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ASSESSMENT REPORT

describing

GEOLOGICAL MAPPING, PROSPECTING, GEOCHEMICAL SAMPLING AND GEOPHYSICAL SURVEYS

at the

GROUNDHOG PROPERTY

Sea 1-104 YC72460-YC72563

NTS 105F/10
Latitude 61°36'N; Longitude 132°52'W

located in the

Watson Lake Mining District
Yukon Territory

prepared by

Archer, Cathro & Associates (1981) Limited

for

ROCKHAVEN RESOURCES LTD.

by

M.Turner, B.Sc.

January 2009

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INTRODUCTION

The Groundhog property covers silver-lead-zinc showings located in the Pelly Mountains of Yukon Territory. It is wholly owned by Rockhaven Resources Ltd.

This report describes a two phase exploration program conducted in summer and early fall 2008. Phase I was done between July 23 and 27 and comprised helicopter-borne versatile-time domain electromagnetic (VTEM) and magnetic surveys, which were flown over the property by Geotech Ltd. Phase II was performed by Archer, Cathro & Associates (1981) Limited between September 16 and 20. It involved geological mapping, prospecting and geochemical sampling by a two person crew working from a fly camp on the property. The author participated in Phase II and his Statement of Qualifications appears in Appendix I.

PROPERTY LOCATION, CLAIM DATA AND ACCESS

The Groundhog property consists of 104 contiguous mineral claims located 50 km southwest of Ross River in southeastern Yukon, at latitude 61°36' north and longitude 132°52' west on NTS 105F/10 (Figure 1). The claims are registered in the Watson Lake Mining Recorder in the name of Archer Cathro, which holds them in trust for Rockhaven. Claim data are listed below while the locations of individual claims are illustrated on Figure 2.

Claim Name	Grant Number	Expiry Date*
Sea 1-104	YC72460-YC72563	March 5, 2013

* Expiry date includes 2008 work which has been filed for assessment credit.

Phase I work was conducted from the Ross River Airport. Phase II work was done from a tent camp located at an old exploration campsite alongside the Groundhog Creek access road. An ATV and a previously constructed road system were used to access most parts of the property.

HISTORY

Silver-lead-zinc mineralization was discovered in the region in 1956. Subsequent exploration has outlined two areas of silver-lead-zinc mineralization, one to the north, and the other to the south, of Groundhog Creek (collectively “the Groundhog Silver Camp”). In total about 100 showings have been discovered, mostly by prospecting and bulldozer trenching. The showings located north of Groundhog Creek presently lie within a staking moratorium pending settlement of First Nation land claims.

Silver mineralization was first reported in the area now covered by the Groundhog property by prospectors H. and P. Versluce in 1979. They staked the Jeff claims and conducted limited prospecting and rock sampling. Soon afterward N. Hennel staked the Hi Grade claim on the east side of the Jeff claims and an unknown person staked the Jim claims directly to the south. There is no record of work having been done on either of those claim blocks.

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FIGURE 1

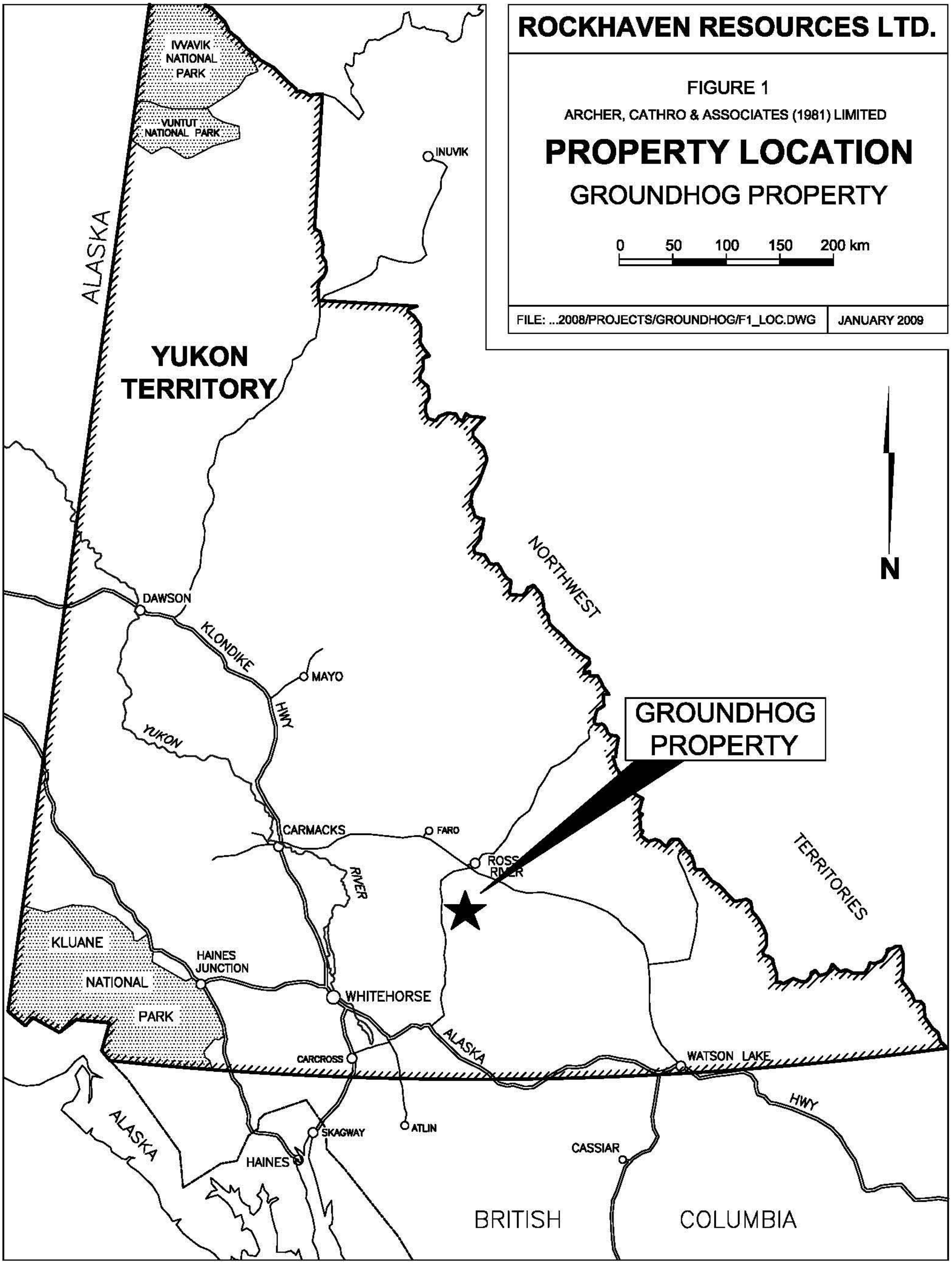
ARCHER, CATHRO & ASSOCIATES (1981) LIMITED

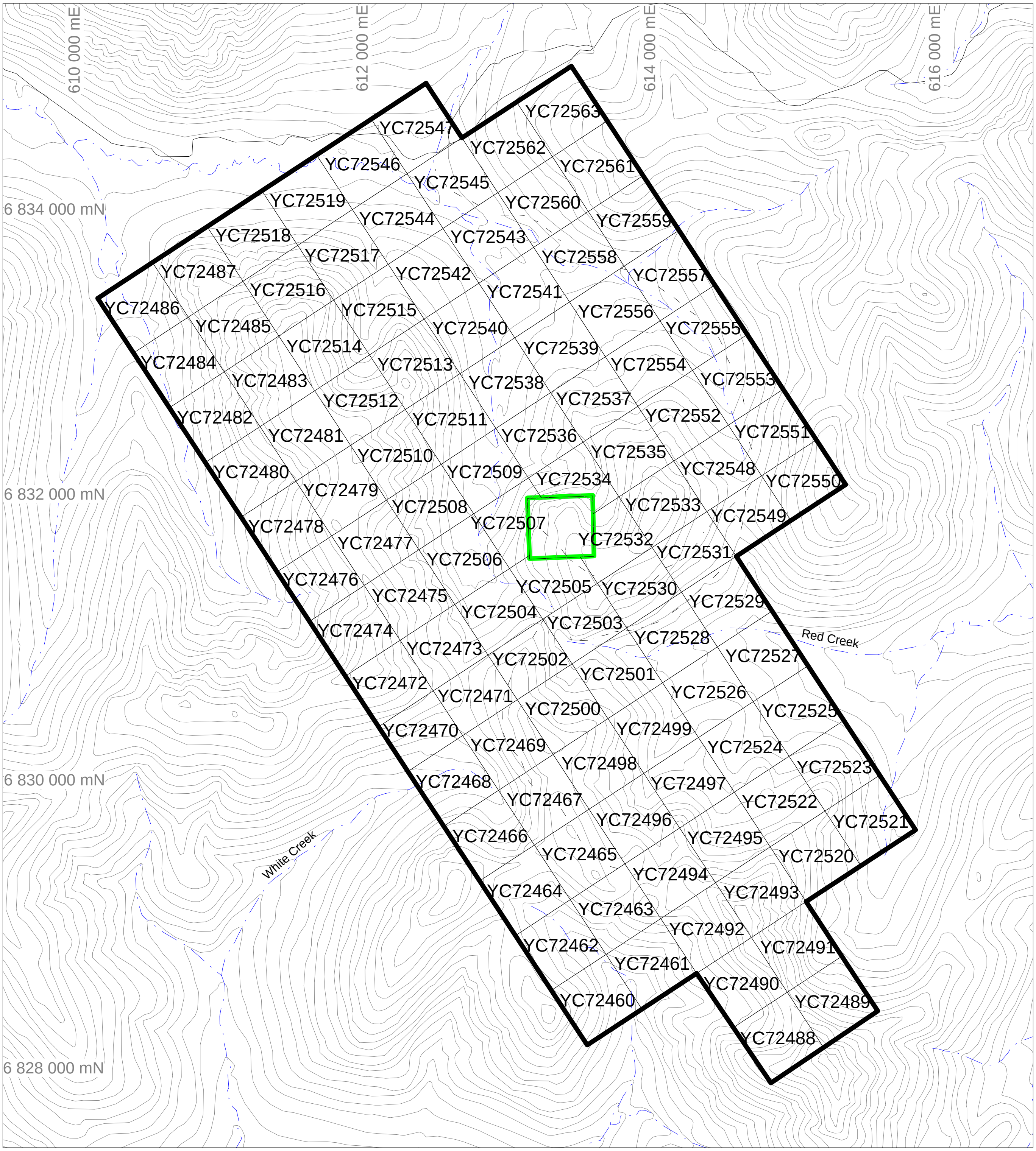
PROPERTY LOCATION

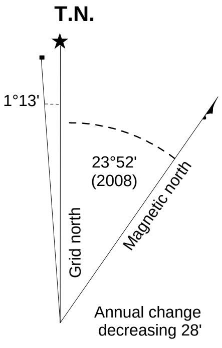
GROUNDHOG PROPERTY

FILE: ...2008/PROJECTS/GROUNDHOG/F1_LOC.DWG

JANUARY 2009







🟩 Claim owned by others

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FIGURE 2

ARCHER, CATHRO & ASSOCIATES (1981) LIMITED

CLAIM LOCATIONS

GROUNDHOG PROPERTY

0 2 km

UTM Zone 8, NAD83, NTS 105F/10

FILE:../2008/Groundhog

DATE: JANUARY 2009

In 1981, the Seagull Joint Venture, comprised of Great Western Petroleum Corporation and Lornex Mining Corporation, staked the Lorne claims to the east of the Jeff claims. That joint venture performed a program of mapping and silt and soil geochemical sampling over its property. This work located scattered mineralized float, but it was all believed to have originated from the Jeff claims, except for a train of massive galena boulders that was followed to a snow covered area. That discovery was never further evaluated.

In 1986, Yukon Minerals Corporation staked 348 claims to cover all of the known showings in the Groundhog Silver Camp. In 1987 it added another 152 claims and formed a joint venture with Perrex Resources Inc. That joint venture carried out mapping and prospecting over the entire claim block, which resulted in the discovery of a number of new showings. Subsequently bulldozer and excavator trenching was done to evaluate the various showings. One of the showings (PN) was tested by a 52.56 tonne bulk sample and 204 m of diamond drilling in 6 holes between 1988 and 1990.

McCrory Holdings Ltd. conducted an eight day reconnaissance exploration program over its adjoining Pass Peak property in 1987. Nine mineral occurrences were discovered and sampled. This property was optioned to Yukon Minerals in 1988. Detailed mapping and silt geochemistry sampling were completed in 1988 over this property, which lies in the southern portion of the present Groundhog property.

The area was partially restaked by Whitehorse prospector R. Berdahl in 1990, and he continues to own one claim that covers the old workings on the Lucky, PN and the Jill veins.

The southern part of Groundhog Silver Camp was staked in late 2007 by Strategic Metals Ltd. Rockhaven bought the property from Strategic in November 2008.

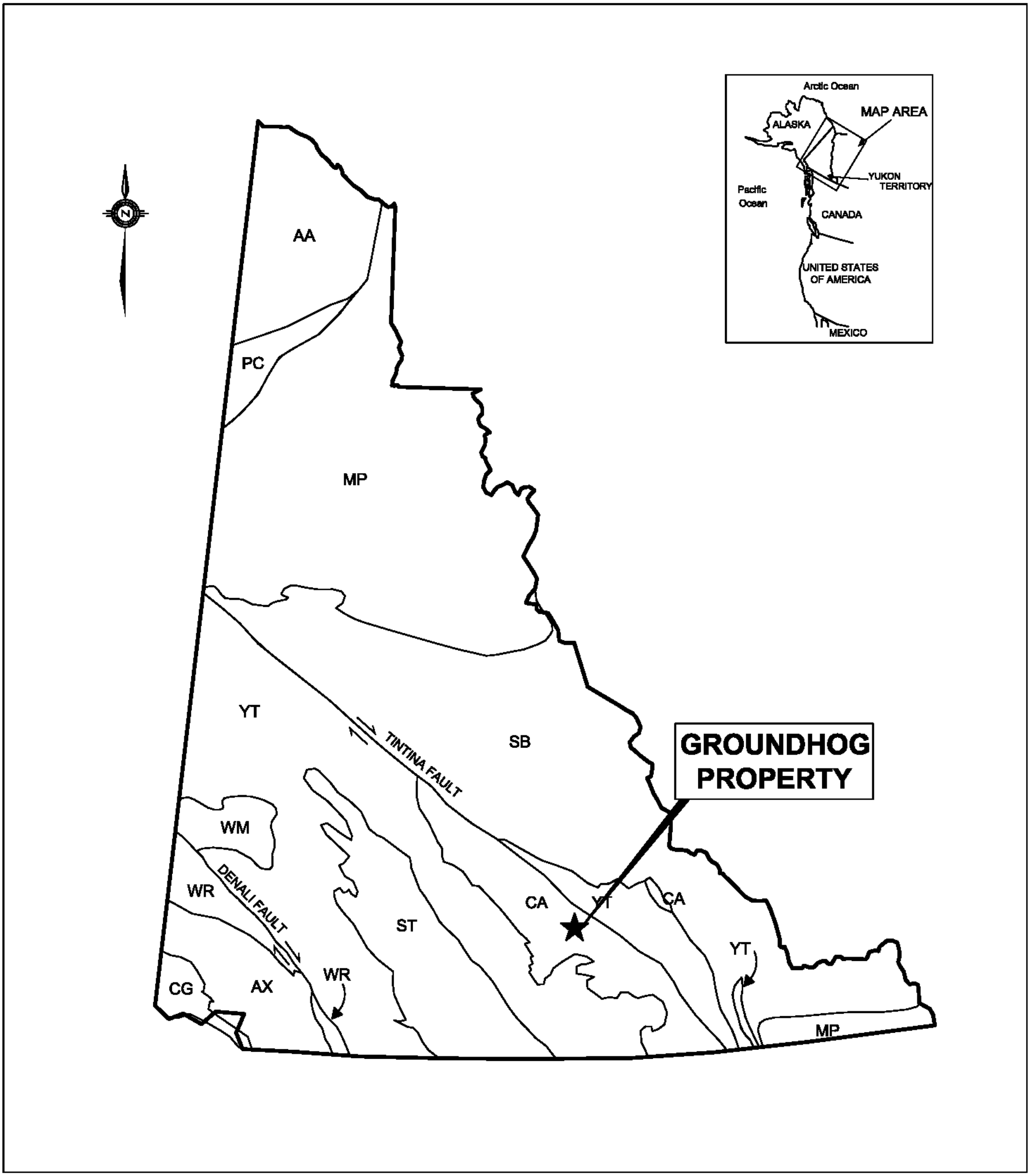
GEOMORPHOLOGY

The Groundhog property is located in the St. Cyr Range of the Pelly Mountains. All streams draining the property flow into the Groundhog, Upper Sheep and Seagull creeks, which ultimately flow into the Bering Sea via the Pelly River and Yukon River.

The claims overlie rugged topography with peaks rising to 2120 m from valley floors of 1200 m. Lower elevations are vegetated with spruce forests, thick buckbrush and slide alder surrounded by moss. Higher elevations exhibit talus slopes with intermittent grass and alpine heather. Outcrop is mostly restricted to ridges and very steep slopes. Treeline is at 1575 m.

REGIONAL GEOLOGY

The Groundhog property is located thirty kilometres southwest of the Tintina Fault in the Ketza-Seagull District of the Cassiar Platform, (Figure 3). The Tintina Fault is a northwest trending transcurrent fault that produced approximately 425 km of dextral strike-slip offset between 58 and 67 million years ago (Mortensen, 2004). This fault juxtaposes a metamorphosed island arc assemblage of the Yukon-Tanana Terrane to the northeast against miogeoclinal rocks of the Cassiar Platform to the southwest (Figure 3).



ANCESTRAL NORTH AMERICA

MP	Mackenzie Platform
SB	Selwyn Basin

TERRANES
Displaced Continental Margin

AA	Arctic Alaska
CA	Cassiar
PC	Porcupine

Pericratonic Terranes

YT	Yukon-Tanana / Slide Mountain

ACCRETED TERRANES

ST	Stikinia / Cache Creek
AX	Alexander
WR	Wrangellia
CG	Chugach
WM	Windy McKinley

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FIGURE 3

ARCHER, CATHRO & ASSOCIATES (1981) LIMITED

TECTONIC SETTING
GROUNDHOG PROPERTY

0 100 200 km

DRAWN\REVISED BY: MT

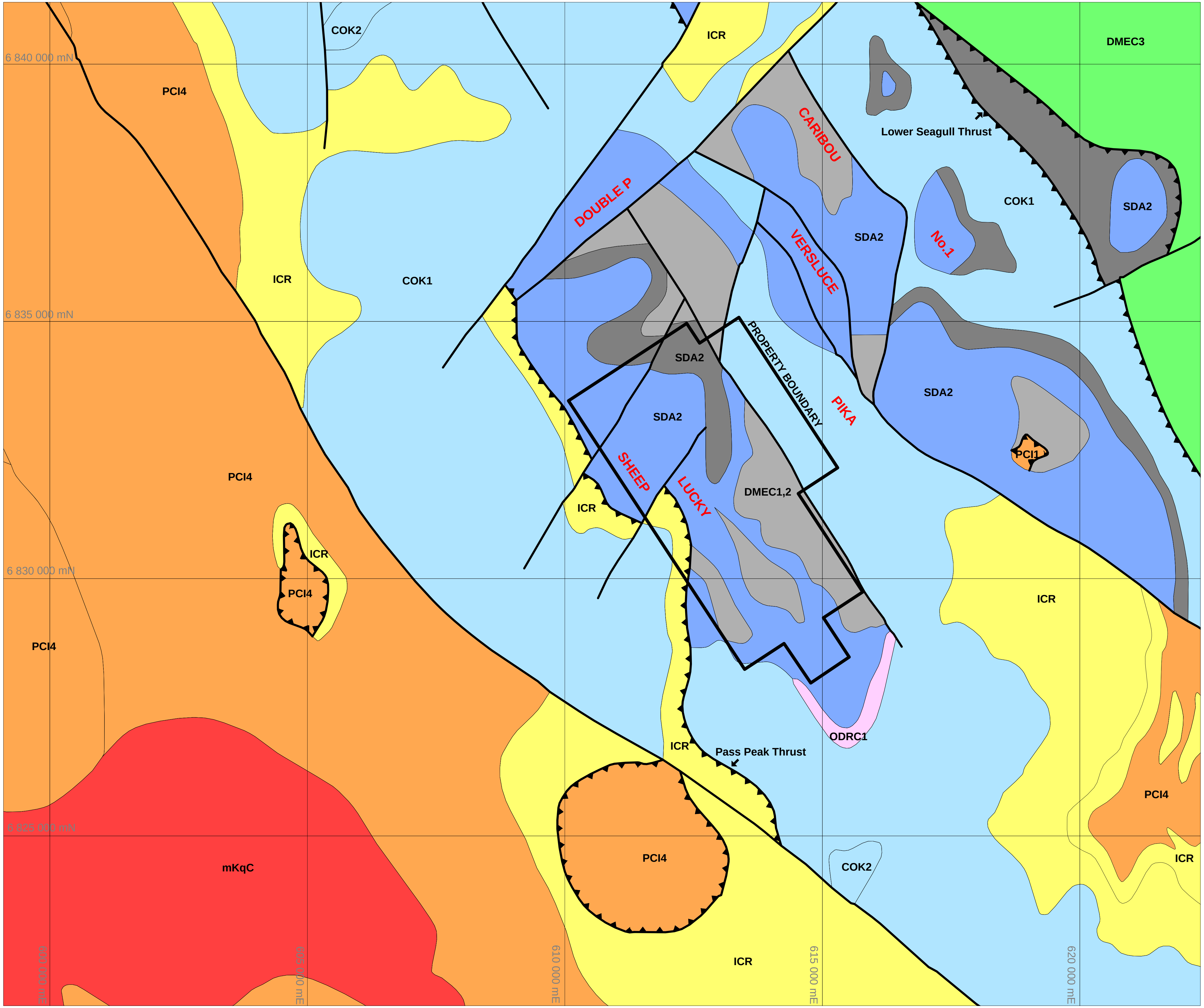
FILE: ...\FIG 03 - TECTONIC SETTING

DATE: JANUARY 2009

The Ketza-Seagull District is underlain by late Proterozoic to Triassic, clastic, volcanic, and carbonate rocks that were deformed during Mesozoic arc-continent collision and by Mid-Cretaceous intrusions (Tempelmen Kluit, 1977). Structure across the district has a pronounced northwesterly trending fabric. It is dominated by northeast verging thrust faults, which resulted from Mesozoic compression, and parallel to sub-parallel horst and graben, which were probably formed during uplift caused by doming above a large buried intrusion (Abbott, 1986). Seven main lithological units are recognized in the Groundhog area (Gordey and Makepeace, 1999). These units are described in the following table, and their distribution is shown on a regional geology map (Figure 4).

Table I - Regional Lithological Units (*After Gordey and Makepeace*, 1999)

Name	**Age**	**Unit**	**Description**
Cassiar Suite	Mid-Cretaceous	mKqC	Light grey weathering, homogenous, porphyritic medium-grained biotite quartz monzonite.
Earn Group	Upper Devonian to Lower Mississippian	DMEC1	Dark grey, recessive weathering, thin bedded, black siliceous slate with chert pebble conglomerate and rare lenses of intermediate to felsic volcaniclastic rocks.
		DMEC2	Rusty orange weathering, resistant, apple-green and dark grey, thin bedded chert and cherty tuff; local nodular and bedded barite.
		DMEC3	Heterogeneous, rusty, black, white, and orange- weathering rhyolite-trachyte to andesite flows, breccias and tuffs.
Askin Group	Middle Silurian to Middle Devonian	SDA2	Medium grey to buff weathering, medium-to-thick bedded dolomite, silty and sandy dolomite, limestone, and medium-to-thick bedded orthoquartzite.
Kechika Group	Upper Cambrian to Lower Ordovician	COK1	Basinal, fine grained, calcareous pelitic strata containing thin bedded, lustrous, calcareous grey slate, phyllite, limestone, minor grey dolomite and dolomitic limestone; quartz-carbonate veins; minor sills and flows of basalt.
Rosella Group	Lower Cambrian	ICR	Resistant, thick bedded to massive, limestone and argillaceous limestone with local archaeocyathid buildups, trilobite fragments, and oolites; pisolitic massive dolomite and limestone; marble, calc-silicate, calcareous phyllite and minor schist.
Ingenica Group	Upper Proterozoic to Lower Cambrian	PCI4	Buff weathering, resistant muscovite-biotite granodiorite gneiss and augen gneiss.



Mid Cretaceous
Cassiar Suite

mKqC Light grey weathering, homogenous porphyritic medium grained biotite quartz monzonite

Upper Devonian to Lower Mississipian
Earn Group

DMEC1,2 Dark grey, recessive weathering, thin bedded, black siliceous slate with interbeds and members of quartz-chert greywacke, chert granule grit, and rusty orange weathering, resistant, apple-green and dark grey, thin bedded chert and cherty tuff

DMEC3 Heterogeneous, rusty, black-, white-, and orange-weathering rhyolite-trachyte to andesite flows, breccias and tuffs

Silurian to Lower Devonian
Askin Group

SDA2 Resistant, thick bedded to massive, red weathering, coarsely sucrose dolomite; minor sandy dolomite

SDA2 Recessive weathering, thin bedded, dark grey dolomitic shale

Ordovician to Devonian
Road River Group

ODRC1 Recessive, black, locally calcareous, fissile grapholitic shale

Upper Cambrian to Lower Ordovician
Kechika Group

COK1 Basinal fine grained calcareous pelitic strata containing thin bedded, lustrous, calcareous , grey slate, phyllite, limestone, minor grey dolomite and dolomitic limestone; quartz- carbonate veins; minor sills and flows of basalt

COK2 Massive, dark green and marron amygdaloidal basalt flows and volcaniclastics

Lower Cambrian
Rosella Group

ICR Resistant, thick bedded to massive, limestone and argillaceous limestone with local archaeocyathid buildups, trilobite fragments, and oolites, pisolitic massive dolomite and limestone; marble, calc-silicate, calcareous phyllte and minor schist

Upper Proterozoic to Lower Cambrian
Ingenika Group

PCI1 Calcareous sandstone, shale, quartz-eye grit, quartzite and minor grey limestone

PCI4 Buff weathering, resistant muscovite-biotite granodiorite gneiss and augen gneiss

▲▲▲ Thrust fault

— Normal fault

— Geological contact

SHEEP Mineralized trend

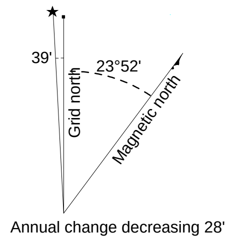


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FIGURE 4

ARCHER, CATHRO & ASSOCIATES (1981) LIMITED

REGIONAL GEOLOGY

GROUNDHOG PROPERTY

0 5 km

UTM Zone 8V, NAD83, NTS 105F/10

FILE:.../2008/GROUNDHOG

DATE: DECEMBER 2008

PROPERTY GEOLOGY

Mapping in 1988 by Yukon Minerals used identified six units that are correlated to the regional lithologies as shown in Table II. Mapping by Rockhaven in 2008 was done at 1:10000 scale, using the same units for consistency. Figure 5 is a compilation of both mapping programs.

Table II - Correlation of Regional and Property Lithological Units

Regional unit	Property subunit	Description
mKqC	KTqfp	Dark green, fine grained biotite-bearing mafic dykes.
DMEC1	uDMs	Black, recessive weathering shale.
DMEC2	uDMc	Dark grey, resistant, thin bedded chert and local nodular and bedded barite.
SDA2	SDd	Buff-, grey-, and red-weathering dolomite with lenses of massive quartz arenite.
COK1	Ccph	Grey buff, brown weathering, thinly laminated calcareous phyllite.
ICR	Cph	Grey calcareous phyllite.

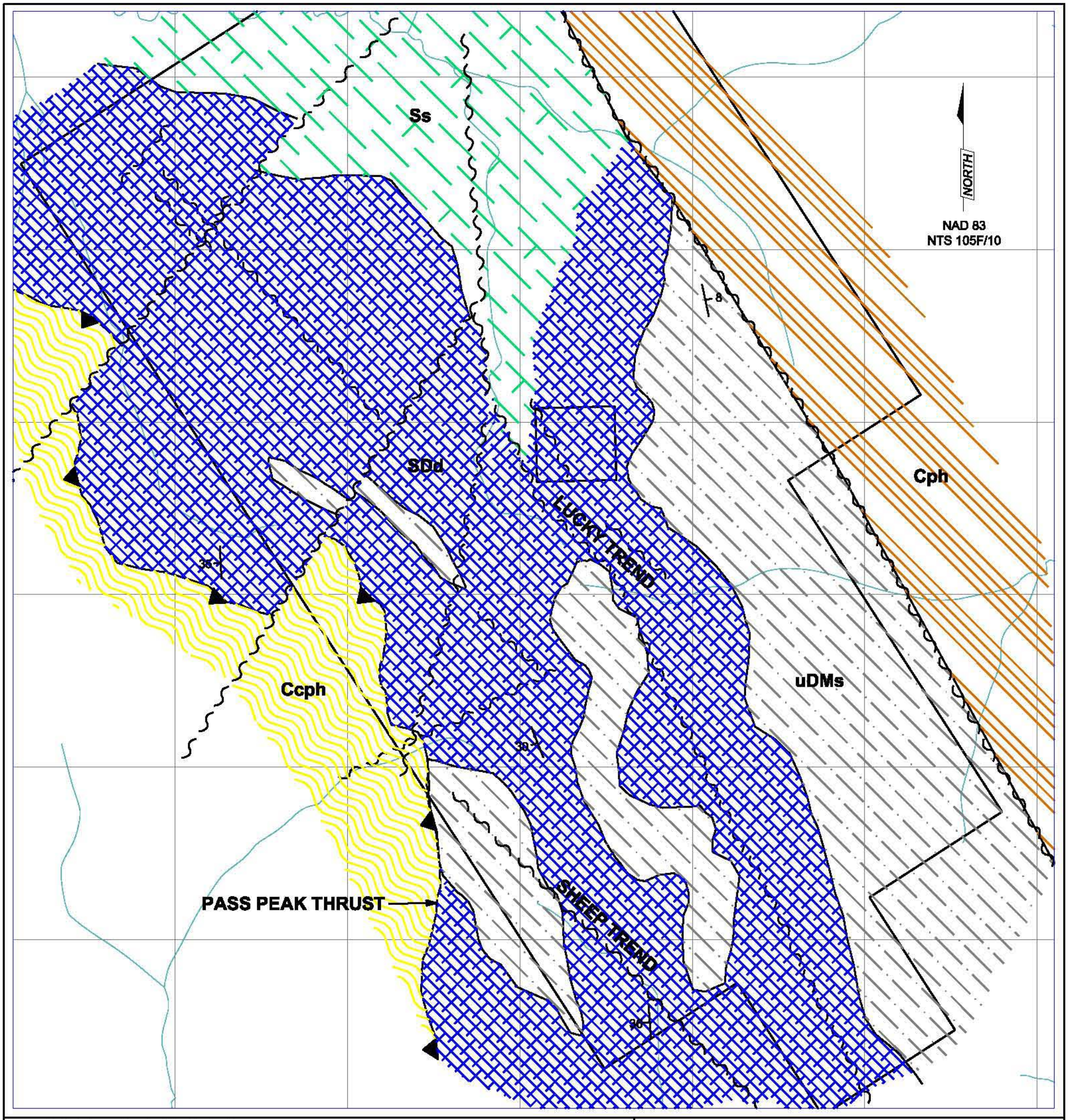
The property is underlain by relatively thick successions (up to 400 m) of calcareous sedimentary rocks with lesser clastic sedimentary rocks, which range in age from Lower Cambrian to Late Devonian-Mississippian. Bedding orientations measured during 2008 mapping mostly show northerly strikes, with flat to moderate dips of 5° to 35°W in the western part of the property and 2° to 20°E in the east. These measurements indicate a broad anticlinal fold with a northerly trending axis.

