

**ASSESSMENT REPORT**  
**2008 Airborne Geophysical Program**  
**CLEAR LAKE PROJECT**

Work carried out July 17 to August 2, 2008

on the following claims:

<b>Grant Number</b>	<b>Claim Name</b>	<b>Claim No</b>	<b>Expiry Date</b>
YC66660-YC66665	DAYLIGHT	1-6 incl.	13-Dec-08
YC66666	DAYLIGHT	8	13-Dec-08
YC66764-YC66811	CL	7-54 incl.	11-Jan-09
YC66876-YC66909	CL	55-88 incl.	26-Mar-09

Whitehorse Mining District  
NTS 105L/11,14  
UTM: 491683E, 6961560N, NAD 83, Zone 8  
Latitude 62°47'03"N, Longitude 135°09'46"W  
Yukon Territory

By

**Gerald G. Carlson, Ph.D., P.Eng.**

**COPPER RIDGE EXPLORATIONS INC.**

500 – 625 Howe Street  
Vancouver, B.C. V6C 2T6

October 31, 2008

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## 1.0 SUMMARY

The Clear Lake property (the “Property”), consisting of 121 Yukon Quartz mining claims, is located 65 km east of Pelly Crossing and 225 km north of Whitehorse, Yukon. The Property has a dirt air strip, presently overgrown, and can be accessed by fixed wing plane or helicopter from Pelly Crossing, Carmacks or Whitehorse. There is also a winter road from Pelly Crossing. Copper Ridge Explorations Inc. (“Copper Ridge”) has an option to earn a 100% interest in the Property.

Clear Lake was first explored in 1965. Drill programs in the late 1970's, 1980's and the early 1990's have included a total of 18,219 m in 71 drill holes. Since 1965, the Property has been subjected to numerous surface exploration campaigns. These have included primarily geophysics and soil geochemistry because of the relative lack of bedrock exposure. Among the geophysical techniques applied, gravity, horizontal loop electromagnetics (“HLEM”) and, more recently, induced polarization (“IP”) have been the preferred techniques. Drill programs during this period have included a total of 18,219 m in 71 drill holes.

Clear Lake is a sedimentary-exhalative (SEDEX) massive sulphide deposit that occurs in Devonian to Mississippian aged shales of the Earn Group. These rocks are part of the Selwyn Basin stratigraphic assemblage. The pyritic massive sulphide body is sigmoidal in shape, approximately 1,000 m in length and up to 120 m wide. Base metal mineralization discovered to date occurs in two discrete horizons. In the massive sulphide-siliceous horizon, combined zinc-lead mineralization grading greater than 5% occurs in three elongate-shaped lenses, 5 to 30 m thick and 450 m in length that extend at least 300 m down dip. The tuff-barite horizon, 75 m into the hangingwall of the deposit, has a number of intersections of greater than 10% zinc over widths of one to six m.

The favourable Earn Group stratigraphy occurs extensively within and external to the claim boundary. Numerous geophysical and geochemical targets have been identified over the years of exploration on the property, and many of these have been tested by trenching and drilling. Although a number of other base metal occurrences have been discovered, none have as yet been of significant size.

The Property was staked by Mr. Bernie Kreft in late 2007 and optioned to Copper Ridge in early 2008. Copper Ridge subsequently staked additional claims and, during the summer of 2008, flew a 235 km helicopter borne magnetic and EM survey. The survey successfully defined the Clear Lake deposit as a thick and weak conductor. Four other EM anomalies, with properties similar to the Clear Lake conductor, have also been identified by the survey. These targets are a high priority for drill testing.

## **2.0 INTRODUCTION**

### ***2.1 Terms of Reference and Participating Personnel***

This report summarizes the geology and exploration history of the Clear Lake Zn-Pb-Ag Sedex massive sulphide deposit and describes an airborne VTEM geophysical survey carried out on the property during summer of 2008. The program was funded and operated by Copper Ridge Explorations Inc. Total expenditures for the airborne survey being applied as assessment to the Clear Lake claims are \$79,063.87. The author of this report visited the property during the 2008 field season and planned and supervised the airborne geophysical program described herein.

Geotech Ltd. of Aurora, Ontario, was contracted for the helicopter-borne airborne geophysical survey of the Property. Trans North Helicopters of Whitehorse was contracted to haul helicopter fuel to the property for the survey work.

### ***2.2 Source Documents***

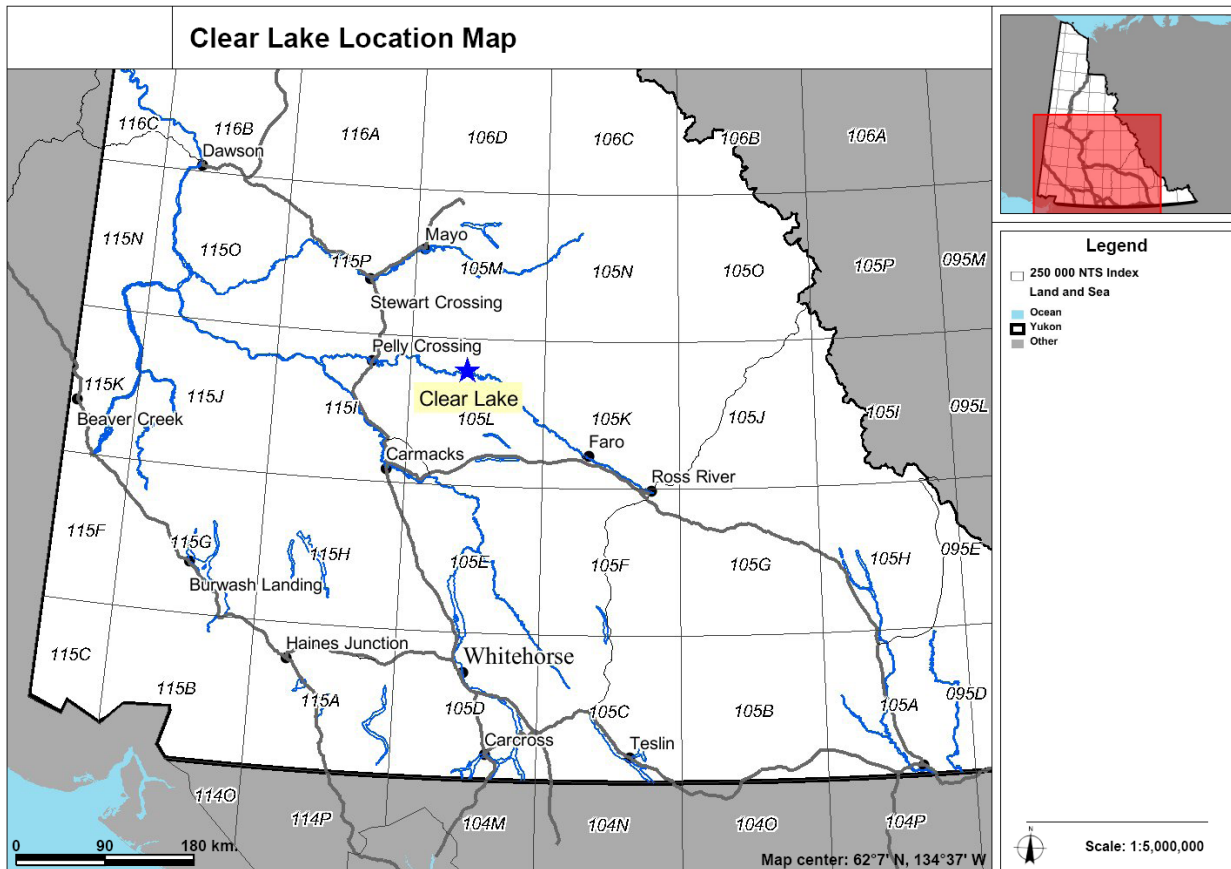
This report incorporates data from historical work on the Property as recorded in the assessment report record as well as in private company reports. Much of the information in this report is taken from a property compilation that is being prepared for Copper Ridge in the form of a NI43-101 report by D.G. MacIntyre (in preparation).

## **3.0 PROPERTY DESCRIPTION AND LOCATION**

The Clear Lake property, consisting of 121 contiguous quartz claims covering approximately 2,450 hectares, is located 65 km east of Pelly Crossing and 225 km north of Whitehorse, Yukon (Figure 1). The center of the deposit is located at NTS coordinates 491680E and 6961560N, NAD 83, Zone 8 or in geographic coordinates - Latitude 62°47'03"N, Longitude 135°09'46"W. Elevations near the deposit range from 690 to 715 metres above sea level.

### ***3.1 Physiography and Climate***

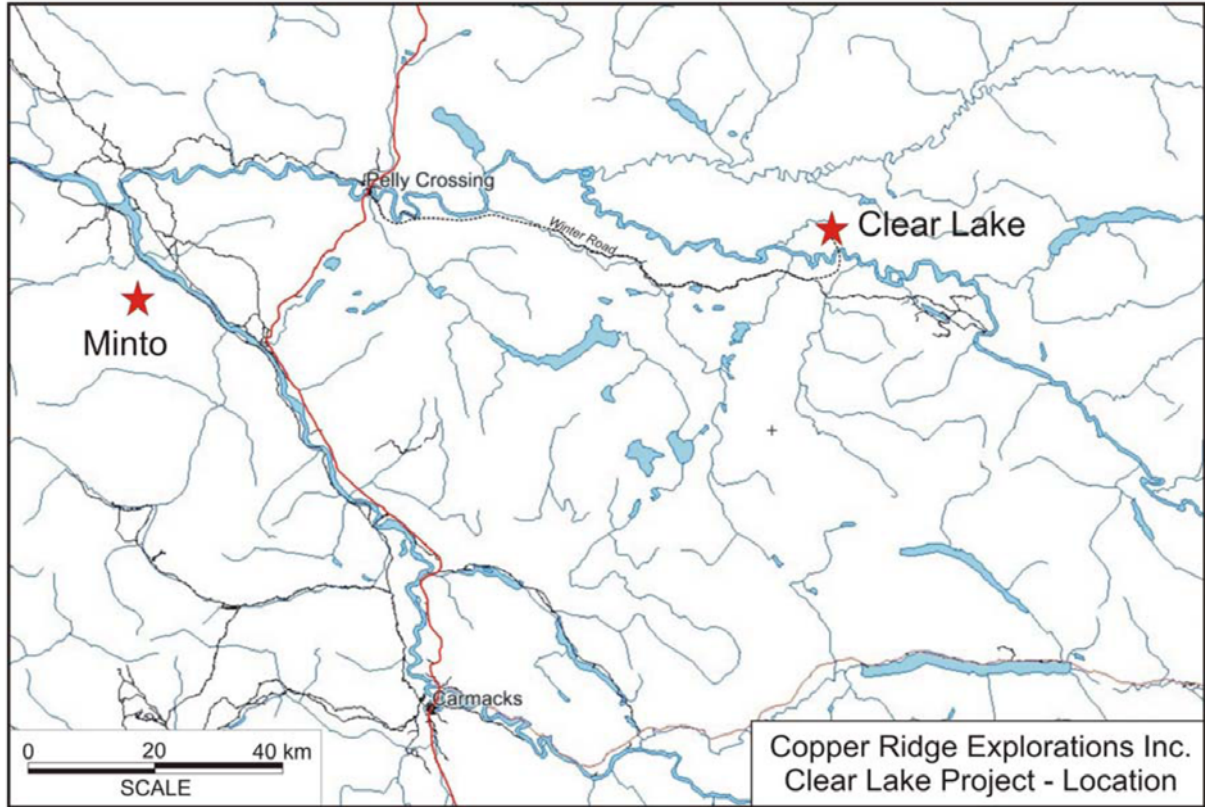
The Clear Lake property covers the height of land between the confluence of the Pelly and MacMillan Rivers (Figure 4). Currently, access is via helicopter based in Carmacks, located approximately 90 kilometres to the southwest, or from Whitehorse, a distance of 225 kilometres. A dirt airstrip approximately 1000 meters long was used during previous drilling programs but is now overgrown. A winter road links the property to the all-weather North Klondike Highway at Pelly Crossing, approximately 65 kilometres to the west. The property is approximately 100 km east of Sherwood Copper's new Minto mine (Figure 2).



**Figure 1. Location of the Clear Lake property, Yukon.**

The climate in southwestern Yukon is one of contrast with short, moderately dry summers (30 cm annual precipitation) and long, cold winters with moderate snowfall. The exploration season extends from mid-May through to late September-early October. The property covers rolling upland between the MacMillan and Pelly Rivers with numerous small lakes and swampy basins contained by low hills. Topography is moderate with approximately 200 meters of relief. The highest point on the property is 800 meters above sea level. Vegetation on north and east facing slopes consists of stunted white and black spruce, willow, labrador tea and moss. South and west facing slopes sustain white spruce, aspen, poplar, lodgepole pine, and various grasses and shrubs. Cottonwood is restricted to river and stream valleys and stands of lodgepole pine grow on some dry, flat areas. Large areas have been burned within the last 25 years. They are now covered by stands of small spruce, poplar, and pine along with extensive growths of alder, birch and willow.

During the Pleistocene epoch two lobes of the Cordilleran ice sheet scoured a westerly trending glacial fabric across the region resulting in hundreds of drumlins, moraines and outwash deposits. Overburden in the Clear Lake area ranges in thickness from 1 to over 50 meters and outcrop exposure is generally poor.



**Figure 2. Infrastructure and access routes, Clear Lake property, Yukon.**

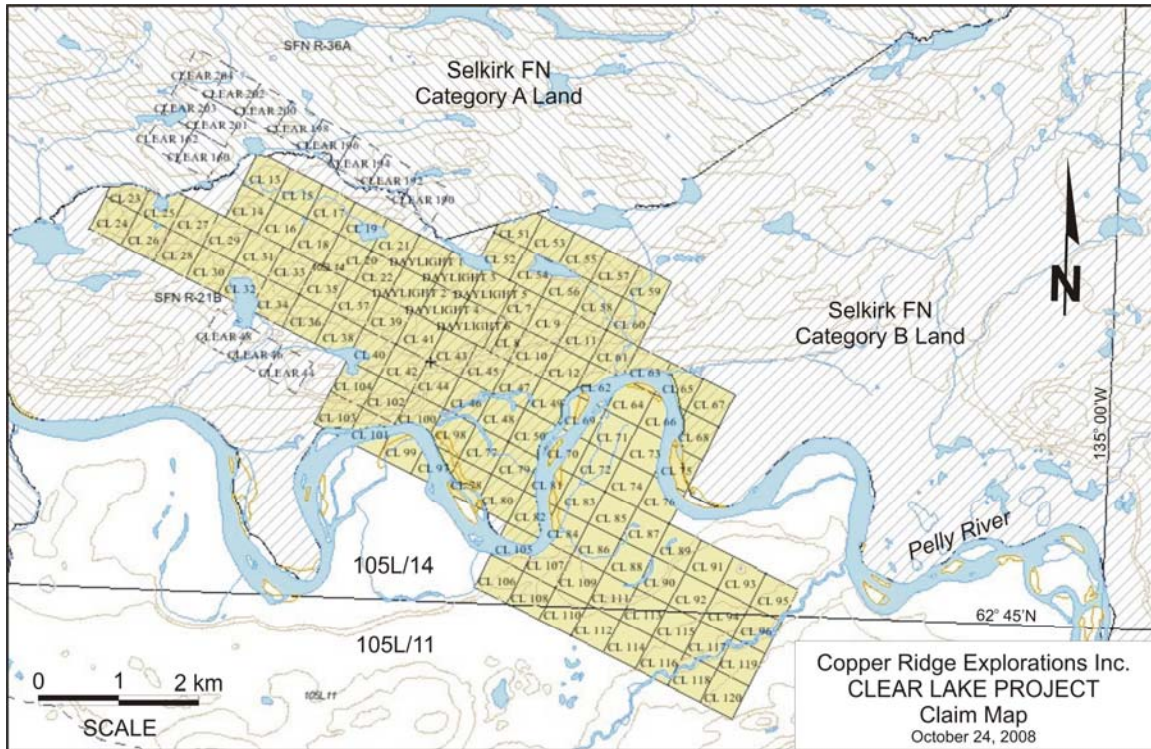
### **3.2 Land Tenure**

The mineral claims comprising the Clear Lake property (the “Property”) are shown in Figure 3 and listed in Table 1. The Clear Lake claims have not been surveyed. Claim details given in Table 1 were obtained using an online mineral tenure search engine available on the Government of Yukon web site. All claims listed in the table are in the Whitehorse Mining District within NTS map sheets 105L/11 and 105L/14.

The Property is under option to Copper Ridge from Bernie Kreft. In order to earn a 100% interest in the Property, Copper Ridge must make payments of \$160,000 and issue 500,000 shares over 5 years, plus make a payment of \$10,000 and issue 250,000 shares if an interest in the property is farmed out or sold to a third party. The vendor will retain a 2% Net Smelter Royalty,  $\frac{3}{4}$  of which (or 1.5%) can be purchased for \$1.5 million.

**Table 1. List of mineral claims, Clear Lake property.**

<b>Grant Number</b>	<b>Claim Name</b>	<b>Claim No</b>	<b>Expiry Date*</b>
YC66660-YC66665	DAYLIGHT	1-6	13-Dec-13
YC66666	DAYLIGHT	8	13-Dec-13
YC66764-YC66811	CL	7-54	11-Jan-14
YC66876-YC66909	CL	55-88	26-Mar-14
YC83502-YC83533	CL	89-120	26-Sep-09



**Figure 3. Claim map, Clear Lake property, Yukon.**

### **3.3 First Nation Settlement Lands**

According to a map published on the Government of Yukon website and the map shown in Figure 3 that was generated using the Yukon MapMaker online mapping system, much of the Clear Lake property is located within Settlement Lands of the Selkirk First Nation, specifically the parcel designated as SFN R-21B. This parcel is classified as Category B and is adjoining Category A Settlement Land to the north (SFN R-36A). The following descriptions of Settlement Lands and associated rights of access are taken from the Government of Yukon website.

Category A Settlement Land is settlement land where a Yukon First Nation has ownership of the surface and subsurface, including minerals. All staking, exploration and mining activity is governed by the First Nations for new mineral interests.

Category B Settlement Land is settlement land where a Yukon First Nation has ownership of the surface. New and existing staking, exploration and mining activity are governed by the Yukon government.

In recognition of the surface rights embodied under the above agreements, Copper Ridge is consulting on an ongoing basis with representatives of the Selkirk First Nation. Head office for the Selkirk First Nation is located in Pelly Crossing, Yukon.

## 4.0 HISTORY

The following description of historical work done on the property is derived from the Yukon Geological Survey Minfile database, supplemented, where appropriate, with information contained in publicly available assessment reports. These assessment reports are listed in the References section of this report.

