BURDA KNIGHT NE
PROPERTY

Knight Township, Larder Lake Mining Division

Mining Claims:

4261661
4261662
4276222
4276223

April 2, 2015
Prepared for filing by:

Marc Gaudreau

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SUMMARY / ACCESS/ INTRODUCTION

The Burda Knight NE Property (BKNE) is located in the central region of Knight Township, abutting the west side of Duncan Lake. A magnetic Nipissing Gabbro sill formation runs north south along the west side of Duncan Lake and underlies parts of Duncan Lake. This Nipissing Gabbro sill hosts at least two known polymetallic vein showings of Au, Ag, Co. Recent BKNE exploration programs have confirmed Cu and Au potential within the claims.

These newly discovered showings have become the focus of the property which is only accessible by float plane or seven (7) kilometer boat ride from the landing north off Route 560. The landing is 15 kilometers west of the town of Gowganda. The BKP is held 100% by David Burda.

The recent exploration programs include the collection of samples for rock analysis and identification, hand stripping, VLF EM and SGH survey. The work programs did not require an Exploration Plan or Exploration Permit. The purpose of these ongoing programs is to realize potential for polymetallic vein mineralization along structures, faults and shears or breccia pipes containing Au, Cu, Ag and Co possibly in contact with sedimentary and Nipissing Gabbro rocks that might also intrude a part of the property. Work to date has generated new exploration and drill targets. An Exploration Permit for a small drill program has been submitted at the time of this report to support a summer drill program.

The BKNE is situated on the outer margin of an embayment on the west side of Duncan Lake. Brecciated nipissing diabase /gabbro boulder, re-healed by quartz/carbonate has been found along the shoreline as well as numerous sulfide rich mineralized boulders in catchment areas in a down glacial ice direction.

Noted large 1-1.5m faulted and brecciated quartz carbonate boulder on shoreline- float,

Figure 1. Project Location

CLAIM OWNERSHIP

The BKNE Project area is part of a larger contiguous block of claims recorded 100% in the name of David Burda. The BKNE Project area consists of four (4) contiguous, unpatented mining claims totaling 46 units. David Burda holds the claims 100%.

Claim	No. Units	Due Date	Work $/Year
4261661	16	2015-Apr-08	$6,400
4261662	4	2015-Apr-08	$1,600
4276222	13	2015-Sep-06	$5,200
4276223	13	2015-Sep-06	$5,200
	46		**$18,400**

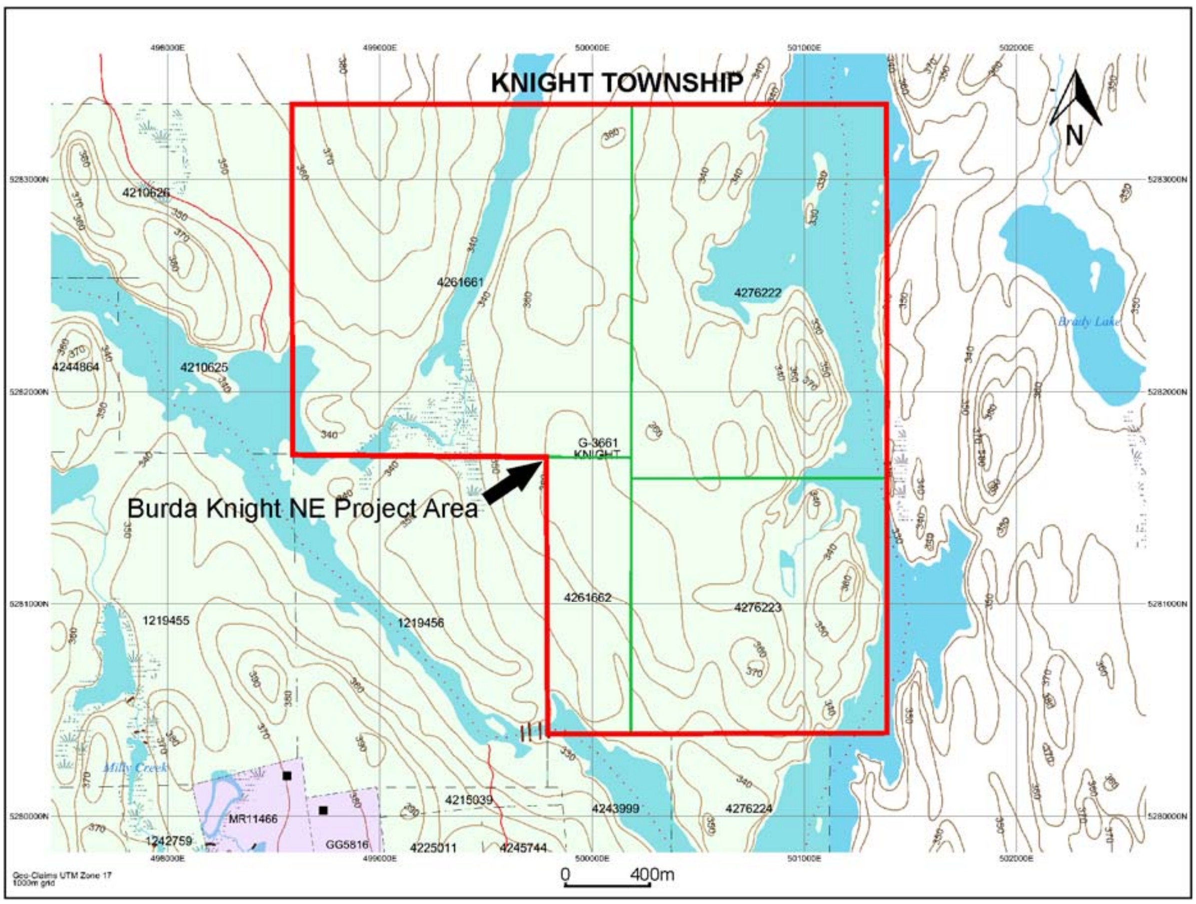


Figure 2. Location of the BKNE Property in Knight Township, Larder Lake Mining Division, Ontario Canada.

TOPOGRAPHY & VEGETATION

Exposed bedrock over the surveyed areas of the property is limited to along the shoreline of Duncan Lake. The interior consist of rolling hills and valleys. Overburden includes sandy clay and organics with an unknown depth. A swamp occupies the northeastern portion of the property and several smaller swamps occur in other areas of the claims. Vegetation comprises coniferous and deciduous trees of varying age and size, along with numerous small shrubs.

GEOLOGY

The area geology is comprised of Archean volcanic and metasedimentary terrain of the Superior Province with unconformable overlying Huronian Supergroup metasediments, the Gowganda Formation, and intruded by Nipissing Diabase mafic sills and dykes. A large area of Knight Township has been mapped as Huronian sedimentary units with very limited outcrop found due to the fairly thick glacial till across most of the area and the thick bush being counterproductive to effective field exploration. Previous mapping by Graham in 1932 was followed by Carter in 1977 & '87, and Johns in 1999 & 2003. Rock types encountered include gabbros of the Nipissing Diabase in varying grain size and textures and Huronian metasediments of the Gowganda formation. Gold and copper and possibly silver and PGE's associated with the chalcopyrite and malachite and what maybe a grain of native silver noted in the sheared gabbro with quartz veining east of Duncan Lake.

As per the following extracts from Carter's 1983 OGS Report 225 the anticipated deposit types are as follows, "Deposits Associated with Matachewan-Type Diabase Dikes

UNCLASSIFIED COPPER DEPOSITS

In south-eastern Natal Township about 1.2 km south of the central part of Natal Lake, an occurrence of copper in a north-north-westerly trending diabase dike was observed. The copper occurs as malachite staining on ramifying quartz-calcite veining, the trend of which could not be determined. Many of these dikes show considerable epidote alteration, e.g. the dike along the east shore of Natal Lake. As these dikes may range in age from Early to Late Precambrian - similar trending dikes were observed to cut Gowganda Formation rocks in Leonard Township (Carter 1977a, Map 2359) - and as silver is associated with the diabase cutting the Middle Precambrian sedimentary rocks, these diabase dikes may contain copper and silver mineralization. Deposits Associated with Nipissing - Type Diabase

CONCORDANT VEIN-TYPE SILVER-GOLD DEPOSITS

Nipissing-type diabase occurs mainly as a concordant gently-curved concave-eastwards sill in the Gowganda Formation in east-central Knight Township, and as north easterly trending dikes in south-eastern Knight Township. The most important silver deposit is the Coulis vein system (Guaranty

Trust Company of Canada property) which consists of two intersecting veins, the more prominent of which is concordant with the trend of the sill.

UNCLASSIFIED COPPER DEPOSITS

Because of poor exposure, copper deposits in the Duncan Lake diabase sill in the southern part of Knight Township (Duncan Lake occurrence) and in the northeast trending dikes in south-eastern Knight Township (Polliwog Lake occurrence) cannot be classified on the basis of their relative trend with respect to the sill and dikes respectively.

GOLD

Gold occurs in quartz veins, quartz-carbonate veins and shears in Early Precambrian alkali metavolcanics and granitoid rocks. Such alkalic metavolcanics are well exposed in south-eastern Natal Township and the search for gold should be concentrated in this area in regions where the rocks are sheared and fractured. Granitoid rocks occur in two areas: south-central and north-eastern Knight Township. Mineralized zones should be sought for in fractured regions associated with basalt xenoliths, within the plutons. Two such zones trend N10W in the pluton in south-central Knight Township and these shearing directions may be significant for gold mineralization.

SILVER-COBALT

Although silver-cobalt mineralization is not widespread in the map-area, this type of mineralization is clearly associated with the Nipissing-type diabase sill which intruded into Middle Precambrian sedimentary rocks. The deposits occur within the diabase or in Middle Precambrian sedimentary rocks near the contact with diabase. No special characteristics of the diabase associated with the mineralization were noted, except that the diabase was medium-grained.

NORTHERN DUNCAN LAKE

Hematite in a quartz vein occurs on an island in the northern part of Duncan Lake and is collinear with a similar vein on the east shore opposite the island trending on average N50W. The vein is 0.7 m wide, dips 75 degrees to the north and consists of quartz-hematite breccias and a quartz-sandstone breccia. On the island it is 30 m long and its easterly extension, on the eastern shore of Duncan Lake, is about 20 m long. Hematite forms about 30 percent of the vein and cements the quartz and sandstone fragments. An occurrence of hematite 0.1 km east-southeast of the island referred to above and on the east shore of Duncan Lake consists of narrow ramifying hematized quartz veins in paraconglomerate. About 0.7 km south of the same island referred to above and 120 m inland from the east shore of Duncan Lake is an occurrence of specular hematite, ruby silver (as small grains 0.5 mm across), cobalt bloom, and malachite in a quartz breccia vein containing fragments of pink arkose. The vein is enclosed in arkose of the Gowganda Formation near its contact with a Nipissing-type diabase sill. No exploration activity was detected at the occurrences. Southern Duncan Lake On the east shore of the southern part of

Duncan Lake near the southern boundary of Knight Township, copper in the form of chalcopyrite was observed in a quartz stringer in the lower part of the Nipissing Diabase sill at its contact with Gowganda Formation interlayered siltstone-mudstone units. The chalcopyrite occurs as disseminated grains about 2mm in width and forms 5 percent of the stringers. No exploration activity was noted.

TYRANITE MINES LIMITED

Fifteen diamond drill holes of unknown total length were sunk in Knight Township by an unknown group. In Knight Township the deposit is located on claim GG 5800 and it extends into claim GG 5801 in Tyrrell Township to the south. It was described as lying in a fracture zone trending N10W and dipping 70 degrees west, parallel to a contact of granitic and basaltic rocks. Mineralization along the fracture extended for 120 m north from the common Knight-Tyrrell Townships boundary line and formed a zone approximately 9m wide. The fracture zone was highly silicified, containing numerous quartz and carbonate veinlets filling small fractures and impregnated with "pyrite in irregular particles and in cubic crystals. The gold values are contained chiefly in this sulphide (Graham 1932, p.51). No specific assay values for this section of the mineralized zone in Knight Township were given but exploration in Tyrrell Township led to the development of the Tyranite mine, which operated from 1939 to 1942 (Carter 1977b, p.55-56).

MINERALIZATION

To date, no economic mineralization has been discovered on the BKNE Property.

PREVIOUS WORK

- August 2013: Prospecting and sampling by Scott Franko P. Geo assisted by Marc Gaudreau
- October 2013: Prospecting, stripping and sampling by Frank Racicot P. Geo assisted by Marc Gaudreau
- November 2013: VLF EM survey by Frank Racicot P. Geo assisted by Ted Lang, interpretation my Shaun Parent
- June 2014: VLF EM report by Frank Racicot P. Geo and Shaun Parent
- August 2014: VLF EM survey and report by Frank Racicot P. Geo and Shaun Parent
- August 2014: David Burda conducts independent 4 day property visit
- September 2014: SGH field sample collection by Marc Gaudreau and Eldon Phillip
- October 2014: SGH report by Dale Sutherland, ActLabs Ontario
- March 2015: VLF EM and SGH compilation report by Shaun Parent

Appendix A
Invoice Cost Summary

1. October 2013: Prospecting, stripping and sampling by Frank Racicot P. Geo assisted by Marc Gaudreau
   $864.45

2. November 2013: VLF EM survey by Frank Racicot P. Geo assisted by Ted Lang, interpretation my Shaun Parent
   $2650.60

3. June 2014: VLF EM report by Frank Racicot P. Geo and Shaun Parent
   $960.50

4. August 2014: VLF EM survey and report by Frank Racicot P. Geo and Shaun Parent
   $9,910.00

5. August 2014: David Burda conducts independent 4 day property visit, 1,550km @ $0.50km, all expenses inclusive
   $1,200

6. September 2014: SGH field sample collection by Marc Gaudreau and Eldon Phillip
   $6,400

7. October 2014: SGH report by Dale Sutherland, ActLabs Ontario
   $5,420.44

8. March 2015: VLF EM and SGH compilation report by Shaun Parent
   $791.00

TOTAL COST OF ASSESSMENT FOR SUBMISSION = $28,196.99 + $1,130.00 to compile into submission report and file report. $29,326.99
Invoices available by request from David Burda
David F Burda, Client number 113513, 50 Pheasant Run Drive, Nepean, Ontario K2J 2R4, 613-889-2424 phone, dburda7@gmail.com

Refer to the following reports herein for recommendations for exploration:

- **SGH Report for Dave Burda - Knight Township SGH Survey by Dale Sutherland**
- **Burda VLF & SGH Report by Shaun Parent**

VLF EM-16 Surveying Report

On

Quartz Stockwork

Knight Township

District of Larder Lake

Ontario

Prepared For

Frank Racicot Consulting

Prepared by: Shaun Parent

Superior Exploration Adventure and Climbing Co. Ltd.

February 27, 2014

Executive Summary:

Quartz Stockwork is located in Knight Township in the district of Larder Lake of Northern Ontario. A VLF EM-16 survey program was carried out in October 25, 2013, using a VLF EM-16 and a handheld Garmin GPS-60C using 1 transmitter station - NAA – Cutler, Maine.

The objective of the 2013 VLF EM-16 survey was to determine if the VLF Survey could delineate the location of interpreted structures that may host gold deposits.

Introduction

A VLF-EM16 survey is a relatively simple and economic geophysical survey that is used to better understand shallow, vertical and sub vertical bedrock conductors.
This report describes the findings and results of the VLF EM-16 survey utilizing the new VLF 2DMF processing software of which the author of this report has assisted in its development.

VLF2DMF is a software package that has been developed in order to enable the processing and inversion of electromagnetic (EM) induction data acquired at a Very Low Frequency (VLF).

VLF2DMF is capable of inverting VLF-EM data acquired along a surveyed line at different frequencies. Data collected in a survey area can also be processed but not inverted as a set. The software allows the display of the survey as profiles of the Raw Data, Fraser Filtered Data, KH, Resistivity and a (2-D) Modelled Inversion.

Personnel

The VLF EM-16 operator and GPS field navigator responsible for the collection of all raw data was Frank Racicot and Ted Lang. Interpretation of the VLF data using the VLF2DMF Software was completed by Shaun Parent.

Work Performed

The VLF EM-16 survey consisted of running 1 Northwest VLF traverse Line (00) across the area of interest known as Quartz Stockwork.

The VLF lines were completed while using a handheld Garmin 60-CSX GPS. Each VLF station was located based on a northerly azimuth and distance from the start of the survey line. At each line station, 1 transmitter station was read using the Geonics VLF- Em-16 receiver. The following parameters were used throughout the survey.

VLF Transmitters Used– NAA-24.0 Hz. Cutler, Maine

VLF survey direction - The VLF Em-16 receiver was facing northwest along the survey line (00)

VLF survey stations - All readings were taken at approximately 20 meter stations along the survey line.

Parameters of Measurement - In-phase and Quad-phase components of vertical magnetic field as a percentage of horizontal primary fields. (Tangent of tilt angle and ellipticity). VLF transmitter NAA was to the east. The transmitter is chosen so that the direction to the transmitting station is as close to the orientation of the bedrock strike.

VLF Data Processing

Field data was collected as follows on each surveyed line.

- Each station was saved onto the Handheld Garmin 60CSX Handheld GPS Unit (including local features such as power lines, fences and geological structures)
- VLF readings for each station were recorded in a notebook as In-Phase and Quadrature corresponding to the line number and station number. (See example in Table 1)

Table 1 Example of VLF Field Data Collection

Line 00	NAA In phase	NAA Quadrature	Notes
0+00	10	4	
0+20N	8	2	
0+40N	6	0	

- Field information was transferred to a Garmin map source program where line and station information could be viewed.

- Garmin and VLF data were compiled onto an excel spreadsheet and then inputted into the VLF2DMF processing software.

VLF Data Profiles

All VLF data collected on line 00, was processed with the VLF2DMF software. Each line profile includes the frequency used. All VLF profiles are divided into 5 figures which are found at the end of this report.

1: VLF Raw and Filtered Data Profiles for NAA

The raw data for each frequency was plotted for each line surveyed. A running average filter of the raw data is run to smooth the survey profile.

2: Fraser Filter Profiles for NAA

Filtered raw data for frequency NAA was run through the Fraser filter. This filter transforms In-Phase cross overs and inflections into positive peak anomalies. In-Phase inflections and cross overs are usually plus to minus, while Quadrature responses are negative to positive giving a negative peak anomaly when the Fraser Filter is applied. VLF anomalies were chosen based on the location of the peaks on the Fraser Filter profile.

3: VLF K-H Profiles for NAA

Filtered data for frequency NAA was run through the Karous-Hjelt (K-H) filter. The filter is applied to obtain a section of current density. The higher values are in general associated with conductive structures.

4: VLF Resistivity Profiles for NAA

The apparent resistivity for frequency NAA was calculated and plotted. The resistivity can be calculated if the mean environmental resistivity is known at the beginning of the VLF profile. A mean resistivity of 500 ohm's was used for the Quartz Stockwork.

5: VLF Model 500 Ohm for NAA

An apparent resistivity of 500 Ohms was used to build an initial model used in the inversion to obtain a realistic cross section of the line surveyed. Conductive zones are colored blue while resistive zones are colored orange. A Pseudo depth scale is found on the left side of model profiles. Surface conductive zones show little depth extent, have a horizontal display and are limited in length.
Deeper conductors have more depth extent with a vertical display.

Discussion of Results

The VLF data for transmitter NAA was interpreted for line 00 surveyed relative to the nearest surveyed station. In order to determine the location of a VLF conductor, all five profiles are used.

The modelling profiles provide a basis for the delineation of shallow subsurface conductors from deeper bedrock conductors. The approximate depth to a VLF anomaly is calculated from the VLF Model. A summary of VLF anomalies is listed in table 2. This table includes the approximate location of each VLF anomaly as well as the type of anomaly. The type of bedrock VLF anomaly is posted as well as an apparent depth.

Table 2 VLF Interpretation Table TX NAA

Transmitter NAA- Cutler, Maine 24.0 Hz.

Line 00

Station	VLF Anomaly Symbol	VLF Anomaly Type	Depth Estimate meters
1+70N	A	Bedrock anomaly	-80
0+60N	B	Bedrock anomaly with conductive surficial response	00

Conclusions

The Ground VLF EM-16 Survey was successful in outlining:

a) Bedrock conductor covered by conductive overburden located near Quartz Stockwork?.
b) Deep bedrock conductor.
c) Line 00 has poor coupling with transmitter NAA to the southeast.
d) The GPS stations along line 00 appear to have unequal spacing between 1+00N and 0+00. This error could be causing and error in the processing of the VLF data, leading to a distortion of the profiles near Anomaly B.

The use of 1 frequency across the Quartz Stockwork assisted in identifying several bedrock conductors.
The processing of raw VLF data using the VLF2D Software program was successful in distinguishing between surficial and bedrock VLF conductors on the 1 line surveyed.

Recommendations#

Ground proofing of VLF anomalies should be followed up to determine if these anomalies are related to mineralization, fault zones or structural contacts.
Priority VLF anomaly is A.

VLF surveying of a line 00 with a length of 600 meters at 20 meter stations in a NE-SW direction across the Quartz Stockwork Anomaly. The Quartz Stockwork Anomaly should be located at approximately 300 S. The use Transmitter NAA- Cutler, Maine and Transmitter NML- La Moure N. Dakota. Parallel lines at 0+50E, 1+00E, 0+50W and 1+00W should also be surveyed. This is recommended in order to trace and obtain more detail on the location and strike length of the Quartz Stockwork.

Further processing of the above VLF Data using the VLF2DMF map module software to produce plan maps and 3D visual cross sections of the surveyed area

List of References

Baker,H.A,. and J.O.Myers, 1979, VLF-EM model studies and some simple quantitative applications to field results: Geoexploration 17, 55-63

Fraser, D.C., 1969. Contouring of VLF-EM data. Geophysics, 34 958-967

Geonics Ltd.,1997: Operating Manual for VLF Em-16

Karous, M and Hjelt, S.E., 1983: Linear filtering of VLF dip-angle measurements, Geophysical Prospecting 31, 782-794

McNeil, J.D. and Labson; 1991: Geological Mapping using VLF radio fields. In Nabghian, M.N Ed, Electrical Methods in Applied Geophysics 11. Soc. Expl. Geoph, 521-640

Sayden, A.S, Boniwell, J.B; 1989: VLF Electromagnetic Method, Canadian Institute of Mining and Metalurgy, Special Volume 41, 111-125 of VLF-EM Data

Monteiro Santos, F.A; 2013: VLF 2D V1.2 A program for 2D inversion

Certificate of Qualifications

I, Shaun Parent, P. Geo (LTD.) residing at 282 B Whispering Pines Road, Batchawana Bay, Ontario do certify that:

1. I am a consulting Geoscientist with Superior Exploration, Adventure & Climbing Co. Ltd.

2. I graduated with a Geological Technician Diploma from Sir Sandford Fleming College in 1986.

3. I graduated with a BSc. from the University of Toronto in 1986

4. I am a member in good standing with the Association of Professional Geoscientists of Ontario #1955 and a member of the Prospectors and Developers Association of Canada.

5. I have been employed continuously as a Geoscientist for the past 26 years since my graduation from University.

6. The nature of my involvement with this project was to carry out the VLF Survey interpretation for Frank Racicot of Anomaly A VLF data using the EMTOMO VLF2D Software of which I have been developing with Dr. Fernando Santos of Lisbon, Portugal.

Dated this 27th day of February 2014

Shaun Parent, P. Geo (Limited)

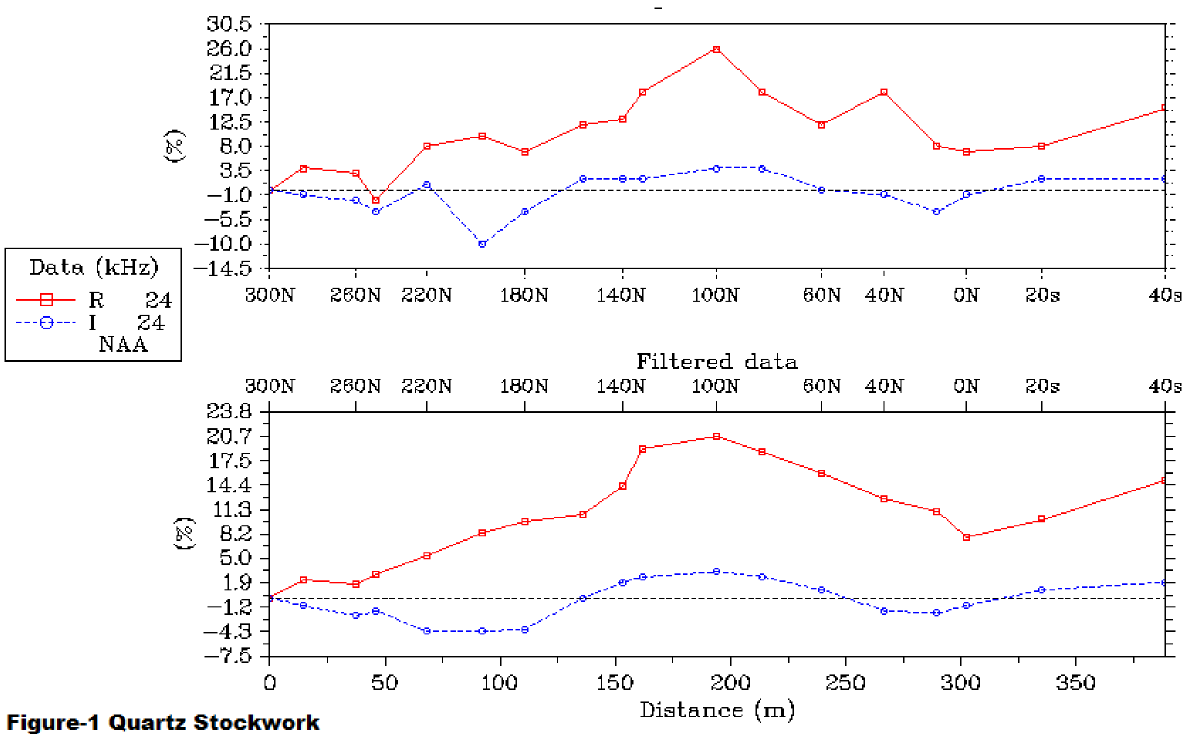


Figure-1 Quartz Stockwork
Line 00
Raw and Filtered Data

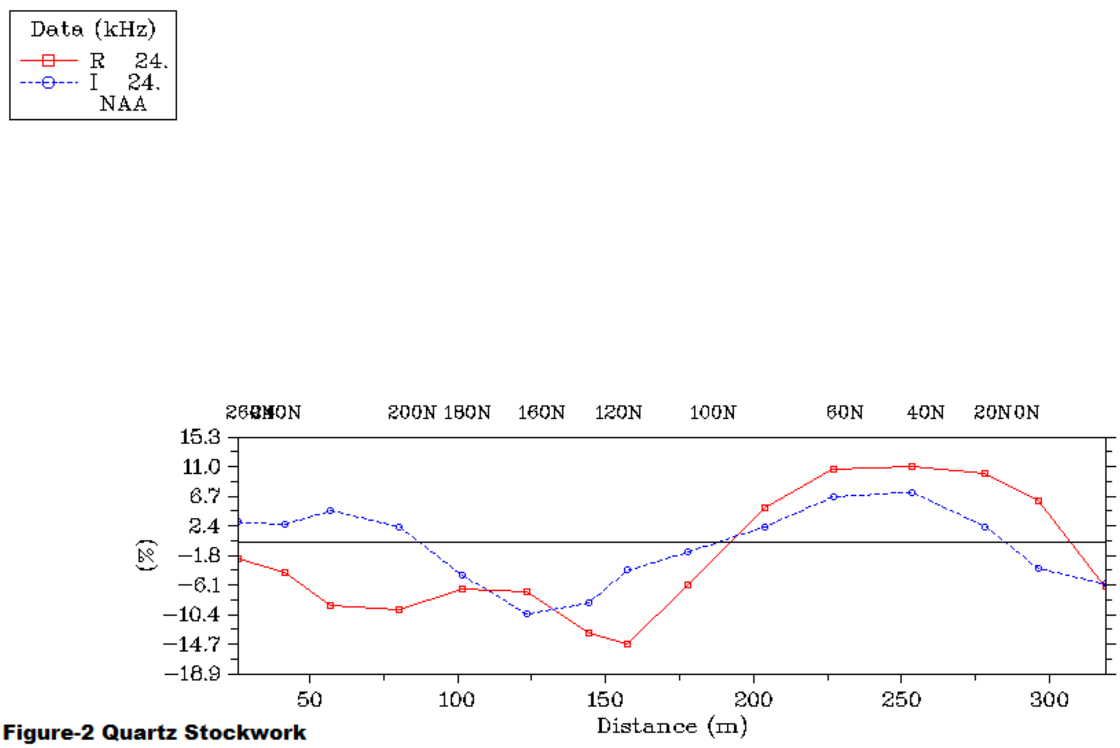


Figure-2 Quartz Stockwork
Line 00
Fraser Filter Profile

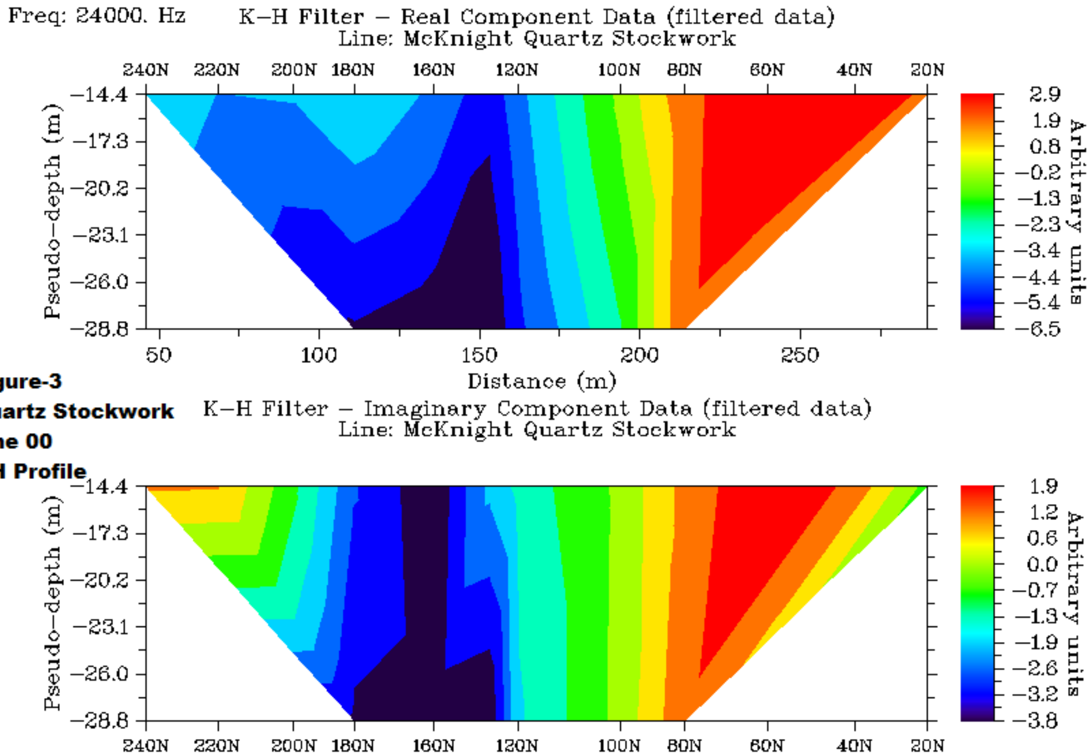


Figure-3
Quartz Stockwork
Line 00
KH Profile

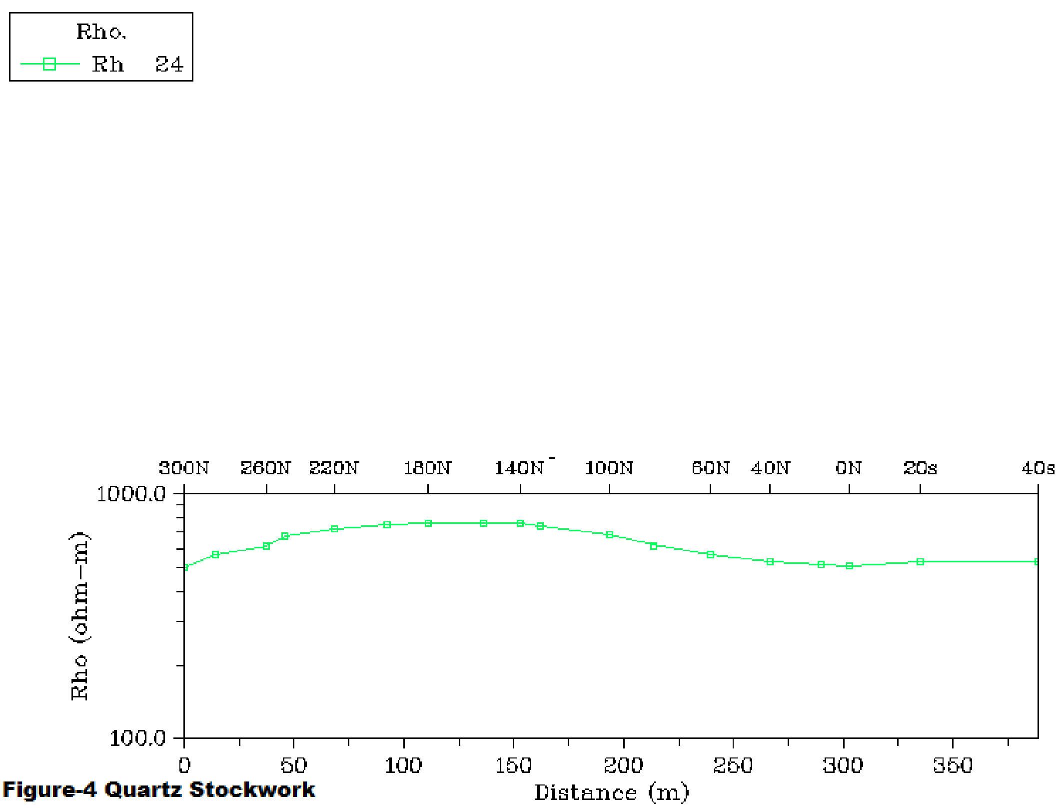


Figure-4 Quartz Stockwork
Line 00
Resistivity Profile

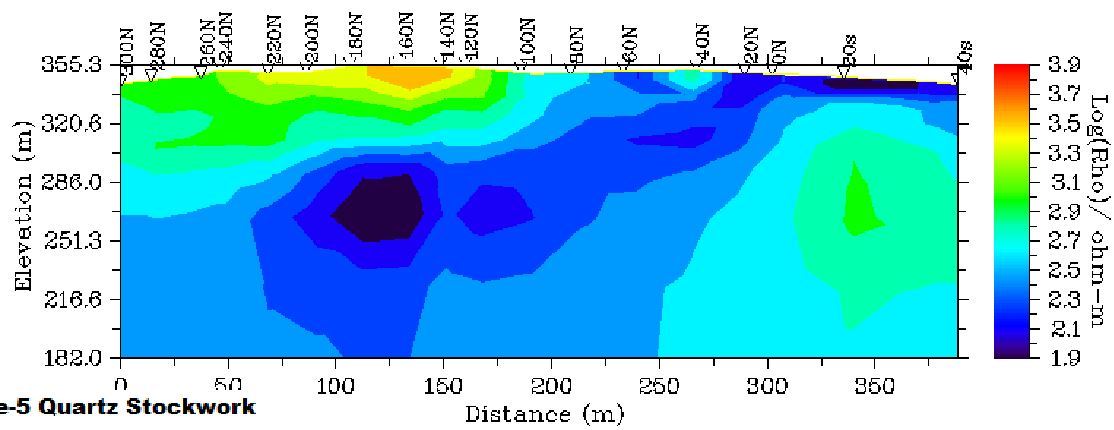


Figure-5 Quartz Stockwork
Line 00
VLF Model 1000 Ohm

VLF EM-16 Surveying Report

On

Anomaly B-C

Knight Township

District of Larder Lake

Ontario

Prepared For

Frank Racicot Consulting

Prepared by: Shaun Parent

Superior Exploration Adventure and Climbing Co. Ltd.

February 27, 2014

Executive Summary:

Anomaly B and C is located in Knight Township in the district of Larder Lake of Northern Ontario. A VLF EM-16 survey program was carried out in October 25, 2013, using a VLF EM-16 and a handheld Garmin GPS-60C using 1 transmitter station - NAA – Cutler, Maine

The objective of the 2013 VLF EM-16 survey was to determine if the VLF Survey could delineate the location of interpreted structures that may host gold deposits.

Introduction

A VLF-EM16 survey is a relatively simple and economic geophysical survey that is used to better understand shallow, vertical and sub vertical bedrock conductors.
This report describes the findings and results of the VLF EM-16 survey utilizing the new VLF 2DMF processing software of which the author of this report has assisted in its development.

VLF2DMF is a software package that has been developed in order to enable the processing and inversion of electromagnetic (EM) induction data acquired at a Very Low Frequency (VLF).

VLF2DMF is capable of inverting VLF-EM data acquired along a surveyed line at different frequencies. Data collected in a survey area can also be processed but not inverted as a set. The software allows the display of the survey as profiles of the Raw Data, Fraser Filtered Data, KH, Resistivity and a (2-D) Modelled Inversion.

Personnel

The VLF EM-16 operator and GPS field navigator responsible for the collection of all raw data was Frank Racicot. And Ted Lang. Interpretation of the VLF data using the VLF2DMF Software was completed by Shaun Parent.

Work Performed

The VLF EM-16 survey consisted of running 2 North South VLF traverse Lines (00) and (L1E) across the area of interest known as Anomaly B and C

The VLF lines were completed while using a handheld Garmin 60-CSX GPS. Each VLF station was located based on a northerly azimuth and distance from the start of the survey line. At each line station, 1 transmitter station was read using the Geonics VLF- Em-16 receiver. The following parameters were used throughout the survey.

VLF Transmitters Used– NAA-24.0 Hz. Cutler, Maine

VLF survey direction - The VLF Em-16 receiver was facing north along the survey lines (00) and (L1E)

VLF survey stations - All readings were taken at approximately 20 meter stations along the survey line.

Parameters of Measurement - In-phase and Quad-phase components of vertical magnetic field as a percentage of horizontal primary fields. (Tangent of tilt angle and ellipticity). VLF transmitter NAA was to the east. The transmitter are chosen so that the direction to the transmitting station is as close to the orientation of the bedrock strike.

VLF Data Processing

Field data was collected as follows on each surveyed line.

- Each station was saved onto the Handheld Garmin 60CSX Handheld GPS Unit (including local features such as power lines, fences and geological structures)
- VLF readings for each station were recorded in a notebook as In-Phase and Quadrature corresponding to the line number and station number. (See example in Table 1)

Table 1 Example of VLF Field Data Collection

Line 00	NAA In phase	NAA Quadrature	Notes
0+00	10	4	
0+20N	8	2	
0+40N	6	0	

- Field information was transferred to a Garmin map source program where line and station information could be viewed.
- Garmin and VLF data were compiled onto an excel spreadsheet and then inputted into the VLF2DMF processing software.

VLF Data Profiles

All VLF data collected on lines 0N, and 1E, was processed with the VLF2DMF software. Each line profile includes the frequency used. All VLF profiles are divided into 5 figures which can be found at the end of this report.

1: VLF Raw and Filtered Data Profiles for NAA

The raw data for each frequency was plotted for each line surveyed. A running average filter of the raw data is run to smooth the survey profile.

2: Fraser Filter Profiles for NAA

Filtered raw data for frequency NAA was run through the Fraser filter. This filter transforms In-Phase cross overs and inflections into positive peak anomalies. In-Phase inflections and cross overs are usually plus to minus, while Quadrature responses are negative to positive giving a negative peak anomaly when the Fraser Filter is applied. VLF anomalies were chosen based on the location of the peaks on the Fraser Filter profile.

3: **VLF K-H Profiles for NAA**

Filtered data for frequency NAA was run through the Karous-Hjelt (K-H) filter. The filter is applied to obtain a section of current density. The higher values are in general associated with conductive structures.

4: VLF Resistivity Profiles for NAA

The apparent resistivity for frequency NAA was calculated and plotted. The resistivity can be calculated if the mean environmental resistivity is known at the beginning of the VLF profile. A mean resistivity of 1000 ohm's was used for the Anomaly A and B.

5: VLF Model 1000 Ohm for NAA

An apparent resistivity of 100 Ohms was used to build an initial model used in the inversion to obtain a realistic cross section of the line surveyed. Conductive zones are colored blue while resistive zones are colored orange. A Pseudo depth scale is found on the left side of model profiles. Surface conductive zones show little depth extent, have a horizontal display and are limited in length.
Deeper conductors have more depth extent with a vertical display.

Discussion of Results

The VLF data for transmitter NAA was interpreted separately for each line surveyed relative to the nearest surveyed station. In order to determine the location of a VLF conductor, all five profiles are used.

The modelling profiles provide a basis for the delineation of shallow subsurface conductors from deeper bedrock conductors. The approximate depth to a VLF anomaly is calculated from the VLF Model. A summary of VLF anomalies is listed is listed in table 2. This table includes the approximate location of each cultural and VLF anomaly as well as the type of anomaly. The type of bedrock VLF anomaly is posted as well as an apparent depth.

Table 2 VLF Interpretation Table TX NAA

Transmitter NAA- Cutler, Maine 24.0 Hz.

Line 0E

Station	VLF Anomaly Symbol	VLF Anomaly Type	Depth Estimate meters
1+00S	A	Bedrock,Fault?	-5
0+60N	B	Bedrock, Contact?	00
2+20N	C	Bedrock, Fault?	-5
2+80N	D	Bedrock, Fault?	-5
5+80N	E	Bedrock, Fault?	00
6+40N	F	Surficial?	00
7+60N	G	Surficial?	00

Transmitter NAA- Cutler, Maine 24.0 Hz.

Line 1E

Station	VLF Anomaly Symbol	Anomaly Type	Depth Estimate Meters
6+60S	A	Bedrock, Contact?	-40
4+60S	B	Bedrock, Fault?	-10
3+80S	C	Bedrock, Contact?	00
2+80S	D	Bedrock, Contact?	00
1+40S	E	Bedrock, Fault?	00
0+80S	F	Bedrock, Fault?	00

Conclusions

The Ground VLF EM-16 Survey was successful in outlining:

a) Bedrock conductors located near Anomaly A and B.
b) Several bedrock conductors that might represent faults.
c) On Line 0E Anomalies CD and EF might represent a wide conductive zone
d) Anomaly B on Line 1E is a strong mineralized fault or shear?

The use of 1 frequency across Anomaly A and B assisted in identifying several bedrock conductors, possible faults and contacts.
The processing of raw VLF data using the VLF2D Software program was successful in distinguishing between surficial and bedrock VLF conductors on the 2 lines surveyed.

Recommendations#

Ground proofing of VLF anomalies should be followed up to determine if these anomalies are related to mineralization, fault zone or structural contacts.
Priority VLF anomalies are found on Line 00, at CD and EF and on line 1E at B and F

VLF surveying on 50 meter lines at 20 meter stations in a N-S direction on lines 0+50W, 1+00W, 0+50E and 1+50E using Transmitter NAA and Transmitter NML- La Moure N. Dakota. This is recommended in order to trace and obtain more detail on the location and strike length of VLF anomaly A. Re surveying Line 00 and L1E with transmitter NAA and Transmitter NML.

Further processing of the above VLF Data using the VLF2DMF map module software to produce plan maps and 3D visual cross sections of the surveyed area

List of References

Baker,H.A,. and J.O.Myers, 1979, VLF-EM model studies and some simple quantitative applications to field results: Geoexploration 17, 55-63

Fraser, D.C., 1969. Contouring of VLF-EM data. Geophysics, 34 958-967

Geonics Ltd.,1997: Operating Manual for VLF Em-16

Karous, M and Hjelt, S.E., 1983: Linear filtering of VLF dip-angle measurements, Geophysical Prospecting 31, 782-794

McNeil, J.D. and Labson; 1991: Geological Mapping using VLF radio fields. In Nabghian, M.N Ed, Electrical Methods in Applied Geophysics 11. Soc. Expl. Geoph, 521-640

Sayden, A.S, Boniwell, J.B; 1989: VLF Electromagnetic Method, Canadian Institute of Mining and Metalurgy, Special Volume 41, 111-125 of VLF-EM Data

Monteiro Santos, F.A; 2013: VLF 2D V1.2 A program for 2D inversion

Certificate of Qualifications

I, Shaun Parent, P. Geo (LTD.) residing at 282 B Whispering Pines Road, Batchawana Bay, Ontario do certify that:

1. I am a consulting Geoscientist with Superior Exploration, Adventure & Climbing Co. Ltd.

2. I graduated with a Geological Technician Diploma from Sir Sandford Fleming College in 1986.

3. I graduated with a BSc. from the University of Toronto in 1986

4. I am a member in good standing with the Association of Professional Geoscientists of Ontario #1955 and a member of the Prospectors and Developers Association of Canada.

5. I have been employed continuously as a Geoscientist for the past 26 years since my graduation from University.

6. The nature of my involvement with this project was to carry out the VLF Survey interpretation for Frank Racicot of Anomaly A VLF data using the EMTOMO VLF2D Software of which I have been developing with Dr. Fernando Santos of Lisbon, Portugal.

Dated this 27th day of February 2014

Shaun Parent, P. Geo (Limited)

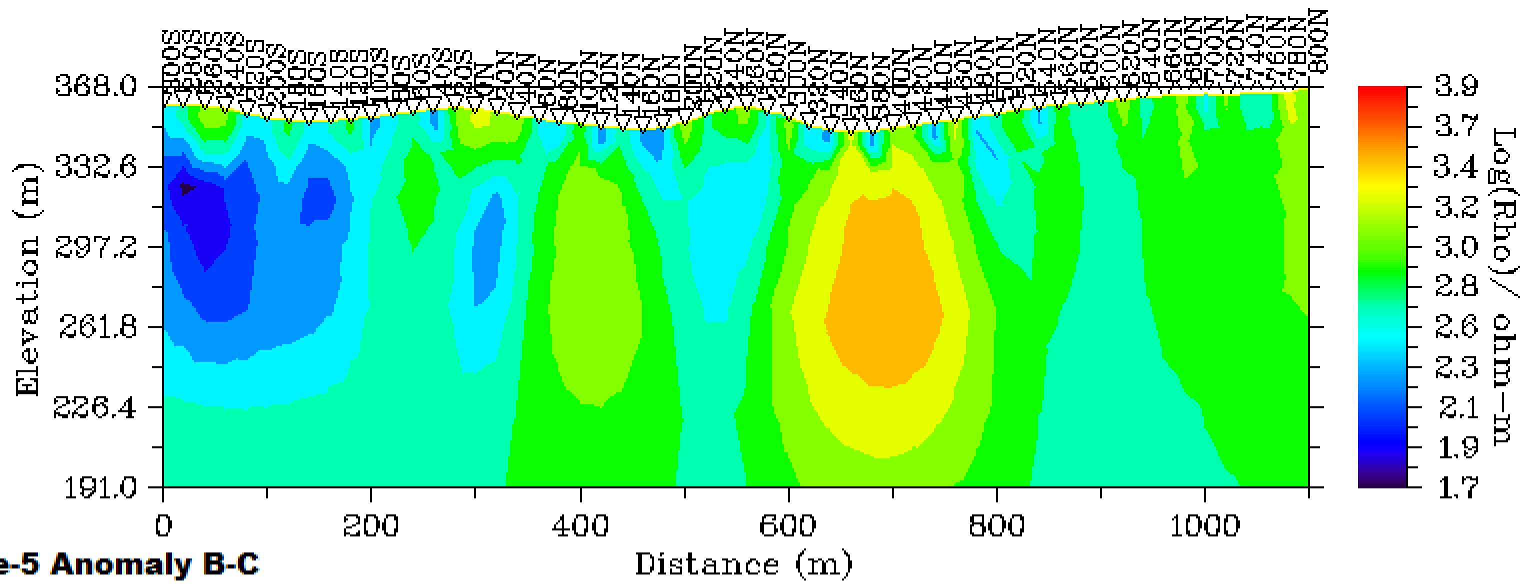


Figure-5 Anomaly B-C

Line 0E

VLF Model 1000 Ohm

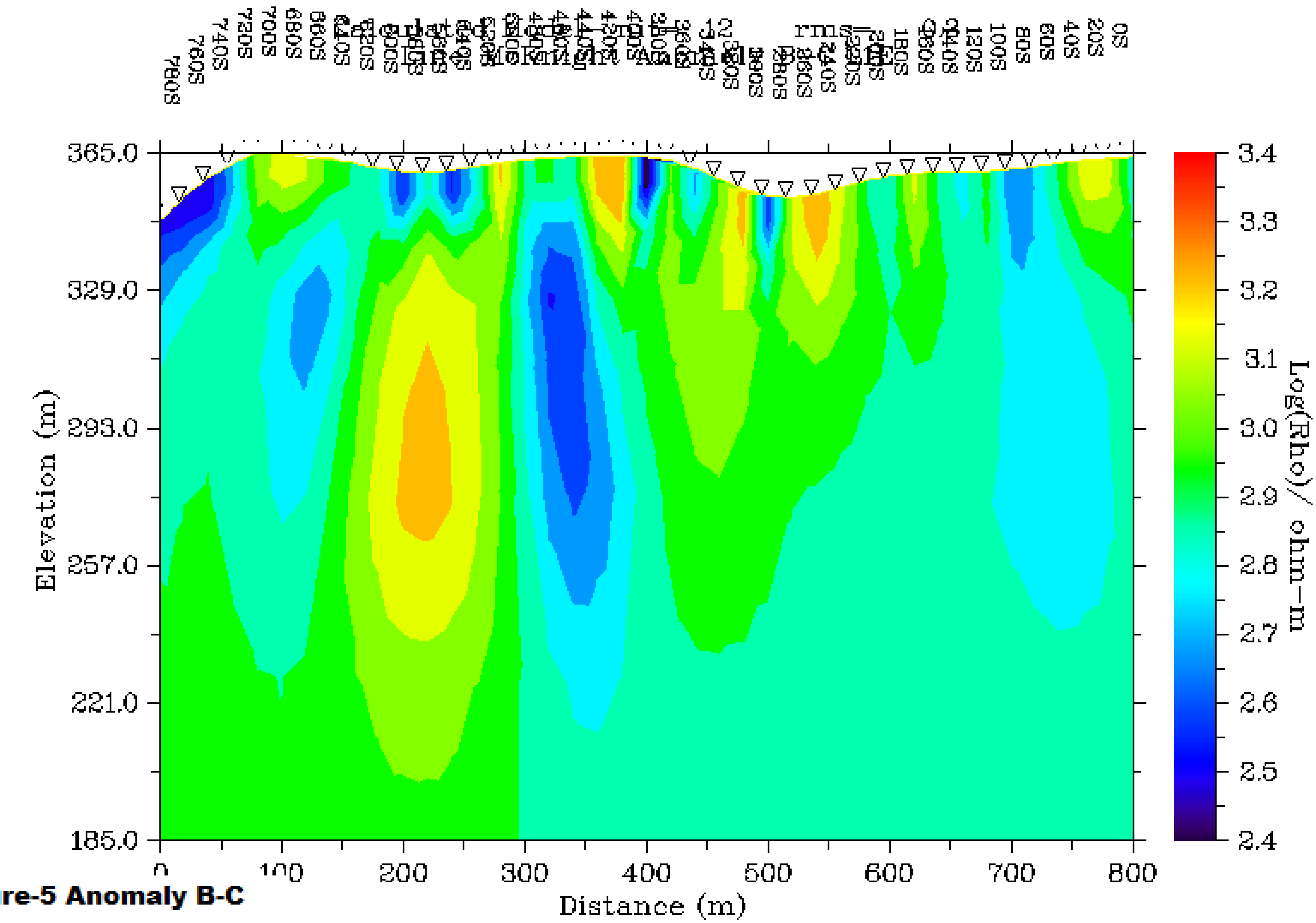


Figure-5 Anomaly B-C

Line 1E

VLF Model 1000 Ohm

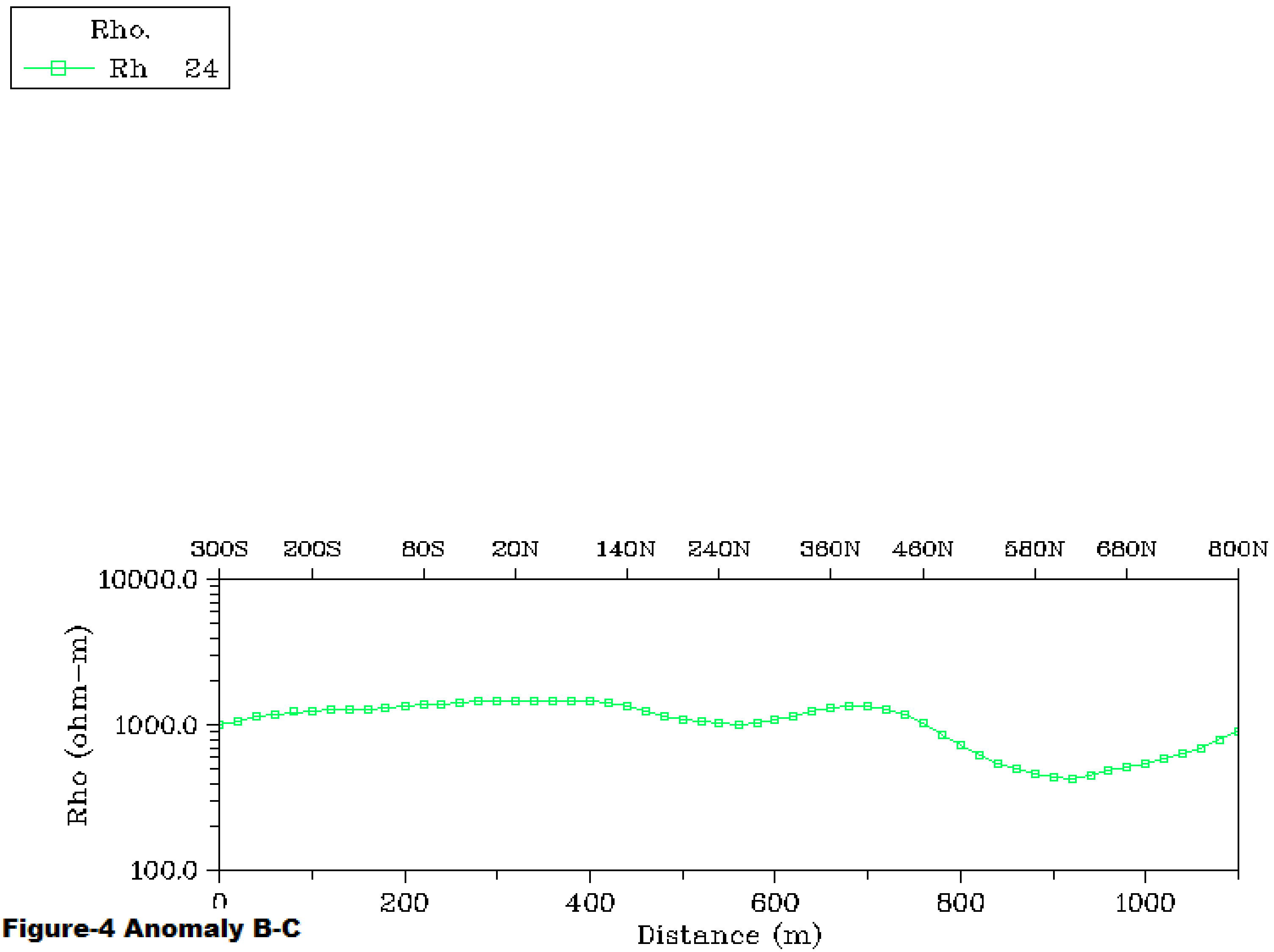


Figure-4 Anomaly B-C

Line 0E

Resistivity Profile

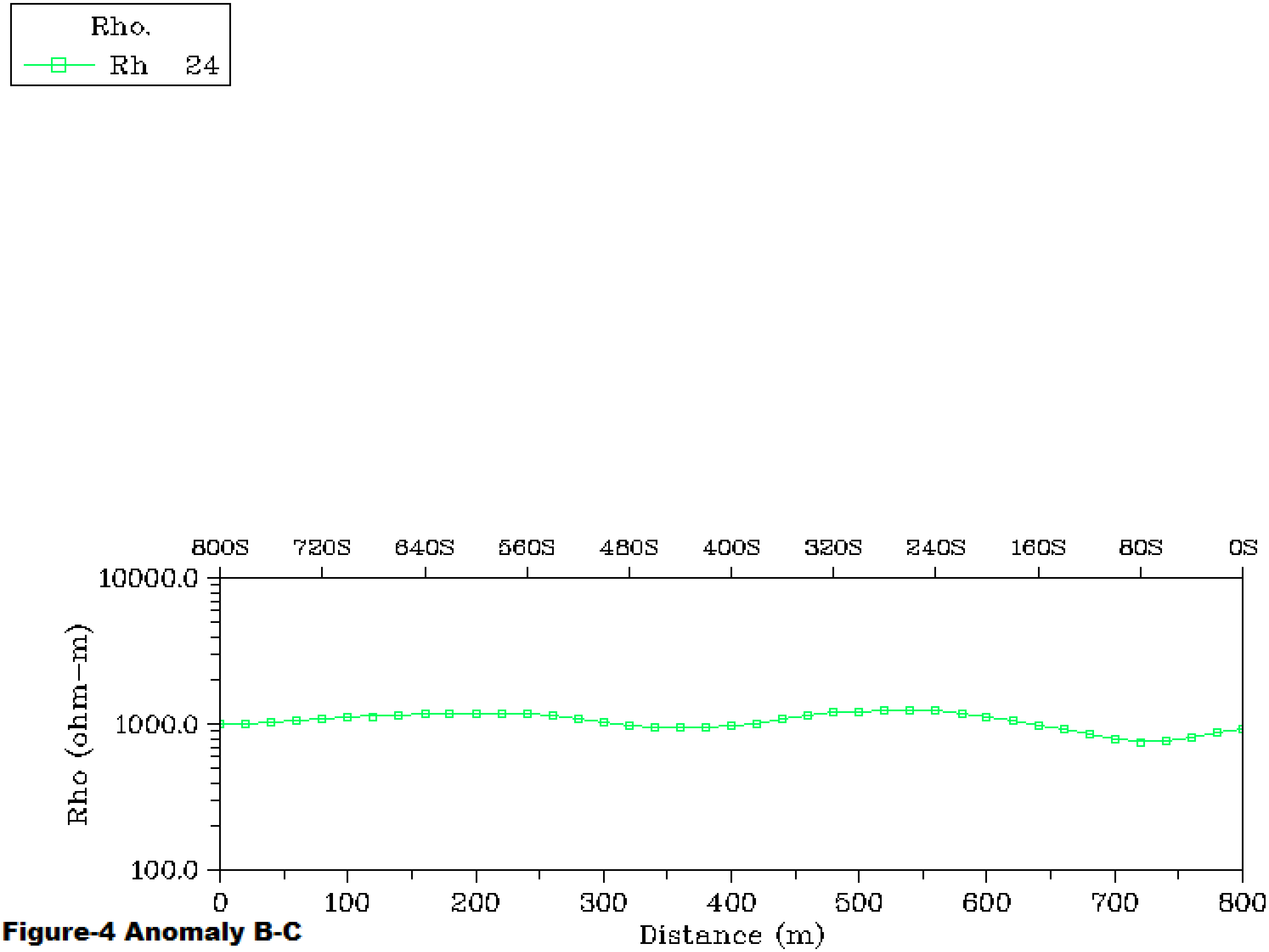


Figure-4 Anomaly B-C
Line 1E
Resistivity Profile

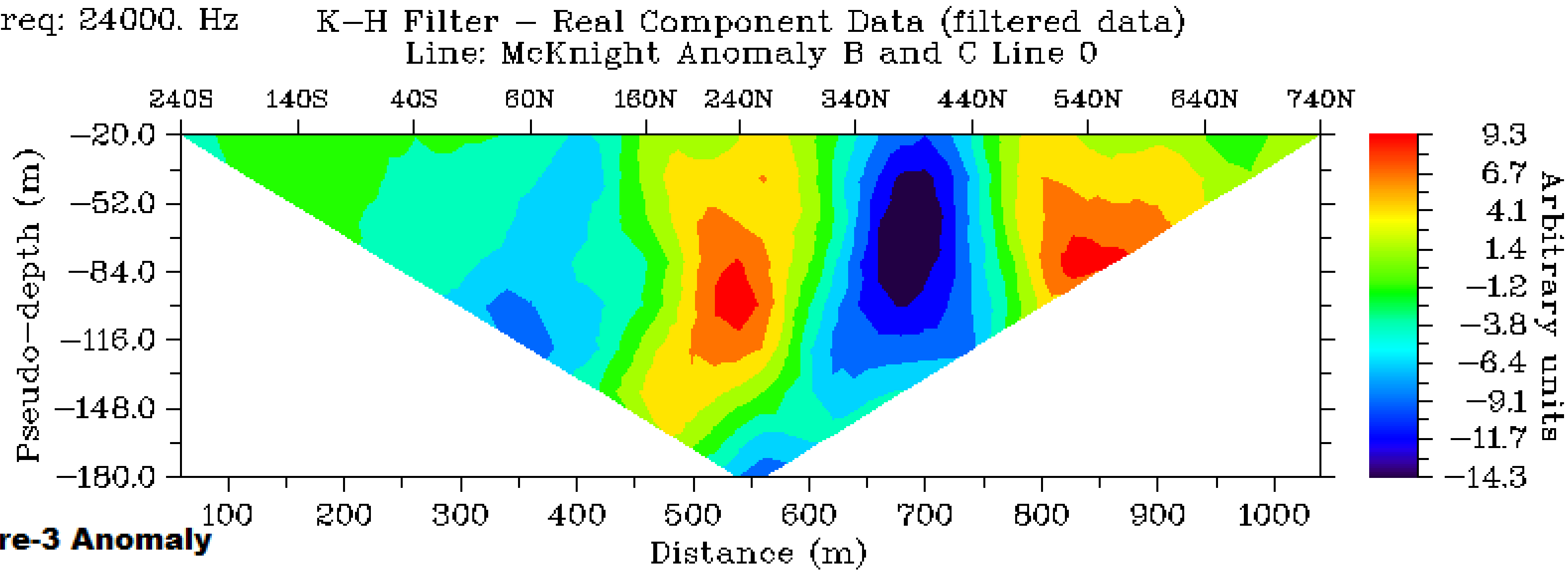
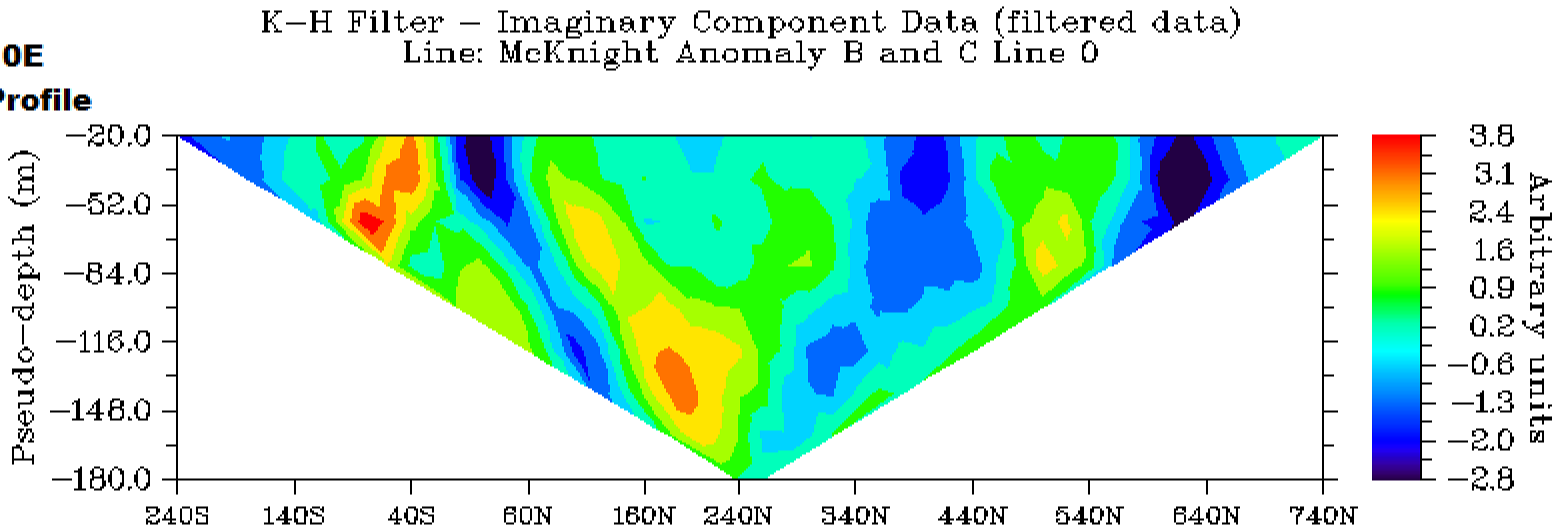