Although there are no mapped exposures of intrusive bedrock on the property, some areas host numerous boulders of dark green mafic dyke (KTqfp). Yukon Minerals' mapping identified two dykes located in outcrops about 400 m north of the property. These dykes range from 2 to 10 m in width and were traced over 600 m along strike.

Yukon Minerals' maps show a number of northwest and northeast trending faults. The Pass Peak Thrust Fault is the only named fault on the property and represents the southern flank of the complexly faulted arch named the Seagull Uplift. The Lower Seagull Thrust, 5 km to the northeast of the property (Figure 4), represents the northern flank of the arch. Several normal faults and shear zones that have been mapped on the property are interpreted to be horst and graben structures within the Seagull Uplift (Abbott, 1986).

MINERALIZATION, SHOWING DESCRIPTIONS AND ROCK GEOCHEMISTRY

Mineralization in the Seagull Uplift is associated with seven main structural trends, two of which, (the Sheep and Lucky trends) cross the property. These mineralized trends are oriented northwest and are individually traced up to 7 km along strike. They appear to lie along the flanks of grabens formed during the Seagull Uplift (Ramaekers, 1988) or along fluid conduits provided by older thrust faults. Although the source of the mineralizing fluids is unknown, it has been postulated that the uplift and structural extension resulted from doming above an unexposed



uDMs Late Devonian to Mississippian
Black shale, phyllite, chert conglomerate

SDd Silurian and Early to Middle Devonian
Buff-, grey- and red-weathered dolomite with lenses of quartz arenite

Ss Silurian
Grey weathering, platy, thinly laminated dolmitic siltstone

Ccph Late Cambrian
Grey buff, brown weathering, thinly laminated calcareous phyllite

Cph Early Cambrian
Grey calcareous phyllite

Thrust fault

Normal fault

35 Bedding measurement

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FIGURE 5

ARCHER, CATHRO & ASSOCIATES (1981) LIMITED

PROPERTY GEOLOGY

GROUNDHOG PROPERTY

Scale 1:4000

0 500 1000 1500 2000 2500m

DRAWN / REVISED BY: M. Turner

PROJECT: GROUNDHOG

FILE:2008/GROUNDHOG/FIGURES/PROPERTYGEO.dwg

DATE: JANUARY 2009

Mid-Cretaceous intrusion, which may also been the main heat source driving the fluid transfer (Abbott 1986).

The majority of the showings on the property are fault-bounded quartz-carbonate veins and breccias hosted by the Askin Group carbonate sequence. Mineralization within the veins and breccias consists of disseminated to semi-massive, coarse grained galena, sphalerite, tetrahedrite, freibergite and pyrite. Malachite staining is common on carbonate minerals, with the copper remobilized from the weathering of tetrahedrite. Hydrozincite staining was also locally observed. Most of the showings occur near the top of the Askin Group, just below the contact with overlying Earn Group shales and fine grained clastics. This relatively incompetent and non-reactive unit appears to have acted as a physical and chemical barrier that localized mineral deposition in the underlying carbonate rocks (Fowler, 1988).

Vein and breccia zones on the property are associated with northwest trending, steeply dipping structures, which mostly occur along the Lucky and Sheep trends. Mineralization is hosted within the main structures and in east to northeast trending shear zones that cut obliquely across the primary structures. Movement along these shears has helped produce dilatent zones that have enabled open space filling by veins.

Replacement mineralization is locally developed where structures hosting vein and breccia zones cut carbonate wallrocks. This mineralization occurs as blebby and disseminated galena and sphalerite within discreet reactive horizons in vugs and open spaces within the host carbonates. Little effort has been made by previous operators to assess potential for this type of mineralization, but 2008 exploration discovered a new bedrock showing and a prospective float occurrence.

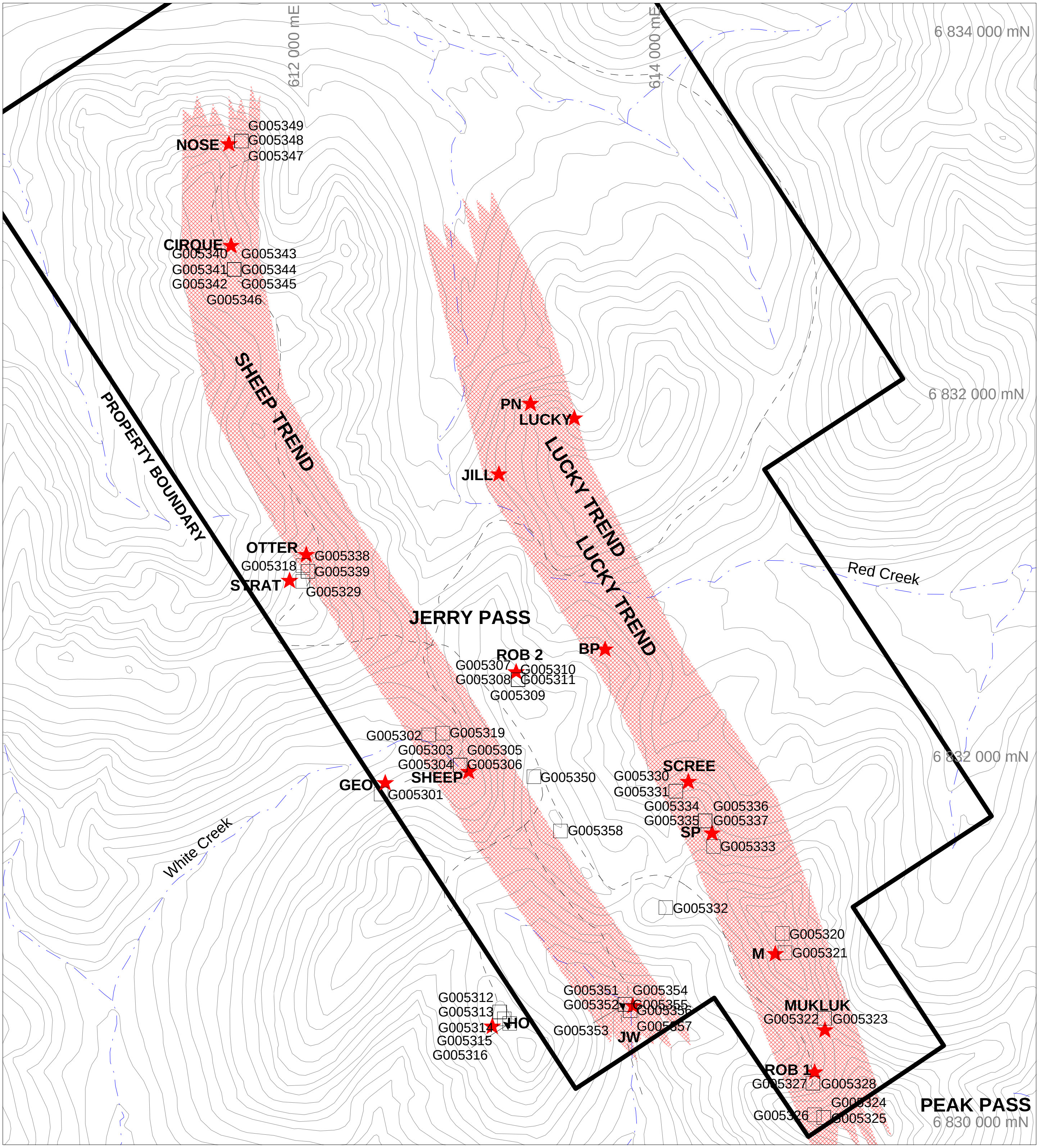
Stratiform mineralization consisting of banded galena, sphalerite and chalcopyrite in Cambrian-aged phyllites and tuffs in the western part of the property. Although this mineralization is potentially significant, it has never been systematically evaluated.

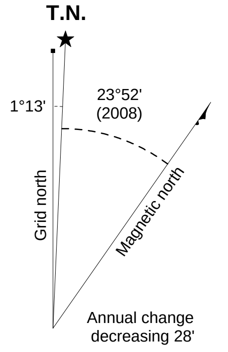
In 2008, 58 rock samples were collected from the Groundhog property. Rock sample descriptions can be found in Appendix II, sample handling and analytical procedures are described in Appendix III, and Certificates of Analysis appear in Appendix IV. Figure 6 shows rock sample and showing locations.

Most of the rock samples are character specimens taken from bulldozer trenches that were dug during the 1987-1990 programs by Yukon Minerals. Many of the trenches could not be properly remapped due to sloughing. Therefore, the following descriptions of the various showings are largely based on previous reports.

Cirque and Nose Showings

The Cirque and Nose showings are located along the flat top of a prominent northwest trending ridge, which is underlain mainly by resistant weathering Askin Group dolomite (SDd). Access to both showings is by a cat road that extends southeast along the ridge top from the main access road at Jerry Pass (Figure 6). The showings are located toward the north end of the structure





★ Showing location

☐ 2008 rock sample

- - 4x4 access road

▨ Mineralized trend

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FIGURE 6

ARCHER, CATHRO & ASSOCIATES (1981) LIMITED

2008 ROCK SAMPLE AND SHOWING LOCATIONS

GROUNDHOG PROPERTY

0 2 km

UTM Zone 8, NAD83, NTS 105F/10

FILE:.../GROUNDHOG/ROCKLOC.WOR DATE: JANUARY 2009 defining the Sheep Trend. Potential further north along the projected strike of this structure is difficult to assess due to heavy vegetation in the Groundhog Creek valley.

The Cirque Showing is located on the upper rim of a cirque near the northern edge of the property. Three parallel quartz-siderite veins bearing galena, tetrahedrite, azurite, malachite and sphalerite have been exposed in trenches, along with minor stockwork veinlets. Limonite and manganese alteration are developed in wallrocks peripheral to the veins. Bulldozer trenching traced the vein system over a length of 400 m north from the main exposure on the cirque rim. The trenches are spaced approximately 100 m apart and produced rock samples that assayed up to 2945g/t Ag (Davidson, 1988). The 2008 program relocated and confirmed the mineralization at the main exposure, but did not find any bedrock in historical trenches that were excavated along strike. Samples G005343 and G005344 were selective rock samples of the strongest mineralization observed within the exposed veins. The better of them returned 11663.5 g/t Ag, 64.7% Pb and 3.7% Cu. A 1 m chip sample across strongly limonitic wallrocks directly adjacent to the vein returned 388 g/t Ag, 4.4% Pb and 7.8% Zn.

The Nose Showing consists of numerous sheeted quartz veins and veinlets hosted in an approximately 20 m wide fracture zone cutting dolomite. Bedrock exposure is limited to a single historical trench. The veins contain only minor sulphides and localized limonite and manganese oxides. They have northerly strikes and near vertical dips. Sample G005348, a float sample of limonite and manganese stained quartz taken from the base of the trench, returned 61 g/t Ag, 1.6% Pb and 2.0% Zn.

Otter Showing

The Otter Showing is exposed in three old excavator trenches. Weak mineralization occurs within a narrow quartz vein that is hosted in a small shear zone developed along a bedding plane in phyllite. Mineralization consists of disseminated galena with lesser sphalerite and malachite. An historical 1.5 m chip sample across the vein graded 96 g/t Ag, 16.5 % Pb and 1.0 % Zn (Davidson, 1991).

Sheep Showing

The Sheep Showing is exposed by an old excavator trench at the headwaters of a creek that hosts strong iron sulphate precipitates (White Creek). The mineralization is hosted in three parallel, east trending quartz veins that range between 0.5 to 1.5 m in width. The veins have been traced approximately 15 m along strike and are covered by overburden along their strike projections. Mineralization comprises pods and disseminations of galena, sphalerite and minor tetrahedrite, with pervasive malachite and hydrozincite staining throughout the vein. Only one of the veins is significantly mineralized. Grab samples taken in 2008 returned up to 764 g/t Ag, 34.2% Pb and 6.5% Zn.

SP Showing

The SP Showing is exposed by two historical excavator trenches that are spaced approximately 125 m apart. Vein material consists of brecciated dolomite fragments hosted in a quartz-carbonate matrix. Mineralization comprises disseminated galena and sphalerite. Pervasive limonite alteration envelopes the vein. Although the true vein width could not be determined due to poor exposure, historical samples grade up to 1714 g/t Ag (Davidson, 1988). Float samples of vein material collected in 2008 returned up to 149 g/t Ag, 8.5% Pb and 4.1% Zn. A sample of limonite altered wallrock yielded 30 g/t Ag and 0.3% Zn.

Scree Showing

The Scree Showing was discovered in 2008 while prospecting along a boulder talus slope. The showing is located approximately 350 m along strike of the SP Showing. Mineralized quartz vein float was outlined over an area of 150 m x 10 m. Two float samples were taken, returning up to 983 g/t Ag and 45.77% Pb. Hand trenching is needed to fully assess this new discovery.

Rob #1 Showing

The Rob #1 Showing is a 20 m long by 3 m wide quartz vein that hosts localized pods of galena. Grab samples returned up to 301 g/t Ag.

JW Showing

The JW Showing was discovered in 2008. It represents a 40 m long shear zone that is hosted in dolomite (SDd). The shear exhibits localized silicification in the southern part of the exposure. Mineralization in the silicified exposure consists of pods and disseminations of honey sphalerite and minor galena within open-space replacement textured, silica flooded dolomite. Two grab samples were taken at this site and returned up to 15.5 % Zn. Nicholson (1988) reported a grab sample taken 80 m north along the structure returned 14.5 % Zn. The northern part of the exposure consists of limonite- and manganese- stained fractures, samples from which yield subeconomic values for silver, lead, copper and zinc.

Strat and Geo Showings

The Strat and Geo Showings were not re-examined in 2008 because they were snow covered. Reported descriptions of these showings suggest they are unique in the district. They consist of laminated and disseminated galena, sphalerite and chalcopyrite in a Lower Cambrian unit comprised of tuffaceous phyllite and quartz-carbonate phyllite. These showings are located 1.5 km apart but appear to lie in the same part of the stratigraphic section. Both showings have been traced for over lengths of 200 m and range between 1 and 2 m in width. Assays returned up to 14% Pb+Zn with 34 g/t Ag.

The PN, Lucky and Jill showings lie on a claim owned by R. Berdahl. They were not visited in 2008.

Three anomalous float samples which are not attributed to a specific showing, were collected on the property in 2008. The first sample was a composite grab sample of five rock fragments taken from a 5 m by 6 m gossanous area on the north face of Pass Peak. The fragments were chipped from massive galena boulders that feature strong azurite and malachite staining. This sample assayed 2000 g/t Ag, 77.21% Pb, and 1.3% Cu. The source of the float was not found due to excessive snow cover. The second anomalous float sample was collected on the floor of White Creek valley. This sample was composed of coarse grained galena in malachite stained quartz gangue. It yielded 229 g/t Ag and 6.5 % Pb. The final sample comprises a 20 cm by 45 cm sample of dolomitic breccia containing 5 mm to 1 cm angular fragments in a quartz-carbonate matrix. This rock sample was collected near the contact between shale (uDMs) and dolomite (SDd) and returned 27 g/t Ag and 1.0 % Pb.

SILT GEOCHEMISTRY

In 2008, 47 silt samples were collected from the property. The silt sampling program was designed to characterize the geochemical signature of various creeks that drain the property and to identify drainages with the best potential for discovery of more showings. The 2008 results were compiled with historical silt data reported by Lornex in 1981 and Yukon Minerals in 1988. Sample handling and analytical procedures used in 2008 are explained in Appendix IV and Certificates of Analysis are provided in Appendix V. Anomalous thresholds for silt values are outlined in Table III below. Figure 7 shows 2008 silt sample locations and Figures 8, 9, 10 and 11 illustrate compiled thematic data for silver, lead, copper and zinc, respectively.

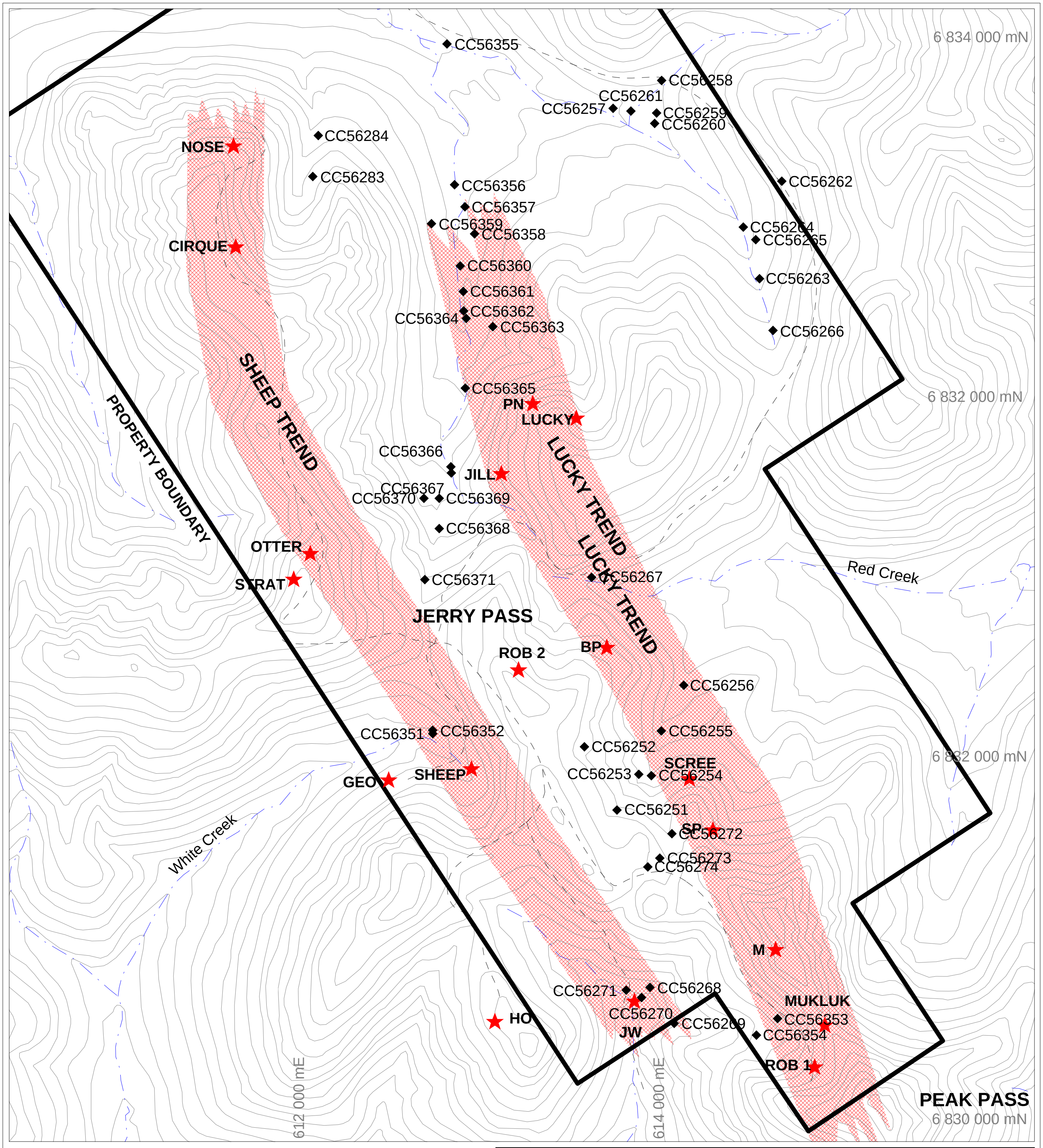
Table III- Anomalous Thresholds

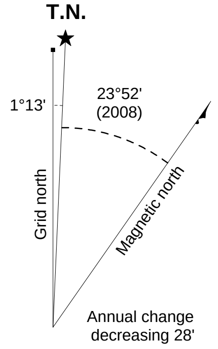
Element	Weak (ppm)	Moderate (ppm)	Strong (ppm)	Peak (ppm)
Silver	>1 ≤1.5	>1.5 ≤2	>2	2.7
Lead	>100 ≤200	>200 ≤300	>300	457
Copper	>50 ≤100	>100 ≤200	>200	492
Zinc	>200 ≤300	>300 ≤500	>500	1,090

Silt sampling was mainly focussed on the larger creeks on the property and their tributaries. Sampling intervals in the northern and eastern parts of the property were constrained by the frequent lack of suitable, silt-size material. Creeks in the south and west parts of the property host sufficient silt throughout their drainages to enable regular 200 m sample intervals.

A number of silt samples taken in 2008 returned elevated values, including one strongly anomalous silver (2.7 ppm), three moderately to strongly anomalous lead (216 to 301 ppm), seven strongly anomalous zinc (563 to 1,085 ppm) and five strongly anomalous copper (292 to 492 ppm). The anomalous drainages are mainly concentrated in the centre of the property. The White Creek and Red Creek drainages are particularly anomalous. White Creek receives material from the Pass Peak Thrust Fault and showings associated with the Sheep Trend. Red Creek drains structures associated with the Lucky Trend and uDMs stratigraphy, which is prospective for strata-controlled style mineralization.

Anomalous arsenic values were obtained from the Red Creek and White Creek drainages. Gold analyses should be done on those sample pulps.





★ Showing location

◆ 2008 silt sample

⁄ 4x4 access road

▨ Mineralized trend

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FIGURE 7

ARCHER, CATHRO & ASSOCIATES (1981) LIMITED

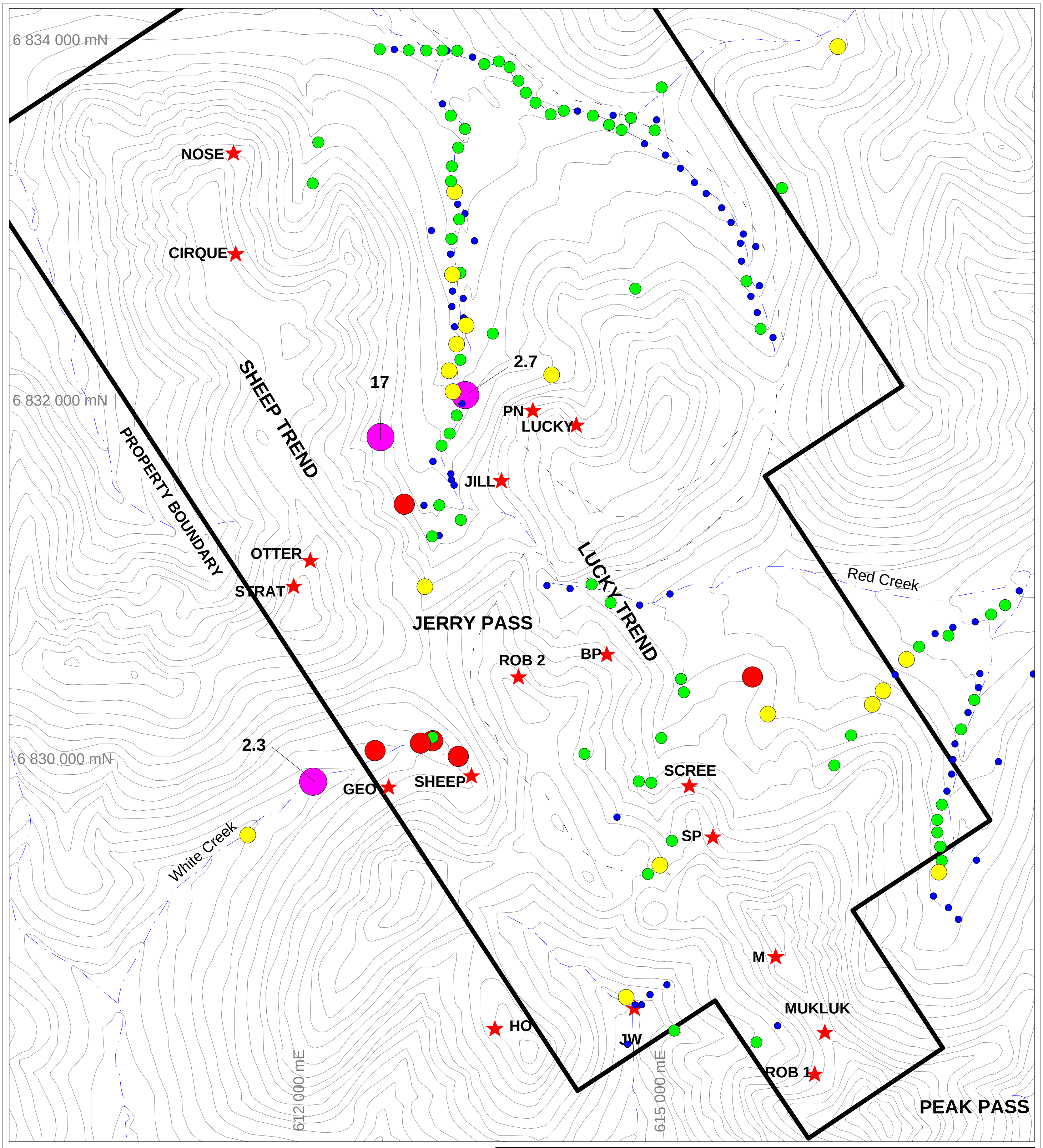
2008 SILT SAMPLE LOCATIONS

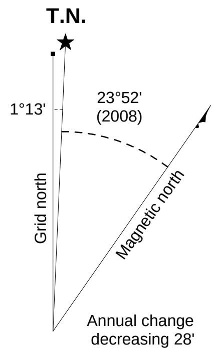
GROUNDHOG PROPERTY

0 2 km

UTM Zone 8, NAD83, NTS 105F/10

FILE:.../GROUNDHOG/ROCKLOC.WOR DATE: JANUARY 2009





● **2.3** Value (ppm)

Silver Geochemistry (ppm)

- ● ≥2.0
- ● ≥1.5 < 2
- ● ≥1.0 < 1.5
- ● ≥0.5 < 1
- ● ≥0.1 < 0.5

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FIGURE 8

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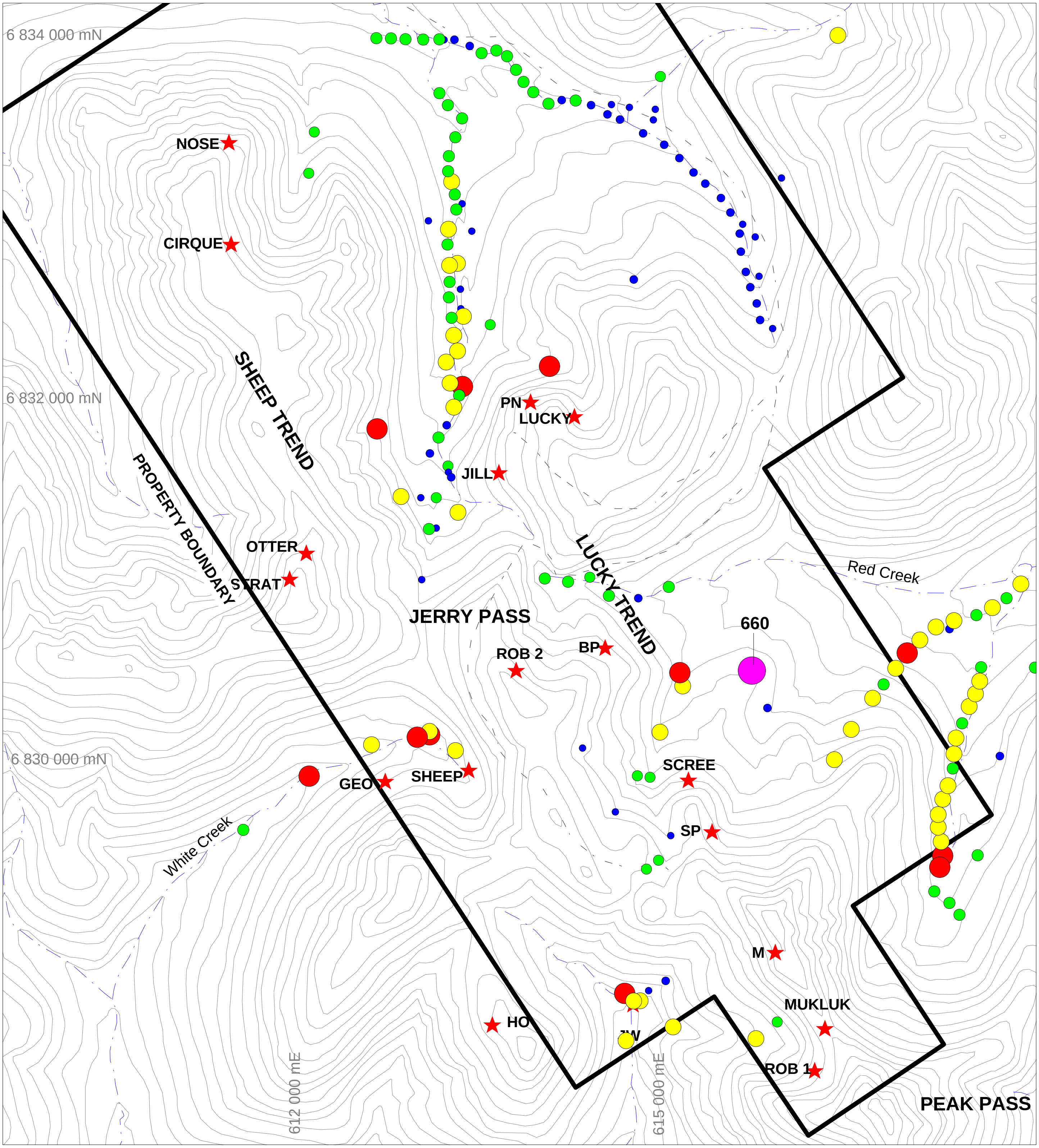
SILVER SILT GEOCHEMISTRY