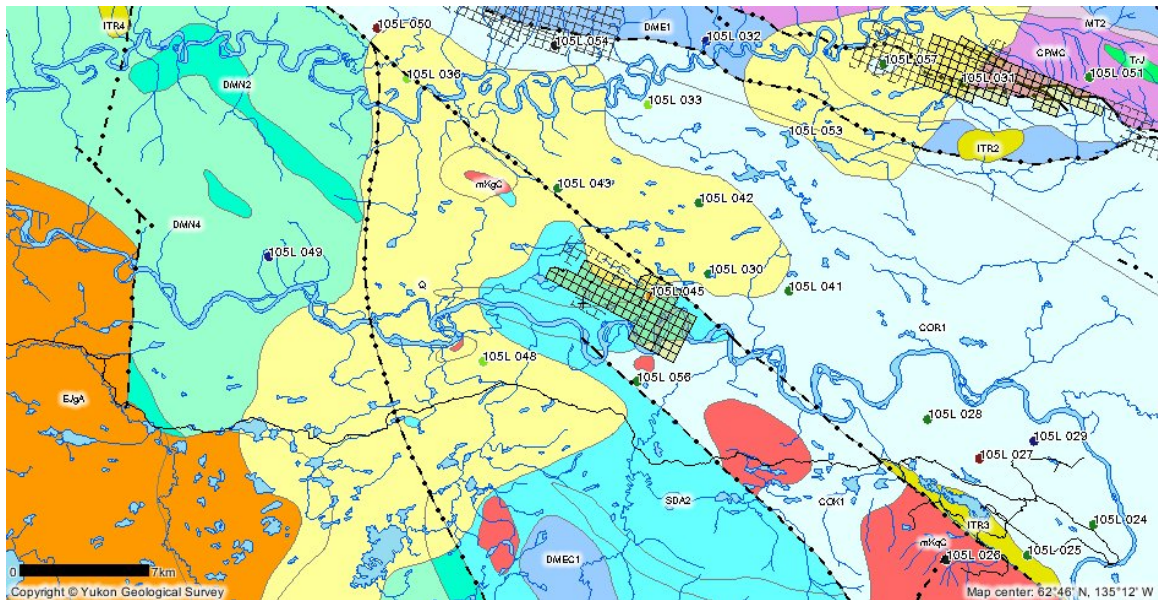
- 1965: First staked by Conwest Exploration Company Ltd, as part of a 734 claim block, following the discovery of the Faro orebody 80 km to the southeast. Limited prospecting, mapping, ground and airborne EM and magnetometer surveying was followed by drill testing of six EM anomalies. One of these holes intersected 0.45 m of massive pyrite.
- 1974 – 1979: Re-staked as the Sue claims in August 1974 by a syndicate of Conwest companies (Chimo Gold Mines Ltd, Consolidated Canadian Faraday Ltd and International Mogul Mines Ltd) and Teck Corporation Ltd. U.S. Steel Western Hemisphere Inc acquired the Teck interest early in 1975 and formed the Macmillan Joint Venture. The JV carried out bulldozer gridding, linecutting, EM, magnetometer and gravity surveying and geological mapping. This work was followed up by 17 drill holes (2,531 m) in 1978 and 10 drill holes (2,481 m) in 1979.
- 1980 - 1984: Conwest syndicate's interest was acquired by Getty Canadian Metals Ltd. in 1980. Getty carried out geological mapping, soil geochemical sampling, MaxMin EM and gravity surveying, followed by drilling of 3 holes (709.3 m) in 1981; linecutting, geochemical sampling, EM and gravity surveying and drilling of 3 holes (943.7 m) in 1982; linecutting, drilling of 69 overburden holes (531 m) and 2 diamond drill holes (2,045.5 m) in 1983; and diamond drilling of one hole (457.2 m) in 1984.
- 1989 - 1991: The Property was re-staked by Total Energold Corporation, which also purchased Conwest's NPI interest. Total Energold carried out geochemical soil and rock sampling and geological mapping to evaluate 18 target areas later in the year. The property was optioned to Mitsui Kinzoku Resources of Canada Inc, a wholly owned subsidiary of Mitsui Mining and Smelting Company Ltd in 1991. At the same time Total Energold purchased U.S. Steel's interest in the property.
- 1991 - 1993: Total Energold and Mitsui carried out additional surface work and drilled 19 holes (4,588.2 m). In 1992 Total Erickson Resources Ltd, a wholly owned subsidiary of Total Energold, carried out diamond drilling of 10 holes (3 100.1 m), plus further surface work in 1992 and 1993. In 1993, Mitsui drilled an additional 6 holes (1,364 m) and then dropped its option.
- 2007 – 2008: The property was re-staked by Bernie Kreft and, early in 2008, optioned to Copper Ridge Explorations Inc. In July, 2008, Copper Ridge flew an airborne VTEM (versatile domain electromagnetic – magnetometer) survey over the property, the subject of this report.



## 5.0 GEOLOGICAL SETTING

### 5.1 General Property Setting

The compiled geology for the Clear Lake area taken from the Yukon Geological Survey MapMaker website is shown in Figure 4. The legend for this figure is given in Table 2. Regional geological data included in the compiled map is from the Glenlyon 1:250,000 map sheet (105L) which was first mapped by Campbell in 1967 (Campbell, 1967) and the 1977 revised 1:1,000,000 scale MacMillan River map sheet by Gabrielse (Gabrielse et al, 1980).



**Figure 4. Regional geology, Clear Lake property (see Table 2 for legend).**

The Pelly River region comprises Palaeozoic deep sea clastic sedimentary rocks of the Selwyn Basin, deformed intermediate to mafic volcanic rocks of the Cassiar Belt and locally Mesozoic intrusive rocks. The Tintina Fault separates the Selwyn Basin and Anvil Allochthon in the northeast from the Cassiar Belt in the southwest. Thrust sheets and parallel faults have complicated the geology, particularly in the Clear Lake area. The Anvil Allochthon was formed by westerly derived thrust sheets that were active during late Triassic to mid-Cretaceous. Recent interpretation of the regional geology suggests that numerous major faults occur in the area.

The Clear Lake deposit occurs within the Tunnel Basin in Upper Devonian-Mississippian black graphitic argillite along the western margin of Selwyn Basin (Grapes, 1987). The Selwyn Basin has a central basinal chert facies that is bounded by the Mackenzie and Pelly-Cassiar platformal carbonates to the west and east respectively. The western margin is partly truncated by the Tintina Fault. The Clear Lake strata occur within splays in the fault zone. To the north, the southwestward-dipping Paleozoic Anvil Range Group clastic metasediments are cut by northwest-trending, normal faults and are intruded by subvolcanic plugs and necks of Cretaceous andesite (Templeman-Kluit, 1977). Anvil

Range Group rocks occur immediately to the north of the Clear Lake Deposit. Mid-Devonian Askin Group dolostone and quartzite occur to the southwest of the Clear Lake deposit (Grapes, 1987).

**Table 2. Regional geologic map units.**

Map Unit	Age	Group or Formation	Lithology
Q	Quaternary		silt, sand, gravel
ITR2	Lower Tertiary, mostly(?) Eocene		rhyolite, flows, tuff, breccia
mKgC	mid-Cretaceous		granodiorite, quartz diorite, quartz monzonite, granite
mKqS	mid-Cretaceous		granite, quartz monzonite, granodiorite
EJgA	Early Jurassic		
CPMC	Carboniferous to Permian		chert, shale, siltstone
DMN4	Devonian, Mississippian and(?) older		quartzite, qtz-musc-schist
DMEC1	Upper Devonian to Lower Mississippian		slate, sandstone, conglomerate
DME3	Earliest Mississippian	Earn Group	flows, tuffs, plugs, chert
DME2	Devonian	Earn Group	chert, shale, argillite
DME1	Upper Devonian and Mississippian	Earn Group	siltstone, sandstone, conglomerate
SDA2	Middle Silurian to Middle Devonian	Road River Group, Askin Formation	mudstone, quartzite, limestone, dolostone
COK1	Upper Cambrian and Lower Ordovician	Kechika Group	slate, phyllite, limestone
COR1	Upper Cambrian and Ordovician	Rabbitkettle Formation	chert, siltstone, phyllite, limestone, conгло

An interval of erosion following tilting and probably open folding of Devonian-Mississippian and older rocks in the Clear Lake area, occurred in the late Mississippian or early Permian (Grapes, 1987).

During the Late Cretaceous or early Tertiary regional stratigraphic and structural correlations within the Clear Lake area were obscured by offset along the Tintina Fault. The surface manifestation of the fault is the Tintina Trench, a northern extension of the Rocky Mountain Trench. It represents a zone of major, northwest-trending, steeply dipping, transcurrent faulting, approximately 960 km long on which 450 kilometres of right lateral displacement has been postulated (Templeman-Kluit, 1977). Displacements in the Clear Lake area occurred along steeply dipping, anastomosing fault surfaces making correlation between fault blocks within the fault zone extremely tentative.

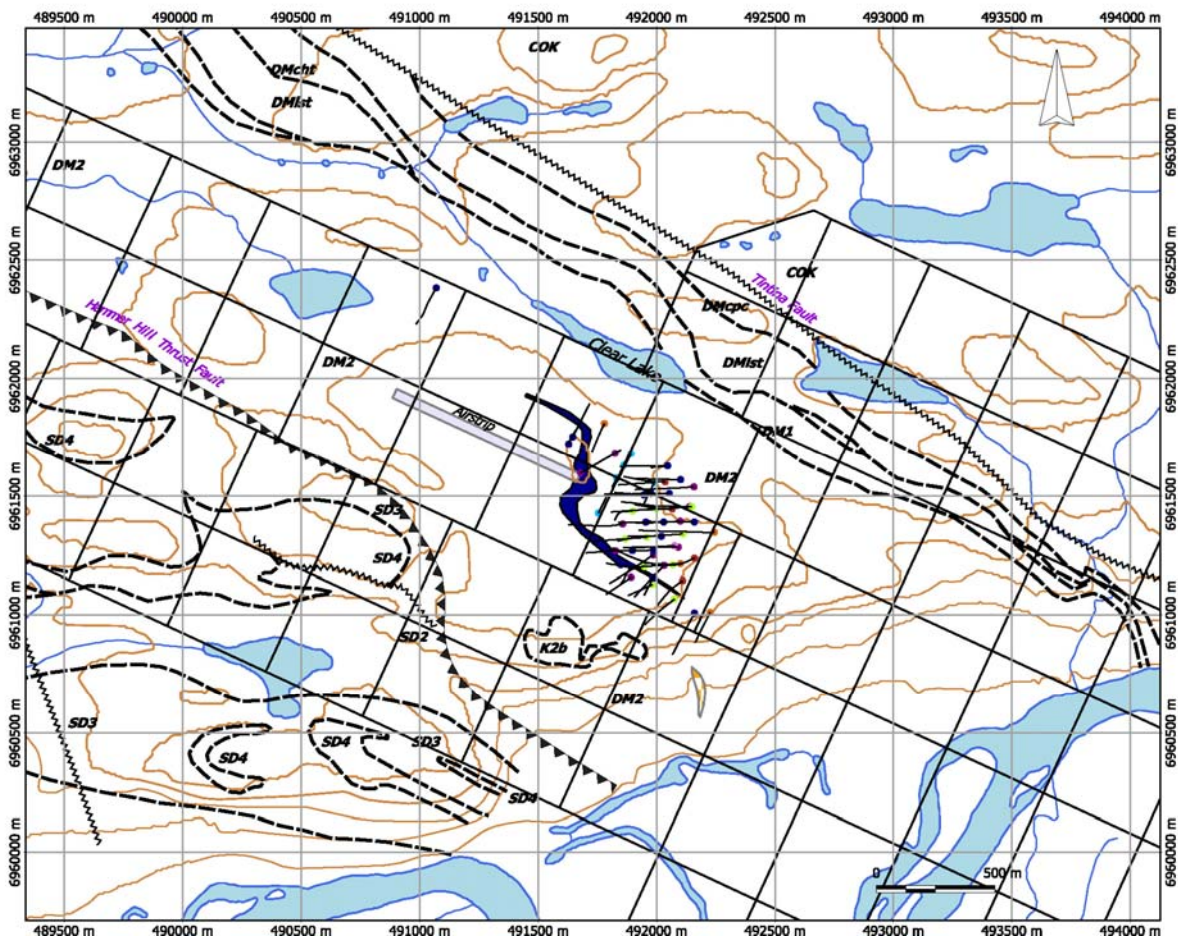
Deformation in the Anvil Range culminated in the Mid-Cretaceous with intrusion of the Anvil batholith. The intrusion resulted in a domal or antiformal feature 64 km long and 24 km wide trending northwest parallel to the Tintina Trench, and terminating just east of

the Clear Lake deposit. The northeast limb dips gently, whereas the southeast limb is steep (Campbell, 1967)

The geologic setting, deposit type, and host rocks (Earn Group) of the Clear Lake Zone are similar to the Cirque deposit in northern British Columbia.

## 5.2 Property Geology

Clear Lake is a barite-associated, shale-hosted, sedimentary-exhalative massive sulphide deposit that is hosted by carbonaceous argillite, siltstone, chert and tuff of the Devonian to Mississippian Earn Group. The favourable Earn Group stratigraphy occurs extensively within and external to the claim boundary (Figure 5).



**Figure 5. Property geology, Clear Lake deposit. Geology after Basnett, 1990. (see Table 3 for description of map units.)**

The property is bisected by the northwest trending Tintina Fault. This strike-slip fault may have right lateral displacements of as much as 450 km (Templeman-Kluit, 1977). On the property, north of the fault are phyllites of the Cambrian to Ordovician Kechika Group. These have been correlated with the Lower Cambrian Mt. Mye Formation and calcareous phyllite and limestone of the Cambrian to Ordovician Vangorda Formation

which are important host rocks for the massive sulphide deposits of the Faro district. South of the fault are Ordovician to Silurian shale of the Road River Group, Silurian to Devonian quartzite, dolostone, argillite, shale and amygdaloidal andesite of the Askin Formation and sandstone, argillite, chert, limestone, shale, breccia, conglomerate and tuff of the Devonian to Mississippian Earn Group.

**Table 3. Table of Formations, Clear Lake property (after Basnett, 1990).**

<b>TERTIARY, MESOZOIC (?) OR MISSISSIPPIAN</b>	
<b><i>INTRUSIVE ROCKS</i></b>	
K2	Mafic Intrusive Rocks – a: gabbro, diorite, b: diabase
K1	Felsite
<b>MISSISSIPPIAN AND/OR EARLIER</b>	
DMCPC	Chert Pebble Conglomerate – locally heterolithic with Kechika Group clasts
<b>DEVONIAN-MISSISSIPPIAN</b>	
<b><i>EARN GROUP</i></b>	
DMB	Barite
DMA	massive sulphide
DM6	mafic volcanic flow rocks
DM5	tuff
DM4	chert, dark grey, massive
DM3	breccia, conglomerate
DM2	argillite and shale
DM1	sandstone
DMLST	limestone
DMCHT	chert
<b>SILURIAN-DEVONIAN</b>	
<b><i>ASKIN GROUP</i></b>	
SD4	quartzite
SD3	dolostone
SD2	argillite, shale
SD1	amygdaloidal andesite
<b>ORDOVICIAN-SILURIAN</b>	
<b><i>ROAD RIVER FORMATION</i></b>	
OS	shale
<b><i>KECHIKA GROUP</i></b>	
COK	phyllite

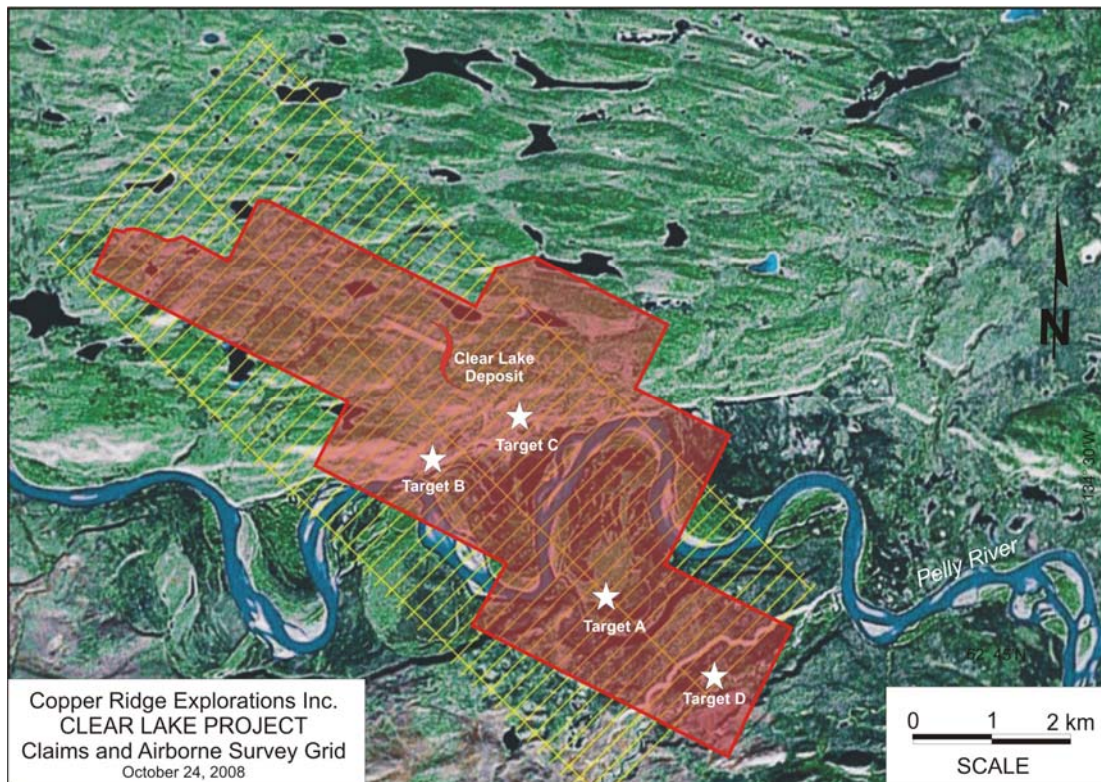
The Clear Lake stratabound massive sulphide deposit is hosted by carbonaceous argillite, siltstone, chert and intermediate tuff of the Earn Group. The precise age of the host sediments is not known due to lack of diagnostic micro or macro fossils (Grapes, 1987). The host rocks are steeply dipping to the northeast and are contained within a northeast dipping, overturned syncline. The Earn Group rocks unconformably overlie dolostone and quartzite of the Middle Devonian Askin Group. Regionally, the Clear Lake host

rocks are correlative with lithologically similar Upper Devonian to Mississippian shales in the Pelly Mountains to the southwest and in the Selwyn Mountains to the east (Templeman-Kluit, 1981).

The youngest rocks on the Clear Lake property are mafic and felsitic intrusive rocks of unknown age. One such intrusion cuts Earn Group argillite and shale just south of the main Clear Lake deposit (Figure 5).