Figure-3 Anomaly

B-C

Line 0E

KH Profile



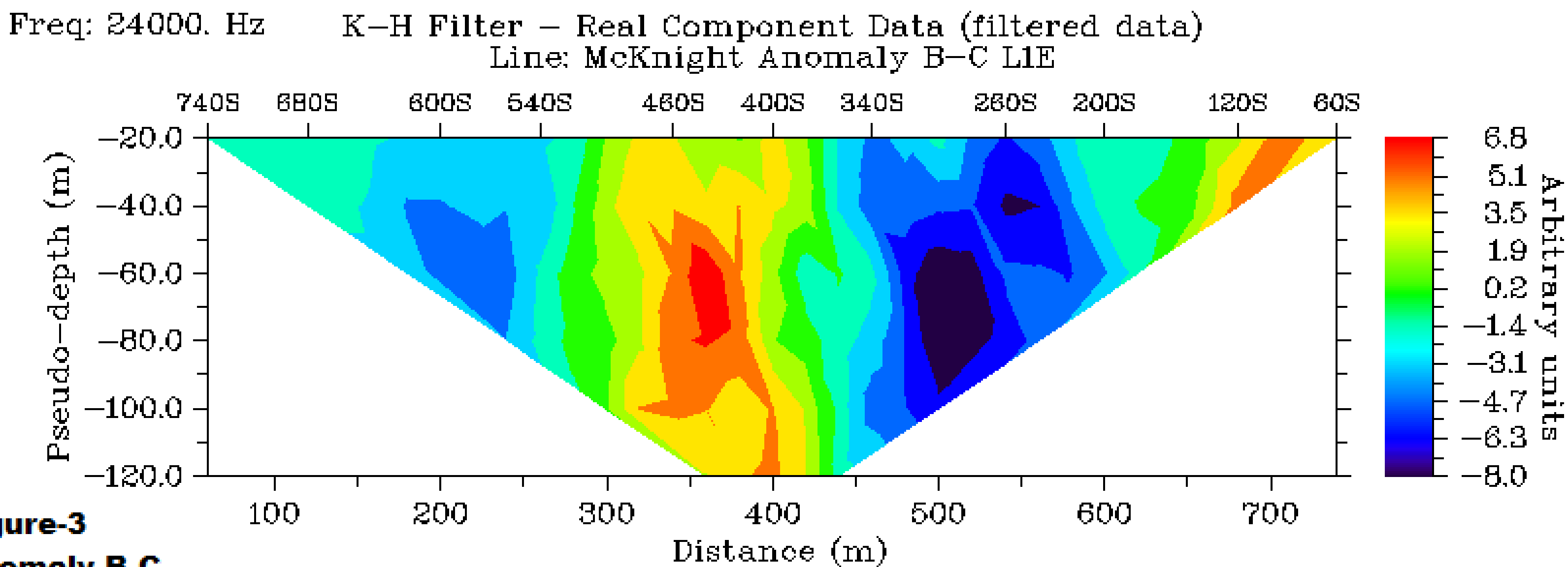
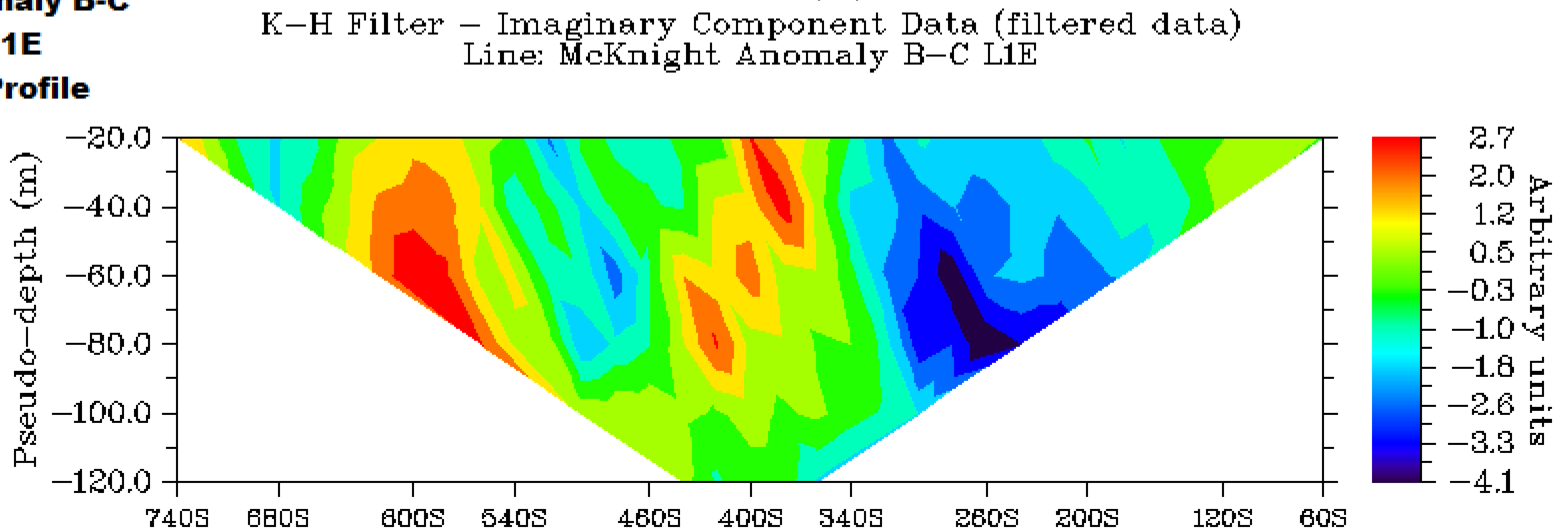


Figure-3
Anomaly B-C
Line 1E
KH-Profile



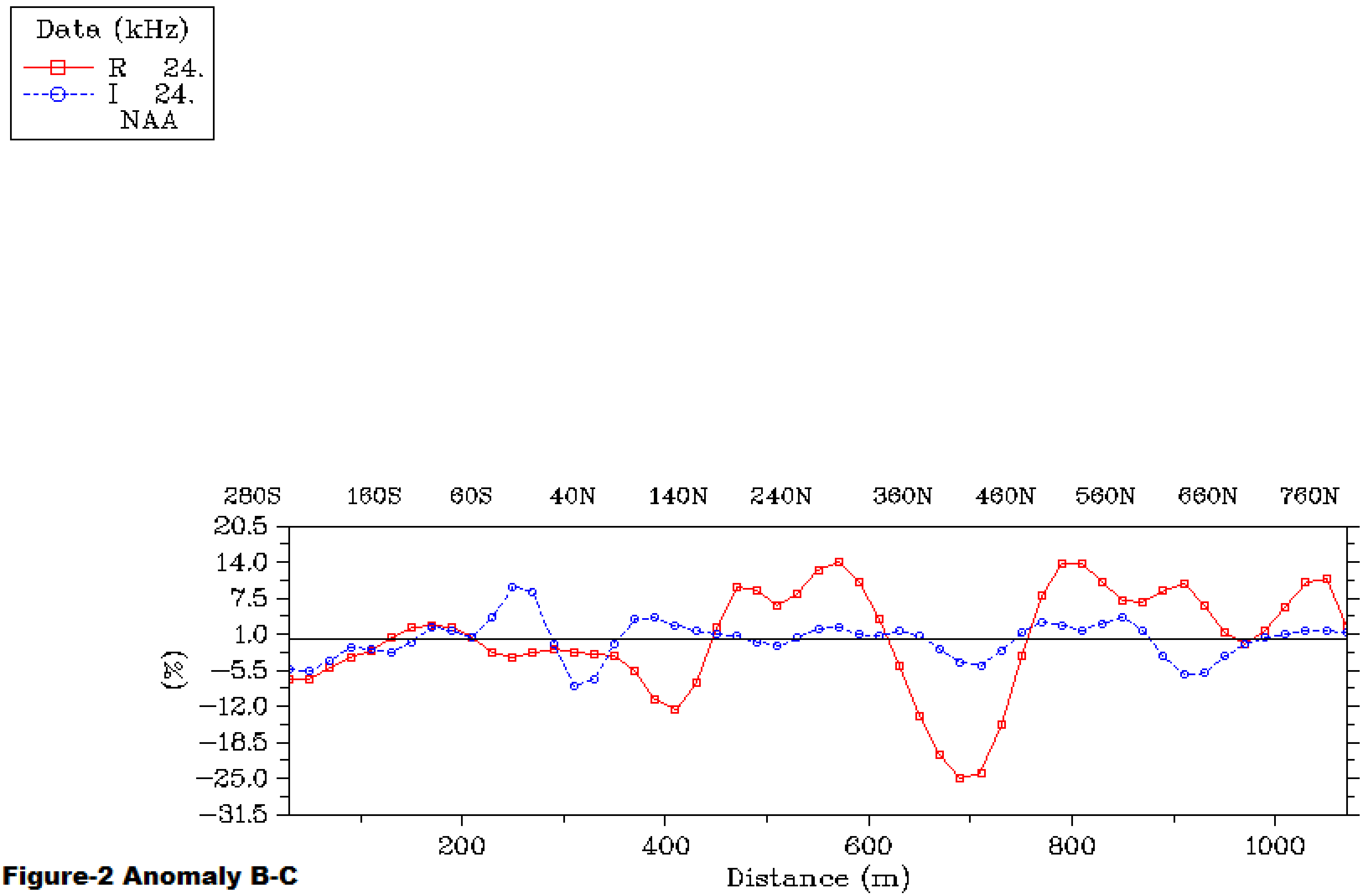


Figure-2 Anomaly B-C
Line 0E
Fraser Filter Profile

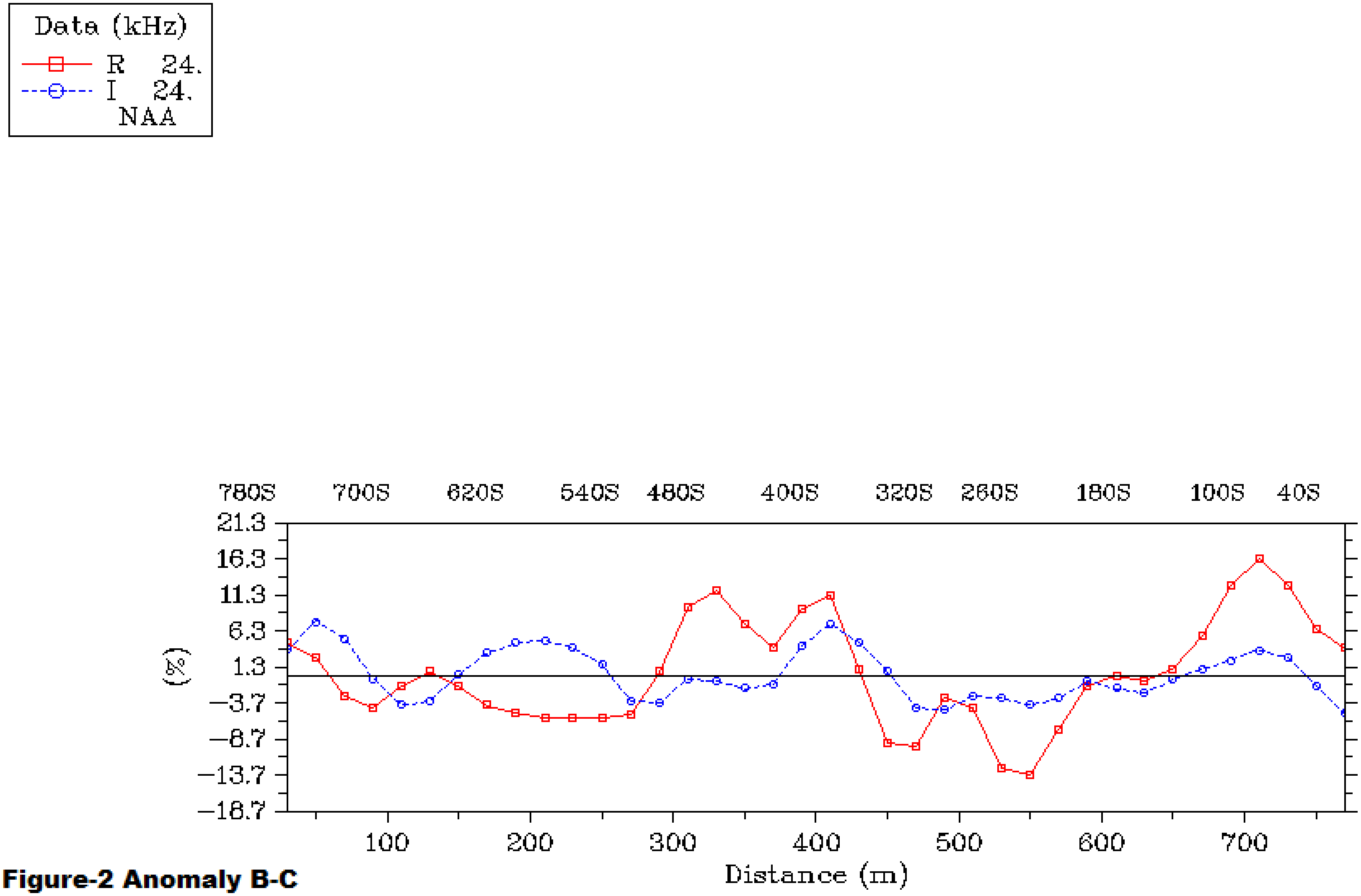


Figure-2 Anomaly B-C

Line 1E

Fraser Filter Profile

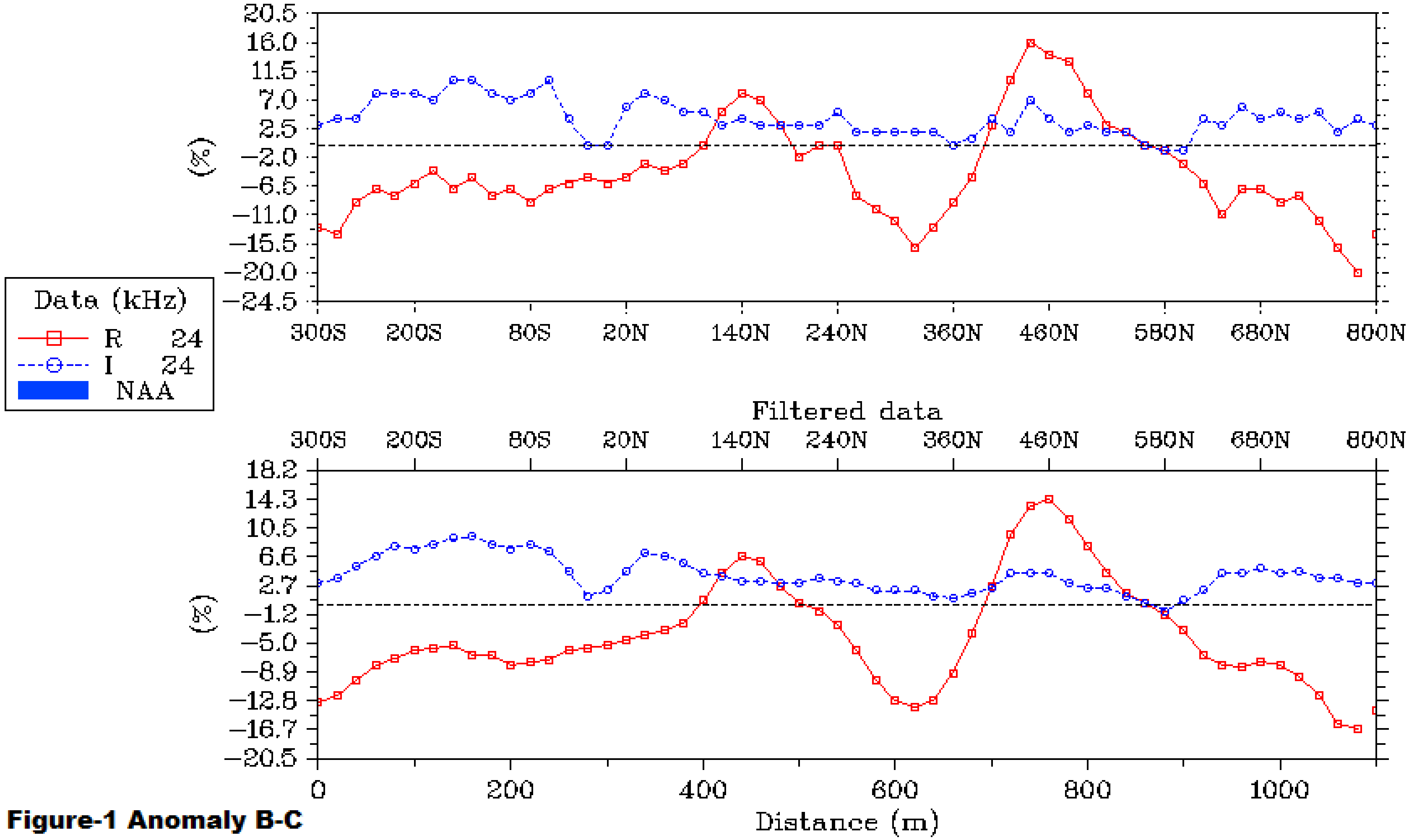


Figure-1 Anomaly B-C
Line 0E
Raw and Filtered Data

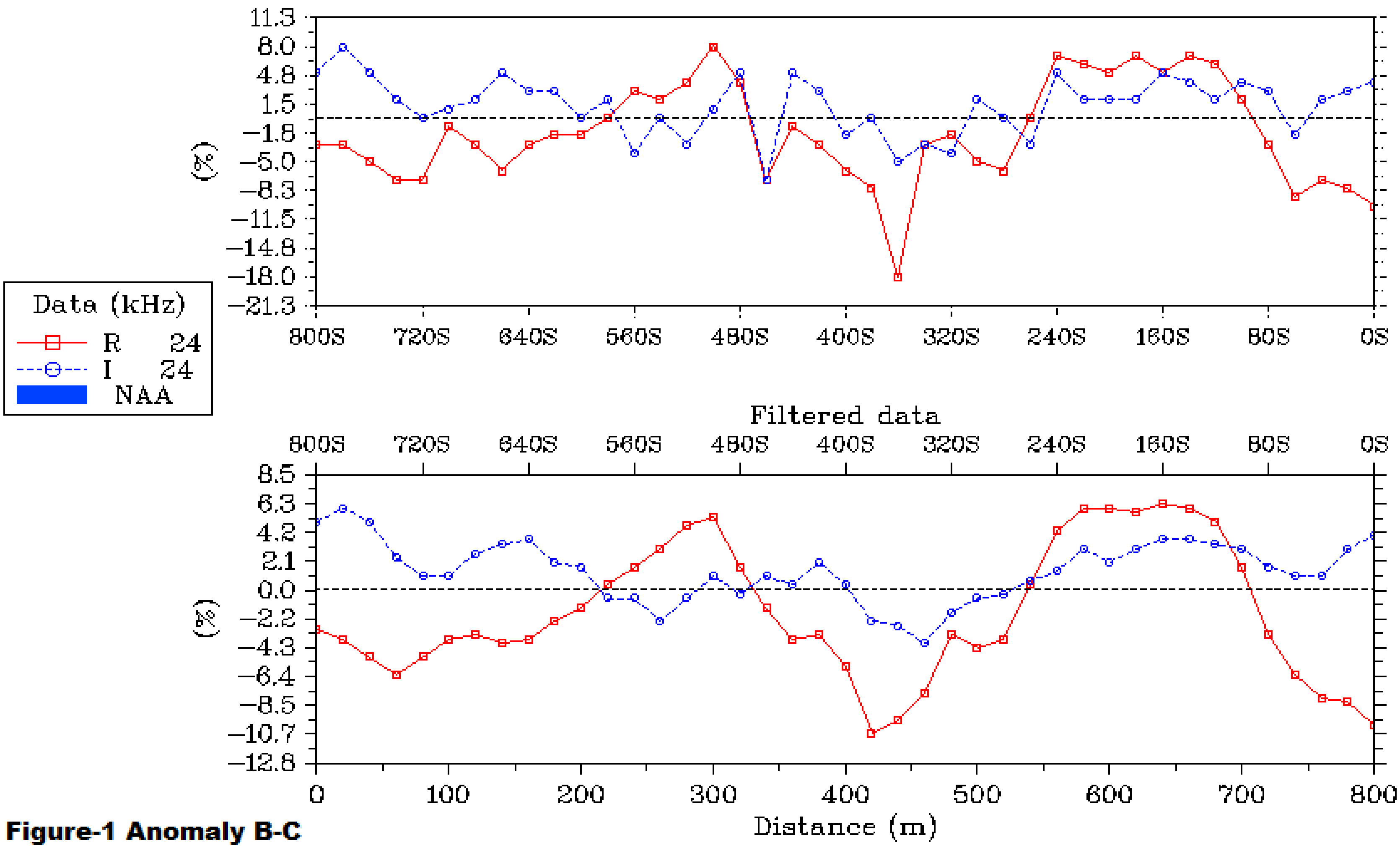


Figure-1 Anomaly B-C

Line 1E

Raw and Filtered Data

VLF EM-16 Surveying Report

On

Anomaly-A

Knight Township

District of Larder Lake

Ontario

Prepared For

Frank Racicot Consulting

Prepared by: Shaun Parent

Superior Exploration Adventure and Climbing Co. Ltd.

February 27, 2014

Executive Summary:

Anomaly A is located in Knight Township in the district of Larder Lake of Northern Ontario
A VLF EM-16 survey program was carried out in October 25, 2013, using a VLF EM-16 and a handheld Garmin GPS-60C using 1 transmitter station - NAA – Cutler, Maine

The objective of the 2013 VLF EM-16 survey was to determine if the VLF Survey could delineate the location of interpreted structures that may host gold deposits.

Introduction

A VLF-EM16 survey is a relatively simple and economic geophysical survey that is used to better understand shallow, vertical and sub vertical bedrock conductors.

This report describes the findings and results of the VLF EM-16 survey utilizing the new VLF 2DMF processing software of which the author of this report has assisted in its development.

VLF2DMF is a software package that has been developed in order to enable the processing and inversion of electromagnetic (EM) induction data acquired at a Very Low Frequency (VLF).

VLF2DMF is capable of inverting VLF-EM data acquired along a surveyed line at different frequencies. Data collected in a survey area can also be processed but not inverted as a set. The software allows the display of the survey as profiles of the Raw Data, Fraser Filtered Data, KH, Resistivity and a (2-D) Modelled Inversion.

Personnel

The VLF EM-16 operator and GPS field navigator responsible for the collection of all raw data was Frank Racicot. And Ted Lang. Interpretation of the VLF data using the VLF2DMF Software was completed by Shaun Parent.

Work Performed

The VLF EM-16 survey consisted of running 1 North South VLF traverse Line (2E) and 1 East West Traverse (L00) across the area of interest known as Anomaly A.

The VLF lines were completed while using a handheld Garmin 60-CSX GPS. Each VLF station was located based on a northerly azimuth and distance from the start of the survey line. At each line station, 1 transmitter station was read using the Geonics VLF- Em-16 receiver. The following parameters were used throughout the survey.

VLF Transmitters Used– NAA-24.0 Hz. Cutler, Maine

VLF survey direction - The VLF Em-16 receiver was facing west along the survey line 00 and south along survey line 2E

VLF survey stations - All readings were taken at approximately 20 meter stations along the survey line.

Parameters of Measurement - In-phase and Quad-phase components of vertical magnetic field as a percentage of horizontal primary fields. (Tangent of tilt angle and ellipticity). VLF transmitter NAA was to the east. The transmitters are chosen so that the direction to the transmitting station is as close to the orientation of the bedrock strike.

VLF Data Processing

Field data was collected as follows on each surveyed line.

- Each station was saved onto the Handheld Garmin 60CSX Handheld GPS Unit (including local features such as power lines, fences and geological structures)
- VLF readings for each station were recorded in a notebook as In-Phase and Quadrature corresponding to the line number and station number. (See example in Table 1)

Table 1 Example of VLF Field Data Collection

Line 00	NAA In phase	NAA Quadrature	Notes
0+00	10	4	
0+20W	8	2	
0+40W	6	0	

- Field information was transferred to a Garmin map source program where line and station information could be viewed.
- Garmin and VLF data were compiled onto an excel spreadsheet and then inputted into the VLF2DMF processing software.

VLF Data Profiles

All VLF data collected on lines 0N, and 2E, was processed with the VLF2DMF software. Each line profile includes the frequency used. All VLF profiles are divided into 5 figures which are found at the end of this report.

1: VLF Raw and Filtered Data Profiles for NAA

The raw data for each frequency was plotted for each line surveyed. A running average filter of the raw data is run to smooth the survey profile.

2: Fraser Filter Profiles for NAA

Filtered raw data for frequency NAA was run through the Fraser filter. This filter transforms In-Phase cross overs and inflections into positive peak anomalies. In-Phase inflections and cross overs are usually plus to minus, while Quadrature responses are negative to positive giving a negative peak anomaly when the Fraser Filter is applied. VLF anomalies were chosen based on the location of the peaks on the Fraser Filter profile.

3: VLF K-H Profiles for NAA

Filtered data for frequency NAA was run through the Karous-Hjelt (K-H) filter. The filter is applied to obtain a section of current density. The higher values are in general associated with conductive structures.

4: VLF Resistivity Profiles for NAA

The apparent resistivity for frequency NAA was calculated and plotted. The resistivity can be calculated if the mean environmental resistivity is known at the beginning of the VLF profile. A mean resistivity of 500 ohm's was used for the Anomaly A.

5: VLF Model 500 Ohm for NAA

An apparent resistivity of 500 Ohms was used to build an initial model used in the inversion to obtain a realistic cross section of the line surveyed. Conductive zones are colored blue while resistive zones are colored orange. A Pseudo depth scale is found on the left side of model profiles. Surface conductive zones show little depth extent, have a horizontal display and are limited in length.
Deeper conductors have more depth extent with a vertical display.

Discussion of Results

The VLF data for transmitter NAA was interpreted separately for each line surveyed relative to the nearest surveyed station. In order to determine the location of a VLF conductor, all five profiles are used.

The modelling profiles in Figure 5 provide a basis for the delineation of shallow subsurface conductors from deeper bedrock conductors. The approximate depth to a VLF anomaly is calculated from the VLF Model. A summary of VLF anomalies is listed is listed in Table 2. This table includes the approximate location of each cultural and VLF anomaly as well as the type of anomaly. The type of bedrock VLF anomaly is posted as well as an apparent depth.

Table 2 VLF Interpretation Table TX NAA

Transmitter NAA- Cutler, Maine 24.0 Hz.

Line 00E

Station	Cultural Anomaly Symbol	Cultural Anomaly Type	VLF Anomaly Symbol	VLF Anomaly Type	Depth Estimate meters
0+30E			A	Bedrock	-10
0+50W			B	Bedrock	-20
1+40W			C	Surficial?	-10

Transmitter NAA- Cutler, Maine 24.0 Hz.

Line 2E

Station	Cultural Anomaly Symbol	Cultural Anomaly Type	VLF Anomaly Symbol	Anomaly Type	Depth Estimate Meters
1+60S			A	Bedrock	-30
2+80S			B	Surficial	-5

Conclusions

The Ground VLF EM-16 Survey was successful in outlining:

a) Bedrock conductor located near Anomaly A.
b) Several bedrock conductors.
c) Surficial conductor at west end of Line 00 and south end of Line 2E.

The use of 1 frequency across Anomaly A assisted in identifying several bedrock conductors. Line 00 was run east west and coupling from transmitter NAA was poor. VLF anomalies along this line might be exaggerated in size.
The processing of raw VLF data using the VLF2D Software program was successful in distinguishing between surficial and bedrock VLF conductors on the 2 lines surveyed.

Recommendations#

Ground proofing of VLF anomalies should be followed up to determine if these anomalies are related to mineralization, fault zone or structural contacts.

VLF surveying on 50 meter lines at 20 meter stations in a N-S direction on lines 0+50W, 1+00W, 0+50E and 1+00E using Transmitter NAA and Transmitter NML- La Moure N.Dakota. This is recommended in order to trace and obtain more detail on the location and strike length of VLF anomaly A. Re-surveying Line 00 with NAA and Transmitter NML.

Further processing of the above VLF Data using the VLF2DMF map module software to produce plan maps and 3D visual cross sections of the surveyed area

List of References

Baker,H.A,. and J.O.Myers, 1979, VLF-EM model studies and some simple quantitative applications to field results: Geoexploration 17, 55-63

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Sayden, A.S, Boniwell, J.B; 1989: VLF Electromagnetic Method, Canadian Institute of Mining and Metalurgy, Special Volume 41, 111-125 of VLF-EM Data

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6. The nature of my involvement with this project was to carry out the VLF Survey interpretation for Frank Racicot of Anomaly A VLF data using the EMTOMO VLF2D Software of which I have been developing with Dr. Fernando Santos of Lisbon, Portugal.

Dated this 27th day of February 2014

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Shaun Parent, P. Geo (Limited)