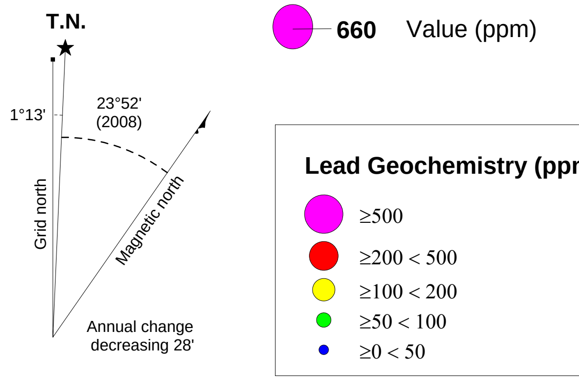
GROUNDHOG PROPERTY

0 2 km

UTM Zone 8, NAD83, NTS 105F/10

FILE:.../2008/GROUNDHOG/AgCHEM.WOR | DATE: JANUARY 2009





Lead Geochemistry (ppm)

- ● ≥500
- ● ≥200 < 500
- ● ≥100 < 200
- ● ≥50 < 100
- • ≥0 < 50

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FIGURE 9

ARCHER, CATHRO & ASSOCIATES (1981) LIMITED

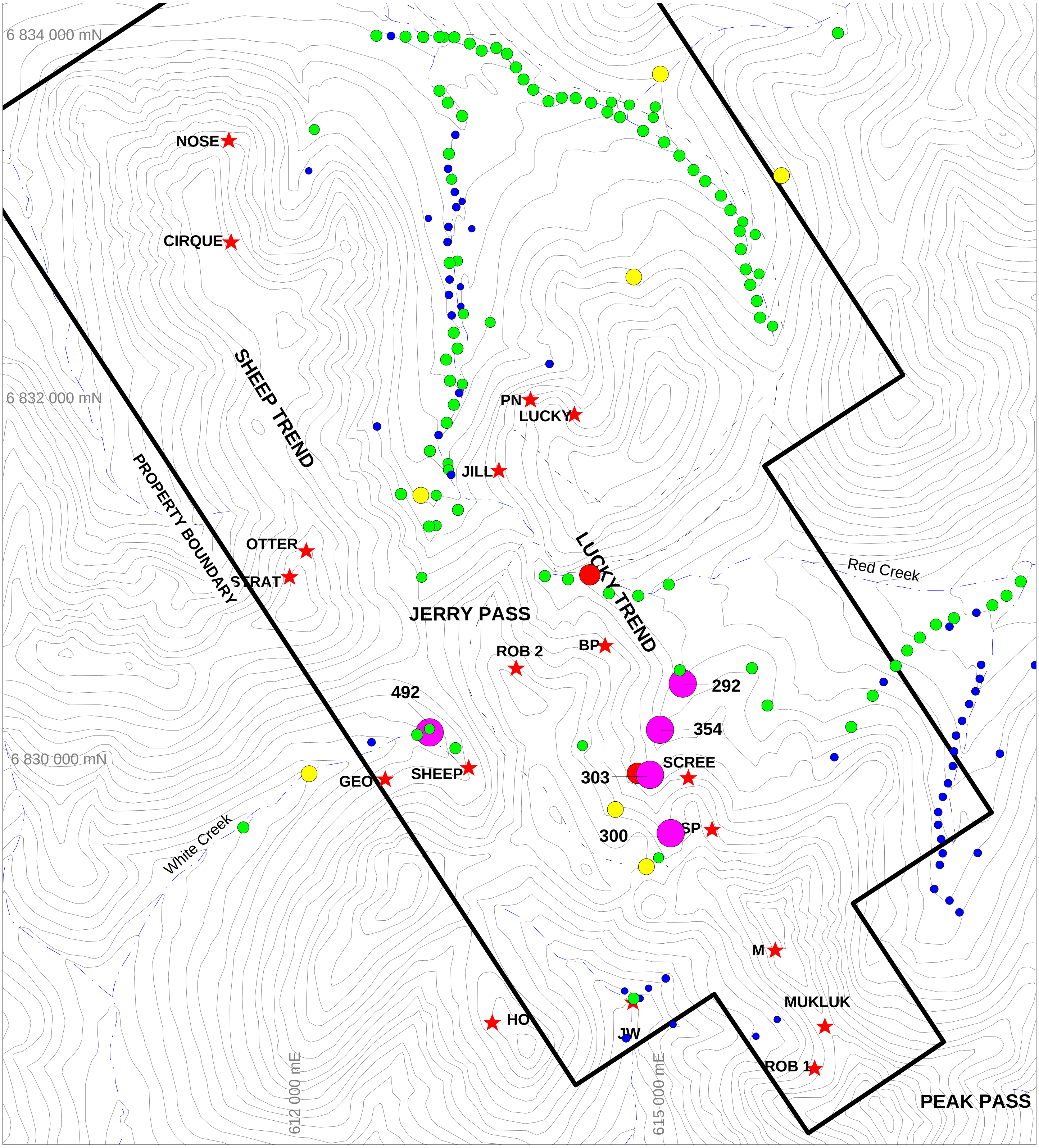
LEAD SILT GEOCHEMISTRY

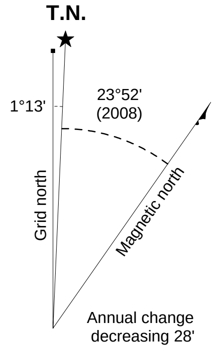
GROUNDHOG PROPERTY

0 2 km

UTM Zone 8V, NAD83, NTS 105F/10

FILE:.../2008/GROUNDHOG/PbCHEM.WOR DATE: JANUARY 2009





● **300** Value (ppm)

Copper Geochemistry (ppm)

- 🟣 ≥200
- 🔴 ≥100 < 200
- 🟡 ≥50 < 100
- 🟢 ≥25 < 50
- 🔵 ≥0 < 25

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FIGURE 10

ARCHER, CATHRO & ASSOCIATES (1981) LIMITED

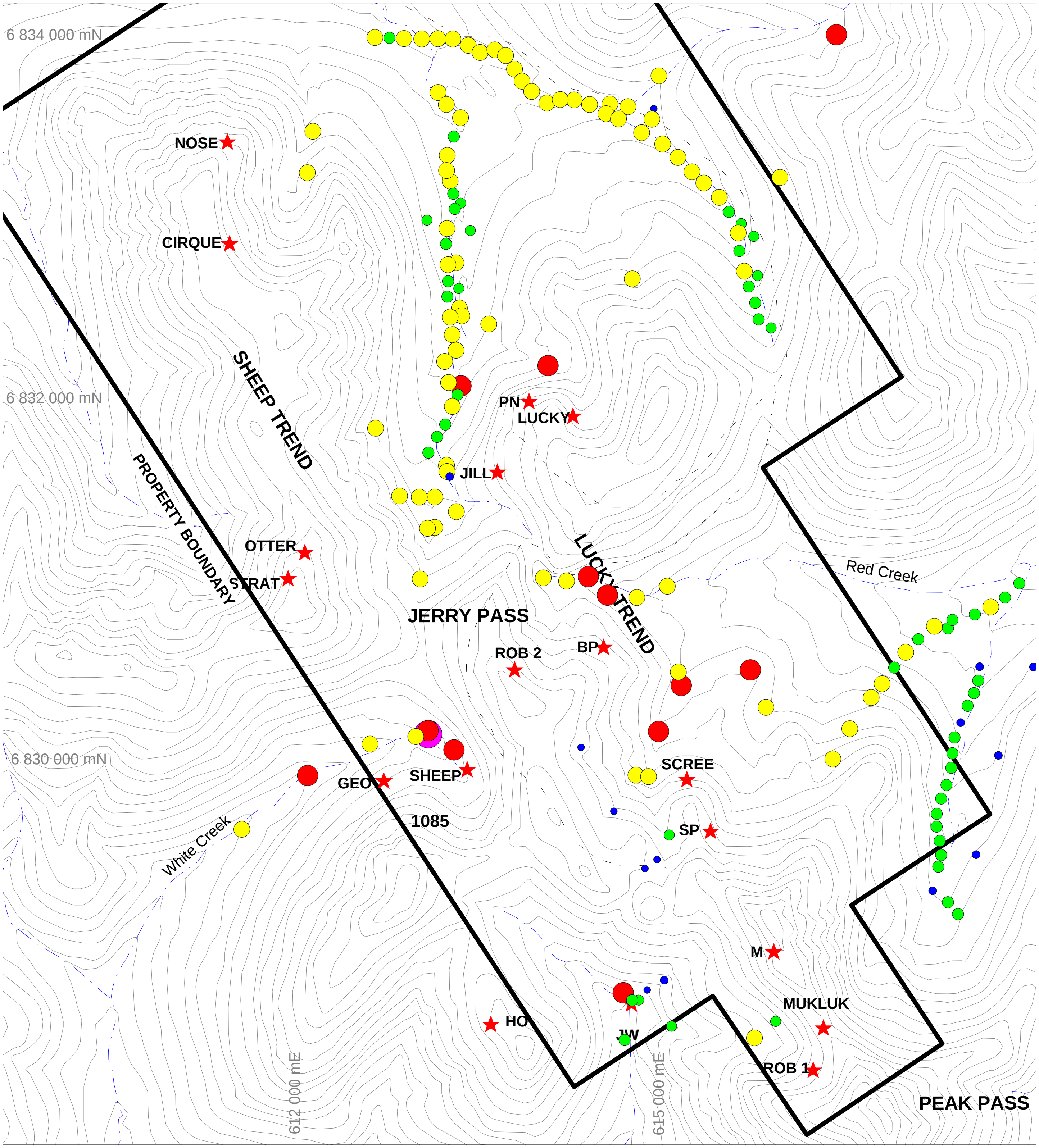
COPPER SILT GEOCHEMISTRY

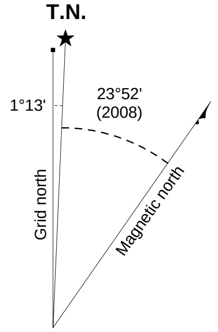
GROUNDHOG PROPERTY

0 2 km

UTM Zone 8, NAD83, NTS 105F/10

FILE:.../2008/GROUNDHOG/CuCHEM.WOR DATE: JANUARY 2009





● **1085** Value (ppm)

Zn Geochemistry (ppm)

- ● ≥1000
- ● ≥500 < 1000
- ● ≥200 < 500
- ● ≥100 < 200
- ● ≥0 < 100

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FIGURE 11

ARCHER, CATHRO & ASSOCIATES (1981) LIMITED

ZINC SILT GEOCHEMISTRY

GROUNDHOG PROPERTY

0 2 km

UTM Zone 8, NAD83, NTS 105F/10

FILE:.../2008/GROUNDHOG/ZnCHEM.WOR DATE: JANUARY 2009

GEOPHYSICAL SURVEYS

Helicopter-borne VTEM and magnetic surveys were conducted from July 23 to 27, 2008 by Geotech Ltd. of Aurora, Ontario, using an Astar B3 helicopter operated by TRK Helicopters. Appendix V is a report which includes descriptions equipment and techniques used for the survey, a brief discussion of results and a CD containing survey data. Key geophysical results are presented with known structures and showing locations on Figures 12 and 13.

The geophysical data have not yet been fully interpreted; however, preliminary analysis of magnetic data shows a positive correlation between elevated magnetism and exposures of calcareous phyllite (Cph) in the eastern and southern portions of the property. Where rocks of this unit outcrop near the Pass Peak Thrust Fault, the magnetic intensity is very subdued, possible due to magnetic destruction caused by alteration along the fault. It should be noted that the southern and eastern parts of the property have received the least amount of mapping and that elevated magnetism may be related to buried intrusions.

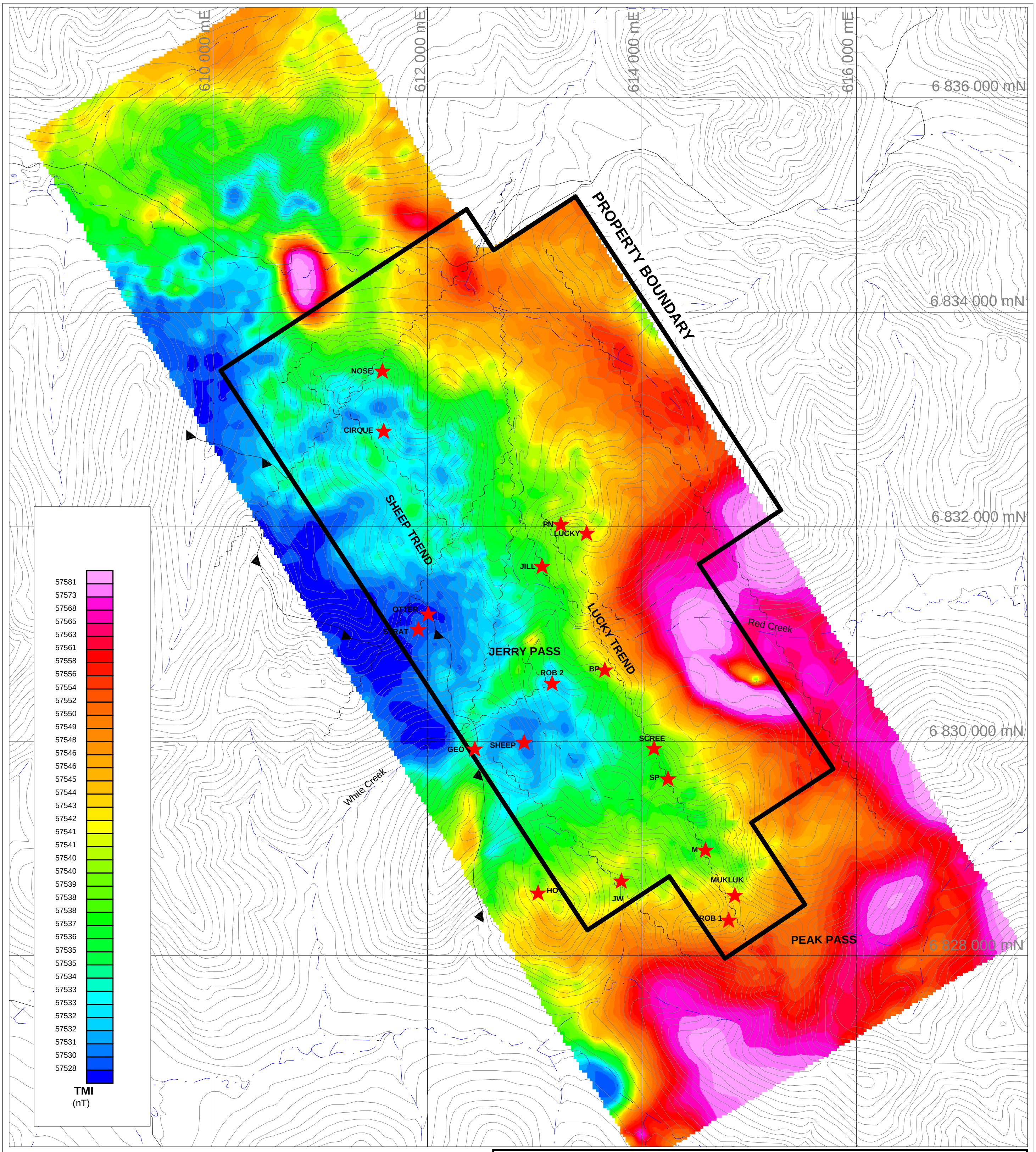
Electromagnetic response is strongest over the Earn Group shales (uDMs) and Askin Group shaly dolomite beds (SDd). A pronounced EM conductor with a coincident magnetic high is centred 200 m north of the property, in a heavily vegetative area near the floor of the Groundhog Creek valley. There are known sills and dykes at that area, and the geophysical response may be related to them.

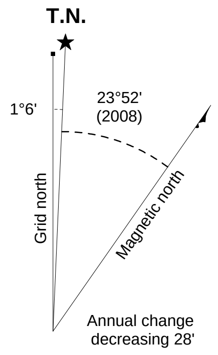
A VLF-EM survey completed in 1987 by Yukon Minerals north of Groundhog Creek indicated that vein faults were easily defined where they juxtapose poorly conductive dolomite against highly conductive graphitic shale (Davidson, 1987). Some structures that host known showings on the Groundhog property juxtapose the same lithologies. Thus, detailed interpretation of VTEM may be able to identify prospective vein faults based on variations in conductivity.

DISCUSSION AND CONCLUSIONS

The Groundhog property hosts numerous silver-lead-zinc showings that are hosted within fault structures that lie along two main mineralized trends. Mineralization is mainly found within vein and breccia deposits within Silurian-age carbonate rocks. Stratabound horizons containing banded sulphides have also yielded promising silver, lead and zinc values. These horizons are hosted by Cambrian-age phyllites and tuffs. Bedrock exposure is limited and there is a good potential for additional discoveries. Little effort has been directed by previous explorers toward replacement style mineralization. Manto-type silver-lead-zinc±gold deposits of this kind are known to occur in the district and they are very attractive exploration targets.

Only small areas on the lengths of the mineralized trends are well exposed or have received any trenching. Thus, detailed mapping and systematic prospecting along these structures is recommended. Detailed mapping and prospecting should also be done along reactive carbonate strata, especially where they are overlain by impermeable shales. A property-wide soil sampling survey should be undertaken, with close spaced samples collected along the trace of the mineralized trends.





★ Showing location

▼▼ Thrust fault

~~ Normal fault

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FIGURE 12

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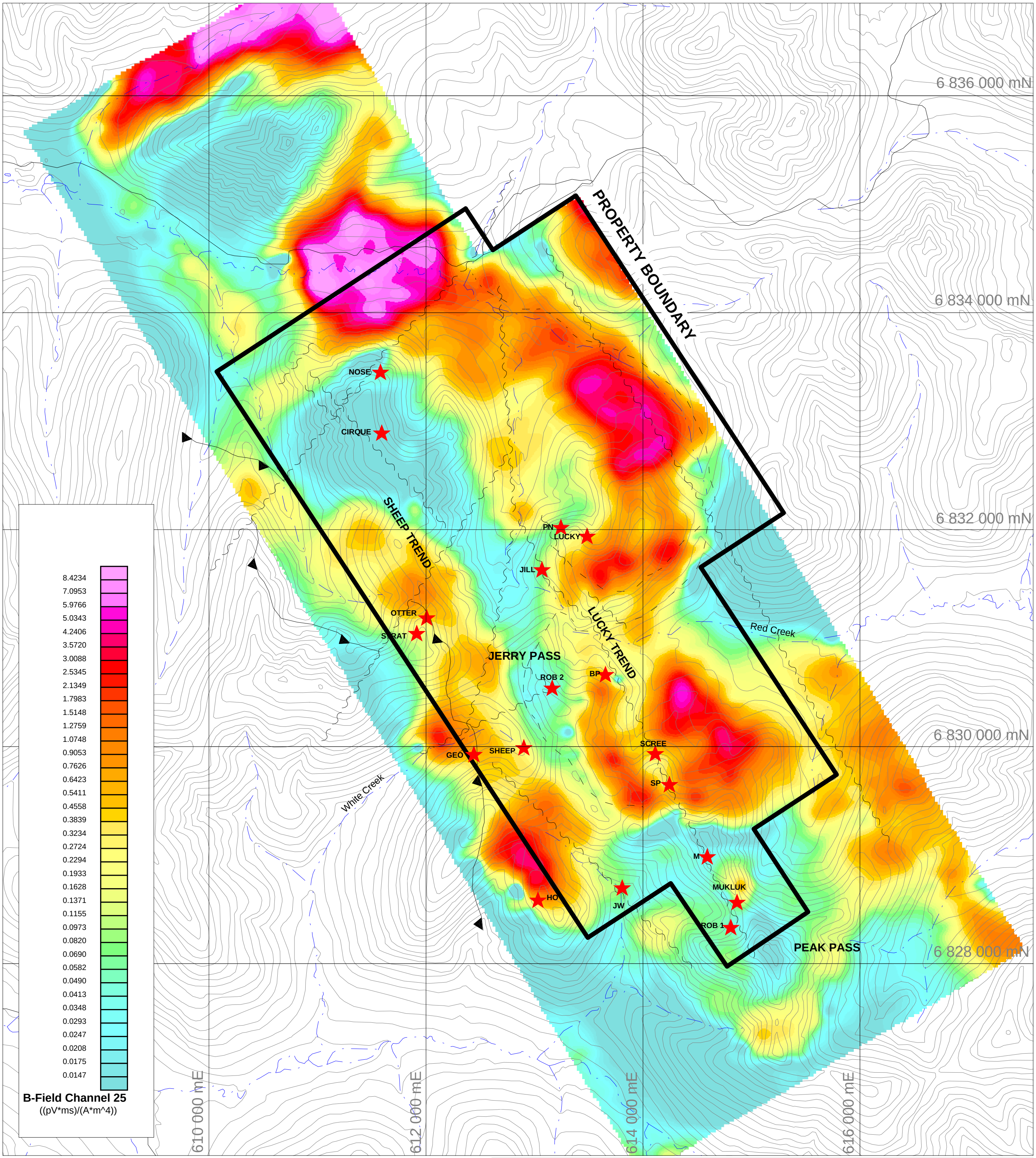
TOTAL MAGNETIC INTENSITY

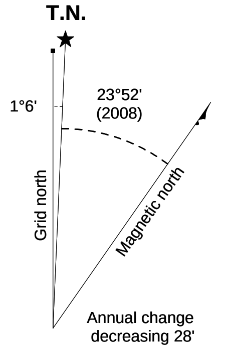
GROUNDHOG PROPERTY

0 2 km

UTM Zone 8, NAD83, NTS 105F/10

FILE:.../PROJECTS/2008/GROUNDHOG/MAG DATE: JANUARY 2009





★ Showing location

▼ ▼ Thrust fault

~~ Normal fault

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FIGURE 13

ARCHER, CATHRO & ASSOCIATES (1981) LIMITED

B-FIELD ELECTROMAGETICS

GROUNDHOG PROPERTY

0 2 km

UTM Zone 8, NAD83, NTSF/10

FILE:.../PROJECTS/2008/GROUNDHOG/MAG | DATE: JANUARY 2009

Detailed interpretation of the 2008 VTEM and magnetic data should be completed. It should be beneficial in delineating favourable structures within unexposed areas of the property.

Respectfully submitted,

ARCHER, CATHRO & ASSOCIATES (1981) LIMITED

Matt Turner, B.Sc.

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APPENDIX I

STATEMENT OF QUALIFICATIONS

STATEMENT OF QUALIFICATIONS

I, Matthew Turner, geologist, with business addresses in Whitehorse, Yukon Territory and Vancouver, British Columbia and residential address in Vancouver, British Columbia, hereby certify that:

1. I graduated from the University of British Columbia in 2002 with a B.Sc. majoring in Earth and Ocean Sciences.

2. From 1997 to present, I have been actively engaged as a geologist in mineral exploration in British Columbia, Yukon Territory and Northwest Territories

3. I have personally participated in or supervised the field work reported herein and have interpreted all data resulting from this work.

Matthew Turner, B.Sc.

APPENDIX II

ROCK SAMPLE DESCRIPTIONS

Rock Sample Descriptions

Project: Groundhog Property: Groundhog

Sample Number: Grid East: E Grid North: N Type: Float Dimension:
G005301 UTM: 612419 E UTM: 6829864 N Sample Width: Abundance: limited
Elevation: m
Comments: Geo Showing: Strong limonite altered ankorite/siderite material hosted along foliation plane of chlorite schist. Forest green staining seen on fractures and pervasive throughout. Showing was not accessible due to frozen cliff and snow.

Sample Number: Grid East: E Grid North: N Type: Float Dimension:
G005302 UTM: 612682 E UTM: 6830190 N Sample Width: Abundance: 3 boulders
Elevation: m
Comments: Float sample consisting of quartz vein hosting coarse grained galena and malachite staining pervasive on fracture surfaces. Minor limonite alteration.

Sample Number: Grid East: E Grid North: N Type: Grab Dimension:
G005303 UTM: 612855 E UTM: 6830024 N Sample Width: Abundance: Limited
Elevation: m
Comments: Sheep Showing: Grab sample from narrow quartz vein hosting trace disseminated galena. QV is parrellel to the main Sheep vein.

Sample Number: Grid East: E Grid North: N Type: grab Dimension:
G005304 UTM: 612855 E UTM: 6830024 N Sample Width: Abundance: moderately
Elevation: m
Comments: Sheep Showing: 1.5 m wide malachite/hydrozincite stained quartz vein hosting localized zones of strongly limonitic material and localized zones of galena/ sphalerite and chalcopyrite. Sample is a grab sample of strongly limonitic material hosting deeply weathered pits and possible hydrozincite coating.

Sample Number: Grid East: E Grid North: N Type: grab Dimension:
G005305 UTM: 612855 E UTM: 6830024 N Sample Width: Abundance: moderately
Elevation: m
Comments: Sheep Showing: Grab smaple of strongly mineralized quartz vein material from subcrop material. Disseminated sphalerite/galena (40%) with minor malachite.

Sample Number: Grid East: E Grid North: N Type: grab Dimension:
G005306 UTM: 612855 E UTM: 6830024 N Sample Width: Abundance: moderately
Elevation: m
Comments: Sheep Showing: Very strongly mineralized quartz vein with massive concentrations of galena (50%) and chalcopyrite (10%) with associated malachite staining.

Rock Sample Descriptions Project: Groundhog Property: Groundhog

---

Sample Number: G005307
Grid East: E Grid North: N Type: Chip Dimension:
UTM: 613174 E UTM: 6830495 N Sample Width: 1.0 m Abundance: abundant
Elevation: m
Comments: Rob 2 Showing: 1.0 m chip sample of dark grey unmineralized dolomite hosting minor quartz veining directly adjacent to main zone.

Sample Number: G005308
Grid East: E Grid North: N Type: Chip Dimension:
UTM: 613174 E UTM: 6830495 N Sample Width: 1.6 m Abundance: Abundant
Elevation: m
Comments: Rob 2 Showing: 1.6 m chip across white quartz vein hosting narrow stringers of carbonate and ankorite

---

Sample Number: G005309
Grid East: E Grid North: N Type: Chip Dimension:
UTM: 613174 E UTM: 6830495 N Sample Width: 1.85 m Abundance: abundant
Elevation: m
Comments: Rob 2 Showing: 1.85 m chip sample of pink and rusty stained shaley and quartz vein material. No sulphides are observed

---

Sample Number: G005310
Grid East: E Grid North: N Type: Chip Dimension:
UTM: 613174 E UTM: 6830495 N Sample Width: 1.6 m Abundance: Abundant
Elevation: m
Comments: Rob 2 Showing: 1.6 m chip sample across qtz flooded chert material. The edge of the zone hosts 65 cm wide zone of crushed quartz.

Sample Number: G005311
Grid East: E Grid North: N Type: Grab Dimension:
UTM: 613174 E UTM: 6830495 N Sample Width: Abundance: Abundant
Elevation: m
Comments: Rob 2 Showing: Grab sample of strong pink material

Sample Number: G005312
Grid East: E Grid North: N Type: Chip Dimension:
UTM: 613073 E UTM: 6828662 N Sample Width: 1 m Abundance: Abundant
Elevation: m
Comments: Ho Showing: 1.0 m chip sample across recessive zone hosting limonitic pods and stringers within the host dolomite.

Rock Sample Descriptions Project: Groundhog Property: Groundhog

---

Sample Number: Grid East: E Grid North: N Type: Grab Dimension: 5 m x 12 m
G005313 UTM: 613073 E UTM: 6828662 N Sample Width: Abundance: Abundant
Elevation: m
Comments: Ho Showing: Grab sample of limonite altered material at base of trench

---

Sample Number: Grid East: E Grid North: N Type: Chip Dimension:
G005314 UTM: 613073 E UTM: 6828662 N Sample Width: 2.0 m Abundance: 5 m x 12 m
Elevation: m
Comments: Ho Showing: 2.0 m wide chip sample of dolomite hosting narrow (2cm wide) sheeted veins of quartz hosting minor carbonate and limonitic pits. No sulphides visible. Vein system open along strike.

Sample Number: Grid East: E Grid North: N Type: Grab Dimension:
G005315 UTM: 613098 E UTM: 6828624 N Sample Width: Abundance: abundant
Elevation: m
Comments: Ho Showing: Grab of limonite altered material in base of trench

---

Sample Number: Grid East: E Grid North: N Type: Grab Dimension: 2.3 x 3 m
G005316 UTM: 613128 E UTM: 6828599 N Sample Width: Abundance:
Elevation: m
Comments: Ho Showing: 2.3 m wide blow out of unmineralized quartz vein

---

Sample Number: Grid East: E Grid North: N Type: Grab Dimension:
G005317 UTM: no gps E UTM: N Sample Width: Abundance:
Elevation: m
Comments: Grab of Zone 5 Vein…barren Quartz

Sample Number: Grid East: E Grid North: N Type: Dimension:
G005318 UTM: 611988 E UTM: 6831124 N Sample Width: Abundance:
Elevation: m
Comments: Quartz with laminated galena.

Rock Sample Descriptions Project: Groundhog Property: Groundhog

---

Sample Number: G005319
Grid East: E Grid North: N Type: Dimension:
UTM: 612760 E UTM: 6830200 N Sample Width: Abundance:
Elevation: m
Comments: Sample taken on road cut heading down to Geo and sheep showing. Local limonite and minor manganese staining in dolomite hosting narrow discontinuous quartz veins.

Sample Number: G005320
Grid East: E Grid North: N Type: Grab Dimension:
UTM: 614632 E UTM: 6829095 N Sample Width: Abundance:
Elevation: m
Comments: White coarse-crystaline quartz with no visible mineralization. From vein 2 to 12 inches thick.

Sample Number: G005321
Grid East: E Grid North: N Type: Float Dimension:
UTM: 614646 E UTM: 6828989 N Sample Width: Abundance:
Elevation: m
Comments: White coarse-crystaline quartz with no visible mineralization. From vein approximately 1 m thick.

Sample Number: G005322
Grid East: E Grid North: N Type: Grab Dimension:
UTM: 614864 E UTM: 6828627 N Sample Width: Abundance:
Elevation: m
Comments: Coarse-crystaline quartz with pervasive Fe staining. From vein approximately 1m thick.

Sample Number: G005323
Grid East: E Grid North: N Type: Chip Dimension:
UTM: 614864 E UTM: 6828627 N Sample Width: 1m Abundance:
Elevation: m
Comments: Phylite. Hosting above quartz vein.

Sample Number: G005324
Grid East: E Grid North: N Type: Bedrock Dimension:
UTM: 614860 E UTM: 6828080 N Sample Width: Abundance:
Elevation: m
Comments: White coarse-crystaline quartz with no visible mineralization. From vein approximately 9 ft thick.

Rock Sample Descriptions

Project: Groundhog

Property: Groundhog

Sample Number:	Grid East:		E	Grid North:		N	Type:	Float	Dimension:	
G005325	UTM:	614860	E	UTM:	6828080	N	Sample Width:		Abundance:	Very low.
	Elevation:		m							

Comments: Quartz with malachite and azurite residue.