## 6.0 2008 AIRBORNE GEOPHYSICAL PROGRAM

From July 17th to August 2nd, 2008, Geotech Ltd. of Aurora, Ontario, carried out a



**Figure 6. Clear Lake claim outline and airborne survey flight lines on Google Earth background.**

helicopter-borne geophysical survey over a single contiguous block at the Clear Lake Property (see Figure 6).

The geophysical sensors included a versatile time domain electromagnetic (VTEM) system, and a caesium magnetometer. Ancillary equipment included a GPS navigation system and a radar altimeter. A total of 235 line-kilometres were flown on 200 m spaced lines.

The survey operations were based in Mayo, Yukon. In-field data quality assurance and preliminary processing were carried out on a daily basis during the acquisition phase.

Preliminary and final data processing, including generation of final digital data and map products, were undertaken from the office of Geotech Ltd. in Aurora, Ontario. The survey description and results are included in Geotech's final report included as Appendix I to this report. All technical data is included in the CD accompanying the report.

In the Geotech report, the processed survey results are presented as electromagnetic stacked profiles (see Figure 7), a color contour grid of the B-field EM late time channel and total magnetic intensity (see Figure 8).

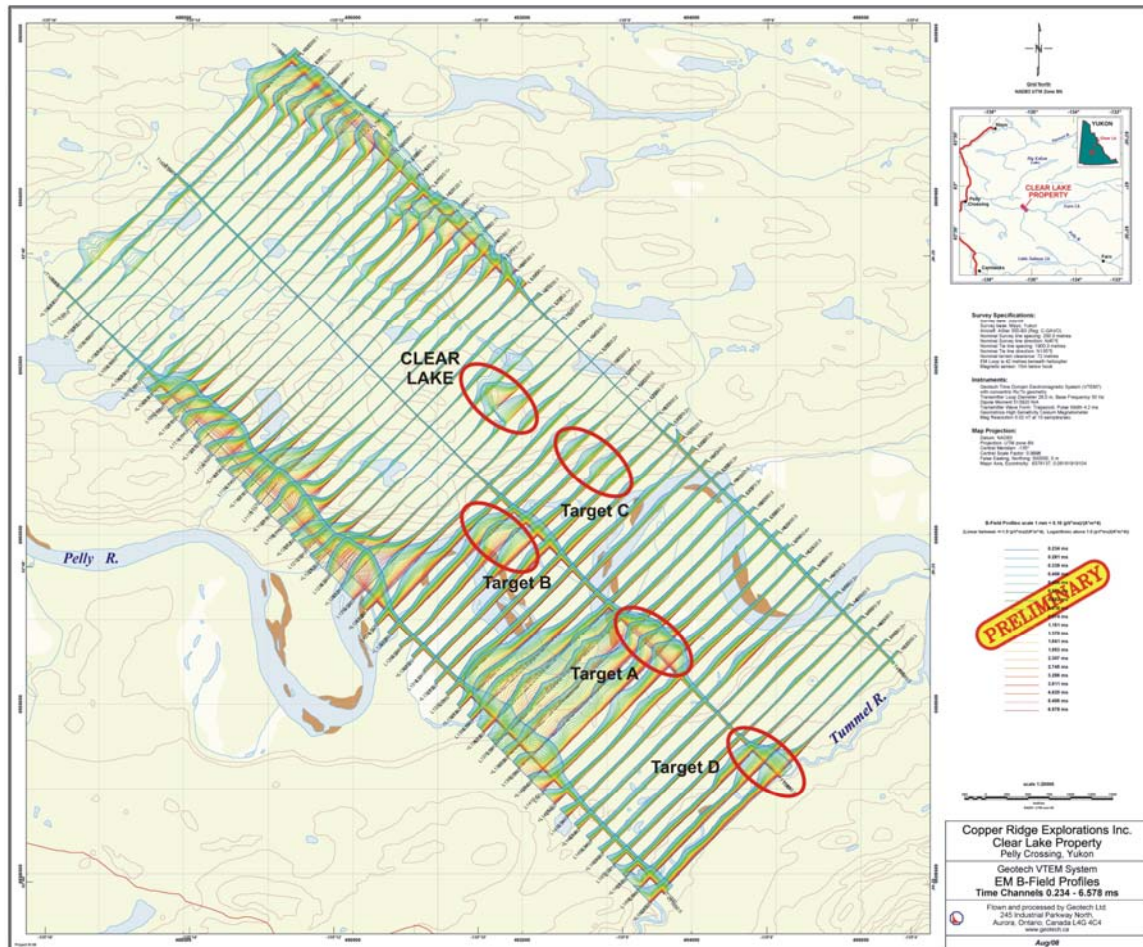


Figure 7. Geotech VTEM survey results - stacked EM profiles and targets.

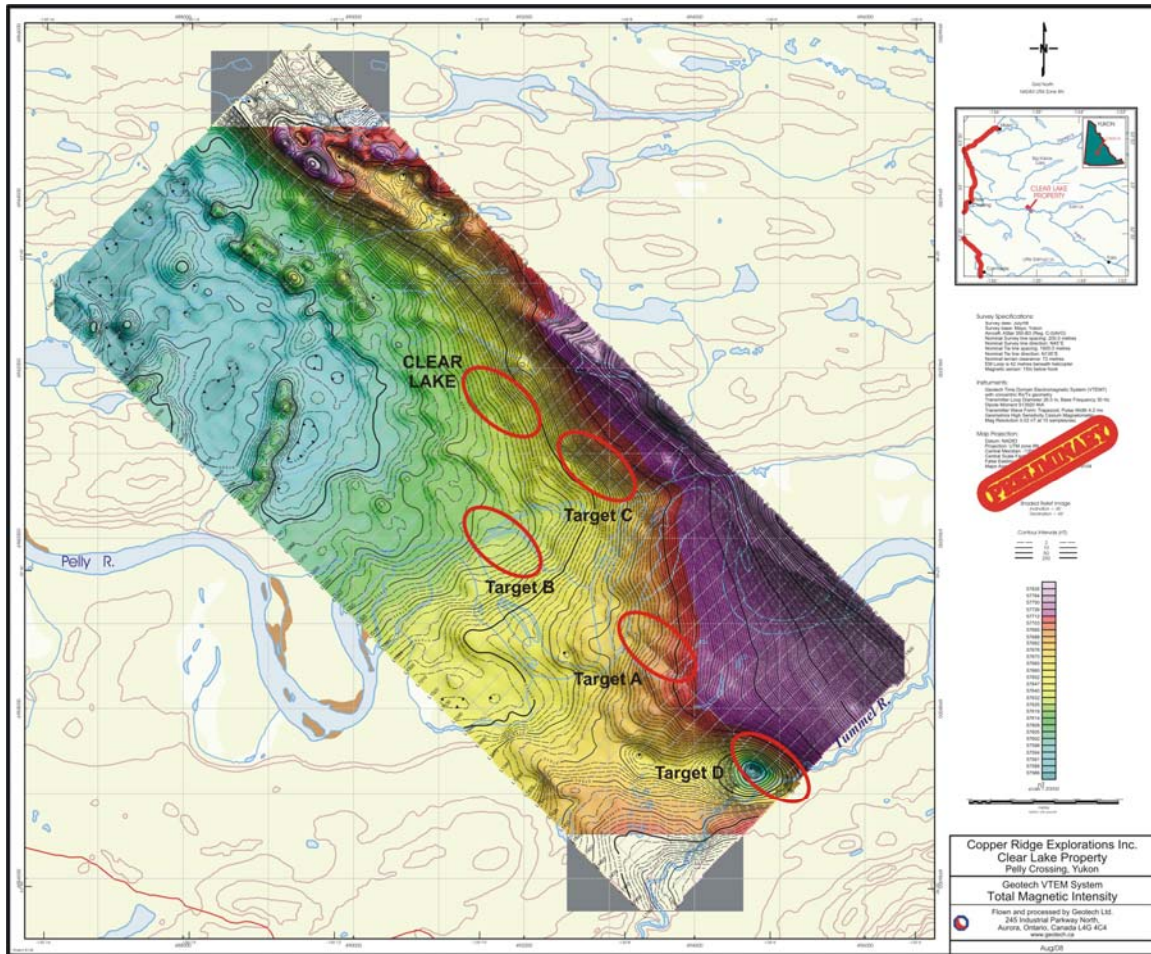


Figure 8. Geotech VTEM survey results - total field magnetics and targets.

## 6.1 Survey Results

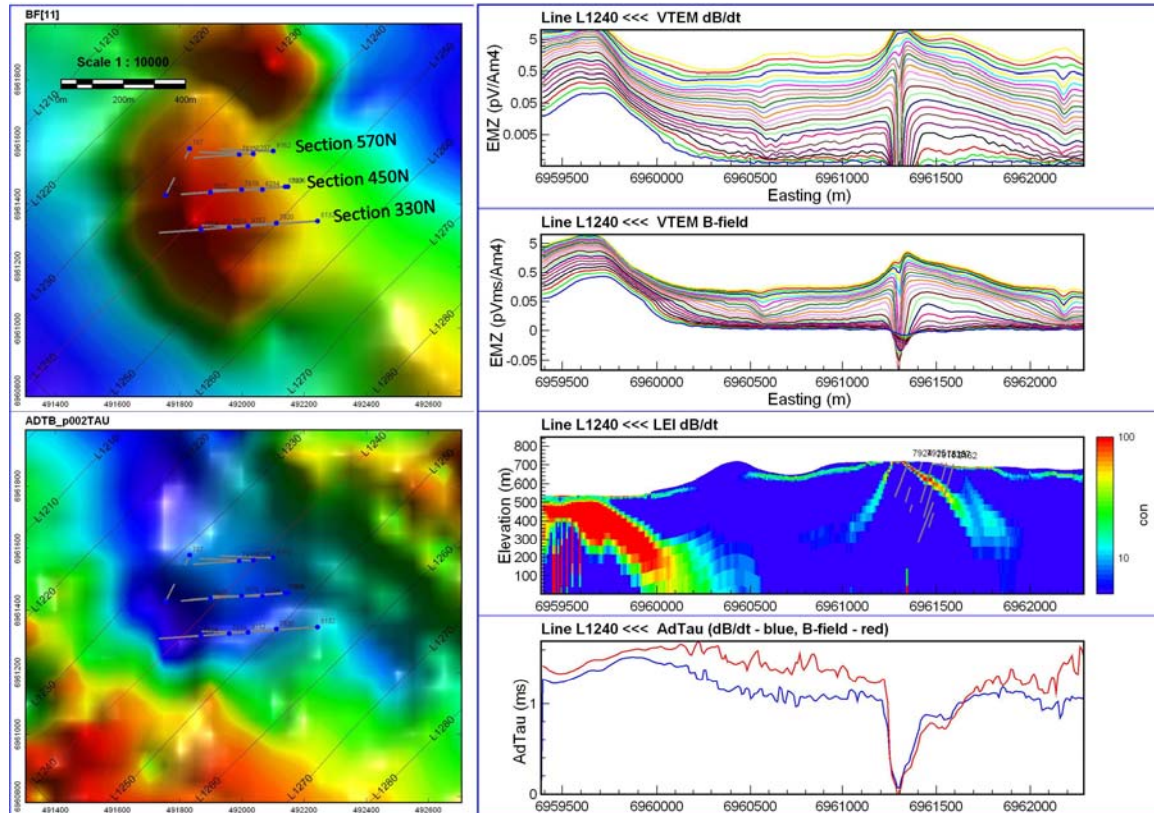
The Company has not carried out a detailed interpretation of the geophysical survey. However, certain observations can be made from a preliminary assessment of the data. Four priority targets have been identified and are shown in Figures 6, 7 and 8 (above). Figure 6 shows the survey flight lines relative to the Property outline, while Figure 7 shows the electromagnetic results as stacked profiles and Figure 8 shows the total field magnetic results. The Clear Lake deposit is also shown on these figures.

A preliminary interpretation of the VTEM data was provided by Condor Consultants of Boulder, Colorado (Ken Witherly, pers. comm.) on one flight line over the Clear Lake deposit and on one line over three of the four priority targets.

### 6.1.1 Clear Lake Deposit

The Clear Lake deposit stands out as a thick but weak conductor on one line and as a narrow conductor on an adjacent line, the line of the interpretation (see Figure 9). The interpreted section (LEI bB/dt) indicates a narrow conductor, which is accurate in this case because the modeled line crosses the southeastern tail of the deposit where the

mineralization has narrowed considerably. Drill holes near the section line have been projected on to the modeled interpretation. The conductivity is not strong: The weakness of the conductivity in this case, despite the mineralization being predominantly massive pyritic sulphide, may be due to the possible encapsulation of the pyrite grains by a non-conductive mineral such as quartz or coating by a nonconductive secondary mineral.



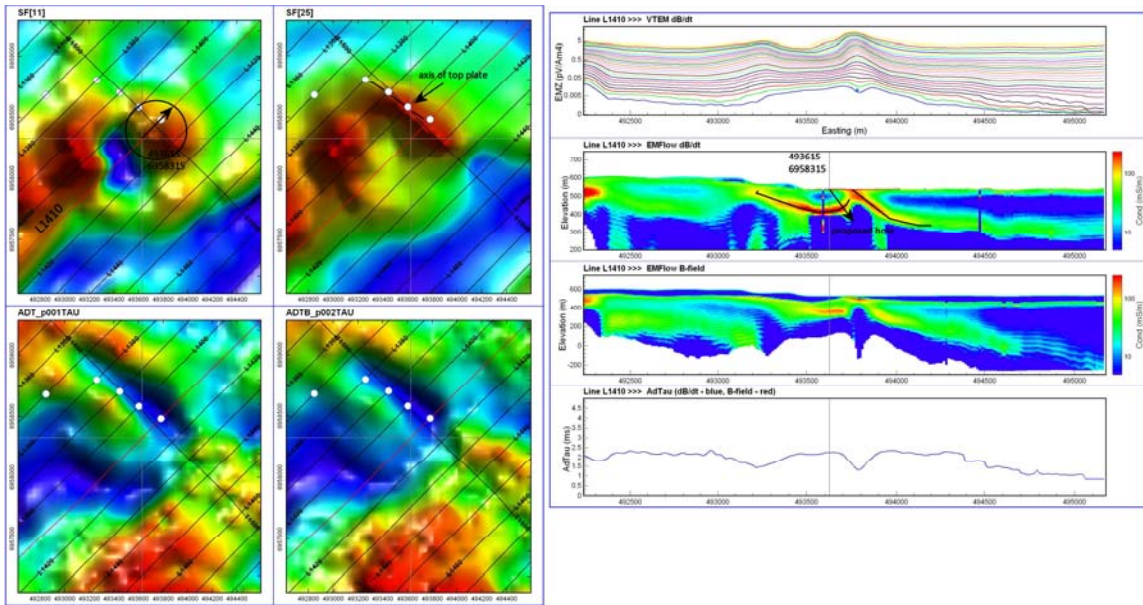
**Figure 9. Plan, profile and interpreted EM response over the Clear Lake deposit.**

### 6.1.2 Target A

Target A is the highest priority target that coincides with previously defined gravity, IP and electromagnetic anomalies, previously known as “Area 16” or “Grid 5” (Basnett, 1990). Previous work has identified two gravity anomalies in this area. The southernmost of these is believed to be caused by a bedrock high, but the northern anomaly has been interpreted to be caused by sulphides (Hanneson, 1984). This 0.5 milligal anomaly has coincident HLEM and IP chargeability anomalies. It has been tested by one drill hole, which did not reach bedrock. Overburden is believed to be 30 to 40 m thick in this area.

The preliminary interpretation of the 2008 VTEM anomaly by Condor suggests the EM response at Target A is caused by a flat-lying, weak conductor, possibly disrupted by a shallow fault, at a depth of about 150 m (see Figure 10). This anomaly could represent a massive sulphide body similar to Clear Lake. A proposed drill hole is shown on the Condor interpreted section.

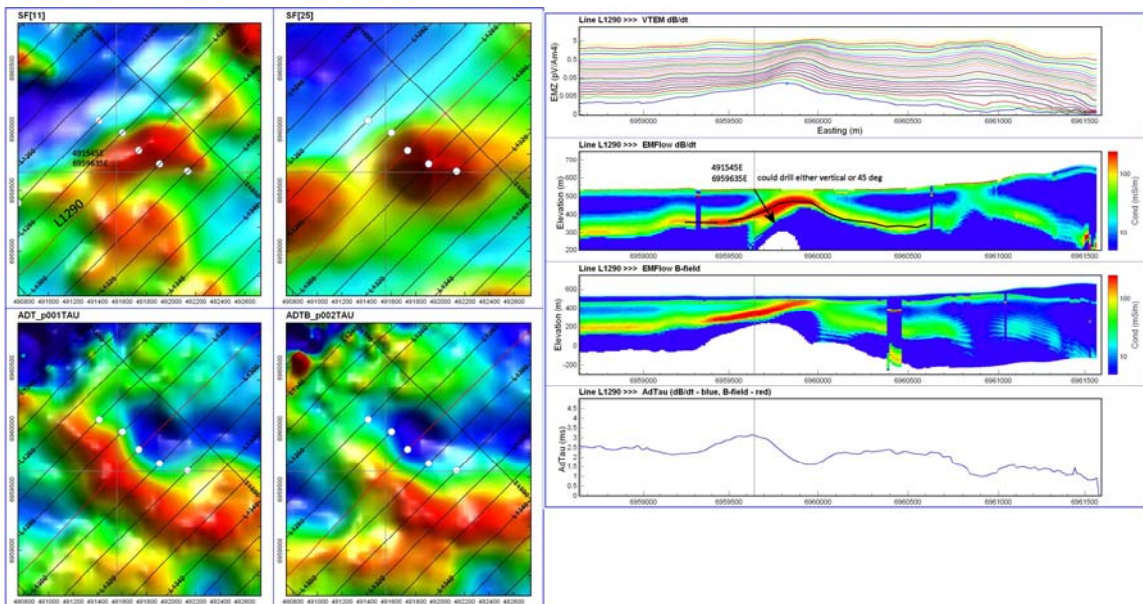




**Figure 10. Plan, profile and modeled EM response, Target A.**

### 6.1.3 Target B

Target B corresponds with the previously defined Area 12 (Basnett, 1990), 2.2 km southwest of the Clear Lake deposit, a 1,000 m long arcuate HLEM anomaly (see Figure 11).



**Figure 11. Plan, profile and modeled EM response, Target B.**

Barite and pyrite have been observed on fractures in Askin Formation dolomite to the south of the conductor. In an overburden drill soil geochemical line over the conductor,

two Zn results ran 410 ppm and 450 ppm while three soils had Ag values from .9 to 1.8 ppm. In a separate soil survey, four auger soil samples had Zn results of 5,370, 2,640, 575 and 348 ppm Zn, but no other anomalous metals. These anomalous soil values could be the result of dispersion from the Clear Lake deposit or from an undiscovered source.