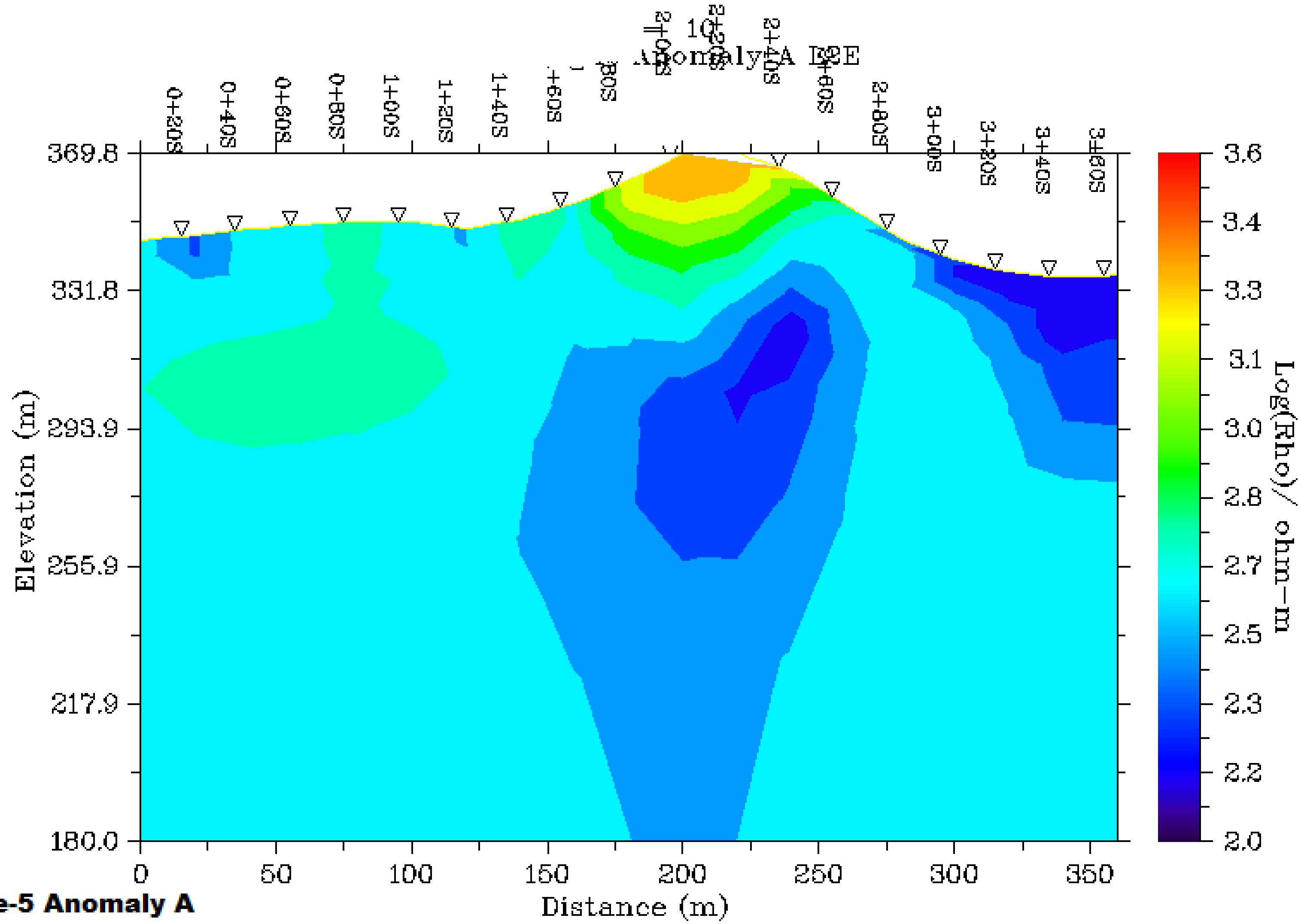


Figure-5 Anomaly A

Line 2E

VLF Model 500 Ohm

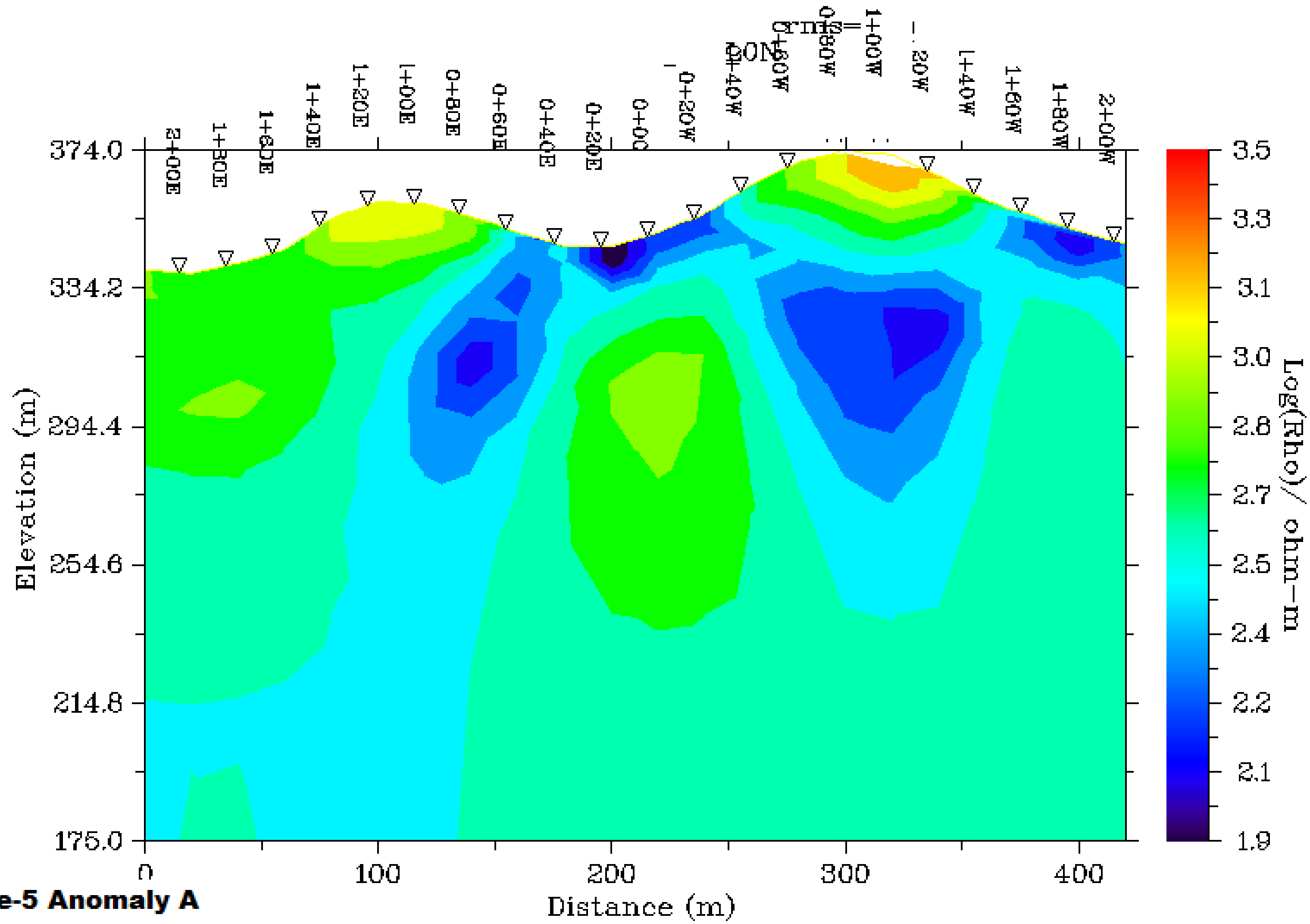


Figure-5 Anomaly A
Line 00
VLF Model 500 Ohm

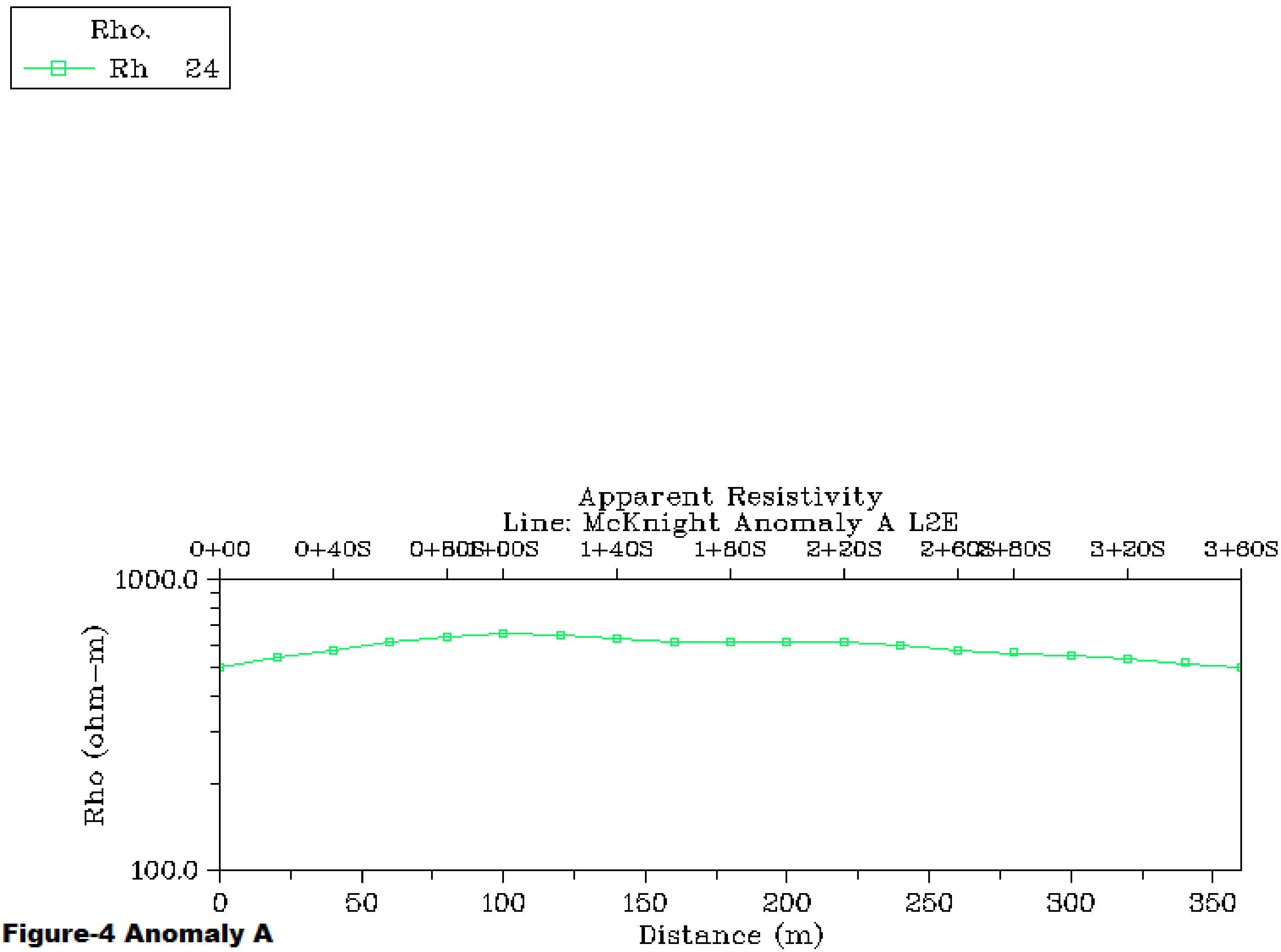


Figure-4 Anomaly A
Line 2E
Resistivity Profile

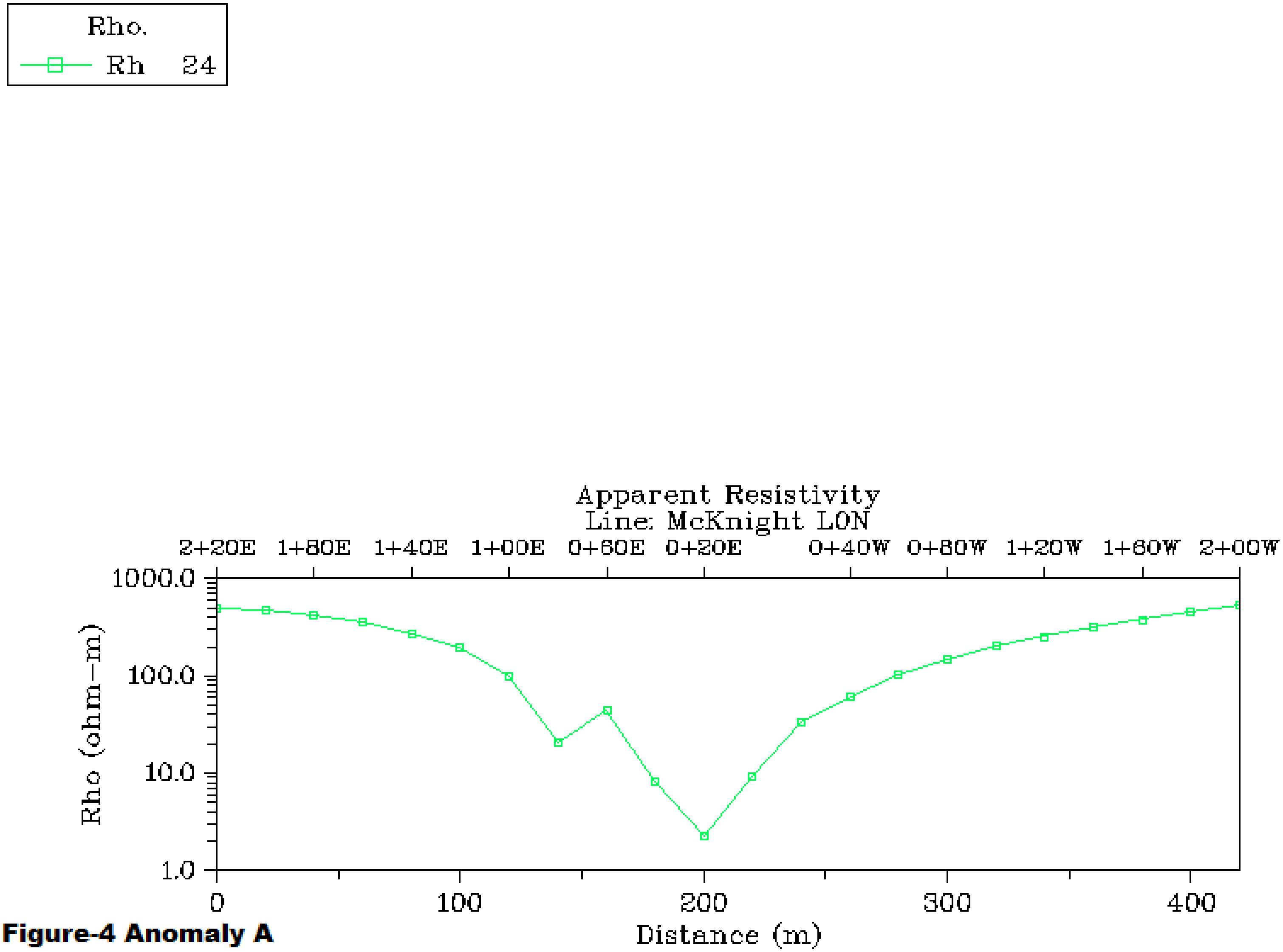


Figure-4 Anomaly A
Line 00
Resistivity Profile

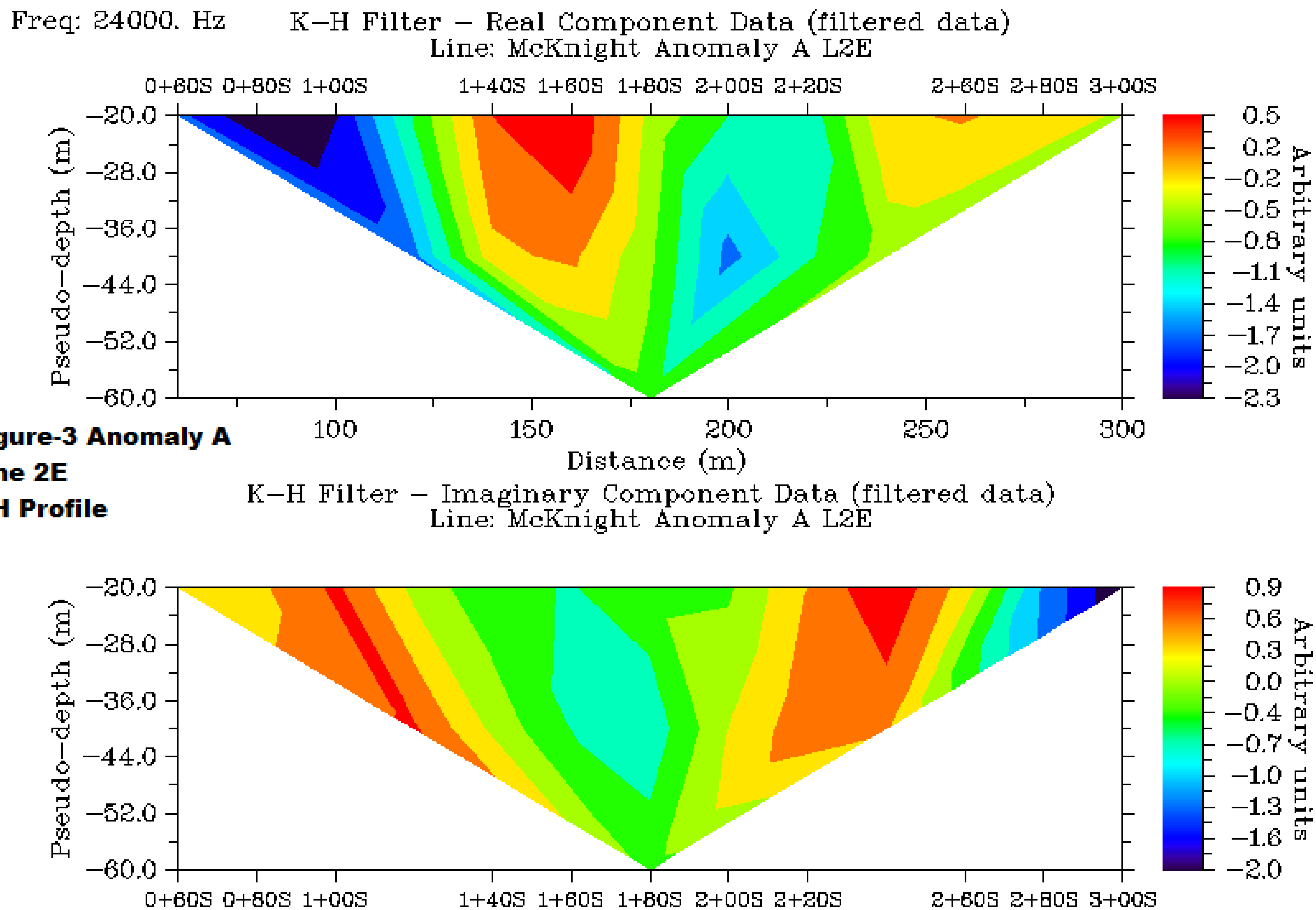


Figure-3 Anomaly A
Line 2E
KH Profile

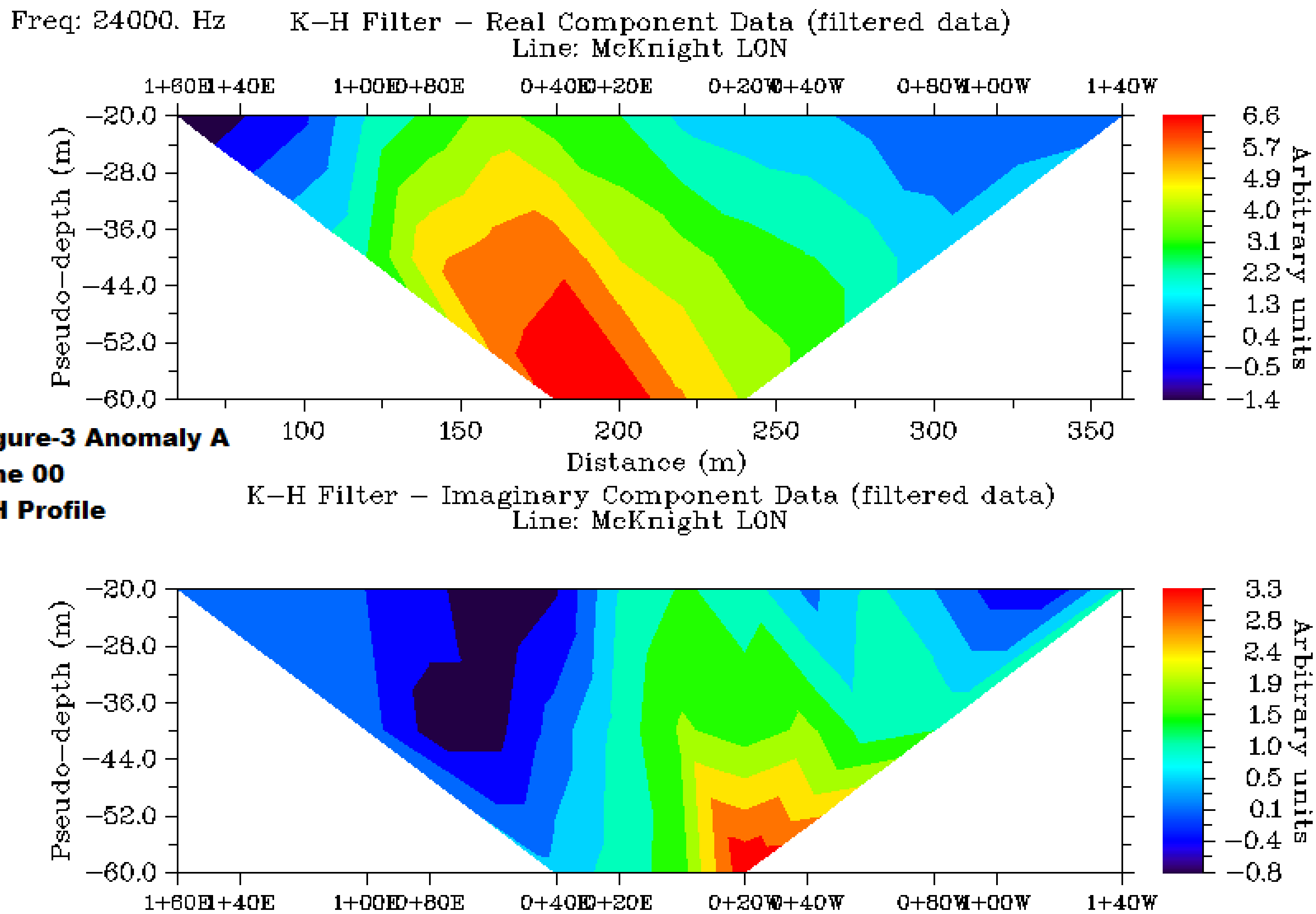


Figure-3 Anomaly A

Line 00

KH Profile

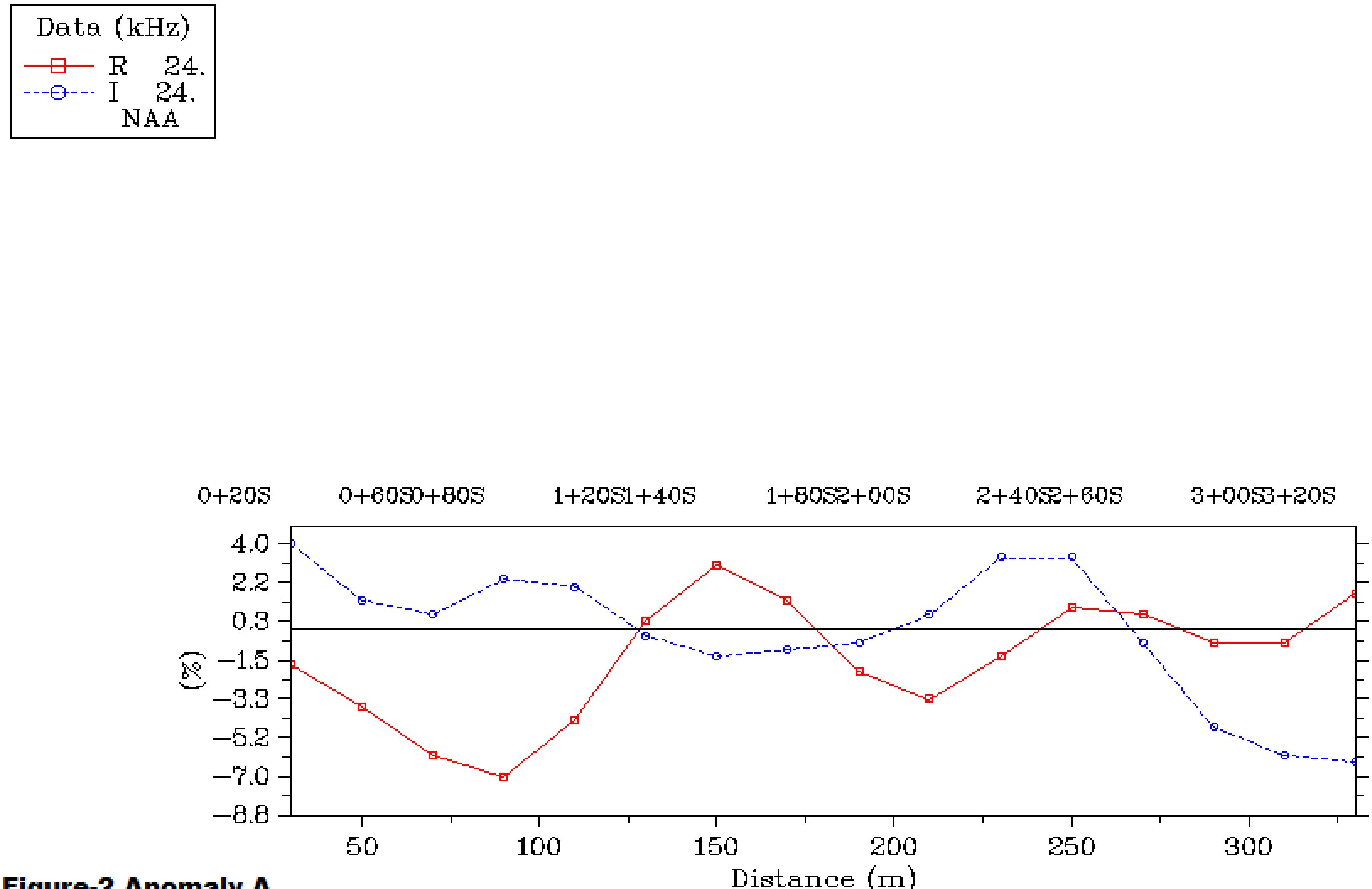


Figure-2 Anomaly A
Line 2E
Fraser Filter Profile

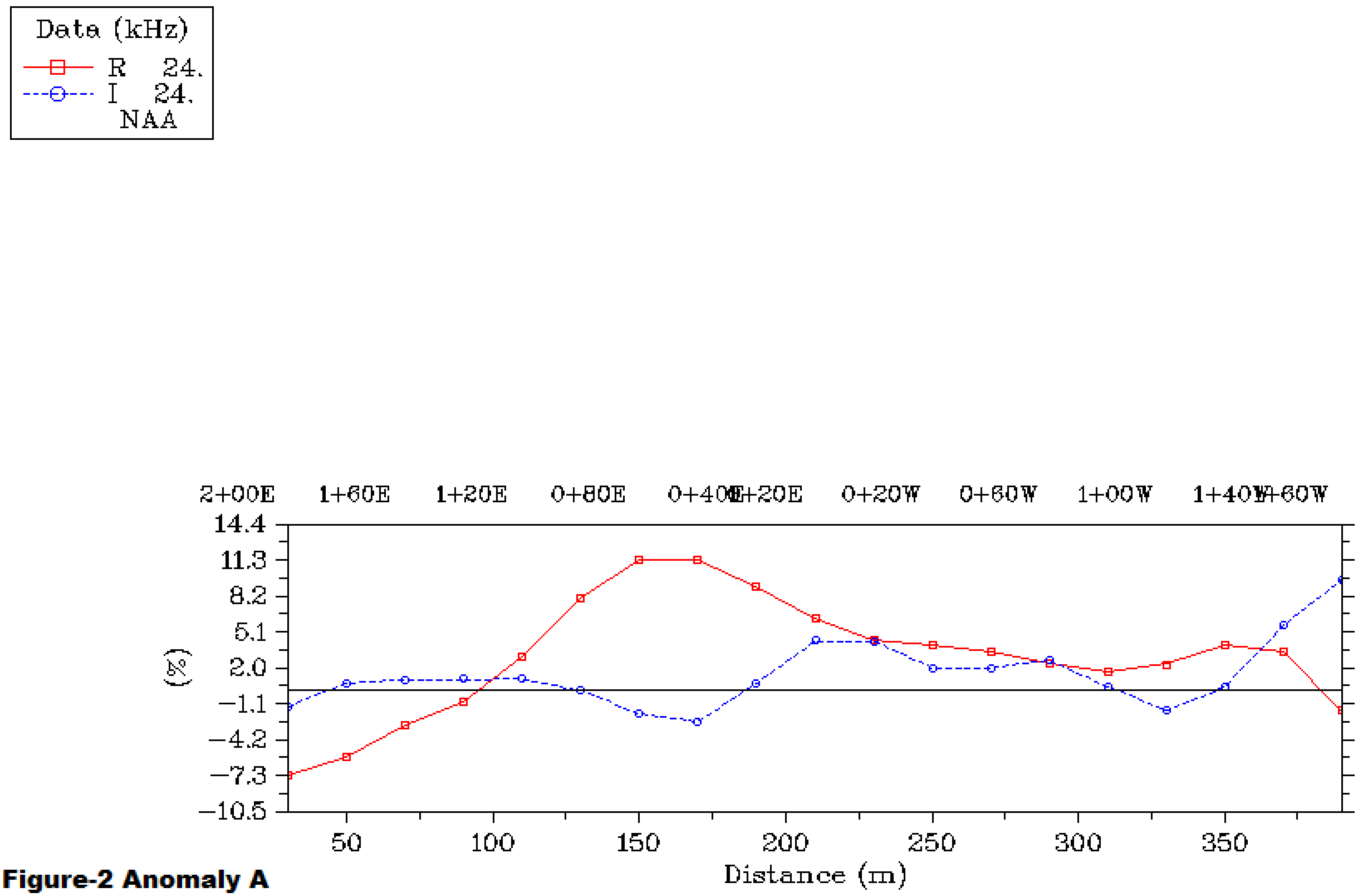


Figure-2 Anomaly A

Line 00

Fraser Filter Profile

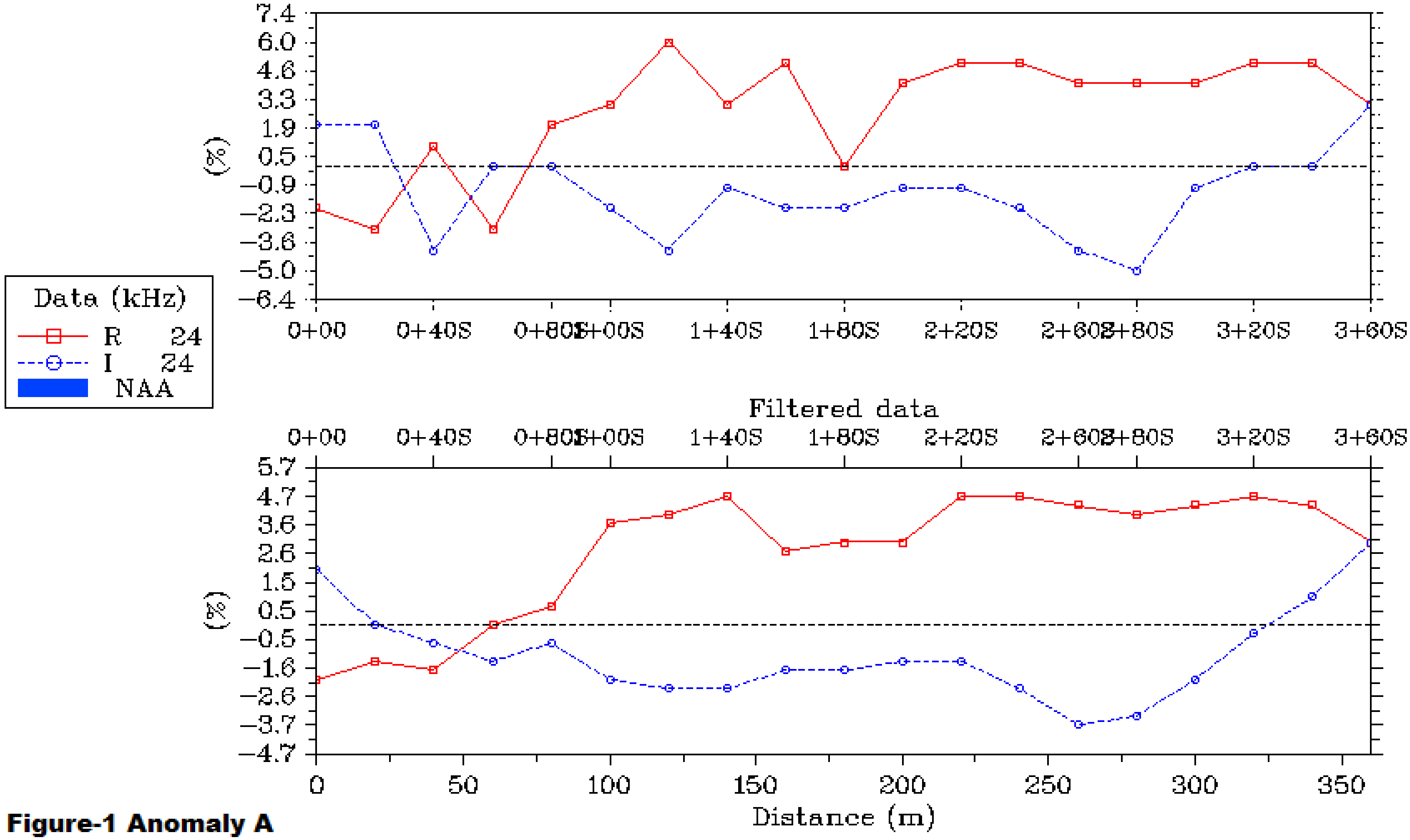


Figure-1 Anomaly A
Line 2E
Raw and Filtered Data

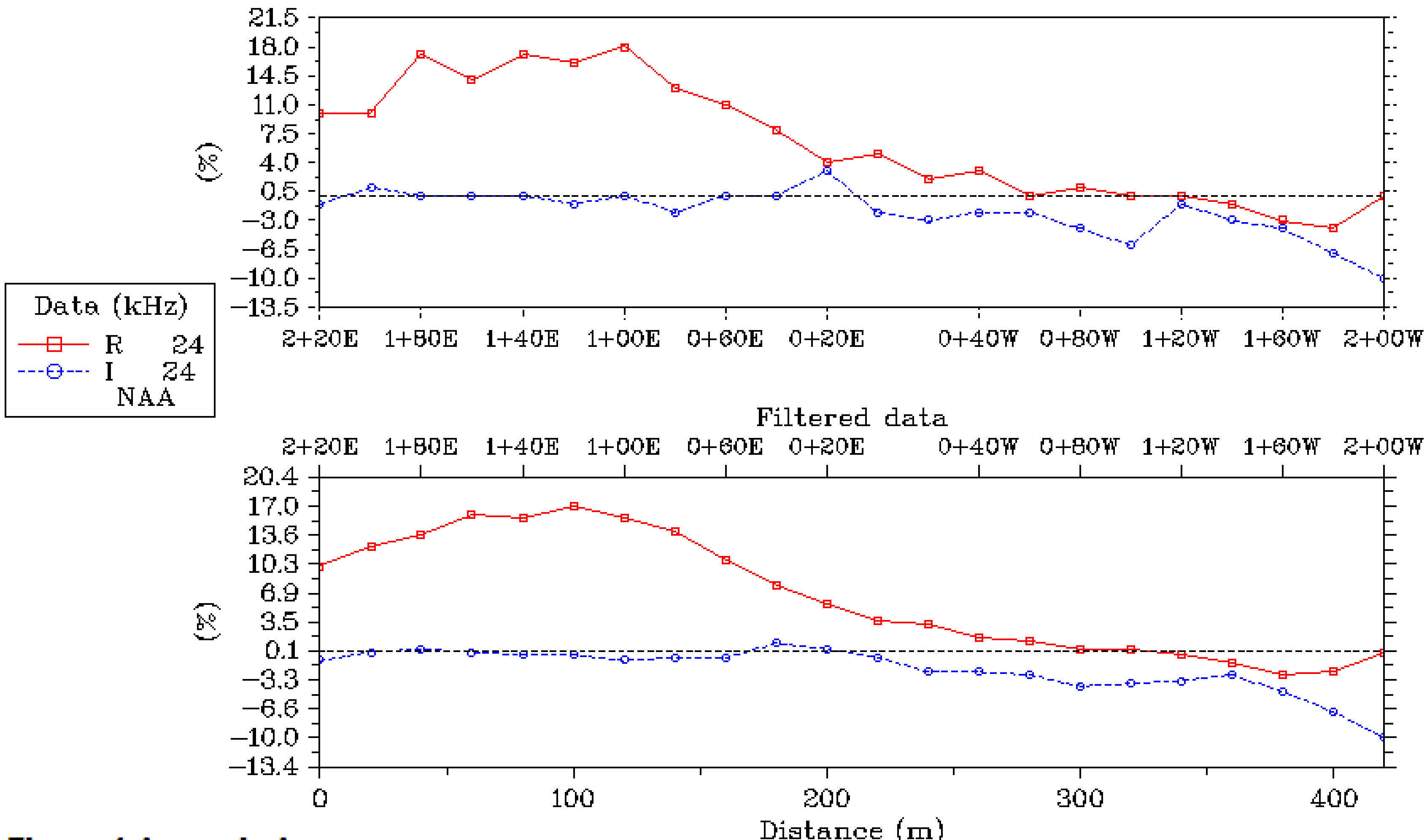


Figure-1 Anomaly A

Line 0N

Raw and Filtered Data

VLF EM-16 Surveying Report

On

B and C Anomalies

Knight Township

Prepared For

Dave Burda

By

Shaun Parent, P. Geo

Superior Exploration, Adventure & Climbing Co. Ltd.

September 2, 2014

Table of Contents

Executive Summary:

Anomaly B and C is located in Knight Township, District of Larder Lake, Northern Ontario.

A VLF EM-16 survey program was carried out in early June 2014, using a Geonics VLF EM-16 and a handheld Garmin GPS-60C. 2 transmitter stations were read during the course of the survey NAA 24.0 KHz – Cutler, Maine and NML 25.2KHz- La Moure, North Dakota. Data was inputted and processed with the VLF2DMF processing software.

The objective was to determine if the VLF Survey could delineate economic mineralization and/or new structures in the area of Card Anomalies B and C on claims owned by Dave Burda (Figure A). Previous VLF surveying was carried out in the fall of 2013 by Frank Racicot over the B and C anomalies. The VLF Grid covered 2 VLF lines (Figure B). An assessment report was filed by Frank Racicot with the MNDM.

Introduction

A VLF-EM16 survey is a relatively simple and economic geophysical survey that is used to better understand shallow, vertical and sub vertical bedrock conductors.

This report describes the findings and results of the VLF EM-16 survey, including interpretation from the VLF2DMF processing software.

VLF2DMF software enables the processing and inversion of electromagnetic (EM) induction data acquired at a Very Low Frequency (VLF). VLF-EM data is acquired at 20 meter stations along a GPS line at different frequencies. It produces profiles of Raw Data, Fraser Filtered Data, KH, Resistivity as well as a (2-D) Modelled Inversion. It also allows for plan maps and slices of Fraser, KH and Inversion models of separate VLF survey lines.

Personnel

2 persons completed the survey: The VLF EM-16 operator and the GPS field navigator/note recorder. Interpretation of the VLF data using the VLF2DMF Software was completed by Shaun Parent.

Figure A General Location Map of VLF Survey

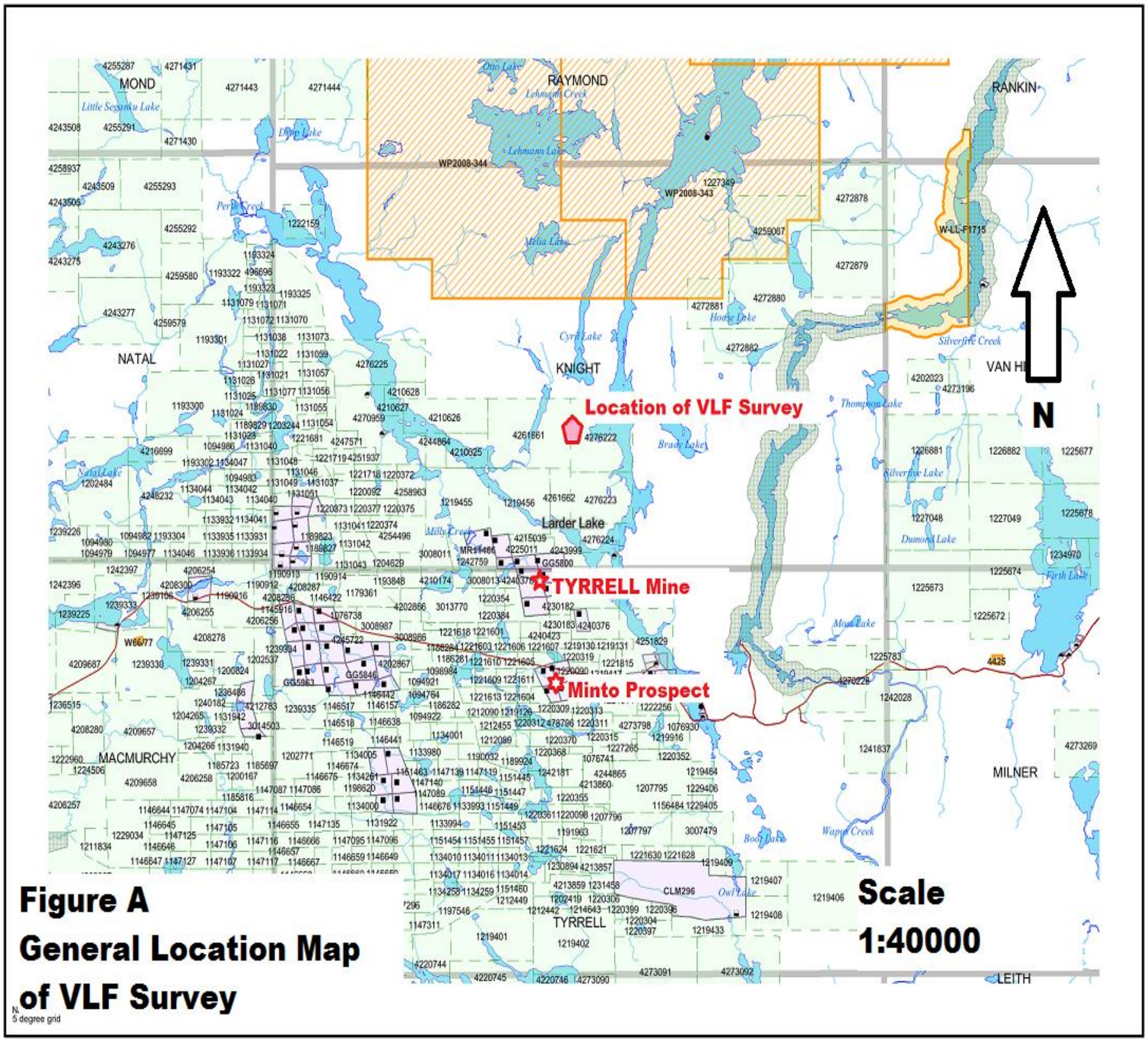
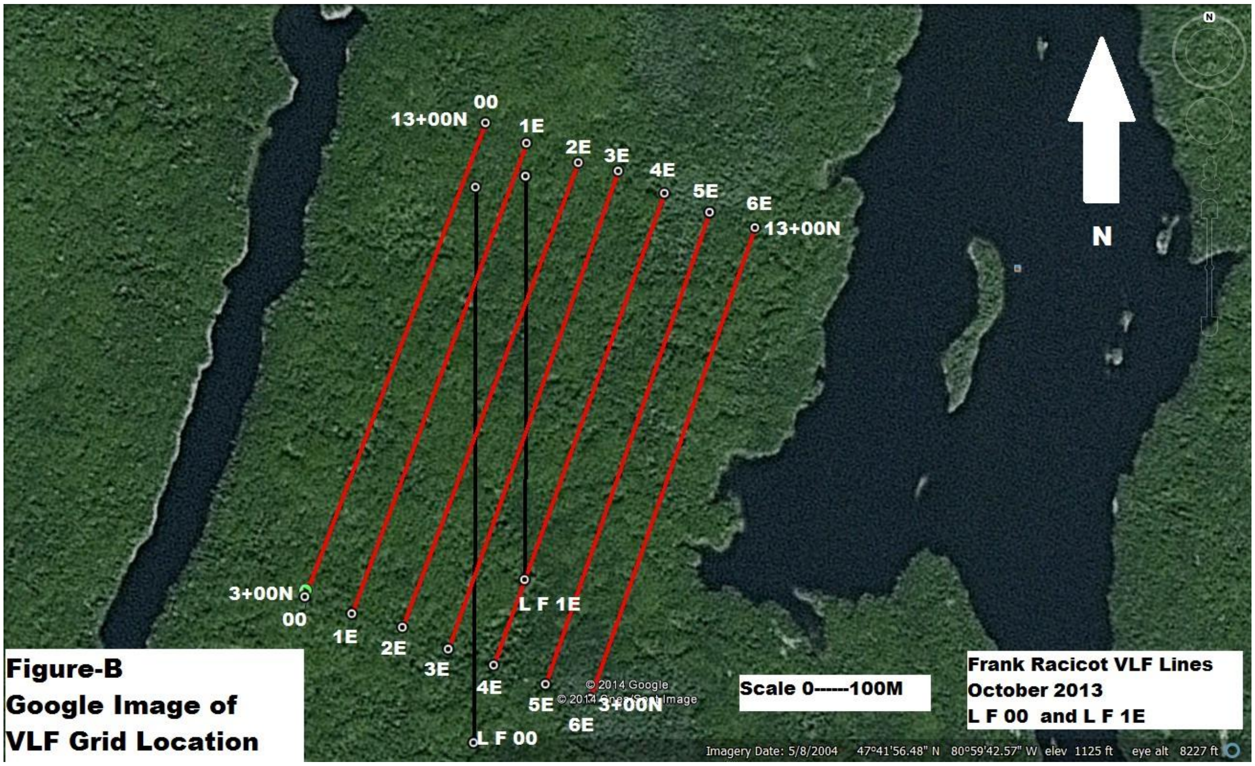


Figure B   Google Image of VLF Grid Location



Work Performed

VLF Survey Field Work:

- The VLF EM-16 survey consisted of running 7 VLF Lines in a direction of 20-200 degrees true azimuth using a handheld Garmin 60-CSX GPS.

- Each VLF station was located based on a 020 Degree azimuth and distance from the start of the survey line. At each line station, 2 transmitter stations were read using the Geonics VLF- Em-16 receiver. The following parameters were used throughout the survey.

VLF Transmitters Used: NAA-24.0 KHz. Cutler, Maine and NML-25.2 KHz. La Moure, North Dakota.

VLF survey direction: The VLF Em-16 receiver was facing 020 degrees along all lines

VLF survey stations: All readings were taken at approximately 20 meter stations along the survey line. Each 100 meter station was flagged on all lines surveyed.

Parameters of Measurement: In-phase and Quad-phase components of vertical magnetic field as a percentage of horizontal primary fields (Tangent of tilt angle and ellipticity). VLF transmitter NAA was to the east and NML was to the west. The transmitters are chosen so that the direction to the transmitting station is as close to the orientation of the bedrock strike.

GPS/Note Documenting

- Field data was collected as follows on each surveyed line.
- GPS Co-ordinates were marked for each station read with the VLF transmitter as well as any other features that might be of interest such as power lines, fences and geological structures. Data was saved onto the Handheld Garmin 60CSX GPS Unit.
- VLF readings for each station were recorded in a notebook as In-Phase and Quadrature corresponding to the line number and station number. (See example in Table 1)

Table 1 Example of VLF Field Data Collection

Line 0+00	NAA In phase	NAA Quadrature	NML In phase	NML Quadrature	Notes
2+00N	10	6	4	5	
2+20N	8	4	2	4	

VLF Data Processing

- Field information was transferred to a Garmin Map Source program where line and station information could be viewed.
- Garmin and VLF data were compiled onto a spreadsheet for input into the VLF2DMF processing software.
- The VLF data collected on the 7 lines, was processed with the VLF2DMF software. Each line profile includes the frequency used. All VLF profiles are divided into 5 figures which are found at the end of this report. Figures 1-5-NAA refers to TX NAA. Figures 1-5-NML refers to TX NML

Profiles Produced from VLF2DMF Software

(Stations NAA & NML are listed separately in appendicies at end of report)

1: VLF Raw and Filtered Data Profiles for NAA-NML

The raw data for each frequency was plotted for each line surveyed. A running average filter of the raw data is run to smooth the survey profile.

2: Fraser Filter Profiles for NAA-NML

Filtered raw data for frequency NAA and NML was run through the Fraser filter. This filter transforms In-Phase cross overs and inflections into positive peak anomalies. In-Phase inflections and cross overs are usually plus to minus, while Quadrature responses are negative to positive giving a negative peak anomaly when the Fraser Filter is applied. VLF anomalies were chosen based on the location of the peaks on the Fraser Filter profile.

3: VLF K-H Profiles for NAA-NML

Filtered data for frequency NAA and NML was run through the Karous-Hjelt (K-H) filter. The filter is applied to obtain a section of current density. The higher values are in general associated with conductive structures.

4: VLF Resistivity Profiles for NAA-NML

The apparent resistivity for frequency NAA and NML was calculated and plotted. The resistivity can be calculated if the mean environmental resistivity is known at the beginning of the VLF profile. A mean resistivity of 1000 ohm's was used for all lines.

5: VLF Model 1000 Ohm for NAA-NML

A resistivity of 1000 Ohm's was used to build an initial model used in the inversion to obtain a realistic cross section of the line surveyed. Conductive zones are colored blue while resistive zones are colored orange. A Pseudo depth scale is found on the left side of model profiles. Surface conductive zones show little depth extent, have a horizontal display and are limited in depth. Deeper conductors have more depth extent with a vertical display.

Discussion of Results

The VLF data for transmitter NAA and NML was plotted and interpreted separately. The modelling profiles in Figure 5 for each line provide a basis for the delineation of shallow subsurface conductors from deeper bedrock conductors. The approximate depth to a VLF anomaly is calculated from the VLF Model. A summary of VLF anomalies for TX-NAA are listed in Tables 2 through 8. VLF anomalies for TX-NML are listed in Tables 9 through 15. These tables include the UTM and station location of each VLF anomaly, anomaly symbol, type of anomaly and depth estimate.

The interpreted location of NAA VLF Conductors are shown on a Google image in Figure C and NML VLF Conductors are shown on a Google image in Figure D. The best VLF responses calculated from the apparent resistivity are summarized in the following tables.

- Table 16 refers to the location of the best low resistivity responses for TX NAA.
- Table 17 refers to the location of the best low resistivity responses for TX NML.

The trend of the low resistivity response for NAA is shown on the google map in Figure E while the NML response is shown in Figure F.

2D Models were calculated for both TX NAA and TX NML. These models represent the combined VLF lines surveyed and are shown with views to the East and West from a polar azimuth of 30 degrees.

The 2D Model for TX NAA - View to East is Figure G, View to west is Figure H. The 2D Model for TX NML view to east is Figure I and the view to west is Figure J.

Table 2 VLF Interpretation Table Line 0+00E TX NAA

Transmitter NAA- Cutler, Maine 24.0 Hz.
Line 00

Location	Line Location	VLF Anomaly Symbol	VLF Anomaly Type	Depth Estimate meters	Notes
499767.0 5282530.5	Station 4+20N	00-NAA-A	Bedrock contact	00-40	
499802 5282624	Station 5+20N	00-NAA-B	Bedrock?	00-50	
499840 5282727	Station 6+30N	00-NAA-C	Surficial	00-20?	
499909 5282923	Station 8+40N	00-NAA-D	Bedrock	00-102	
499924 5282981	Station 9+00N	00-NAA-E	Bedrock	00-80	
500031 5283245	Station 11+80N	00-NAA-F	Bedrock Contact?	00-40	

The maximum depth estimate is based on the depth calculated from the model with a resistivity of 1000 ohms and TX frequency of 24.0 which is 102 meters.

Table 3 VLF Interpretation Table Line 1E TX NAA

Transmitter NAA- Cutler, Maine 24.0

Line 1E

Location	Line Location	VLF Anomaly Symbol	VLF Anomaly Type	Depth Estimate Meters	Notes
499846 5282458	Station 3+80N	1E-NAA-A	Surficial?	00-20	
499890 5282615	Station 5+40N	1E-NAA-B	Bedrock Contact?	00-102	
500010 5282908	Station 8+60N	1E-NAA-C	Bedrock	00-102	
500067 5283058	Station 10+00N	1E-NAA-D	Bedrock Contact?	00-102	
500098 5283149	Station 11+20N	1E-NAA-E	Bedrock Contact?	00-40	
500138 5283288	Station 12+50N	1E-NAA-F	Bedrock Contact?	00-30	

The maximum depth estimate is based on the depth calculated from the model with a resistivity of 1000 ohms and TX frequency of 24.0 which is 102 meters

Table 4 VLF Interpretation Table Line 2E TX NAA

Transmitter NAA- Cutler, Maine 24.0

Line 2E

Location	Line Location	VLF Anomaly Symbol	VLF Anomaly Type	Depth Estimate Meters	Notes
499939 5282426	Station 3+80N	2E-NAA-A	Surficial	00-20	
499975 5282520	Station 4+80N	2E-NAA-B	Bedrock contact	00-40	
499998 5282575	Station 5+40N	2E-NAA-C	Bedrock	00-102	
500031 5282669	Station 6+40N	2E-NAA-D	Bedrock contact	00-40	
500051 5282733	Station 7+20N	2E-NAA-E	Surficial	00-20	
500076 5282810	Station 7+80N	2E-NAA-F	Bedrock	00-102	
500116 5282916	Station 9+00N	2E-NAA-G	Bedrock	00-102	
500176 5283057	Station 10+60N	2E-NAA-H	Bedrock contact	00-102	

The maximum depth estimate is based on the depth calculated from the model with a resistivity of 1000 ohms and TX frequency of 24.0 which is 102 meters

Table 5 VLF Interpretation Table Line 3E TX NAA

Transmitter NAA- Cutler, Maine 24.0

Line 3E

Location	Line Location	VLF Anomaly Symbol	VLF Anomaly Type	Depth Estimate Meters	Notes
500066 5282485	Station 4+80N	3E-NAA-A	surficial	00-20	
500083 5282542	Station 5+40N	3E-NAA-B	Bedrock Contact?	00-120	
500107 5282598	Station 6+00N	3E-NAA-C	Bedrock	00-120	
500139 5282694	Station 7+00N	3E-NAA-D	Bedrock contact	00-120	
500212 5282902	Station 9+20N	3E-NAA-E	Bedrock	20-120	
500258 5283014	Station 10+40N	3E-NAA-F	Bedrock contact	00-120	
500292 5283110	Station 11+50N	3E-NAA-G	Bedrock contact	00-60	
500314 5283186	Station 12+20N	3E-NAA-H	Surficial	00-20	

The maximum depth estimate is based on the depth calculated from the model with a resistivity of 1000 ohms and TX frequency of 24.0 which is 102 meters

Table 6 VLF Interpretation Table Line 4E TX NAA

Transmitter NAA- Cutler, Maine 24.0

Line 4E

Location	Line Location	VLF Anomaly Symbol	VLF Anomaly Type	Depth Estimate Meters	Notes
500179 5282508	Station 5+40N	4E-NAA-A	Bedrock contact	00-102	
500214 5282599	Station 6+40N	4E-NAA-B	Bedrock?	00-40	
500271 5282765	Station 8+20N	4E-NAA-C	Bedrock contact	00-102	
500309 5282865	Station 9+20N	4E-NAA-D	Bedrock	00-102	
500339 5282938	Station 10+00N	4E-NAA-E	Bedrock contact	00-102	
500367 5283039	Station 11+00N	4E-NAA-F	Bedrock contact?	00-102	
500402 5283128	Station 11+80N	4E-NAA-G	Bedrock contact?	00-102	

The maximum depth estimate is based on the depth calculated from the model with a resistivity of 1000 ohms and TX frequency of 24.0 which is 102 meters

Table 7 VLF Interpretation Table Line 5E TX NAA

Transmitter NAA- Cutler, Maine 24.0

Line 5E

Location	Line Location	VLF Anomaly Symbol	VLF Anomaly Type	Depth Estimate Meters	Notes
500215 5282305	Station 3+60N	5E-NAA-A	surficial	00-40	
500236 5282370	Station 4+10N	5E-NAA-B	Bedrock contact?	00-102	
500262 5282440	Station 5+00N	5E-NAA-C	Bedrock	00-102	
500281 5282495	Station 5+60N	5E-NAA-D	Surficial	00-40	
500325 5282626	Station 7+00N	5E-NAA-E	Bedrock	00-102	
500366 5282737	Station 8+20N	5E-NAA-F	Bedrock	00-80	
500436 5282930	Station 10+20N	5E-NAA-G	Bedrock contact?	00-102	
500456 5282987	Station 10+80N	5E-NAA-H	Bedrock contact	00-102	
500495 5283060	Station 11+80N	5E-NAA-I	Surficial	00-20	

The maximum depth estimate is based on the depth calculated from the model with a resistivity of 1000 ohms and TX frequency of 24.0 which is 102 meters

Table 8 VLF Interpretation Table Line 6E TX NAA

Transmitter NAA- Cutler, Maine 24.0KHz

Line 6E

Location	Line Location	VLF Anomaly Symbol	VLF Anomaly Type	Depth Estimate Meters	Notes
500341 5282364	Station 4+60N	6E-NAA-A	Bedrock contact	00-80	
500401 5282533	Station 6+30N	6E-NAA-B	Surficial	00-60	
500435 5282630	Station 7+40N	6E-NAA-C	Bedrock contact	00-102	
500466 5282722	Station 8+40N	6E-NAA-D	Bedrock	00-102	
500529 5282889	Station 10+20N	6E-NAA-E	Bedrock	20-102	
500582 5283040	Station 11+70N	6E-NAA-F	Bedrock contact?	00-80	

The maximum depth estimate is based on the depth calculated from the model with a resistivity of 1000 ohms and TX frequency of 24.0 which is 102 meters

Table 9 VLF Interpretation Table Line 00 TX NML

Transmitter NML- La Moure N. Dakota, 25.2Khz

Line 00

Location	Line Location	VLF Anomaly Symbol	VLF Anomaly Type	Depth Estimate Meters	Notes
499752 5282500	Station 3+50N	00 NML-A	Surficial	00-20	
499781 5282567	Station 4+60N	00 NML-B	Surficial	00-20	
499810 5282643	Station 5+40N	00 NML-C	Bedrock	00-99.6	
499906 5282930	Station 8+10N	00 NML-D	Bedrock contact?	00-99.6	
499933 5283000	Station 9+20N	00 NML-E	Bedrock contact?	00-80	
499961 5283057	Station 9+80N	00 NML-F	Bedrock contact	00-80	
500031 5283245	Station 11+80N	00 NML-G	Bedrock contact?	00-99.6	

The maximum depth estimate is based on the depth calculated from the model with a resistivity of 1000 ohms and TX frequency of 25.2 which is 99.6 meters

Table 10 VLF Interpretation Table Line 1E TX NML

Transmitter NML- La Moure N. Dakota, 25.2Khz

Line 1E

Location	Line Location	VLF Anomaly Symbol	VLF Anomaly Type	Depth Estimate Meters	Notes
499888 5282591	Station 5+10N	1E NML-A	Bedrock	00-99.6	
499939 5282720	Station 6+50N	1E NML-B	Surficial?	00-40	
500015 5282918	Station 8+60N	1E NML-C	Bedrock	00-99.6	
500050 5283010	Station 9+60N	1E NML-D	Bedrock contact	00-99.6	
500094 5283142	Station 10+80N	1E NML-E	Surficial	00-40	

The maximum depth estimate is based on the depth calculated from the model with a resistivity of 1000 ohms and TX frequency of 25.2 which is 99.6 meters

Table 11 VLF Interpretation Table Line 2E TX NML

Transmitter NML- La Moure N. Dakota, 25.2Khz

Line 2E

Location	Line Location	VLF Anomaly Symbol	VLF Anomaly Type	Depth Estimate Meters	Notes
499975 5282520	Station 4+80N	2E NML-A	Bedrock contact	00-99.6	
499998 5282575	Station 5+40N	2E NML-B	Bedrock	00-99.6	
500024 5282649	Station 6+20N	2E NML-C	Bedrock contact?	00-99.6	
500116 5282916	Station 9+00N	2E NML-D	Bedrock	00-99.6	
500151 5283007	Station 10+00N	2E NML-E	Bedrock?	00-99.6	
500176 5283057	Station 10+60N	2E NML-F	Bedrock contact	00-99.6	

The maximum depth estimate is based on the depth calculated from the model with a resistivity of 1000 ohms and TX frequency of 25.2 which is 99.6 meters

Table 12 VLF Interpretation Table Line 3E TX NML

Transmitter NML- La Moure N. Dakota, 25.2Khz

Line 3E

Location	Line Location	VLF Anomaly Symbol	VLF Anomaly Type	Depth Estimate Meters	Notes
500025 5282373	Station 3+60N	3E NML-A	Surficial	00-40	
500066 5282485	Station 4+80N	3E NML-B	Bedrock	00-99.6	
500099 5282579	Station 6+00N	3E NML-C	Bedrock contact?	00-60	
500135 5282680	Station 6+80N	3E NML-D	Bedrock	00-99.6	
500212 5282904	Station 9+20N	3E NML-E	Bedrock	20-99.6	
500258 5283014	Station 10+40N	3E NML-F	Bedrock contact?	00-99.6	
500292 5283110	Station 11+30N	3E NML-G	Surficial	00-40	

The maximum depth estimate is based on the depth calculated from the model with a resistivity of 1000 ohms and TX frequency of 25.2 which is 99.6 meters

Table 13 VLF Interpretation Table Line 4E TX NML

Transmitter NML- La Moure N. Dakota, 25.2Khz

Line 4E

Location	Line Location	VLF Anomaly Symbol	VLF Anomaly Type	Depth Estimate Meters	Notes
500124 5282355	Station 3+80N	4E NML-A	Surficial	00-40	
500179 5282508	Station 5+40N	4E NML-B	Bedrock	00-99.6	
500214 5282599	Station 6+40N	4E NML-C	Bedrock contact?	00-60	
500271 5282765	Station 8+20N	4E NML-D	Bedrock contact	00-99.6	
500309 5282865	Station 9+20N	4E NML-E	Bedrock	00-99.6	
500339 5282939	Station 10+00N	4E NML-F	Bedrock contact	00-99.6	
500367 5283039	Station 11+00N	4E NML-G	Bedrock contact	00-60	
500402 5283128	Station 12+00N	4E NML-H	Surficial	00-40	

The maximum depth estimate is based on the depth calculated from the model with a resistivity of 1000 ohms and TX frequency of 25.2 which is 99.6 meters

Table 14 VLF Interpretation Table Line 5E TX NML

Transmitter NML- La Moure N. Dakota, 25.2Khz

Line 5E

Location	Line Location	VLF Anomaly Symbol	VLF Anomaly Type	Depth Estimate Meters	Notes
500221 5282325	Station 3+80N	5E NML-A	Bedrock contact?	00-99.6	
500262 5282440	Station 5+00N	5E NML-B	Bedrock?	00-60	
500304 5282569	Station 6+40N	5E NML-C	Bedrock contact?	00-99.6	
500325 5282626	Station 7+00N	5E NML-D	Bedrock	00-99.6	
500366 5282737	Station 8+20N	5E NML-E	Bedrock	00-99.6	
500436 5282930	Station 10+20N	5E NML-F	Bedrock contact?	00-99.6	
500456 5282987	Station 10+80N	5E NML-G	Surficial?	00-40	

The maximum depth estimate is based on the depth calculated from the model with a resistivity of 1000 ohms and TX frequency of 25.2 which is 99.6 meters

Table 15 VLF Interpretation Table Line 6E TX NML

Transmitter NML- La Moure N. Dakota, 25.2Khz

Line 6E

Location	Line Location	VLF Anomaly Symbol	VLF Anomaly Type	Depth Estimate Meters	Notes
500313 5282288	Station 3+80N	6E NML-A	Surficial	00-40	
500341 5282364	Station 4+60N	6E NML-B	Bedrock contact	00-60	
500366 5282439	Station 5+30N	6E NML-C	Surficial	00-20	
500390 5282500	Station 6+00N	6E NML-D	Bedrock?	00-99.6	
500435 5282630	Station 7+40N	6E NML-E	Bedrock	00-99.6	
500466 5282722	Station 8+40N	6E NML-F	Bedrock contact?	00-99.6	
500490 5282790	Station 8+90N	6E NML-G	Bedrock contact?	00-60	
500539 5282925	Station 10+60N	6E NML-H	Bedrock contact	00-99.6	
500584 5283042	Station 11+80N	6E NML-I	Surficial	00-20	

The maximum depth estimate is based on the depth calculated from the model with a resistivity of 1000 ohms and TX frequency of 25.2 which is 99.6 meters

Table 16 TX NAA VLF Calculated Resistivity Anomalies at 1000 Ohm

Line Number	UTM	Line Location	Resistivity Anomaly Location	Line Number	UTM	Line Location	Resistivity Anomaly Location
00	488813 5282652	Station 5+40N	00 NML RES-A	4E	500191 5282532	Station 5+80N	4E NML RES-A
00	499907 5282912	Station 8+20N	00 NML RES-B	4E	500314 5282877	Station 9+20N	4E NML Res-B
1E	499900 5282620	Station 5+40N	1E NML RES-A	5E	500329 5282635	Station 7+00N	5E NML Res-A
1E	500012 5282917	Station 8+60N	1E NML RES-B	5E	500433 5282921	Station 10+00N	5E NML Res-B
2E	500002 5282585	Station 5+40N	2E NML RES-A	6E	500345 5282374	Station 4+60N	6E NML Res-A
2E	500125 5282943	Station 9+20N	2E NML RES-B	6E	500470 5282731	Station 8+40N	6E NML Res-B
3E	500086 5282552	Station 5+40N	3E NML Res-A				
3E	500217 5282913	Station 9+20N	3E NML RES-B				

Table 17 TX NML VLF Calculated Resistivity Anomalies at 1000 Ohm

Line Number	UTM	Line Location	Resistivity Anomaly Location
00	499807 5282643	Station 5+20N	00 NAA RES-A
00	499912 5282934	Station 8+40N	00 NAA RES-B
1E	499900 5282620	Station 5+40N	1E NAA RES-A
1E	500012 5282917	Station 8+80N	1E NAA RES-B
2E	500002 5282585	Station 5+40N	2E NAA RES-A
2E	500119 5282925	Station 9+00N	2E NAA RES-B
3E	500086 5282518	Station 5+40N	3E NAA RES-A
3E	500217 5282913	Station 9+20N	3E NAA RES-B
4E	500182 5282518	Station 5+40N	4E NAA RES-A
4E	500314 5282877	Station 9+40N	4E NAA RES-B
5E	500329 5282635	Station 7+00N	5E NAA RES-A
5E	500369 5282748	Station 8+20N	5E NAA RES-B
6E	500345 5282374	Station 4+60N	6E NAA RES-A
6E	500470 5282731	Station 8+40N	6E NAA RES-B

Figure C VLF TX-NAA Conductors

Figure D VLF TX-NML Conductors

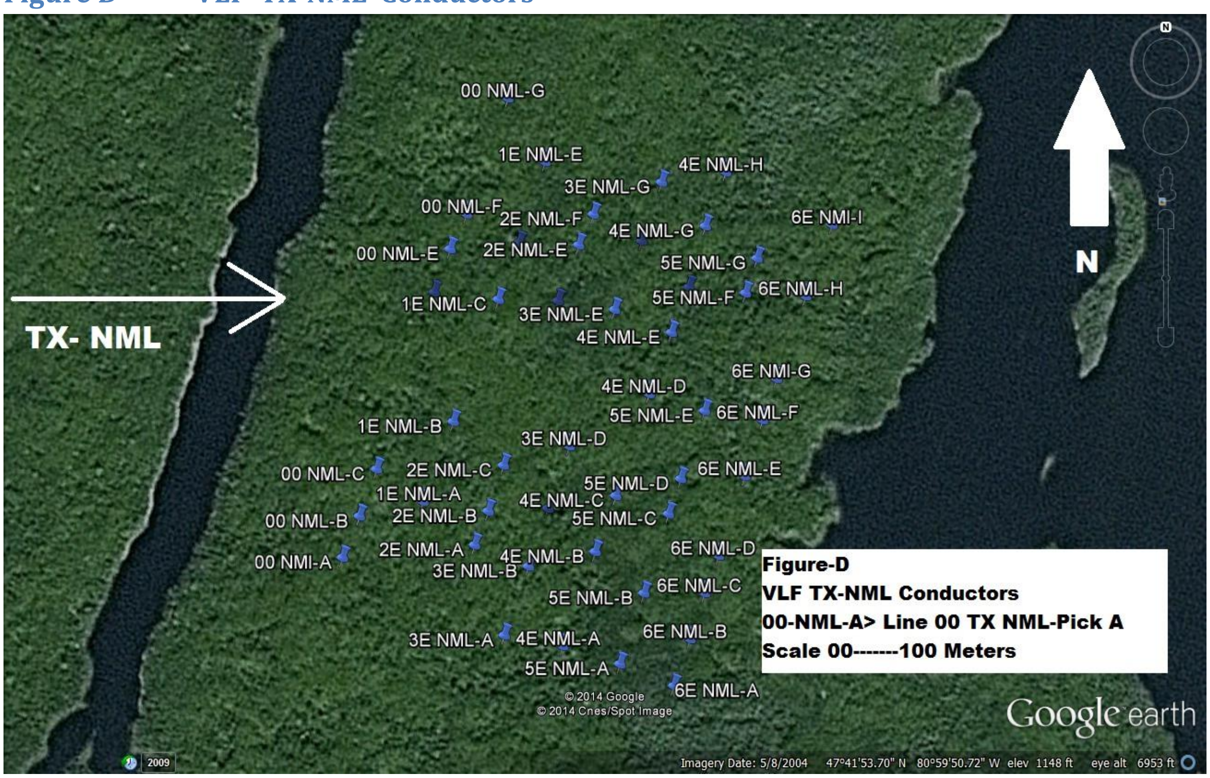


Figure E VLF TX-NAA Resistivity Low Picks

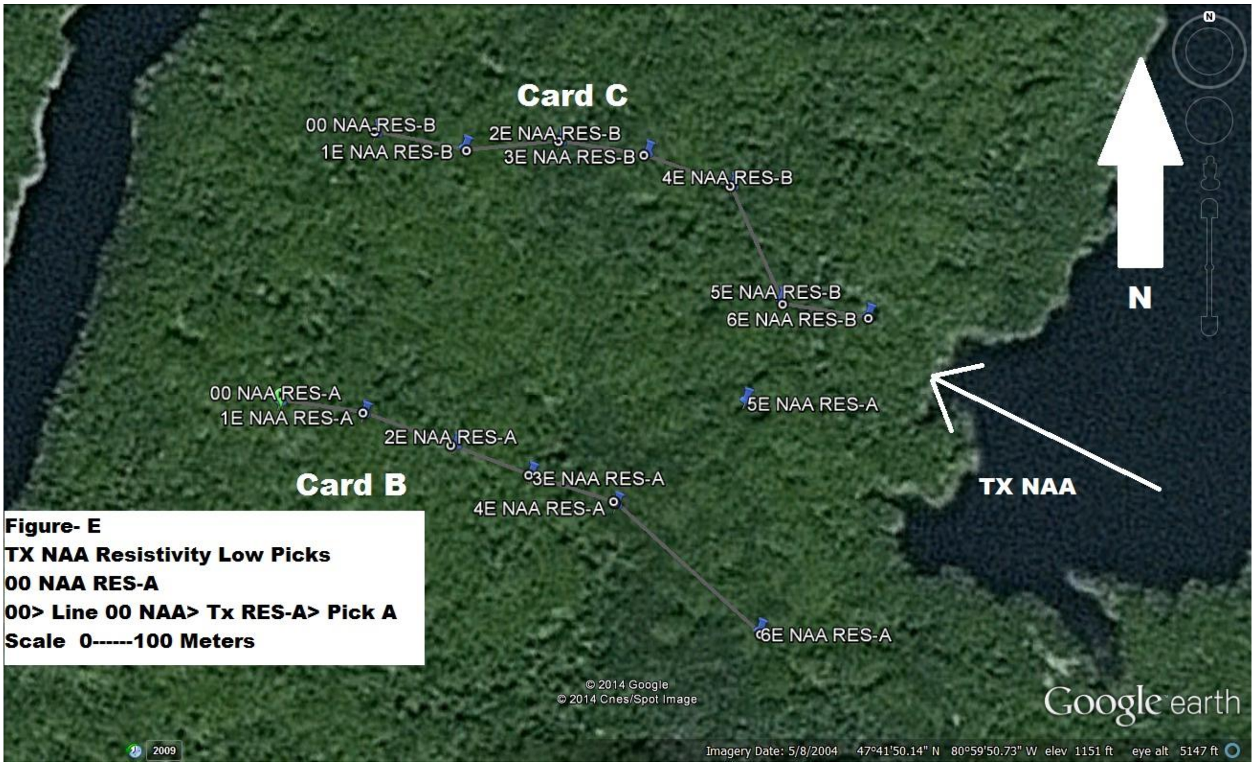


Figure F VLF TX-NML Resistivity Low Picks

Figure G VLF TX-NAA 2D Model (East View)

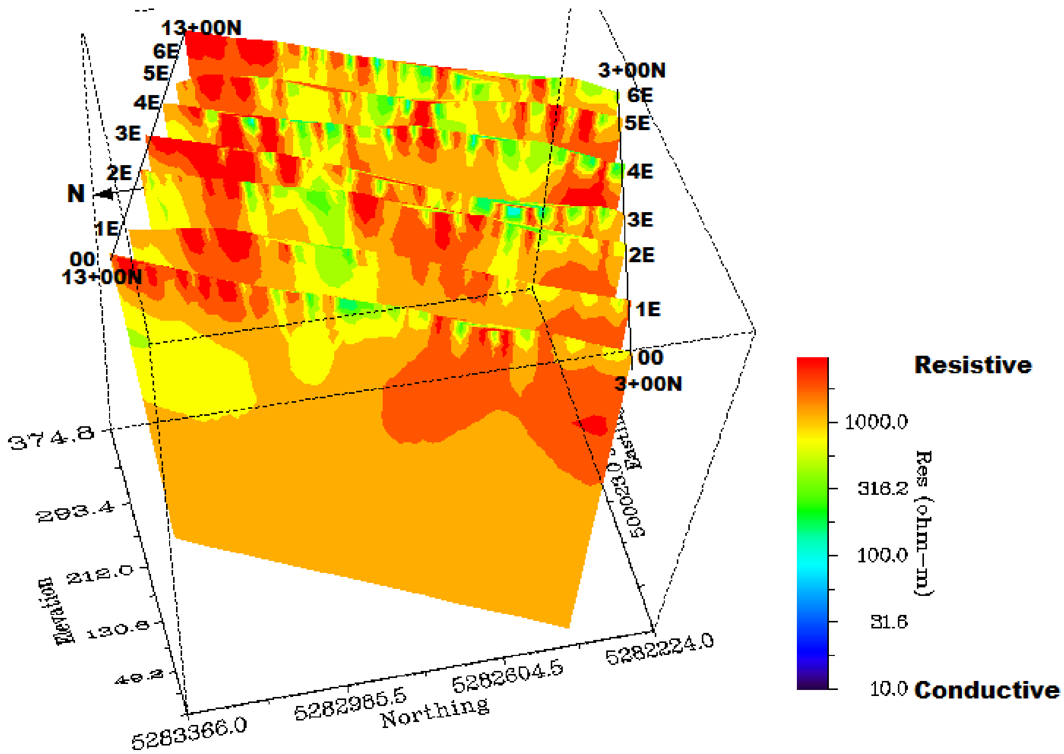


Figure-G
2D View of TX-NAA Model 1000 Ohm
View to the East

Figure H **VLF TX-NAA 2D Model (West View)**

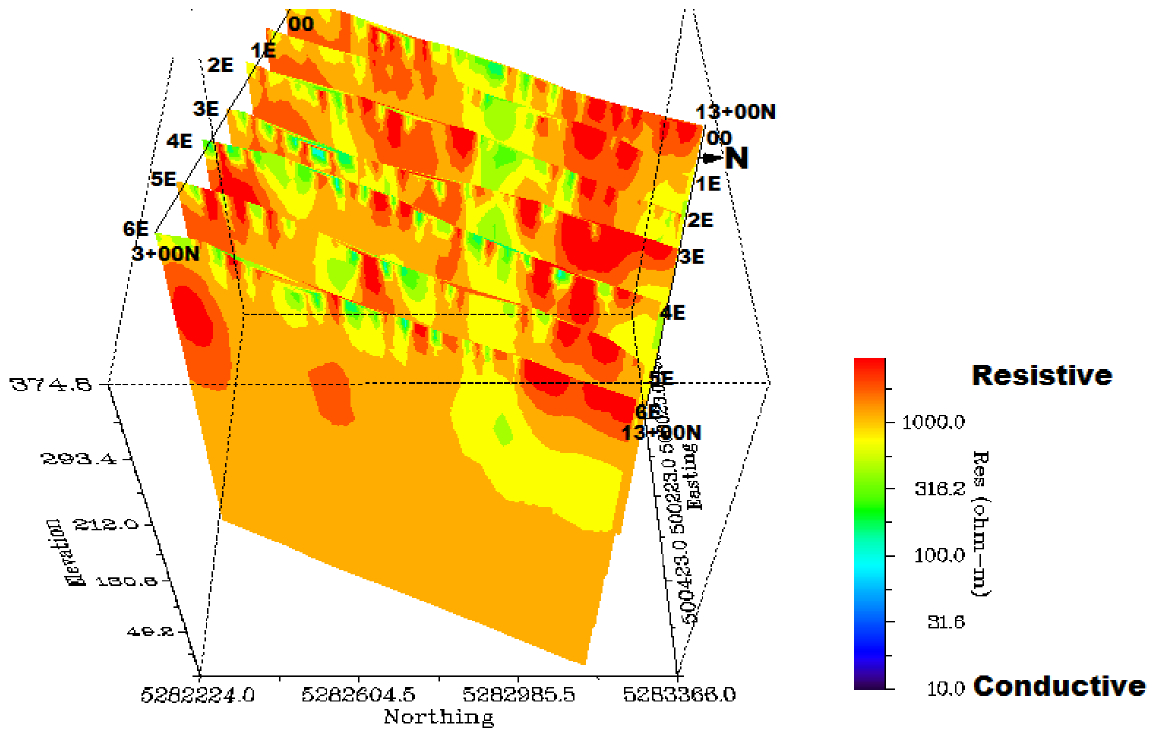


Figure-H
2D View of TX-NAA Model 1000 Ohm
View to West

Figure I VLF TX-NML 2D Model (East View)

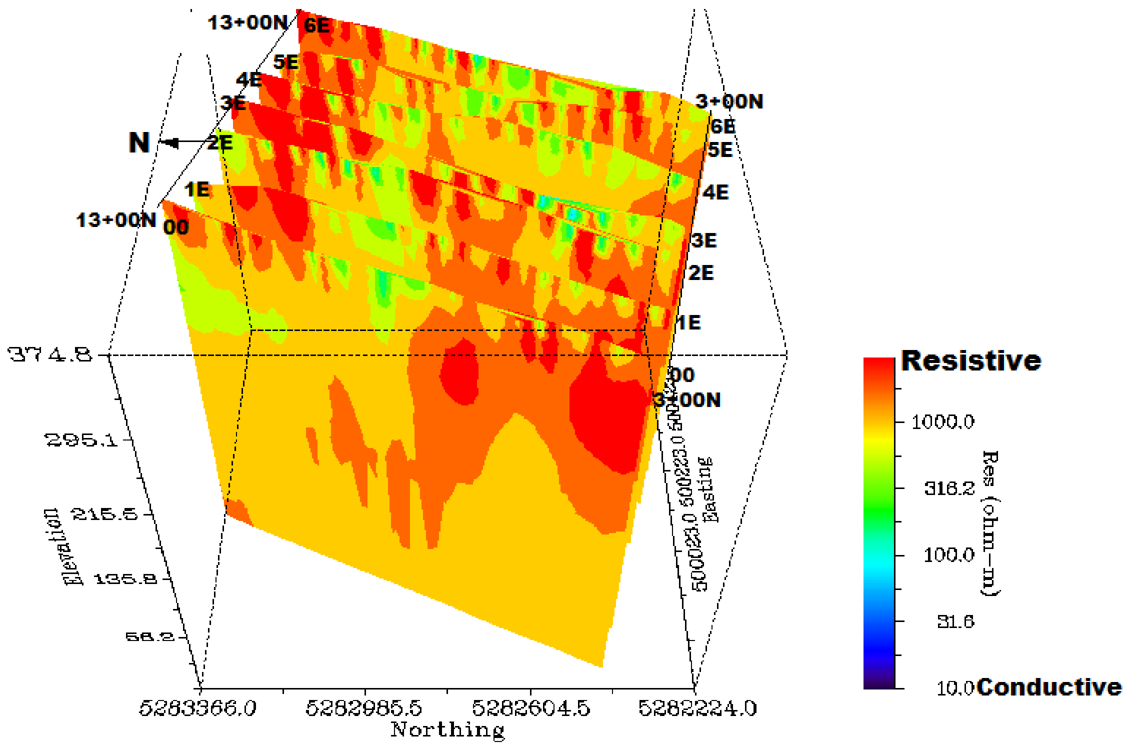


Figure-I
2D View of TX-NML Model 1000 Ohm
View to East

Figure J VLF TX-NML 2D Model (West View)

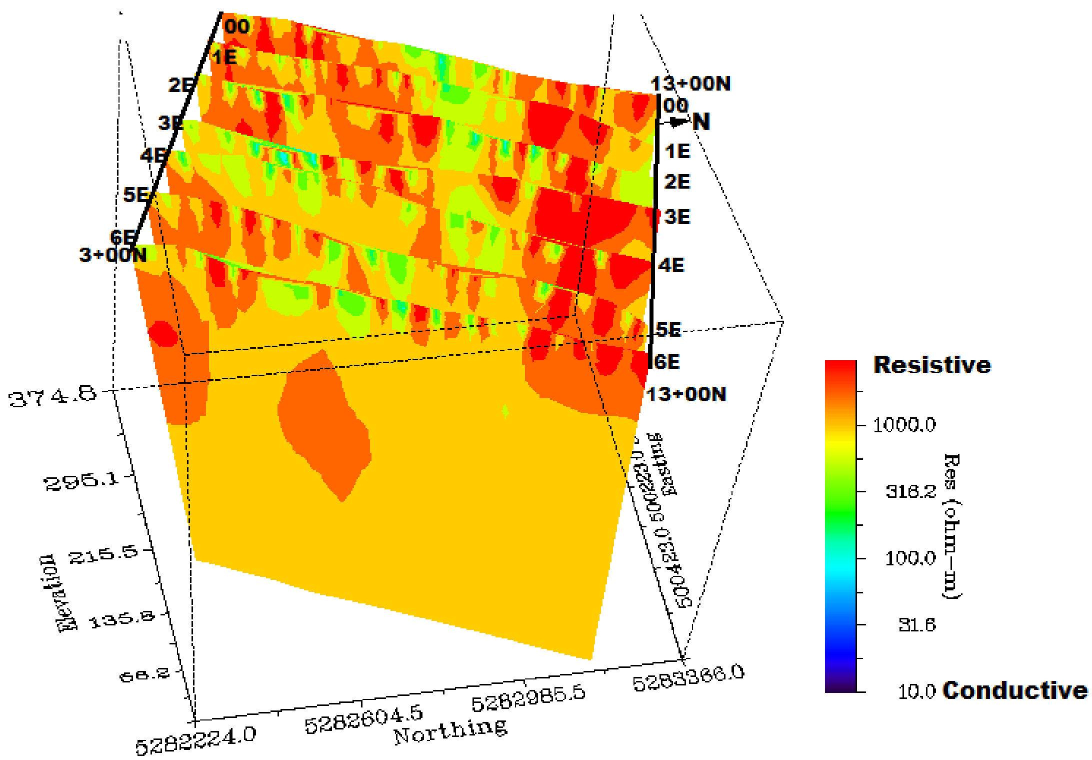


Figure-J
2D View of TX-NML Model 1000 Ohm
View to West

Conclusions

The Ground VLF EM-16 Survey was successful in outlining:

a) 2 Main bedrock conductors (ground follow up required).
b) Delineation of Card Anomaly B and Card Anomaly C
c) The use 2 transmitters TX-NAA and TX-NPM confirmed and delineated true bedrock conductors from noise.
d) The processing of raw VLF data using the VLF2D Software program was successful in identifying bedrock conductors on both Transmitters: NAA and NML.
e) The VLF survey identified many bedrock, bedrock contacts and surficial anomalies.
f) Two interesting trends were identified across the complete VLF grid.
g) No bedrock was identified along the VLF lines in order to correlate geology with VLF conductors.
h) Two main trends in the apparent resistivity were identified. These correlate well with the location of Card B and Card C anomalies.
i) 2D Models of both transmitters NAA and NML with views to the east and west (Figures G, H, I, J), show the two main VLF trends.