Sample Number:	Grid East:		E	Grid North:		N	Type:	Float-Composite	Dimension:	
G005326	UTM:	614808	E	UTM:	6828095	N	Sample Width:		Abundance:	Moderate
	Elevation:		m							

Comments: Strongly Fe altered limestone float within phylite zone. Numerous (15 to 20) 1 - 2 ft diameter boulders.

Sample Number:	Grid East:		E	Grid North:		N	Type:	Float-Composite	Dimension:	
G005327	UTM:	614800	E	UTM:	6828269	N	Sample Width:		Abundance:	Low - scattered
	Elevation:		m							

Comments: Massive galena with strong Cu-oxide staining. Scattered float with unlcear source.

Sample Number:	Grid East:		E	Grid North:		N	Type:	Float-Composite	Dimension:	
G005328	UTM:	614800	E	UTM:	6828269	N	Sample Width:		Abundance:	Moderate
	Elevation:		m							

Comments: Strongly Fe-altered limestone float.

Sample Number:	Grid East:		E	Grid North:		N	Type:		Dimension:	
G005329	UTM:	611987	E	UTM:	6831037	N	Sample Width:		Abundance:	
	Elevation:		m							

Comments: Green, moderately foliated chlortie schist hosting narrow quartz and siderite viening along foliation plane. Zone is approximetly 1 m wide and is lost in talus on either side of sharp ridge line.

Sample Number:	Grid East:		E	Grid North:		N	Type:	Float	Dimension:	
G005330	UTM:	614044	E	UTM:	6829880	N	Sample Width:		Abundance:	
	Elevation:		m							

Comments: Scree Showing: Grab smaple of strongly limonitic and pitted amterial hosting massive blebs and stringers of fine to medium grained galena.

Rock Sample Descriptions Project: Groundhog Property: Groundhog

---

Sample Number: G005331
Grid East: E Grid North: N Type: Float Dimension:
UTM: 614044 E UTM: 6829880 N Sample Width: Abundance:
Elevation: m
Comments: Scree Showing: Grab sample of limonite altered quartz vein and dolomite clastic breccia containing massive bands and small small blebs and disseminations of galena.

Sample Number: G005332
Grid East: E Grid North: N Type: Grab Dimension:
UTM: 613989 E UTM: 6829238 N Sample Width: Abundance: limited
Elevation: m
Comments: Dolomitic breccia with qtz matrix. Grab sample found in creek cut

---

Sample Number: G005333
Grid East: E Grid North: N Type: Float Dimension:
UTM: 614252 E UTM: 6829575 N Sample Width: Abundance: limited
Elevation: m
Comments: SP Showing: Old trench on southern extent of SP showing exposing moderately altered dolomite and quartz veining. Sample is a float of poddy, medium to coarse grained galena hosted in quartz.

Sample Number: G005334
Grid East: E Grid North: N Type: Float Dimension:
UTM: 614206 E UTM: 6829716 N Sample Width: Abundance: Limited
Elevation: m
Comments: SP Showing: Quartz vein hosting sheared galena in limonite stained fractures. Minor galena disseminations and blebs within quartz.

Sample Number: G005335
Grid East: E Grid North: N Type: Float Dimension:
UTM: 614206 E UTM: 6829716 N Sample Width: Abundance: moderately abundant
Elevation: m
Comments: SP Showing: Very strongly limonite altered material

---

Sample Number: G005336
Grid East: E Grid North: N Type: Float Dimension:
UTM: 614206 E UTM: 6829716 N Sample Width: Abundance: moderately abundant
Elevation: m
Comments: SP Showing: Quartz vein material hosting manganese and local limonite alteration.

Rock Sample Descriptions Project: Groundhog Property: Groundhog

Sample Number:	Grid East:	E	Grid North:	N	Type:	Float	Dimension:	
G005337	UTM:	614206 E	UTM:	6829716 N	Sample Width:		Abundance:	abundant
	Elevation:	m						

Comments: SP Showing: Float sample of typical limonite altered dolomite that hosts the quartz veins.

Sample Number:	Grid East:	E	Grid North:	N	Type:	Bedrock	Dimension:	
G005338	UTM:	612016 E	UTM:	6831092 N	Sample Width:		Abundance:	
	Elevation:	m						

Comments: Strat or Otter Showing?: Lightly Fe-altered phylite.

Sample Number:	Grid East:	E	Grid North:	N	Type:	Float	Dimension:	
G005339	UTM:	612016 E	UTM:	6831092 N	Sample Width:		Abundance:	Moderate
	Elevation:	m						

Comments: Strat or Otter Showing?:Pervasively Fe-altered phylite float.

Sample Number:	Grid East:	E	Grid North:	N	Type:	Float	Dimension:	
G005340	UTM:	611609 E	UTM:	6832758 N	Sample Width:		Abundance:	
	Elevation:	m						

Comments: Cirque Showing: Goethite.

Sample Number:	Grid East:	E	Grid North:	N	Type:	Float-Composite	Dimension:	
G005341	UTM:	611609 E	UTM:	6832758 N	Sample Width:		Abundance:	
	Elevation:	m						

Comments: Cirque Showing: Quartz with speckled malachite, azurite and galena, with some limonite crusting.

Sample Number:	Grid East:	E	Grid North:	N	Type:	Float	Dimension:	
G005342	UTM:	611609 E	UTM:	6832758 N	Sample Width:		Abundance:	
	Elevation:	m						

Comments: Cirque Showing: Massive galena.

Rock Sample Descriptions

Project: Groundhog Property: Groundhog

Sample Number: G005343
Grid East: E Grid North: N Type: Chip Dimension:
UTM: 611609 E UTM: 6832758 N Sample Width: ~1m Abundance:
Elevation: m
Comments: Cirque Showing: Fe altered limestone from gossanous structure running parallel to quartz vein.

Sample Number: G005344
Grid East: E Grid North: N Type: Float Dimension:
UTM: 611609 E UTM: 6832758 N Sample Width: Abundance: Moderate
Elevation: m
Comments: Cirque Showing: Pervasively Fe altered limestone float. Numerous cobble sized pieces, localized.

Sample Number: G005345
Grid East: E Grid North: N Type: Chip Dimension:
UTM: 611609 E UTM: 6832758 N Sample Width: ~1m Abundance:
Elevation: m
Comments: Cirque Showing: Quartz veinlets and pervasively altered limestone from bedrock exposure.

Sample Number: G005346
Grid East: E Grid North: N Type: Chip Dimension:
UTM: 611609 E UTM: 6832758 N Sample Width: ~1m Abundance:
Elevation: m
Comments: Cirque Showing: Quartz veinlets and pervasively altered limestone from bedrock exposure.

Sample Number: G005347
Grid East: E Grid North: N Type: Float Dimension:
UTM: 611649 E UTM: 6833466 N Sample Width: Abundance: Low
Elevation: m
Comments: Nose Showing: Goethite float.

Sample Number: G005348
Grid East: E Grid North: N Type: Float Dimension:
UTM: 611649 E UTM: 6833466 N Sample Width: Abundance: Moderate
Elevation: m
Comments: Nose Showing: Dark brown/black, pervasively altered limestone float.

Rock Sample Descriptions Project: Groundhog Property: Groundhog

---

Sample Number: G005349
Grid East: E Grid North: N Type: Chip Dimension:
UTM: 611649 E UTM: 6833466 N Sample Width: ~1m Abundance: Moderate
Elevation: m
Comments: Nose Showing: Dark brown pervasively altered limestone in floor of trench.

Sample Number: G005350
Grid East: E Grid North: N Type: grab Dimension:
UTM: 613261 E UTM: 6829960 N Sample Width: Abundance:
Elevation: m
Comments: Strong limonitic material in quartz vein and dolomite breccia at contact of shales and dolomites.

Sample Number: G005351
Grid East: E Grid North: N Type: Chip Dimension:
UTM: 613764 E UTM: 6828704 N Sample Width: 1.0 m Abundance:
Elevation: m
Comments: JW Showing: 1 m chip of western hanging wall. Sample consists of quartz flooded dolomite hosting narrow quartz veinlets/sheets @ 125/45. There is a significant carbonate component within the silicified zone (remobilized carbonate).

Sample Number: G005352
Grid East: E Grid North: N Type: Chip Dimension:
UTM: 613764 E UTM: 6828704 N 1.6 m Abundance:
Elevation: m
Comments: JW Showing: 1.6 m chip of strongly limonitic and goethitic altered quartz vein material. In some sections of the zone the alteration is 100% of the rock.

Sample Number: G005353
Grid East: E Grid North: N Type: Chip Dimension:
UTM: 613764 E UTM: 6828704 N Sample Width: 1.6 m Abundance:
Elevation: m
Comments: JW Showing: 1.6 m chip across either footwall of zone or remnant piece of host within the vein.

Sample Number: G005354
Grid East: E Grid North: N Type: Chip Dimension:
UTM: 613764 E UTM: 6828704 N Sample Width: 0.65 m Abundance:
Elevation: m
Comments: JW Showing: 0.65 m wide chip across zone containing extremely limonitic and manganese stained quartz carbonate vein.

Rock Sample Descriptions Project: Groundhog Property: Groundhog

Sample Number:	Grid East:		E	Grid North:		N	Type: Grab	Dimension:	
G005355	UTM:	613764	E	UTM:	6828704	N	Sample Width:	Abundance:	
	Elevation:		m						

Comments: Grab sample of extremely leached and pitted material on altered vein surface.

Sample Number:	Grid East:		E	Grid North:		N	Type: Grab	Dimension:	3 m x 5 m
G005356	UTM:	613792	E	UTM:	6828669	N	Sample Width:	Abundance:	
	Elevation:		m						

Comments: Silicifiedc dolomite containing pods of coarse crystalline "honey" sphalerite. Pervasive limonite pits throughout rock.

Sample Number:	Grid East:		E	Grid North:		N	Type: Grab	Dimension:	3 m x 5 m
G005357	UTM:	613792	E	UTM:	6828669	N	Sample Width:	Abundance:	
	Elevation:		m						

Comments: Same as G005356. Sample taken for comparison.

APPENDIX III

SAMPLE HANDLING AND ANALYTICAL PROCEDURES

SAMPLE HANDLING AND ANALYTICAL PROCEDURES

All rock and soil samples collected during the 2008 program were sorted into rice bags and sealed with a plastic zap strap on the Groundhog property. Samples were brought to Whitehorse by truck when the field crew returned on September 20.

Sample bags were temporarily stored at the Archer Cathro office prior to shipment. All samples were shipped via Greyhound Courier Express to ALS Chemex in North Vancouver, British Columbia.

Rock Geochemical Samples

All rock sample sites in 2008 were marked with orange flagging tape labelled with the sample number. The location of each sample was determined using a handheld GPS unit. All samples sent for shipment were double bagged with sample tags placed in the bags.

The rock samples were submitted to ALS Chemex in North Vancouver, British Columbia where they were dried and fine crushed to –2 mm. A 250 g split was then pulverized to 75 micron and a portion of this material was digested in aqua regia before being analyzed for 34 elements by the inductively coupled plasma-atomic emission spectroscopy technique (ME-ICP41). Overlimit samples for silver and lead were analyzed using Ag-GRA21 and Pb-OG62 respectively.

Silt Geochemical Samples

All silt geochemical samples collected on the property were located by means of compass and of handheld GPS units. Sample locations were marked with orange flagging tape and labelled with sample number. Silt samples were and were placed into individual pre-numbered kraft paper bags.

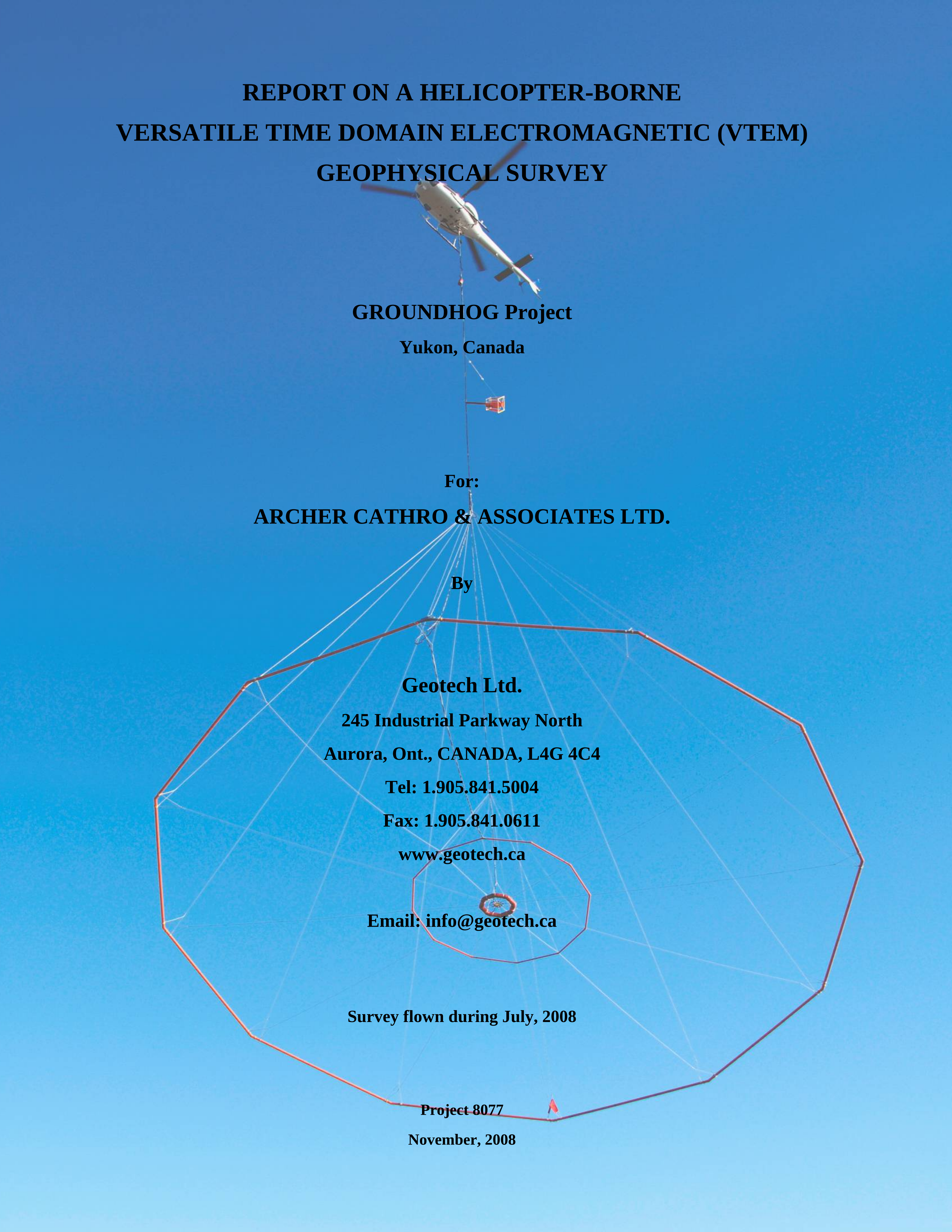
The silt samples were sent to ALS Chemex, where they were dried and screened to minus 180 microns. A 50 g split of the screened fraction was dissolved in aqua regia and analyzed by ME-ICP41.

APPENDIX IV

CERTIFICATES OF ANALYSIS

APPENDIX V

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



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

GROUNDHOG Project

Yukon, Canada

For:

ARCHER CATHRO & ASSOCIATES LTD.

By

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Survey flown during July, 2008

Project 8077
November, 2008

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REPORT ON A HELICOPTER-BORNE
VERSATILE TIME DOMAIN ELECTROMAGNETIC SURVEY

GROUNDHOG Project
Yukon, Canada

Executive Summary

During July 23rd to July 27th, 2008 Geotech Ltd. carried out a helicopter-borne geophysical survey for Archer Cathro & Associates Ltd. over one (1) block of the Groundhog Project situated in the 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 466 line-kilometres were flown.

The survey operations were based out of Ross River, 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 colour grid of the B-field EM late time channels 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.

1. INTRODUCTION

1.1 General Considerations

These services are the result of the Agreement made between Geotech Ltd. and Archer Cathro & Associates Ltd. to perform a helicopter-borne geophysical survey over the Groundhog property block located near Ross River, Yukon, Canada (Figure 1).

Mathew Dumala acted on behalf of Archer Cathro & Associates Ltd. 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 (VTEM) system and aeromagnetics using a caesium magnetometer. A total of 466 line-km of geophysical data were acquired during the survey. The survey area is shown in Figure 2.

The crew was based out of Ross River, Yukon for the acquisition phase of the survey. Survey flying started on July 23rd and was completed on July 27th, 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 November, 2008.

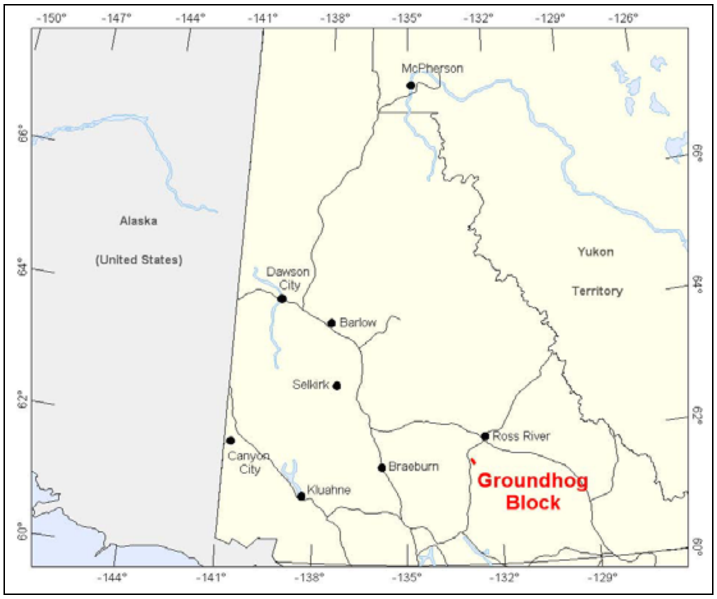

Figure 1 - Property Location

1.2 Survey Location and Specifications

The Groundhog block (61°35'32.72"N, 132°51'37.07"W) is located approximately 50 kilometres south-west of Ross River, Yukon, the base of operations for the survey.

The survey blocks were flown in a N 60° E direction with a traverse line spacing of 100 metres, as depicted in Figure 2. Tie lines were flown perpendicular to the traverse lines at a spacing of 950 metres in the direction of N 150° E. For more detailed information on the flight spacing and direction see Table 1.

1.3 Topographic Relief and Cultural Features

Topographically, the property exhibits large relief, with elevations ranging from 1217 to 2148 metres above sea level (see Figure 2). There are many small rivers and streams that run throughout the block. There are no roads leading to the block, making it accessible only by air. The survey block is covered by NTS (National Topographic Survey) of Canada sheet 105F10.

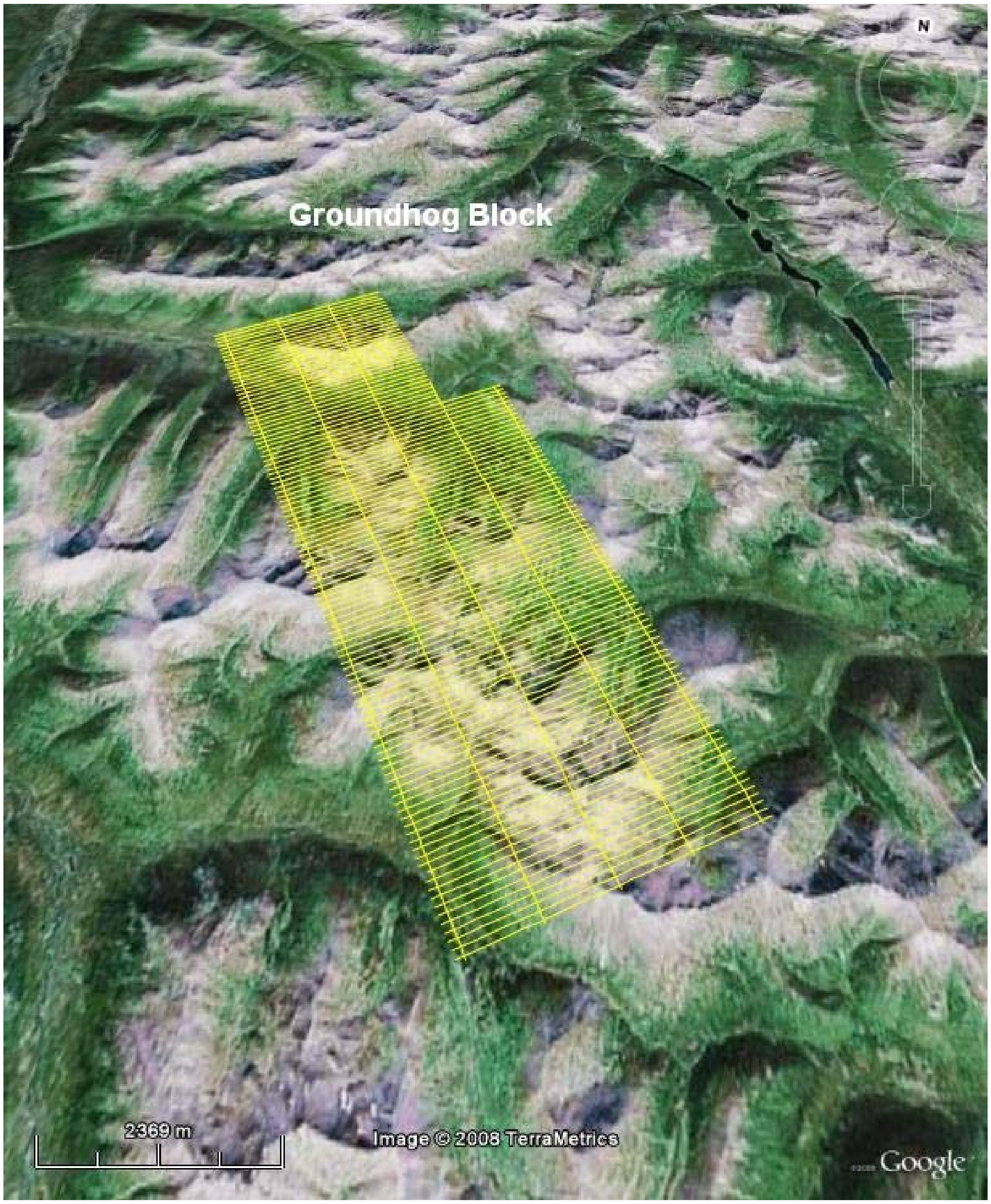

Figure 2 - Google Earth Image with Flight Paths

2. DATA ACQUISITION

2.1 Survey Area

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

Table 1 - Survey blocks

Survey block	Line spacing (m)	Area (Km^2)	Planned Line-km	Actual Line-km[1]	Flight direction	Line number
Groundhog	Traverse: 100	42	417	423	N 60°E	L5800 - 6910
	Tie: 950		49	50	N 150°E	T7900 - 7940
TOTAL		42	466	473		

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

2.2 Survey Operations

Survey operations were based out of Ross River, Yukon, from July 23rd to July 27th, 2008. The following table summarises the timing and daily progress of the survey.

Table 2 - Survey schedule

Date	Flight #	Flown KM	Block	Crew location	Comments
23-July-08	51-53	161	GNR	Ross River, Yukon	Production
24-July-08	54-57	288	GNR	Ross River, Yukon	Production
25-July-08	58 - 60	182	GNR, FAIR	Ross River, Yukon	Production
26-July-08				Ross River, Yukon	No production – low ceiling and rain.
27-July-08	62 - 63	133	GNR	Ross River, Yukon	Production

---

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

2.3 Flight Specifications

The helicopter maintained a mean height of 72 metres above the ground with a nominal survey speed of 80 km/hour. This allowed for a nominal EM sensor terrain clearance of 37 metres and a magnetic sensor clearance of 59 metres. The data recording rates of the data acquisition was 0.1 second for electromagnetics, magnetometer and 0.2 second for altimeter and GPS. This translates to a geophysical reading about every 2 metres along flight track. Navigation was assisted by a CDGPS receiver and data acquisition system, which reports GPS co-ordinates as latitude/longitude and directs the pilot over a pre-programmed survey flight path.

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 information which may be useful in data processing.

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

2.4 Aircraft and Equipment

2.4.1 Survey Aircraft

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

2.4.2 Electromagnetic System

The electromagnetic system was a Geotech Time Domain EM (VTEM) 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 vertical distance of 35 metres below the aircraft as shown in Figure 5. The receiver decay recording scheme is shown diagrammatically in Figure 4.

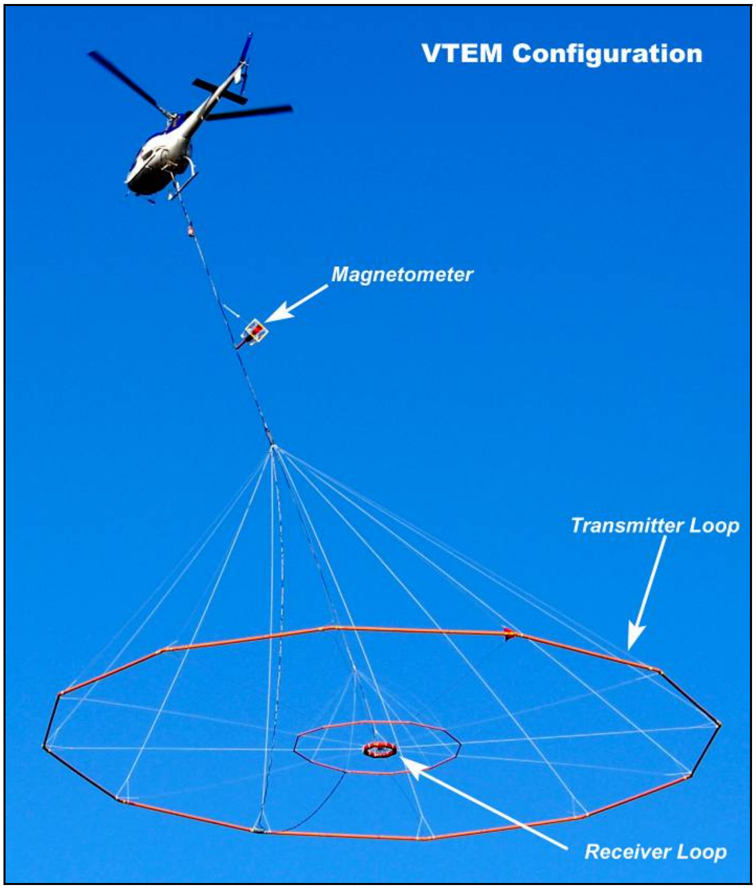

Figure 3 - VTEM Configuration

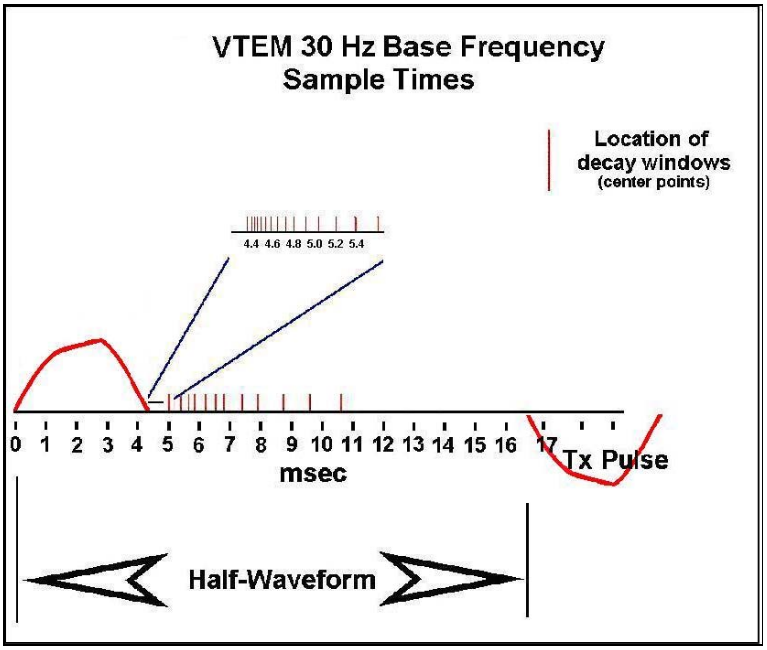

Figure 4 – VTEM Short Pulse Waveform & Sample Times

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

VTEM system parameters:

Transmitter Section

- Transmitter coil diameter: 26 m
- Number of turns: 4
- Transmitter base frequency: 30 Hz
- Peak current: 262 A
- Pulse width: 4.2 ms
- Pulse width: Duty cycle: 25%
- Peak dipole moment: 556,400 nIA
- Nominal terrain clearance: 37 m

Receiver Section

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

Magnetometer

- Nominal terrain clearance: 59 m

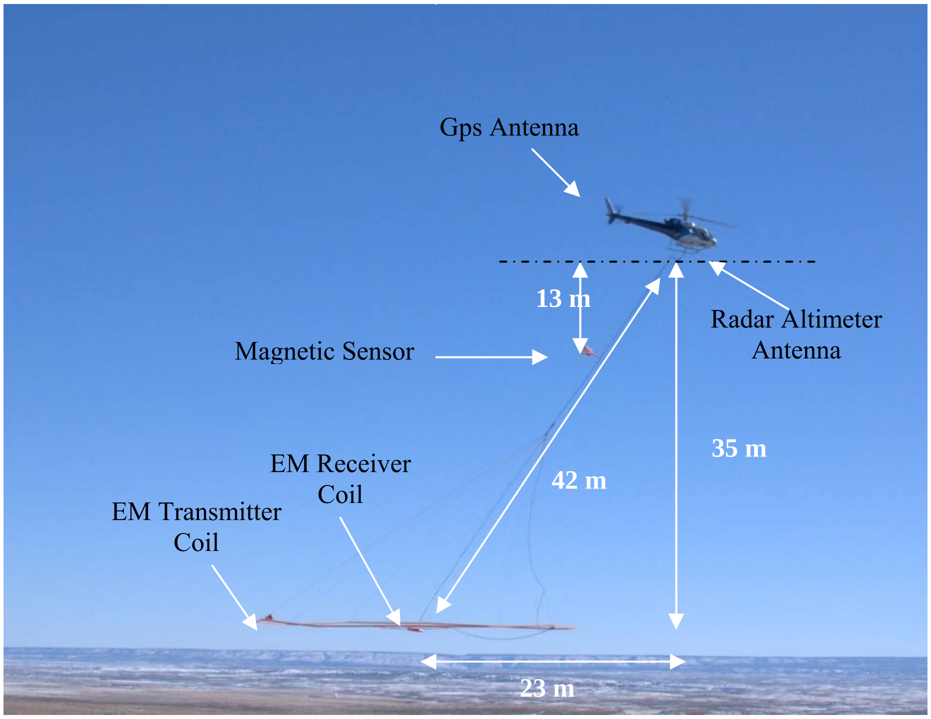

Figure 5 - VTEM system configuration

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 separate 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 on the apron at the airport in Ross River, Yukon (61°58'21.77"N, 132°25'37.56"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.