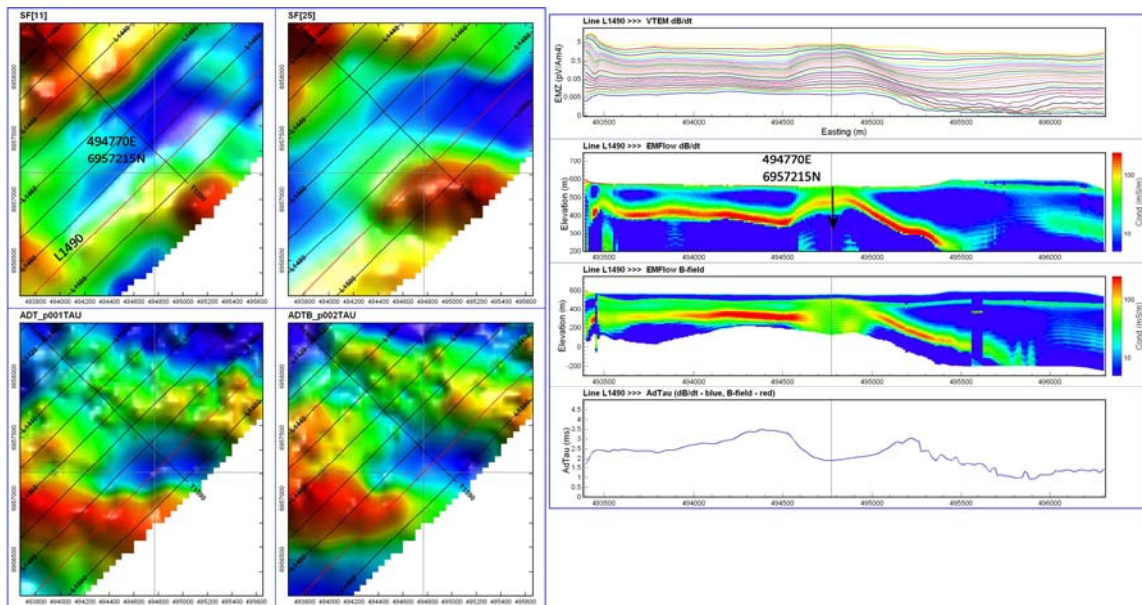
While the original Area 12 HLEM anomaly appears to be just north of the Pelly River channel, and possibly quite shallow, the Target B anomaly is along strike to the southeast, in the Pelly River valley, and is likely deeper, at 100 to 200 m depth.

### 6.1.4 Target C

Target C, 800 m southeast of the Clear Lake deposit, corresponds with previously defined Area 17, consisting of numerous HLEM conductors and gravity anomalies. On the VTEM map (Figure 7), it can be seen to be an extension of the southeastern tail of the Clear Lake deposit. Two of the anomalies have been drilled in the past: Hole 78-16 encountered a zone of crushed graphitic quartz rock and was apparently not completed to depth. Hole 81-30 intersected some narrow massive pyrite intervals and occasional stringers containing sphalerite, interpreted as possibly a thrust fault (Verley, 1981). The Geotech VTEM data over this zone has not been modeled by Condor Consultants.

### 6.1.5 Target D

Target D is located on the edge of the survey area. Condor's interpretation (Figure 12) suggests that it also is a weak, flat-lying conductor that could represent a Clear Lake type of massive sulphide deposit. Interestingly, it is roughly coincident with a strong, negative magnetic anomaly (see Figure 8).



**Figure 12. Plan, profile and modeled EM response, Target D.**

All four target areas merit drill testing. Previous geological, geophysical, geochemical and drill hole exploration data from the Target A, B and C areas, should be compiled with the new Geotech data and interpretations prior to planning specific drill holes.

## 7.0 CONCLUSIONS AND RECOMMENDATIONS

The Clear Lake property, consisting of 121 Yukon Quartz mining claims, is located 65 km east of Pelly Crossing and 225 km north of Whitehorse, Yukon. The Property was first explored in 1965. Drill programs in the late 1970's, 1980's and the early 1990's have included a total of 18,219 m in 71 drill holes. Since 1965, the Property has been subjected to numerous surface exploration campaigns, primarily geophysics and soil geochemistry because of the relative lack of bedrock exposure. Among the geophysical methods applied, gravity, HLEM and, more recently, IP have been the preferred techniques. Drill programs during this period have included a total of 18,219 m in 71 drill holes.

Clear Lake is a SEDEX massive sulphide deposit that occurs in Devonian to Mississippian aged shales of the Earn Group. The pyritic massive sulphide body is sigmoidal in shape, approximately 1,000 m in length and up to 120 m wide. Base metal mineralization discovered to date occurs in two discrete horizons. In the massive sulphide-siliceous horizon, combined zinc-lead mineralization grading greater than 5% occurs in three elongate-shaped lenses, 5 to 30 m thick and 450 m in length that extend at least 300 m down dip. A tuff-barite horizon, 75 m into the hangingwall of the deposit, has a number of intersections of greater than 10% Zn over widths of 1 to 6 m.

The favourable Earn Group stratigraphy occurs extensively within and external to the claim boundary. Numerous geophysical and geochemical targets have been identified over the years of exploration on the property, and many of these have been tested by trenching and drilling. Although a number of other base metal occurrences have been discovered, none have as yet been of significant size.

The Property was staked by Bernie Kreft in late 2007 and optioned to Copper Ridge in early 2008. Copper Ridge subsequently staked additional claims and, during the summer of 2008, flew a 235 km helicopter borne magnetic and EM survey. The survey successfully defined the Clear Lake deposit as a thick and weak conductor. Four EM anomalies, with properties similar to the Clear Lake conductor, have also been identified by the survey. All four target areas merit drill testing. Previous geological, geophysical, geochemical and drill hole exploration data from the Target A, B and C areas, should be compiled with the new Geotech data and interpretations prior to planning specific drill holes.

## 8.0 STATEMENT OF COSTS

Geotech Ltd. VTEM Survey	\$62,094.13
Trans North Helicopters	<u>\$16,969.74</u>
<b>TOTAL</b>	<b>\$79,063.87</b>

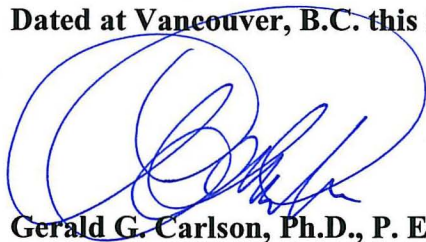
See Appendix II for Invoices

## 9.0 STATEMENT OF QUALIFICATIONS

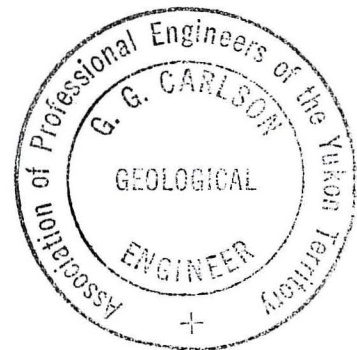
I, Gerald G. Carlson, hereby certify that:

1. I am a consulting mineral exploration geologist and President of Copper Ridge Explorations Inc., 500 – 625 Howe Street, Vancouver, B.C. V6C 2T6.
2. I am a graduate of the University of Toronto, with a degree in Geological Engineering (B.A.Sc., 1969). I attended graduate school at Michigan Technological University (M.Sc., 1974) and Dartmouth College (Ph.D., 1978). I have been involved in geological mapping, mineral exploration and the management of mineral exploration companies continuously since 1969, with the exception of time between 1972 and 1978 for graduate studies in economic geology.
3. I am a member in good standing of the Association of Professional Engineers and Geoscientists of the Province of British Columbia, Registration No. 12513 and of the Association of Professional Engineers of Yukon, Registration No. 0198.
4. I am the author of this report on the Clear Lake Project, Report on the 2008 Airborne Geophysical Program. The report is based on a literature review, on private company reports and on property visits during the 2008 field season.
5. I am a Director, President and CEO of Copper Ridge Explorations Inc., and I own shares in the company.
6. I was personally involved in the planning, execution and interpretation of the exploration programs discussed in this report.

**Dated at Vancouver, B.C. this 31st day of October, 2008,**



**Gerald G. Carlson, Ph.D., P. Eng.**



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**APPENDIX I**  
**GEOTECH REPORT**

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



**Clear Lake Property**

**Mayo, Yukon**

**For:**

**COPPER RIDGE EXPLORATIONS INC.**

**By**

**Geotech Ltd.**

**245 Industrial Parkway North  
Aurora, Ont., CANADA, L4G 4C4**

**Tel: 1.905.841.5004**

**Fax: 1.905.841.0611**

**www.geotech.ca**

**Email: info@geotech.ca**

**Survey flown in July and August, 2008**

**Project 8138**

**September, 2008**

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# REPORT ON A HELICOPTER-BORNE VERSATILE TIME DOMAIN ELECTROMAGNETIC SURVEY

Clear Lake Property  
Mayo, Yukon

## **Executive Summary**

During July 17<sup>th</sup> to August 2<sup>nd</sup>, 2008 Geotech Ltd. carried out a helicopter-borne geophysical survey for Copper Ridge Explorations Inc. over one (1) block (Clear Lake Property) near Mayo in Yukon, Canada.

Principal geophysical sensors included a versatile time domain electromagnetic (VTEM) system, and a caesium magnetometer. Ancillary equipment included a GPS navigation system and a radar altimeter. A total of 235 line-kilometers were flown.

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

The processed survey results are presented as electromagnetic stacked profiles, and as a color contour grid of the B-field EM late time channel, and total magnetic intensity.

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

The survey report describes the procedures for data acquisition, processing, final image presentation and the specifications for the digital data set. No formal interpretation is included in this report.

# 1. INTRODUCTION

## 1.1 General Considerations

These services are the result of the Agreement made between Geotech Ltd. and Copper Ridge Explorations Inc. to perform a helicopter-borne geophysical survey over the Clear Lake Property, located near Mayo, in central Yukon, Canada (Figure 1).

Gerry Carlson, president, acted on behalf of Copper Ridge Explorations Inc. during the data acquisition and data processing phases of this project.

The geophysical surveys consisted of helicopter borne EM using the versatile time-domain electromagnetic (VTM) system and aeromagnetism using a caesium magnetometer. A total of 235 line-km of geophysical data were acquired during the survey. The survey area is shown in Figure 2.

The crew was based in Mayo, Yukon for the acquisition phase of the survey. Survey flying started on July 17<sup>th</sup> and was completed on August 2<sup>nd</sup>, 2008.

Data quality control and quality assurance, and preliminary data processing were carried out on a daily basis during the acquisition phase of the project. Final data processing followed immediately after the end of the survey. Final reporting, data presentation and archiving were completed from the Aurora office of Geotech Ltd. in September, 2008.



Figure 1 – Property Location

## 1.2 Survey and System Specifications

For the Clear Lake property, traverse lines were flown at line separation of 200 m. The tie lines were flown perpendicular to the traverse line at a spacing of 1900 meters. For more detailed information on the flight spacing and direction see Table 1.

The helicopter maintained a mean terrain clearance of 74 meters which translates into an average height of 39 meters above ground for the bird-mounted VTEM system and 61 meters for the magnetic sensor.

The survey was flown using an A-Star B3 helicopter, registration C-GAVO. The helicopter was operated by Great Slave Helicopters Ltd. Details of the survey specifications may be found in Section 2 of this report.

## 1.3 Topographic Relief and Cultural Features

Topographically, the Clear Lake Property exhibits a moderate relief, with an elevation ranging from 531-746 meters above sea level (Figure 2). Clear Lake Property is approximately 68 kilometers east of Pelly Crossing and 150 kilometers north of Lake Laberge. It is located approximately 95 kilometers from the village of Mayo. This survey block is covered by NTS (National Topographic Survey) of Canada sheet 105L11, 105L14.



Figure 2 – Google Image of Survey

## 2. DATA ACQUISITION

### 2.1 Survey Area

The survey block (see Location map, Figure 2) and general flight specifications are as follows:

**Table 1** - Survey blocks

Survey block	Traverse/Tie Line spacing (m)	Area (Km <sup>2</sup> )	Line-km's	Flight direction	Line numbers
Clear Lake Property	Traverse: 200	42.5	240.3	N 45° E	L1000 – L1500
	Tie: 1900			N 135° E	T1580 – T1600

Survey block boundaries co-ordinates are provided in Appendix B.

### 2.2 Survey Operations

Survey operations were based out of the Mayo, Yukon from July 17<sup>th</sup> to August 2<sup>nd</sup>, 2008. The following table shows the timing of the flying.

**Table 2** - Survey schedule

Date	Flight #	Flown KM	Block	Crew location	Comments
17-July-08			Clear Lake	Mayo, Yukon	Mobilization
18-July-08			Clear Lake	Mayo, Yukon	System assembly, rain
19-July-08			Clear Lake	Mayo, Yukon	System assembly, rain
20-July-08			Clear Lake	Mayo, Yukon	System installation, helicopter arrival
21-July-08			Clear Lake	Mayo, Yukon	System installation
22-July-08			Clear Lake	Mayo, Yukon	System installation - complete
23-July-08			Clear Lake	Mayo, Yukon	Helicopter test flights.
24-July-08			Clear Lake	Mayo, Yukon	Production aborted – helicopter malfunction
25-July-08			Clear Lake	Mayo, Yukon	No production, helicopter malfunction.
26-July-08			Clear Lake	Mayo, Yukon	Helicopter inspection and maintenance.
27-July-08			Clear Lake	Mayo, Yukon	Helicopter inspection and maintenance, awaiting parts.
28-July-08			Clear Lake	Mayo, Yukon	Helicopter inspection and maintenance, parts arrive.
29-July-08			Clear Lake	Mayo, Yukon	Helicopter repair and maintenance.
30-July-08	1 - 2	124	Clear Lake	Mayo, Yukon	Production aborted – rain.
31-July-08	3	111	Clear Lake	Mayo, Yukon	Production
01-Aug-08			Clear Lake	Mayo, Yukon	Reflights
02-Aug-08			Clear Lake	Mayo, Yukon	Job complete



## 2.3 Flight Specifications

The helicopter was maintained at a mean height of 74 meters above the ground with a nominal survey speed of 80 km/hour. This allowed for a nominal EM sensor terrain clearance of 39 meters and a magnetic sensor clearance of 61 meters. The data recording rates of the data acquisition was 0.1 second for electromagnetics, magnetometer and gamma ray spectrometer, 0.2 second for altimeter and GPS. This translates to a geophysical reading about every 2 meters along flight track. Navigation was assisted by a CDGPS receiver and data acquisition system, which reports GPS co-ordinates as latitude/longitude and directs the pilot over a pre-programmed survey grid.

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

On return of the aircrew to the base camp the survey data was transferred from a compact flash card (PCMCIA) to the data processing computer. The data were then uploaded via ftp to the Geotech office in Aurora, ON for daily quality assurance and quality control by qualified personnel, operating remotely.

## 2.4 Aircraft and Equipment

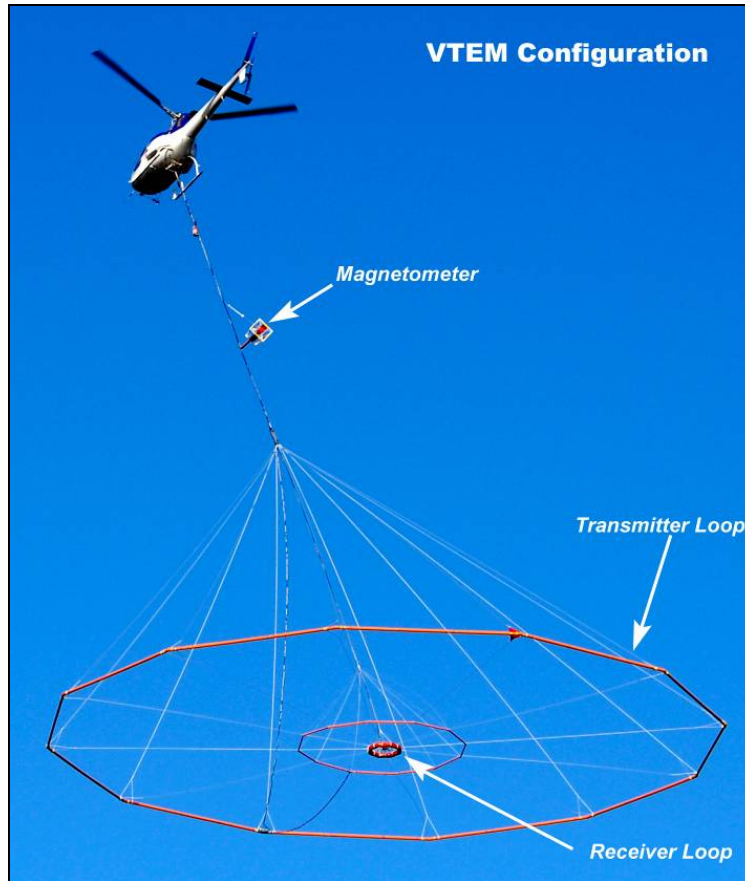
### 2.4.1 Survey Aircraft

The survey was flown using Astar B3, registration C-GAVO. The helicopter was operated by Great Slave Helicopters Ltd., based out of Yellowknife, Northwest Territories. Installation of the geophysical and ancillary equipment was carried out by Geotech Ltd.

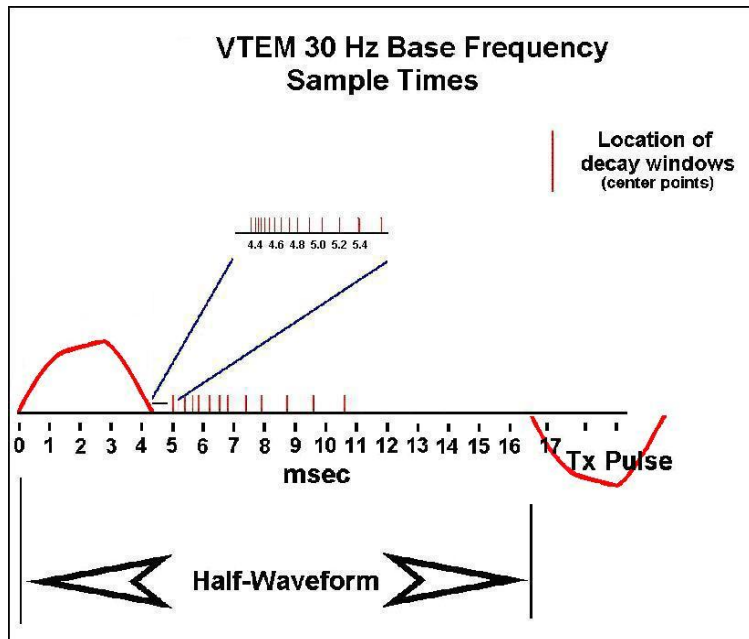
### 2.4.2 Electromagnetic System

The electromagnetic system was a Geotech Time Domain EM (VTEM) system. The configuration is as indicated in Figure 3 below.