Recommendations

1) Ground proofing and prospecting of the 2 priority VLF trends should be followed up to determine if these anomalies are related to mineralization, fault zone or structural contacts. The priority VLF anomalies are identified in Table 16 NAA VLF Calculated Resistivity Anomalies and Table 17 NML VLF Calculated Resistivity Anomalies. These two trends are shown in figures E and F as well as the 2D models in figures G, H, I, J.

2) VLF surveying of 50 meter lines at 0+50E, 1+50E and 2+50E to cover the CARD C anomaly.

3) VLF surveying of 50 meter lines at 3+00E, 3+50E and 4+00E to cover the Card B anomaly. Lines need only be 600 meters in length. Such lines will give more information in the area of strong VLF anomalies.

4) 2 - 100 meter wide VLF lines with a length of 600 meters with an azimuth of 45 degrees to cover the Card C anomaly.

5) 2 - 100 meter wide VLF lines with a length of 600 meters with an azimuth of 45 degrees to cover the Card B anomaly. These lines might assist in determining a cross structure in the vicinity of the strongest VLF anomalies.

6) Geochemical sampling MMI of soils over the 2 best VLF trends in order to determine if the VLF conductors are related to economic mineralization.

7) Processing of the VLF Data combined with sample geochemistry with software such as Golden Software's surfer in order to produce a shaded relief map of Fraser Filter and Resistivity data. Such maps will greatly assist in interpretation.

8) Based on the present VLF survey, and lack of geological information, further ground follow-up is required before drill targets can be determined.

List of References

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Certificate of Qualifications

I, Shaun Parent, P. Geo (LTD.) residing at 282 B Whispering Pines Road, Batchawana Bay, Ontario do certify that:

1. I am a consulting Geoscientist with Superior Exploration, Adventure & Climbing Co. Ltd.

2. I graduated with a Geological Technician Diploma from Sir Sandford Fleming College in 1986.

3. I graduated with a BSc. from the University of Toronto in 1986

4. I am a member in good standing with the Association of Professional Geoscientists of Ontario #1955 and a member of the Prospectors and Developers Association of Canada.

5. I have been employed continuously as a Geoscientist for the past 26 years since my graduation from University.

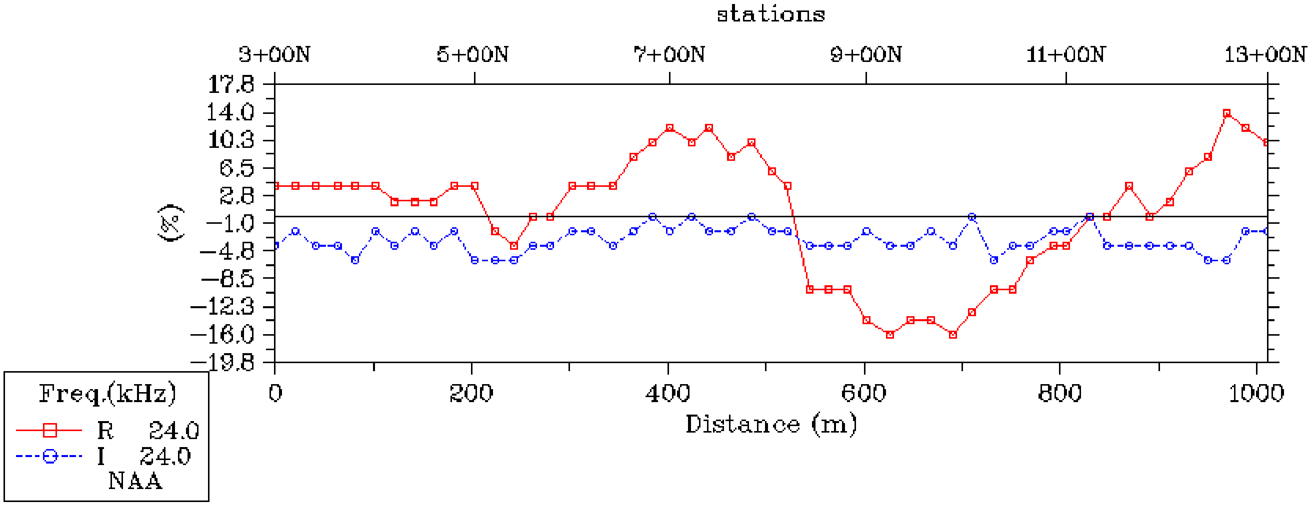
6. The nature of my involvement with this project was to carry out the VLF Survey and the interpretation of the VLF data using the EMTOMO VLF2D Software of which I have been developing with Dr. Fernando Santos of Lisbon, Portugal.

Dated this 2nd day of September 2014

Shaun Parent, Dipl-Geo, BSc. P. Geo (Limited)

Appendix 1 NAA - Line 00 - Raw & Filtered Data

Figure-1 NAA
Raw and Filtered Data Profile



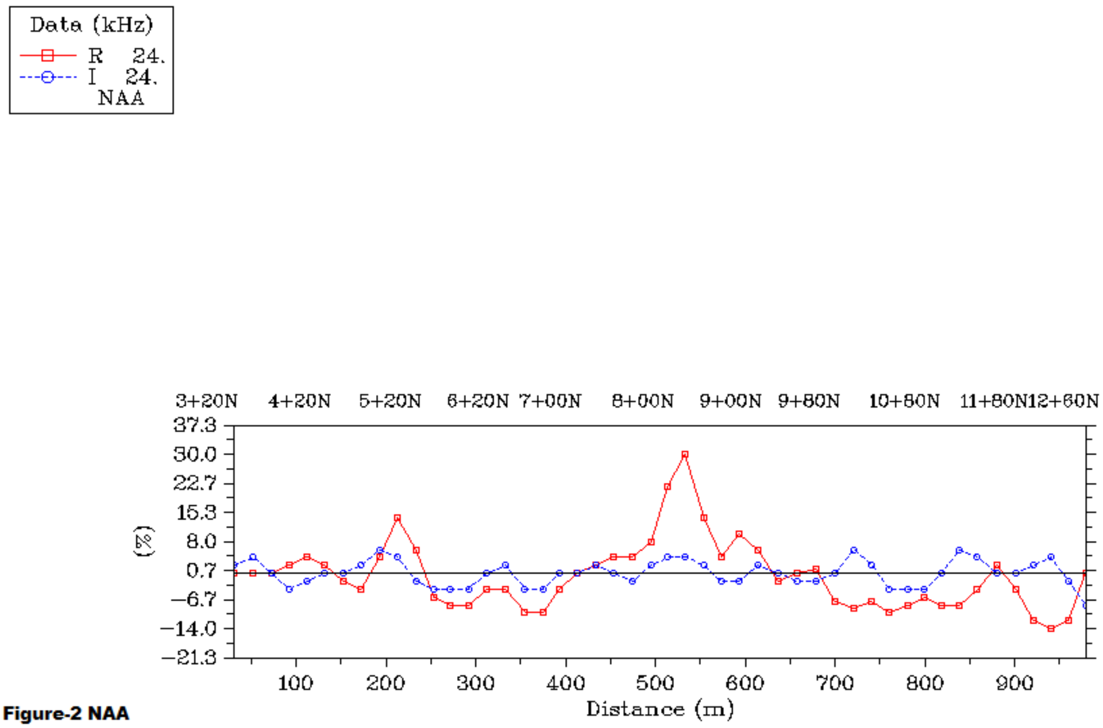


Figure-2 NAA
Line 00
Fraser Filter Profile

Appendix 3   NAA - Line 00 - K-H Filter

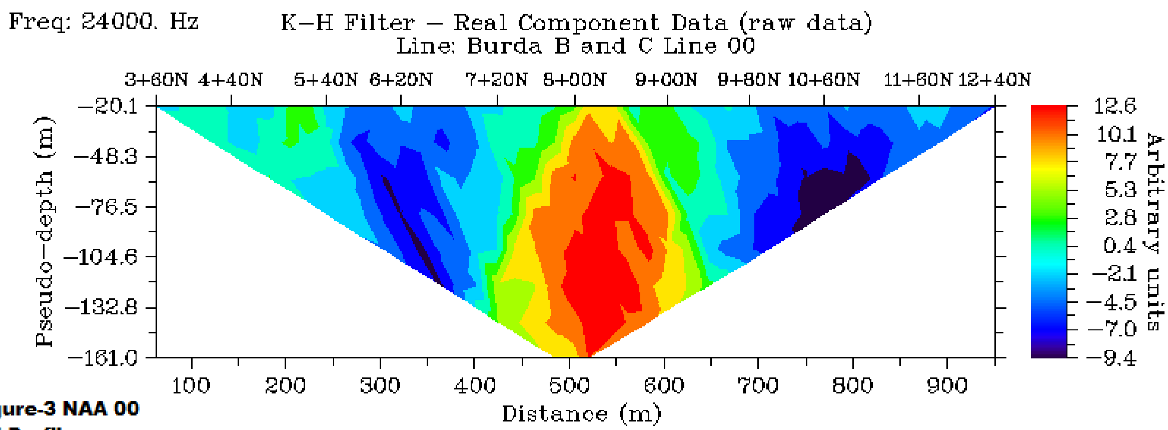
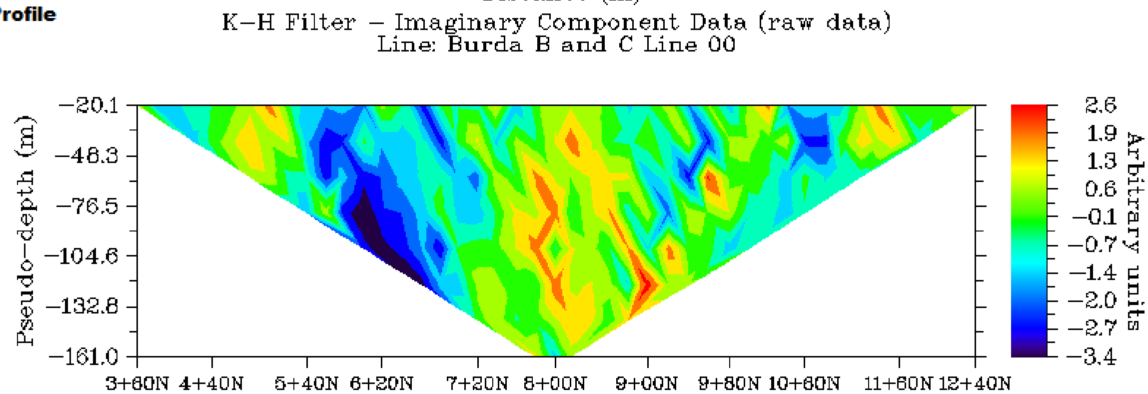


Figure-3 NAA 00
KH Profile



Appendix 4 NAA - Line 00 - Resistivity

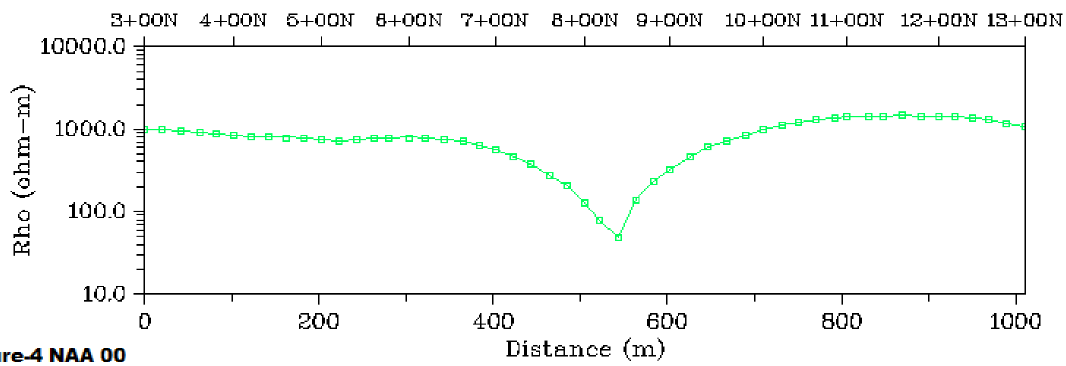


Figure-4 NAA 00
Resistivity 1000 Profile

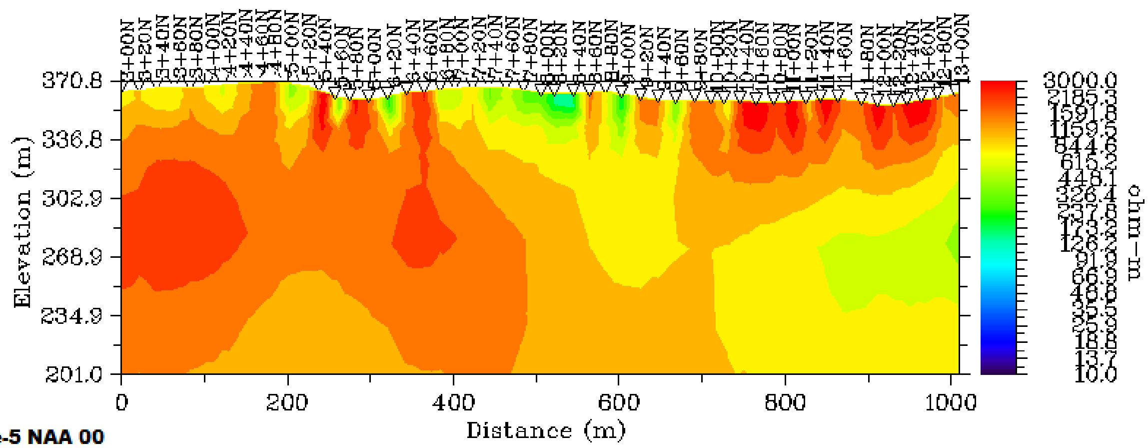
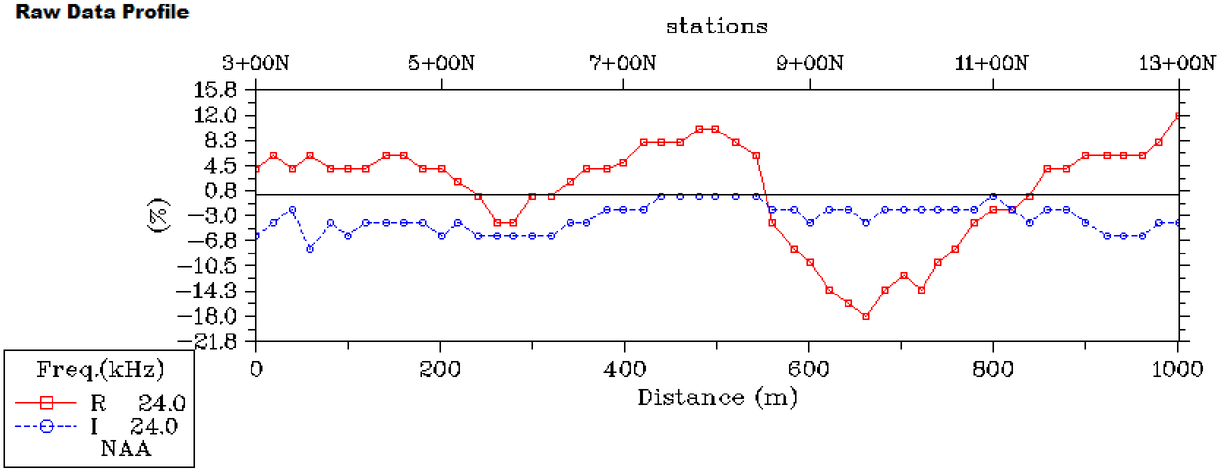
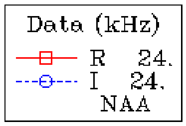


Figure-5 NAA 00
Model 1000 Ohm Profile

Figure-1 NAA 1E
Raw Data Profile





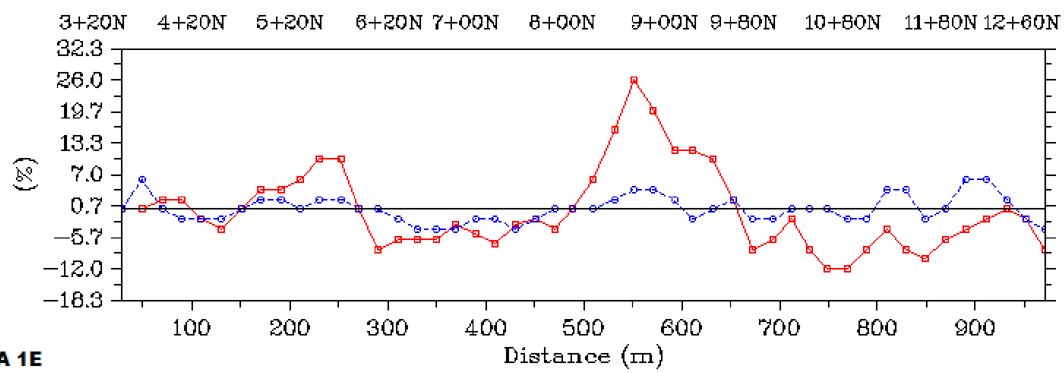


Figure-2 NAA 1E
Fraser Filter Profile

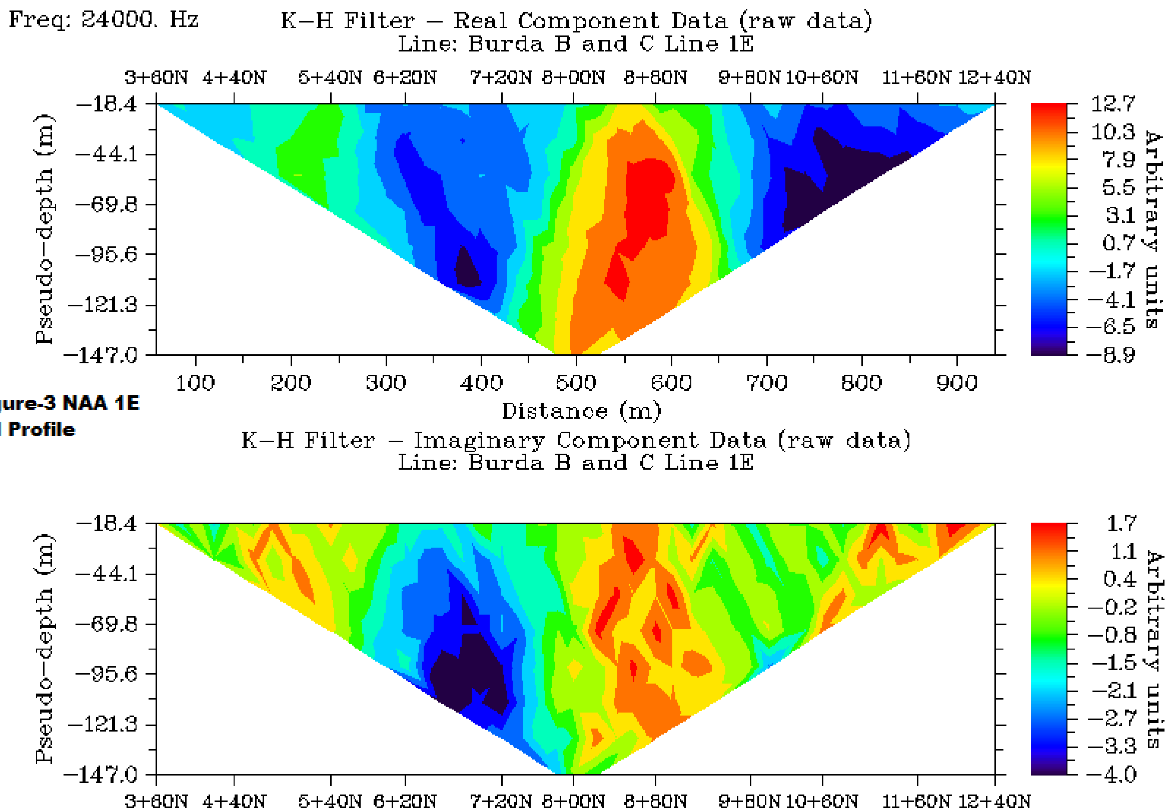


Figure-3 NAA 1E KH Profile

Appendix 9 NAA - Line 1E - Resistivity

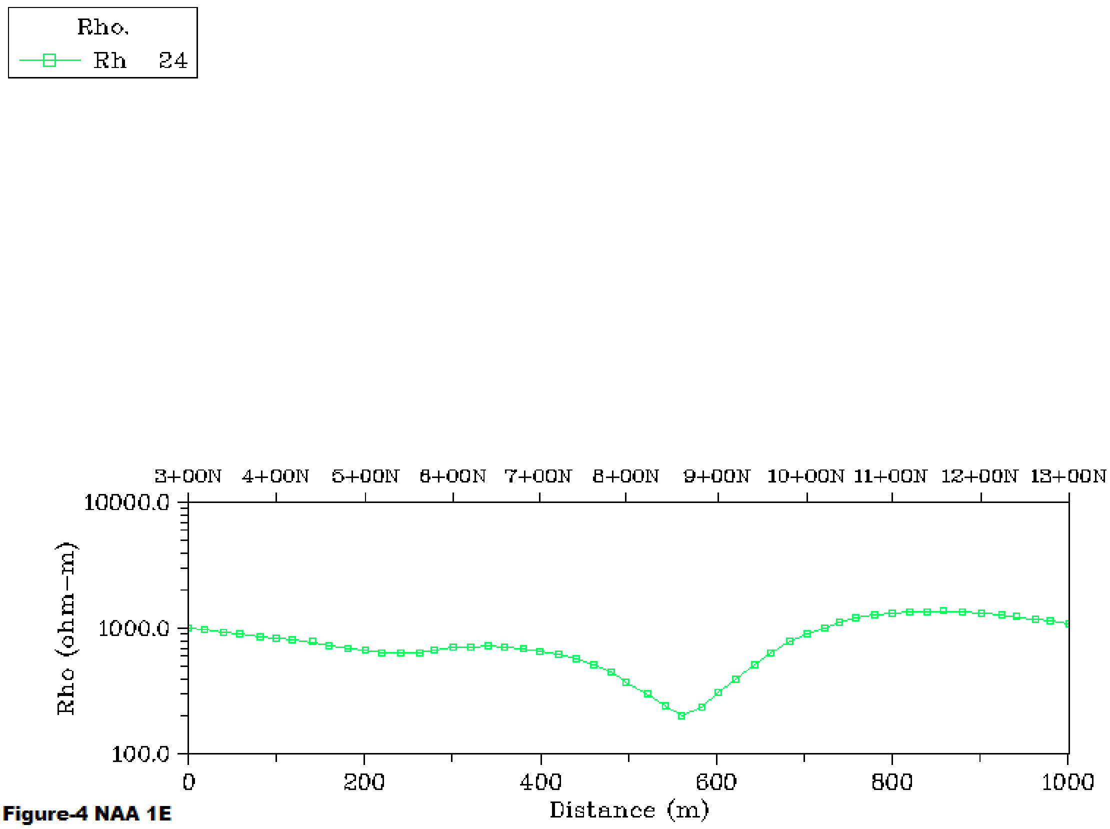


Figure-4 NAA 1E
Resistivity 1000 Profile

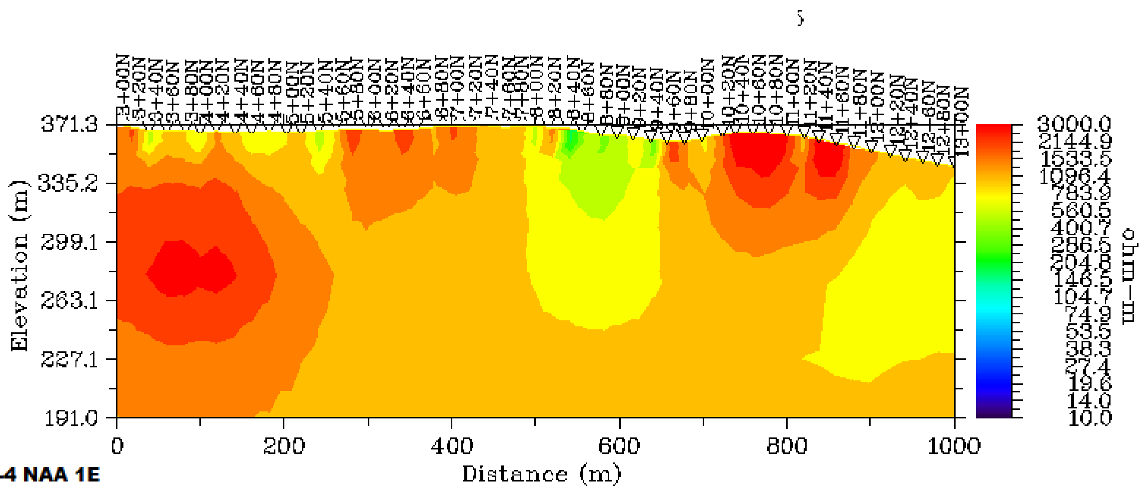
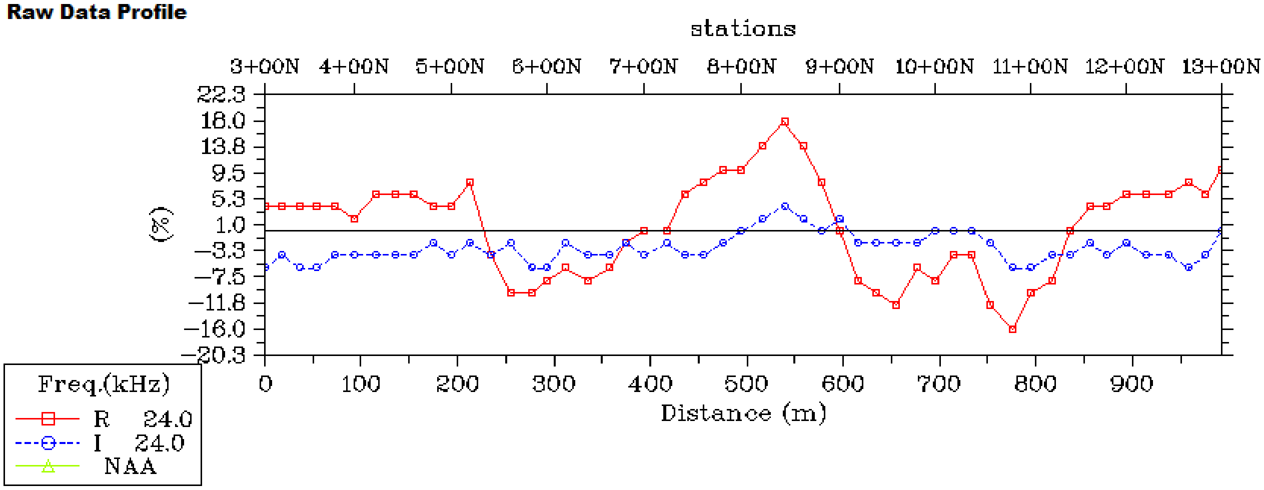


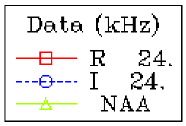
Figure-4 NAA 1E
Model 1000 Ohm Profile

Appendix 11 NAA - Line 2E - Raw Data

Figure-1 NAA 2E
Raw Data Profile



Appendix 12 NAA - Line 2E - Fraser Filter



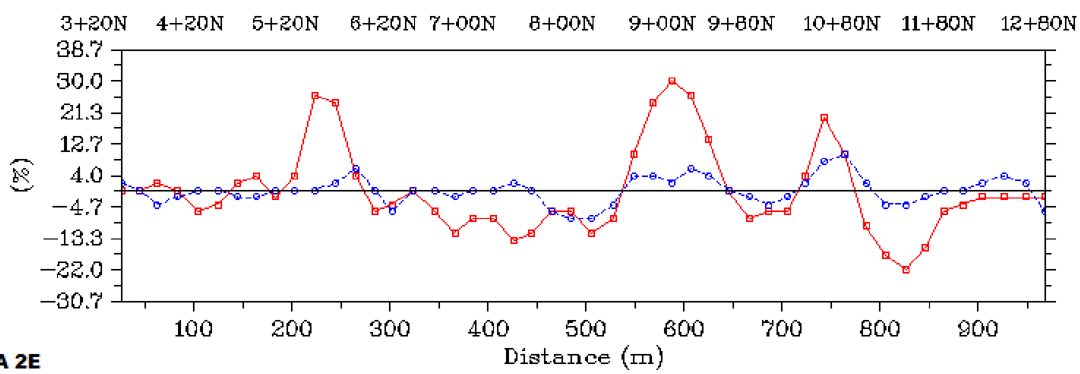


Figure-2 NAA 2E
Fraser Filter Profile

Appendix 13 NAA - Line 2E - K-H Filter

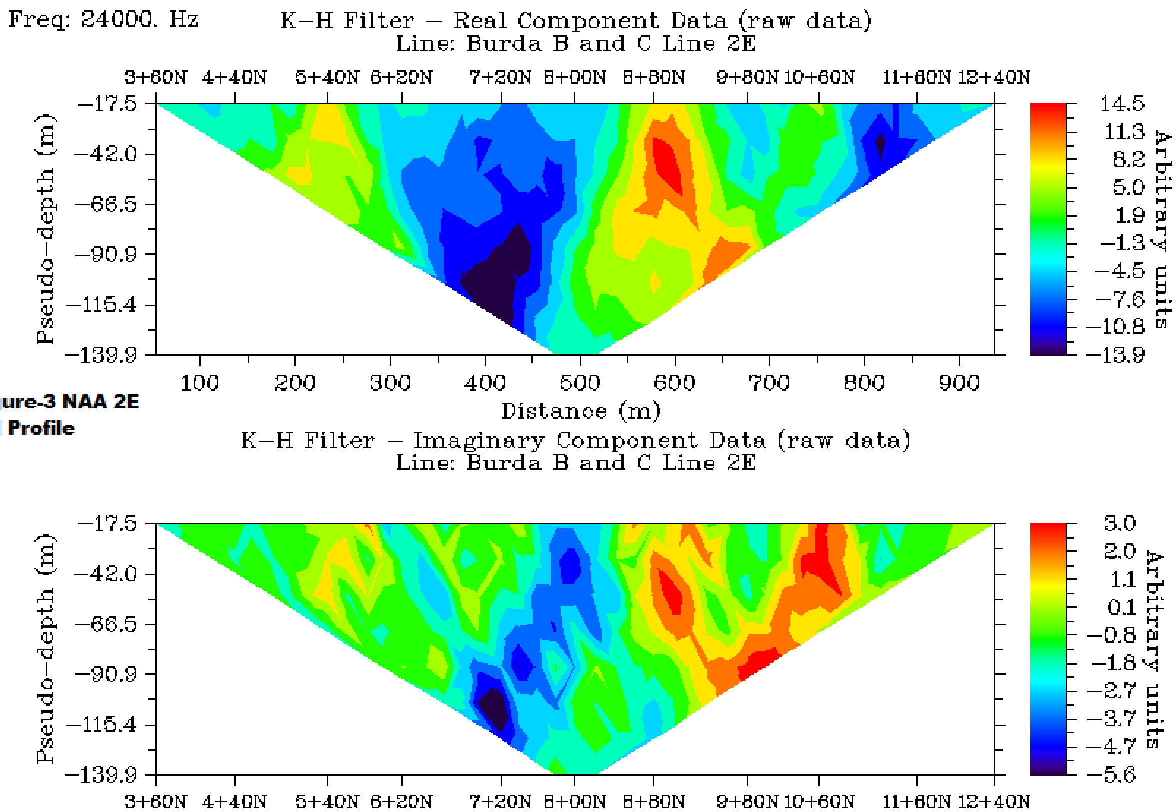
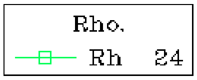


Figure-3 NAA 2E KH Profile



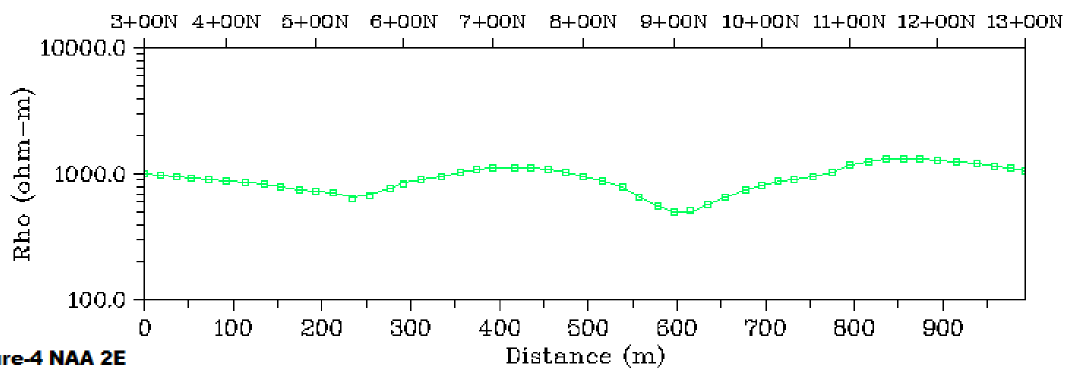


Figure-4 NAA 2E
Resistivity 1000 Profile

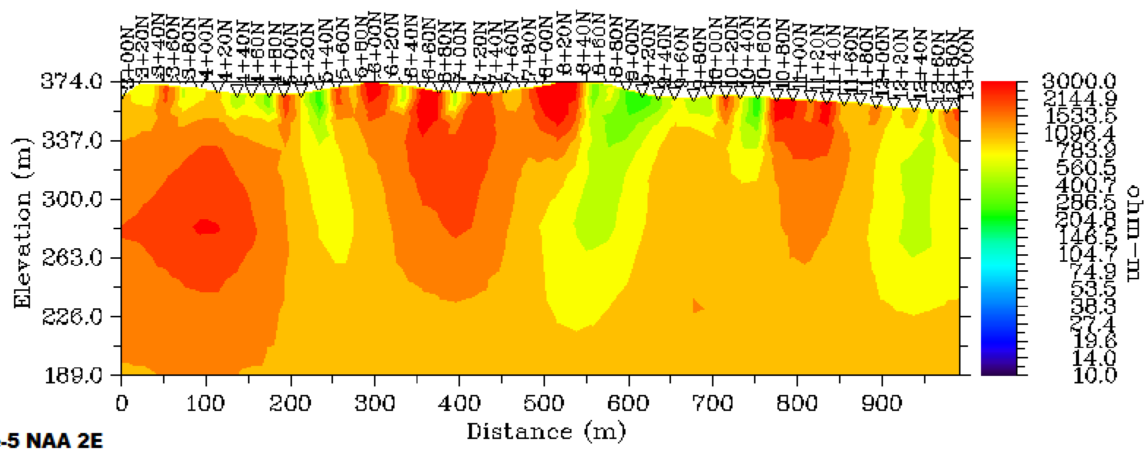
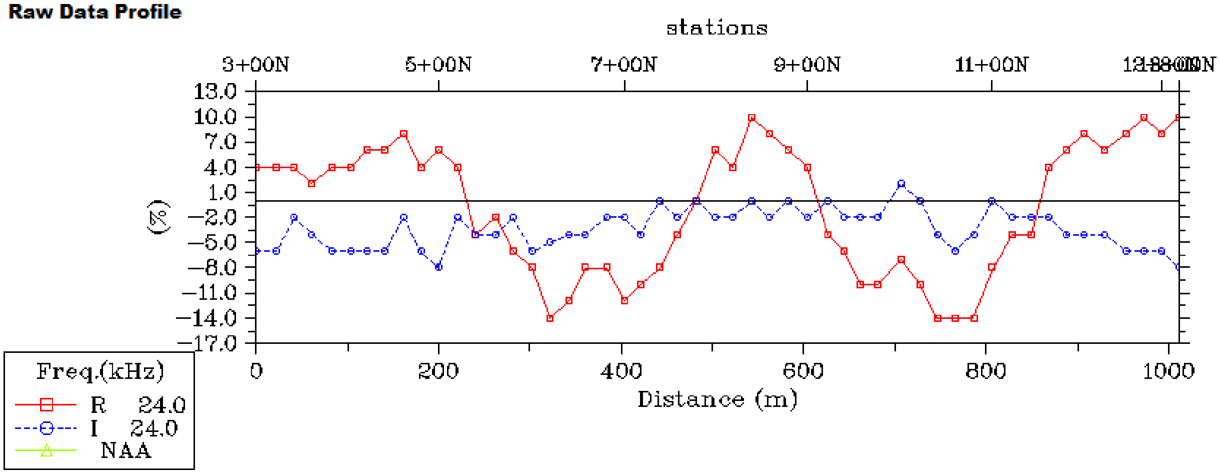
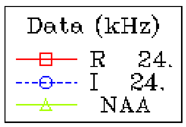


Figure-5 NAA 2E
Model 1000 Ohm Profile

Figure-1 NAA 3E
Raw Data Profile



Appendix 17 NAA - Line 3E - Fraser Filter



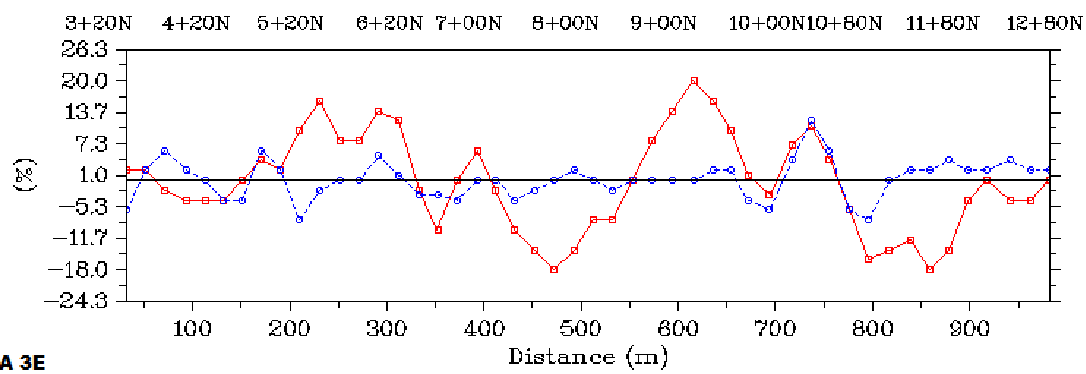


Figure-2 NAA 3E
Fraser Filter Profile

Appendix 18 NAA - Line 3E - K-H Filter

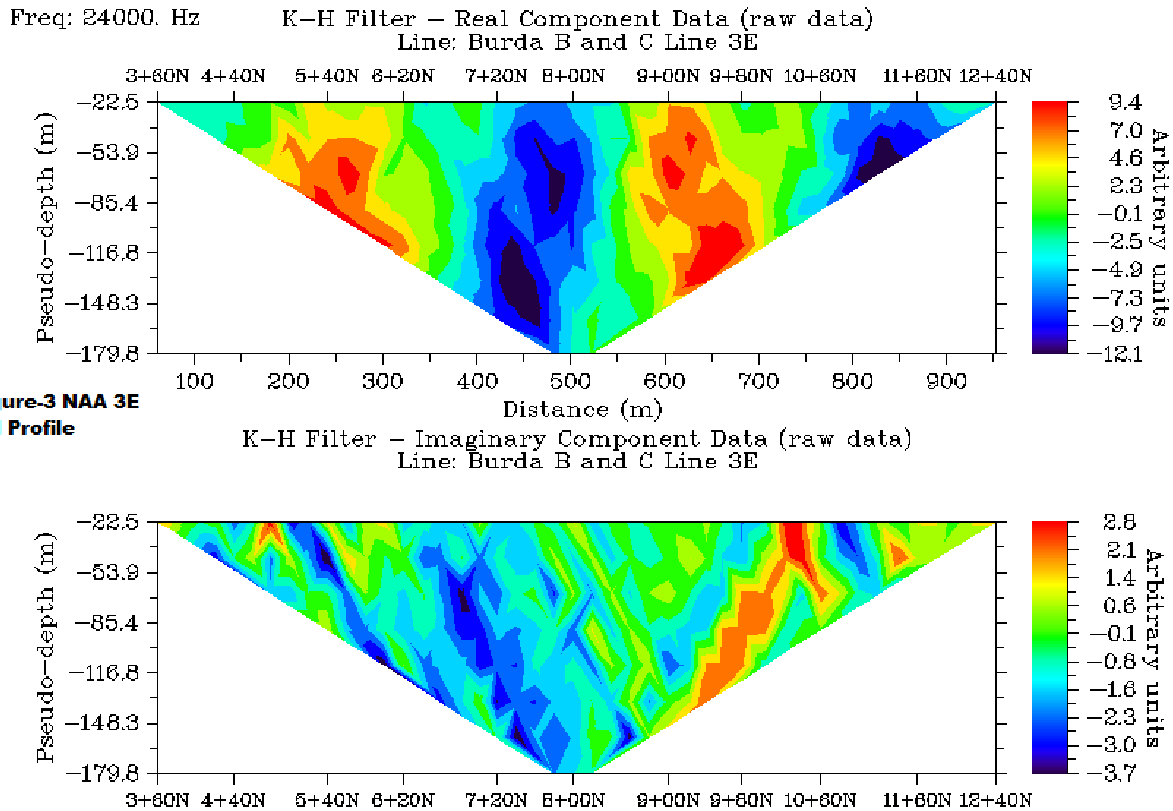
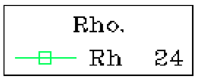


Figure-3 NAA 3E KH Profile



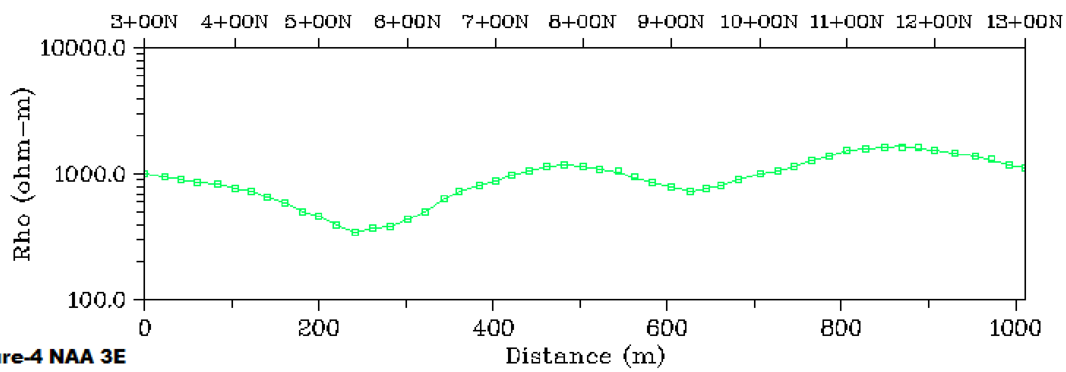


Figure-4 NAA 3E
Resistivity 1000 Profile

Appendix 20 NAA - Line 3E - Model

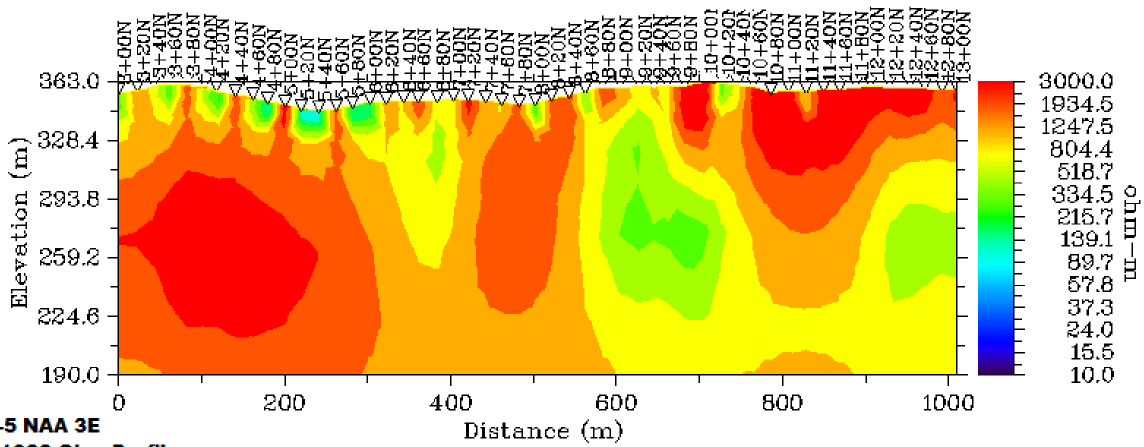
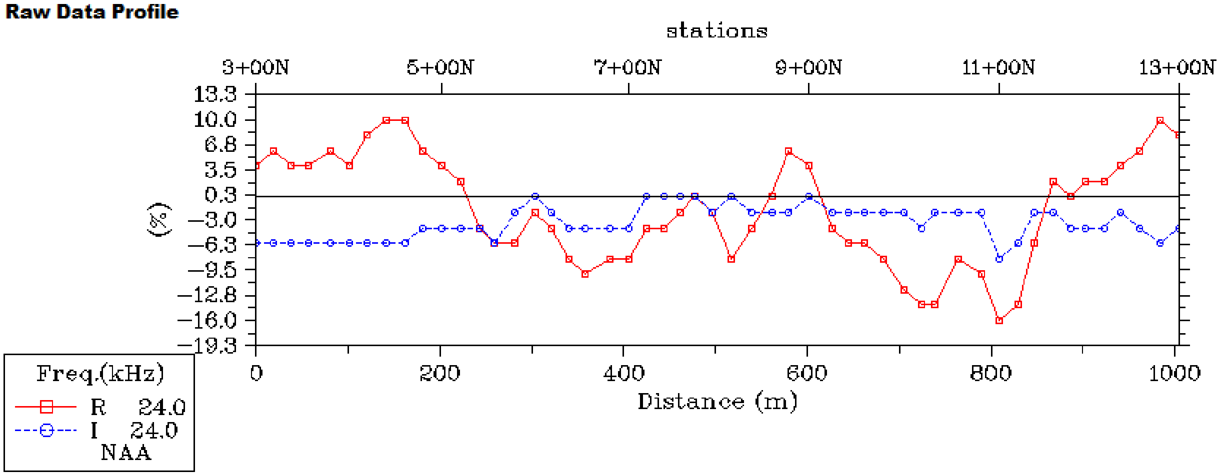
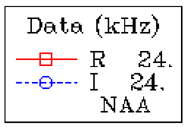


Figure-5 NAA 3E
Model 1000 Ohm Profile

Appendix 21 NAA - Line 4E - Raw Data

Figure-1 NAA 4E
Raw Data Profile





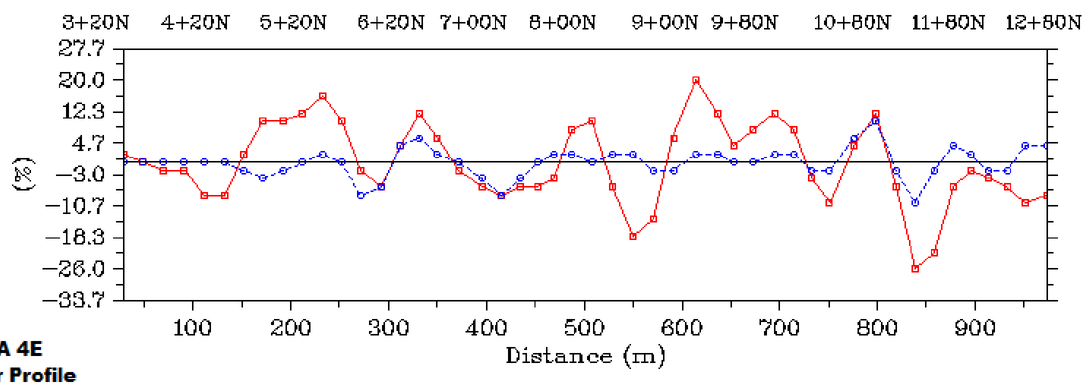


Figure-2 NAA 4E
Fraser Filter Profile

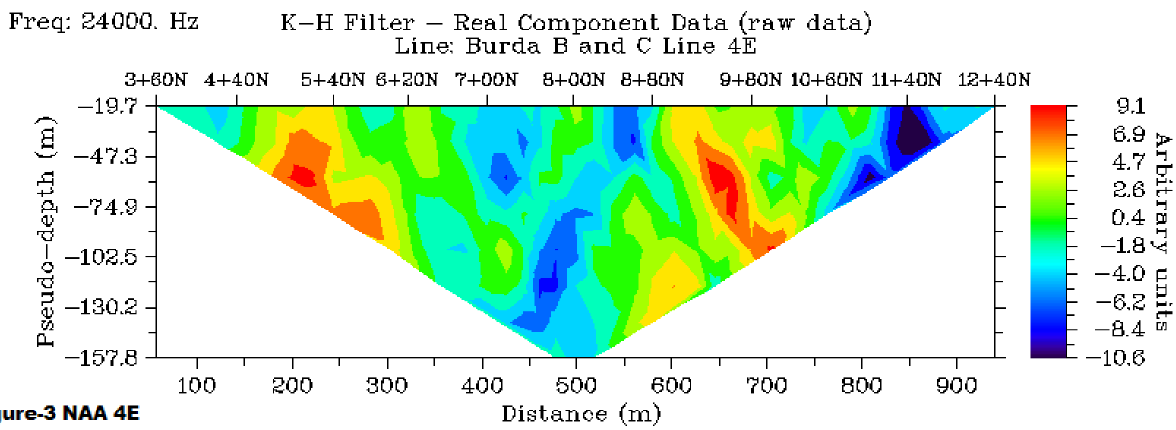
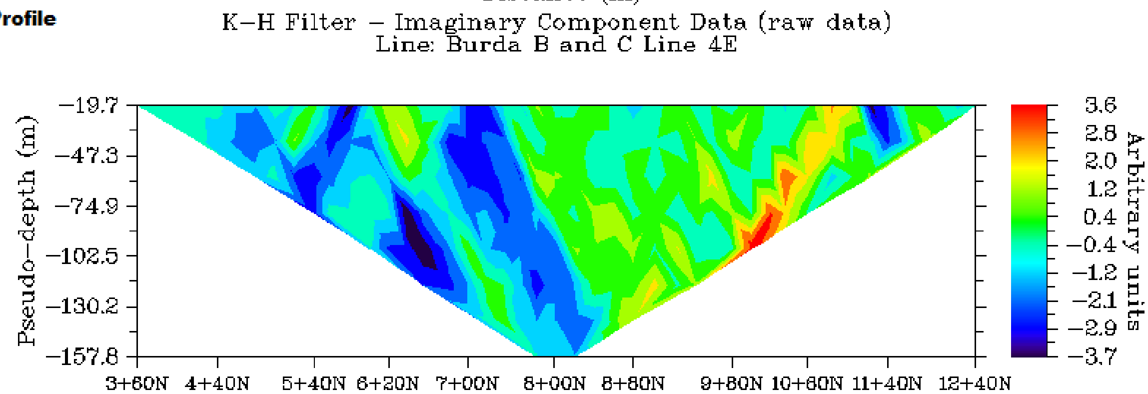
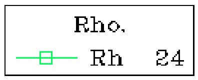


Figure-3 NAA 4E KH Profile



Appendix 24 NAA - Line 4E - Resistivity



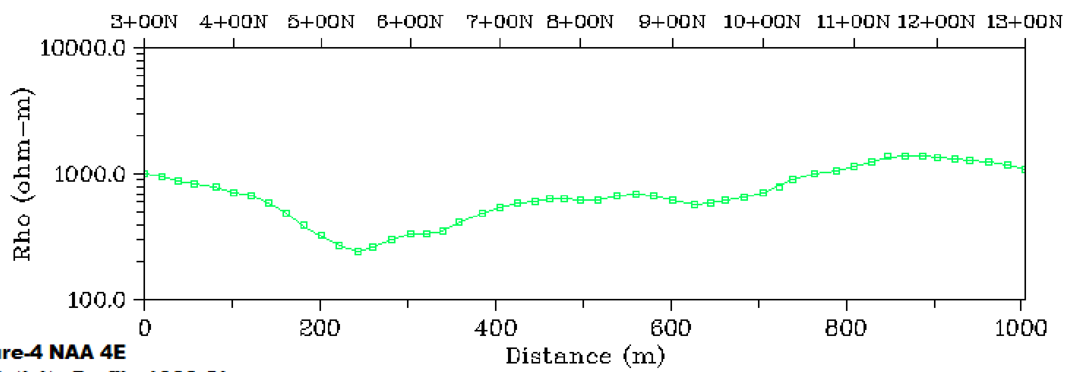


Figure-4 NAA 4E
Resistivity Profile 1000 Ohm

Appendix 25 NAA - Line 4E - Model

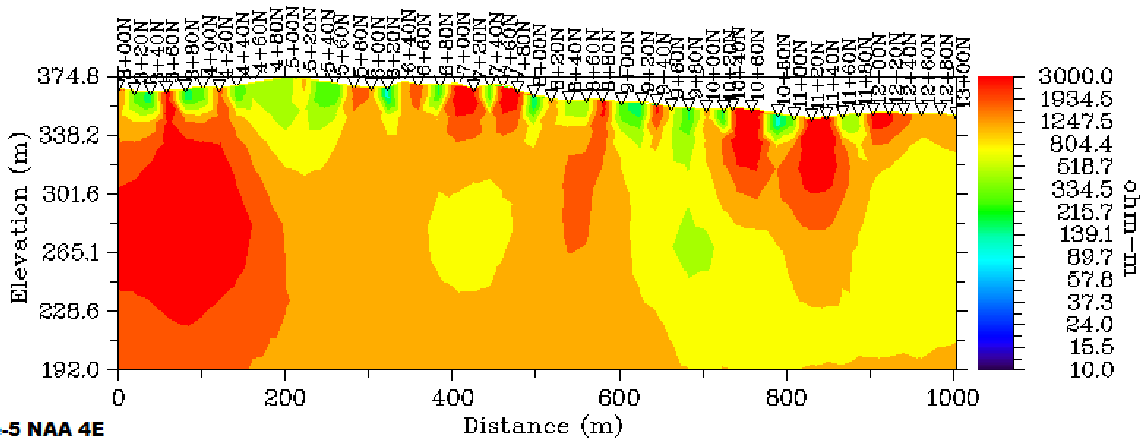
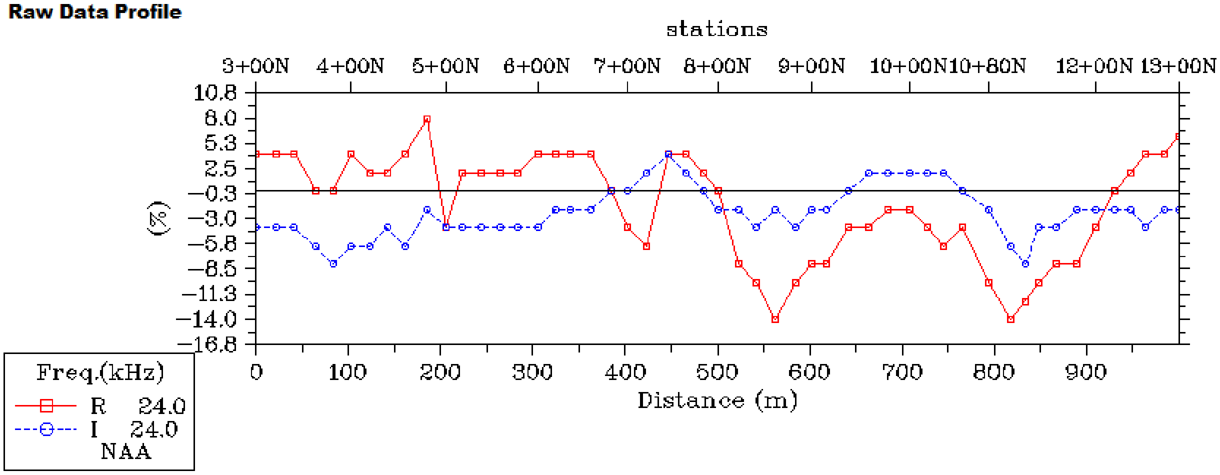