<u>Field:</u>

Project Manager:	Les Moschuk (office)
Data QC/QA:	Nick Venter (office)
Crew chief:	Ryan MacIver
System Operator:	Jason McKinnon

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

Pilot:	Randy Marks
Mechanical Engineer:	Chris Ward

<u>Office:</u>

Preliminary Data Processing:	Neil Fiset
Final Data Processing:	Neil Fiset
Mapping/Reporting:	Kyle Orlowski

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

4. DATA PROCESSING AND PRESENTATION

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

4.1 Flight Path

The flight path, recorded by the acquisition program as WGS 84 latitude/longitude, was converted into the NAD83 Datum, UTM Zone 8 North coordinate system in Oasis Montaj.

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

4.2 Electromagnetic Data

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

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

The results are presented as stacked profiles of EM voltages for the time gates, in linear - logarithmic scale for both B-field and dB/dt response. B-field time channel recorded at 1.641 milliseconds after the termination of the pulse is also presented as contour colour image.

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

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

4.3 Magnetic Data

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

Tie line levelling was carried out by adjusting intersection points along 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 was interpolated between survey lines using a random point gridding method to yield x-y grid values for a standard grid cell size of approximately 0.2 cm at the mapping scale. The Minimum Curvature algorithm was used to interpolate values onto a rectangular regular spaced grid.

5. DELIVERABLES

5.1 Survey Report

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

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

5.2 Maps

Final maps were produced at scale of 1:10,000. The coordinate/projection system used was NAD 83, 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, and color magnetic TMI contour maps. The following maps are presented on paper;

- VTEM B-field profiles, Time Gates 0.234 – 9.245 ms in linear - logarithmic scale over total magnetic intensity colour grid and.
- VTEM dB/dt profiles, Time Gates 0.234 – 9.245 ms in linear – logarithmic scale.
- VTEM B-field late time, Time Gate 1.641 ms colour image.
- Total magnetic intensity (TMI) colour image and contours.

.

5.3 Digital Data

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

- DVD structure.

There are two (2) main directories;

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

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

Table 5 – Geosoft GDB Data Format.

Channel Name	**Description**
X:	X positional data (metres – NAD83, UTM zone 8 north)
Y:	Y positional data (metres – NAD83, UTM zone 8 north)
Z:	GPS antenna elevation (metres - ASL)
Lon:	Longitude data (degree – NAD83)
Lat:	Latitude data (degree – NAD83)
Radar:	Helicopter terrain clearance from radar altimeter (metres - AGL)
RadarB:	EM Bird terrain clearance from radar altimeter (metres - AGL)
DEM:	Digital elevation model (metres)
Gtime:	GPS time (seconds of the day)
Mag1:	Raw Total Magnetic field data (nT)
Basemag:	Magnetic diurnal variation data (nT)
Mag2:	Diurnal corrected Total Magnetic field data (nT)
Mag3:	Leveled Total Magnetic field data (nT)
SF[10]:	dB/dt 120 microsecond time channel pV/(A*m^4)
SF[11]:	dB/dt 141 microsecond time channel pV/(A*m^4)
SF[12]:	dB/dt 167 microsecond time channel pV/(A*m^4)
SF[13]:	dB/dt 198 microsecond time channel pV/(A*m^4)
SF[14]:	dB/dt 234 microsecond time channel pV/(A*m^4)
SF[15]:	dB/dt 281 microsecond time channel pV/(A*m^4)
SF[16]:	dB/dt 339 microsecond time channel pV/(A*m^4)
SF[17]:	dB/dt 406 microsecond time channel pV/(A*m^4)
SF[18]:	dB/dt 484 microsecond time channel pV/(A*m^4)
SF[19]:	dB/dt 573 microsecond time channel pV/(A*m^4)
SF[20]:	dB/dt 682 microsecond time channel pV/(A*m^4)
SF[21]:	dB/dt 818 microsecond time channel pV/(A*m^4)
SF[22]:	dB/dt 974 microsecond time channel pV/(A*m^4)
SF[23]:	dB/dt 1151 microsecond time channel pV/(A*m^4)
SF[24]:	dB/dt 1370 microsecond time channel pV/(A*m^4)
SF[25]:	dB/dt 1641 microsecond time channel pV/(A*m^4)
SF[26]:	dB/dt 1953 microsecond time channel pV/(A*m^4)
SF[27]:	dB/dt 2307 microsecond time channel pV/(A*m^4)
SF[28]:	dB/dt 2745 microsecond time channel pV/(A*m^4)
SF[29]:	dB/dt 3286 microsecond time channel pV/(A*m^4)
SF[30]:	dB/dt 3911 microsecond time channel pV/(A*m^4)
SF[31]:	dB/dt 4620 microsecond time channel pV/(A*m^4)
SF[32]:	dB/dt 5495 microsecond time channel pV/(A*m^4)
SF[33]:	dB/dt 6578 microsecond time channel pV/(A*m^4)
SF[34]:	dB/dt 7828 microsecond time channel pV/(A*m^4)
SF[35]:	dB/dt 9245 microsecond time channel pV/(A*m^4)

Channel Name	**Description**
BF[10]:	B-field 120 microsecond time channel (pV*ms)/(A*m^4)
BF[11]:	B-field 141 microsecond time channel (pV*ms)/(A*m^4)
BF[12]:	B-field 167 microsecond time channel (pV*ms)/(A*m^4)
BF[13]:	B-field 198 microsecond time channel (pV*ms)/(A*m^4)
BF[14]:	B-field 234 microsecond time channel (pV*ms)/(A*m^4)
BF[15]:	B-field 281 microsecond time channel (pV*ms)/(A*m^4)
BF[16]:	B-field 339 microsecond time channel (pV*ms)/(A*m^4)
BF[17]:	B-field 406 microsecond time channel (pV*ms)/(A*m^4)
BF[18]:	B-field 484 microsecond time channel (pV*ms)/(A*m^4)
BF[19]:	B-field 573 microsecond time channel (pV*ms)/(A*m^4)
BF[20]:	B-field 682 microsecond time channel (pV*ms)/(A*m^4)
BF[21]:	B-field 818 microsecond time channel (pV*ms)/(A*m^4)
BF[22]:	B-field 974 microsecond time channel (pV*ms)/(A*m^4)
BF[23]:	B-field 1151 microsecond time channel (pV*ms)/(A*m^4)
BF[24]:	B-field 1370 microsecond time channel (pV*ms)/(A*m^4)
BF[25]:	B-field 1641 microsecond time channel (pV*ms)/(A*m^4)
BF[26]:	B-field 1953 microsecond time channel (pV*ms)/(A*m^4)
BF[27]:	B-field 2307 microsecond time channel (pV*ms)/(A*m^4)
BF[28]:	B-field 2745 microsecond time channel (pV*ms)/(A*m^4)
BF[29]:	B-field 3286 microsecond time channel (pV*ms)/(A*m^4)
BF[30]:	B-field 3911 microsecond time channel (pV*ms)/(A*m^4)
BF[31]:	B-field 4620 microsecond time channel (pV*ms)/(A*m^4)
BF[32]:	B-field 5495 microsecond time channel (pV*ms)/(A*m^4)
BF[33]:	B-field 6578 microsecond time channel (pV*ms)/(A*m^4)
BF[34]:	B-field 7828 microsecond time channel (pV*ms)/(A*m^4)
BF[35]:	B-field 9245 microsecond time channel (pV*ms)/(A*m^4)
PLM:	Power Line monitor (60Hz)
FltNo	Flight number
Date	Flying date

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 “VTEM_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 (Amp)

- Grids in Geosoft GRD format, as follows:

BF25_GRN:	B-Field Channel 25 (Time Gate 1.641 ms)
Mag3_GRN:	Total magnetic intensity (nT)

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

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

8077_Bfield_**:	B-field profiles, Time Gates 0.234 – 9.245 ms in linear logarithmic scale over TMI.
8077_dBdt_**:	dB/dt profiles, Time Gates 0.234 – 9.245 ms in linear logarithmic scale.
8077_BF_**:	B-field Time Gate 1.641 ms colour image.
8077_TMI_**:	Total magnetic intensity colour image and contours.

Note: Where ** represents the map name (8077_TMI_GroundhogN.map).

Maps are also presented in PDF and MapInfo format.

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

- Google Earth files *8077_GRN_fltpath.kml* showing the flight path of each block. Free versions of Google Earth software 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 the Groundhog Project in the Yukon Territory, Canada.

The total area coverage is 42 km^2. Total survey line coverage is 466 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 1:10,000. No formal interpretation is included in this report.

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 detailed interpretation of the EM and magnetic data, in conjunction with the known geology, including EM anomaly picking, as well as 3D inversion and modelling techniques to further 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[6],

Kyle Orlowski
Geotech Ltd.

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

Neil Fiset
Geotech Ltd.

November 2008

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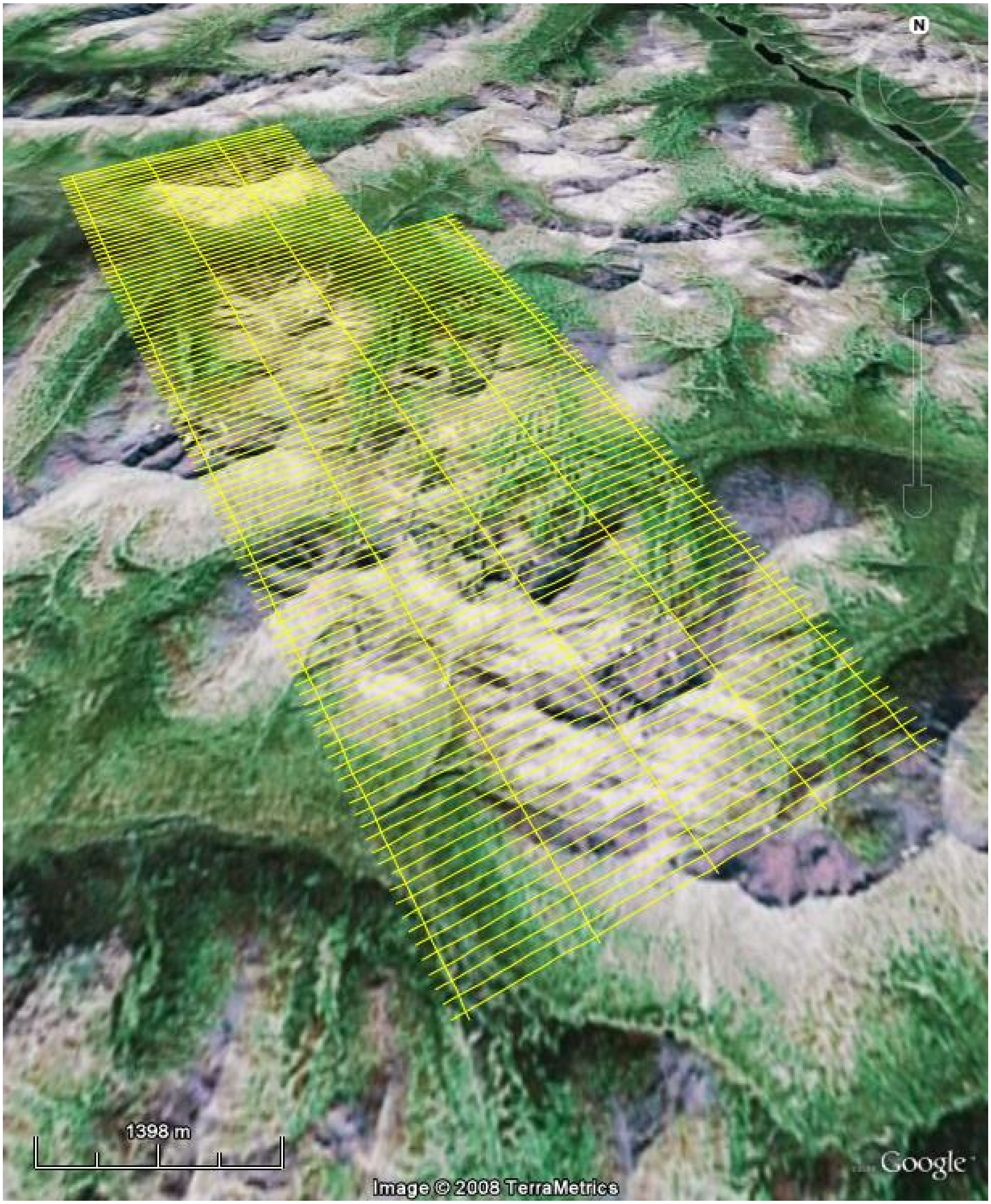
[6] Final data processing and interpretation of the EM and magnetic data were carried out by Neil Fiset, from the office of Geotech Ltd. in Aurora, Ontario, under the supervision of Jean Legault, P. Geo, Manager of Data Processing and Interpretation.

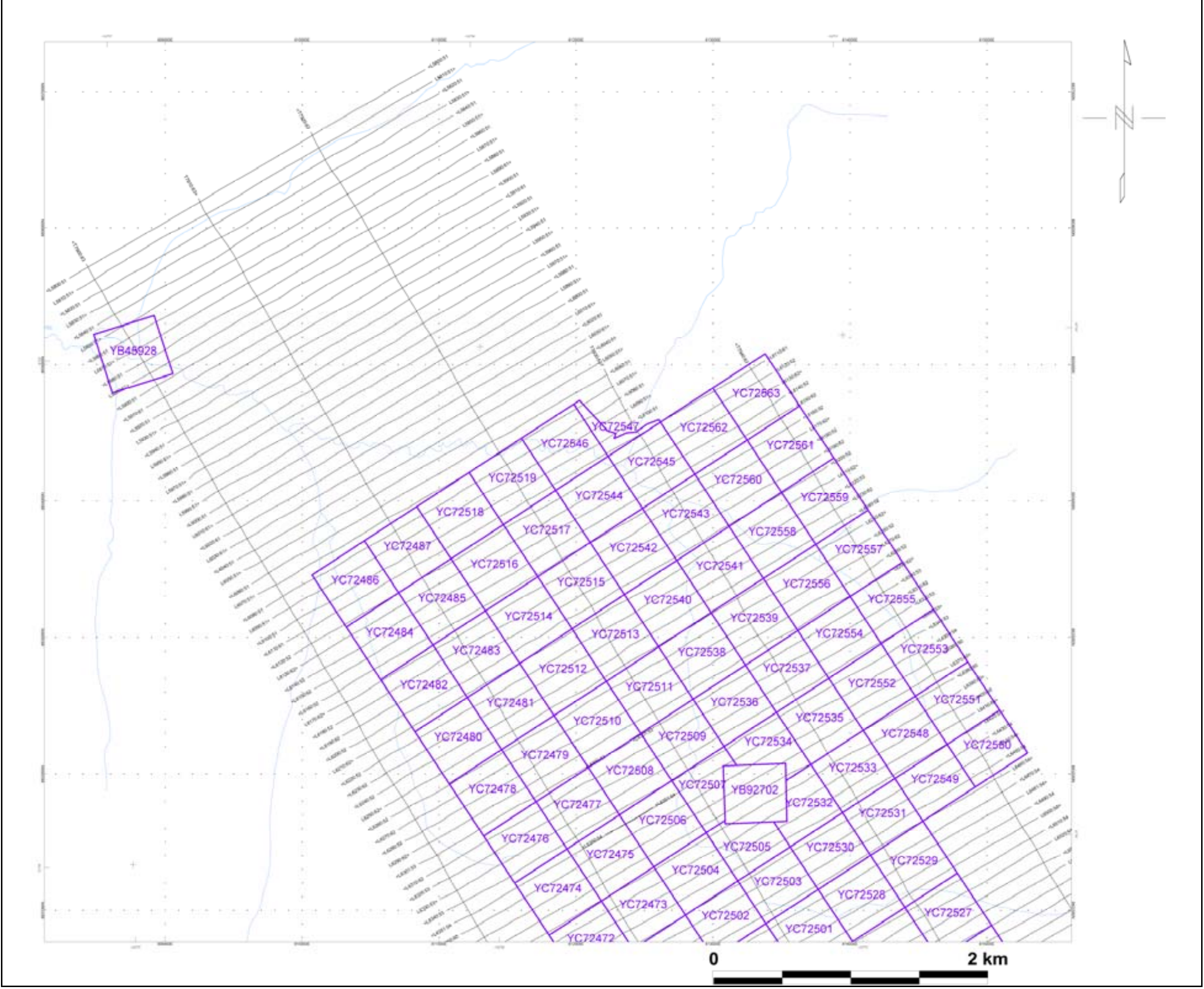
APPENDIX A

SURVEY BLOCK LOCATION MAPS

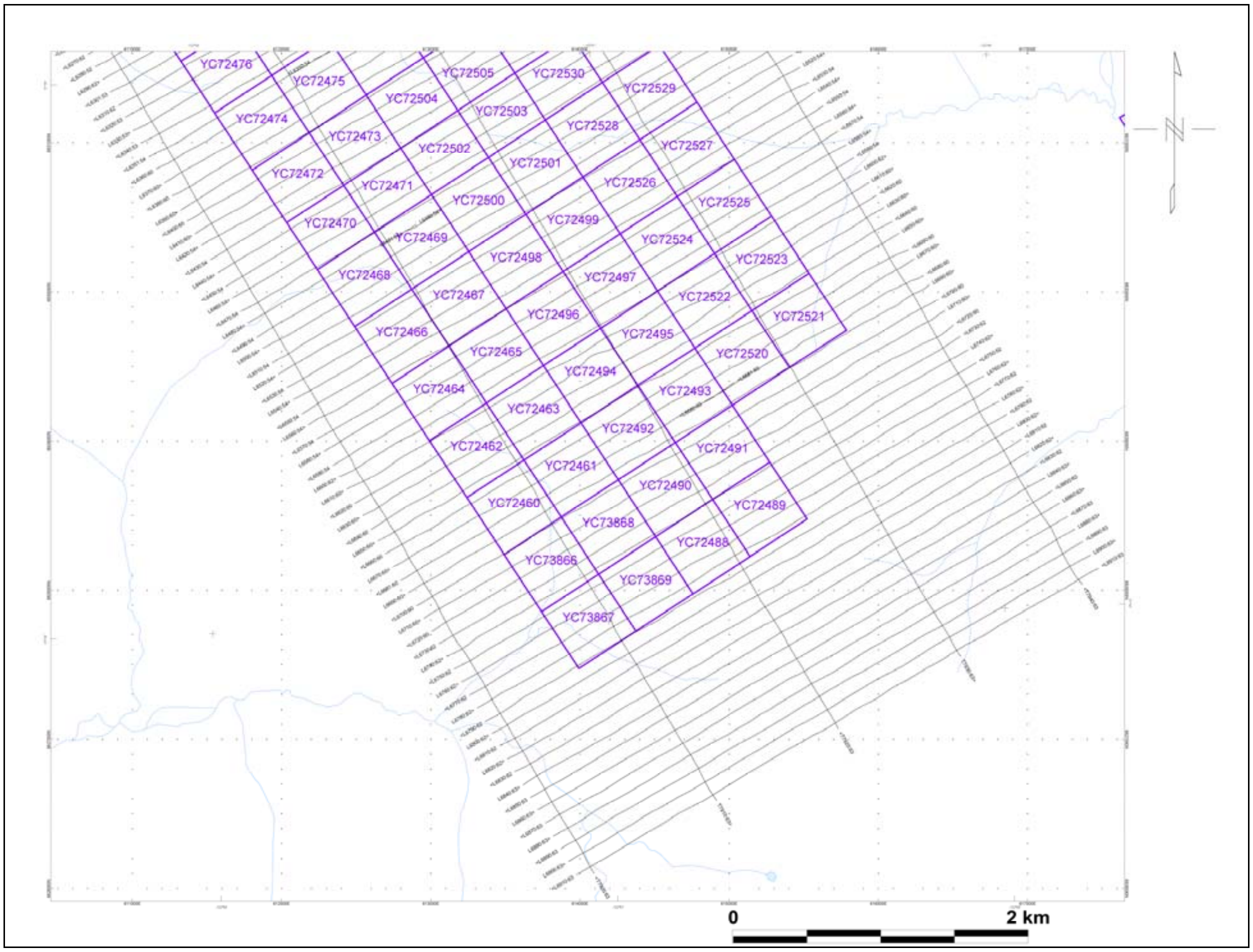
Google Earth Image: Groundhog Project



Google Earth Image: Groundhog Block



Mining Claims Map: Groundhog Block - North



Mining Claims Map: Groundhog Block South

APPENDIX B

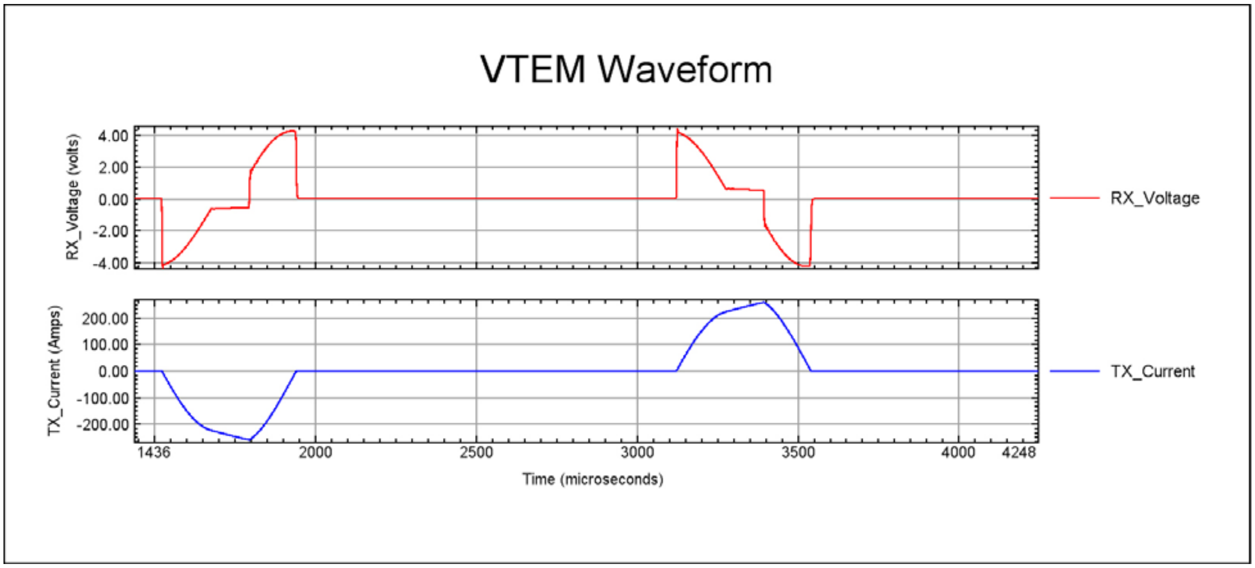
SURVEY BLOCK COORDINATES

(NAD83, UTM Zone 8 North)

Groundhog	
X	Y
608319	6835643
610875	6837155
612464	6834486
613358	6835015
617461	6828121
614011	6826080

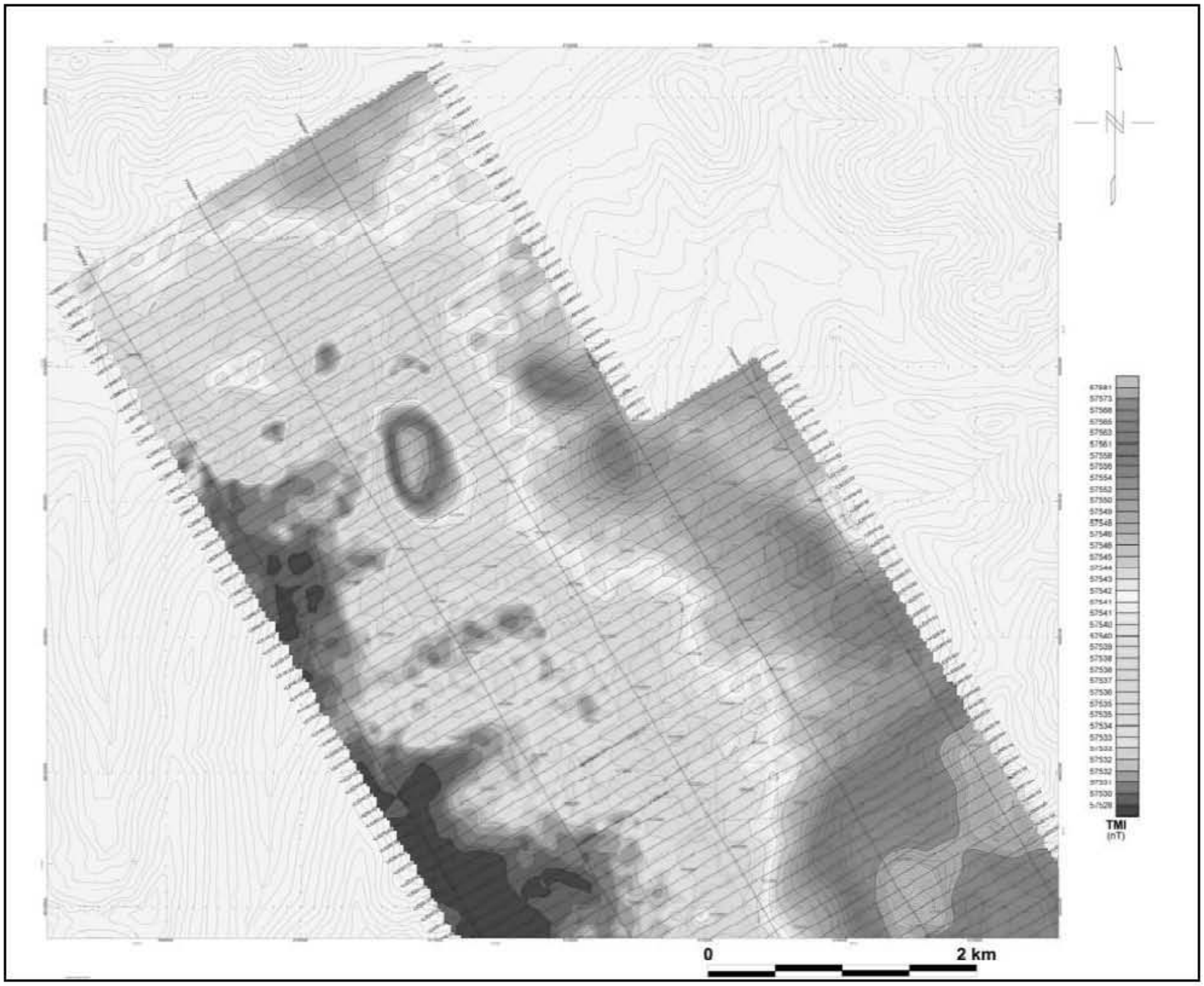
APPENDIX C

VTEM WAVEFORM



APPENDIX D

GEOPHYSICAL MAPS[1]



Groundhog Property - North: Total Magnetic Intensity (TMI)