Receiver and transmitter coils are concentric and Z-direction oriented. The coils were towed at a mean distance of 35 meters below the aircraft as shown in Figure 5. The receiver decay recording scheme is shown diagrammatically in Figure 4.



**Figure 3 - VTEM Configuration**



**Figure 4 - VTEM Short Pulse (4 ms) Waveform & Sample Times.**

The complete VTEM decay sampling scheme is shown in Table 3 below. Twenty-six time measurement gates (channels 10 to 35) were used for the final data processing in the range from 120 ms to 9245 ms, as shown in Table 5.

**Table 3 – Decay Sampling Scheme**

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

VTEM system parameters:

Transmitter Section

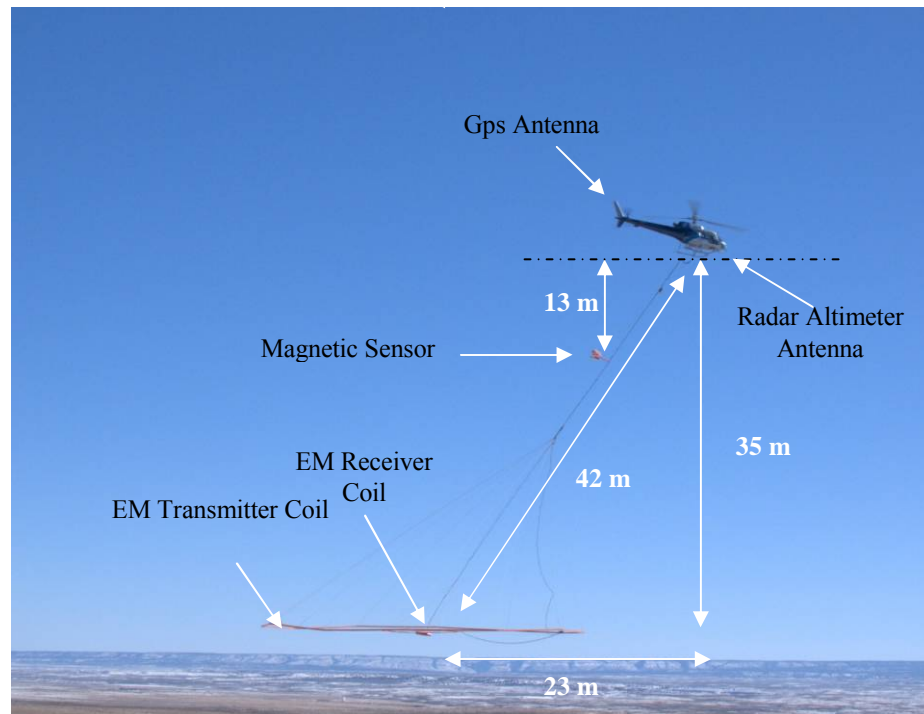
- Transmitter coil diameter: 26 m
- Number of turns: 4
- Transmitter base frequency: 30 Hz
- Peak current: 266 A
- Pulse width: 4.8 ms
- Duty cycle: 29%
- Peak dipole moment: 535, 966 nIA
- Nominal terrain clearance: 39 m

Receiver Section

- Receiver coil diameter: 1.2 m
- Number of turns: 100
- Effective coil area: 113.1 m<sup>2</sup>
- Wave form shape: trapezoid
- Power Line Monitor: 60 Hz

Magnetometer

- Nominal terrain clearance: 61 m



**Figure 5 – VTEM system configuration**

### 2.4.3 Airborne magnetometer

The magnetic sensor utilized for the survey was a Geometrics optically pumped caesium vapour magnetic field sensor, mounted in a separated bird, 13 metres below the helicopter, as shown in Figure 5. The sensitivity of the magnetic sensor is 0.02 nanoTesla (nT) at a sampling interval of 0.1 seconds. The magnetometer sends the measured magnetic field strength as nanoTesla to the data acquisition system via the RS-232 port.

### 2.4.4 Radar Altimeter

A Terra TRA 3000/TRI 40 radar altimeter was used to record terrain clearance. The antenna was mounted beneath the bubble of the helicopter cockpit (Figure 5).

### 2.4.5 GPS Navigation System

The navigation system used was a Geotech PC104 based navigation system utilizing a NovAtel's CDGPS (Canada-Wide Differential Global Positioning System Correction Service) enable OEM4-G2-3151W GPS receiver, Geotech navigate software, a full screen display with controls in front of the pilot to direct the flight and an NovAtel GPS antenna mounted on the helicopter tail (Figure 5). As many as 11 GPS and two CDGPS satellites may be monitored at any one time. The positional accuracy or circular error probability (CEP) is 1.8 m, with CDGPS active, it is 1.0 m. The co-ordinates of the block were set-up prior to the survey and the information was fed into the airborne navigation system.

### 2.4.6 Digital Acquisition System

A Geotech data acquisition system recorded the digital survey data on an internal compact flash card. Data is displayed on an LCD screen as traces to allow the operator to monitor the integrity of the system. The data type and sampling interval as provided in Table 4

**Table 4** – Acquisition Sampling Rates

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

### **2.4.7 Base Station**

A combined magnetometer/GPS base station was utilized on this project. A Geometrics Caesium vapour magnetometer was used as a magnetic sensor with a sensitivity of 0.001 nT. The base station was recording the magnetic field together with the GPS time at 1 Hz on a base station computer.

The base station magnetometer sensor was installed in an isolated area 300 m from Mayo Airport (63°37'03" N, 135°52'30" W), away from electric transmission lines and moving ferrous objects such as motor vehicles. The base station data were backed-up to the data processing computer at the end of each survey day.

### 3. PERSONNEL

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

Field:

Project Manager: Les Moschuk

Crew chief: Ryan MacIver  
Kevin Boyer

Operator: Eric McNeil  
Jim Buchanan

The survey pilot and the mechanical engineer were employed directly by the helicopter operator – Great Slave Helicopters Ltd.

Pilot: Adam Kristenson

Mechanical Engineer: Chris Williams

Office:

QA/QC: Neil Fiset

Preliminary Data Processing Neil Fiset

Final Data Processing: Neil Fiset

Reporting/Mapping: Kezia Au

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

## **4. DATA PROCESSING AND PRESENTATION**

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

### **4.1 Flight Path**

The flight path, recorded by the acquisition program as WGS 84 latitude/longitude, was projected into the WGS 84 UTM coordinate system (UTM Zone 8N) in Oasis Montaj.

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

### **4.2 Electromagnetic Data**

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

The signal to noise ratio was further improved by the application of a low pass linear digital filter. This filter has zero phase shift which prevents any lag or peak displacement from occurring, and it suppresses only variations with a wavelength of less than roughly 1 second or 15 metres. This filter is a symmetrical 1 second linear filter.

The results are presented as stacked profiles of EM voltages for the time gates, in linear - logarithmic scale for both B-field and dB/dt response. A grid of the B-field time channel, recorded 2.307 milliseconds after the termination of the impulse is also presented as contour colour image.

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

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



### 4.3 Magnetic Data

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

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

The corrected magnetic data were interpolated between survey lines using a random point gridding method to yield x-y grid values for a standard grid cell size of approximately 0.5 cm at the mapping scale. The Minimum Curvature algorithm was used to interpolate values onto a rectangular regular spaced grid.

## 5. DELIVERABLES

### 5.1 Survey Report

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

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

### 5.2 Maps

Final maps were produced at a scale of 1:20,000 for Clear Lake Property. The coordinate/projection system used was WGS 84, UTM zone 8 north. All maps show the flight path trace and topographic data; latitude and longitude are also noted on maps.

The preliminary and final results of the survey are presented as EM profiles, a late-time gate gridded EM channel, a color magnetic contour map, and various spectrometer maps. The following maps are presented on paper;

- B-field profiles, Time Gates 0.234 – 9.245 ms in linear logarithmic scale, with TMI colour image.
- B/dt profiles, Time Gates 0.234 – 9.245 ms in linear logarithmic scale.
- B-field mid time, Time Gate 2.307 ms colour image and contours.
- Total magnetic intensity colour image and contours.

### 5.3 Digital Data

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

There are two (2) main directories,

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

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

**Table 5 – Geosoft GDB Data Format.**

<b>Channel Name</b>	<b>Description</b>
Line:	Flight line number with flight number
X:	X positional data (meters – WGS 84, UTM zone 8 north)
Y:	Y positional data (meters –WGS 84, UTM zone 8 north)
Z:	GPS antenna elevation (meters - ASL)
Radar:	Helicopter terrain clearance from radar altimeter (meters - AGL)
RadarB:	EM Bird terrain clearance from radar altimeter (meters - AGL)
DEM:	Digital elevation model (meters)
Gtime:	GPS time (seconds of the day)
Mag1:	Raw Total Magnetic field data (nT)
Mag2:	Diurnal corrected Total Magnetic field data (nT)
Magfin:	Leveled Total Magnetic field data (nT)
Basemag:	Magnetic diurnal variation data (nT)
SF[10]:	dB/dt 120 microsecond time channel (pV/A/m <sup>4</sup> )
SF[11]:	dB/dt 141 microsecond time channel (pV/A/m <sup>4</sup> )
SF[12]:	dB/dt 167 microsecond time channel (pV/A/m <sup>4</sup> )
SF[13]:	dB/dt 198 microsecond time channel (pV/A/m <sup>4</sup> )
SF[14]:	dB/dt 234 microsecond time channel (pV/A/m <sup>4</sup> )
SF[15]:	dB/dt 281 microsecond time channel (pV/A/m <sup>4</sup> )
SF[16]:	dB/dt 339 microsecond time channel (pV/A/m <sup>4</sup> )
SF[17]:	dB/dt 406 microsecond time channel (pV/A/m <sup>4</sup> )
SF[18]:	dB/dt 484 microsecond time channel (pV/A/m <sup>4</sup> )
SF[19]:	dB/dt 573 microsecond time channel (pV/A/m <sup>4</sup> )
SF[20]:	dB/dt 682 microsecond time channel (pV/A/m <sup>4</sup> )
SF[21]:	dB/dt 818 microsecond time channel (pV/A/m <sup>4</sup> )
SF[22]:	dB/dt 974 microsecond time channel (pV/A/m <sup>4</sup> )
SF[23]:	dB/dt 1151 microsecond time channel (pV/A/m <sup>4</sup> )
SF[24]:	dB/dt 1370 microsecond time channel (pV/A/m <sup>4</sup> )
SF[25]:	dB/dt 1641 microsecond time channel (pV/A/m <sup>4</sup> )
SF[26]:	dB/dt 1953 microsecond time channel (pV/A/m <sup>4</sup> )
SF[27]:	dB/dt 2307 microsecond time channel (pV/A/m <sup>4</sup> )
SF[28]:	dB/dt 2745 microsecond time channel (pV/A/m <sup>4</sup> )
SF[29]:	dB/dt 3286 microsecond time channel (pV/A/m <sup>4</sup> )
SF[30]:	dB/dt 3911 microsecond time channel (pV/A/m <sup>4</sup> )
SF[31]:	dB/dt 4620 microsecond time channel (pV/A/m <sup>4</sup> )
SF[32]:	dB/dt 5495 microsecond time channel (pV/A/m <sup>4</sup> )
SF[33]:	dB/dt 6578 microsecond time channel (pV/A/m <sup>4</sup> )
SF[34]:	dB/dt 7828 microsecond time channel (pV/A/m <sup>4</sup> )
SF[35]:	dB/dt 9245 microsecond time channel (pV/A/m <sup>4</sup> )
BF[10]:	B-field 120 microsecond time channel (pVms)/(Am <sup>4</sup> )
BF[11]:	B-field 141 microsecond time channel (pVms)/(Am <sup>4</sup> )
BF[12]:	B-field 167 microsecond time channel (pVms)/(Am <sup>4</sup> )
BF[13]:	B-field 198 microsecond time channel (pVms)/(Am <sup>4</sup> )

Channel Name	Description
BF[14]:	B-field 234 microsecond time channel (pVms)/(Am <sup>4</sup> )
BF[15]:	B-field 281 microsecond time channel (pVms)/(Am <sup>4</sup> )
BF[16]:	B-field 339 microsecond time channel (pVms)/(Am <sup>4</sup> )
BF[17]:	B-field 406 microsecond time channel (pVms)/(Am <sup>4</sup> )
BF[18]:	B-field 484 microsecond time channel (pVms)/(Am <sup>4</sup> )
BF[19]:	B-field 573 microsecond time channel (pVms)/(Am <sup>4</sup> )
BF[20]:	B-field 682 microsecond time channel (pVms)/(Am <sup>4</sup> )
BF[21]:	B-field 818 microsecond time channel (pVms)/(Am <sup>4</sup> )
BF[22]:	B-field 974 microsecond time channel (pVms)/(Am <sup>4</sup> )
BF[23]:	B-field 1151 microsecond time channel (pVms)/(Am <sup>4</sup> )
BF[24]:	B-field 1370 microsecond time channel (pVms)/(Am <sup>4</sup> )
BF[25]:	B-field 1641 microsecond time channel (pVms)/(Am <sup>4</sup> )
BF[26]:	B-field 1953 microsecond time channel (pVms)/(Am <sup>4</sup> )
BF[27]:	B-field 2307 microsecond time channel (pVms)/(Am <sup>4</sup> )
BF[28]:	B-field 2745 microsecond time channel (pVms)/(Am <sup>4</sup> )
BF[29]:	B-field 3286 microsecond time channel (pVms)/(Am <sup>4</sup> )
BF[30]:	B-field 3911 microsecond time channel (pVms)/(Am <sup>4</sup> )
BF[31]:	B-field 4620 microsecond time channel (pVms)/(Am <sup>4</sup> )
BF[32]:	B-field 5495 microsecond time channel (pVms)/(Am <sup>4</sup> )
BF[33]:	B-field 6578 microsecond time channel (pVms)/(Am <sup>4</sup> )
BF[34]:	B-field 7828 microsecond time channel (pVms)/(Am <sup>4</sup> )
BF[35]:	B-field 9245 microsecond time channel (pVms)/(Am <sup>4</sup> )
Lon:	Longitude data (degree – WGS84)
Lat:	Latitude data (degree – WGS84)
PLinef:	60 Hz power line monitor

Electromagnetic B-field and dB/dt data is found in array channel format between indexes 10 – 35, as described above.

- Database of the VTEM Waveform “Waveform.gdb” in Geosoft GDB format, containing the following channels:

Time: Sampling rate interval, 10.416 microseconds  
RX\_Volt: Output voltage of the receiver coil (volt)  
TX\_Curr: Output current of the transmitter (amps)

- Grids in Geosoft GRD format, as follow,

8138\_mag3: Total magnetic intensity (nT)  
8138\_BF27: B-Field Channel 27 (Time Gate 2.307 ms.)

A Geosoft .GRD file has a .GI metadata file associated with it, containing grid projection information. A grid cell size of 50 meters was used for the grids.

- Maps at 1:20, 000 in Geosoft MAP format, as follows:

Clearlake \_TMI\_BF: B-field profiles, Time Gates 0.234 – 9.245 ms in linear logarithmic scale, with TMI colour image.

Clearlake \_dBdt: dB/dt profiles, Time Gates 0.234 – 9.245 ms in linear logarithmic scale.

Clearlake \_BF: B-field mid time, Time Gate 2.307 ms colour image.

Clearlake \_TMI: Total magnetic intensity colour image and contours.

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

- Google Earth files Flighpath\_in.kml showing the flight path of the blocks.

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

## 6. CONCLUSIONS AND RECOMMENDATIONS

### 6.1 Conclusions

A helicopter-borne versatile time domain electromagnetic (VTEM) geophysical survey has been completed over one block one the Clear Lake Property situated near Mayo, Yukon, Canada.

The total area coverage is 42.5 km<sup>2</sup>. Total survey line coverage is 235 line kilometres. The principal sensors included a Time Domain EM system and a magnetometer. Results have been presented as stacked profiles and contour colour images at a scale of 1:20,000.

### 6.2 Recommendations

Based on the geophysical results obtained, a number of interesting EM and magnetic anomaly groupings were identified across the property. We therefore recommend a more detailed interpretation of the EM and magnetic data including EM anomaly picking and EM time constant analysis, as well as using inversion and modelling technique to better characterize the observed anomalies and to more accurately determine their parameters (depth, conductance, dip, etc.) prior to ground follow-up and drill testing.