Figure-5 NAA 4E
Model 1000 Ohm Profile

Appendix 26 NAA - Line 5E - Raw Data

Figure 1- NAA 5E
Raw Data Profile



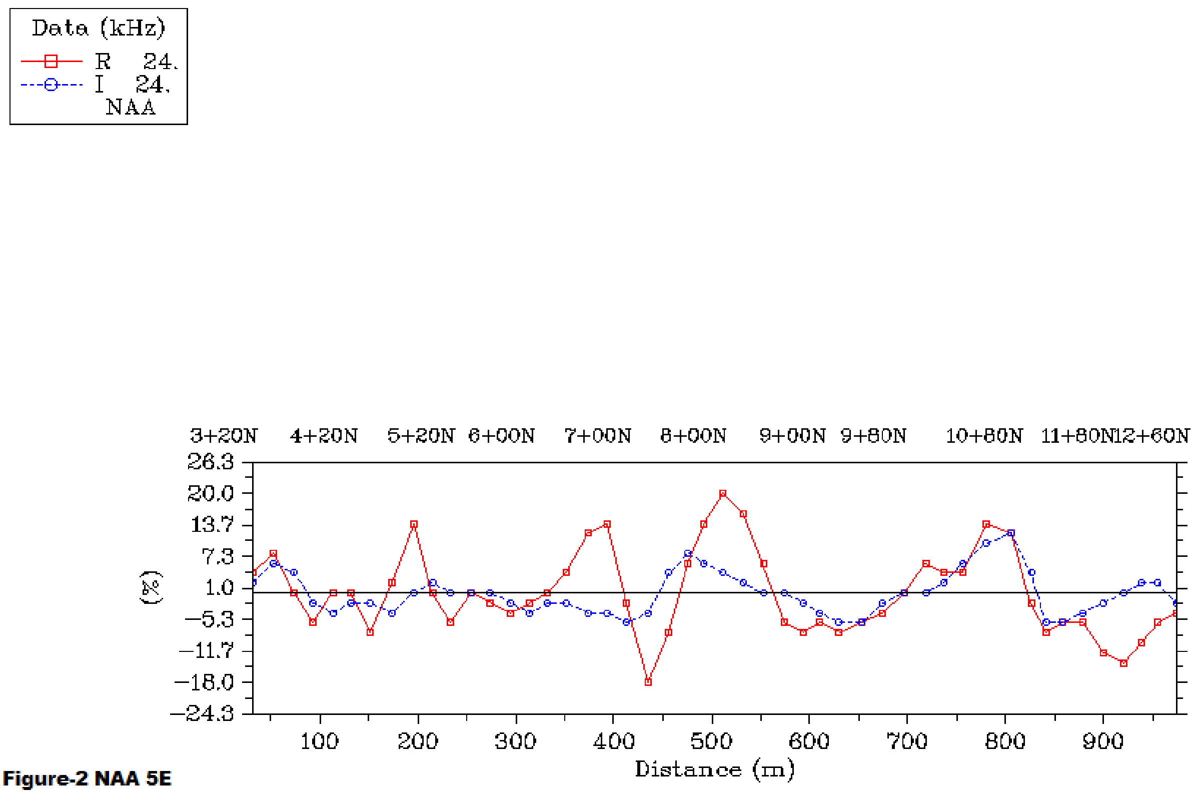


Figure-2 NAA 5E
Fraser Filter Profile

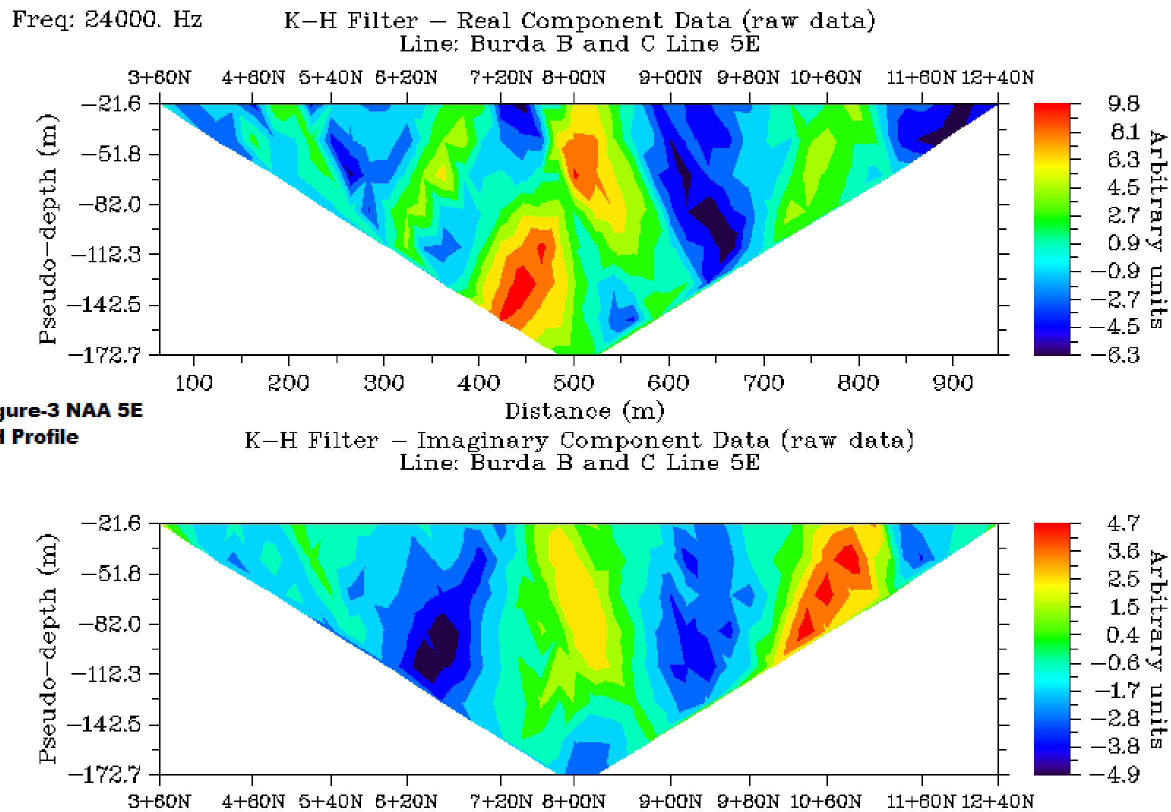


Figure-3 NAA 5E KH Profile

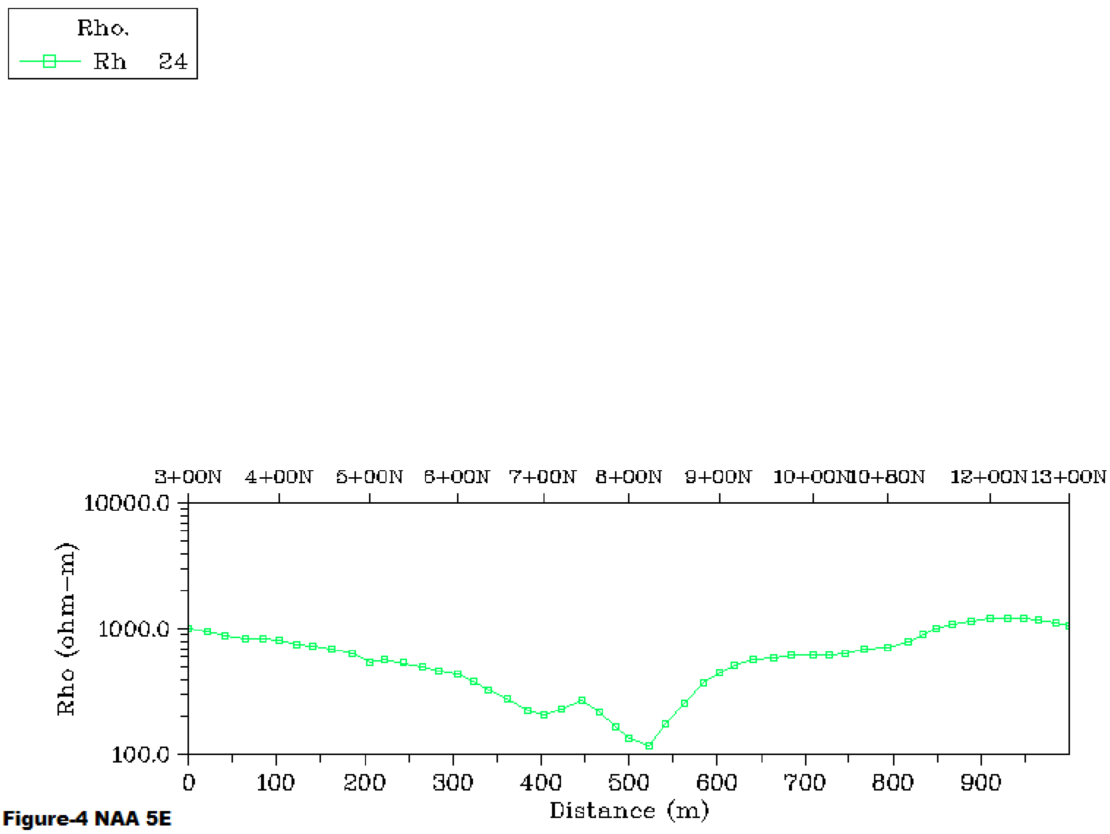


Figure-4 NAA 5E
Resistivity Profile 1000 Ohm

Appendix 30 NAA - Line 5E - Model

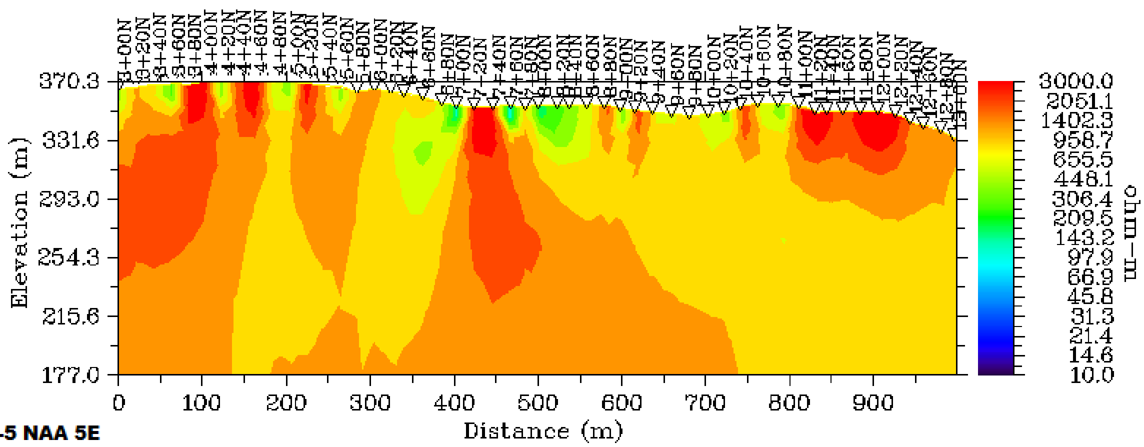
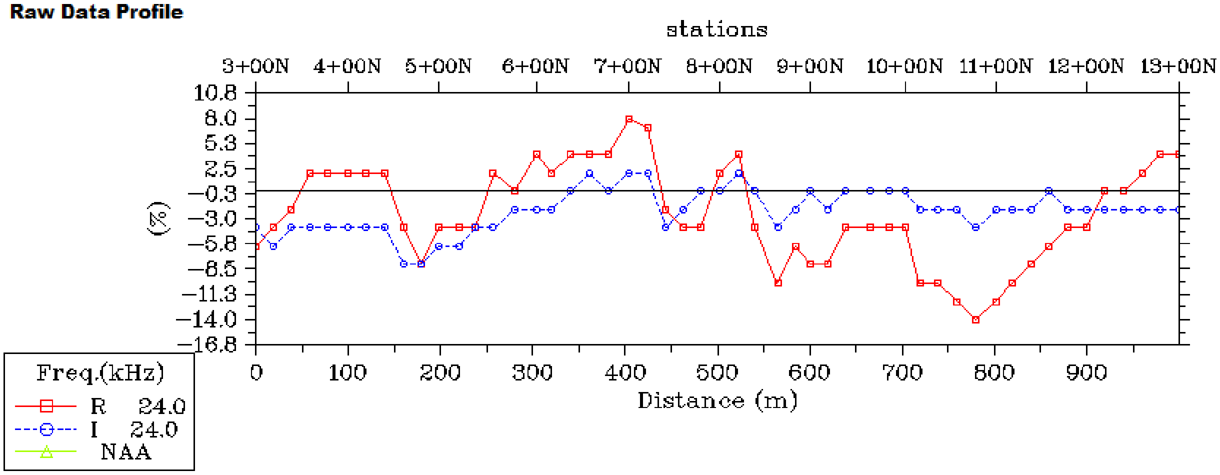


Figure-5 NAA 5E
Model 1000 Ohm Profile

Appendix 31 NAA - Line 6E - Raw Data

Figure-1 NAA 6E
Raw Data Profile



Appendix 32 NAA - Line 6E - Fraser Filter

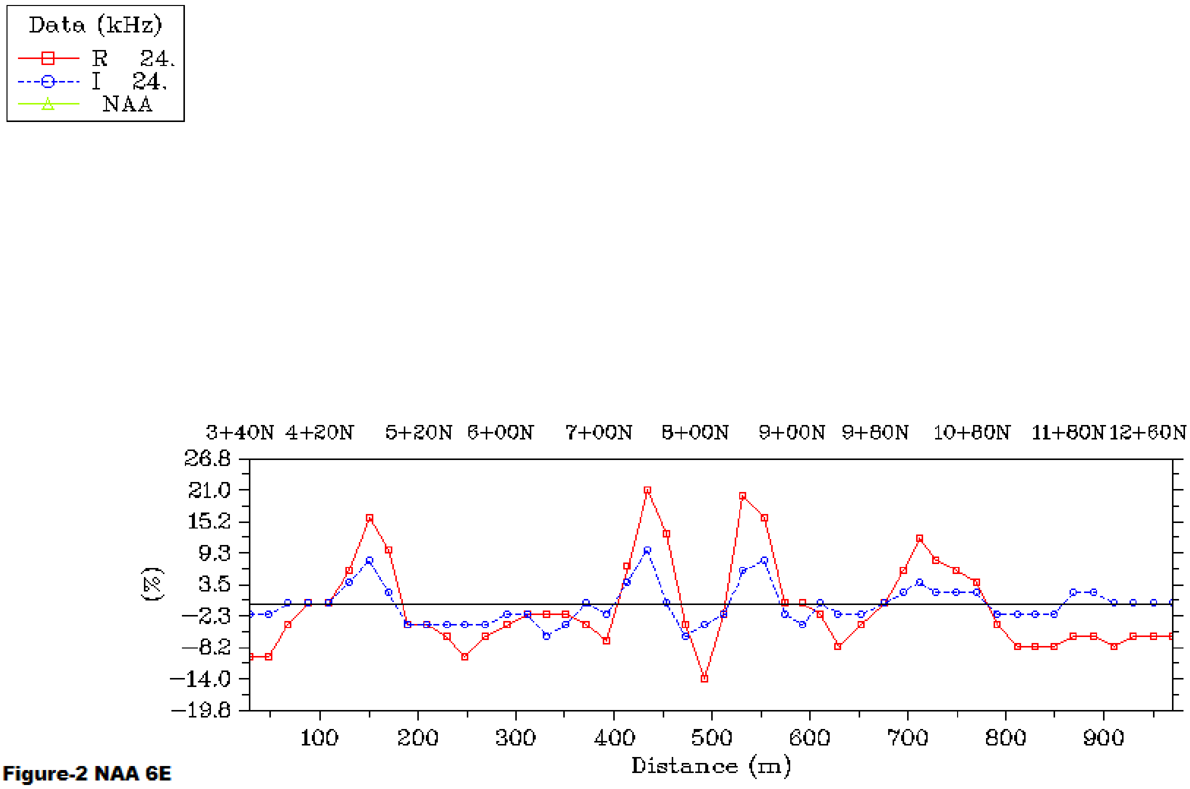


Figure-2 NAA 6E
Fraser Filter Profile

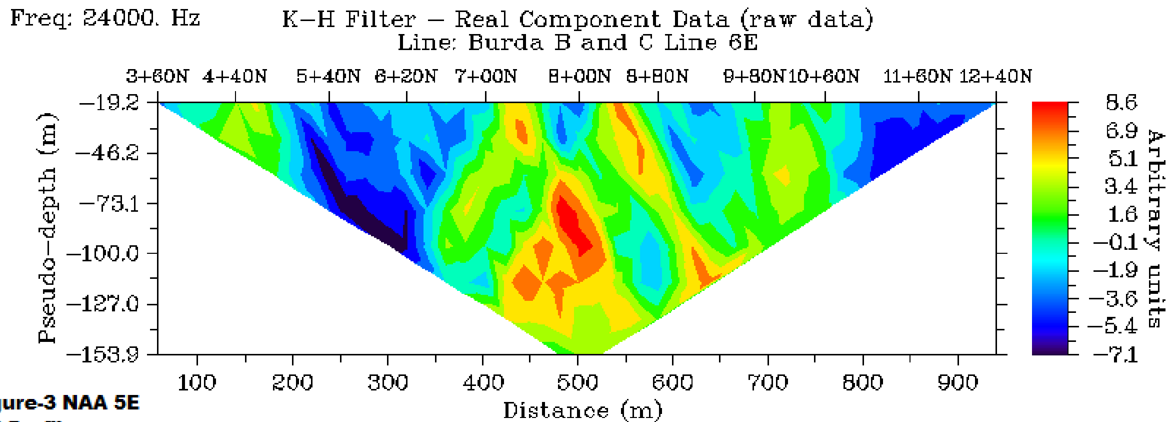
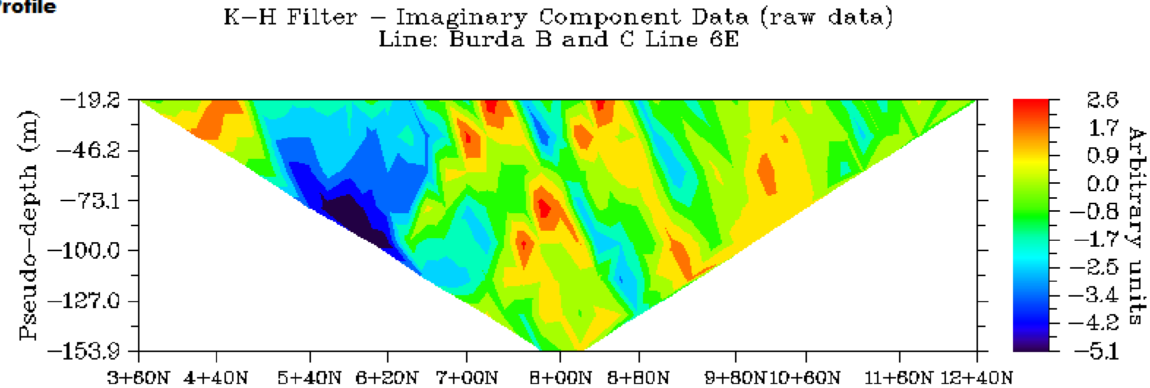


Figure-3 NAA 5E KH Profile



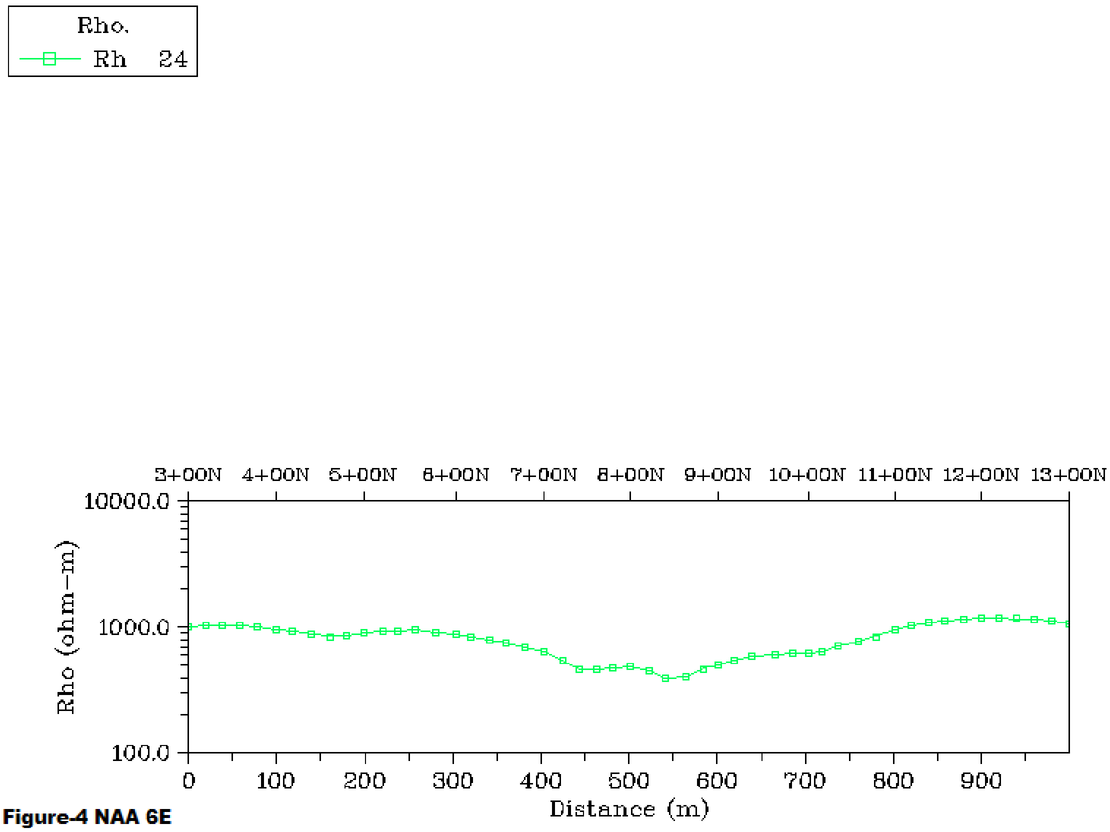


Figure-4 NAA 6E
Resistivity 1000 Ohm Profile

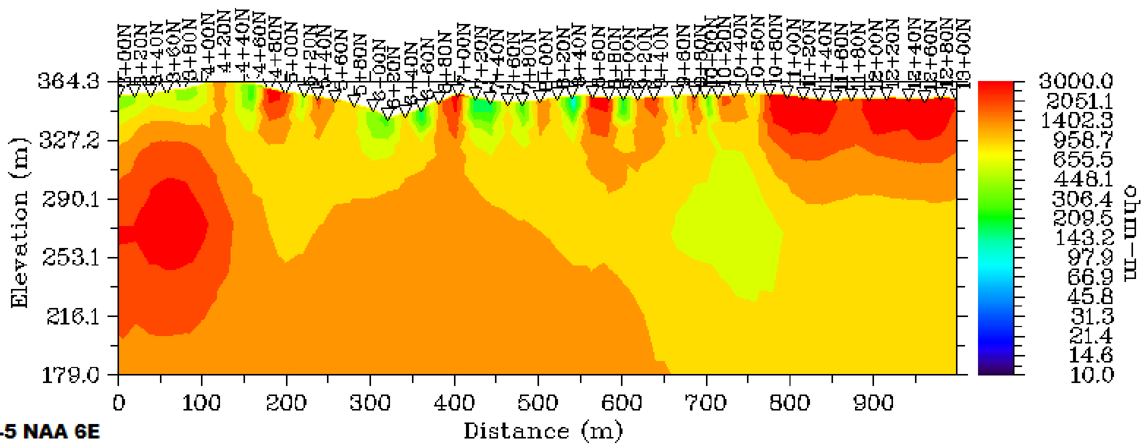
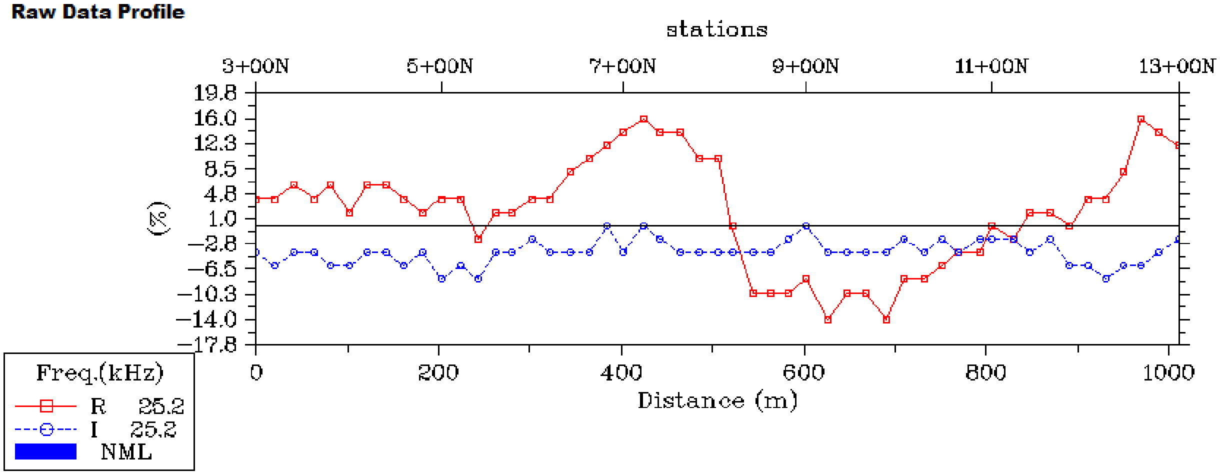
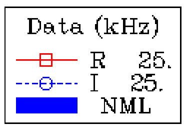


Figure-5 NAA 6E
Model 1000 Ohm Profile

Figure-1 NML 00
Raw Data Profile





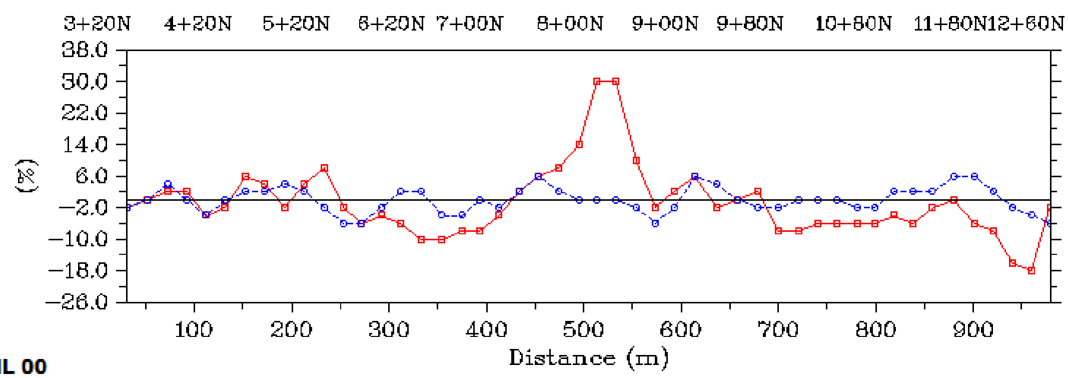


Figure-2 NML 00
Fraser Filter Profile

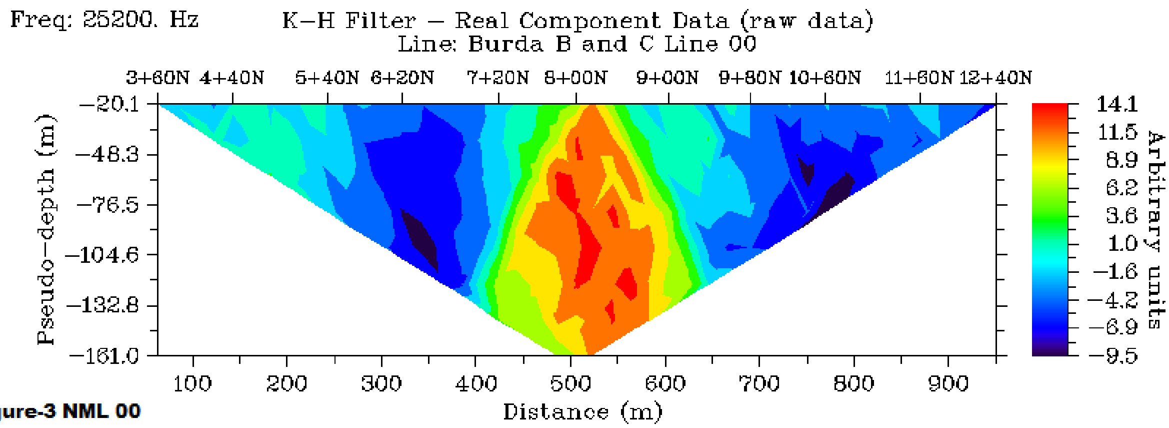
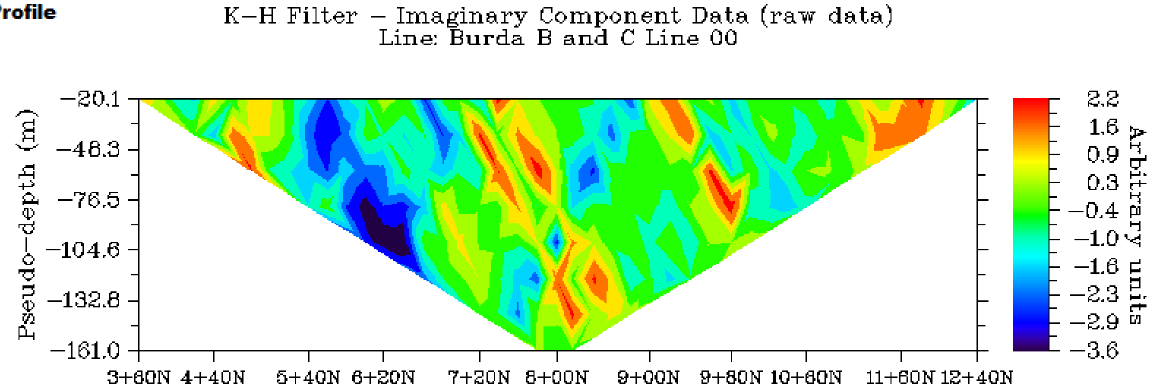


Figure-3 NML 00 KH Profile



Appendix 39 NML - Line 00 - Resistivity

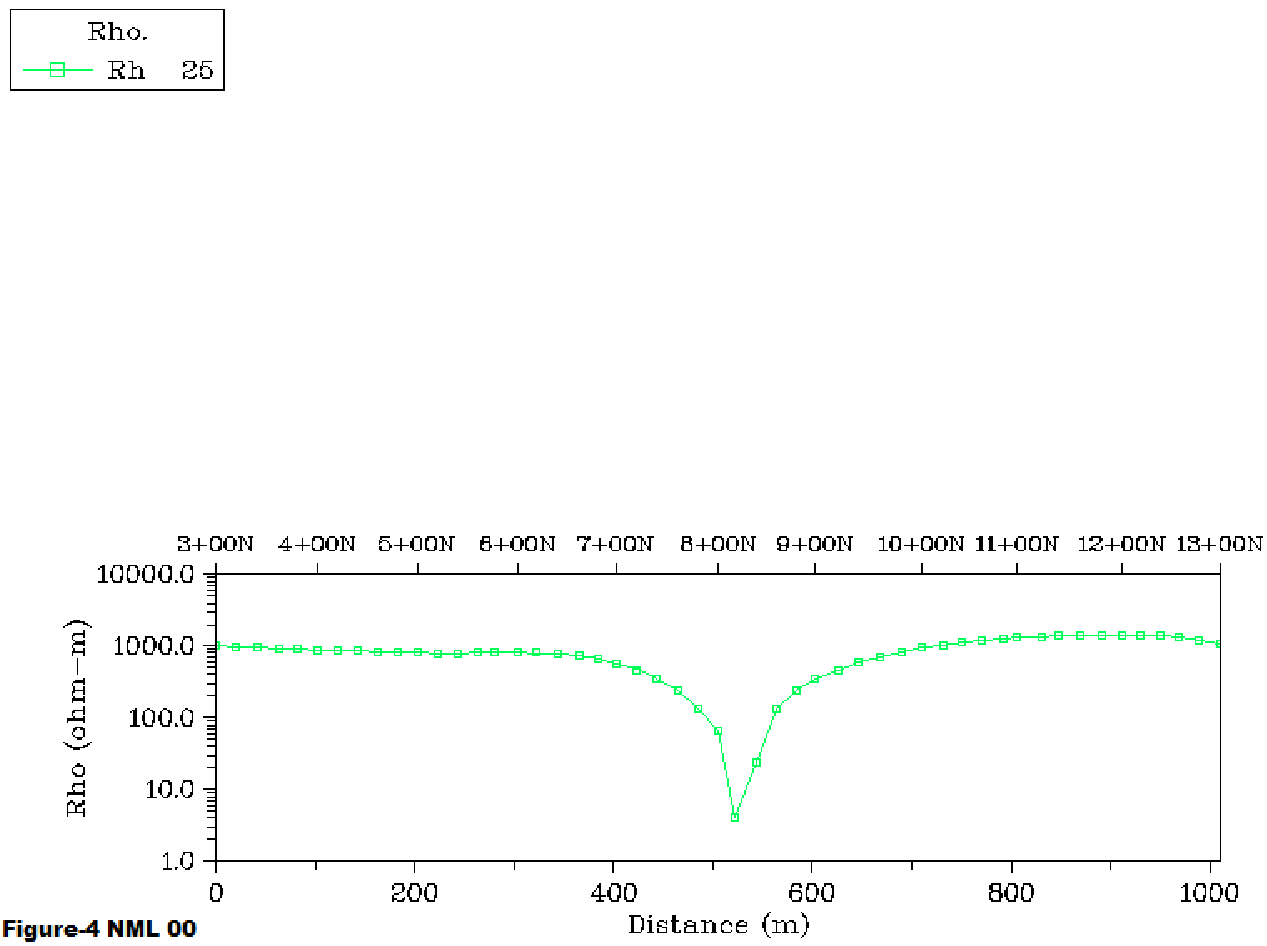


Figure-4 NML 00
Resistivity 1000 Ohm Profile

Appendix 40 NML - Line 00 - Model

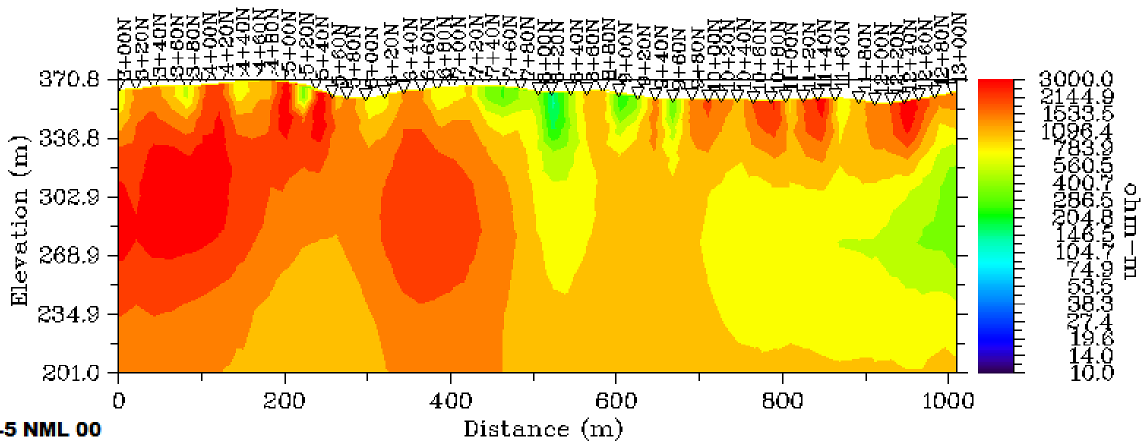
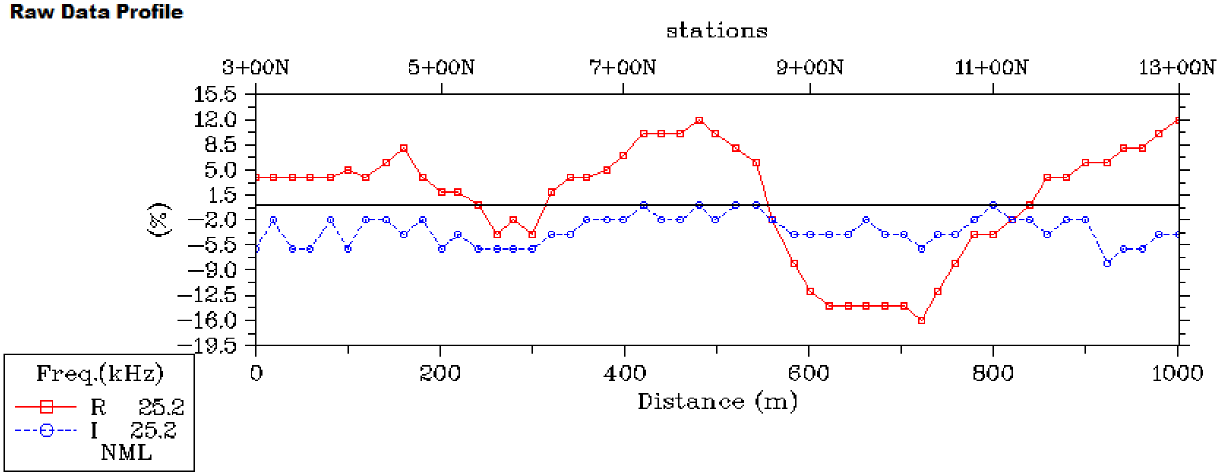


Figure-5 NML 00
Model 1000 Ohm Profile

Appendix 41 NML - Line 1E - Raw Data

Figure -1 NML 1E
Raw Data Profile



Appendix 42 NML - Line 1E - Fraser Filter

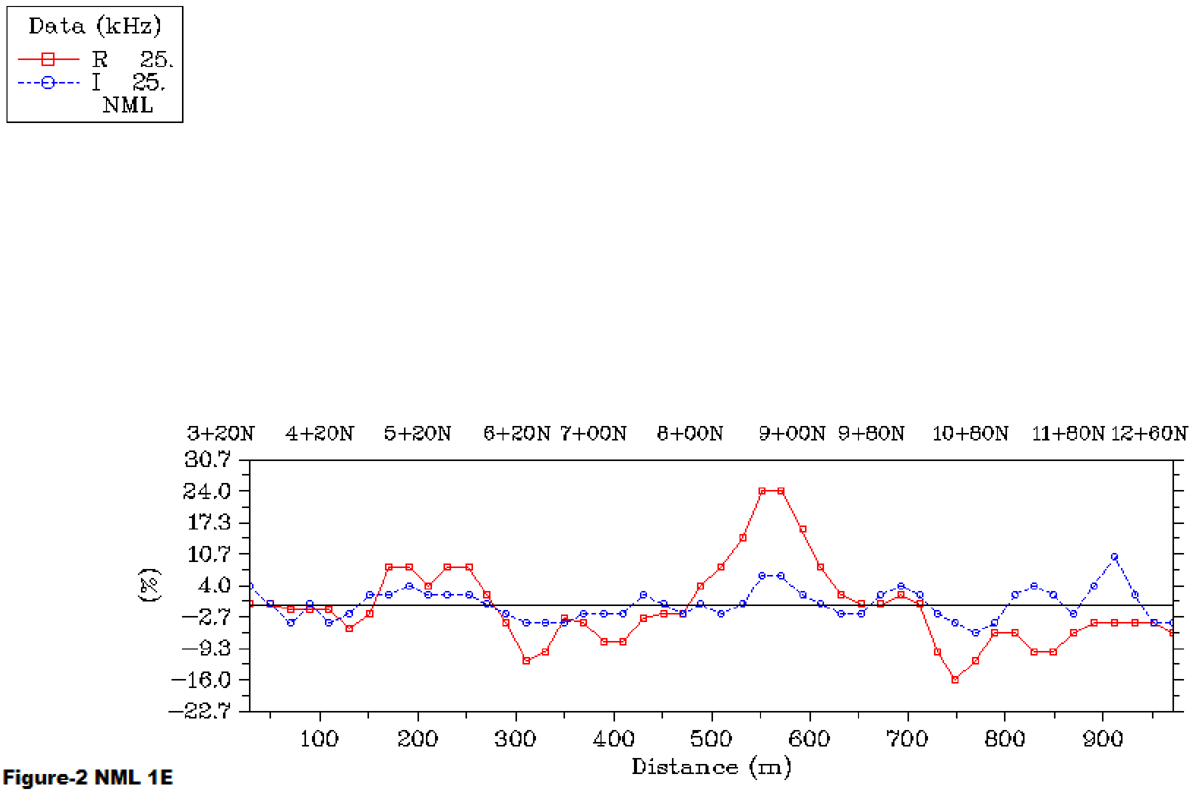


Figure-2 NML 1E
Fraser Filter Profile

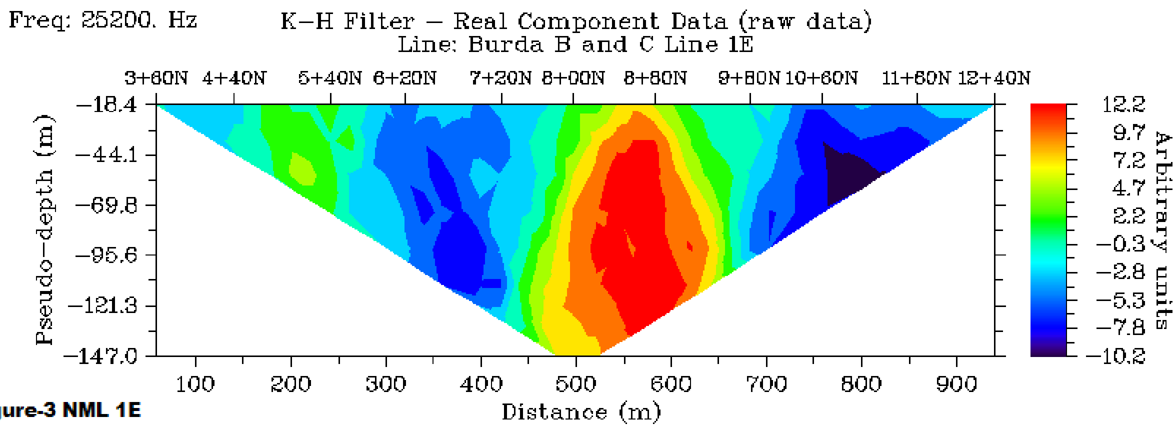
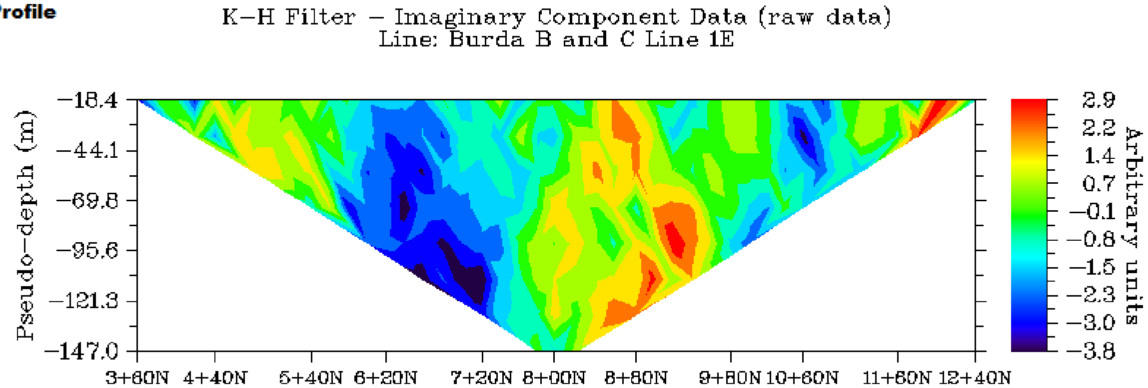


Figure-3 NML 1E KH Profile



Appendix 44 NML - Line 1E - Resistivity

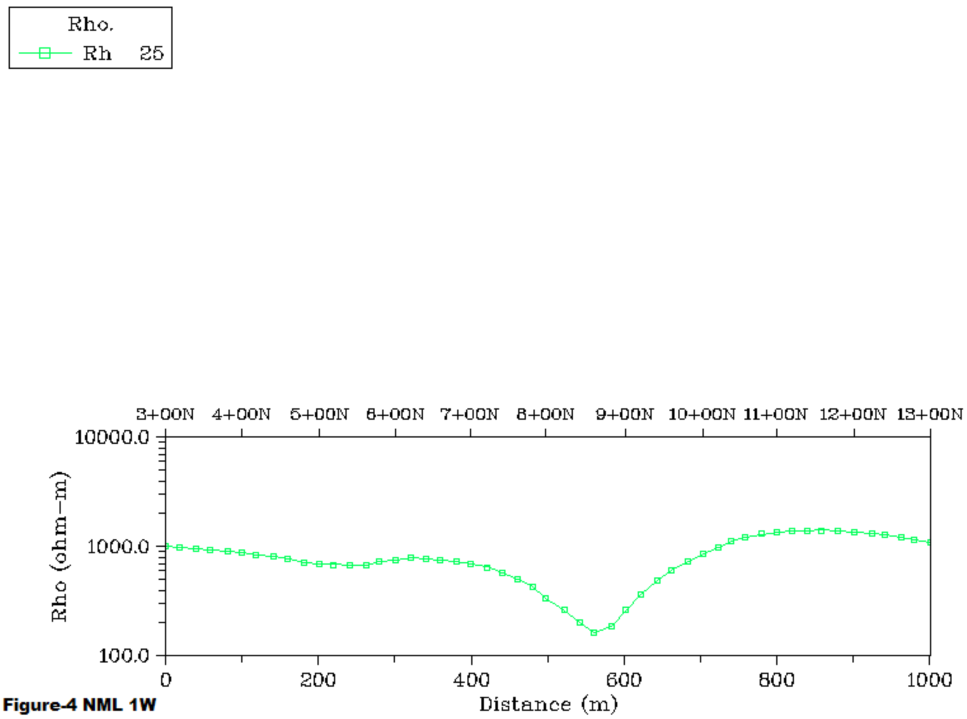


Figure-4 NML 1W
Resistivity 1000 Ohm Profile

Appendix 45 NML - Line 1E - Model

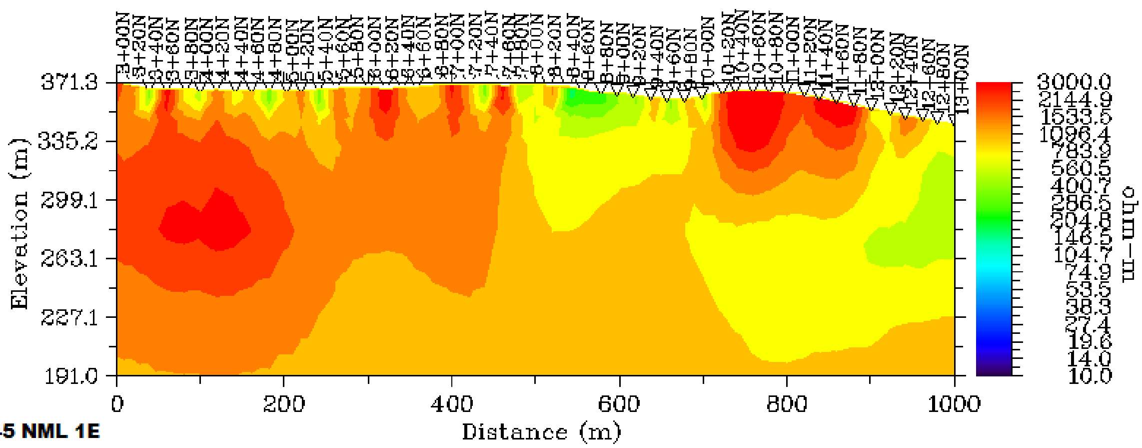
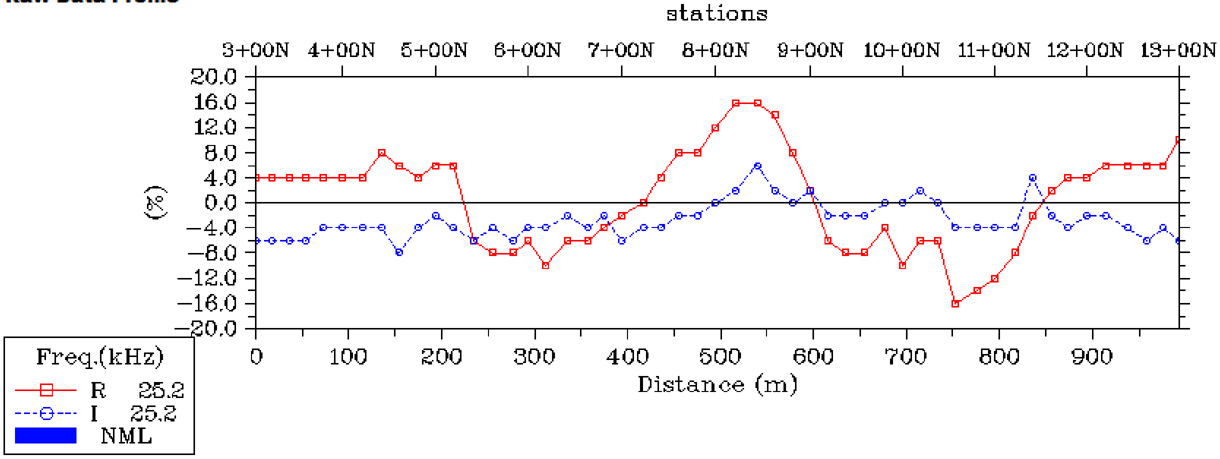


Figure-5 NML 1E

Appendix 46 NML - Line 2E - Raw Data

Figure-1 NML 2E
Raw Data Profile



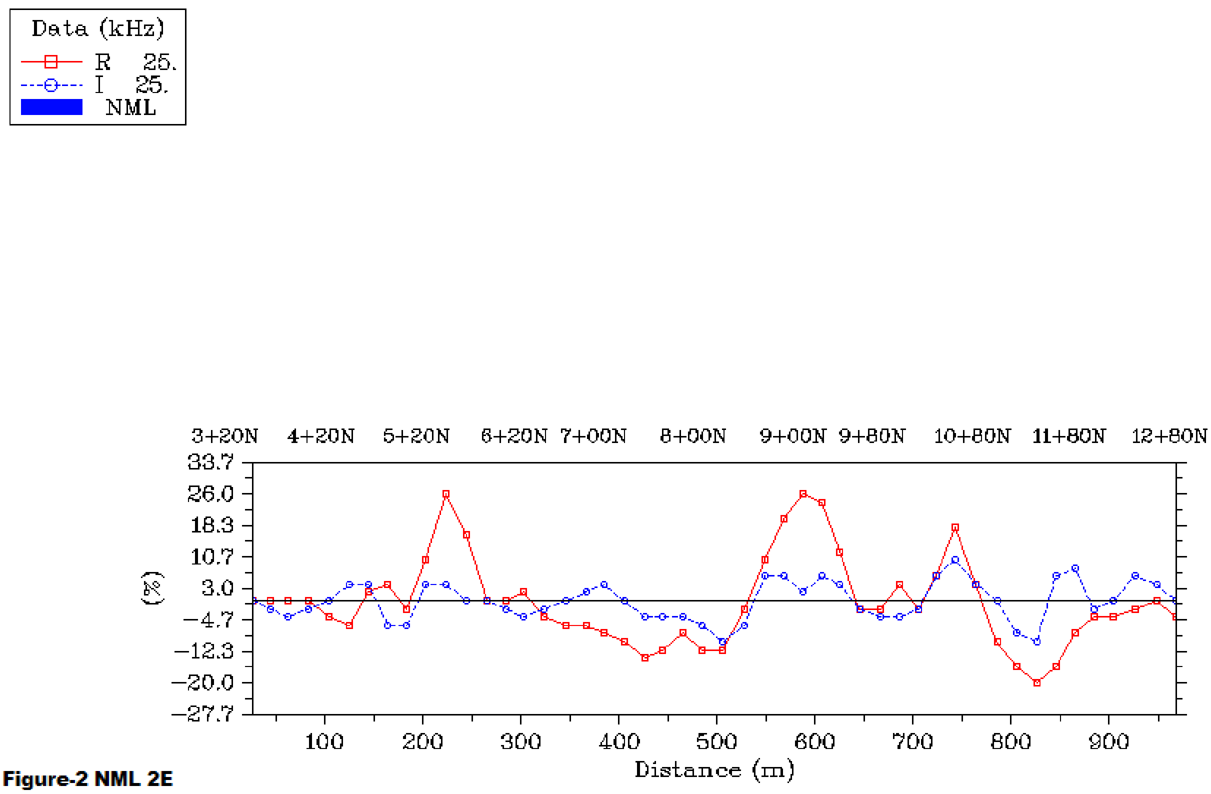


Figure-2 NML 2E
Fraser Filter Profile

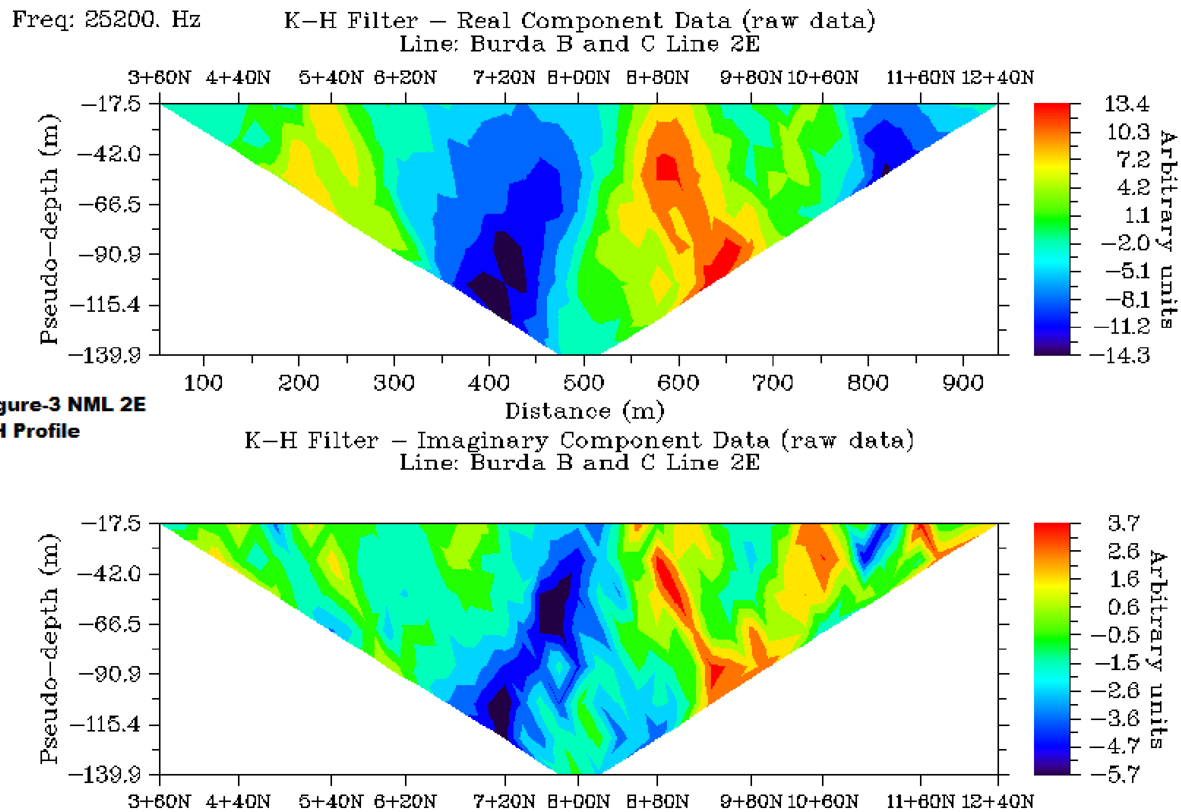
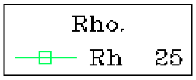