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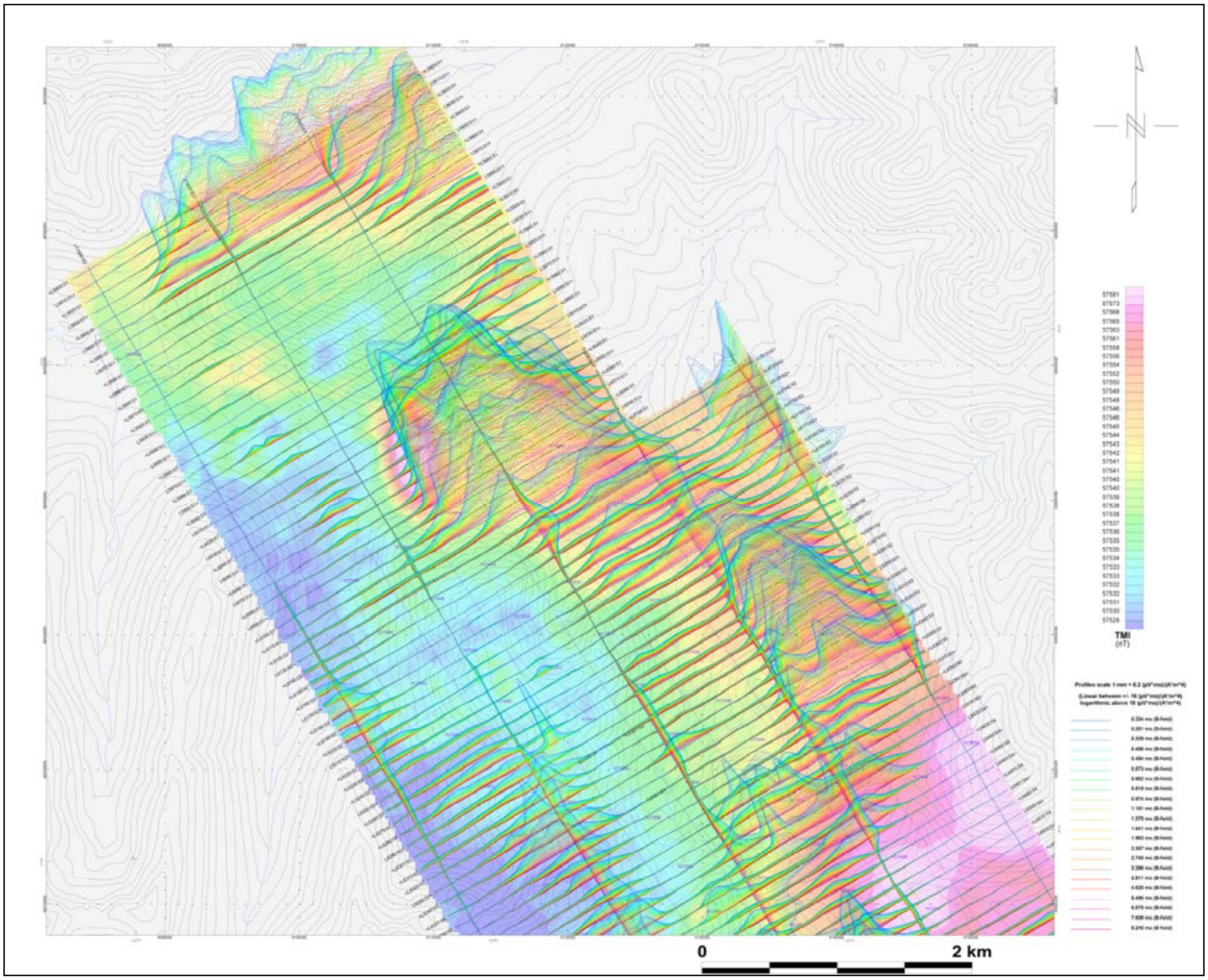
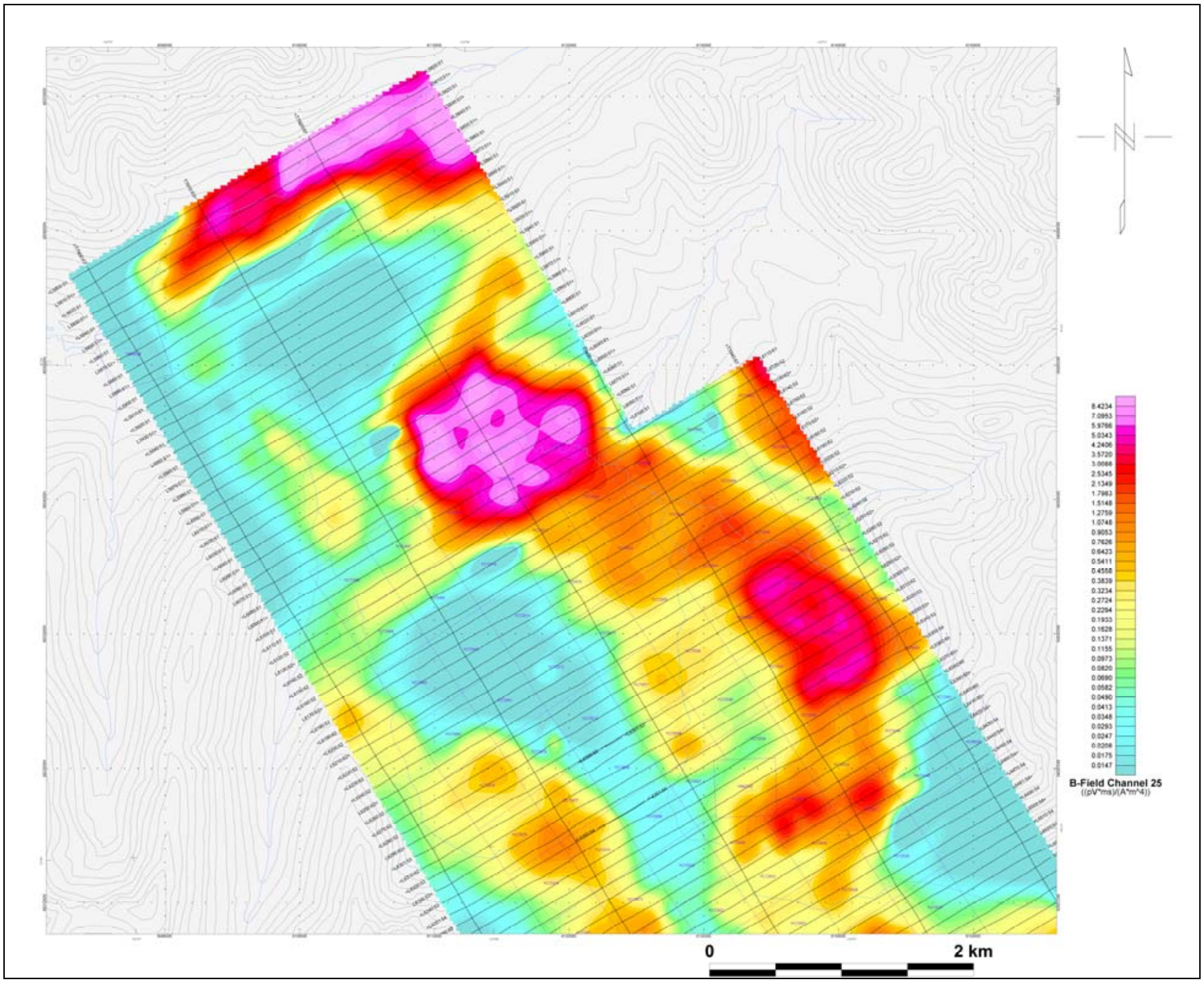
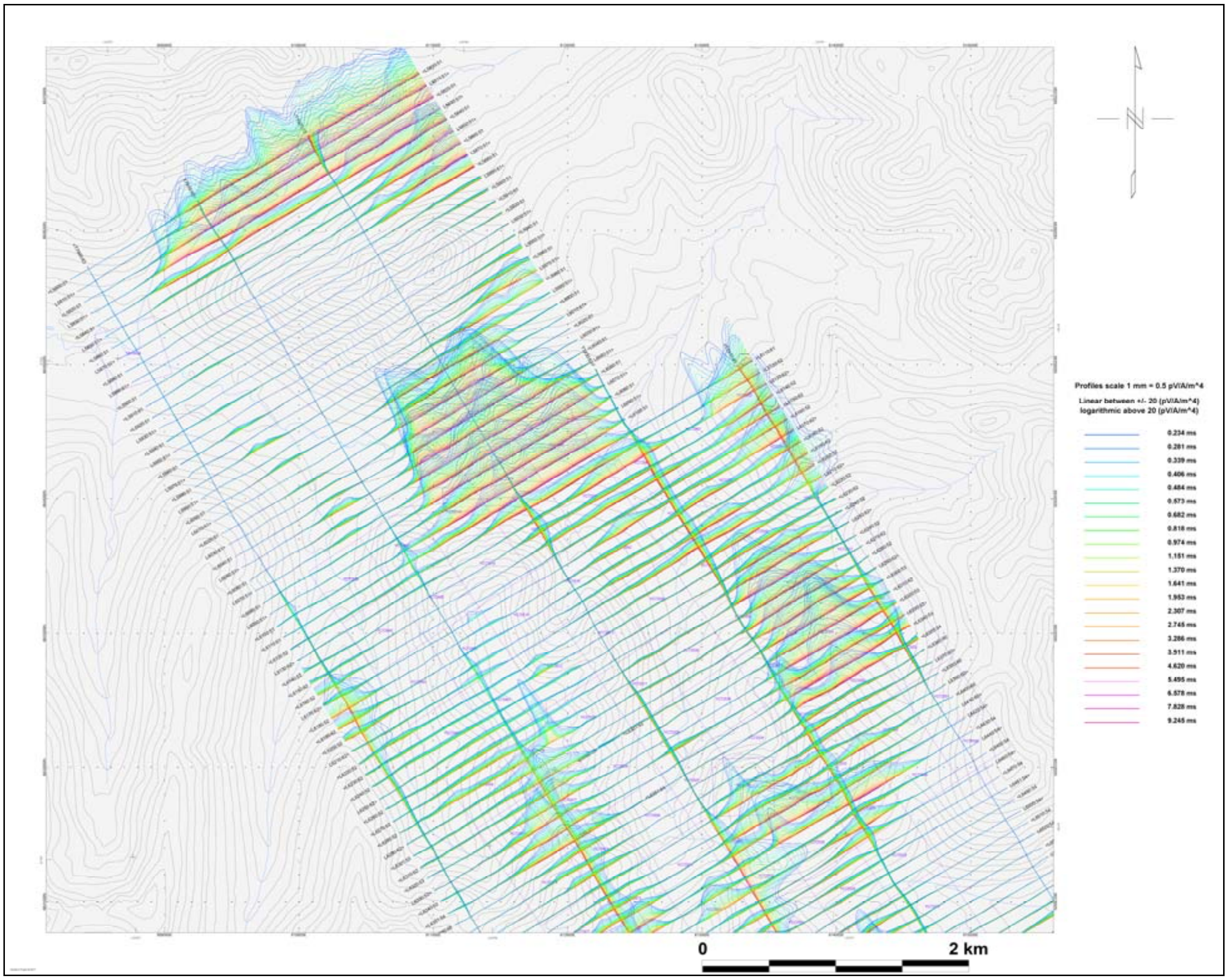
[1] Note: Present maps are a selection of the final geophysical maps. Full size geophysical maps are also available in PDF format on the final DVD.



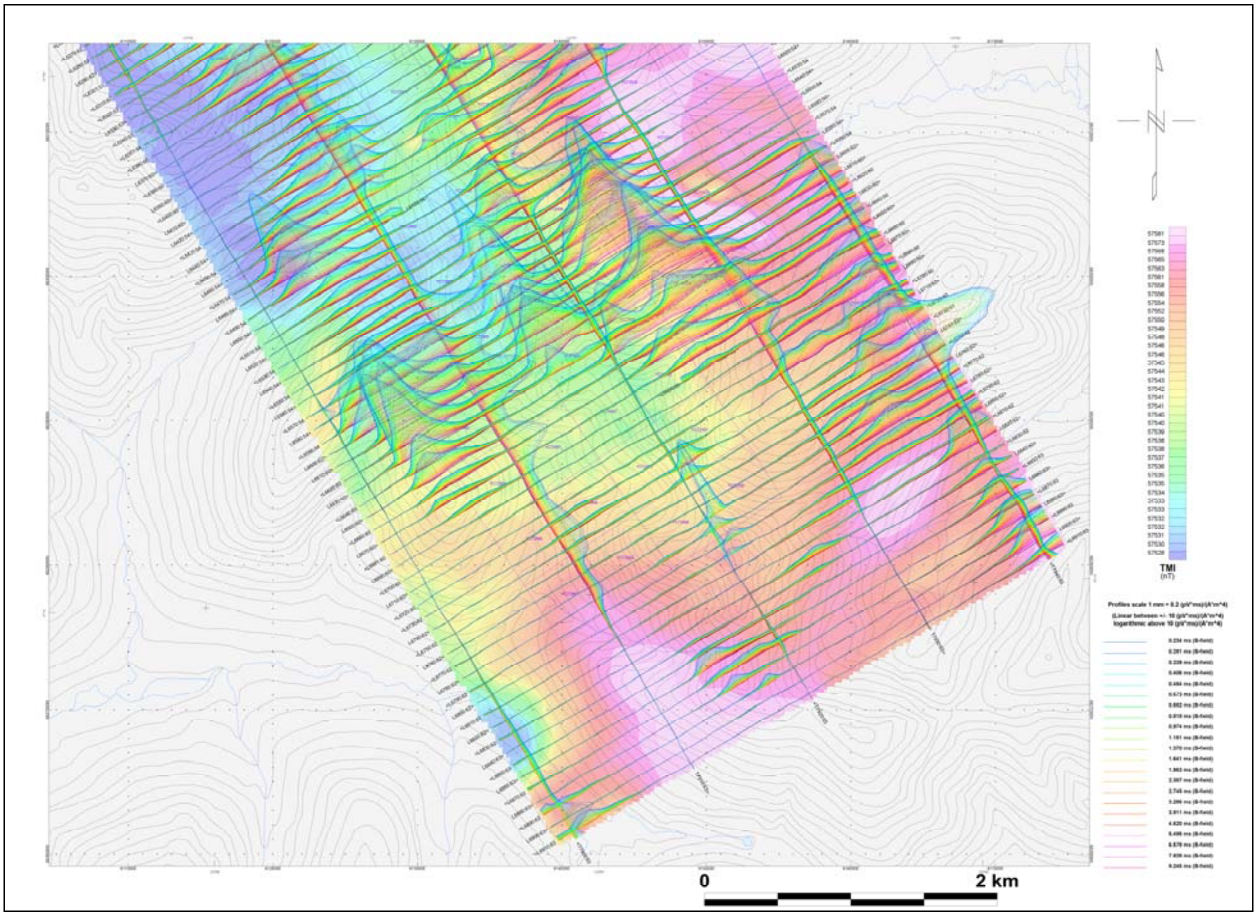
Groundhog Property - North: VTEM B-Field Profiles – Time Gates 0.234 to 9.245 ms, over TMI



Groundhog Property - North: VTEM B-Field Contours – Time Gate 1.641 ms



Groundhog Property - North: VTEM dB/dt Profiles
- Time Gates 0.234 to 9.245 ms



Groundhog Property - South: VTEM B-Field Profiles - Time Gates 0.234 to 9.245 ms, over TMI

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 metres diameter transmitter loop that produces a dipole moment up to 384,000 nIA at peak current. The wave form is a bi-polar, modified square wave with a turn-on and turn-off at each end. With a base frequency of 30 Hz, the duration of each pulse is approximately 7.4 milliseconds followed by an off time where no primary field is present.

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

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

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

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 (see model H). Only concentric loop systems can map this type of target.

The Maxwell ^{TM} modeling program (Fullagar and Reid, 2001) used to generate the following responses assumes a resistive half-space.

Variation of Plate Depth

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

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

Variation of Plate Dip

As the plate dips and departs from the vertical position, the peaks become asymmetrical. Figures C-3 & C-4 and C-7 and C-8 show a near surface plate dipping 80º 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 90º to about 30º. The method is not sensitive enough where dips are less than about 30º. For example, for a plate dipping 45º, the minimum shoulder starts to vanish. In Figures C-9 & C-10 and C-11 & C-12, a flat lying plate is shown, relatively near surface. Note that the twin peak anomaly has been replaced by a symmetrical shape with large, bell shaped, channel amplitudes which decay relative to the conductance of the plate.

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

Variation of Prism Dip

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

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

I. THIN PLATE

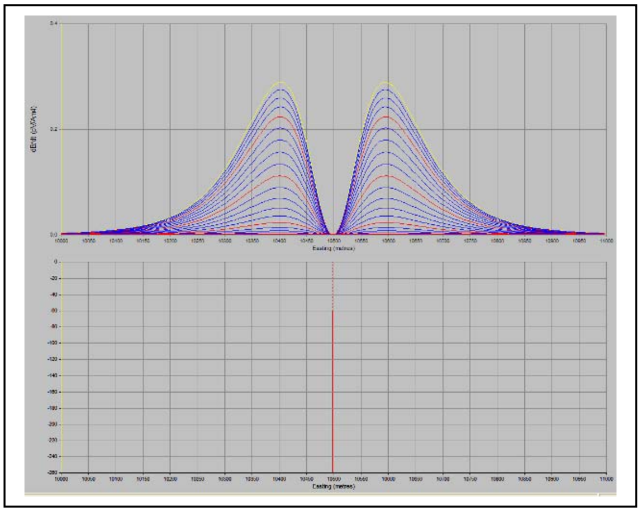


Figure C-1: dB/dt response of a shallow vertical thin plate. Depth=100 m, CT=20 S. The EM response is normalized by the dipole moment and the Rx area.

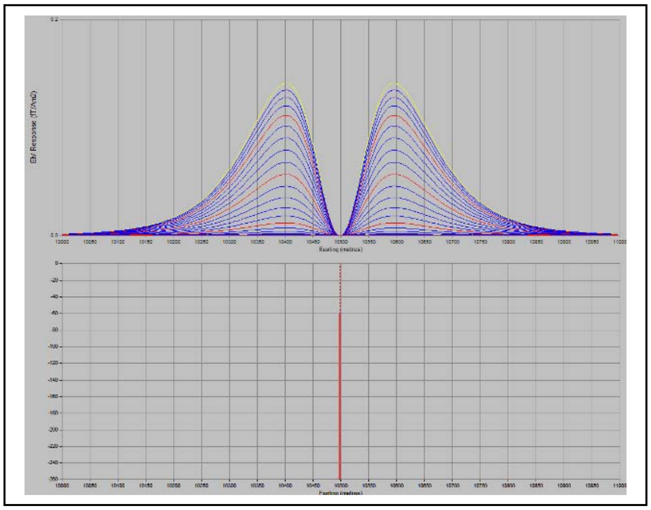


Figure C-2: B-field response of a shallow vertical thin plate. Depth=100 m, CT=20 S. The EM response is normalized by the dipole moment.

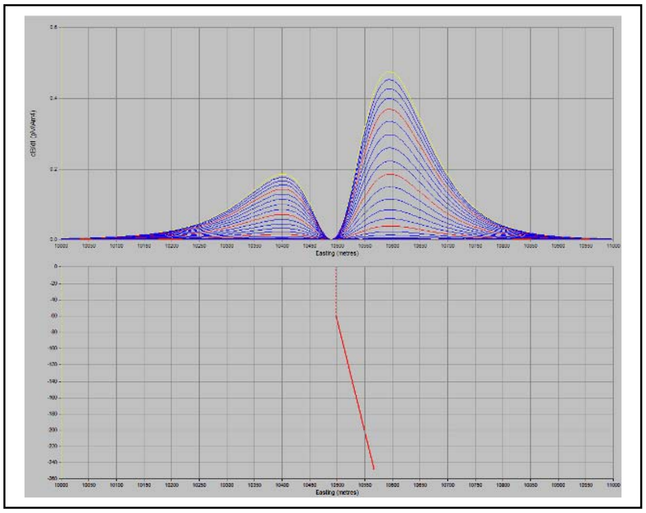


Figure C-3: dB/dt response of a shallow skewed thin plate. Depth=100 m, CT=20 S. The EM response is normalized by the dipole moment and the Rx area.

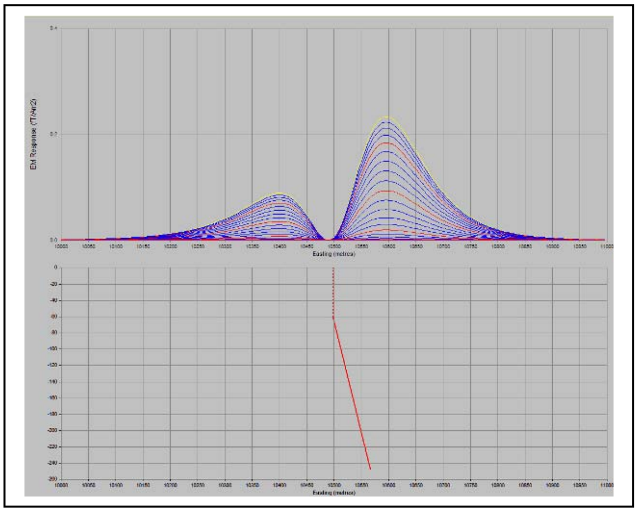


Figure C-4: B-field response of a shallow skewed thin plate. Depth=100 m, CT=20 S. The EM response is normalized by the dipole moment.

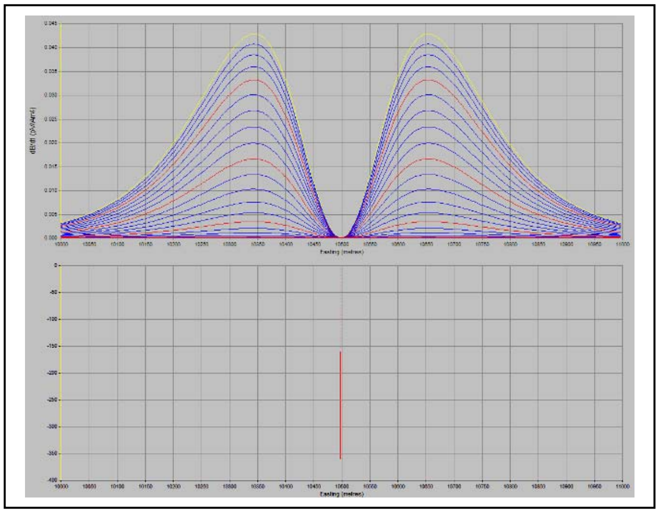


Figure C-5: dB/dt response of a deep vertical thin plate. Depth=200 m, CT=20 S. The EM response is normalized by the dipole moment and the Rx area.

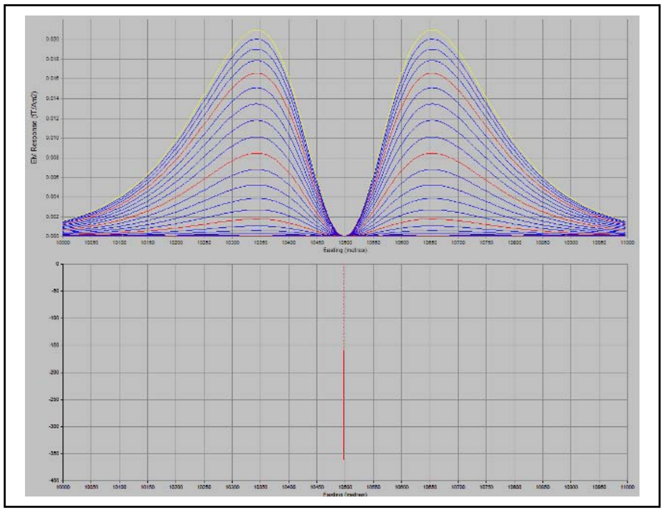


Figure C-6: B-Field response of a deep vertical thin plate. Depth=200 m, CT=20 S. The EM response is normalized by the dipole moment.

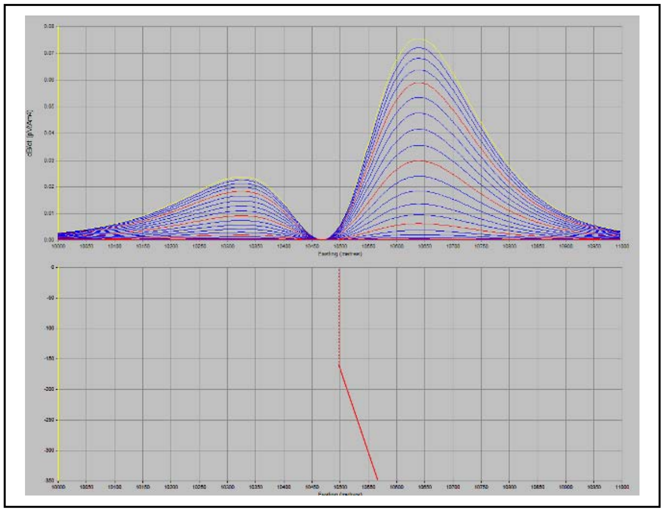


Figure C-7: dB/dt response of a deep skewed thin plate. Depth=200 m, CT=20 S. The EM response is normalized by the dipole moment and the Rx area.

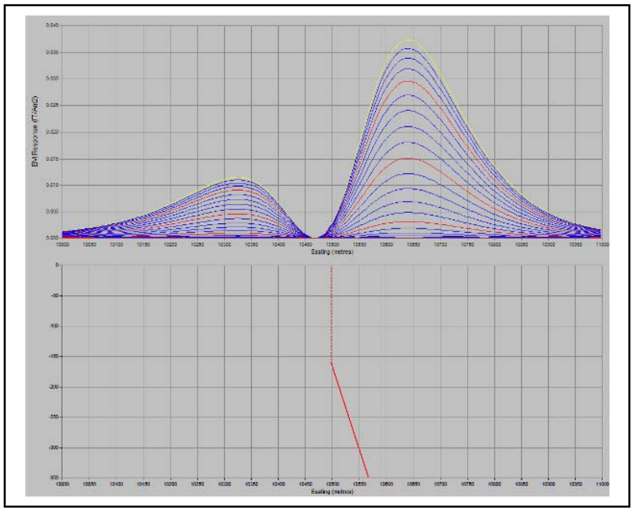


Figure C-8: B-field response of a deep skewed thin plate. Depth=200 m, CT=20 S. The EM response is normalized by the dipole moment.

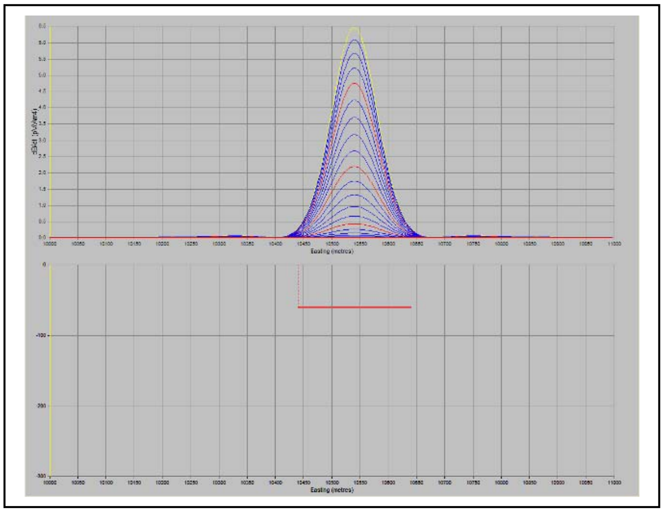


Figure C-9: dB/dt response of a shallow horizontal thin plate. Depth=100 m, CT=20 S. The EM response is normalized by the dipole moment and the Rx area.

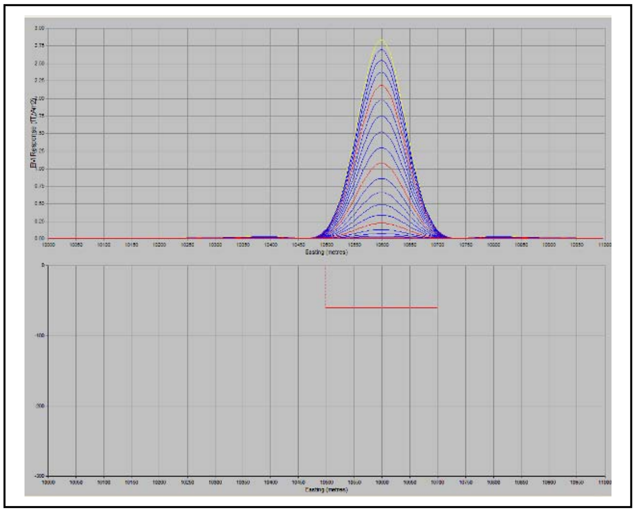


Figure C-10: B-Field response of a shallow horizontal thin plate. Depth=100 m, CT=20 S. The EM response is normalized by the dipole moment.

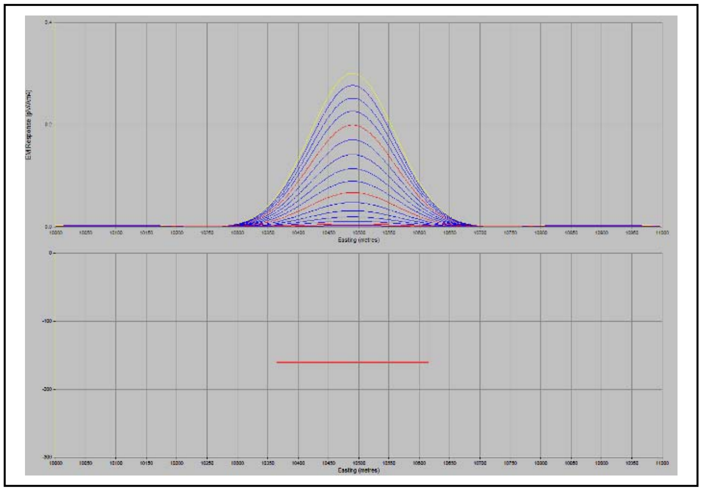


Figure C-11: dB/dt response of a deep horizontal thin plate. Depth=200 m, CT=20 S. The EM response is normalized by the dipole moment and the Rx area.

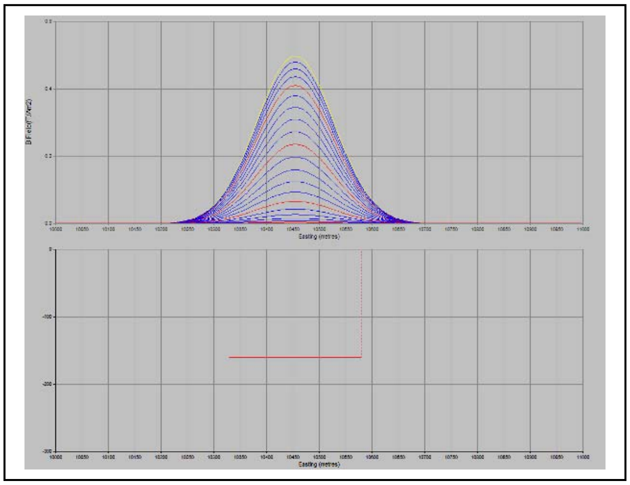


Figure C-12: B-Field response of a deep horizontal thin plate. Depth=200 m, CT=20 S. The EM response is normalized by the dipole moment.

II. THICK PLATE

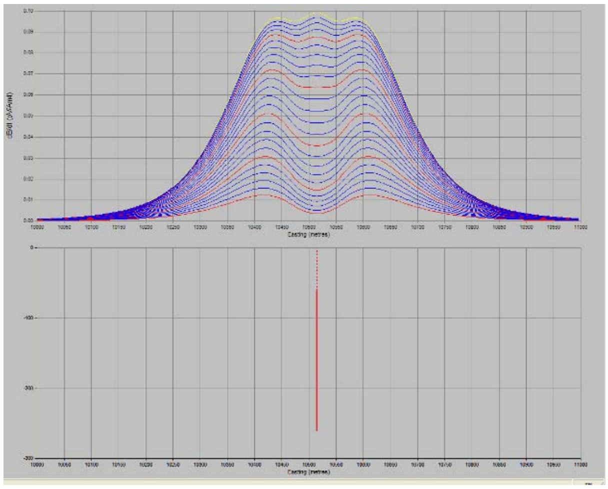


Figure C-13: dB/dt response of a shallow vertical thick plate. Depth=100 m, C=12 S/m, thickness=20 m. The EM response is normalized by the dipole moment and the Rx area.

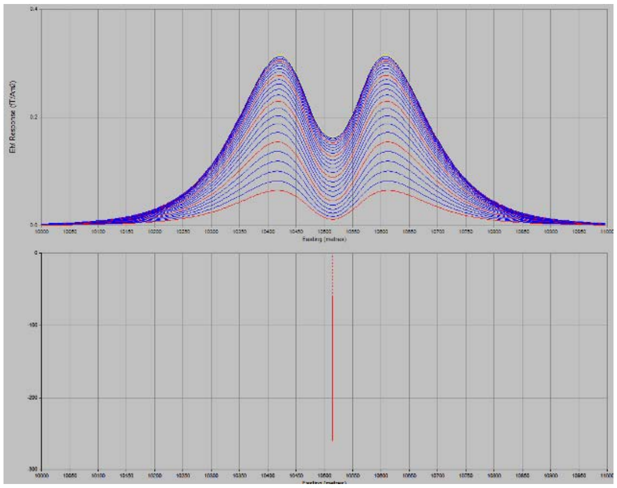


Figure C-14: B-Field response of a shallow vertical thick plate. Depth=100 m, C=12 S/m, thickness= 20 m. The EM response is normalized by the dipole moment.

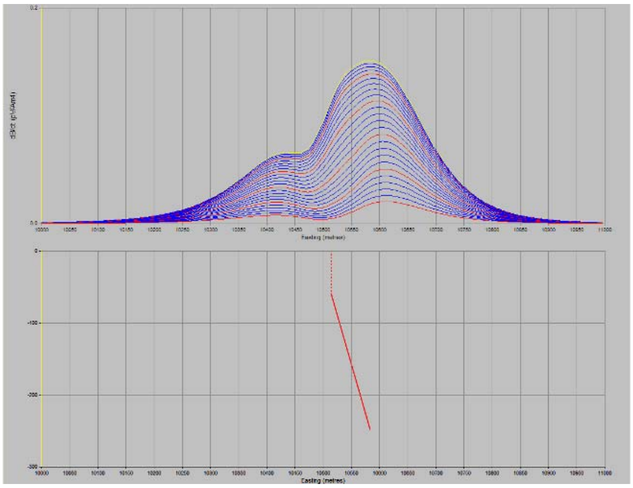


Figure C-15: dB/dt response of a shallow skewed thick plate. Depth=100 m, C=12 S/m, thickness=20 m. The EM response is normalized by the dipole moment and the Rx area.