Respectfully submitted<sup>1</sup>,

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Kezia Au  
**Geotech Ltd.**

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

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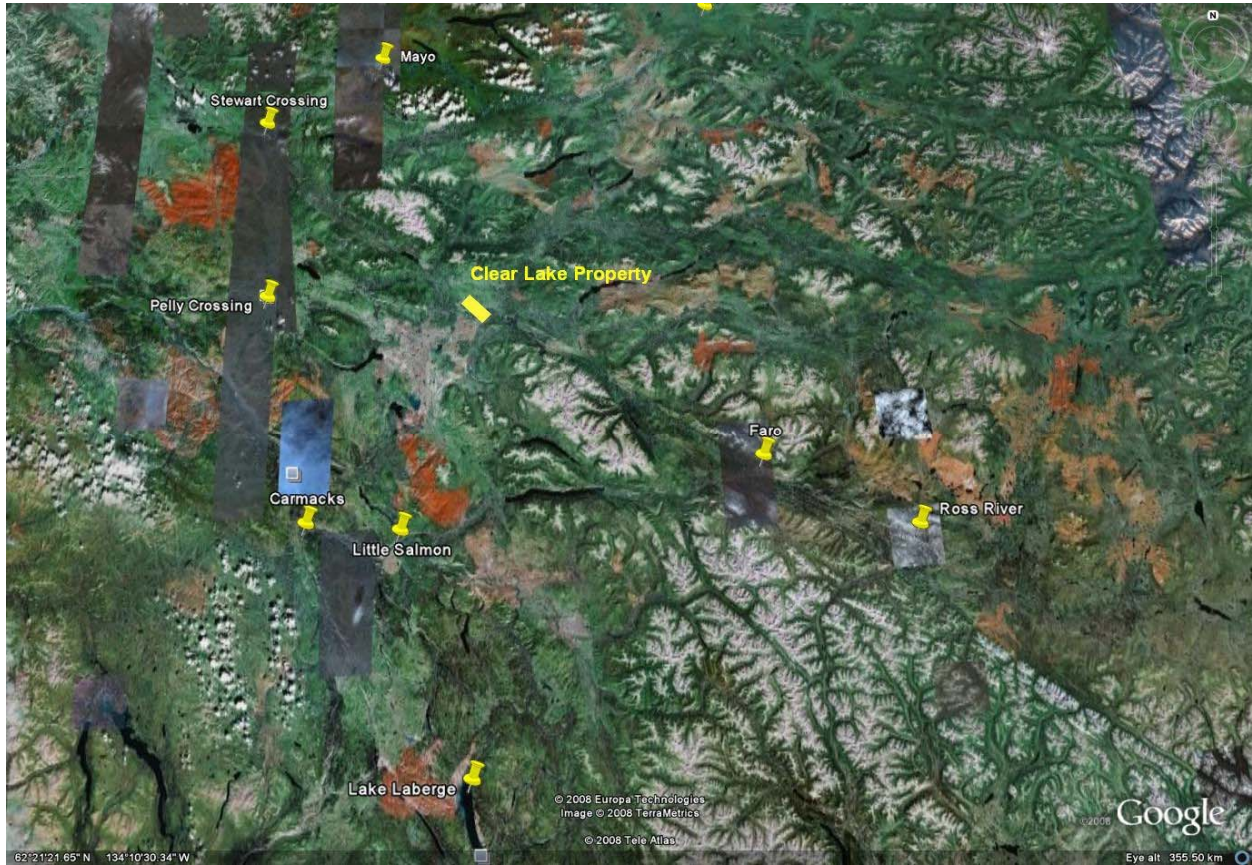
Neil Fiset  
**Geotech Ltd.**

September 2008

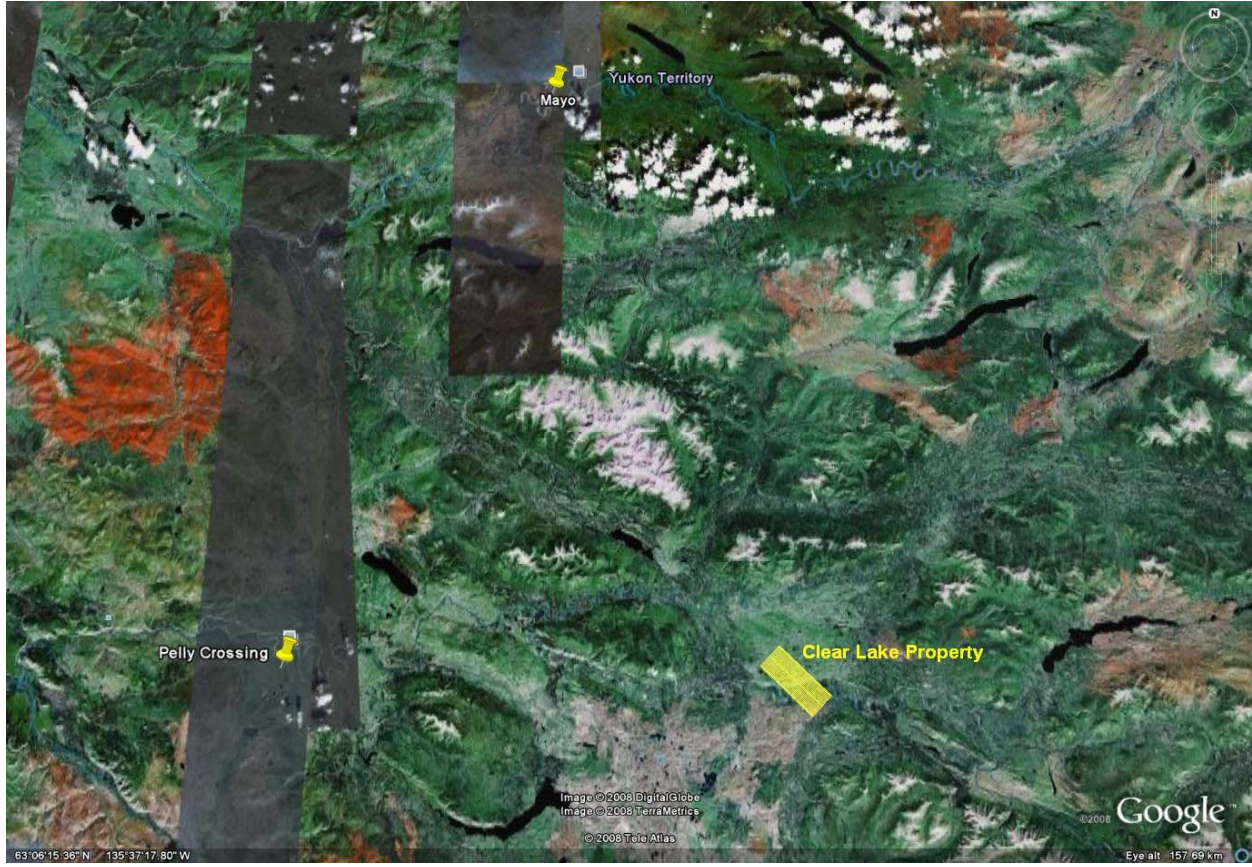
<sup>1</sup>Final data processing of the EM-magnetic geophysical data were carried out by Neil Fiset, from the office of Geotech Ltd. in Aurora, Ontario, under the supervision of Jean Legault, P. Geo, Manager of Data Processing and Interpretation.

## APPENDIX A

### SURVEY BLOCK LOCATION MAPS



Location map for Clear Lake Property



Google Earth Imagery



## APPENDIX B

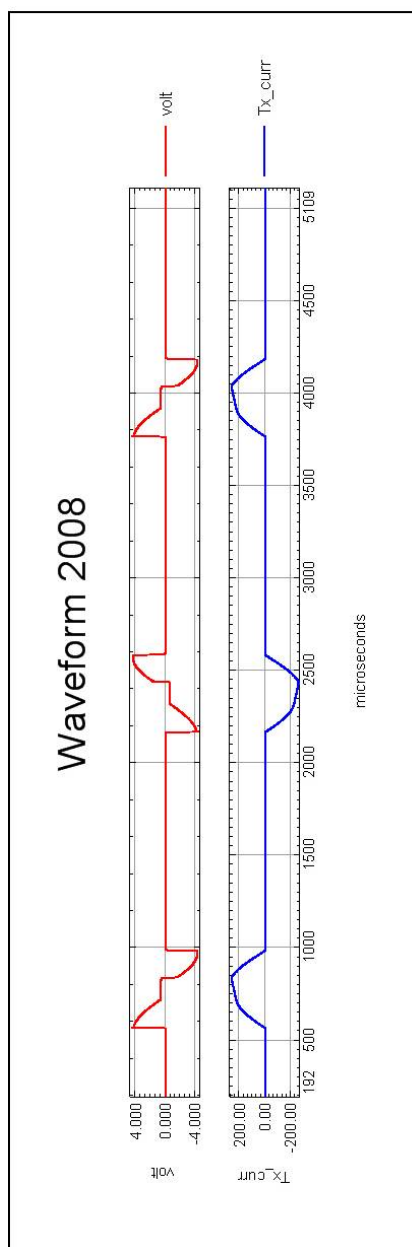
### SURVEY BLOCK COORDINATES

(WGS 84, UTM zone 8 north)

Clear Lake Property	
X	Y
486540	6962840
489350	6965655
496430	6958560
493550	6955700