Figure-3 NML 2E KH Profile

Appendix 49 NML - Line 2E -Resistivity



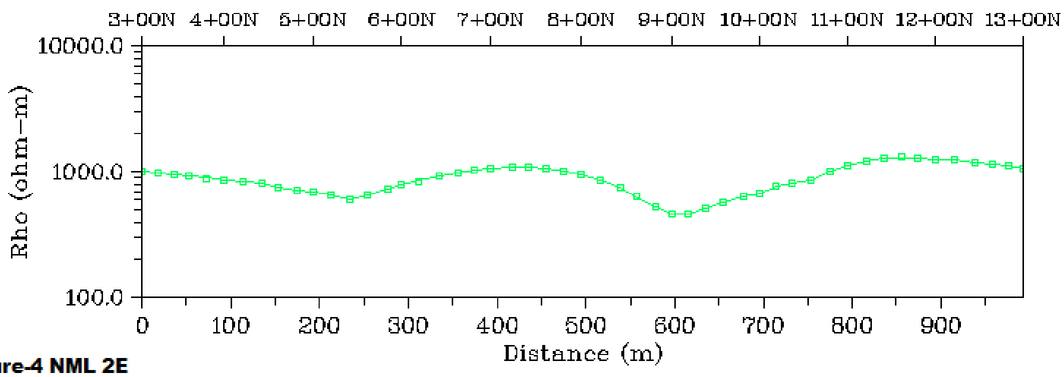


Figure-4 NML 2E
Resistivity 1000 Ohm Profile

Appendix 50 NML - Line 2E - Model

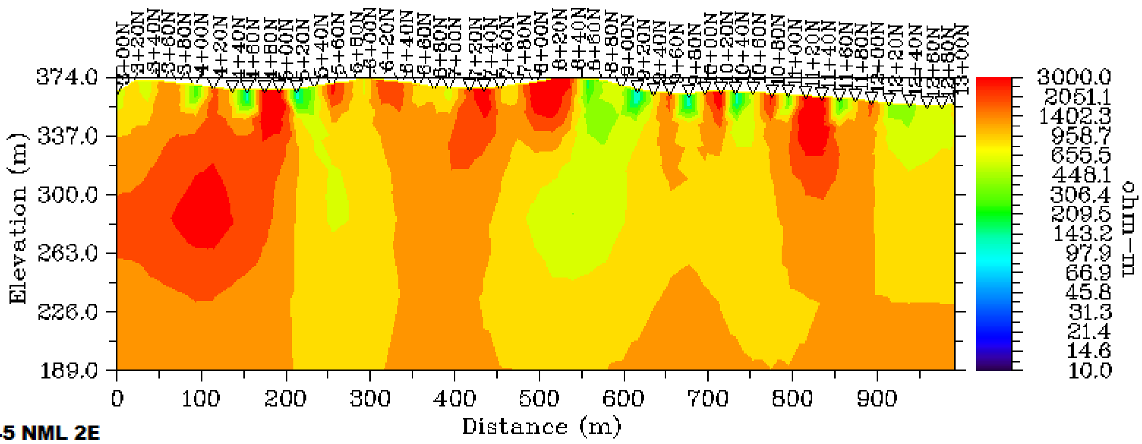
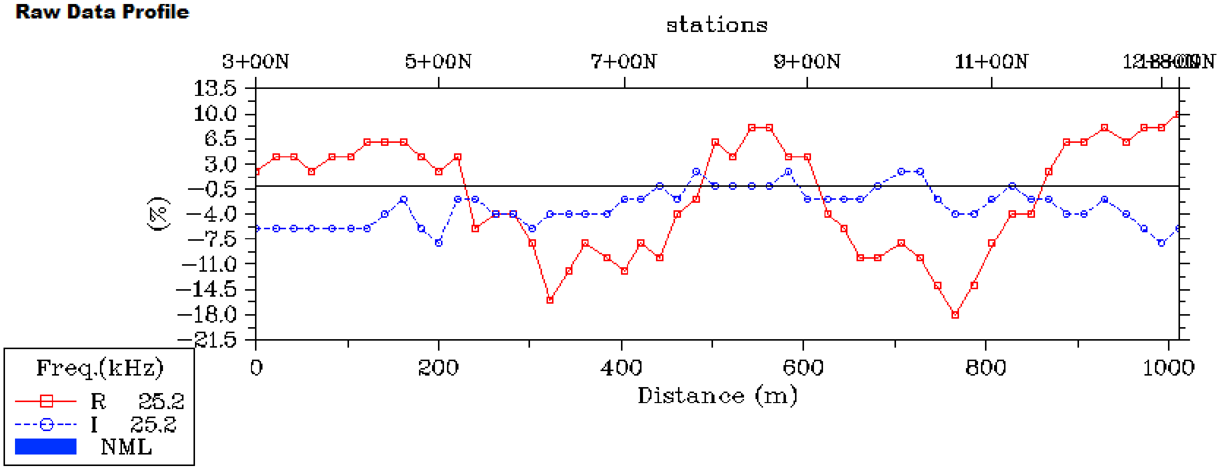


Figure-5 NML 2E
Model 1000 Profile

Appendix 51   NML - Line 3E - Raw Data

Figure-1 NML 3E
Raw Data Profile



Appendix 52 NML - Line 3E - Fraser Filter

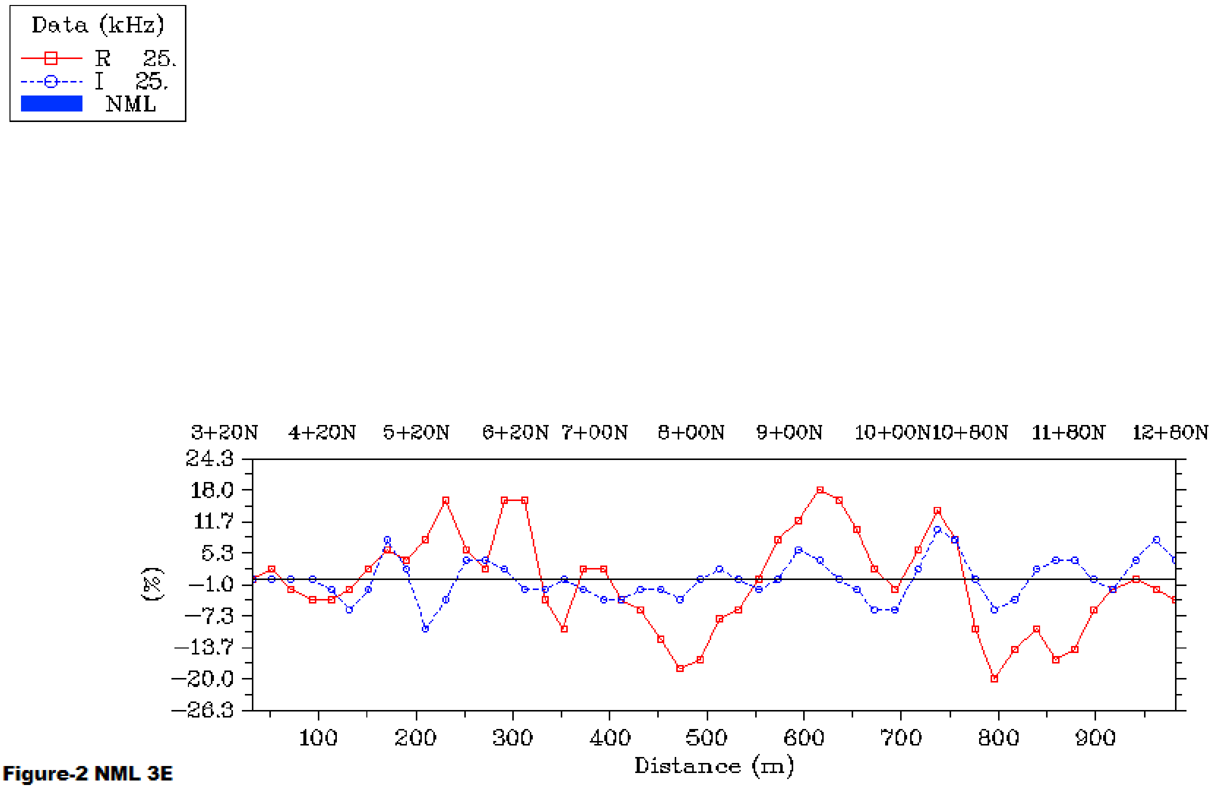


Figure-2 NML 3E
Fraser Filter Profile

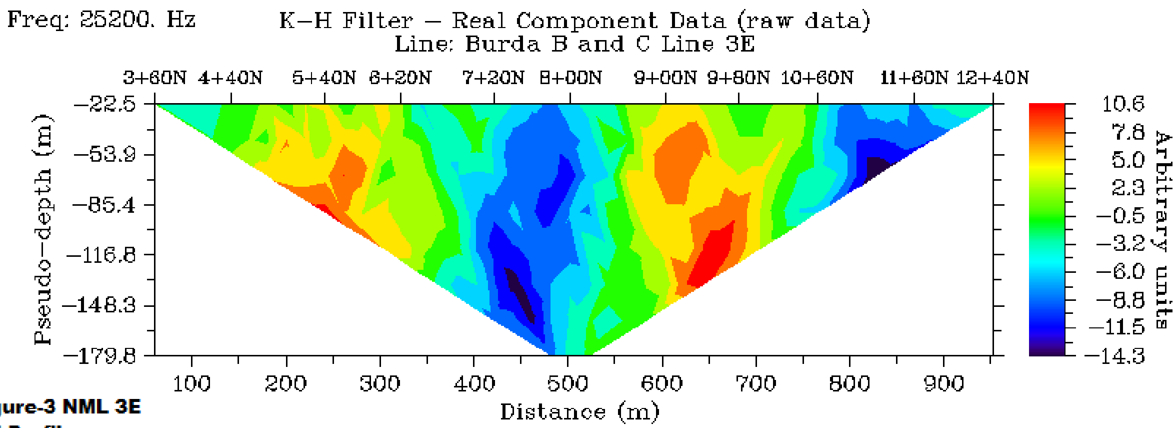
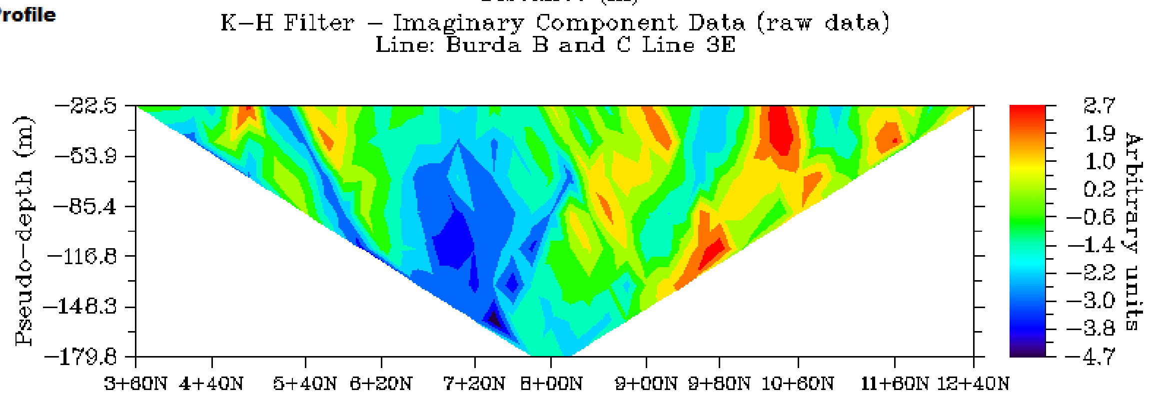


Figure-3 NML 3E KH Profile



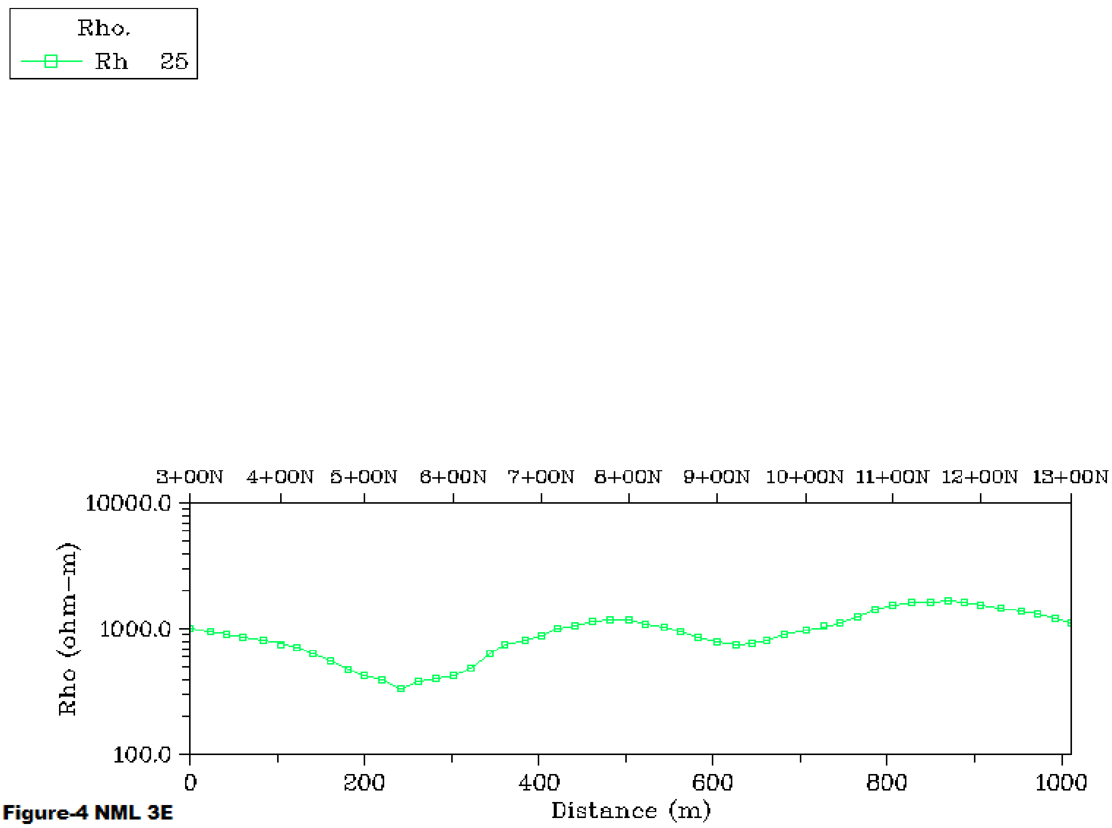


Figure-4 NML 3E
Resistivity 1000 Ohm Profile

Appendix 55 NML - Line 3E - Model

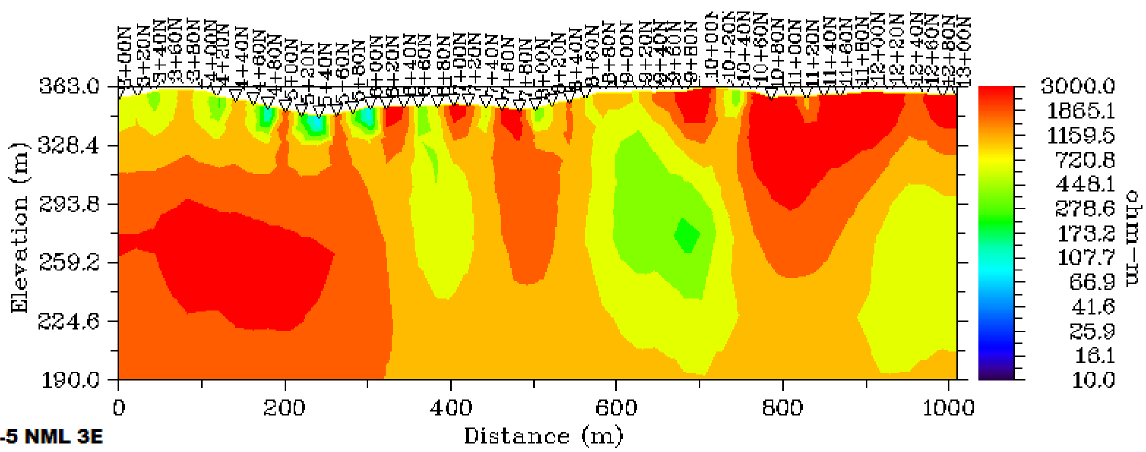
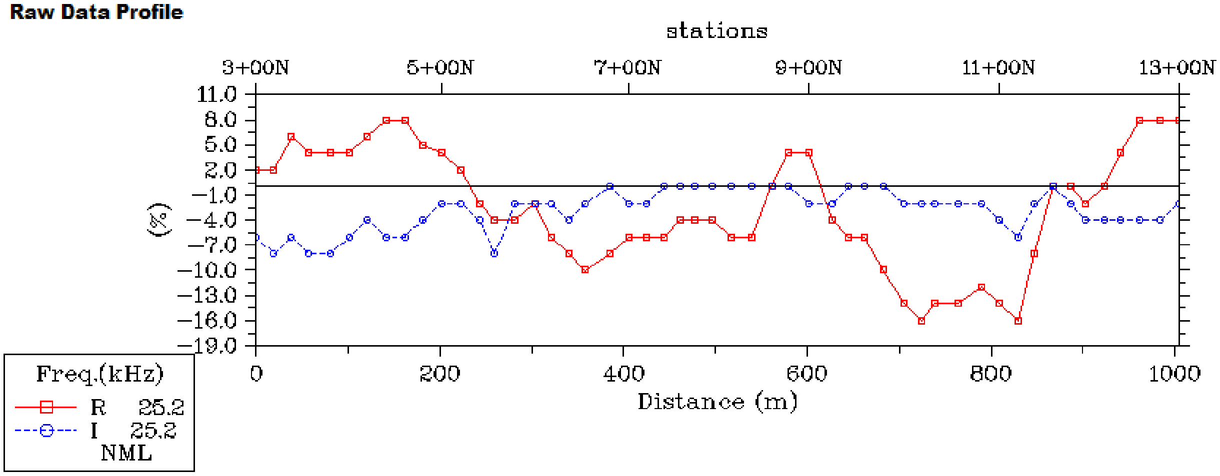
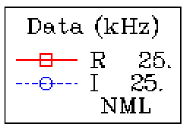


Figure-5 NML 3E
Model 1000 Ohm Profile

Appendix 56 NML - Line 4E - Raw Data

Figure-1 NML 4E
Raw Data Profile





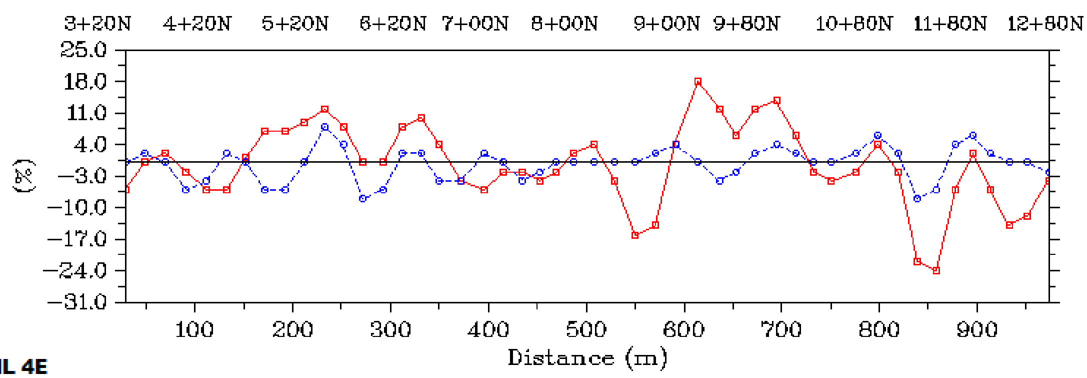


Figure-2 NML 4E
Fraser Filter Profile

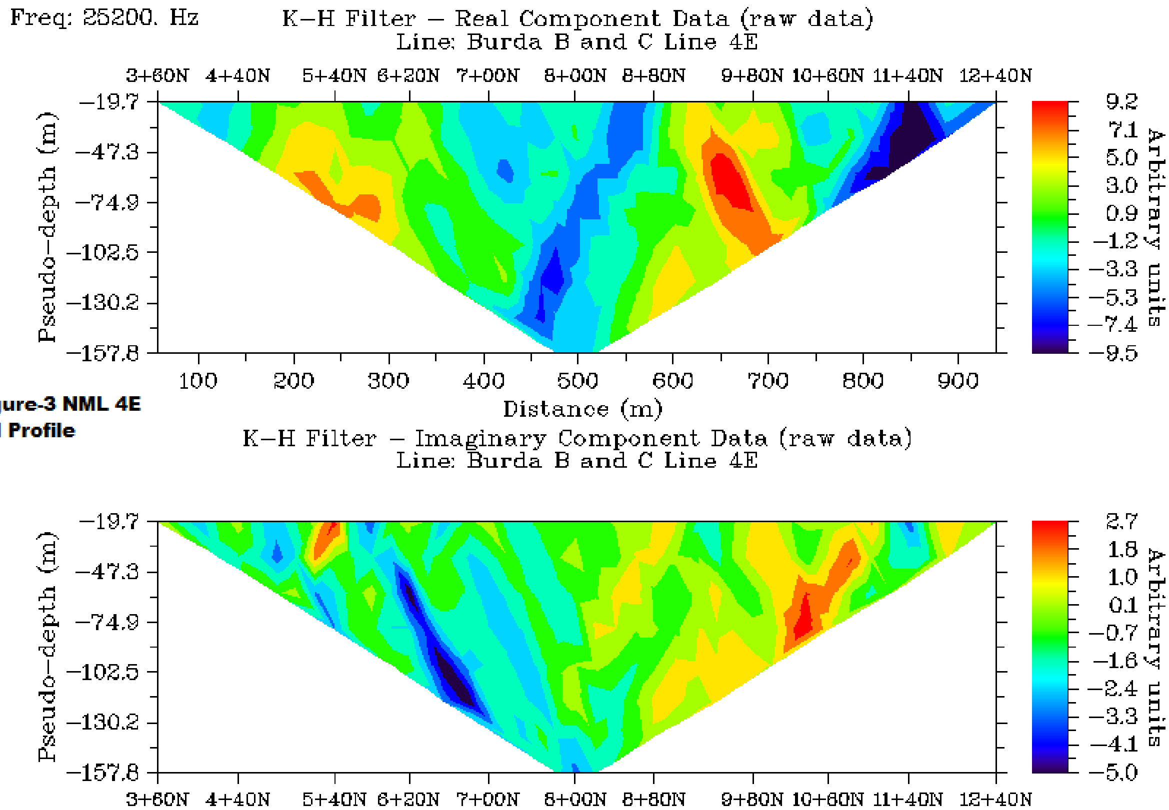
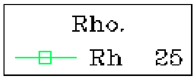


Figure-3 NML 4E KH Profile

Appendix 59 NML - Line 4E - Resistivity



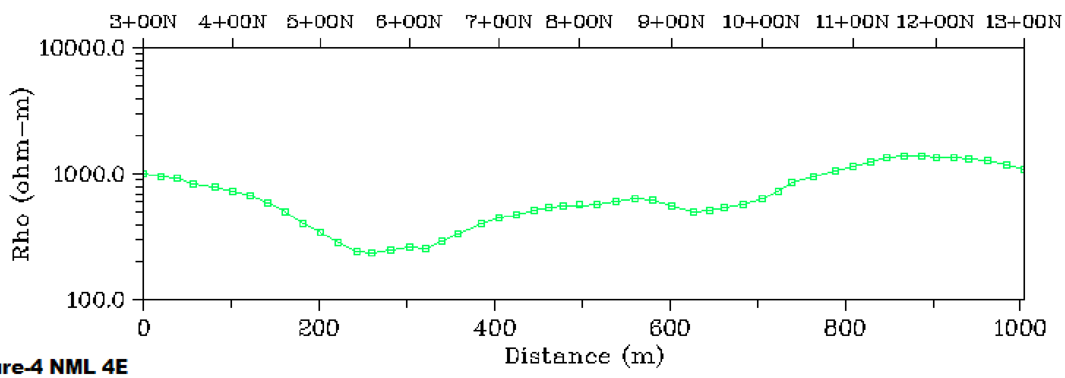


Figure-4 NML 4E
Resistivity 1000 Ohm Profile

Appendix 60 NML - Line 4E - Model

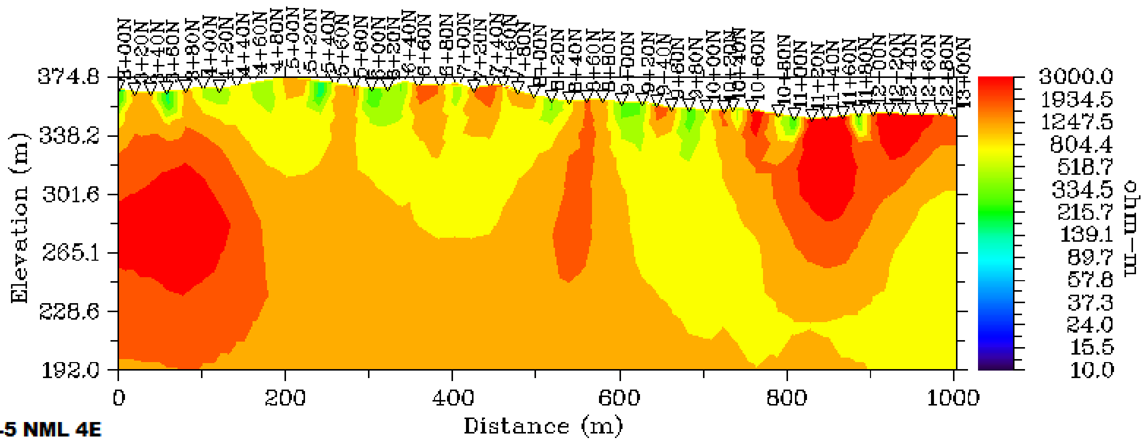
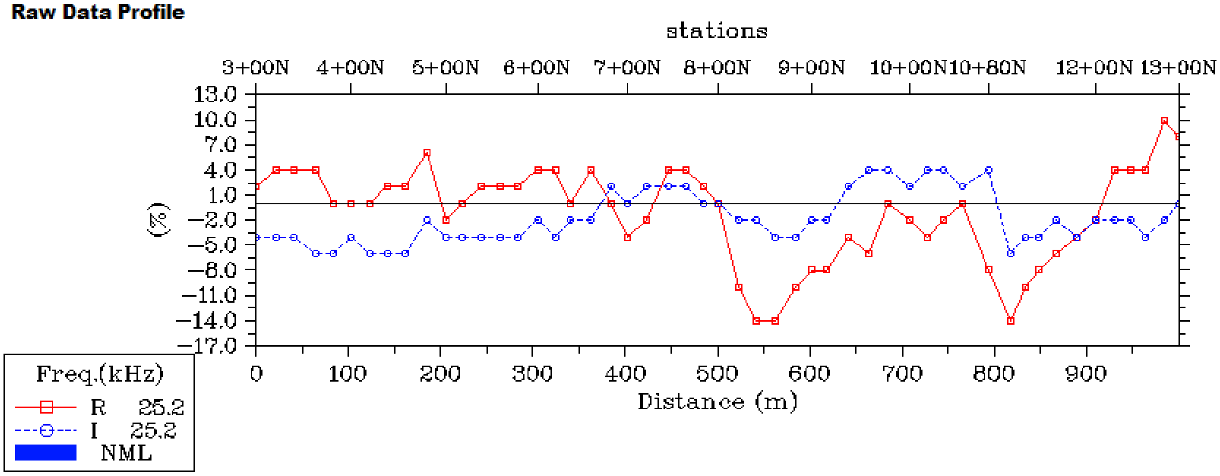


Figure-5 NML 4E
Model 1000 Ohm Profile

Appendix 61 NML - Line 5E - Raw Data

Figure-1 NML 5E
Raw Data Profile



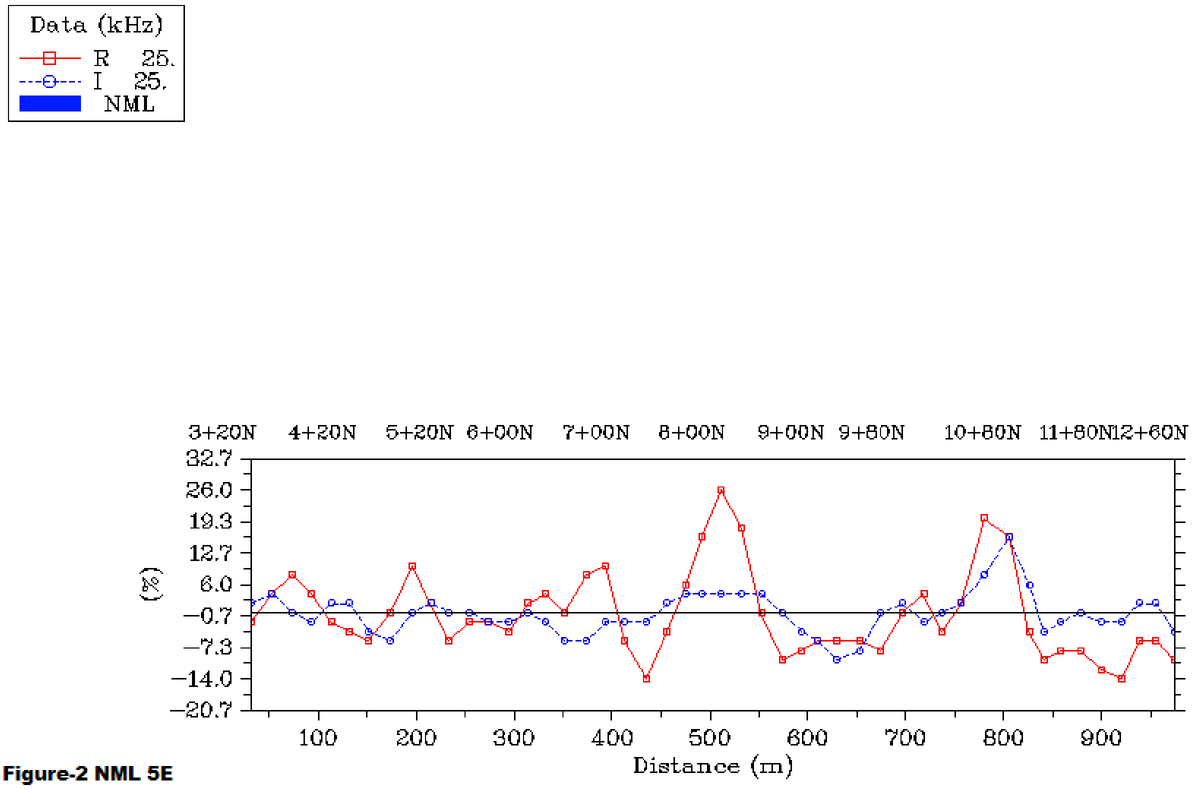


Figure-2 NML 5E
Fraser Filter Profile

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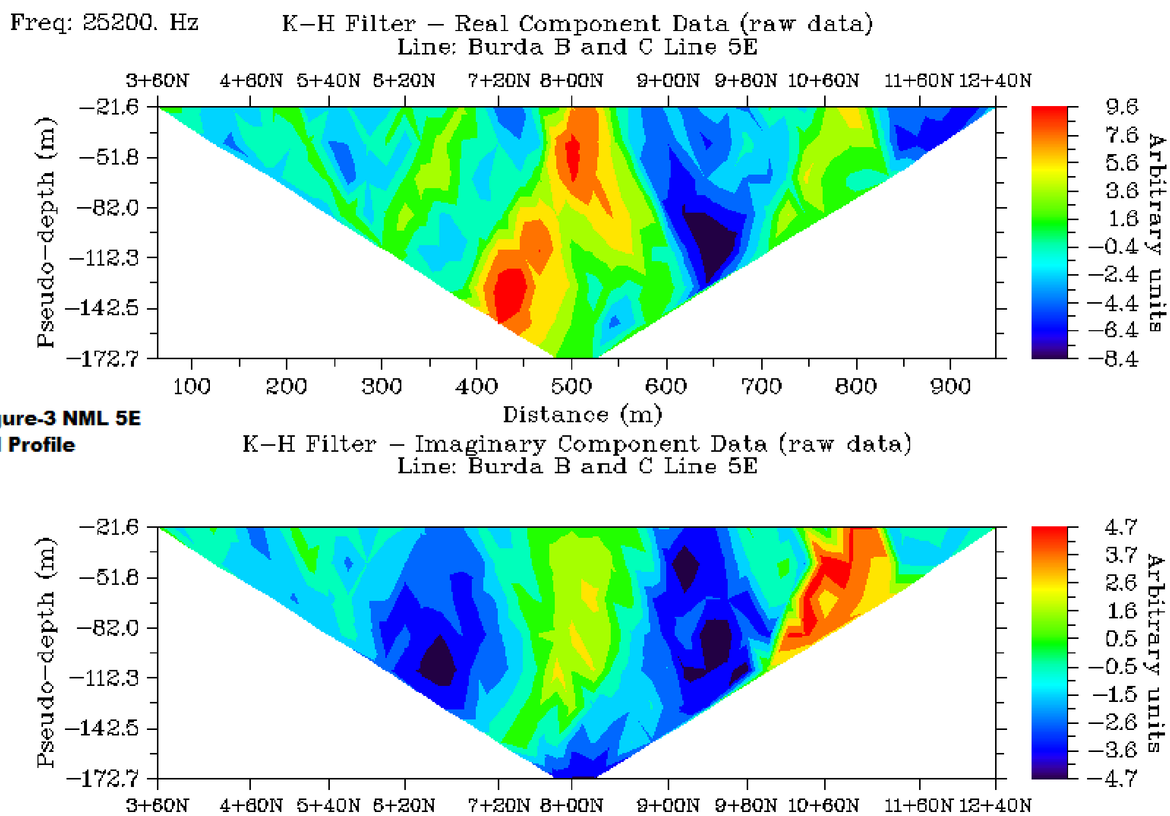


Figure-3 NML 5E
KH Profile

Appendix 64 NML - Line 5E - Resistivity

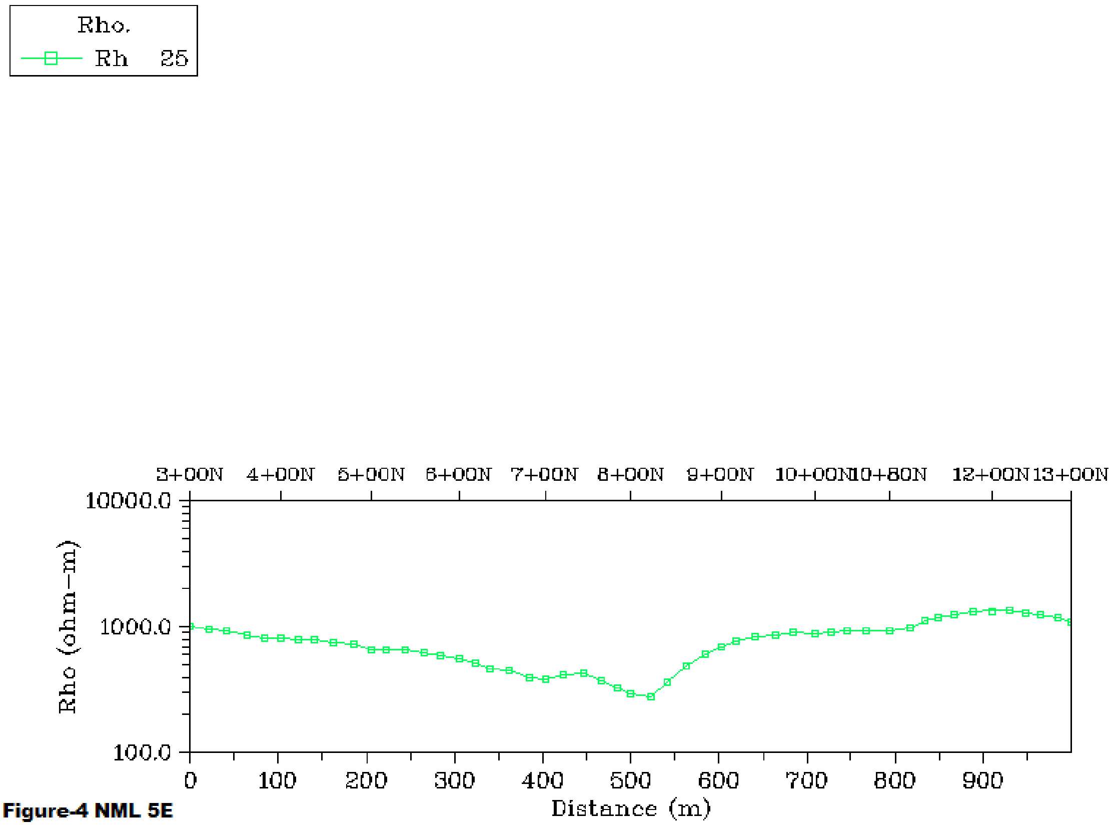


Figure-4 NML 5E
Resistivity 1000 Ohm Profile

Appendix 65 NML -Line 5E - Model

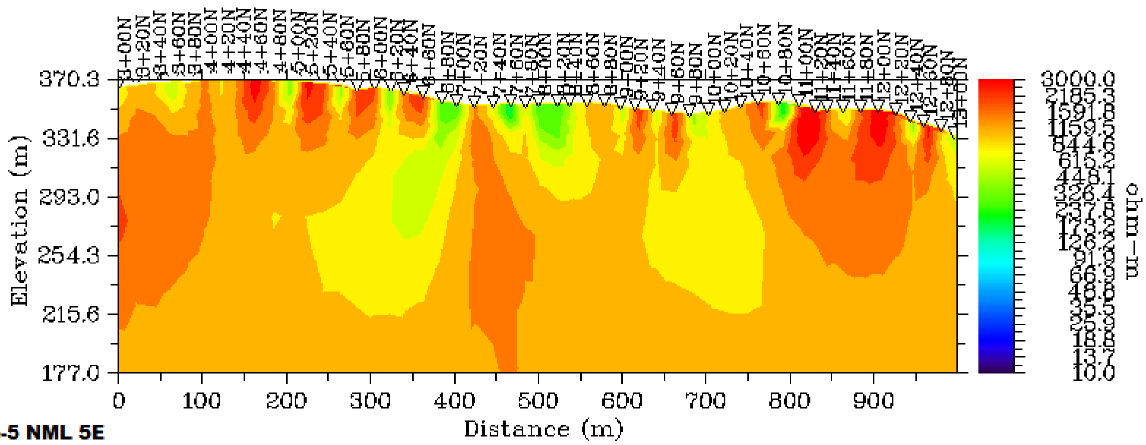
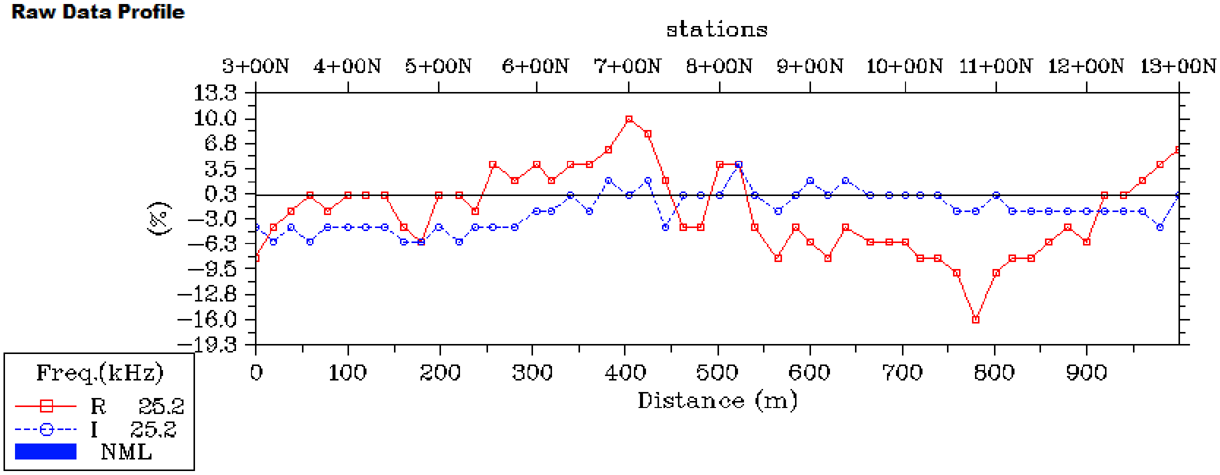


Figure-5 NML 5E
Model 1000 Ohm Profile

Appendix 66 NML - Line 6E - Raw Data

Figure-1 NML 6E
Raw Data Profile



Appendix 67 NML - Line 6E - Fraser Filter

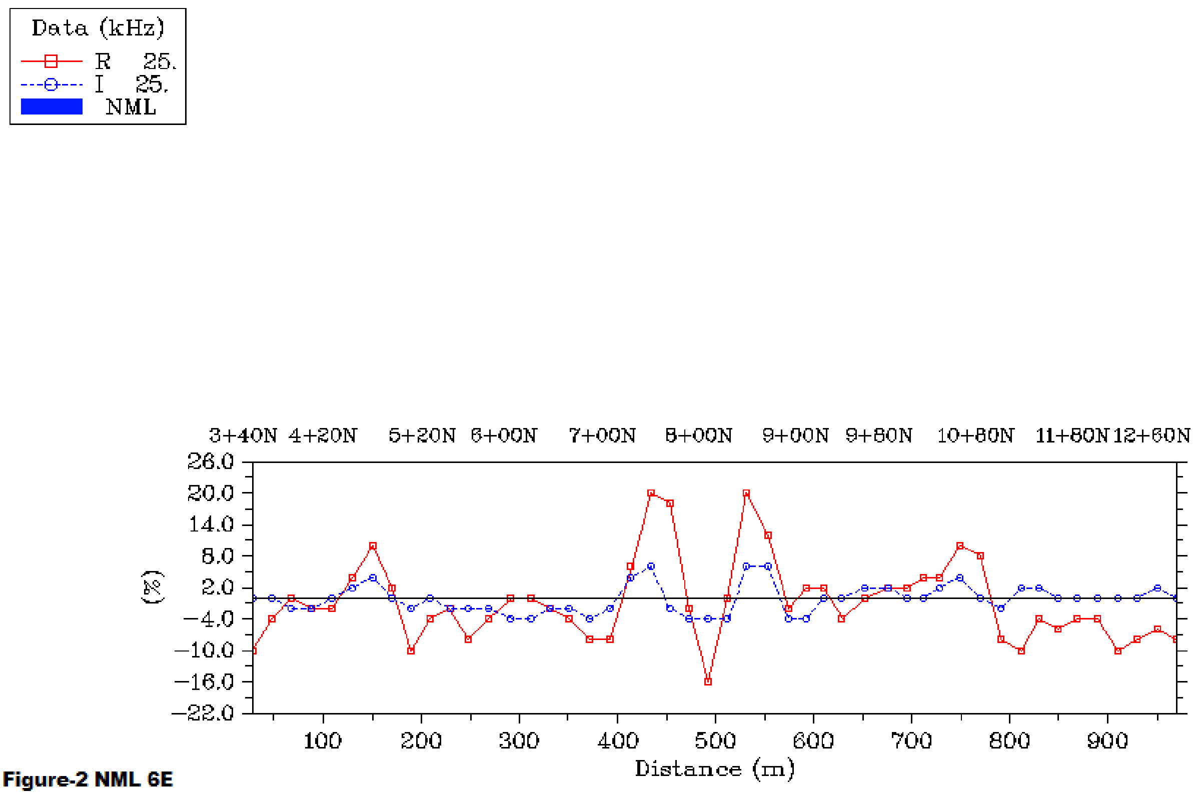


Figure-2 NML 6E
Fraser Filter Profile

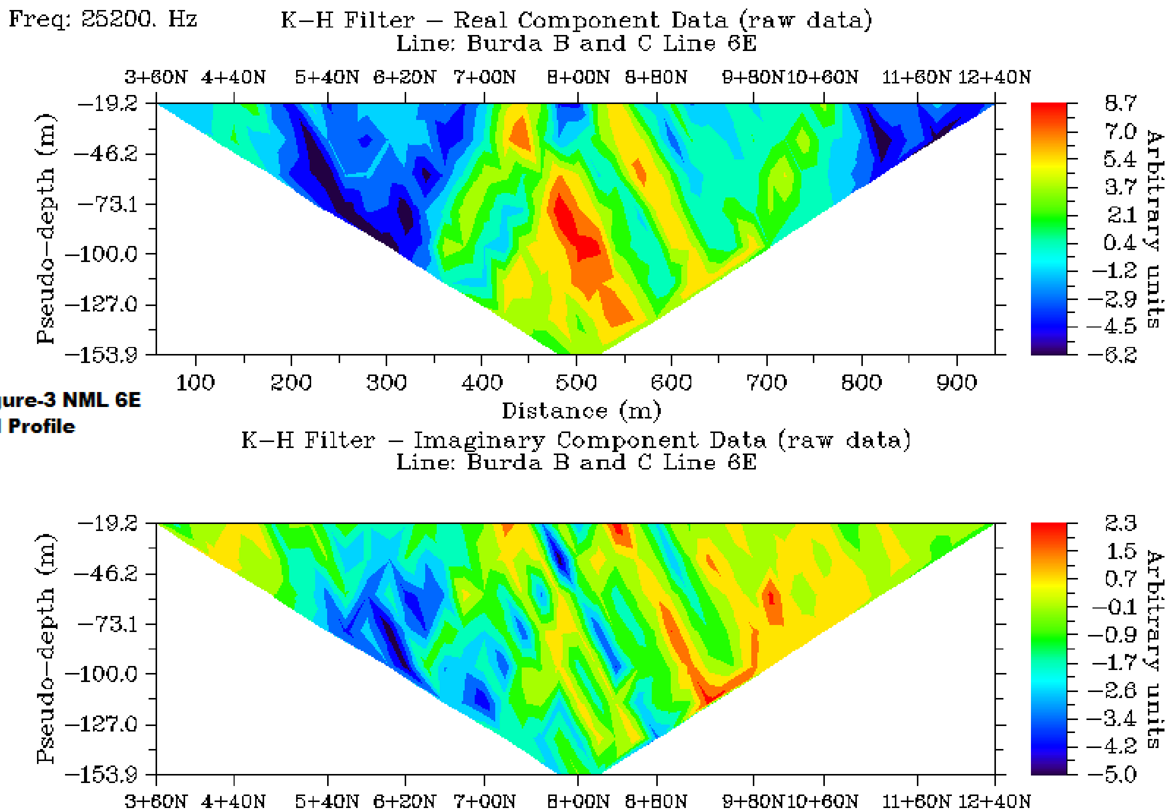


Figure-3 NML 6E KH Profile

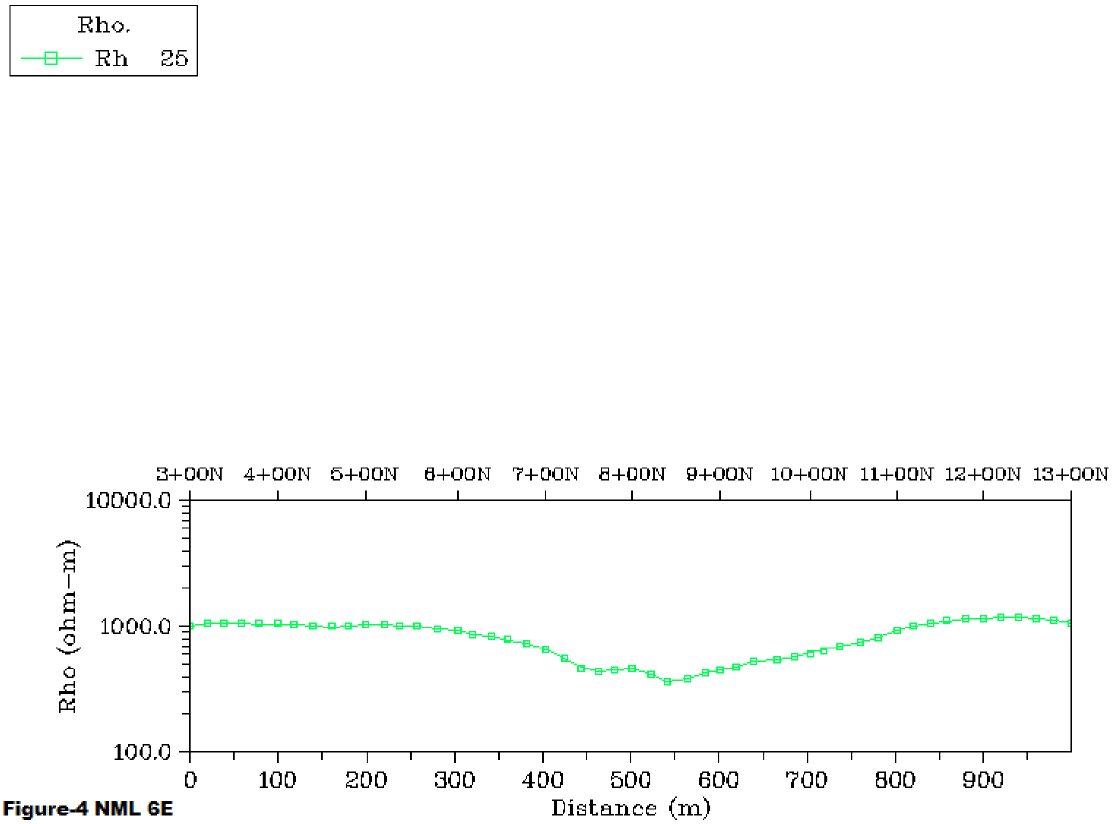


Figure-4 NML 6E
Resistivity 1000 Ohm Profile

Appendix 70 NML - Line 6E - Model

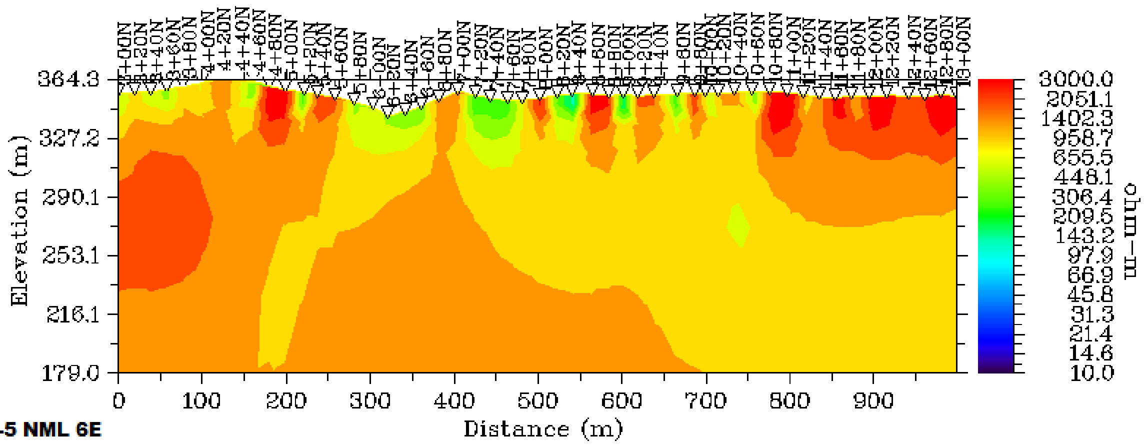


Figure-5 NML 6E
Model 1000 Ohm Profile

SUMMARY OF

SPATIOTEMPORAL GEOCHEMICAL HYDROCARBON INTERPRETATION (SGH)

SURVEY FIELD SAMPLING COLLECTION

SEPTEMBER 2014

Completed by:

Marc Gaudreau and Eldon Phillip

INTRODUCTION

In order to complete an accurate SPATIOTEMPORAL GEOCHEMICAL HYDROCARBON INTERPRETATION (SGH) survey Marc Gaudreau and David Burda consulted with Dale Sutherland with Actlabs in Ancaster Ontario prior to completing field work.

After thorough review of the results of VLF EM surveys completed by Frank Racicot and Shaun Parent David Burda decided to complete a SGH survey to gain additional information to support the VLF EM anomalies and ultimately drill the targets if warranted.

PREPARATION

It was decided to best compliment the VMF EM surveys a sampling grid was prepared following the VLF EM survey lines grid. The VLF EM survey grid was prepared using GPS only. As station markers were used at each station reading it was felt the same grid could be utilized. Dale Sutherland agreed that coverage over line 6E could be omitted and the north and south part of line 00 therefore the following survey grid was prepared. The sampling stations on the SGH grid would be taken at 50m intervals, the lines are at 100 meter spacing.

A total of 128 samples were submitted for analysis. Line 6E (24 samples), Line 5E (24 samples), Line 4E (24 samples), Line 3E (24 samples), Line 2E (24 samples), Line 1E (24 samples), Line 00 (6 samples) and two (2) duplicate samples were taken for quality control at stations 2E 9+00N and 3E 7+00N.

SAMPLING

The filed crew departed from Sudbury on September 24, 2014 and arrived at accommodations in Gowganda and setup for the next day. In the morning of September 25, 2014 the field crew traveled to the boat landing on Duncan Lake approximately 15km west of Gowganda. From the landing a seven (7) km boat ride north on Duncan Lake to the landing locating to access the grid. Same landing location used by the VLF EM survey team. The sampling of the grid went flawlessly the weather was optimum. All but two samples were taken in the “B” horizon. The two samples taken above the “B” horizon were in low lying areas and the organic horizon was sample at a greater depth approximately 25cm. Other than the two samples that did not test the “B” horizon the samples description can be summarized, colour being light to medium reddish brown to grey in sandy silty soil. Strict sampling protocol was adhered to too prevent cross contamination of the samples. The samples were sealed tight and double labeled with coordinates included with sample and station ID. All stations were also flagged for future reference. Note that in a number of instances the pacing was not accurate and adjusted by GPS dynamically in the field.

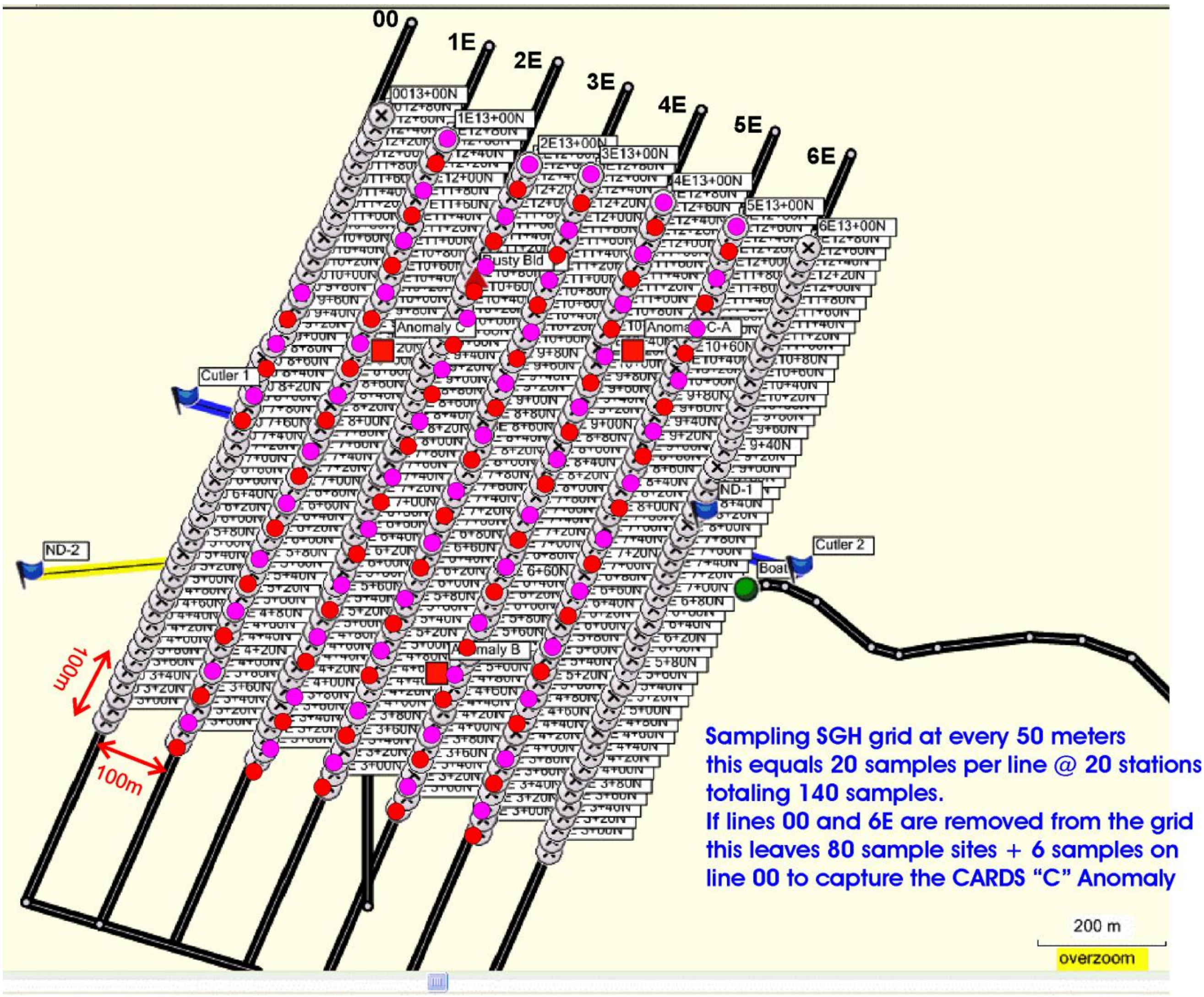
September 25, 2014, lines 5E and 4E were completed.
September 26, 2014, lines 3E and 2E were completed.
September 27, 2014, lines 1E and 00 were completed.