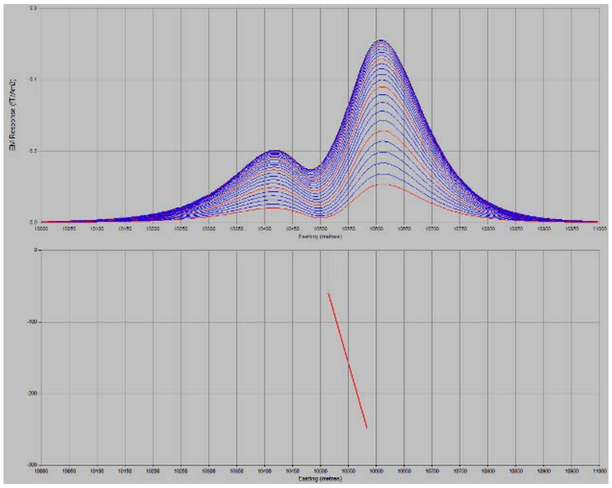


Figure C-16: B-Field response of a shallow skewed thick plate. Depth=100 m, C=12 S/m, thickness=20 m. The EM response is normalized by the dipole moment.

III. MULTIPLE THIN PLATES

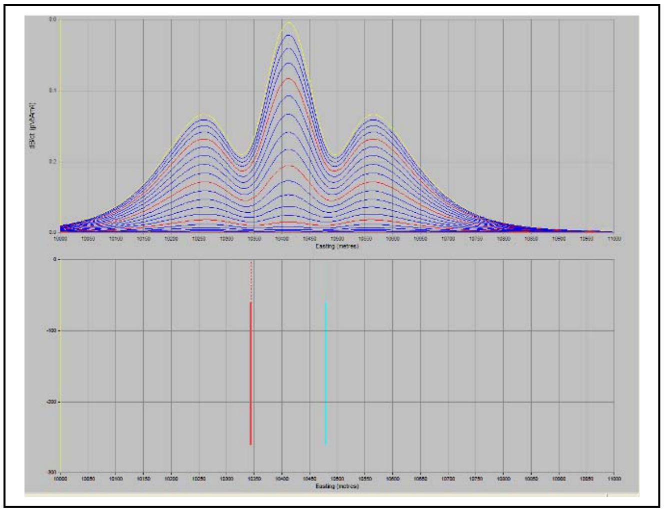


Figure C-17: dB/dt response of two vertical thin plates. Depth=100 m, CT=20 S. The EM response is normalized by the dipole moment and the Rx area.

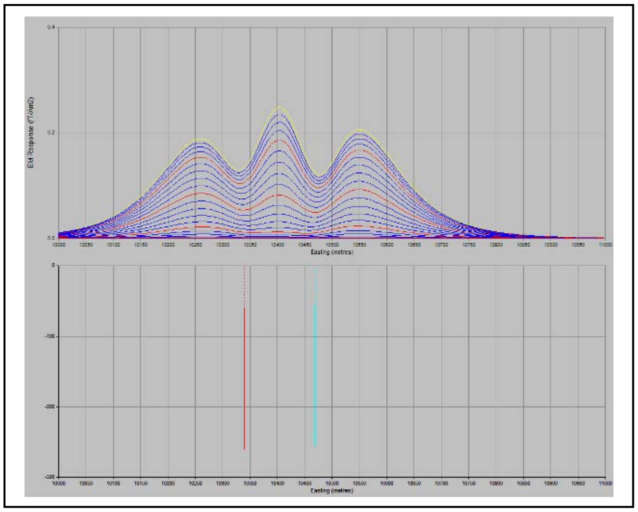


Figure C-18: B-Field response of two vertical thin plates. Depth=100 m, CT=20 S. The EM response is normalized by the dipole moment.

General Interpretation Principals

Magnetics

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

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

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

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

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

Concentric Loop EM Systems

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

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

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

It is sometimes difficult to distinguish between responses associated with the edge effects of flat lying conductors and poorly conductive bedrock conductors. Poorly conductive bedrock conductors having low dip angles will also exhibit responses that may be interpreted as 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.

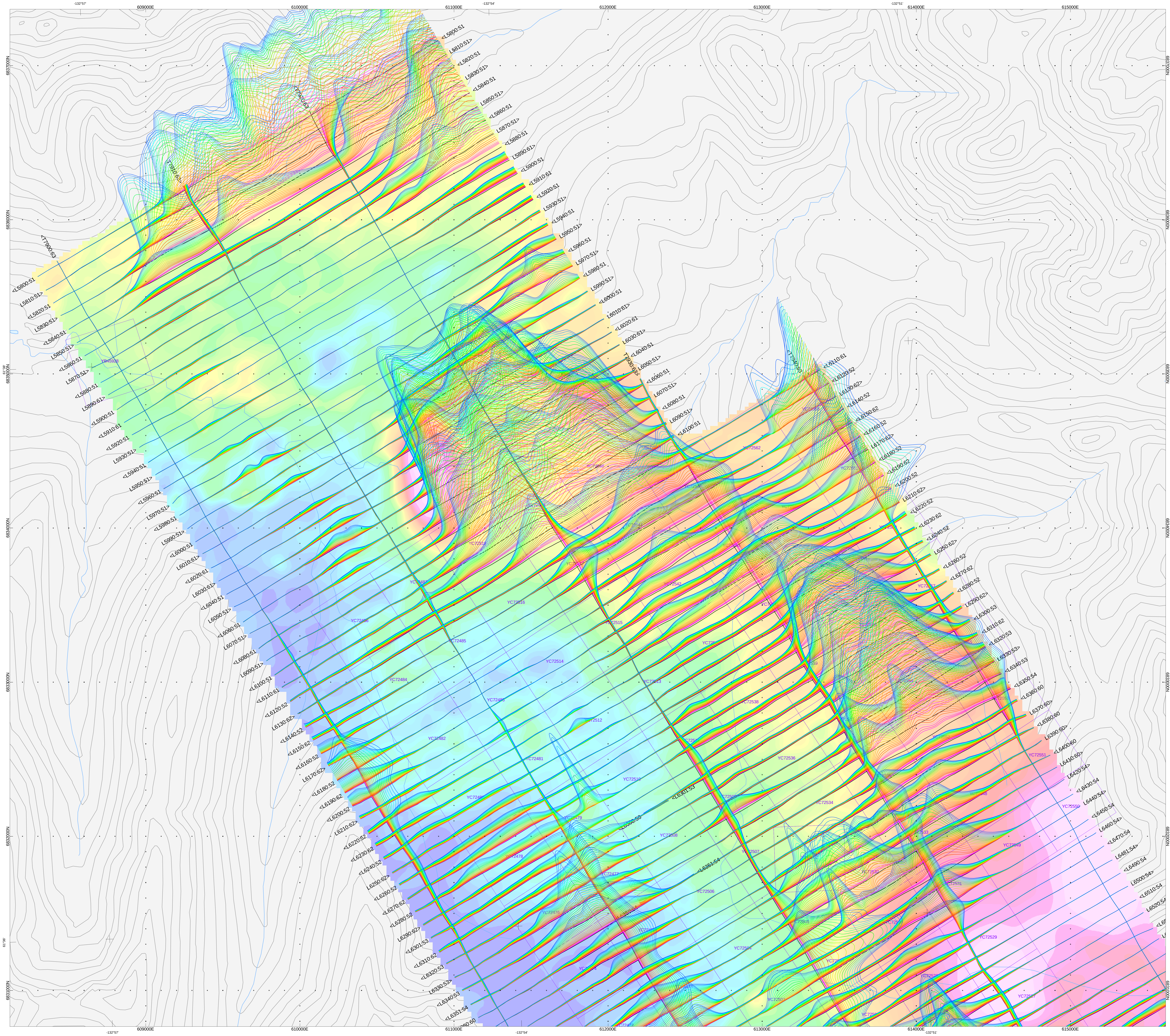
Next, key lines can be profiled as single lines to emphasize specific characteristics of a conductor or the relationship of one conductor to another on the same line. Resistivity Depth sections can be constructed to show the relationship of conductive overburden or conductive bedrock with the conductive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

Roger Barlow
Consultant

Nasreddine Bournas, P. Geo.
Geotech Ltd.

October 2008

GEOTECH LTD.



Scale 1:10,000,000

100 0 100 200

(kilometers)

NAD83 / UTM zone 8N

SURVEY SPECIFICATIONS:

Survey Date: July 23rd to July 27th, 2008
Survey Base: Ross River, Yukon
Aircraft: Aerospatiale A-Star 350 B3 (C-GTRK)
Nominal Survey Line Spacing: 100 Meters
Nominal Survey Line Direction: N 60° E
Nominal Tie Line Spacing: 950 Meters
Nominal Tie Line Direction: N 150° E
Nominal Terrain Clearance: 72 Meters
EM Loop: Towed at a mean distance of 35 meters below the Helicopter
Magnetic Sensor: Towed at a mean distance of 15 meters below the Helicopter

INSTRUMENTS

Geotech Time Domain Electromagnetic System (VTEM)
Concentric Rx/Tx Geometry
Transmitter Loop: Diameter 26 Meters,Base Frequency 30 Hz
Dipole Moment: 556,400 nIA
Transmitter Wave Form: Trapezoid, Pulse Width 4.2 ms.
Geometrics High Sensitivity Cesium Magnetometer
Mag Resolution: 0.02 nT at 10 samples/sec

MAP PROJECTION

Datum: NAD 83
Projection: Universal Transverse Mercator
Central Meridian: 135°W (Zone 8)
Central Scale Factor: 0.9996
False Easting/Northing: 500,000m/0m
Major Axis: 6378137.000
Eccentricity: 0.081819191
NTS: 105F10

Profiles scale 1 mm = 0.2 (pV*ms)/(A*m^4)

(Linear between +/- 10 (pV*ms)/(A*m^4)
logarithmic above 10 (pV*ms)/(A*m^4)

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

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TMI
(nT)

TOPOGRAPHIC LEGEND:

Roads
Trails
Contours
Rivers & Streams
Lakes
Wetlands
Mining Rights

Scale 1:10000

100 0 100 200 300 400 500

(meters)

NAD83 / UTM zone 8N

The topographic data base was derived from 1:50000 NRC (Natural Resources Canada) NTDB data
Background shading is derived from NASA SRTM (Shuttle Radar Topography Mission) data
Inset data derived from Geocommunities 1:250,000 Canadian National Topographic database
Mineral Exploration Licences & Mining Claims are derived from the Government of Yukon, Geomatics Branch
(www.geocomm.com)(www.geogratis.ca)
(http://geomaticsyukon.ca/data_download.html)

Archer Cathro & Associates Ltd.
Groundhog Block - North
Ross River Area, Yukon

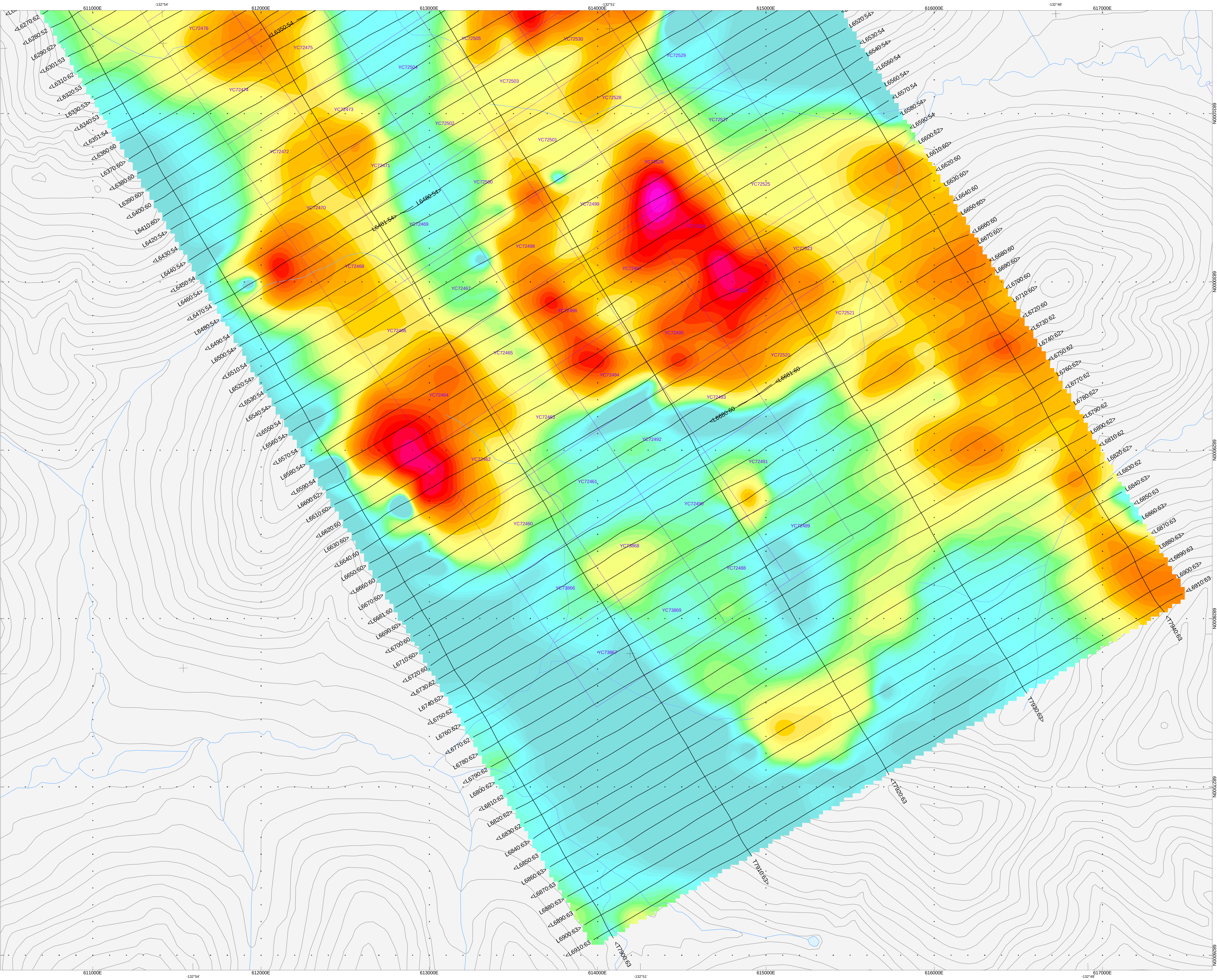
Geotech VTEM System
VTEM B-FIELD PROFILES
TIME GATES 0.234 to 9.245 ms
with TMI Colour Image

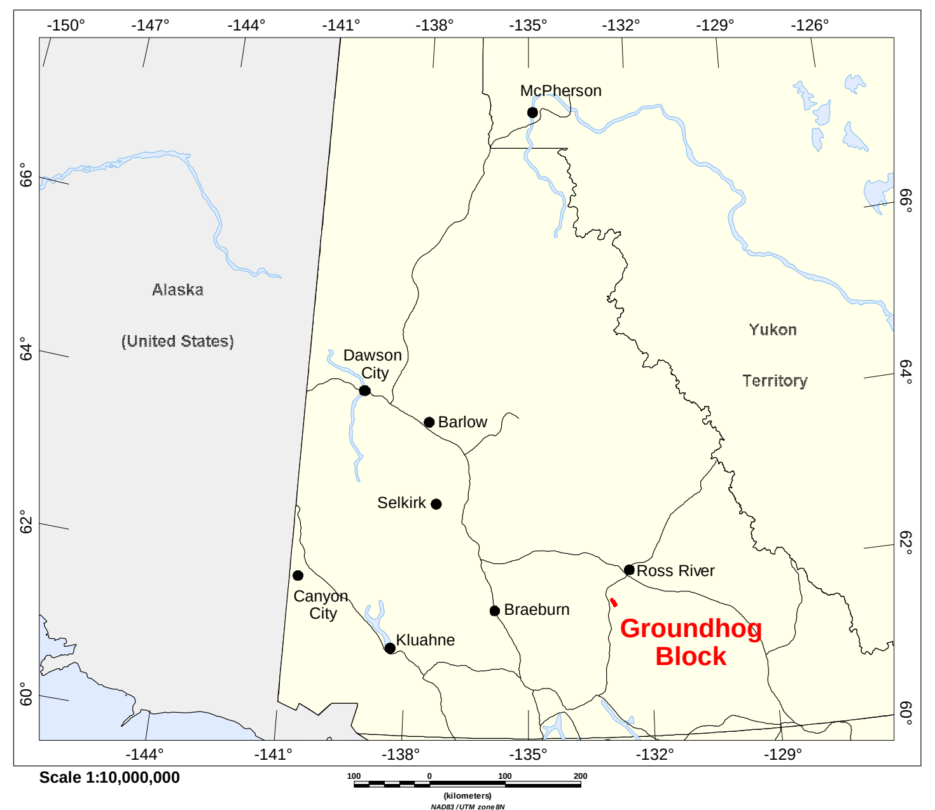
Flown and processed by Geotech Ltd.
245 Industrial Parkway North,
Aurora, Ontario, Canada L4G 4C4
www.geotech.ca

November 2008

Geotech Project # 8077

GEOTECH LTD.





Scale 1:10,000,000

100 0 100 200

(kilometers)

NAD83 / UTM zone 8N

SURVEY SPECIFICATIONS:

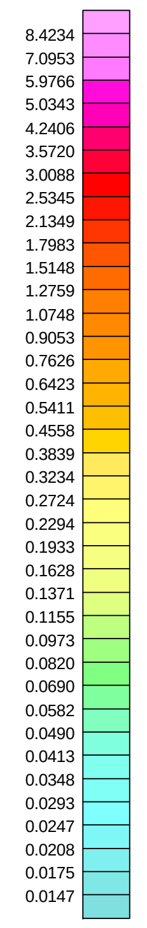
Survey Date: July 23rd to July 27th, 2008
Survey Base: Ross River, Yukon
Aircraft: Aerospatiale A-Star 350 B3 (C-GTRK)
Nominal Survey Line Spacing: 100 Meters
Nominal Survey Line Direction: N 60° E
Nominal Tie Line Spacing: 950 Meters
Nominal Tie Line Direction: N 150° E
Nominal Terrain Clearance: 72 Meters
EM Loop: Towed at a mean distance of 35 meters below the Helicopter
Magnetic Sensor: Towed at a mean distance of 13 meters below the Helicopter

INSTRUMENTS

Geotech Time Domain Electromagnetic System (VTEM)
Concentric Rx/Tx Geometry
Transmitter Loop: Diameter 26 Meters,Base Frequency 30 Hz
Dipole Moment: 556,400 nIA
Transmitter Wave Form: Trapezoid, Pulse Width 4.2 ms.
Geometrics High Sensitivity Cesium Magnetometer
Mag Resolution: 0.02 nT at 10 samples/sec

MAP PROJECTION

Datum: NAD 83
Projection: Universal Transverse Mercator
Central Meridian: 135°W (Zone 8)
Central Scale Factor: 0.9996
False Easting/Northing: 500,000m/0m
Major Axis: 6378137.000
Eccentricity: 0.081819191
NTS: 105F10



B-Field Channel 25
((pV*ms)/(A*m^4))

TOPOGRAPHIC LEGEND:

Roads
Trails
Contours
Rivers & Streams
Lakes
Wetlands
Mining Rights

Scale 1:10000

100 0 100 200 300 400 500

(meters)

NAD83 / UTM zone 8N

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Archer Cathro & Associates Ltd.
Groundhog Block - South
Ross River Area, Yukon

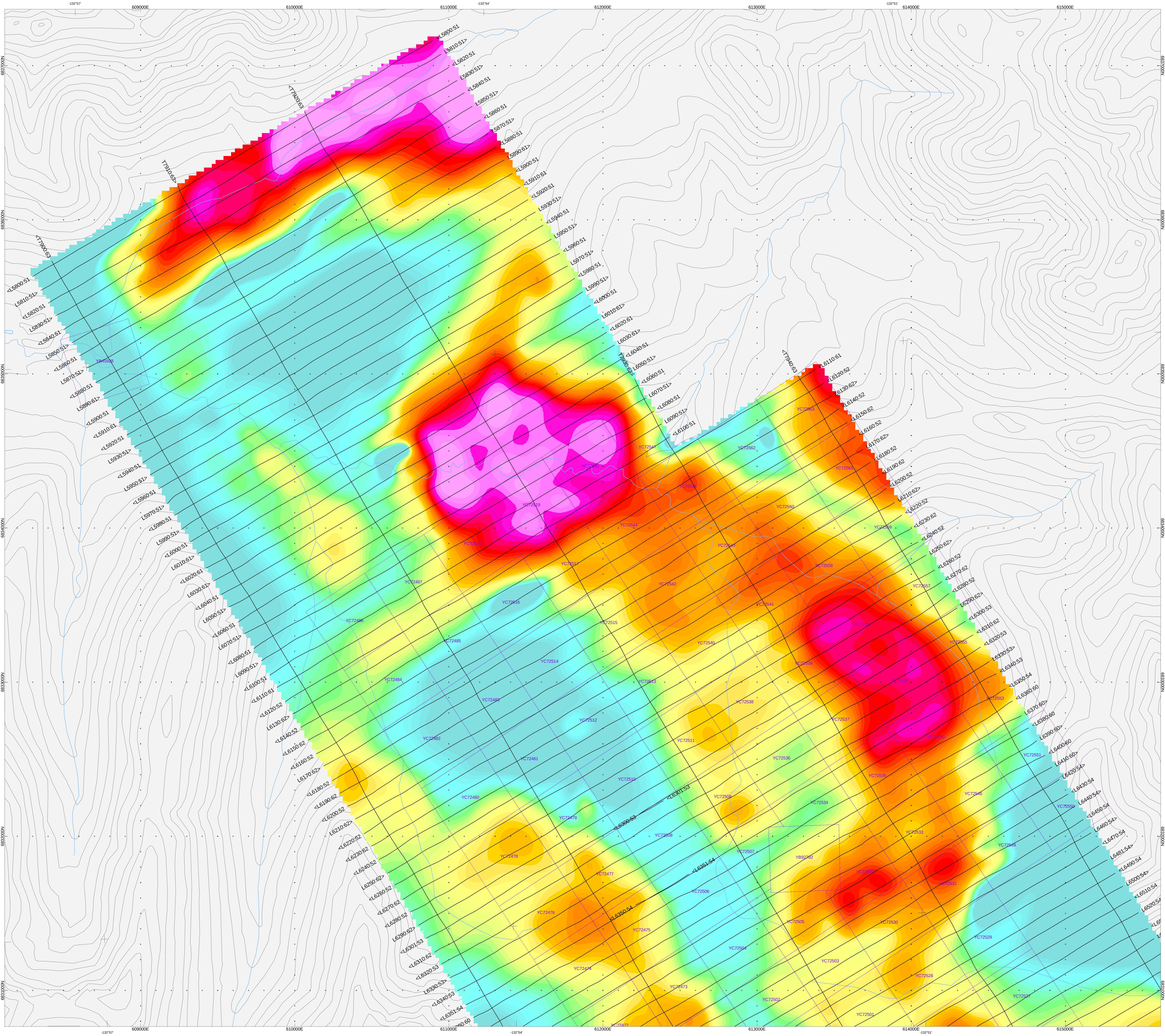
Geotech VTEM System

VTEM B-FIELD CHANNEL 25
TIME GATE 1.641 ms

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

November 2008

Geotech Project # 8077



GEOTECH LTD.

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- Dipole Moment: 556,400 nIA
- Transmitter Wave Form: Trapezoid, Pulse Width 4.2 ms.
- Geometrics High Sensitivity Cesium Magnetometer
- Mag Resolution: 0.02 nT at 10 samples/sec

MAP PROJECTION
- Datum: NAD 83
- Projection: Universal Transverse Mercator
- Central Meridian: 135°W (Zone 8)
- Central Scale Factor: 0.9996
- False Easting/Northing: 500,000m/0m
- Major Axis: 6378137.000
- Eccentricity: 0.081819191
- NTS: 105F10

8.4234
7.0953
5.9766
5.0343
4.2406
3.5720
3.0088
2.5345
2.1349
1.7983
1.5148
1.2759
1.0748
0.9053
0.7626
0.6423
0.5411
0.4558
0.3839
0.3234
0.2724
0.2294
0.1933
0.1628
0.1371
0.1155
0.0973
0.0820
0.0690
0.0582
0.0490
0.0413
0.0348
0.0293
0.0247
0.0208
0.0175
0.0147

B-Field Channel 25
((pV*ms)/(A*m^4))

TOPOGRAPHIC LEGEND:

Roads
Trails
Contours
Rivers & Streams
Lakes
Wetlands
Mining Rights

Scale 1:10000
100 0 100 200 300 400 500
(meters)
NAD83 / UTM zone 8N

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Groundhog Block - North
Ross River Area, Yukon

Geotech VTEM System

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TIME GATE 1.641 ms

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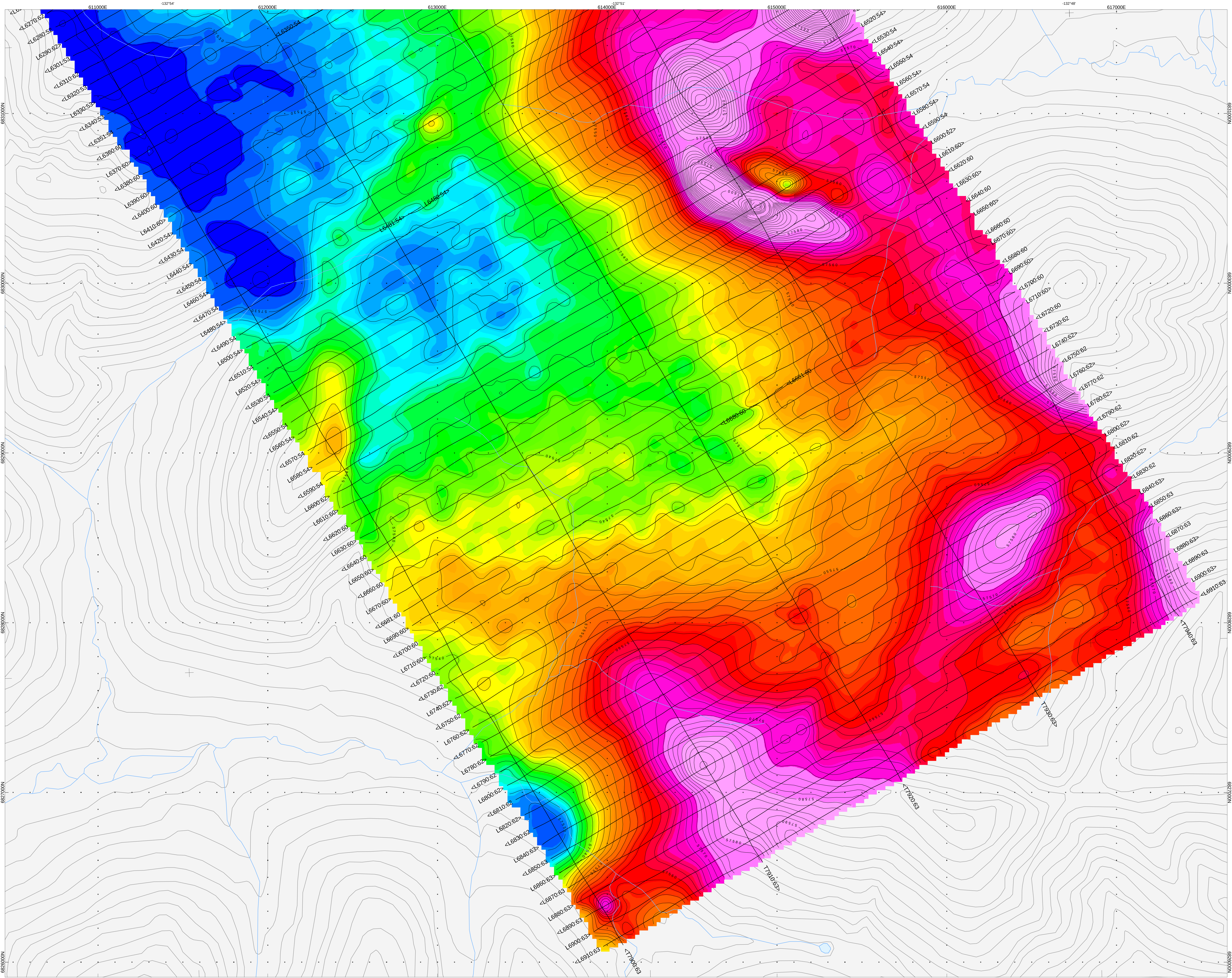
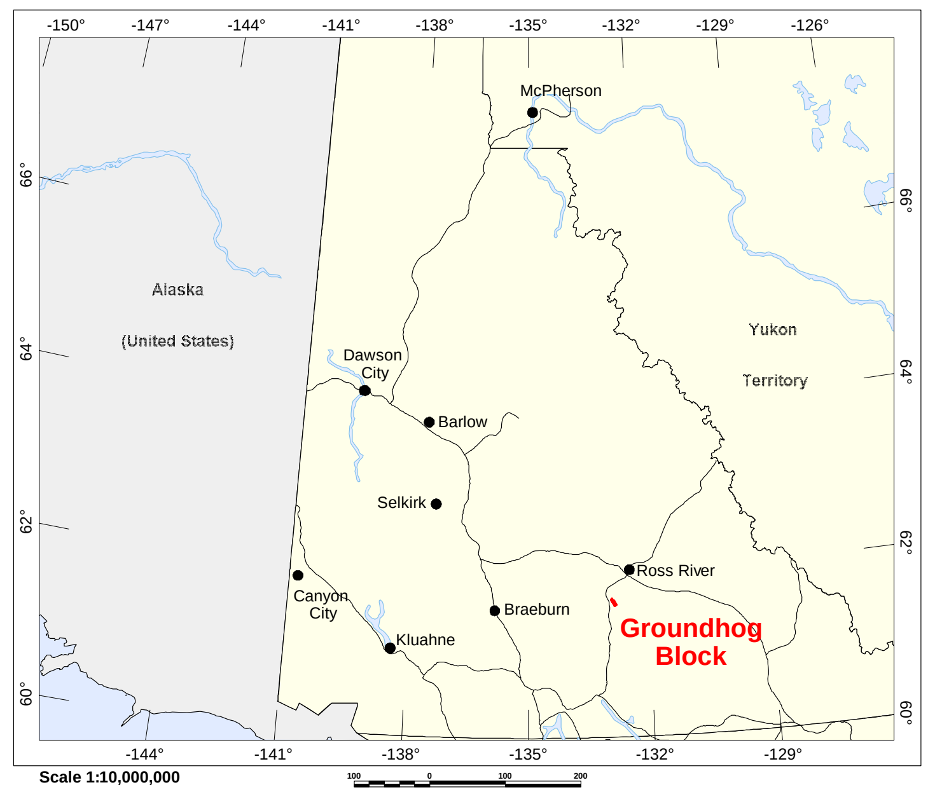
November 2008

Geotech Project # 8077

GEOTECH LTD.