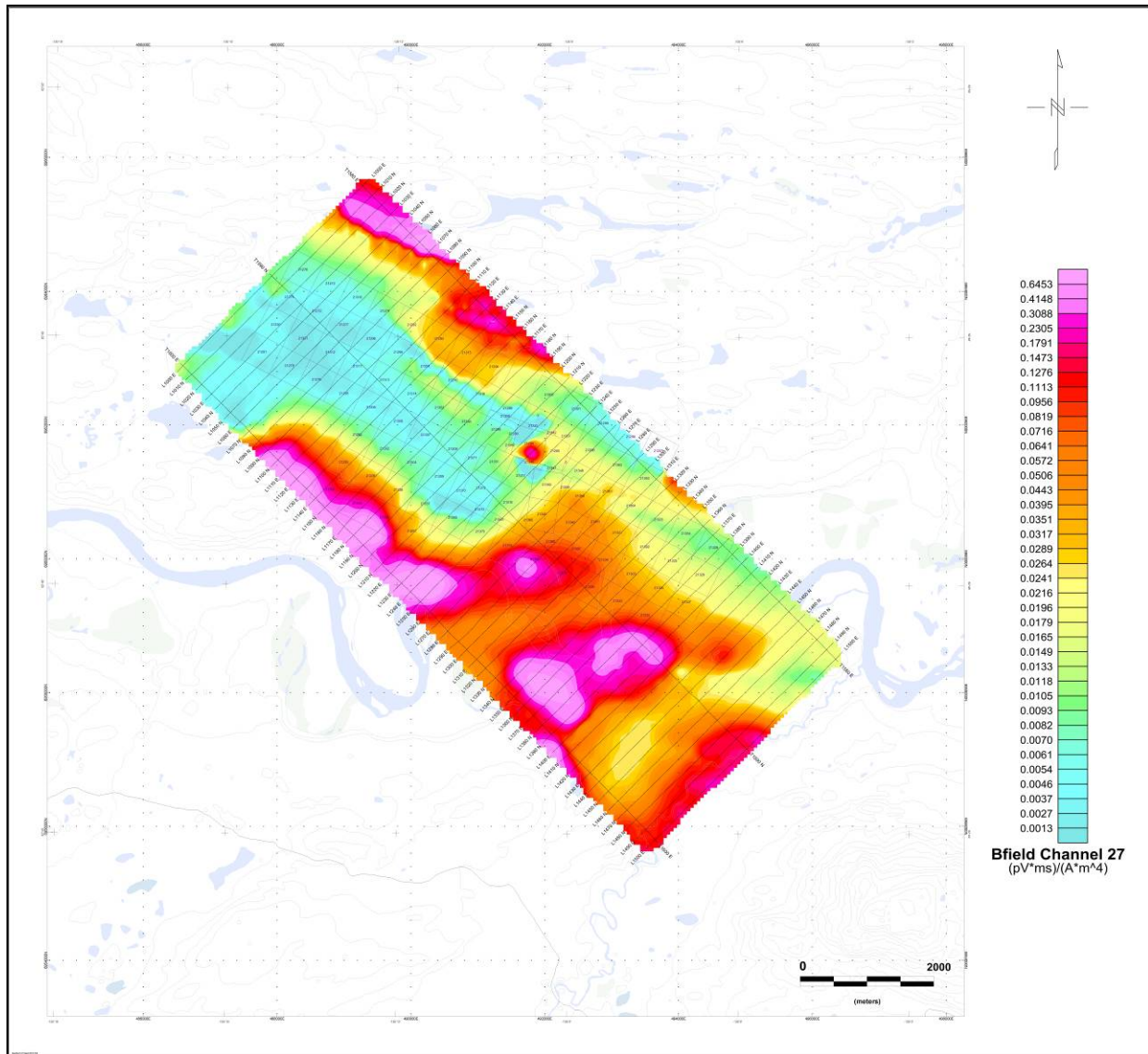
# APPENDIX C

## VTEM WAVEFORM

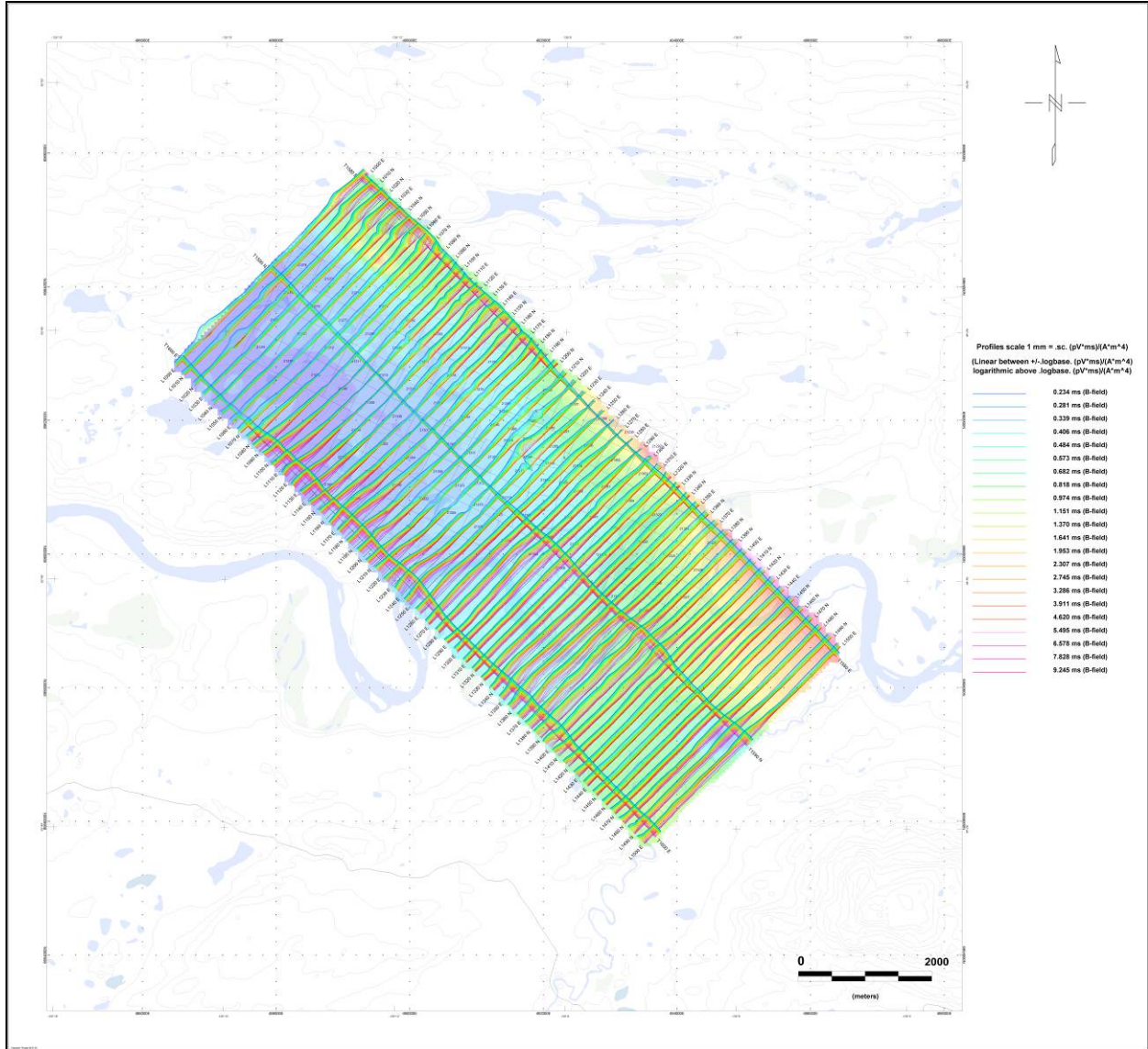


# APPENDIX D

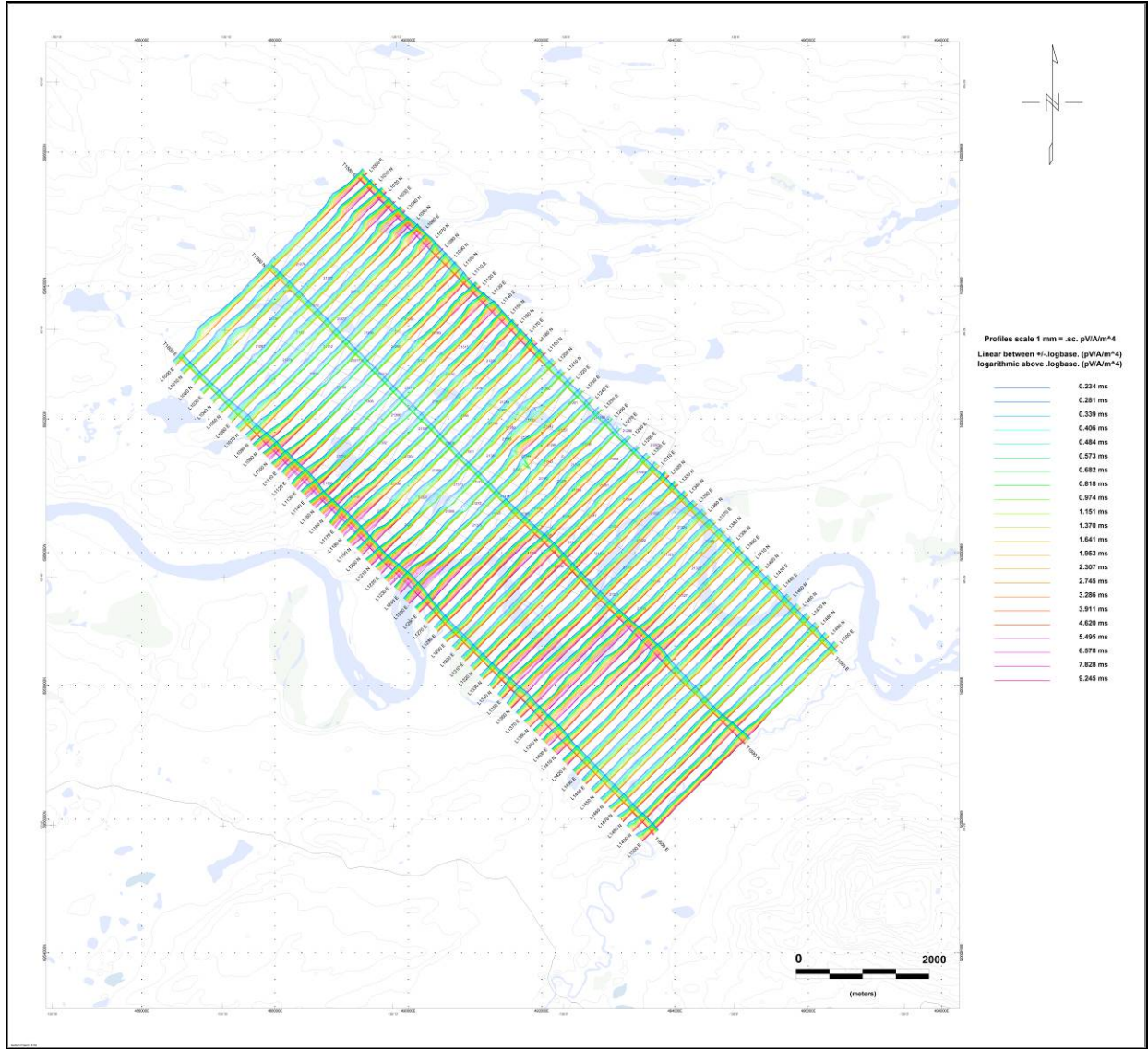
## GEOPHYSICAL MAP



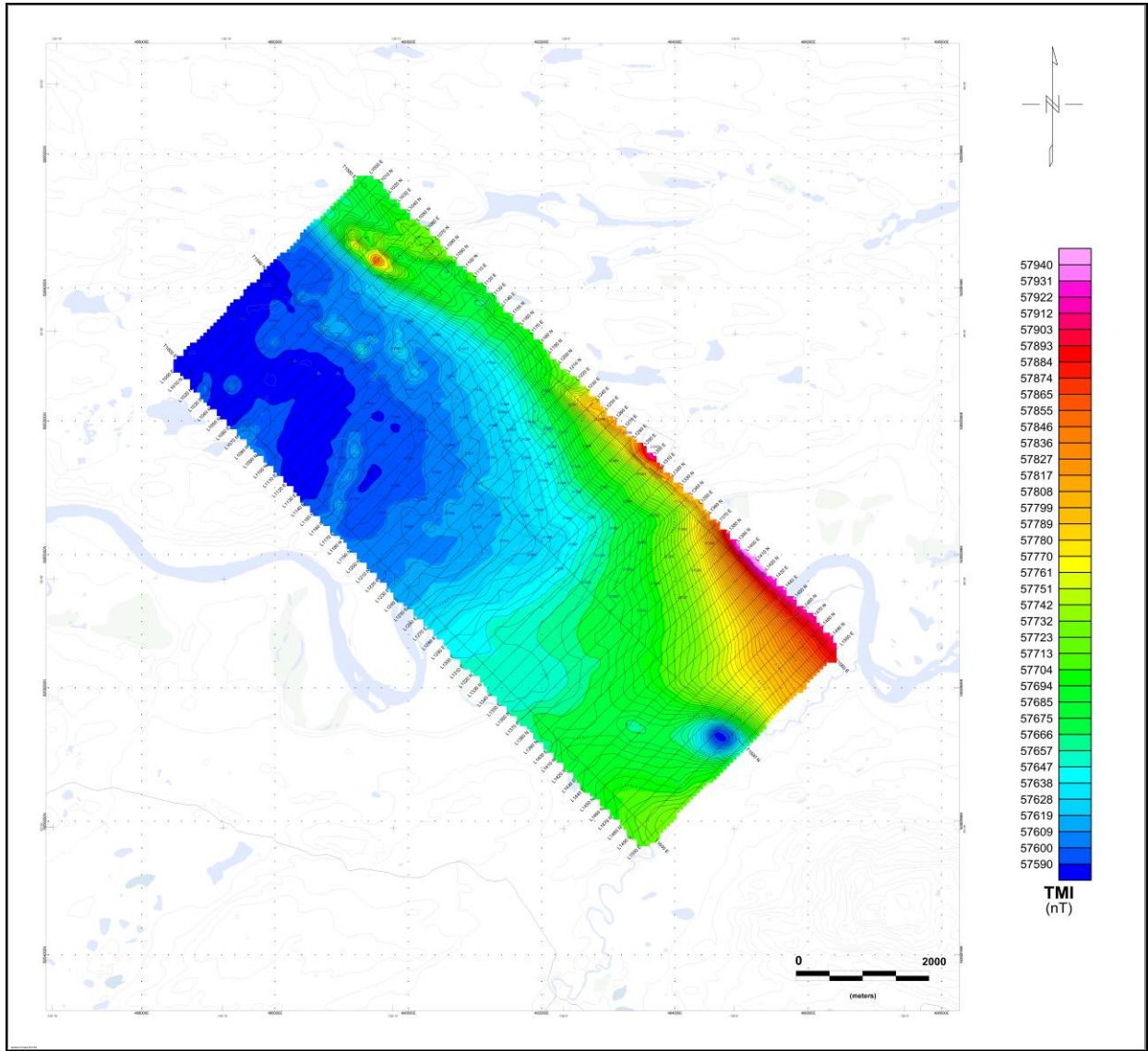
**Clear Lake Property, B-Field Time Gate 2.307 ms**



**Clear Lake Property, VTEM B-Field Profiles over TMI image  
 – Time Gates 0.234 to 9.245 ms**



**Clear Lake Property, VTEM dB/dt Profiles – Time Gates 0.234 to 9.245 ms**



**Clear Lake Property, Total Magnetic Intensity**

## APPENDIX E

### GENERALIZED MODELING RESULTS OF THE VTEM SYSTEM

#### Introduction

The VTEM system is based on a concentric or central loop design, whereby, the receiver is positioned at the centre of a 26.1 meters diameter transmitter loop that produces a dipole moment up to 535,966 nIA at peak current. The wave form is a bi-polar, modified square wave with a turn-on and turn-off at each end. With a base frequency of 30 Hz, the duration of each pulse is approximately 4.8 milliseconds followed by an off time where no primary field is present.

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

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

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

#### General Modeling Concepts

A set of models has been produced for the Geotech VTEM® system with explanation notes (see models C1 to C18). The reader is encouraged to review these models, so as to get a general understanding of the responses as they apply to survey results. While these models do not begin to cover all possibilities, they give a general perspective on the simple and most commonly encountered anomalies.

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

- For near vertical and vertical plate models, the top of the conductor is always located directly under the centre low point between the two shoulders in the classic **M** shaped response.

- As the plate is positioned at an increasing depth to the top, the shoulders of the **M** shaped response, have a greater separation distance.
- When faced with choosing between a flat lying plate and a prism model to represent the target (broad response) some ambiguity is present and caution should be exercised.
- With the concentric loop system and Z-component receiver coil, virtually all types of conductors and most geometries are most always well coupled and a response is generated. Only concentric loop systems can map these varieties of target geometries.

The Maxwell™ EM modeling program (EMIT Technology Ltd. Pty., Midland WA, AU) used to generate the following dB/dt and B-field off-time responses all assume a conductive plate in an infinitely resistive half-spaced host rock

### **Variation of Plate Depth**

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

Diagrammatic models for a vertical plate are shown in Figures C-1 & C-2 and C-5 & C-6 at two different depths, all other parameters remaining constant. With this transmitter-receiver geometry, the classic **M** shaped response is generated. Figures C-1 and C-2 show a plate where the top is near surface. Here, amplitudes of the dual peaks are higher and symmetrical with the zero centre positioned directly above the plate. Most important is the separation distance of the peaks. This distance is small when the plate is near surface and widens with a linear relationship as the plate (depth to top) increases. Figures C-5 and C-6 show a much deeper plate where the separation distance of the peaks is much wider and the amplitudes of the channels have decreased.

### **Variation of Plate Dip**

As the plate dips and departs from the vertical position, the peaks become asymmetrical. Figures C-3 & C-4 and C-7 and C-8 show a near surface plate dipping 80° at two different depths. Note that the direction of dip is toward the high shoulder of the response and the top of the plate remains under the centre minimum.

As the dip increases, the aspect ratio (Min/Max) decreases and this aspect ratio can be used as an empirical guide to dip angles from near 90° to about 30°. The method is not sensitive enough where dips are less than about 30°. For example, for a plate dipping 45°, the minimum shoulder



starts to vanish. In Figures C-9 & C-10 and C-11 & C-12, a flat lying plate is shown, relatively near surface. Note that the twin peak anomaly has been replaced by a symmetrical shape with large, bell shaped, channel amplitudes which decay relative to the conductance of the plate.

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

### **Variation of Prism Dip**

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

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

## I. THIN PLATE

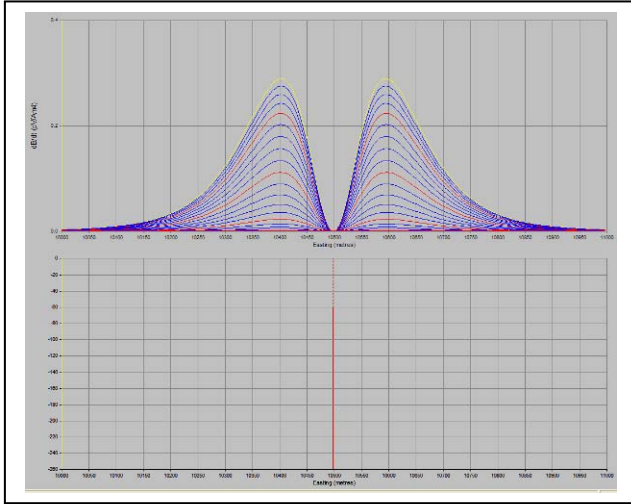


Figure C-1: dB/dt response of a shallow vertical thin plate. Depth=100 m, CT=20 S. The EM response is normalized by the dipole moment and the Rx area.

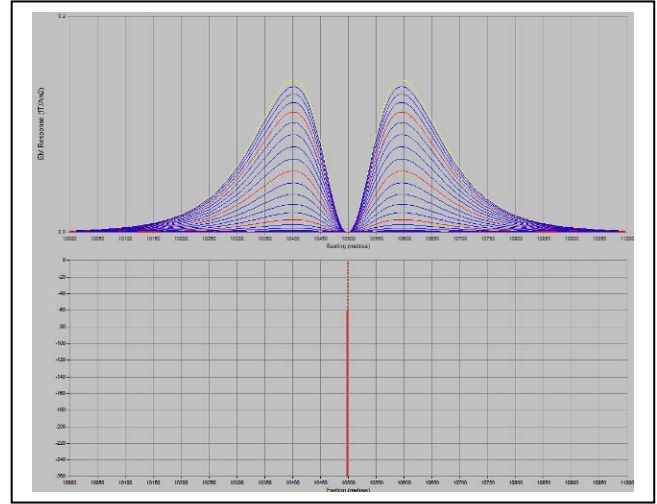


Figure C-2: B-field response of a shallow vertical thin plate. Depth=100 m, CT=20 S. The EM response is normalized by the dipole moment.

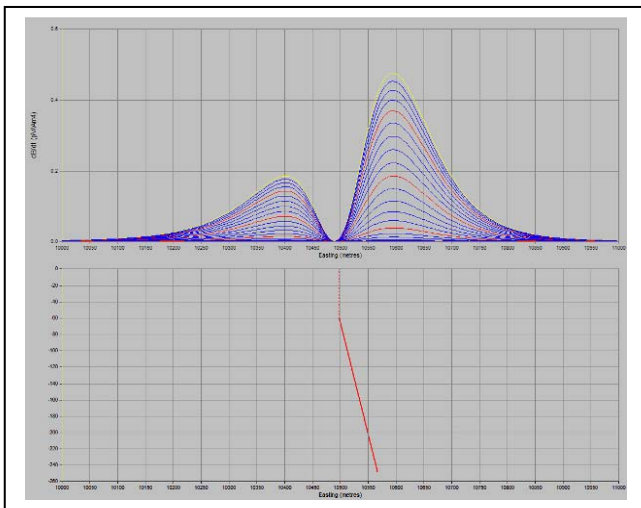


Figure C-3: dB/dt response of a shallow skewed thin plate. Depth=100 m, CT=20 S. The EM response is normalized by the dipole moment and the Rx area.

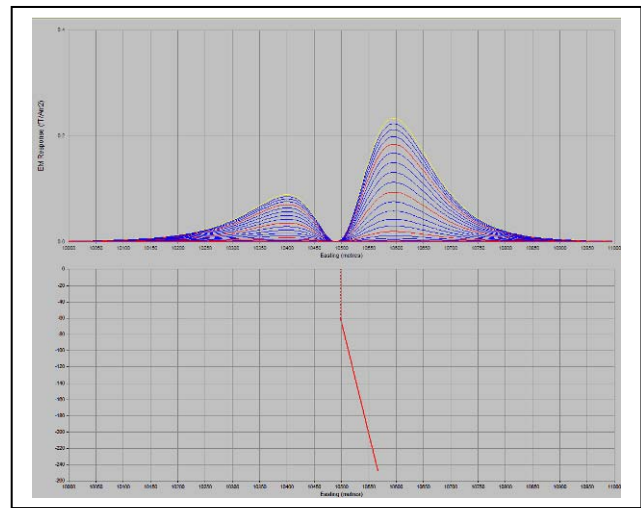


Figure C-4: B-field response of a shallow skewed thin plate. Depth=100 m, CT=20 S. The EM response is normalized by the dipole moment.

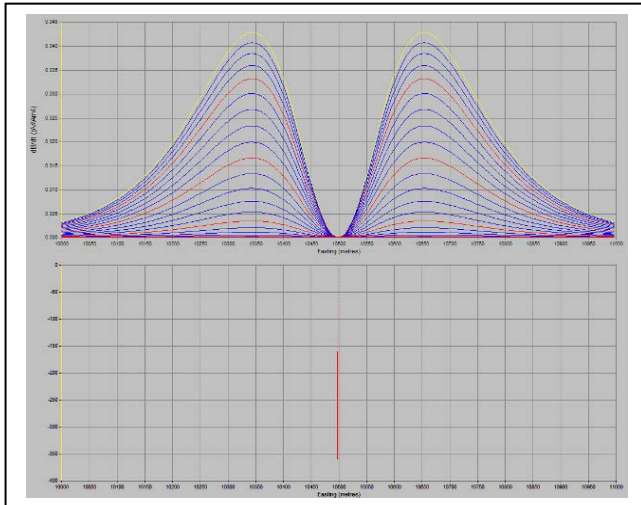


Figure C-5: dB/dt response of a deep vertical thin plate. Depth=200 m, CT=20 S. The EM response is normalized by the dipole moment and the Rx area.

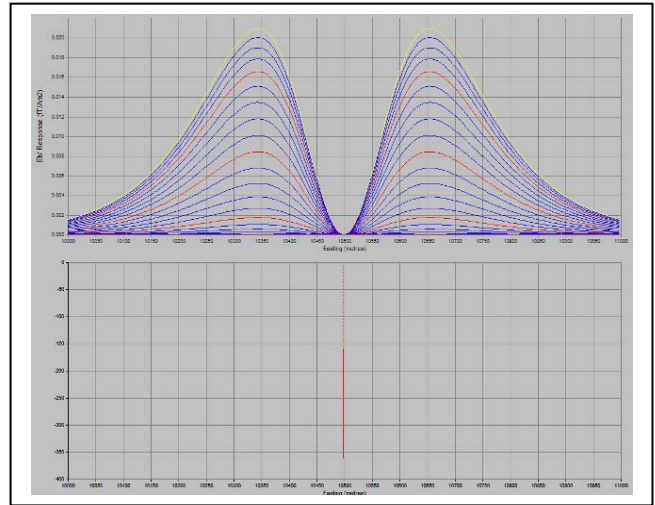


Figure C-6: B-Field response of a deep vertical thin plate. Depth=200 m, CT=20 S. The EM response is normalized by the dipole moment.

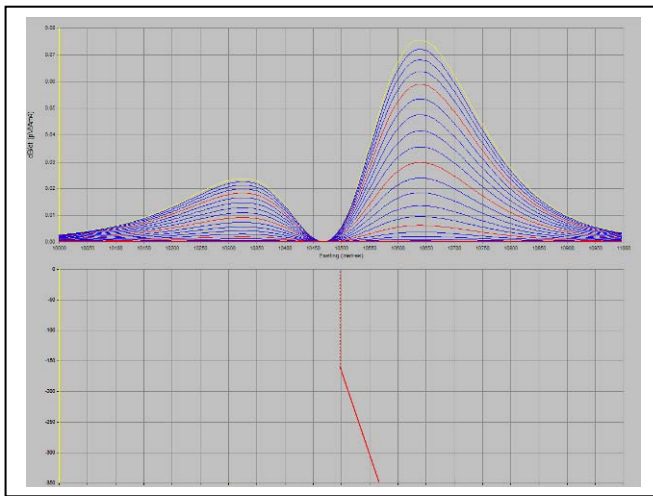


Figure C-7: dB/dt response of a deep skewed thin plate. Depth=200 m, CT=20 S. The EM response is normalized by the dipole moment and the Rx area.

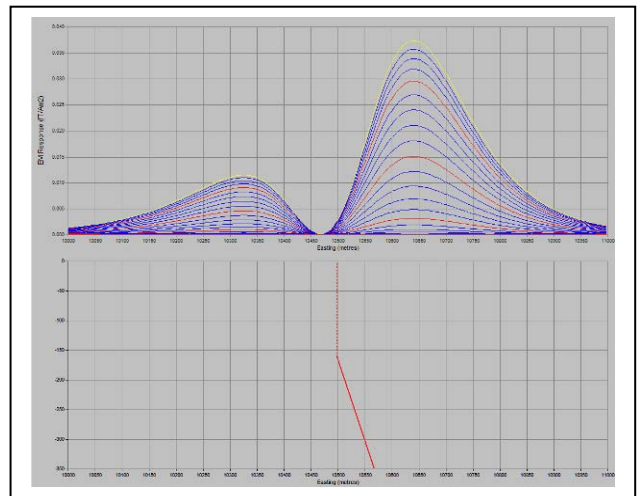


Figure C-8: B-field response of a deep skewed thin plate. Depth=200 m, CT=20 S. The EM response is normalized by the dipole moment.

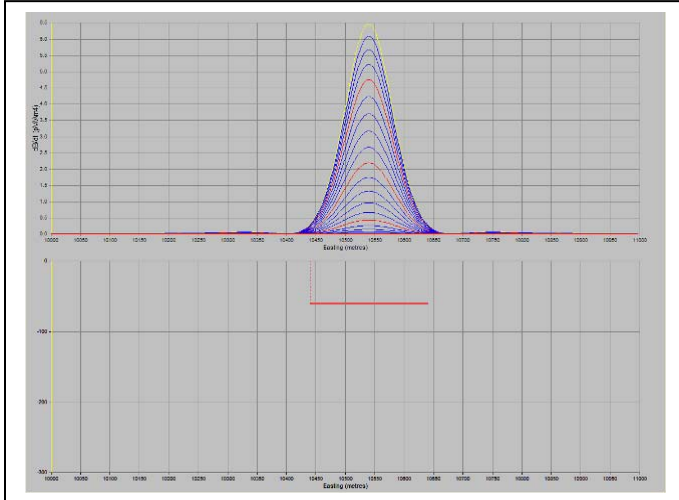


Figure C-9: dB/dt response of a shallow horizontal thin plate. Depth=100 m, CT=20 S. The EM response is normalized by the dipole moment and the Rx area.

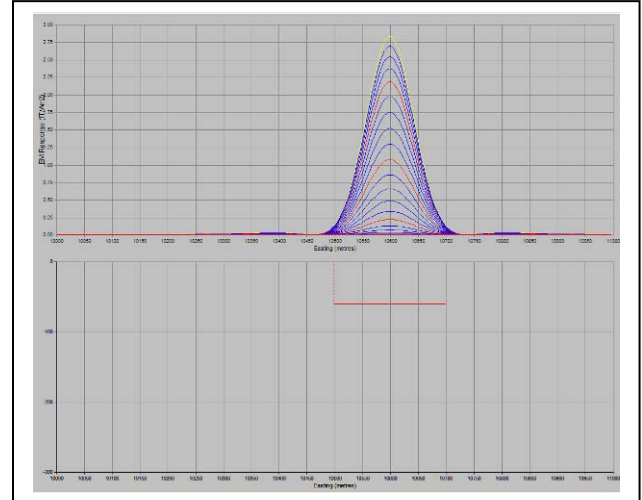


Figure C-10: B-Field response of a shallow horizontal thin plate. Depth=100 m, CT=20 S. The EM response is normalized by the dipole moment.