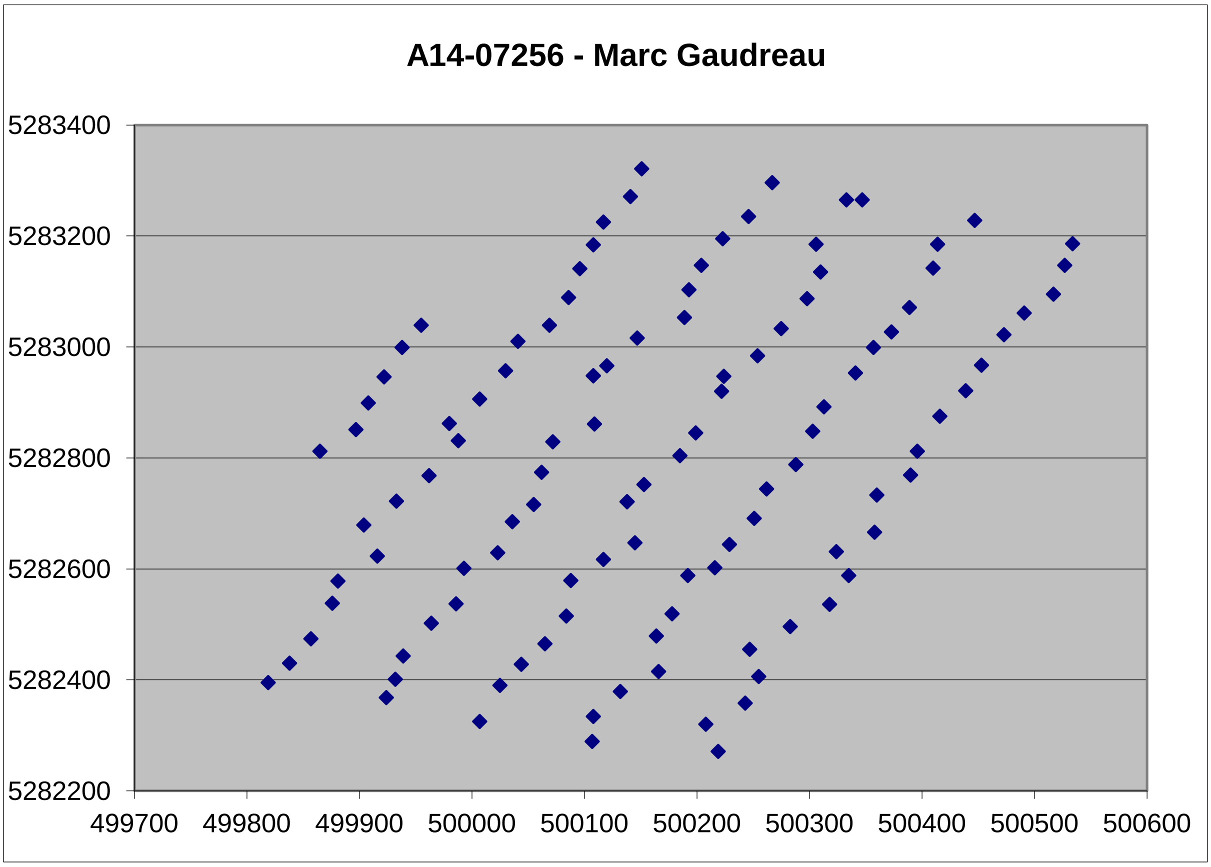
On September 27 & 28th additional exploration work in the same grid area was completed which included shoreline traverses and sampling and tracing a known quartz-carbonate vein across from the west side to east side of Duncan Lake. The vein was found to not be for the most part barren of sulfides. The majority of rocks observed on the shoreline were not mineralized. The field crew returned to Sudbury on September 29th.

The samples were shipped to Actlabs in Ancaster Ontario for analysis.

A sample description and coordinates spreadsheet was also submitted for the report.

Photo of Eldon Phillip typical sample, not colour of “B” horizon.





SGH station sample grid.

Station ID	Easting	Northern
00 7+00N	499865	5282812
00 7+50N	499897	5282851
00 8+00N	499908	5282899
00 8+50N	499922	5282946
00 9+00N	499938	5282999
00 9+50N	499955	5283039
1E 13+00N	500151	5283321
1E 12+50N	500141	5283271
1E 12+00N	500117	5283225
1E 11+50N	500108	5283184
1E 11+00N	500096	5283141
1E 10+50N	500086	5283089
1E 10+00N	500069	5283039
1E 9+50N	500041	5283010
1E 9+00N	500030	5282957
1E 8+50N	500007	5282906
1E 8+00N	499980	5282862
1E 7+50N	499988	5282831
1E 7+00N	499962	5282768
1E 6+50N	499933	5282722
1E 6+00N	499904	5282679
1E 5+50N	499916	5282623
1E 5+00N	499881	5282578
1E 4+50N	499876	5282538
1E 4+00N	499857	5282474
1E 3+50N	499838	5282430
1E 3+00N	499819	5282395
2E 3+00N	499924	5282368
2E 3+50N	499932	5282401
2E 4+00N	499939	5282443
2E 4+50N	499964	5282502
2E 5+00N	499986	5282537
2E 5+50N	499993	5282601
2E 6+00N	500023	5282629
2E 6+50N	500036	5282685
2E 7+00N	500055	5282716
2E 7+50N	500062	5282774
2E 8+00N	500072	5282829
2E 8+50N	500109	5282861
2E 9+00N	500108	5282948
2E 9+00N	500108	5282948
5E 3+00N	500219	5282271
5E 3+50N	500208	5282320
5E 4+00N	500243	5282358
5E 4+50N	500255	5282406
5E 5+00N	500247	5282455
5E 5+50N	500283	5282496
5E 6+00N	500318	5282536
5E 6+50N	500335	5282588
5E 7+00N	500324	5282631
5E 7+50N	500358	5282666

5E 8+00N	500360	5282733
5E 8+50N	500390	5282769
5E 9+00N	500396	5282812
5E 9+50N	500416	5282875
5E 10+00N	500439	5282921
5E 10+50N	500453	5282967
5E 11+00N	500473	5283022
5E 11+50N	500491	5283061
5E 12+00N	500517	5283095
5E 12+50N	500527	5283147
5E 13+00N	500534	5283186
4E 13+00N	500447	5283228
4E 12+50N	500414	5283185
4E 12+00N	500410	5283142
4E 11+50N	500389	5283071
4E 11+00N	500373	5283027
4E 10+50N	500357	5282999
4E 10+00N	500341	5282953
4E 9+50N	500313	5282892
4E 9+00N	500303	5282848
4E 8+50N	500288	5282788
4E 8+00N	500262	5282744
4E 7+50N	500251	5282691
4E 7+00N	500229	5282644
4E 6+50N	500216	5282602
4E 6+00N	500192	5282588
4E 5+50N	500178	5282519
4E 5+00N	500164	5282479
4E 4+50N	500166	5282415
4E 4+00N	500132	5282379
4E 3+50N	500108	5282334
4E 3+00N	500107	5282289
3E 3+00N	500007	5282325
3E 3+50N	500025	5282390
3E 4+00N	500044	5282428
3E 4+50N	500065	5282465
3E 5+00N	500084	5282515
3E 5+50N	500088	5282579
3E 6+00N	500117	5282617
3E 6+50N	500145	5282647
3E 7+00N	500138	5282721
3E 7+00N	500138	5282721
3E 7+50N	500153	5282752
3E 8+00N	500185	5282804
3E 8+50N	500199	5282845
3E 9+00N	500222	5282920
3E 9+50N	500224	5282947
3E 10+00N	500254	5282984
3E 10+50N	500275	5283033
3E 11+00N	500298	5283087
3E 11+50N	500310	5283135

3E 12+00N	500306	5283185
3E 12+50N	500333	5283265
3E 13+00N	500347	5283265
2E 13+00N	500267	5283296
2E 12+50N	500246	5283235
2E 12+00N	500223	5283195
2E 11+50N	500204	5283147
2E 11+00N	500193	5283103
2E 10+50N	500189	5283053
2E 10+00N	500147	5283016
2E 9+50N	500120	5282966

Photo of GPS showing location was taken at each sample station.

3D - SGH

"A SPATIOTEMPORAL GEOCHEMICAL HYDROCARBON INTERPRETATION"

DAVE BURDA
KNIGHT TOWNSHIP SGH SOIL SURVEY

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SGH – SOIL GAS HYDROCARBON
Predictive Geochemistry

for

DAVE BURDA

KNIGHT TOWNSHIP SGH SOIL SURVEY

November 7, 2014

** Dale Sutherland,*

Activation Laboratories Ltd

(- author, originator)*

EVALUATION OF SAMPLE DATA - EXPLORATION FOR:
"COPPER AND GOLD" TARGETS

THE SGH COPPER AND SGH GOLD INTERPRETATION TEMPLATES
ARE USED FOR THIS REPORT

Workorder: A14-07256

1336 Sandhill Drive ● Ancaster, ON ● L9G 4V5 ● CANADA ● Tel: (905) 648-9611 ● Fax: (905) 648-9613 ● Toll Free: 1-888-ACTLABS

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PREFACE

THIS "STANDARD" SGH INTERPRETATION REPORT:

The purpose of this Soil Gas Hydrocarbon (SGH) interpretation "Standard Report" is to ensure that clients and other potential reviewers of the results have a good understanding of this organic, deep penetrating geochemistry. As SGH provides such a large data set and is not interpreted in the same way as an inorganic geochemical method, this interpretation and report enables the user to realize the results in a timely fashion and capitalizes on years of research and development since the inception of SGH in 1976 combined with the knowledge obtained by Activation Laboratories through the interpretation of SGH data from over hundreds of surveys for a wide variety of target types in various lithologies from many geographical locations. Although referenced today as a "nano-technology", the analysis of SGH has not changed since inception. The report is compulsory as it is the only known organic geochemistry that, in spite of the name, uses non-gaseous semi-volatile organic compounds interpreted using a forensic signature approach. It is typically based solely on SGH data and does not include the consideration or interpretation from any other geochemistry (inorganic), geology, or geophysics that may exist related to this survey area(s). This report can also provide evidence of project maintenance. To keep the price to a minimum and to provide as short a turnaround time as practically possible, usually only one SGH Pathfinder Class map is illustrated in a "Standard Report" with an applied interpretation although several other SGH Pathfinder Class maps are used and referenced. Definitions of certain terms or phrases used in this report can be found in Appendix A. A Supplemental Report and/or interpretations for other target types are available. A GIS package of georeferenced images is also available. (See Appendix H)

The interpretation in this report has used the results from some of the research with SGH in recent years which has focused on the potential that the SGH data might be able to further dissect and understand the relationships between the chemical Redox conditions in the overburden the development of an electrochemical cell and its affect in shaping geochemical anomalies. This research has resulted in the development by Activation Laboratories of a new enhanced model of the Electrochemical/ Redox Cell theory originated by Govett (1976) that was further developed to the model by Hamilton (2004, 2009). The new enhanced model developed by Sutherland (2011) takes the general anomalies expected by the Hamilton model to a higher level of detail and specificity. This has resulted in a more confident level of interpretation which has been referenced as 3D-SGH or **3D-"Spatiotemporal Geochemical Hydrocarbons**. This model has been formally introduced at the International Applied Geochemistry Symposium (IAGS) organized by The Association of Applied Geochemists that took place in Rovaniemi, Finland, in August 2011. This new level of understanding of the expected anomaly types that can be observed with SGH provides a new level of quality control in the interpretation process as the symmetry of SGH anomalies can assure the interpreter which anomalies are as a result of a buried target. With the enhanced 3D-SGH interpretation that was introduced in 2012, we also mark the beginning of the ability to make some statements regarding the possible depth to mineralization for some projects as we dissect the Redox cell relative to the new Electrochemical Cell theory. The cover of this report is an artist's rendering of the pathways of different classes of Spatiotemporal Geochemical Hydrocarbons which migrate through the overburden. This model is used as the new 3D-SGH interpretation approach.

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DISCLAIMER

This "SGH Interpretation Report" has been prepared to assist the user in understanding the development and capabilities of this Organic based Geochemistry. The interpretation of the Soil Gas Hydrocarbon (SGH) data is in reference to a template or group of SGH classes of compounds specific to a type of mineralization or target that is chosen by the client (i.e. the template for gold, copper, VMS, uranium, etc.). The various templates of SGH Pathfinder Classes that together define the forensic identification signature for a wide range of commodity target types; Gold, Nickel, VMS, SEDEX, Uranium, Cu-Ni-PGE, IOCG, Base Metal, Tungsten, Lithium, Polymetallic, and Copper, as well as for Kimberlites, Coal Seam, Wet Gas and Oil Play, have been developed through years of research and have been further refined from review of case studies and orientation studies has proven to be able to also address a wide range of lithologies. Even with 15+ years of development and experience with SGH, Activation Laboratories Ltd. cannot guarantee that the templates used are applicable to every type of target in every type of environment. The interpretation in this report attempts to identify an anomaly that has the best SGH signature in the survey for the type of mineralization or target chosen by the client. However, this interpretation is not exhaustive and there may be additional SGH anomalies that may warrant interest. It should not be viewed due to the generation of this SGH report, that Activation Laboratories Ltd. has the expertise or is in the business of interpreting any type of geochemical data as a general service. As the author is the originator of the SGH geochemistry, has researched and developed this exploration tool since 1996, and has produced similar interpretations using SGH data for close to 1,000 surveys, he is perhaps the best qualified to prepare this interpretation as assistance to clients wishing to use this SGH geochemistry. Activation Laboratories Ltd. can offer assistance in general suggestions for sampling protocols and in sample grid design; however we accept no responsibility to the appropriateness of the samples taken. Activation Laboratories Ltd. has made every attempt to ensure the accuracy and reliability of the information provided in this report. Activation Laboratories Ltd. or its employees do not accept any responsibility or liability for the accuracy, content, completeness, legality, or reliability of the information or description of processes contained in this report. The information is provided "as is" without a guarantee of any kind in the interpretation or use of the results of the SGH geochemistry. The client or user accepts all risks and responsibility for losses, damages, costs and other consequences resulting directly or indirectly from using any information or material contained in this report or using data from the associated spreadsheet of results.

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Cautionary Note Regarding Assumptions and Forward Looking Statements

The statements and target rating made in the Soil Gas Hydrocarbon (SGH) interpretive report or in other communications may contain or imply certain forward-looking information related to the quality of a target or SGH anomaly.

Statements related to the rating of a target are based on comparison of the SGH signatures derived by Activation Laboratories Ltd. through previous research on known case studies. The rating is not derived from any statistics or other formula. The rating is a subjective value on a scale of 0 to 6 relative to the similarity of the SGH signature reviewed compared to the results of previous scientific research and case studies based on the analysis of surficial samples over known ore bodies. No information on the results from other geochemical methods, geophysics, or geology is usually available as additional information for the interpretation and assignment of a rating value unless otherwise stated. The rating does not imply ore grade and is not to be used in mineral resource estimate calculations. References to the rating should be viewed as forward-looking statements to the extent that it involves a subjective comparison to known SGH case studies. As with other geochemical methods, an implied rating and associated anticipated target characteristics may be different than that actually encountered if the target is drilled tested or the property developed.

Activation Laboratories Ltd. may also make a scientifically based reference in this interpretive report to an area that might be used as a drill target. Usually the nearest sample is identified as an approximation to a "possible drill target" location. This is based only on SGH results and is to be regarded as a guide based on the current state of this science.

Unless otherwise stated, Activation Laboratories Ltd. has not physically observed the exploration site and has no prior knowledge of any site description or details or previous test results. Actlabs makes general recommendations for sampling and shipping of samples. Unless stated, the laboratory does not witness sampling, does not take into consideration the specific sampling procedures used, or factors such as the season of sampling, samples handling, packaging, or shipping methods. The majority of the time, Activation Laboratories Ltd. has had no input into sampling survey design. Where specified Activation Laboratories Ltd. may not have conducted sample preparation procedures as it may have been conducted at the client's assigned laboratory external to Actlabs. Although Actlabs has attempted to identify important factors that could cause actual actions, events or results to differ scientifically which may impact the associated interpretation and target rating from those described in forward-looking statements, there may be other factors that cause actions, events or results that are not anticipated, estimated or intended.

In general, any statements that express or involve discussions with respect to predictions, expectations, beliefs, plans, projections, objectives, assumptions, future events or performance are not statements of historical fact. These "scientifically based educated theories" should be viewed as "forward-looking statements".

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Readers of this interpretive report are cautioned not to place undue reliance on forward-looking information. Forward looking statements are made based on scientific beliefs, estimates and opinions on the date the statements are made and the interpretive report issued. The Company undertakes no obligation to update forward-looking statements or otherwise revise previous reports if these beliefs, estimates and opinions, future scientific developments, other new information, or other circumstances should change that may affect the analytical results, rating, or interpretation.

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SOIL GAS HYDROCARBON (SGH) GEOCHEMISTRY – OVERVIEW

In the search for minerals and elements, geology requires tools to assess the location and potential quantity of minerals and ores. In the past people looked at the landscape to find the deposit. Similar landscapes indicate similar mineral and metal deposits. This is searching on a macro level, while geochemistry is searching on a micro level. Organic material requires many minerals and elements, so organic materials can be biomarker of the present of the minerals and elements.

SGH is a deep penetrating geochemistry that involves the analysis of surficial samples from over potential mineral or petroleum targets. The analysis involves the testing for 162 hydrocarbon compounds in the C5-C17 carbon series range applicable to a wide variety of sample types. The hydrocarbons are residues from the decomposition of bacteria and microbe that feed on the target commodity as they require inorganic metallic's to catalyze the reactions necessary to develop hydrocarbons and grow in their life cycle. Specific classes of hydrocarbons (SGH) have been successful for delineating targets found at over 900 metres in depth. Samples of various media have been successfully analyzed such as soil (any horizon), sand, till, drill core, rock, peat, humus, lake-bottom sediments and even snow. After preparation in the laboratory, the SGH analysis incorporates a very weak leach, essentially aqueous, that only extracts the surficial bound hydrocarbon compounds and those compounds in interstitial spaces around the sample particles. These are the hydrocarbons that have been mobilized from the target depth. SGH is unique and should not be confused with other hydrocarbon tests or traditional analyses that measure C1 (Methane) to C5 (Pentane) or other gases. Thus, in spite of the name, SGH does not analyze for any hydrocarbons that are actually gaseous at room temperature and can be used to analyze for hydrocarbons in sample types other than soil. SGH is also different from soil hydrocarbon tests that thermally extracts or desorbs all of the hydrocarbons from the whole soil sample. This test is less specific as it does not separate the hydrocarbons and thus does not identify or measure the responses as precisely. These tests also do not use a forensic approach to identification. The hydrocarbons in the SGH extract are separated by high resolution capillary column gas chromatography and then detected by mass spectrometry to isolate, confirm, and measure the presence of only the individual hydrocarbons that have been found to be of interest from initial research and development and from performance testing especially from the two Canadian Mining Industry Research Organization (CAMIRO) projects (97E04 and 01E02).

Over the past 15+ years of research, Activation Laboratories Ltd. has developed an in-depth understanding of the unique SGH signatures associated with different commodity targets. Using a forensic approach we have developed target signatures or templates for identification, and the understanding of the expected geochromatography that is exhibited by each class of SGH compounds. In 2004 we began to include an SGH interpretation report delivered with the data to enable our clients to realize the complete value and understanding of the SGH results in the shortest time frame and provide the benefit from past research sponsored by Actlabs, CAMIRO, OMET and other industrial sponsors. In 2011, a new model of Electrochemical/Redox Cell theory was proposed and the new 3D-SGH interpretation approach based on this theory was incorporated in 2012 on a routine basis for SGH interpretation reports.

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SGH has attracted the attention of a large number of Exploration companies. In the above mentioned research projects the sponsors have included (in no order): Western Mining Corporation, BHP-Billiton, Inco, Noranda, Outokumpu, Xstrata, Cameco, Cominco, Rio Algom, Alberta Geological Survey, Ontario Geological Survey, Manitoba Geological Survey and OMET. Further, beyond this research, Activation Laboratories Ltd. has interpreted the SGH data for over 700 targets from clients since January of 2004. In both CAMIRO research projects over known mineralization and in exploration projects over unknown targets, SGH has performed exceptionally well. As an example, in the first CAMIRO research project that commenced in 1997 (Project 97E04), there were 10 study areas that were submitted blindly to Actlabs. These study sites were selected since other inorganic geochemical methods were unsuccessful at illustrating anomalies related to the target.

Although Actlabs was only provided with the samples and their coordinates, SGH was able to locate the blind mineralization with exceptional accuracy in 9 of the 10 surveys. In 2007, SGH has recently been very successful in exploration and discovery of unknown targets e.g. Golden Band Resources drilled an SGH anomaly and discovered a significant vein containing “visible” gold. (www.goldenbandresources.com)

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SOIL GAS HYDROCARBON SURVEY DESIGN AND SAMPLING

Summary: See Appendix C for more details

In summary, the best conditions for the sample type and survey design include:

- Fist sized samples are usually retrieved from a shallow dug hole in the 15 to 40 cm range of depth.
- Different sample types can be taken even "within" the same survey or transect, data leveling is rarely ever required. SGH is highly effective in areas of very difficult terrain. The Golden Rule is to always take a sample.
- Samples should be evenly spaced in a grid or a series of transects with sample lines spaced at a ratio of up to 4:1 (line spacing: sample spacing).
- A minimum of 50 sample "locations" is recommended with one-third over the target and one-third on each side of the target into background if this can be predicted. This provides the opportunity of optimal data contrast.
- If very wet, samples can be drip dried in the field. No special preservation is required for shipping.
- Relative or UTM sample location coordinates are required to allow interpretation.

SAMPLE PREPARATION AND SGH ANALYSIS

Summary: See Appendix D for more details

Upon receipt at Activation Laboratories:

- The samples are air-dried at a relatively low temperature of 40°C.
- The samples are then sieved and the -60 mesh sieve fraction (<250 microns, although different mesh sizes can be used at the preference of the exploration geologist) is collected.
- The collected "pulp" is packaged in a Kraft paper envelope and transported from our sample preparation department to our analytical building also located in the industrial park in Ancaster Ontario.
- Each sample is then extracted, compounds separated by gas chromatography and detected by mass spectrometry at a *Reporting Limit* of one part-per-trillion (ppt).
- The results of the SGH analysis is reported in raw data form in an Excel spreadsheet as "semi-quantitative" concentrations without any additional statistical modification.

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SGH DATA QUALITY

Summary: See Appendix E for more details

Reporting Limit:

- The Excel spreadsheet of concentrations for each of the 162 compounds monitored is in units of ppt as "parts-per-trillion" which is equivalent to nanograms/kilogram (ng/Kg). The reporting limit of 1 ppt represents a value of approximately 5 times the standard deviation of low level analysis. Essentially all background noise has already been eliminated. All data reported should be used in geochemical mapping. Actual detectable levels can be significantly < 1 ppt.

Laboratory Replicate Analysis:

- An equal aliquot of a random sample is analyzed as a laboratory replicate.
- Due to the large amount of data, the estimate of method variability is reported as the percent coefficient of Variation (%CV).
- A laboratory replicate analysis is reported at a frequency of 1 for every 15 samples analyzed.
- The variability of field duplicate samples are similarly reported if identified.

Historical SGH Precision:

- Although the SGH analysis reports results at such trace ppt concentration levels, the average %CV for laboratory replicates is 8% within a range of ±4%.
- Field duplicates have historically been 5% higher than laboratory replicates.

Laboratory Materials Blank (LMB-QA):

- The LMB-QA values are only an early warning as a quality assurance procedure to indicate the relative cleanliness of laboratory glassware, vials, caps, and the laboratory water supply at the ppt concentration level.
- The LMB-QA values should not be subtracted from any SGH data as any background or noise characteristics have already been removed through the use of a Reporting Limit.

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SGH DATA INTERPRETATION

Summary: See Appendix F for more details

SGH Interpretation and Report:

- Due to the very large data set provided by the SGH analysis, this interpretation report is provide to offer guidance in regard to the results of this geochemistry for their survey.
- In our interpretation procedure, we separate the 162 compound results into 19 SGH sub-classes. These classes include specific alkanes, alkenes, Thiophenes, aromatic, and polyaromatic compounds. The concentrations of the individual hydrocarbons within a class are simply summed. None of these compounds are gaseous at room temperature.
- At this time the magnitude of the hydrocarbon class data has not been proven to imply a higher grade or quantity of the mineralization if present.
- A "geochemical anomaly threshold value" should not be calculated for SGH data as any background or noise has already been filtered out through the use of a Reporting Limit instead of some type of detection limit.
- SGH hydrocarbons data should never be interpreted individually. Interpretation must always be by compound class.
- Multiple SGH Classes are compared. Multiple SGH Classes that have been associated with the presence of specific mineralization are called SGH Pathfinder Classes that together represent the forensic signature or fingerprint identification for a specific type of mineralization or petroleum play.
- The anomalies of each class are compared as to their geochromatographic dispersion and ability to vector to a common location that may be referenced as a potential drill target.
- The agreement and behaviour between SGH Pathfinder Classes for a type of target, as a template of Classes, is compared against SGH research and orientation studies. The quality of agreement is expressed as an SGH Rating of confidence that the SGH anomalies of the survey being interpreted are similar to the behaviour of these classes over known mineralization.
- The interpretation is customized for the project survey by the Author. The SGH Rating and Interpretation is thus subjective and based on the experience of close to 1,000 SGH survey interpretations. The interpretation is not conducted by any computerized process.

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SGH CHARACTERISTICS

Summary: See Appendix G for more details

SGH Characteristics:

- The pattern of SGH anomalies are usually of high contrast and easily observed.
- SGH is able to illustrate exceptionally symmetrical anomalies in spite of exotic overburden and barriers such as permafrost, shale and basalt caps, previously thought to be impenetrable.
- Inorganic geochemistry can illustrate anomalies of metals that have been mobilized by surficial physical processes. As SGH is essentially "blind" to the inorganic content of a sample, SGH anomalies illustrate the true source of mineralization.
- AS SGH hydrocarbons are essentially non-polar, highly symmetrical anomalies are observed. As such symmetry is rare this provides a quality control to the interpretation resulting in higher confidence that is reflected by a higher SGH Rating Score in comparison to known case studies.
- SGH can be analyzed on samples collected in different seasons or adjacent years. The combined data rarely require any data leveling.

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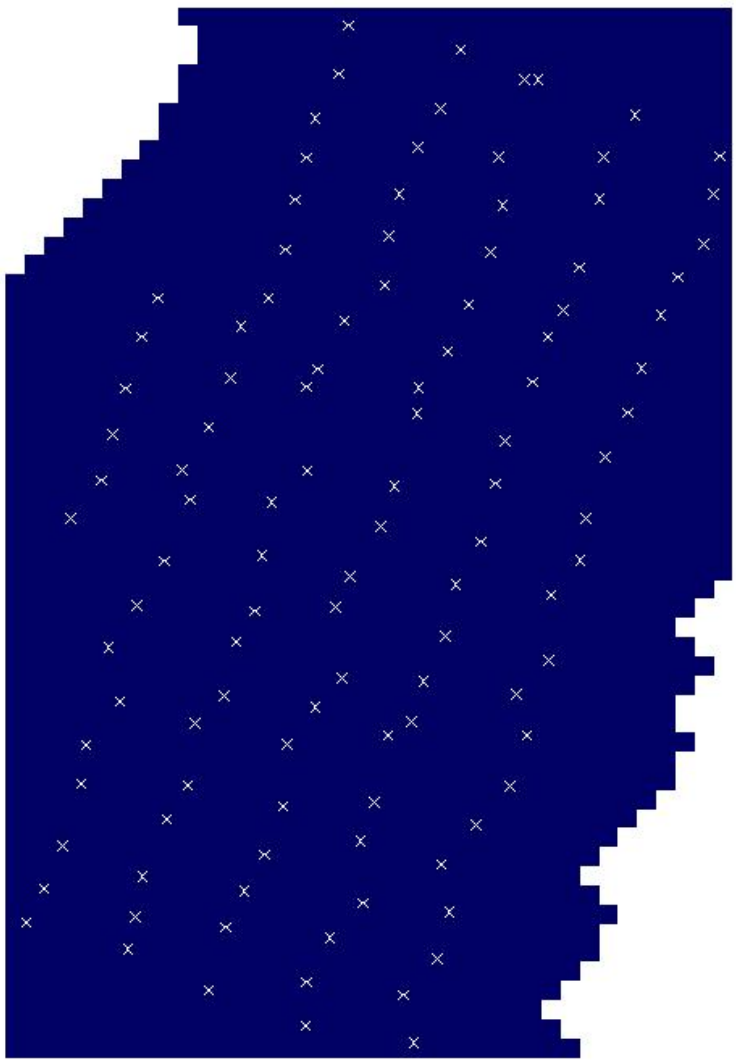
INTERPRETATION OF SGH RESULTS
A14-07256 – DAVE BURDA - KNIGHT TOWNSHIP SGH SOIL SURVEY

This report is based on the SGH results from the analysis of a total of 113 soil samples. The KNIGHT TOWNSHIP SGH Soil Survey Area is described by a rectangular grid with samples spaced at approximately 50 metres along six transects that were 100 metres apart. These samples were collected in September of 2014 and shipped for analysis on September 30th. Analysis was conducted at Actlabs Global Headquarters in Ancaster Ontario Canada. The samples were prepared and then analyzed from October 8th to 9th. Sample coordinates were provided for mapping of the SGH results for these samples in UTM – Zone 17 format. A sample location map is shown below

KNIGHT TOWNSHIP SGH SOIL SURVEY - SAMPLE LOCATION MAP



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GH SURVEY INTERPRETATION
A14-07256 – DAVE BURDA - QUALITY ASSURANCE
KNIGHT TOWNSHIP SGH SOIL SURVEY

Note that the associated SGH results are presented in a separate Excel spreadsheet. This data is semi-quantitative and is presented in units of pg/g or *parts-per-trillion* (ppt) as the concentration of specific hydrocarbons in the sample. The number of samples submitted for this survey is adequate to use SGH as an exploration tool. As SGH is an organic geochemistry it is essentially "blind" to the elemental presence of any inorganic species as actual VMS, gold, silver, uranium, etc. content in the each sample analyzed. SGH has been proven to discriminate between false or mobilized soil anomalies and is able to actually locate the source target deposition. SGH is a deep-penetrating geochemistry and has been proven to locate Copper, Gold, VMS, and other types of mineralization at several hundred metres below the surface irrespective of the type of overburden. Note that the SGH data is only reviewed for the particular target deposit type requested, in this case for the presence of a Gold target. It is assumed that there is only one potential target. If known, in surveys with several complex geophysical targets, to obtain the best interpretation the client should indicate that there are possibly multiple targets. The possibility of multiple geophysical targets should be known due to potential overlap and increased complexity of the resulting geochromatographic anomalies, which could alter the interpretation as to which targets are mineralized or not.

The overall precision of the SGH analysis for the samples at the KNIGHT TOWNSHIP SGH Soil Survey was excellent as demonstrated by 8 different samples taken from this survey which were used for laboratory replicate analysis and were randomized within the analytical run list. The average Coefficient of Variation (%CV) of the replicate results for the survey samples in this submission was **9.6%** which represents an excellent level of analytical performance especially at such low parts-per-trillion concentrations.

Two **Field Duplicate samples were identified in the KNIGHT TOWNSHIP SGH Soil Survey**. The average Coefficient of Variation (%CV) of the replicate results for these field duplicate samples was **7.9%** which represents an excellent level of survey performance. It is typically observed that the variability of field duplicates are 5% to 8% CV higher than for laboratory duplicates of random samples taken from the survey. The fact that the %CV for field duplicates is so close to laboratory replicates is largely due to the very high specificity of the SGH geochemical method that only targets relatively rare hydrocarbons that have been proven to be associated with the decomposition of bacterial that have been in proximity to the target mineralization at depth. Note that the SGH geochemistry does not detect all organic hydrocarbons present in the samples. No other statistics were used on the data for this report for mapping or interpretation purposes aside from the use of a Kriging trending algorithm in the GeoSoft Oasis Montaj mapping software. **This interpretation is based only on the analytical results provided by the SGH Nano-Geochemistry from this submission of samples for the KNIGHT TOWNSHIP SGH Soil Survey.** A template or group of SGH Pathfinder Classes that have been found to be associated with buried Gold targets was used as the basis for the interpretation of the KNIGHT TOWNSHIP SGH Soil Survey. The final interpretation is customized and conducted by the author. Although the term "template" or "signature" often appears in an SGH Interpretation Report, a computerized interpretation is not used.

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A14-07256 – DAVE BURDA - KNIGHT TOWNSHIP SGH SOIL SURVEY SGH INTERPRETATION - SGH TARGET PATHFINDER CLASS MAPS

The maps shown in plan and in 3D views in this report are SGH "Pathfinder Class maps" for targeting various chemical classes of hydrocarbon flux signatures related to Redox conditions and for Gold and Copper type targets. The maps shown represent the simple summation of several individual hydrocarbon compound concentrations that are grouped from within the same organic chemical class. SGH Pathfinder Class maps have been shown to be robust as they are each described using from 4 to 14 chemically related SGH compounds (unless otherwise stated) which are simply summed to create each chemical class map. Thus each map has a higher level of confidence as it is not illustrating just one compound measurement. A legend of the compound classes appears at the bottom of the SGH data spreadsheet.

The Copper template of SGH Pathfinder Classes uses low molecular weight classes of hydrocarbons while the Gold template of SGH Pathfinder Classes uses primarily low and medium molecular weight classes of hydrocarbon compounds. At least three Pathfinder Class maps, associated with the SGH signature developed for Copper and/or Gold must be present to begin to be considered for assignment of a good rating relative to the SGH performance in case studies over known Copper or Gold type mineralization (Some of these maps might not be shown in this report). These SGH classes must also concur and support a consistent interpretation in relation to the expected geochromatographic characteristics of the Pathfinder Class. The *overall* SGH interpretation Rating has even a higher level of confidence as it further implies the consensus between at least the three pathfinder classes. A combination of these SGH Pathfinder Classes potentially defines the signature of a target at depth if present. Each of the SGH Pathfinder Class maps shown in this report is a specific *portion* of the SGH signature relative to the presence of Gold as described. Each pathfinder class map is still just one of the Pathfinder Class maps used in the interpretation template for Copper or for Gold. Additional interpretation information which may contain additional SGH Pathfinder Class maps is available as a Supplementary Report at an additional price (see Appendix H).

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A14-07256 – DAVE BURDA - KNIGHT TOWNSHIP SGH SOIL SURVEY SGH INTERPRETATION - SGH TARGET PATHFINDER CLASS MAPS

Note that any concentration value in the accompanying Excel spreadsheet greater than the "Reporting Limit" of 1 ppt is important data and has been able to depict mineralization at depth. The majority of the variability or noise has already been eliminated; additional filtering will adversely affect any interpretation. Note again that a Kriging trending algorithm has been applied to the mapping routine in the Geosoft Oasis Montaj software in the development of the SGH Class maps. SGH concentrations are in some way probably related to the amount of mineralization present and the grade of mineralization, which probably defines the characteristics of the biofilm(s) in contact with the deposit, as well as being related to the depth to mineralization. SGH results have also been shown to correlate well with geophysical measurements such as magnetic anomalies and those of CSAMT.

The SGH Class maps are the plot of the sums of the particular hydrocarbon class in parts-per-trillion concentration. The dark blue represents very low or non-detect values. For plotting purposes the values at the Reporting Limit are plotted as one-half of this filtering, or one-half of 1.0 ppt. The hotter colours represent higher concentrations of the sum of the class with the highest values being purple in colour.

SGH is a "deep penetrating" geochemistry but also works well for relatively shallow targets. Targets shallower than about 3 to 5 metres will have a reduced SGH signal due to interaction with atmospheric conditions and samples taken right at surface outcrops will have even weaker signals due to a higher degree of weathering from various environmental processes on these volatile and semi-volatile organic hydrocarbons.

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A14-07256 – DAVE BURDA - KNIGHT TOWNSHIP SGH SOIL SURVEY
SGH INTERPRETATION RATING AND CLARIFICATION

Often a geochemistry such as SGH is used as an economical exploration investigation tool to provide more information on an exploration target as some geological body or help prioritize some geophysical target. Such occurrences are in general expected to change the chemistry of the immediate overburden which in turn is expected to result in a chemical anomaly as detected in surficial samples. The author believes that it is important to convey to the client of an anomaly even if there is only part of the SGH signature present that may be related to the mineral signature or template requested. In other words, the anomaly illustrated in the report may not be representative of the mineralization sought as only a part of the SGH signature is present, but the anomaly may confirm the presence of some geological or geophysical target which may be valuable to the client for comparison with other data. In addition it would confirm the ability and sensitivity of SGH to show geological or geophysical occurrences. Example: A well defined rabbit-ear anomaly on an SGH Pathfinder Class map in a report, even though it may have a lower rating of 2.0 or 3.0, may illustrate to the exploration geologist that SGH does agree that there is some geological body at depth that is changing the chemistry and forming a Redox cell in the overburden. However the SGH forensic signature Rating indicates that there is a lower confidence that the "identification" of that body is likely to be say Gold (if the SGH Gold template is requested). This information would provide a confirmation that a target does exist, however if the SGH Rating indicates that the target has a lower level of confidence then the target does not have the forensic signature of the mineralization sought. SGH would thus provide a savings to the exploration program and divert focus to potentially other targets having a higher confidence in the SGH identification Rating.

Thus, the SGH rating must always be considered in conjunction with the SGH Pathfinder Class map shown in the report. It is this rating that provides an insight into the authors' complete interpretation and is a measure of the confidence and to what degree the complete SGH signature compares with the SGH results from over case studies of similar known deposits. Unfortunately, the interpretation of a visual, as the SGH map provided, is so ingrained in humans that the reader may erroneously disregard the author's subjective rating to a large degree. As of November 25, 2011, the author now highlights the rating directly on the page having the plan view of the SGH Pathfinder Class map chosen to be illustrated. Thus to the reader of the report, the authors Rating is actually **MORE IMPORTANT** than the readers instinctive interpretation of just the one map provided. Again, SGH should not be used in isolation from other site information, and that a Rating of 4.0 is when, in the authors' estimation, a signature only starts to have a good identification relative to that type of mineralization, and that the survey may warrant further study although it is not a specific recommendation to drill test the anomaly. As the SGH interpretation is represented by a signature, the SGH Pathfinder Class map(s) illustrated in reports is always only "PART" of the specific SGH signature or template that the client requests (i.e. for Gold, etc.). No one SGH map can represent the complete signature due to the different amounts of spatial dispersion expected for the variety of SGH chemical classes within each signature. Thus the author selects the one SGH Class Map relative to the mineralization requested that best represents an anomaly that estimates the overall signature found in the survey.

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A14-07256 – DAVE BURDA - KNIGHT TOWNSHIP SGH SOIL SURVEY
SGH "REDOX" INTERPRETATION

As a general comment in regard to the SGH results at this KNIGHT TOWNSHIP SGH Soil Survey, the SGH data in general had a moderate signal strength and the SGH Class maps in this report are fairly good in contrast. It is important to not think of contrast with SGH as Signal:Noise as by using a reporting limit the noise has already been nearly completely removed.

One of the first steps in the interpretation of SGH data is to locate potential Redox conditions in the overburden. Redox conditions have been well known to be related to blind mineral targets; however, Redox conditions can also be attributed to other geological bodies that are of no particular interest. SGH signatures are able to differentiate between these targets. SGH has been described by the Ontario Geological Survey of Canada (OGS) as a "Redox Cell locator". Redox Cells can be related to the presence of bacteriological activity related to mineralization but also may be related to the presence of geological bodies such as Granite Gneiss, Dunite, etc. Recently SGH has been shown to be far more sensitive to depicting Redox conditions than even measurements using pH or ORP tests. It is important to understand that; not only is SGH a Redox cell locator, but due to the forensic signature of mineralization used in the interpretation process, SGH can discriminate mineral targets and other target types from geological bodies, other magnetically detected targets, mineralized versus non-mineralized conductors, cultural effects, etc. even in surveys over highly difficult or exotic terrain that often requires the collection of multiple sample types. In the interpretation it is not necessary to detect a Redox cell if mineralization is within approximately 20 metres of the surface as this would be insufficient depth to develop a dispersion halo anomaly.

Many SGH surveys for Gold, and other mineral targets can result in multiple types of anomalies, depending on the class of SGH compounds, even over the same target and in the same set of samples. Thus "Apical", "Segmented-Nested-Halo", and "Rabbit-Ear" or "Segmented Halo" type anomalies are all typically observed within the SGH data set from the effect of Redox cells that have developed over mineralization and their interaction with Redox conditions and the electromotive forces produced by the subsequent Electrochemical Cell. Different types of anomalies have also been associated with the depth to the target. The types of anomalies developed have been recently explained by the use of the 3D-SGH model of interpretation. The highly symmetrical anomalies illustrated by SGH data closely follow the expected self-organizing patterns of neutral species within an electrochemical cell in recent experiments in physics Laboratories. The highly symmetrical anomalies are also able to be observed as the Nano-sized dimensions of these organic hydrocarbons are much smaller than inorganic oxides and sulphides. Thus the SGH hydrocarbons can migrate through the Nano-sized fissures of even clay, basalt, and permafrost caps by means of Nano-capillary action. The simple fact that the SGH anomalies are geometrically symmetrical and not random further improves the confidence of SGH interpretations.

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A14-07256 – DAVE BURDA - KNIGHT TOWNSHIP SGH SOIL SURVEY SGH "GOLD" INTERPRETATION

This report illustrates an SGH Gold Pathfinder Class map on page 23 in plan view and on page 24 in 3D view that has been very reliable in its association with the presence of Gold mineralization. This SGH Class map is only a portion of the SGH Gold signature used in the interpretation. There is not any one SGH Class map that can, as a single map, be reliably used to interpret the presence of Gold or any other type of mineralization. It should also be noted that some SGH Classes can be used as a portion of other SGH mineral signatures, i.e. some portions of SGH signatures overlap in their use.

The SGH Gold Pathfinder Classes are often expected to illustrate an apical response as a vertical projection over mineralization at the shallowest part of the structure if it is within approx. 50-100 metres of surface. Although the map on page 24 is only based on one hydrocarbon response, it is the most representative of the full SGH signature relative to Gold. This SGH Pathfinder map for Gold best illustrates the slightly bent North-South trend comprised of undulating anomalies. As best observed in the 3D map on page 24, the SGH data may indicate pods or pinched out regions of Gold mineralization along this trend. The SGH hydrocarbon signatures are predicted to be associated with Gold targets as the detection of those hydrocarbon residues produced by the decomposition of microbes and bacteria from the life cycle death phase that have been feeding on Gold mineralization. These residues have subsequently migrated to the surface as a flux of different classes of hydrocarbons or decomposition products. During migration to the surface, dispersion away from the mineralization is expected. The distance of dispersion is dependent on the principle of geochromatography that is in generally related to the average molecular weight of the class. It has been found that the complexity of the overburden does not affect the geochromatographic dispersion of the SGH classes of this Nano-Geochemistry, unless a situation is encountered such as that of a "major" fault that may result is a very slight deflection of this path. This is the basis of the 3D-SGH interpretation as the relatively neutral hydrocarbons that SGH detects are spatially observed as very symmetrical anomalies (as presented by the author at the IAGS conference in Finland in 2011 and further at the IAGS conference in New Zealand in November of 2013).

The SGH Class map illustrated in plan view on page 23 and in 3D view on page 24 are diagnostic for depicting Gold mineralization. This map illustrates apical anomalies that are expected to be related to relatively shallow mineralization. The few other anomalies around the edges of the map on page 23 are mostly single sample anomalies. These anomalies are not interpreted due to the lack of neighbouring sample data. A dotted yellow interpretation outline is placed just outside of the anomalies in the SGH Gold Pathfinder Class map on page 23 that illustrates the bent northerly trending zone of possible Gold mineralization. The 3D view of this map appears on page 24 illustrates the undulating apical anomalous trend which might be showing the vertical location of Gold pods.

Again, as signals or anomalies due to "noise" from any analytical, sample preparation, or sampling procedure have been removed through the use of the Reporting Limit filter, any SGH anomaly on this Pathfinder Class Map has a high probability of illustrating a real feature.

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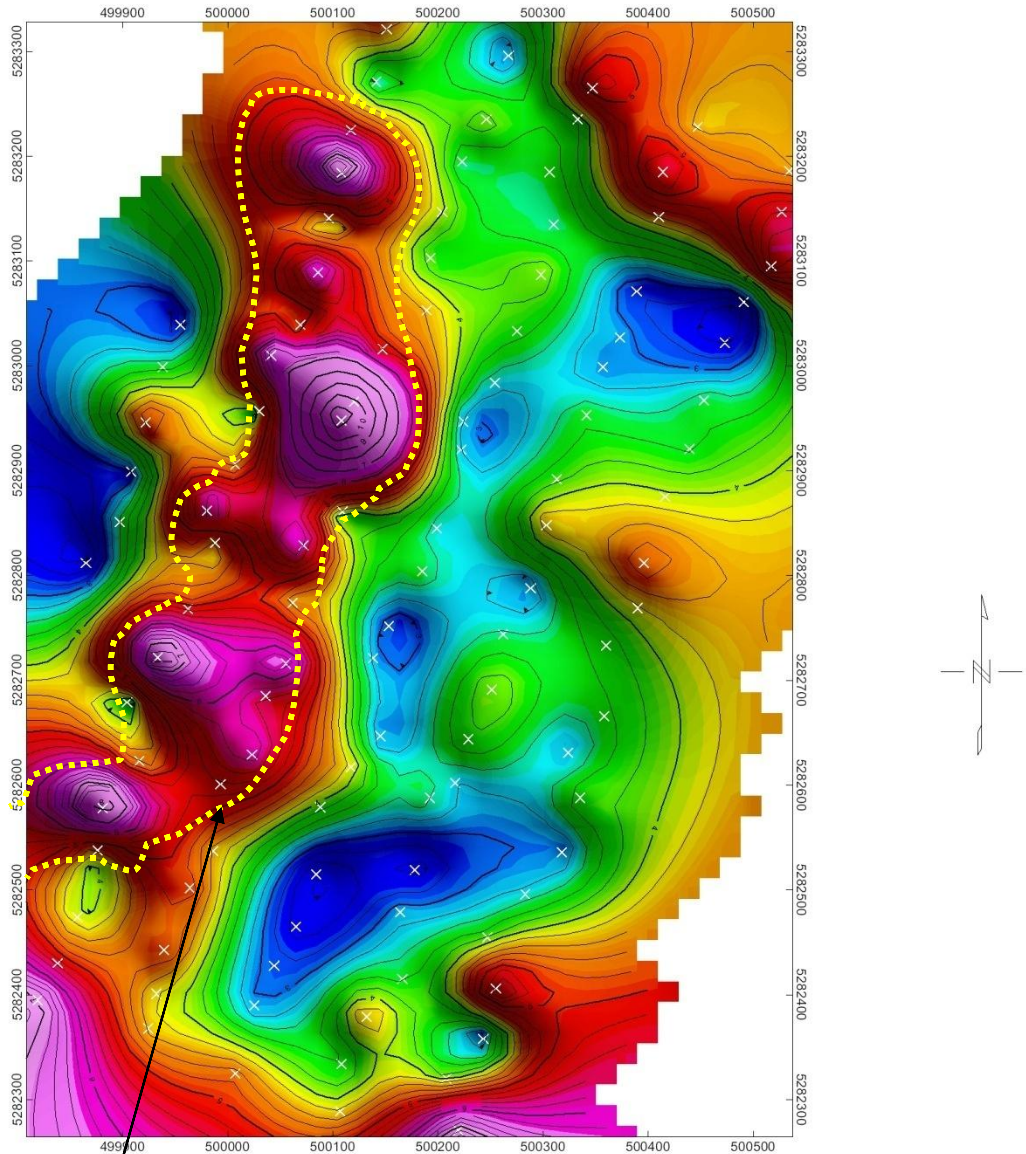
A14-07256 – DAVE BURDA - KNIGHT TOWNSHIP SGH SOIL SURVEY - SGH "GOLD" PATHFINDER CLASS



GOLD ZONE DETECTED BY SGH WITHIN DOTTED YELLOW OUTLINE

SGH SIGNATURE RATING RELATIVE TO "GOLD" = 5.0 OF 6.0

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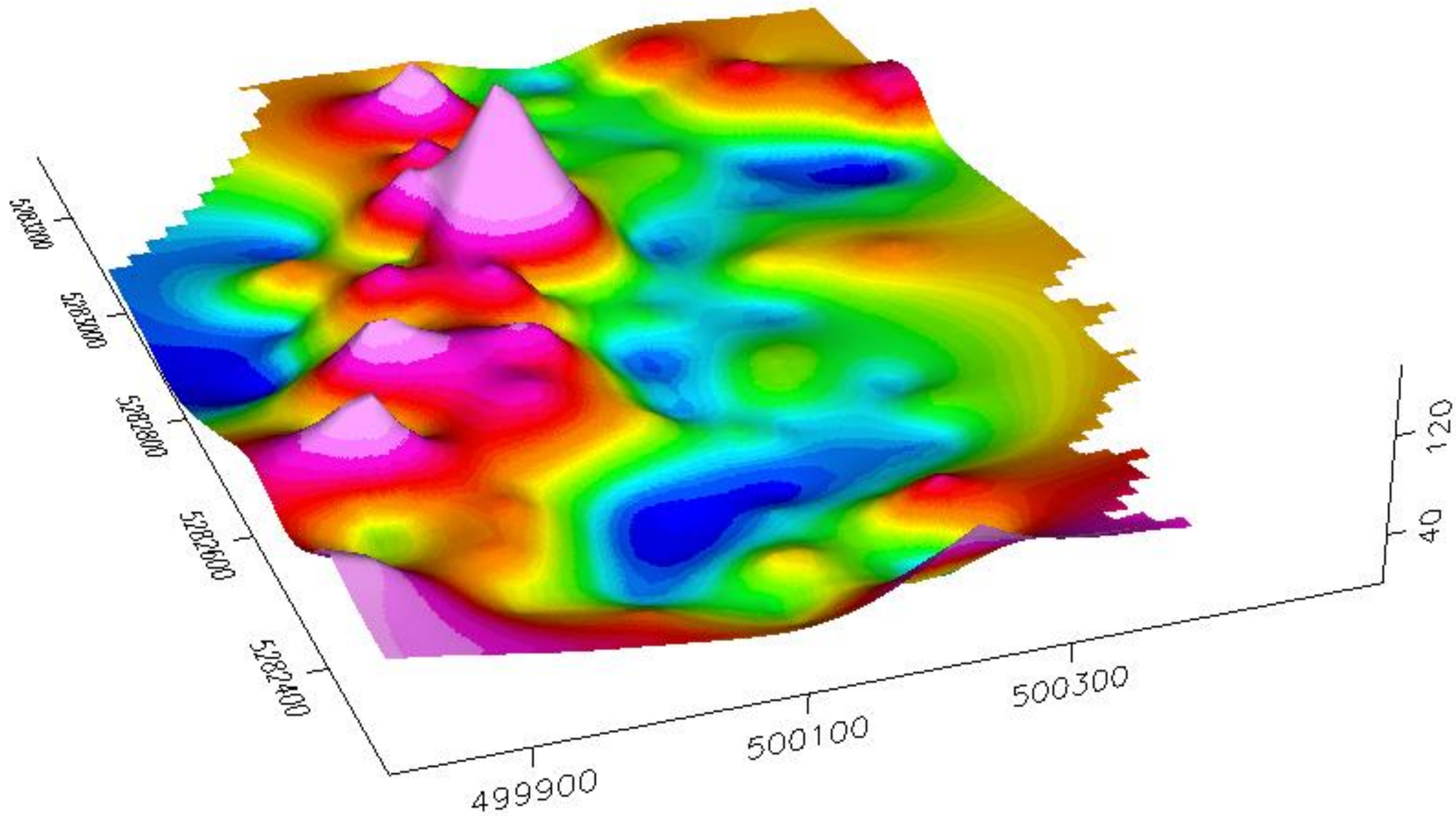
A14-07256 – DAVE BURDA - KNIGHT TOWNSHIP SGH SOIL SURVEY
SGH "GOLD" PATHFINDER CLASS



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A14-07256 – DAVE BURDA - KNIGHT TOWNSHIP SGH SOIL SURVEY SGH "COPPER" INTERPRETATION

The SGH Class map illustrated in plan view on page 26 and in 3D view on page 27 is a portion of the SGH signature for Copper mineralization. The plan map on page 26 appears to illustrate a northeasterly trending apical anomalous zone within the dotted black outline. This zone flanks and partially overlaps the SGH Gold anomaly shown on page 23. The SGH Gold interpretation from the plan view map on page 23 is also shown on page 26 for reference.

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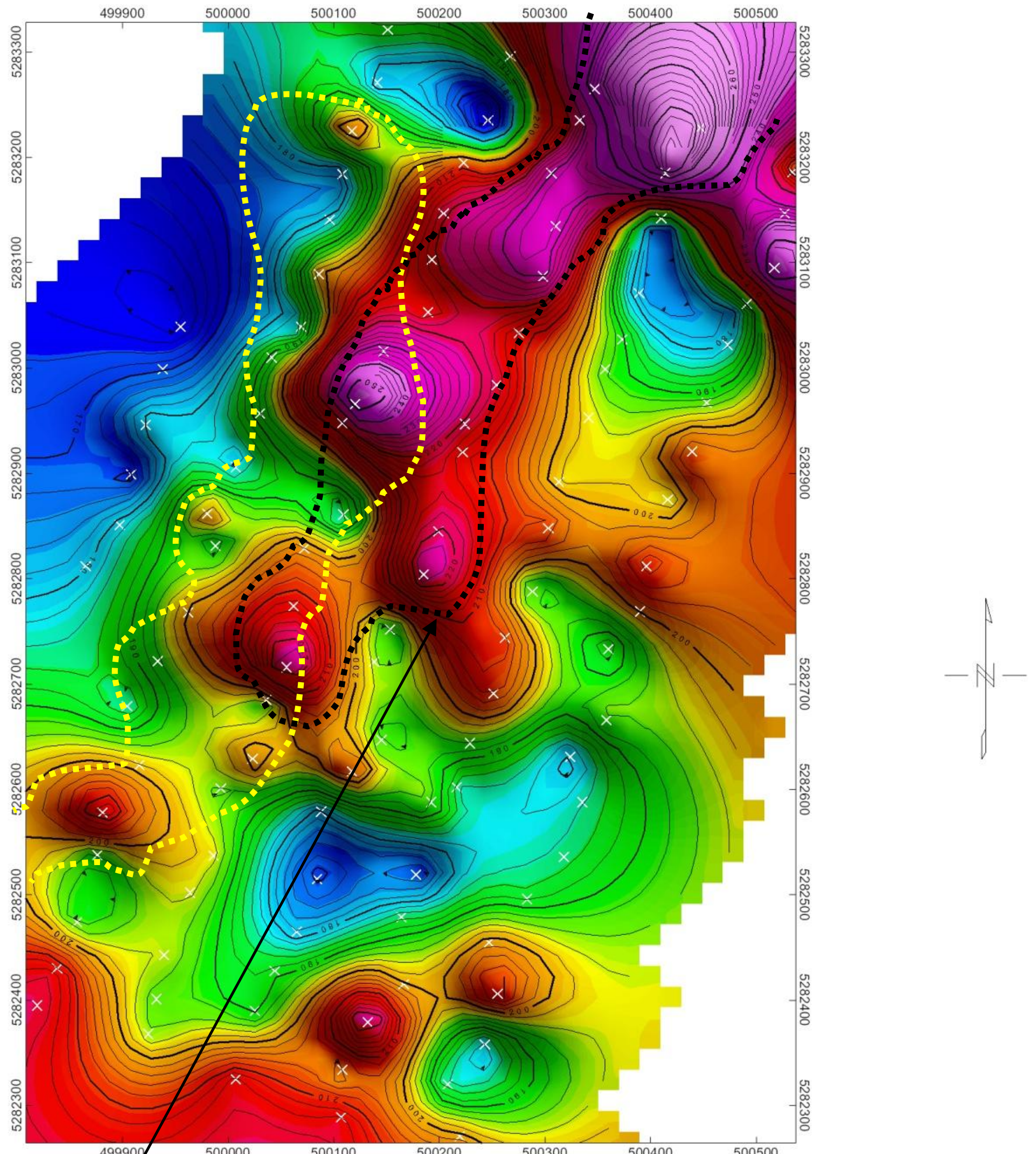
SGH "COPPER" PATHFINDER CLASS



COPPER ZONE DETECTED BY SGH WITHIN DOTTED BLACK OUTLINE

SGH SIGNATURE RATING RELATIVE TO "COPPER" = 4.5 OF 6.0

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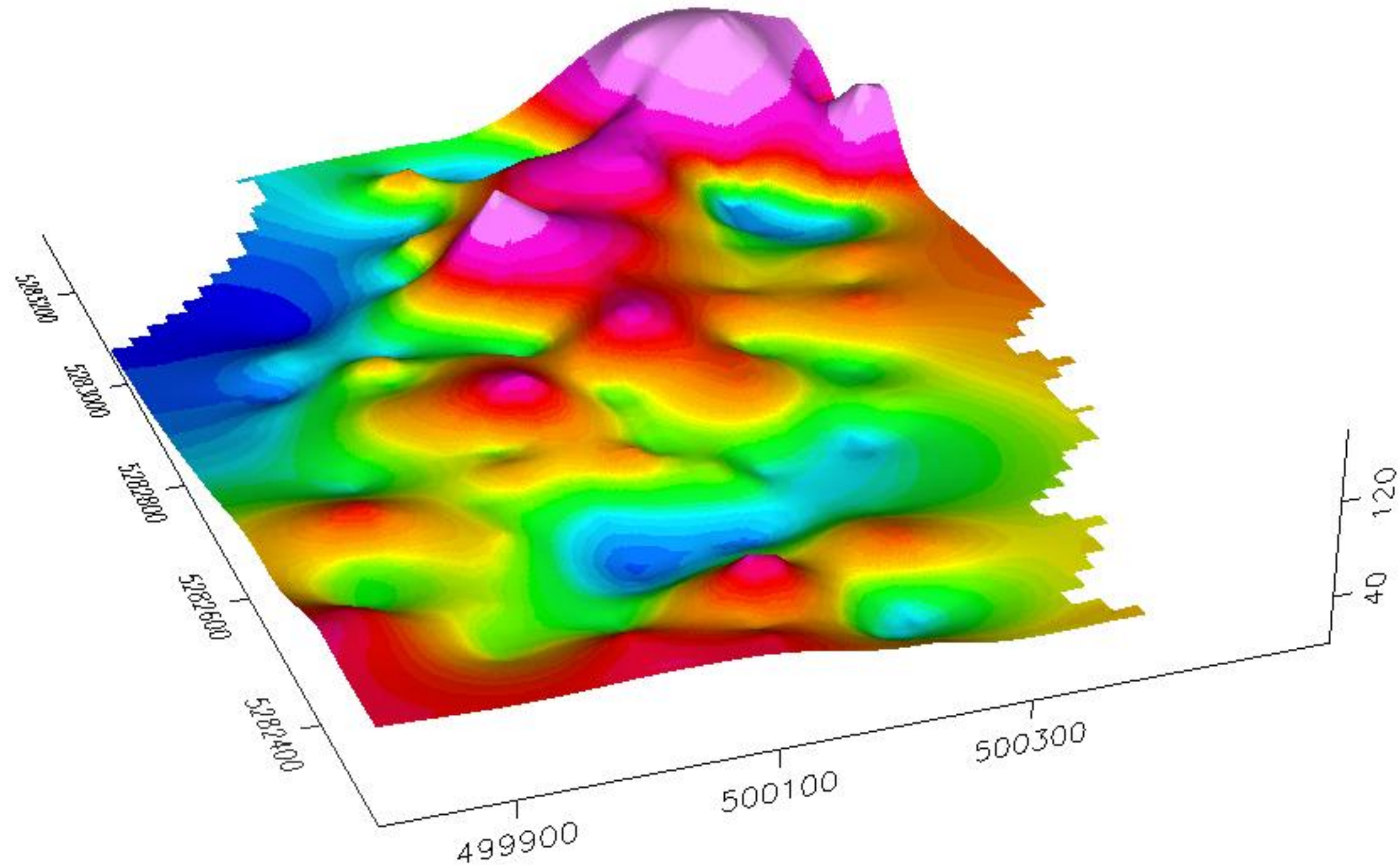
A14-07256 – DAVE BURDA - KNIGHT TOWNSHIP SGH SOIL SURVEY
SGH "GOLD" PATHFINDER CLASS



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A14-07256 – DAVE BURDA - KNIGHT TOWNSHIP SGH SOIL SURVEY SGH "REDOX" INTERPRETATION

The SGH Class maps relative to Gold and Copper illustrated in this report are indicative of a relatively shallow depth to mineralization (approx. <50 metres). In support of this, there was no strong location of Redox conditions found which is usually associated in SGH with deeper mineralization.