Scale 1:10,000,000

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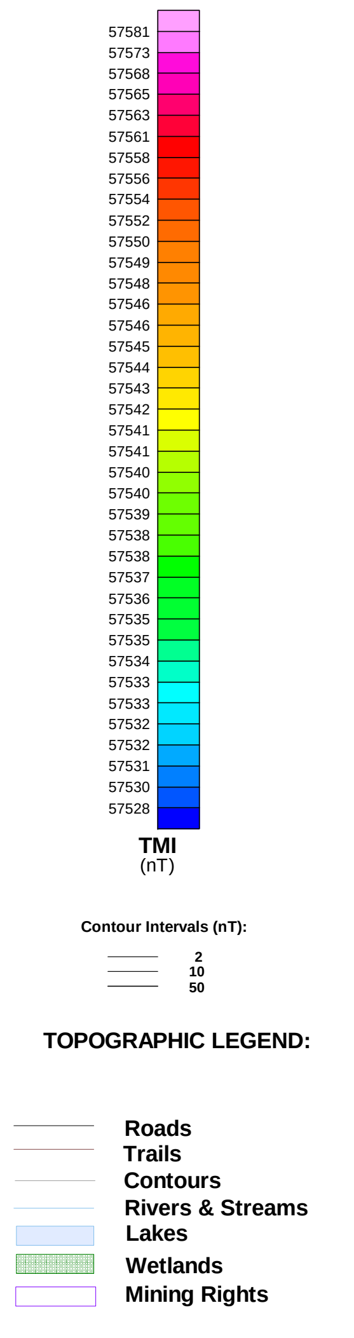

Scale 1:10000

100 0 100 200 300 400 500

(meters)

NAD83 / UTM zone 8N

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Archer Cathro & Associates Ltd.
Groundhog Block - South
Ross River Area, Yukon

Geotech VTEM System

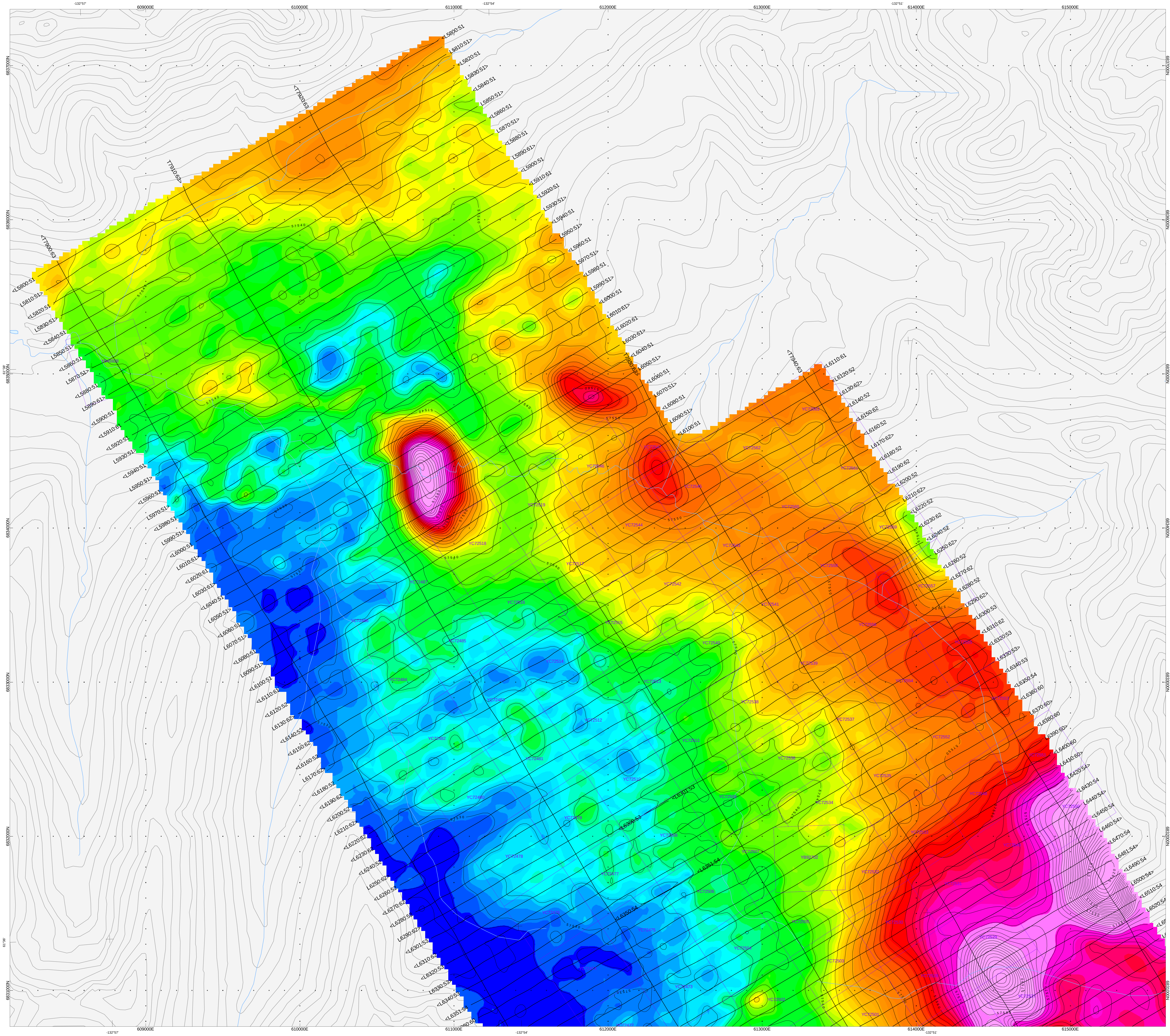
TOTAL MAGNETIC INTENSITY (TMI)

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

November 2008

Geotech Project # 8077

GEOTECH LTD.



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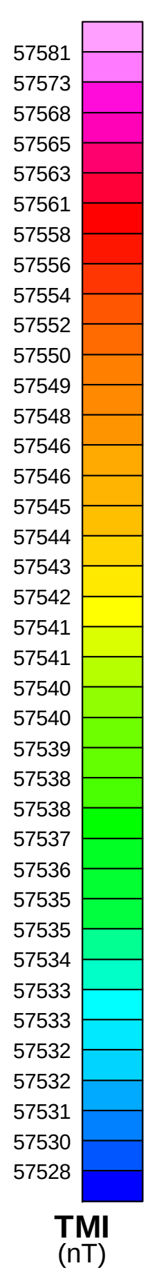

Contour Intervals (nT):

—	2
—	10
—	50

TOPOGRAPHIC LEGEND:

—	**Roads**
—	**Trails**
—	**Contours**
—	**Rivers & Streams**
▭	**Lakes**
▨	**Wetlands**
▭	**Mining Rights**

Scale 1:10000

100 0 100 200 300 400 500

(meters)

NAD83 / UTM zone 8N

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Archer Cathro & Associates Ltd.
Groundhog Block - North
Ross River Area, Yukon

Geotech VTEM System

TOTAL MAGNETIC INTENSITY (TMI)

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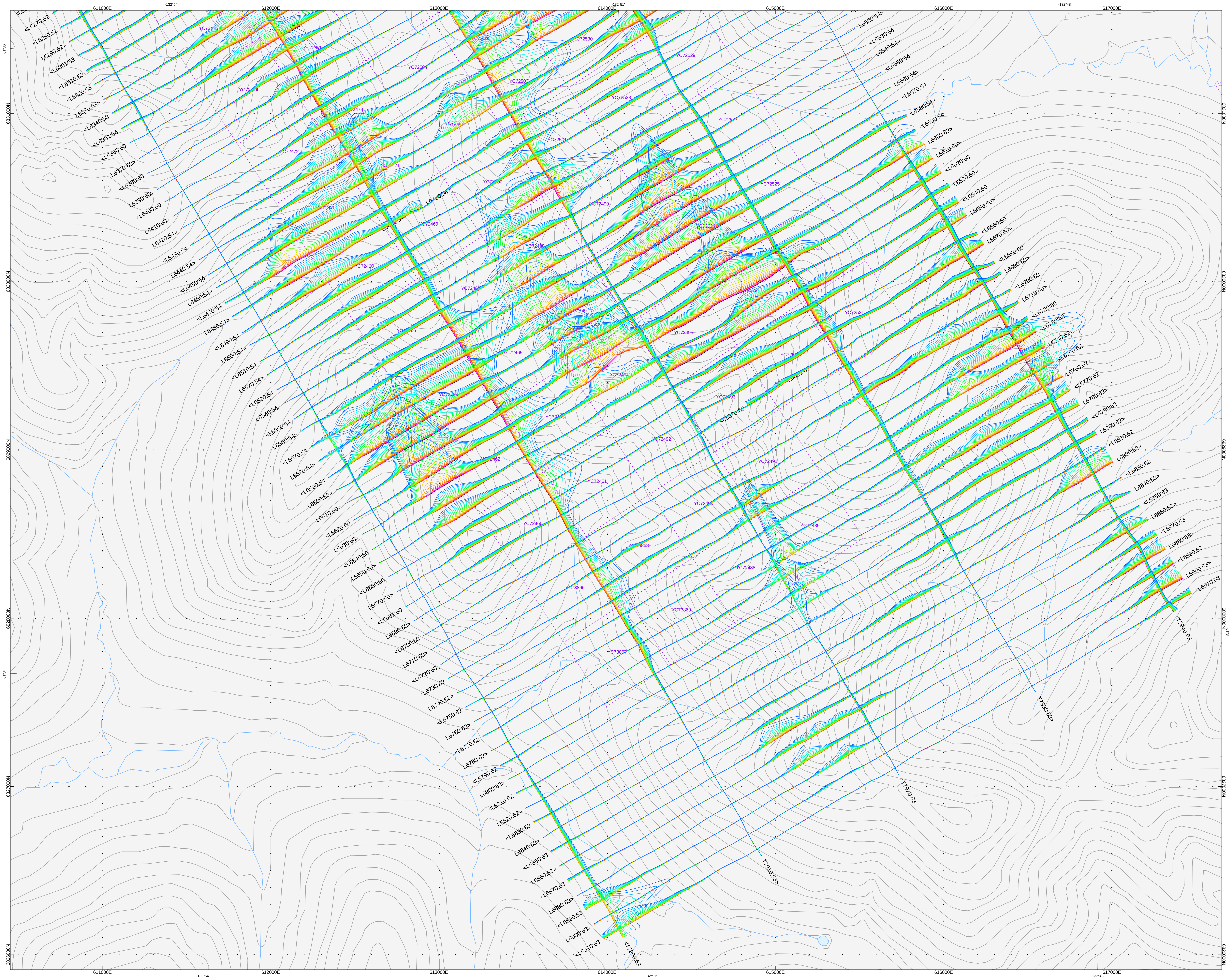
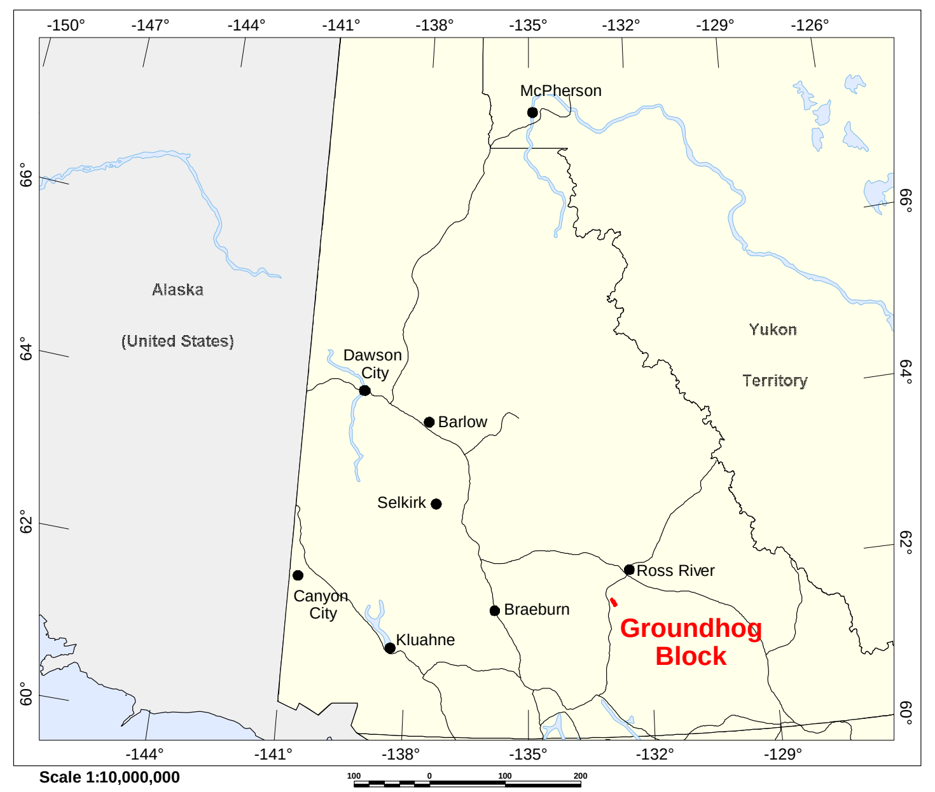
www.geotech.ca

November 2008

Geotech Project # 8077

GEOTECH LTD.





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Eccentricity: 0.081819191
NTS: 105F10

Profiles scale 1 mm = 0.5 pV/A/m^4

Linear between +/- 20 (pV/A/m^4)
logarithmic above 20 (pV/A/m^4)

0.234 ms
0.281 ms
0.339 ms
0.406 ms
0.484 ms
0.573 ms
0.682 ms
0.818 ms
0.974 ms
1.151 ms
1.370 ms
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2.307 ms
2.745 ms
3.286 ms
3.911 ms
4.620 ms
5.495 ms
6.578 ms
7.828 ms
9.245 ms

TOPOGRAPHIC LEGEND:

Roads
Trails
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Rivers & Streams
Lakes
Wetlands
Mining Rights

Scale 1:10000
100 0 100 200 300 400 500
(meters)
NAD83 / UTM zone 8N

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Groundhog Block - South
Ross River Area, Yukon

Geotech VTEM System

VTEM dB/dt PROFILES
TIME GATES 0.234 to 9.245 ms

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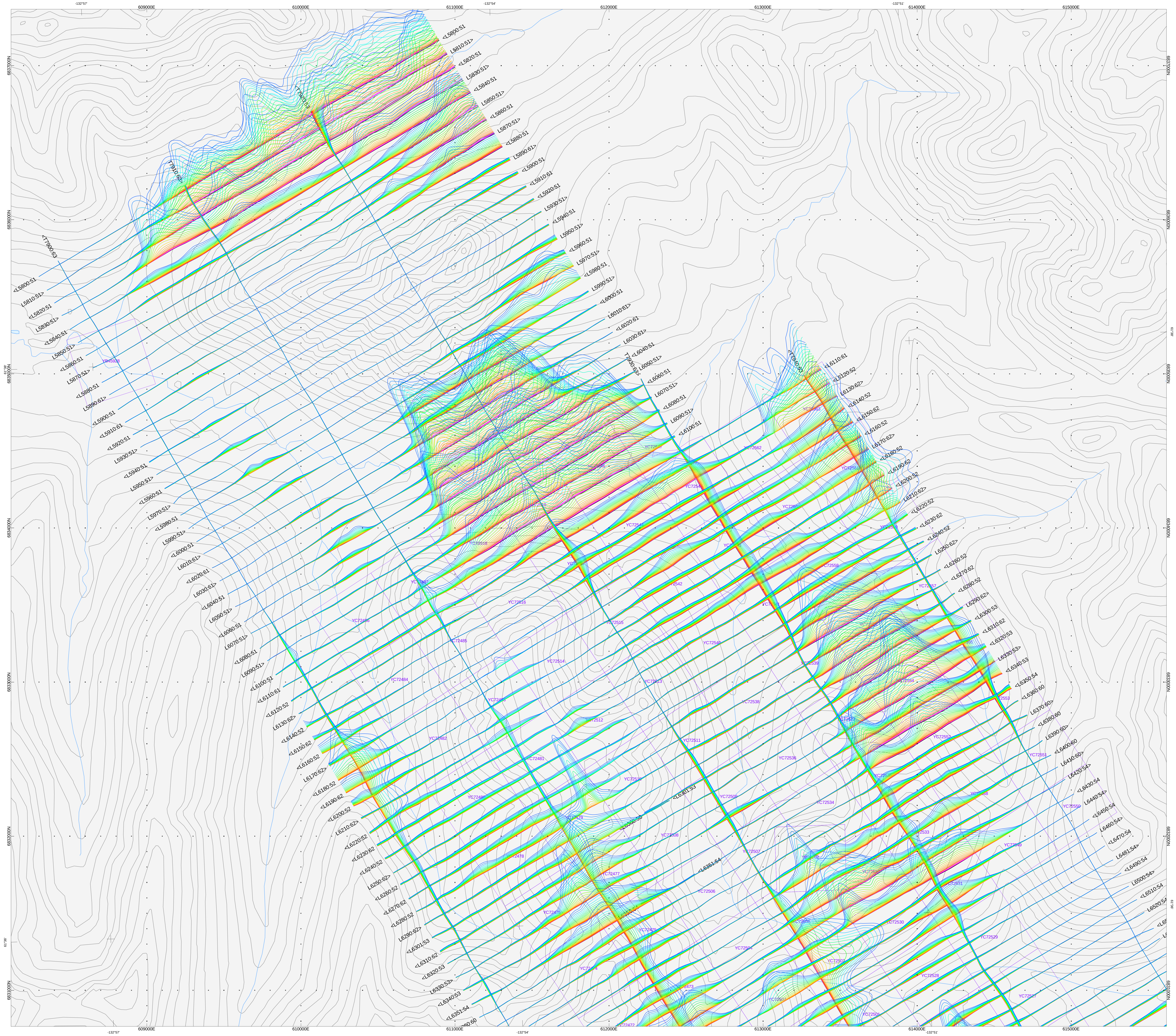
November 2008

Geotech Project # 8077

GEOTECH LTD.



Scale 1:10,000,000

100 0 100 200
(kilometers)
NAD83 / UTM zone 8N

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Profiles scale 1 mm = 0.5 pV/A/m^4

Linear between +/- 20 (pV/A/m^4)
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—	**0.234 ms**
—	**0.281 ms**
—	**0.339 ms**
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—	**0.484 ms**
—	**0.573 ms**
—	**0.682 ms**
—	**0.818 ms**
—	**0.974 ms**
—	**1.151 ms**
—	**1.370 ms**
—	**1.641 ms**
—	**1.953 ms**
—	**2.307 ms**
—	**2.745 ms**
—	**3.286 ms**
—	**3.911 ms**
—	**4.620 ms**
—	**5.495 ms**
—	**6.578 ms**
—	**7.828 ms**
—	**9.245 ms**

TOPOGRAPHIC LEGEND:

—	**Roads**
—	**Trails**
—	**Contours**
—	**Rivers & Streams**
▭	**Lakes**
▨	**Wetlands**
▭	**Mining Rights**

Scale 1:10000

100 0 100 200 300 400 500
(meters)
NAD83 / UTM zone 8N

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TIME GATES 0.234 to 9.245 ms

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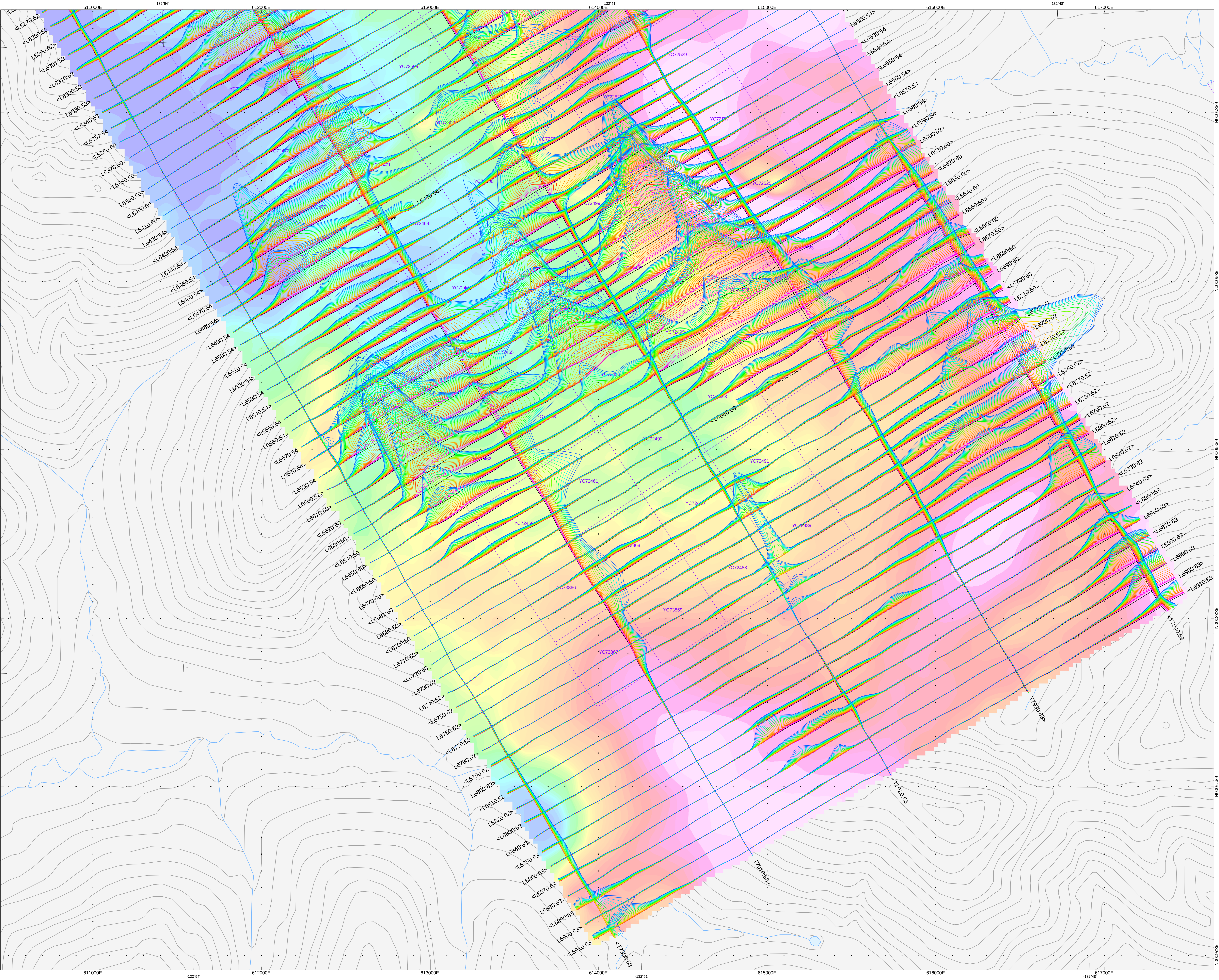

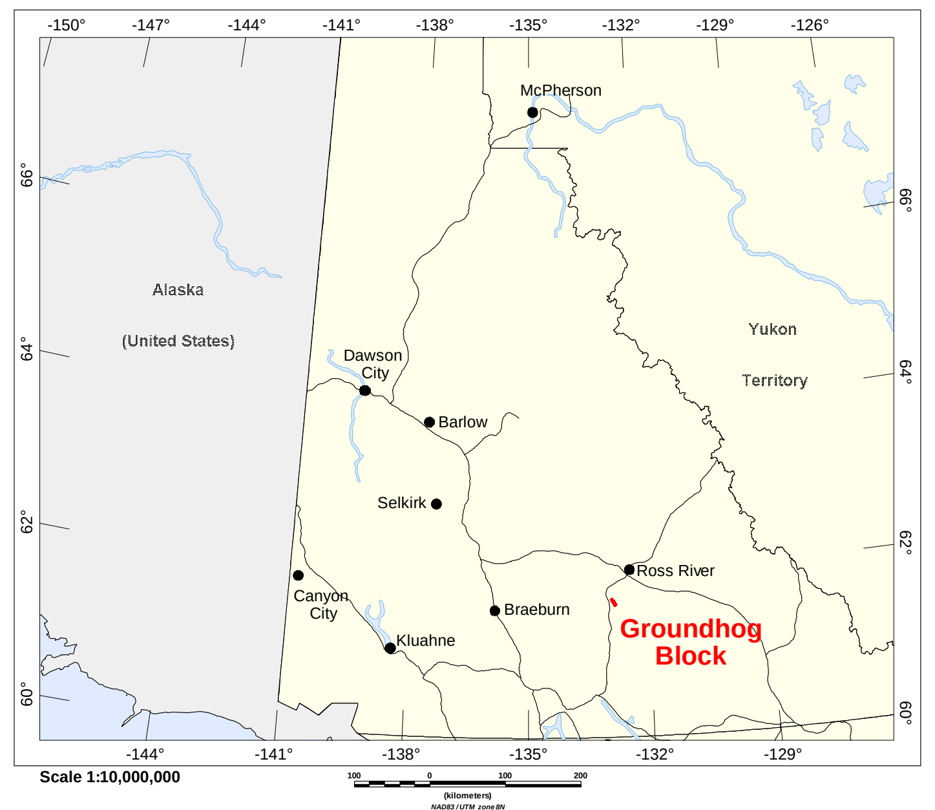

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100 0 100 200 (kilometers)

NAD83 / UTM zone 8N

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(Linear between +/- 10 (pV*ms)/(A*m^4)
logarithmic above 10 (pV*ms)/(A*m^4)

- 0.234 ms (B-field)
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- 5.495 ms (B-field)
- 6.578 ms (B-field)
- 7.828 ms (B-field)
- 9.245 ms (B-field)

TOPOGRAPHIC LEGEND:

- Roads
- Trails
- Contours
- Rivers & Streams
- Lakes
- Wetlands
- Mining Rights

57581
57573
57568
57565
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57531
57530
57528

TMI
(nT)

Scale 1:10000

100 0 100 200 300 400 500

(meters)

NAD83 / UTM zone 8N

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Archer Cathro & Associates Ltd.
Groundhog Block - South
Ross River Area, Yukon

Geotech VTEM System
VTEM B-FIELD PROFILES
TIME GATES 0.234 to 9.245 ms
with TMI Colour Image

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

November 2008

Geotech Project # 8077

ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
1016 – 510 West Hastings Street
Vancouver, B.C. V6B 1L8
Telephone: 604-688-2568 Fax: 604-688-2578

AFFIDAVIT

I, Joan Mariacher, of Vancouver, B.C. make oath and say:

That to the best of my knowledge the attached Statement of Expenditures for exploration work Sea 1-104 mineral claims on Claim Sheet 105F/10 is accurate.

Joan Mariacher

Sworn before me at Vancouver, B.C.

this 3rd day of October 2008.

Notary Public, Yukon Territory

Statement of Expenditures
Sea 1-104 Mineral Claims
October 3, 2008

Contract VTEM Survey (including management fee)

Geotech Ltd.	$110,390.36
Estimate that 50% of survey is off the claims – 1/2 Geotech cost	$55,195.18

Sea 1-104 = $530.72/claim

Geotech Ltd.

245 Industrial Parkway North, Aurora, ON L4G 4C4

BILL TO:

Archer, Cathro & Associates (1981) Limite
1016-510 West Hastings Street
Vancouver, BC
Canada V6B 1L8

DATE:	INVOICE:
7/30/2008	991575

TERMS:	Project
Due on receipt	8077

Description		Amount
Helicopter-borne time domain electromagnetic geophysical survey with VTEM system Interm Billing - Nintey Five (95%) of the estimated total charge plus GST is payable before receipt of prelimnary data		389,862.00
Contract (Yukon and northern BC.)		
For an estimated 2948 line km basic survey charge @$70/km	$206,360.00	
Charges per bvlock 15 blocks @$2000/block	$30,000.00	
Charges per day for estimated 51 days @$6000/day	$306,000.00	
Helicopter time chanrges for estimated 150 hours @$1800/hr	$270,000.00	
Helicopter mob/demob	$28,000.00	
Crew and equipment mob/demob	$26,000.00	
Minimum Survey Charge	$866,360.00	
95% of the Minimum Survey Charge	$823,042.00	
Less Previous Billing Invoice 991388	($433,180.00)	
Total Amount Owing	$389,862.00.	
Business Number: 110859469		

31755.07
A Groundhog - ~~30242.92~~
A Ham - 25151.29
A Hobo - 25409.88
A Mor - 8640.76
A Mik - 60523.69
A Plata - 25470.10
A Ran - 9880.86
Silk Short - <3847.18>
A Ross - 25409.88
A Jagi - 21102.80
A Timber - 9232.41
A Zahco - 9500.64

389862.00

+ Antimony - 10143.58
A Arn - 15563.82
A Black - 34147.50
+ Bob - 9091.98
A Caribou - 23150.62
A Eureka - 30098.57
A Fairweather - 14025.54
A GK - 6522.00

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

Subtotal	Can$389,862.00
GST	Can$19,493.10
TOTAL	Can$409,355.10

Geotech Ltd.

245 Industrial Parkway North, Aurora ON L4G 4C4

Bill To

Archer, Cathro & Associates (1981) Limite
1016-510 West Hastings Street
Vancouver, BC
Canada V6B 1L8

Date	Invoice #
4/30/2008	991388

Terms	Project
Due on receipt	8077

Description	Amount
Helicopter-borne time domain electromagnetic geophysical survey with VTEM system Interm Billing - Fifty percent (50%) of the estimated total charge plus GST is payable on execution of the agreement	433,180.00
Contract (Yukon and northern BC.)	

For an estimated 2948 line km basic survey charge @$70/km	$206,360.00
Charges per bvlock 15 blocks @$2000/block	$30,000.00
Charges per day for estimated 51 days @$6000/day	$306,000.00
Helicopter time chanrges for estimated 150 hours @$1800/hr	$270,000.00
Helicopter mob/demob	$28,000.00
Crew and equipment mob/demob	$26,000.00
Minimum Survey Charge	$866,360.00
50% of the Minimum Survey Charge	$433,180.00

21659.00

Business Number: 110859469

antimony - 2568.55
Auger, Dawn - 32349.31
Bob - 16887.44
Anfield ⇒ Eureka - 67578.64
Fairweather - 30555.84
GK - 12773.72

70458.23
Groundhog - ~~67103.68~~
MV - 42286.00
Plata - 53776.02
Silver Shoot - 9936.68
* Tegai - 42137.11
Timber - 17596.70
* Zinco - 18731.57
Vangor Lakes
454839.00

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

Subtotal	Can$433,180.00
GST	Can$21,659.00
Total	Can$454,839.00