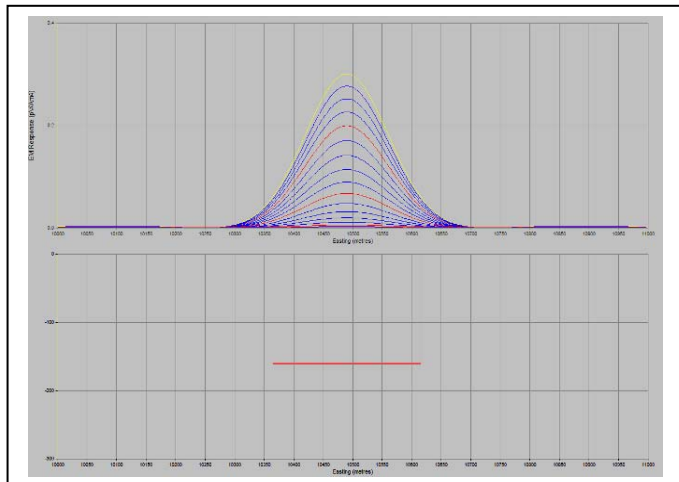


Figure C-11: dB/dt response of a deep horizontal thin plate. Depth=200 m, CT=20 S. The EM response is normalized by the dipole moment and the Rx area.

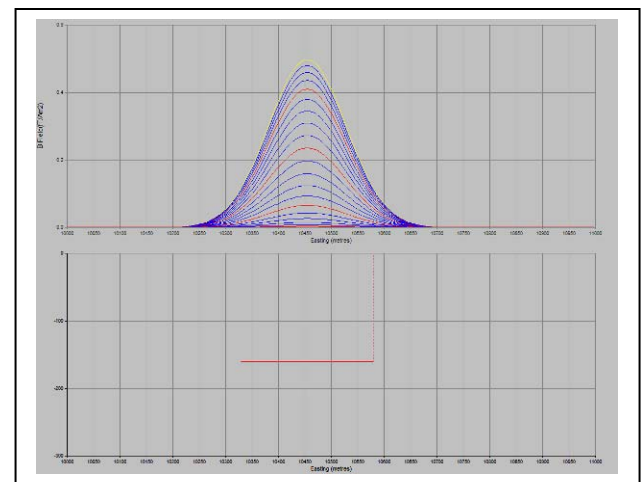


Figure C-12: B-Field response of a deep horizontal thin plate. Depth=200 m, CT=20 S. The EM response is normalized by the dipole moment.

## II. THICK PLATE

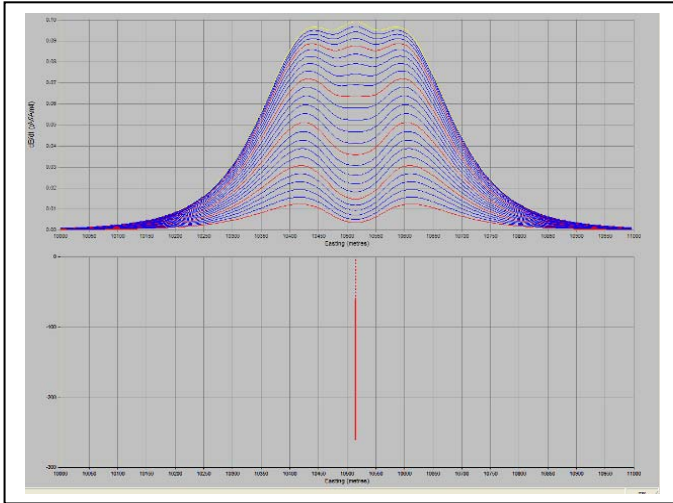


Figure C-13: dB/dt response of a shallow vertical thick plate. Depth=100 m, C=12 S/m, thickness=20 m. The EM response is normalized by the dipole moment and the Rx area.

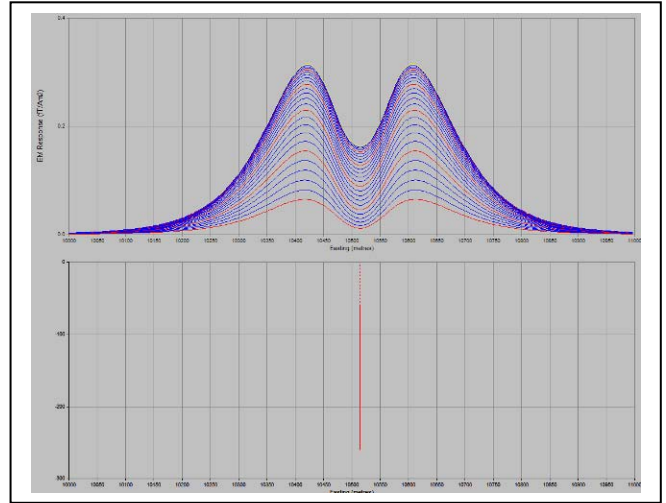


Figure C-14: B-Field response of a shallow vertical thick plate. Depth=100 m, C=12 S/m, thickness=20 m. The EM response is normalized by the dipole moment.

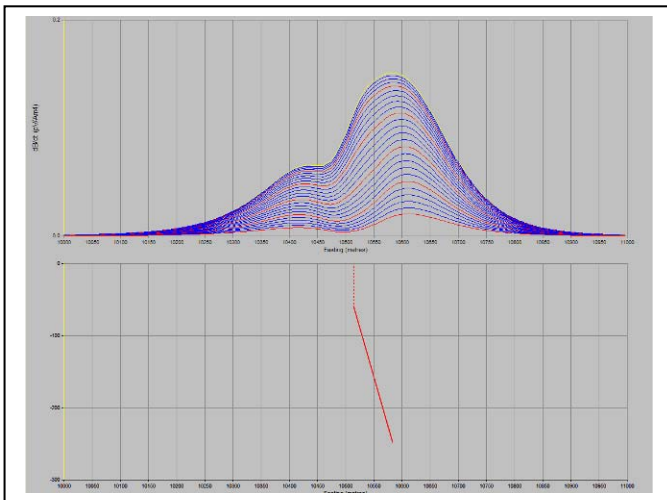


Figure C-15: dB/dt response of a shallow skewed thick plate. Depth=100 m, C=12 S/m, thickness=20 m. The EM response is normalized by the dipole moment and the Rx area.

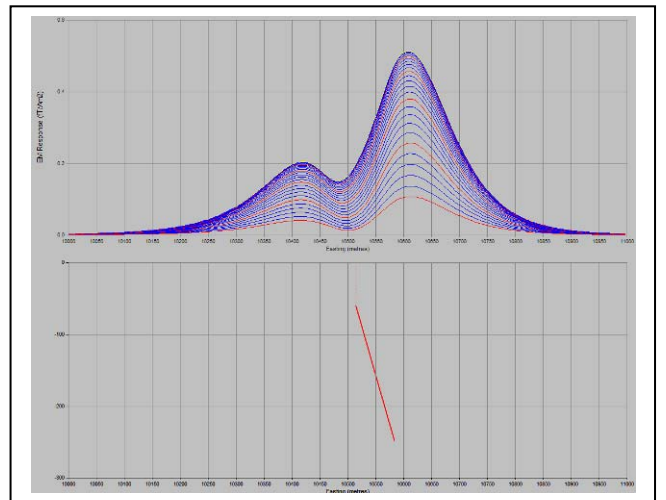


Figure C-16: B-Field response of a shallow skewed thick plate. Depth=100 m, C=12 S/m, thickness=20 m. The EM response is normalized by the dipole moment.

### III. MULTIPLE THIN PLATES

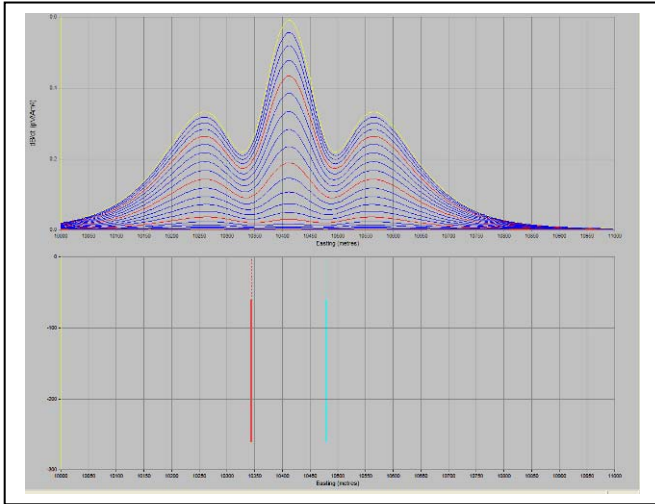


Figure C-17: dB/dt response of two vertical thin plates. Depth=100 m, CT=20 S. The EM response is normalized by the dipole moment and the Rx area.

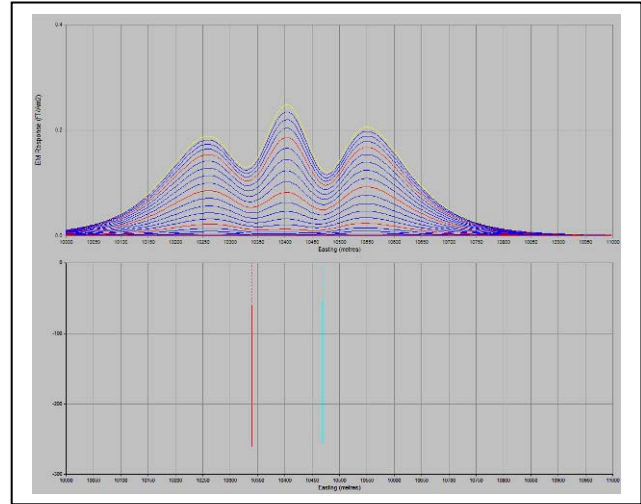


Figure C-18: B-Field response of two vertical thin plates. Depth=100 m, CT=20 S. The EM response is normalized by the dipole moment.

## General Interpretation Principals

### Magnetics

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

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

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

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

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

### Concentric Loop EM Systems

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

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

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

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

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



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

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

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

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Roger Barlow  
**Consultant**

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Nasreddine Bournas, P. Geo.  
Geophysicist  
**Geotech Ltd.**

September 2008

**APPENDIX II**  
**RECEIPTS**




# Geotech Ltd.

245 Industrial Parkway North, Aurora ON L4G 4C4

<b>Bill To</b>
Copper Ridge Explorations Inc. 500-625 Howe Street Vancouver, B.C. V6C 2T6

<b>Date</b>	<b>Invoice #</b>
6/17/2008	991502

<b>Terms</b>	<b>Project</b>
Due on receipt	8138

Description	Amount
Helicopter-borne time domain electromagnetic geophysical survey with VTEM system Interm Billing - 50% Minimum payment before mobilization  (Contract 100 km north west of Faro, Yukon)	31,925.00
For basic survey charge of 235 line km @\$70/line km	\$16,450.00
Charges per day for estimated 2 days @\$6000/day	\$12,000.00
Helicopter time charges for estimated 13 hours @\$1800/hr	\$23,400.00
Helicopter and Crew mob/demob	\$12,000.00
Minimum survey charge	\$63,850.00
50% of the Minimum survey charge	\$31,925.00
Business Number: 110859469	
 Project: Clear Lake Airborne Geophysics Flow-through.	

Posted  
1433

Please Remit By Bank Transfer To:  
 ROYAL BANK OF CANADA  
 3300 Highway#7 West,  
 Suite 100,Concord,  
 Ontario L4K 4M3  
 SWIFT:ROYCCAT2  
 TRANSIT#00192  
 ACCOUNT#1114834

<b>Subtotal</b>	Can\$31,925.00
<b>GST</b>	Can\$1,596.25
<b>Total</b>	Can\$33,521.25



# Geotech Ltd.

245 Industrial Parkway North, Aurora, ON L4G 4C4

<b>BILL TO:</b>
Copper Ridge Explorations Inc. 500-625 Howe Street Vancouver, B.C. V6C 2T6

<b>DATE:</b>	<b>INVOICE:</b>
7/31/2008	991578

<b>TERMS:</b>	<b>Project</b>
Due on receipt	8138

Description	Amount
Helicopter-borne time domain electromagnetic geophysical survey with VTEM system Interm Billing -95% Minimum payment upon completion of flying.  (Contract 100 km north west of Faro, Yukon)	28,732.50
For basic survey charge of 235 line km @\$70/line km	\$16,450.00
Charges per day for estimated 2 days @\$6000/day	\$12,000.00
Helicopter time charges for estimated 13 hours @\$1800/hr	\$23,400.00
Helicopter and Crew mob/demob	\$12,000.00
Minimum survey charge	\$63,850.00
95% of the Minimum survey charge	\$60,657.50
Less Previous Billing Invoice 991502	(\$31,925.00)
Balance Owing	\$28,732.50

F.T.

Clear Lake  
Geophysics (Airborne)

Please Remit By Bank Transfer To:  
 ROYAL BANK OF CANADA  
 3300 Highway#7 West,  
 Suite100,Concord,  
 Ontario L4K 4M3  
 SWIFT:ROYCCAT2  
 TRANSIT # 00192  
 ACCOUNT #1114834

Subtotal	Can\$28,732.50
GST	Can\$0.00
<b>TOTAL</b>	Can\$28,732.50

Geotech Ltd  
 245 Industrial Parkway North  
 Aurora, Ontario L4G 4C4

# Statement

Date

8/28/2008

To:

Copper Ridge Explorations Inc.  
 500-625 Howe Street  
 Vancouver, B.C.  
 V6C 2T6

<b>95% Billing</b>	Amount Due
	Can\$1,436.63

Date	Description	Amount	Balance
12/31/2007	Balance forward		0.00
	8138-		
06/17/2008	INV #991502. Due 06/17/2008.	33,521.25	33,521.25
06/20/2008	PMT	-33,521.25	0.00
07/31/2008	INV #991578. Due 07/31/2008.	30,169.13	30,169.13
08/06/2008	PMT Copper job 8138	-28,732.50	1,436.63

*Project  
 - Clear Lake  
 Airborne Geophysics  
 F-1*

CURRENT	1-30 DAYS PAST DUE	31-60 DAYS PAST DUE	61-90 DAYS PAST DUE	OVER 90 DAYS PAST DUE	AMOUNT DUE
0.00	1,436.63	0.00	0.00	0.00	Can\$1,436.63



REMIT PAYMENT TO:  
**TRANS NORTH HELICOPTERS**  
 TRANS NORTH TURBO AIR LTD.  
 P.O. Box 8, 115 Range Rd.  
 Whitehorse, Yukon Canada Y1A 5X9  
 Tel: (867) 668-2177 - Fax: (867) 668-3420  
 www.tntaheli.com

ACCOUNT NUMBER	600000
INVOICE NUMBER	000000
AREA	B.C. <input type="checkbox"/> YUKON <input type="checkbox"/> NWT <input type="checkbox"/> ALTA <input type="checkbox"/>
AC TYPE	6105
AIRCRAFT REGISTRATION C	GEAG
FLIGHT DATE	DAY MONTH YEAR 16 06 08
PURCHASE ORDER NO.	

CHARTERER  
**Copper Ridge**

BILLING ADDRESS

FUEL & OIL-X TNTA CUST.	TNTA FUEL USED	HRS./LITRES	FROM
<input checked="" type="checkbox"/>		2.7 hrs	LITTLE SALMON AIRSTRIP

HOOK INSURANCE DECLINED  INT \_\_\_\_\_  
 VALUE \_\_\_\_\_ ACCEPTED

TNTA'S TARIFF LIMITS THAT TNTA'S LIABILITY FOR LOSS OR DAMAGE TO GOODS CARRIED IS 50¢ PER LB.

FROM	UP	DOWN	HOURS	REMARKS	NO. OF PASS
Ross River					
TO Little Salmon	1045	1127	0.7		
Little Salmon	1507				
Chin Lake x2		1645	1.6	15 drums Jet B into	
Little Salmon	1710			Chin Lake Strip	
Carracks		1735	0.4		
			2.7		

D.G. TRANSPORTED	<input type="checkbox"/>	2.7	2395.00	6466 50
HOLDING TIME:			/HR.	
FUEL			/LITRE	
FUEL			/LITRE	

TERMS: PAYABLE UPON RECEIPT OF INVOICE.  
 2% INTEREST PER MONTH (24% PER ANNUM) WILL BE CHARGED ON ALL OUTSTANDING AMOUNTS OVER 30 DAYS. IF INTEREST IS NOT PAID, FUTURE FLIGHTS WILL BE ON A CASH BASIS.

X \_\_\_\_\_  
 CHARTERER'S SIGNATURE

CHARTERER'S NAME (PRINTED)  
**See. Str.**

PILOTS SIGNATURE

ENGINEER'S NAME  
**Vick Estrada**

OTHER	
OTHER	
SUB TOTAL	6466 50
GOODS & SERVICES TAX REGISTRATION NO. R121483135	323 33

SHIPPING NAME & QTY.	CLASS	UN #	PACKING GR.	TOTAL \$	6789 83
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CARRIAGE SUBJECT TO TERMS OF PUBLISHED TARIFF.  
 TARIFF AVAILABLE TO PUBLIC VIEW AT TRANS NORTH OFFICE.

ACCOUNTING - CUSTOMER FILE



# TRANS NORTH HELICOPTERS

TRANS NORTH TURBO AIR LTD.

P.O. BOX 8 - WHITEHORSE - YUKON TERRITORY - Y1A 5X9

TELEPHONE: (867) 668-2177 • FAX: (867) 668-3420

Copper Ridge Explorations Inc.  
Suite 500  
625 Howe Street  
Vancouver, B.C.  
V6C 2T6

Date: June 17, 2008

Invoice No: 019-08

RE: Fuel Purchase

Acct No: COPPEXP

**ATTN: Gerry Carlson**

To invoice account for drummed fuel purchased at North 60 Petro Ltd. and delivered to Little Salmon Airstrip by Yukon Pump Sales & Service Ltd. as per attached invoices.

20.0 Drums Fuel @ 461.18 per Drum	=	\$ 9,223.60
Delivery Charge	=	\$ 900.00
GST	=	\$ <u>379.64</u>
<b>Total Invoice</b>	=	<b>\$ 10,503.24</b>

Project: Clear Lake  
Fuel: helicopter

F-T

N.B. Copper Ridge is responsible for the return of the 15 drums slung into Clear Lake. 5 drums of fuel were used for Ticket #41442. Trans North will credit Copper Ridge account for drum returns when North 60 issues the credit.

POSTED  
17443

TERMS: TWO PER CENT INTEREST PER MONTH (24% PER ANNUM) WILL BE CHARGED ON ALL INVOICES NOT PAID WITHIN 30 DAYS OF DATE ISSUED