As shown by the interpretations in other non-related reports the SGH results can become quite complex when mineralization appears to be showing anomalies from a variety of depths.

As a reminder, in the interpretation of SGH data there are several goals. In order of importance they are:

- Vector to the location of a mineral target
- Delineate the mineral target
- Identify the type of mineral target
- Describe the features of the possible mineral target
- See if there is information on the basement structure
- Predict the possible depth to the mineral target

Not every goal is expected to be able to be achieved with each SGH data set.

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A14-07256 – DAVE BURDA - KNIGHT TOWNSHIP SGH SOIL SURVEY SGH INTERPRETATION FOR "GOLD AND COPPER" MINERALIZATION

The interpretation of the SGH data relative to the presence of Gold and Copper mineralization at the Dave Burda KNIGHT TOWNSHIP SGH Soil Survey is described by what appears to be the presence of a bent North-South trending apical anomaly potentially indicating Gold mineralization at a relatively shallow depth as pods that may be pinched out in a Gold mineralized vein (perhaps at a depth in the neighbourhood of 10 to 50 metres) that flanks and partially overlaps an SGH Copper signature as a more northeasterly trending zone in the north half of the survey. This zone would also possibly be from mineralization that is at a shallow depth vein (again perhaps at a depth in the neighbourhood of 10 to 50 metres) in the KNIGHT TOWNSHIP survey.

NOTE: The depths to mineralization estimates are very approximate and are a result of the development of the 3D-SGH interpretation process that recognizes the importance of symmetrical anomalies. Such estimates cannot be calibrated except from the responses from those SGH clients that have offered feedback from actual drilling results or prior site knowledge. The feedback obtained regarding depth since the use of 3D-SGH has been quite encouraging. SGH is the only geochemistry to our knowledge that is able to make some statement with regards to the depth to blind mineralization.

The SGH Ratings shown in this and all SGH reports are based on a scale of 6.0, in 0.5 increments, with a value of 6.0 being the best. The SGH Ratings discussed in relation to Gold represents the similarity of these SGH results with other SGH case studies over known mineralization. Theses SGH signatures or templates have been constantly refined and enhanced since inception and has been proven to be effective and reliable. The SGH templates are based on the interpretation from over 1,000 interpretations for many other surveys in many different geographical regions and for a wide variety of lithologies. The degree of confidence in the SGH Rating only starts to be "good" at a level of 4.0. A Rating of 4.0 is an indication that this SGH Nano-Geochemistry predicts that the zone(s) described may warrant more work or more consideration.

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A14-07256 – DAVE BURDA-KNIGHT TOWNSHIP SGH SOIL SURVEY
SGH INTERPRETATION FOR MINERALIZATION

As seen in other projects, deeper mineralization is often expected to be centrally located within Redox zones. In areas predicted to have shallower mineralization, as at the Knight Township survey, the SGH anomalies are very reliable at showing vertical projections of mineralization and thus directly illustrating the location of possible drill targets. From client feedback in recent years, a few grass roots exploration surveys that have been interpreted with an SGH Confidence Rating of 4.0 (±0.5) have been drill tested and have had successful Gold intersections. However the frequency of success is much more prevalent for those targets that have had an associated SGH Rating Scores of ≥5.0.

The apical anomalies as possible mineralized pods would be possible drill targets for consideration at the Knight Township survey. The suggestion or specific identification of a drill target is not an explicit recommendation by Activation Laboratories Ltd. to drill test the associated location or SGH anomaly. A drill target is implied to ensure that the reader is aware of the location having the highest confidence of being the location of the vertical projection of possibly the location of the nearest structure of mineralization to the surface, based only on SGH data. This is also not a recommendation for vertical drilling. Vertical drilling may not be the best approach to test the SGH anomaly in this area. Activation Laboratories Ltd. has no experience in actual exploration drilling techniques. Other geological, geochemical and/or geophysical information should also be considered.

It must be remembered that other SGH Class maps not shown in this report have also been reviewed to support the interpretation shown. To deduce the most scientifically sound interpretation of the KNIGHT TOWNSHIP survey, the client should use a combination of the SGH results shown in this report with additional geochemical, geophysical, and geological information to possibly obtain a more confident and precise target location. This is not a statement to convey some lower level of confidence in SGH results. This statement is made to recognize the proper use and interpretation of any scientific data. Whenever possible, multiple methods should always be employed so that any decisions do not rely on any one technique.

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A14-07256 – DAVE BURDA - KNIGHT TOWNSHIP SGH SOIL SURVEY SGH SURVEY RECOMMENDATIONS

The sample survey design using 50 metre sample spacing in 6 transects at 100 metre spacing was appropriate and nicely illustrated the possible Copper and Gold features at the KNIGHT TOWNSHIP SGH survey. Based on these results it is doubtful that a higher resolution grid from any infill samples would provide any significant or additional detail using SGH. Infill sampling should probably only be considered as an economical way to obtain more accuracy to provide more precise drill targets if needed. The highest resolution recommended for use with SGH is 25 metre spacing.

Any additional infill sampling may be added to the current SGH data and interpretation, even if sampled at a later time, and may provide information greater accuracy for shallow targets and may provide more detail that may lead to the observation of more symmetry of deeper targets as a segmented anomaly reflecting Redox conditions in the overburden in a 3D-SGH interpretation process. This would further improve confidence in the interpretation. Should additional sampling be considered, please refer to the general recommendations for additional or in-fill sampling for SGH in the next paragraph of this report.

GENERAL RECOMMENDATIONS FOR ADDITIONAL OR IN-FILL SAMPLING FOR SGH ANALYSIS

Based on the results of this report and/or other information, the client may decide that in-fill sampling may be warranted. To obtain the best results from additional sampling for SGH it is recommended that sample locations from the original survey within, or bordering, the area of interest be re-sampled rather than just combining new sample results with the sample data from the initial survey. Although several SGH surveys have previously been easily and directly, combined without data leveling, it cannot be guaranteed that data leveling will not be required. It has been found that data leveling is more apt to be required should the new samples be collected under significantly different environmental conditions than during the initial sample survey, i.e. summer collection versus winter collection. The process of data leveling adds a minimum of 3 to 5 days of work to conduct the additional data evaluation, develop additional plots of the results, conduct new interpretations, and in additional report descriptions. Results from data leveling is also always considered "an approximation", thus the confidence in a combined interpretation will be lower that the interpretation from samples collected during one excursion to the field and submitted as one survey. An additional cost will be invoiced should data leveling operations be required if the client requests that two SGH data sets be interpreted and reported together. Thus re-sampling a few of the original sample locations will provide a faster turnaround time for results and provide more accurate and confident surveys for evaluation and aid in deciding specific drill targets.

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Date Received at Actlabs Ancaster: October 2, 2014

Date Analyzed: October 8-9, 2014

Interpretation Report: November 7, 2014

Dave Burda

50 Pheasant Run Dr.

Nepean, Ontario K2J 2R4

Attention: Mr. Dave Burda

RE: Your Reference: KNIGHT TOWNSHIP SGH SOIL SURVEY

Activation Laboratories Workorder: A14-07256

CERTIFICATE OF ANALYSIS

This Certificate applies to the associated Excel Spreadsheet of Hydrocarbon results combined with the discussion and SGH Pathfinder Class maps of the data shown in this report.

113 Samples were analyzed for this submission.

Sample preparation –Actlabs Ancaster - S4: Drying at 40°C and Sieving with -80 mesh collected

Interpretation relative to Copper and Gold targets was requested.

The following analytical package was requested and analyzed at Actlabs Ancaster Canada:

Analysis Code SGH – Soil Gas Hydrocarbon Geochemistry using High Resolution Gas Chromatography/Mass Spectrometry (HRGC/MS)

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REPORT/WORKORDER: A14-07256

This report may be reproduced without our consent. If only selected portions of the report are reproduced, permission must be obtained. If no instructions were given at the time of sample submittal regarding excess material, it will be discarded within 90 days of this report. Our liability is limited solely to the analytical cost of these analyses. Test results are representative only of the material submitted for analysis.

Notes: The SGH – Soil Gas Hydrocarbon Geochemistry is a semi-quantitative analytical procedure to detect and measure 162 hydrocarbon compounds as the organic signature in the sample material collected from a survey area. It is not an assay of mineralization but is a predictive geochemical tool used for exploration. This certificate pertains only to the SGH data presented in the associated Microsoft Excel spreadsheet of results.

The author of this SGH Interpretation Report, Mr. Dale Sutherland, is the creKnight Townshipr of the SGH and OSG organic geochemical methods. He is a Chartered Chemist (C.Chem.) and Forensic Scientist specializing in organic chemistry. He is a member of the Association of the Chemical Profession of Ontario, the Association of Applied Geochemists, the International Association of GeoChemistry, the Ontario Prospectors Association, the Association for Mineral Exploration British Columbia, the Geochemical Society Association, the Ontario Petroleum institute, the Chemical Institute of Canada, and the Canadian Society for Chemistry, as well as having memberships in several national and international Forensic associations. He is not a professional geologist.

CERTIFIED BY:

Dale Sutherland, B.Sc.,B.Sc.,B.Ed.,C.Chem.,MCIC
Forensic Scientist, Organics Manager,
Director of Research
Activation Laboratories Ltd.

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APPENDIX "A"

List of terms

1. **SGH** – "SOIL GAS HYDROCARBON" GEOCHEMISTRY – a Predictive Geochemistry, used for delineate buried inorganic mineral deposits and organic petroleum plays. This is the original name used to describe this geochemistry since inception in 1996. Code SGH is still used when submitting samples.
2. **3D-SGH**- "3D- SPATIAL TEMPORAL GEOCHEMICAL HYDROCARBONS - the method of interpreting SGH and OSG results based on the Redox/Electrochemical Cell model developed by Activation Laboratories Ltd. in 2011.
3. **Redox cell**- an area of oxidation-reduction reactions or exchange of electrons that is produced over geological bodies, mineralization and petroleum based plays.
4. **Electrochemical cell**- the effect of adjacent chemically reduced areas and chemically oxidized areas as a Redox cell produces a electrical gradient that obeys the physics of a typical Electrochemical cell.
5. **Anthropogenic contamination-** the introduction of impurities/compounds of the same type as those that are being analyzed by human actions that could lead to erroneous results.
6. **Background areas**- the area around a mineral deposit that is beyond the effect of the Redox cell formed over geological bodies or exploration targets. Sampling is required into background areas to produce data that has sufficient contrast to illustrate and differentiate anomalies associated with exploration targets.
7. **Background subtracted**- A sample taken some distances away as to not contain any elements of the target being analyzed.
8. **Biofilm**- a layer of microorganisms and microbe and their related secretions and decomposition products, in this case found to inhabit mineral deposits .
9. **Biomarker**- a compound used as an indicKnight Townshipr of a biological state. In this case a biological substance used to indicate the presence of a mineral deposit.
10. **Blind mineralization** – buried mineralization that shows no physical indication of its existence at the surface
11. **Compound** – used synonymously with the term hydrocarbon in this report
12. **Compound chemical class** – a group of hydrocarbons that are similar in size, structure, and molecular weight such that their chemical characteristics, such as water solubility, partition coefficients, vapour pressures, etc. are similar
13. **Cultural activities** – human initiated processes that may affect the physical and chemical characteristics at the earth's surface
14. **Delineating targets**- indicate the position or outlines of an exploration target as a vertical projection of the target at depth.
15. **Geochemical anomalies** – inorganic element or organic hydrocarbon measurements that are significantly different than the average low level measurements or background in a survey i.e. the needle in a haystack is an anomaly

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16. **Dispersion patterns** – the movement/ spreading of something. In this context the spatial arrangements of hydrocarbons caused by their movements to the surface from some depth.
17. **Exploration tool** – a geological, geophysical or geochemical method that attempts to illustrate data in exploration activities that may indicate the presence of mineralization or petroleum plays.
18. **Fit for purpose**- this method is ideal for its intended use.
19. **Forensic signature**- a grouping or pattern found to identify a substance having multiple characteristics with a high degree of specificity.
20. **High specificity**- as in being very specific to the mineralization.
21. **Anomalies**- this is the spatial representation of data that illustrates a high or low response as well as the combined spatial shape of anomalous data from several neighbouring samples in a survey that can form anomalies described as Rabbit-Ear, Halo, Segmented-halo, nested-halo, etc.
22. **Inorganic geochemistry** – the measurement of inorganic elements in a survey of near surface samples as a tool for exploration
23. **Data leveling** – a technique that attempts to normalize the data sets obtained between two or more sampling programs. The results of data leveling is always considered as an approximation.
24. **Lithologies-** the characteristics and classifications of rock.
25. **Locations-** the physical/ geographical position or coordinates of samples in a survey.
26. **Noise-** interference in a measurement which is independent of the data signal.
27. **Nugget effect-** Anomalously high precious metal assays resulting from the analysis of samples that may not adequately represent the composition of the bulk material tested due to non-uniform distribution of high-grade nuggets in the material to be sampled. (Webster's online dictionary)
28. **Organic geochemistry-** the Soil Gas Hydrocarbon geochemistry (SGH), or now more accurately named as Spatiotemporal Geochemical Hydrocarbons, is the analysis to detect specific organic, or carbon based, hydrocarbon compounds in a sample. The Organo-Sulphur Geochemistry (OSG) is the analysis to detect specific organic compounds that have sulphur joined to carbon in its molecular structure.
29. **Percent Coefficient of Variation (%CV)** – a measure of data variability
30. **Project maintenance** – an activity where the associated cost is applied to the exploration, advancement, and/or operation of activities associated with a particular claim
31. **Rating-** a value given to the overall confidence in the SGH results
32. **Real (in relation to data)-** any rational or irrational number
33. **Reporting Limit –** minimum concentration of an analyte that can be accurately measured for a given analytical method.
34. **Sample matrix-** the components of a sample other than the analyte.
35. **Sample type** – soil, till, humus, lake bottom sediment, sand, snow, etc.
36. **Semi-quantitative-** yielding an approximation of the quantity or amount of a substance
37. **SGH anomalies** ("Apical", "Nested-Halo", and "Rabbit-Ear" or "Halo")
38. **SGH Pathfinder** (class map/compounds)

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39. **SGH template** – a set of hydrocarbon classes that together form a geochemical signature that has been associated with the presence of a particular type of mineralization the majority of the time
40. **Surficial bound hydrocarbons** –
41. **Surficial samples-** a sample from near the earth's surface.
42. **Survey-** the area, position, or boundaries of a region to be analyzed, as set out by the client.
43. **Project-** a planned undertaking
44. **Transect-** A straight line or narrow section through an object or across a section of land.
45. **Target-** Target refers to the ore body of interest

    Target signature: the unique characteristics that identify the target.

    Target type:

    i.e. Gold, Nickel, Copper, Uranium, SEDEX, VMS, Lithium Pegmatites, IOCG, Silver, Ni-Cu-PGE, Tungsten, Polymetallic, Kimberlite as well as Coal, Oil and Gas.
46. **Threshold-** level or point at which data is accepted as significant or true.
47. **Total measurement error-** An estimate of the error in a measurement. Based on either limitation of the measuring instruments or from statistical fluctuations in the quantity being measured.
48. **Visible (in terms of signature**)- the portion shown in a chart or map

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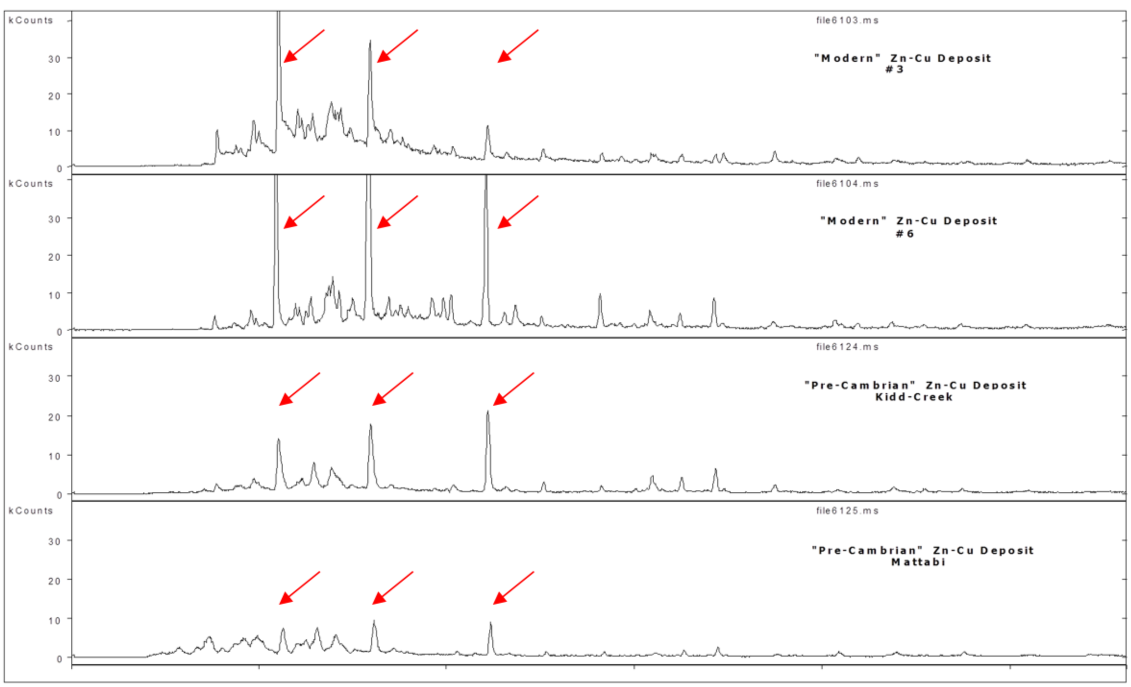
APPENDIX "B"

EXAMPLE OF AN SGH FORENSIC GEOCHEMICAL SIGNATURE EXAMPLE SHOWN FOR A VMS TARGET

The following analyses examine the Volcanic Massive Sulphide (VMS) deposit in various known locations. These analyses show how the gas chromatography indicates the reality of deposits. For all the profiles in this section, the red arrows indicate the signature of the VMS, which have all been found by organic geochemistry. These forensic geochemical signatures are shown to be consistent for similar target areas; therefore, the analyses are reliable indicators for the presence of VMS.

One of the first experiments in 1996 in the development of the SGH analysis was to observe if an SGH response could be obtained directly from an ore sample. From office shelf specimens, small rock chips were obtained which were then crushed and milled. The fine pulp obtained was then subjected to the SGH analysis. These shelf specimen samples were from well known VMS deposits of the Mattabi deposit from the Archean Sturgeon Lake Camp in Northwestern Ontario and from the Kidd Creek Archean volcanic-hosted copper-zinc deposit. Even these specimen samples contain a geochemical record of the hydrocarbons produced by the bacteria that had been feeding on these deposits at depth. As a comparison, SGH analysis were similarly conducted on modern-day VMS ore samples taken from a "black smoker" hydrothermal volcanic vent from the deep sea bed of the Juan de Fuca Ridge where high concentrations of microbial growth was also known to exist. The raw data profiles as GC/MS Total Ion Chromatograms are shown below to illustrate the *"visible"* portion of the VMS signature obtained from the SGH analysis.



The above profiles are:

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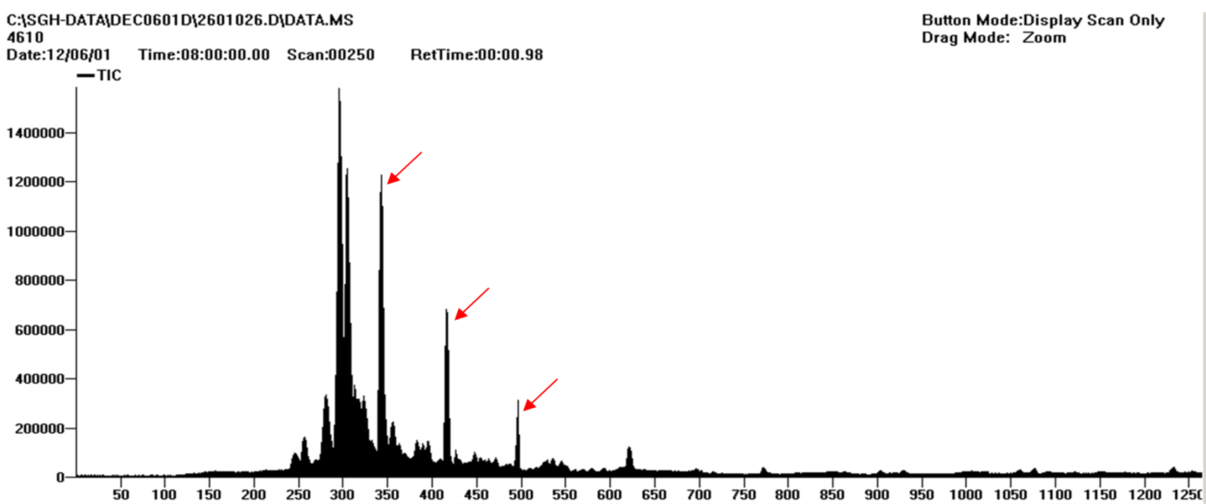
- First profile: Samples from modern day "black smokers"
- Second profile: Samples from modern day "black smokers"
- Third profile: Samples from Pre-Cambrian Zn-Cu Kidd Creek deposit
- Fourth profile: Samples from Mattabi deposit

The red arrows point to three compounds that are a *portion* of the SGH signature for VMS type deposits. This visible portion of the VMS signature of hydrocarbons can easily be seen in the analysis of each of these four samples.

The next question in our early objectives was to see if this SGH signature could also be observed in *surficial soil samples* that had been taken over VMS deposits. Through our research projects, soil samples were obtained from over the Ruttan Cu-Zn VMS deposit near Leaf Rapids, Manitoba and located in the Paleoproterozoic Rusty Lake greenstone belt. The profile obtained, as observed in the raw GC/MS chromatogram, is shown in this next image below:



The three compounds indicated by the red arrows represent the same *visible portion* of the VMS signature observed from the modern day black smoker samples and the ore samples taken from the Mattabi and Kidd Creek, even though this soil was taken from over a different VMS deposit in a geographically different area. Is this coincidence?

Another soil sample was obtained from Noranda's Gilmour South base-metal occurrence in the Bathurst Mining camp in northern New Brunswick. As shown below, this sample contained a very complex SGH signature, however the visible portion of the VMS signature as indicated by the red arrows is still observed as in the black smoker, Mattabi and Kidd Creek ore samples.

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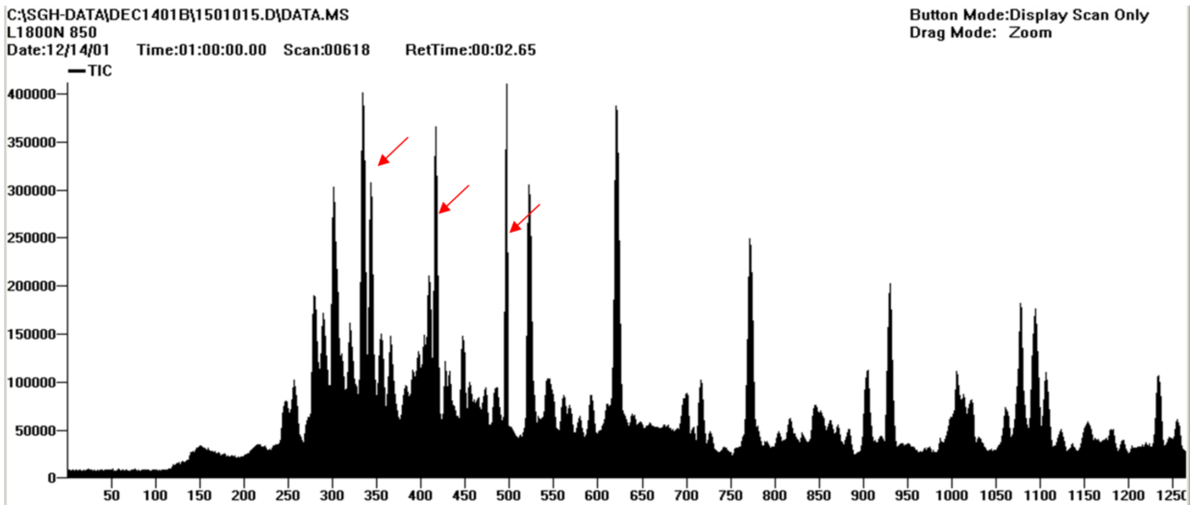

In research conducted by the Ontario Geological Survey, this same portion of the SGH signature was also observed over the VMS deposit at Cross Lake in Ontario. **Note that the visible signature shown as the three compounds indicated by the red arrows is only a small portion of the complete SGH VMS signature**. The full VMS signature is made up of at least three groups, as three organic chemical classes, that together contain at least 35 of the individual SGH hydrocarbons.

The chromatograms shown on the preceding page from the GC/MS analysis are not used directly in the interpretation of SGH data. As we are only interested in a specific list of 162 hydrocarbons, the mass spectrometer and associated software programs specifically identifies the hydrocarbons of interest, runs calculations using relative responses to a short list of hydrocarbons used as standards, and develops an Excel spreadsheet of semi-quantitative concentration data to represent the sample. Thus the SGH results for a sample, like that observed in ore from the Ruttan, are filtered to obtain the concentrations for the specific 162 hydrocarbons. A simple bar graph drawn from the Excel spreadsheet of the hydrocarbons and their concentrations results in a DNA like *forensic SGH signature* as shown below. The portion discussed hear as the "visible" SGH VMS signature in the GC/MS chromatograms, is again shown by the red arrows.

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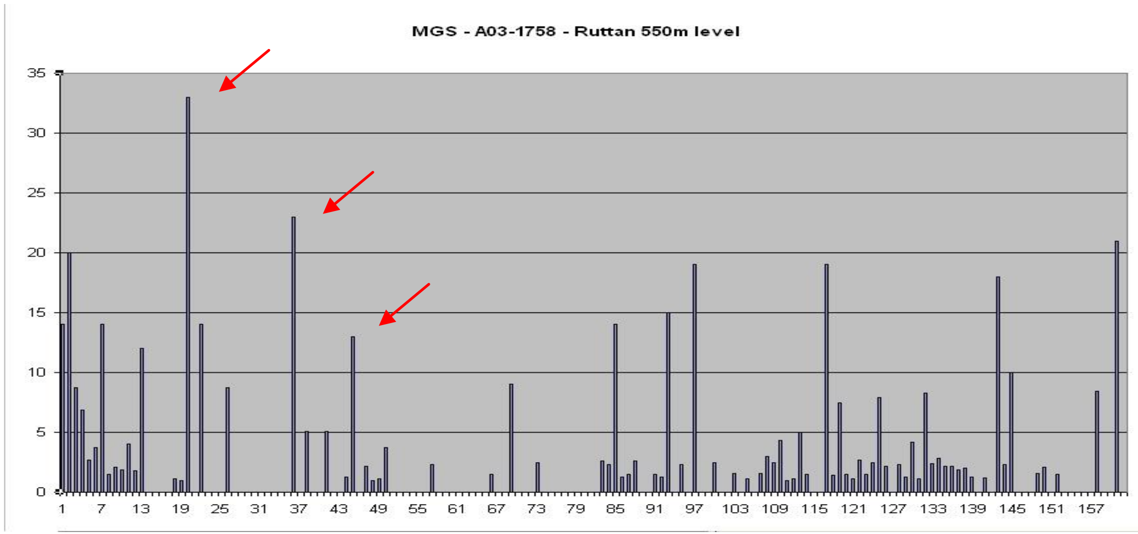

Through the work done in the SGH CAMIRO research projects, it was observed that the hydrocarbon signature produced by the SGH technique appeared to also be able to be used to differentiate barren from ore-bearing conductors. This was explored further through the submission and analysis of specific specimen samples that represented a barren pyritic conductor and a barren graphitic conductor.

The GC/MS chromatograms from these two specimens are compared to that obtained from the Kidd-Creek ore as shown below. This diagram conclusively shows that the SGH signatures obtained from the two types of barren conductors are completely different than that obtained by SGH over VMS type ore. SGH is thus able to differentiate between ore-bearing conductors and barren conductors as **the Forensic SGH Geochemical signature is different**.

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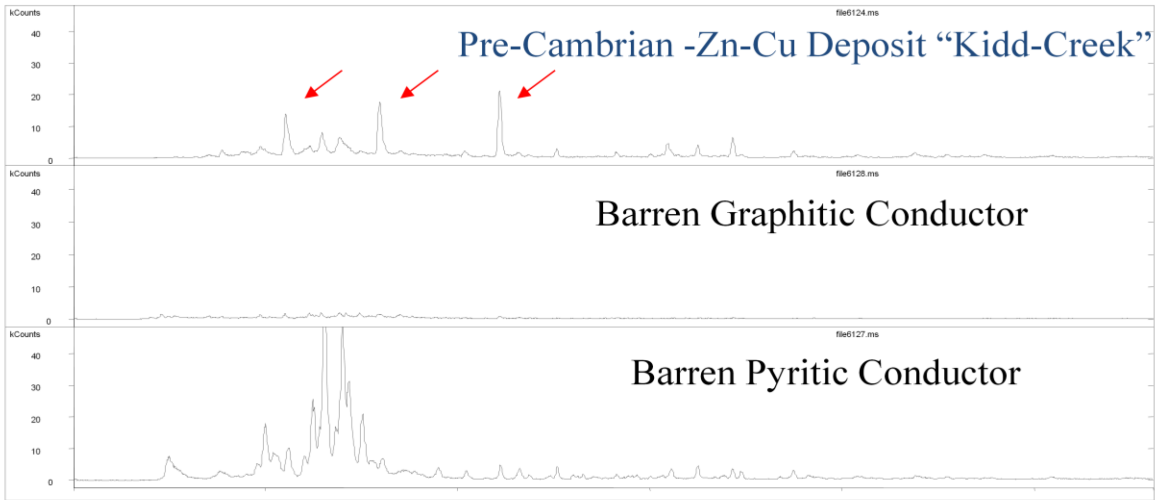

SGH has been described by the Ontario Geological Survey of Canada (OGS) as a "REDOX cell locator". Many SGH surveys for Gold and other mineral targets can result in multiple types of anomalies, depending on the class of SGH compounds, even over the same target and in the same set of samples. Thus "Apical", "Nested-Halo", and "Rabbit-Ear" or "Halo" type SGH anomalies are all typically observed from the effect of REDOX cells that have developed over deposits. REDOX cells are also related to the presence of bacteriological activity.

The VMS template of SGH Pathfinder Classes uses low and medium weight classes of hydrocarbon compounds. Again, at least three Pathfinder Class group maps, associated with the SGH signature for VMS, must be present to begin to be considered for assignment of a good rating. The Pathfinder Class anomalies in these maps must logically concur and support a consistent interpretation in relation to the expected geochromatographic characteristics of the Pathfinder Class, for a specific area.

The interpretation development history for VMS SGH Pathfinder Class map(s) shown in this report is similar to the development history for other target types. The reader should not draw a conclusion that SGH is used only for sulphide based mineralization as some of the most intense SGH anomaly has been associated with Kimberlites where sulphides are essentially not present.

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APPENDIX "C"
SOIL GAS HYDROCARBON SURVEY DESIGN AND SAMPLING

Sample Type and Survey Design: It is highly recommended that a ***minimum*** of 50 sample "locations" is preferred to obtain enough samples into background areas on both sides of *small* suspected targets (wet gas plays, Kimberlite pipes, Uranium Breccia pipes, veins, etc.). SGH is not interpreted in the same way as inorganic based geochemical method. SGH must have enough samples over both the target and background areas in order to fully study the dispersion patterns or geochromatography of the SGH classes of compounds. Based on our minimum recommendation of at least 50 sample locations we further suggest that all samples be *evenly spaced* with about one-third of the samples over the target and one-third on each side of the target in order for SGH to be used for exploration. Targets other than gas plays, pipes, dykes or veins usually require additional samples to represent both the target and background areas.

SGH has been shown to be very robust to the use of different sample types even "within" the same survey or transect. Research has illustrated that it is far more important to the ultimate interpretation of the results to take a complete sample transect or grid than to skip samples due to different sample media. The most ideal natural sample is still believed to be soil from the "Upper B-Horizon", however excellent results can also be obtained from other soil horizons, humus, peat, lake-bottom sediments, and even snow. The sampling design is suggested to use evenly spaced samples from 15 metres to 200 metres and line spacing from 50 metres to 500 metres depending on the size and type of target. A 4:1 ratio is suggested, however, larger orientation surveys have also been successful. Ideally even large grids should have one-third of the samples over the target and two-thirds of the samples into anticipated background areas. This will allow the proper assessment of the SGH geochromatographic vectoring and background site signature levels with minimal bias. Individual samples taken at significant distances from the main survey area to represent background are not of value in the SGH interpretation as SGH results are not background subtracted. Samples can be drip dried in the field and do not need special preservation for shipping and has been specifically designed to avoid common contaminants from sample handling and shipping. SGH has also been shown to be robust to cultural activities even to the point that successful results and interpretation has been obtained from roadside right-of-ways. In conclusion, the conditions for the sample type and survey design include:

- Fist sized samples are usually retrieved from a shallow dug hole in the 15 to 40 cm range of depth.
- Different sample types can be taken even "within" the same survey or transect, data leveling is rarely ever required. SGH is highly effective is areas of very difficult terrain. The Golden Rule is to always take a sample.
- Samples should be evenly spaced in a grid or a series of transects with sample lines spaced at a ratio of up to 4:1 (line spacing: sample spacing).

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- A minimum of 50 sample "locations" is recommended with one-third over the target and one-third on each side of the target into background if this can be predicted. This provides the opportunity of optimal data contrast.
- If very wet, samples can be drip dried in the field.
- No special preservation is required for shipping.

APPENDIX "D"
SAMPLE PREPARATION AND ANALYSIS

Upon receipt at Activation Laboratories the samples are air-dried in isolated and dedicated environmentally controlled rooms set to 40°C. The dried samples are then sieved. In the sieving process, it is important that compressed air is not used to clean the sieves between samples as trace amounts of compressor oils "may" poison the samples and significantly affect some target signatures. At Activation Laboratories a vacuum is used to clean the sieve between each sample. The -60 mesh sieve fraction (<250 microns, although different mesh sizes can be used at the preference of the exploration geologist) is collected and packaged in a Kraft paper envelope and transported from our sample preparation building to our analytical building on the same street in Ancaster Ontario. Each sample is then extracted, separated by gas chromatography and analyzed by mass spectrometry using customized parameters enabling the highly specific detection of the 162 targeted hydrocarbons at a *reporting limit* of one part-per-trillion (ppt). This trace level limit of reporting is critical to the detection of these hydrocarbons that, through research, have been found to be related at least in part to the breakdown and release of hydrocarbons from the death phase of microbes directly interacting with a deposit at depth. The hydrocarbon signatures are directly linked to the deposit type, which is used as a food source. The hydrocarbons that are mobilized and metabolized by the microbes are released in the death phase of each successive generation. Very few of the hydrocarbons measured are actually due to microbe cell structure, or hydrocarbons present or formed in the genesis of the deposit or from anthropogenic contamination. The results of the SGH analysis is reported in raw data form in an Excel spreadsheet as "semi-quantitative" concentrations without any additional statistical modification.

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APPENDIX "E"
SGH DATA QUALITY
Reporting Limit

The SGH Excel spreadsheet of results contains the raw unaltered concentrations of the individual SGH compounds in units of "part-per-trillion" (ppt). The reporting of these ultra low levels is vital to the measurement of the small amounts of hydrocarbons now known to be leached/metabolized and subsequently released by dead bacteria that have been interacting with the ore at depth. To ensure that the data has a high level of confidence, a "reporting limit" is used. The reporting limit of 1 ppt actually represents a level of confidence of approximately 5 standard deviations where SGH data is assured to be "real" and non-zero. Thus in SGH the use of a reporting limit automatically removes site variability, and there is no need to further background subtract any data as the reporting limit has already filtered out any site background effects. Thus we recommend that all data that is equal to or greater than 2 ppt should be used in any data review. It is important to review all SGH data as low values that may be the centre of halo anomalies and higher values as apical anomalies or as halo ridges are all important.

Laboratory Replicate Analysis

A laboratory replicate is a sample taken randomly from the submitted survey being analyzed and are not unrelated samples taken from some large stockpile of bulk material. In the Organics laboratory an equal portion of this sieved sample, or pulp, is taken and analyzed in the same manner using the Gas Chromatography/Mass Spectrometer. The comparison of laboratory replicate and field duplicate results for chemical tests in the parts-per-million or even parts-per-billion range has typically been done using an absolute "relative percent difference (RPD)" statistic which is an easy proxy for error estimation rather than a more complete analysis of precision as specified by Thompson and Howarth. An RPD statistic is not appropriate for SGH results as the reporting limit for SGH is *1 part-per-trillion*. Further, *SGH is a semi-quantitative technique* and was not designed to have the same level of precision as other less sensitive geochemistry's as it is only used as an exploration tool and not for any assay work. SGH is also designed to cover a wide range of organic compounds with an unprecedented 162 compounds being measured for each sample. In order to analyze such a wide molecular weight range of compounds, sacrifices were made to the variability especially in the low molecular weight range of the SGH analysis. The result is that the first fifteen SGH compounds in the Excel spreadsheet is expected to exhibit more imprecision than the other 147 compounds. An SGH laboratory replicate is a large set of data for comparison even for just a few pairs of analyses. Precision calculations using a Thompson and Howarth approach should only be used for estimating error in individual measurements, and not for describing the average error in a larger data set. In geochemical exploration geochemists seek concentration patterns to interpret and thus rigorous precision in individual samples is not required because the concentrations of many samples are interpreted collectively. For these reasons recent and independent research at Acadia University in Canada promote that a percent Coefficient of Variation (%CV) should be used as a universal measurement of relative error in all geochemical applications. As SGH results are a relatively large data set for nearly all submissions, %CV is a better statistic for use with SGH. By using %CV, the concentration of duplicate pairs is irrelevant because the units of concentration cancel out in the formation of the coefficient of variation ratio. For SGH, the

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%CV is calculated on all values ≥ 2 ppt. These values are averaged and represent a value for each pair of replicate analysis of the sample. All of the %CV values for the replicates are then averaged to report one %CV value to represent the overall estimate of the relative error in the laboratory sub-sampling from the prepared samples, and any instrumental variability, in the SGH data set for the survey. Actlabs' has successfully addressed the analytical challenge to minimize analytical variability for such a large list of compounds. Thus as SGH is also interpreted as a signature and is solely used for exploration and not assay measurement, the data from SGH is *"fit for purpose"* as a geochemical exploration tool.

Historical SGH Precision

In the general history of geochemistry, studies indicate that a large component of total measurement error is introduced during the collection of the initial sample and in sub-sampling, and that only a subordinate amount of error in the result is introduced during preparation and analysis. A historical record encompassing many projects for SGH, including a wide variety of sample types, geology and geography, shows that the consistency and precision for the analysis of SGH *is excellent* with an overall precision of 6.8% Coefficient of Variation (%CV). When last calculated, this number had a range of a maximum of 12.4% CV, a minimum of 3.0% CV, with a standard deviation of 1.6%, in a population made up of over 400 targets (over 45,000 samples) interpreted since June of 2004. Again the precision of 6.8% CV included all of the sample types as soil from different horizons, peat, till, humus, lake-bottom sediments, ocean-bottom sediments, and even snow. When field duplicates have been revealed to us, we have found that the precision of the field duplicates are in the range of about 9 to 12 %CV. As SGH is interpreted using a combination of compounds as a chemical "class" or signature, the affect of a few concentrations that may be imprecise in a direct comparison of duplicates is not significant. Further, projects that have been re-sampled at different times or seasons are expected to have different SGH concentrations. The SGH anomalies may not be in exactly the same position or of the same intensity due to variable conditions that may have affected the dispersion of different pathfinder classes. However, the SGH "signature" as to the presence of the specific mix of SGH pathfinder classes will definitely still exist, and will retain the ability to identify the deposit type and vector to the same target location.

Laboratory Materials Blank – Quality Assurance (LMB-QA)

The Laboratory Materials Blank Quality Assurance measurements (LMB-QA) shown in the SGH spreadsheet of results are matrix free blanks analyzed for SGH. These blanks are not standard laboratory blanks as they do not accurately reflect an amount expected to be from laboratory handling or laboratory conditions that may be present and affect the sample analysis result. The LMB-QA measurements are a pre-warning system to only detect any contamination originating from laboratory glassware, vials or caps. As there is no substrate to emulate the sample matrix, the full solvating power of the SGH leaching solution, effectively a water leach, is fully directed at the small surface area of the glassware, vials or caps. In a sample analysis the solvating power of the SGH leaching solution is distributed between the large sample surface area (from soil, humus, sediments, peat, till, etc.) and the relatively small contribution from the laboratory materials surfaces. The sample matrix also buffers the solvating or leaching effect in the sample versus the more vigorous leaching of the laboratory materials which do not experience this buffering effect. Thus the level of the LMB-QA reported is

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biased high relative to the sample concentration and the actual contribution of the laboratory reagents, equipment, handling, etc. to the values in samples is significantly lower. This situation in organic laboratory analysis only occurs at such extremely low part-per-trillion (ppt) measurement levels. This is one of the reasons that SGH uses a reporting limit and not a detection limit. The 1 ppt reporting limit used in the SGH spreadsheet of raw concentration data is 3 to 5 times greater than a detection limit. The reporting limit automatically filters out analytical noise, the actual LMB-QA, and most of the sample survey site background. This has been proven as SGH values of 1 to 3 parts-per-trillion (ppt) have very often illustrated the outline of anomalies directly related to mineral targets. **Thus all SGH values greater than or equal to 1 or 2 ppt should be used as reliable values for interpretations.**

The LMB-QA values thus should not be used to background subtract any SGH data. The LMB-QA values are only an early warning as a quality assurance procedure to indicate the relative cleanliness of laboratory glassware, vials, caps, and the laboratory water supply at the ppt concentration level. *Do not subtract the LMB-QA values from SGH sample data.*

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APPENDIX "F"
SGH DATA INTERPRETATION

SGH Interpretation Report

All SGH submissions must be accompanied by relative or UTM coordinates so that we may ensure that the sample survey design is appropriate for use with SGH, and to provide an SGH interpretation with the results. In our interpretation procedure, we separate the results into 19 SGH sub-classes. These classes include specific alkanes, alkenes, thiophenes, aromatic, and polyaromatic compounds. Note that none of the SGH hydrocarbons are "gaseous" at room temperature and pressure. The classes are then evaluated in terms of their geochromatography and for coincident compound class anomalies that are unique to different types of mineralization. Actlabs uses a six point scale in assigning a subjective rating of similarity of the SGH signatures found in the submitted survey to signatures previously reviewed and researched from known case studies over the same commodity type. Also factored into this rating is the appropriateness of the survey and amount of data/sample locations that is available for interpretation. This rating scale is described in detail in the following section.

SGH PATHFINDER CLASS MAGNITUDE

The magnitude of any individual concentration or that of a hydrocarbon class *does not imply* that the data is of more importance or that mineralization is of higher quantity or grade. SGH interpretation must use the review of the combination of specific hydrocarbon classes to make any interpretation.

GEOCHEMICAL ANOMALY THRESHOLD VALUE

In the interpretation of "inorganic" geochemical data one of the determinations to be made is to calculate a "Threshold" value above which data is considered anomalous. This is done on an element by element basis. In the interpretation of this "organic" geochemical data this determination is done differently. The determination of a threshold value is not calculated for each hydrocarbon compound. The determination of a threshold value is also a concentration below which geochemical data is considered as "noise" for the purposes of geochemical interpretation. As discussed, SGH uses a "Reporting Limit" instead of some type of Detection Limit. The amount of noise that is already eliminated in the data, as below the Reporting Limit of 1 part-per-trillion (shown in the data spreadsheet as "-1" as "not-detected at a Reporting Limit of 1 ppt") is equivalent to approximately 5 standard deviations of variability. *To thus calculate an additional Threshold Value is a loss of real and valuable data.* Further, in the interpretation of SGH data, individual compounds are not considered (unless explicitly mentioned in the report). The interpretation of SGH data is exclusively conducted by "compound chemical class" which is the sum of four to fourteen individual hydrocarbons in the same organic chemical class as these compounds naturally have the same chemical properties that ultimately define their spatial dispersion characteristics in their rise from a mineral target through the overburden. This combined class is more reliable than the measurement of any one compound. SGH also eliminates the need for a Threshold value determination above the Reporting Limit due to the "high specificity" of the specific hydrocarbons and the classes they form. Each of the hydrocarbons has been

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hand selected due to their lower probability of being found in general surface soils. Further, only those classes where the majority of the compounds are detected above the Reporting Limit are considered in the interpretation. This defines the SGH geochemistry as having less geochemical noise due to the use of a reporting limit and as having higher confidence in the use of groups (classes) of data instead of individual compounds. However the most important aspect of interpretation is the use of a forensic signature. At least three specific "Pathfinder" classes, based on the combinations or template of classes we have developed, must be present to define the hydrocarbon signature to confidently predict the presence of a specific type of mineral target. *Do not calculate another Threshold value*. **Fact:** It has been proven many times that important SGH anomalies that depict mineralization at depth can exist even with data at 3 ppt.

Mobilized Inorganic Geochemical Anomalies

It is important to note that SGH is essentially "blind" to any inorganic content in samples as only *organic* compounds as hydrocarbons are measured. Thus inorganic geochemical surface anomalies that have migrated away from the mineral source, and thus may be interpreted and found to be a false target location, is not detected and does not affect SGH results. This fact is of great advantage when comparing the SGH results to inorganic geochemical results. If there is agreement in the location of the anomalies between the organic and inorganic technique, such as Actlabs' Enzyme Leach, a significant increase in confidence in the target location can be realized. If there is no agreement or a shift in the location of the anomalies between the techniques, the inorganic anomaly may have been mobilized in the surficial environment.

The Nugget Effect

As SGH is "blind" to the inorganic content in the survey samples, any concern of a "nugget effect" will not be encountered with SGH data. A "nugget effect" may be of a concern for other inorganic geochemical methods from surveys over copper, gold, lead, nickel, etc. type targets.

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SGH DATA LEVELING

The combination of SGH data from different field sampling events has rarely required leveling in order to combine survey grids. The only circumstances that have occasionally required leveling has been the combination of samples that are very fine in texture, thus having a combined large surface area to samples of peat that may be in nearby areas. Even after maceration of the peat and in using the maximum size of sample amenable to this test method, peat samples have a significantly lower surface area. Peat samples have only required leveling in one survey in the last 500 SGH interpretations.

In only the last year it has been observed that SGH data *may* require leveling when different field sampling events have significantly different soil temperature. It has been documented that only when "soil" samples are taken from "frozen" ground that data leveling may be required as frozen sample act as a frozen cap to the hydrocarbon flux and may collect a higher concentration of hydrocarbon compounds compared to sampling during seasons where the samples are not frozen. Only two surveys have required leveling in the last 500 SGH interpretations.

The author has taken introductory training in the leveling of geochemical data. If leveling is required, both data sets are reviewed in terms of maximum, minimum and average values for each SGH Pathfinder Class intended for use in the interpretation. Data in sectioned into quartiles and each section is assigned specific leveling factors that is then applied to one data set. It should be noted that any type of data leveling is an approximation.

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APPENDIX "G"
SGH RATING SYSTEM DESCRIPTION

To date SGH has been found to be successful in the depiction of buried mineralization for Gold, Nickel, VMS, SEDEX, Uranium, Cu-Ni-PGE, IOCG, Base Metal, Tungsten, Lithium, Polymetallic, and Copper, as well as for Kimberlites, Coal Seam, Wet Gas and Oil Plays. SGH data has developed into a dual exploration tool. From the interpretation, a vertical projection of the predicted location of the target can be made as well as a statement on the rating of the comparability of the identification of the anticipated target type to that from known case studies, as an example: if the client anticipates the target to be a Gold deposit, what is the rating or comparability that the target is similar to the SGH results over a Gold deposit in Nunavut, shear hosted and sediment hosted deposits in Nevada, or Paleochannel Gold mineralization in Western Australia.

- **A rating of "6"** is the highest or best rating, and means that the SGH classes most important to describing a Gold related hydrocarbon signature are all present and consistently vector to the same location with well defined anomalies. To obtain this rating there also needs to be other SGH classes that when mapped lend support to the predicted location.
- **A rating of "5"** means that the SGH classes most important to describing a Gold signature are all present and consistently describe the same location with well defined anomalies. The SGH signatures may not be strong enough to also develop additional supporting classes.
- **A rating of "4"** means that the SGH classes most important to describing a Gold signature are mostly present describing the location with well defined anomalies. Supporting classes may also be present.
- **A rating of "3"** means that the SGH classes most important to describing a Gold signature are mostly present and describe the same location with fairly well defined anomalies. Some supporting classes may or may not be present.
- **A rating of "2"** means that some of the SGH classes most important to describing a Gold signature are present but a predicted location is difficult to determine. Some supporting classes may be present
- **A rating of "1"** is the lowest rating, and means that one of the SGH classes most important to describing a Gold signature is present but a predicted location is difficult to determine. Supporting classes are also not helpful.

The SGH rating is directly and significantly affected by the survey design. Small data sets, especially if significantly <50 sample locations, or transects/surveys that are geographically too short *will automatically receive a lower rating no matter how impressive an SGH anomaly might be*. When there is not enough sample locations to adequately review the SGH class geochromatography, or when the sample spacing is inadequate, or if the spacing is highly variable such that it biases the interpretation of the results, then the confidence in the interpretation of any geochemistry is adversely

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affected. The SGH rating is not just a rating of the agreement between the SGH pathfinder classes for a particular target type; it is a rating of the overall confidence in the SGH results from this particular survey. The interpretation is only based on the SGH results without any information from other geochemical, geological or geophysical information unless otherwise specified.

HISTORY & UNDERSTANDING

The subjective SGH rating system has been used since 2004 when Activation Laboratories started providing an SGH Interpretation Report with ever submission for SGH analysis to aid our clients in understanding this organic geochemistry and ensuring that they obtain the best results for their surveys. As explained in the previous section, the SGH rating is not just a rating of how definitive an SGH anomaly is, and it is not based just on the map(s) provided in this report. It is a rating of "confidence in the interpreted anomaly" from the combination of:

- (i) are the expected SGH Pathfinder Classes of compounds present from the template for this target type (one Pathfinder Class map is shown in the report, at least three must be present to adequately describe the correct signature for a particular target),
- (ii) how well do these SGH Pathfinder Classes agree in describing an particular area,
- (iii) how well does this agreement compare to SGH case studies over known targets of that type,
- (iv) how well is the interpreted anomaly defined by the survey (i.e. a single transect does not provide the same confidence as a complete grid of samples), and
- (v) is there at least a minimum of 50 sample locations in the survey so that there may be an adequate amount of data to observe the geochromatography of the different SGH Pathfinder Class of compounds.

The question often arises by clients as to the frequency of a rating, e.g. "how often is a rating of 5.0 given in an interpretation". To better understand this we present this review of the history of the SGH rating program since 2004 and some of the underlying situations that can affect the historical rating charts. Originally it was recommended that a minimum of 35 sample location be used for small target exploration, however it was quite quickly realized that this is often insufficient and at least 50 sample locations were required. In 2007 the rating scale was refined to include increments of 0.5 units rather than just integer values from 0 to 6.

A rating frequency may be biased high as most clients conduct an orientation study over a known target, thus several of these projects result in high ratings. Note that, at this time, the rating is not said to be linked to grade of a deposit or depth to the target. Even in exploration surveys clients tend to submit samples over more promising targets due to knowledge of the geology and prior geochemical or geophysical results. As shown in the following chart, projects with SGH data from 200 or more sample locations have a higher level of confidence in the interpretation as the

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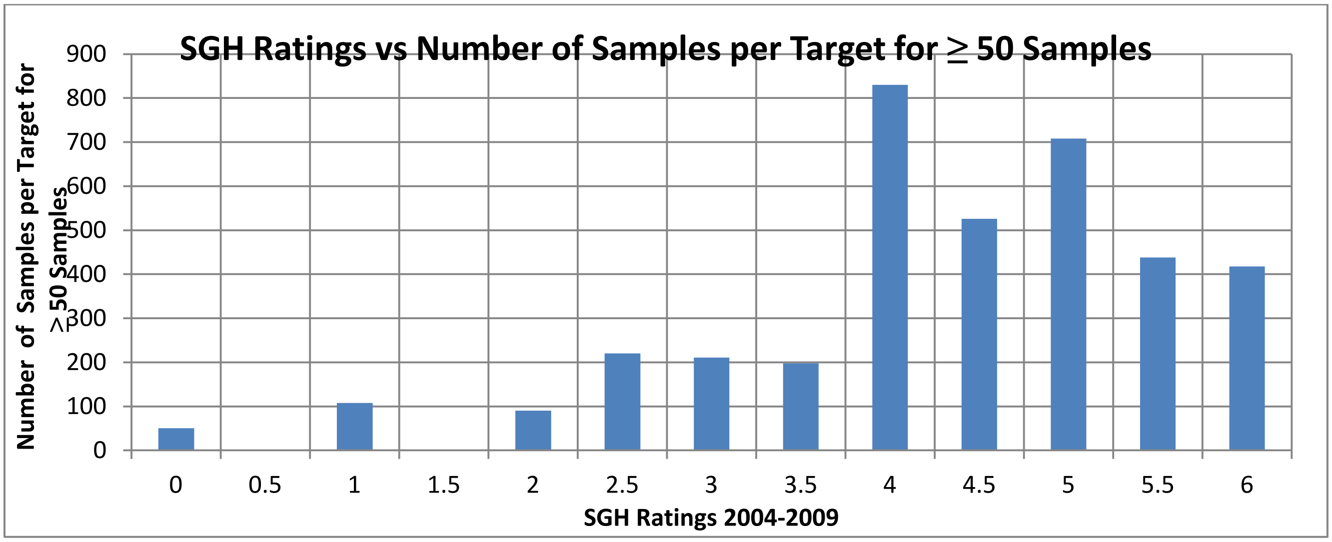
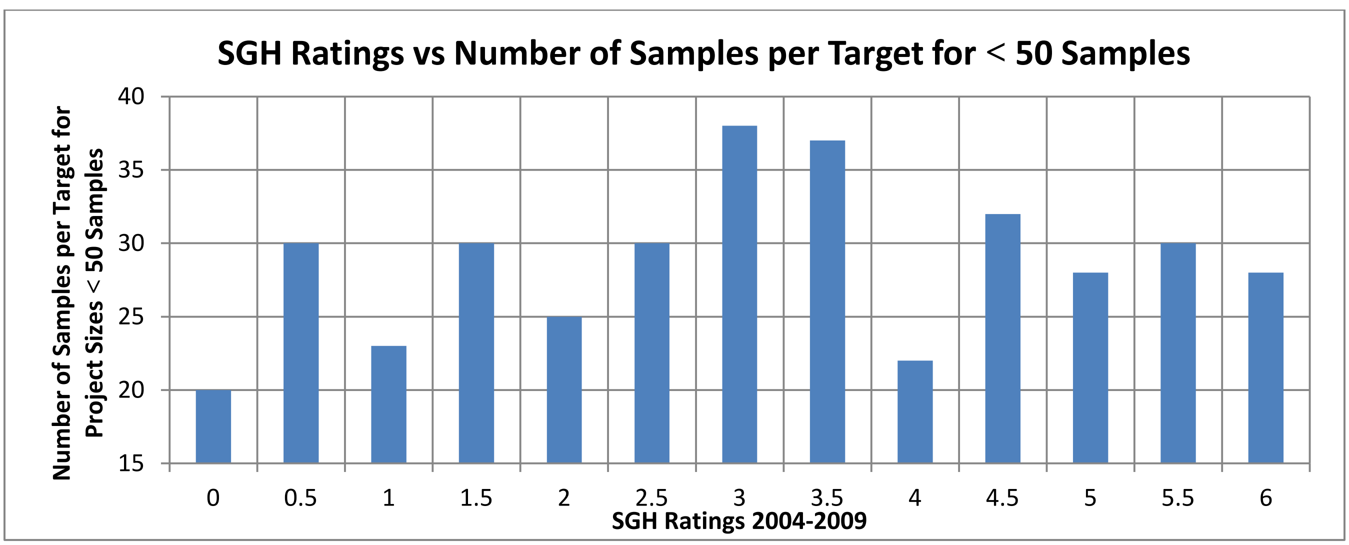
geochromatography of the SGH Pathfinder Classes of compounds can be more completely observed and reviewed.



The rating frequency may be biased low as research projects often include a bare minimum of samples to reduce costs. Research projects may also be over targets known to be difficult to depict with geochemistry. Multiple targets in close vicinity in a survey may result in a low bias as the Pathfinder Class geochromatography is more difficult to deconvelute. Ratings may also be biased low if less than the recommended 50 sample locations are submitted as indicated by the following chart. This chart also illustrates that there is no interpretation bias to a particular rating value.



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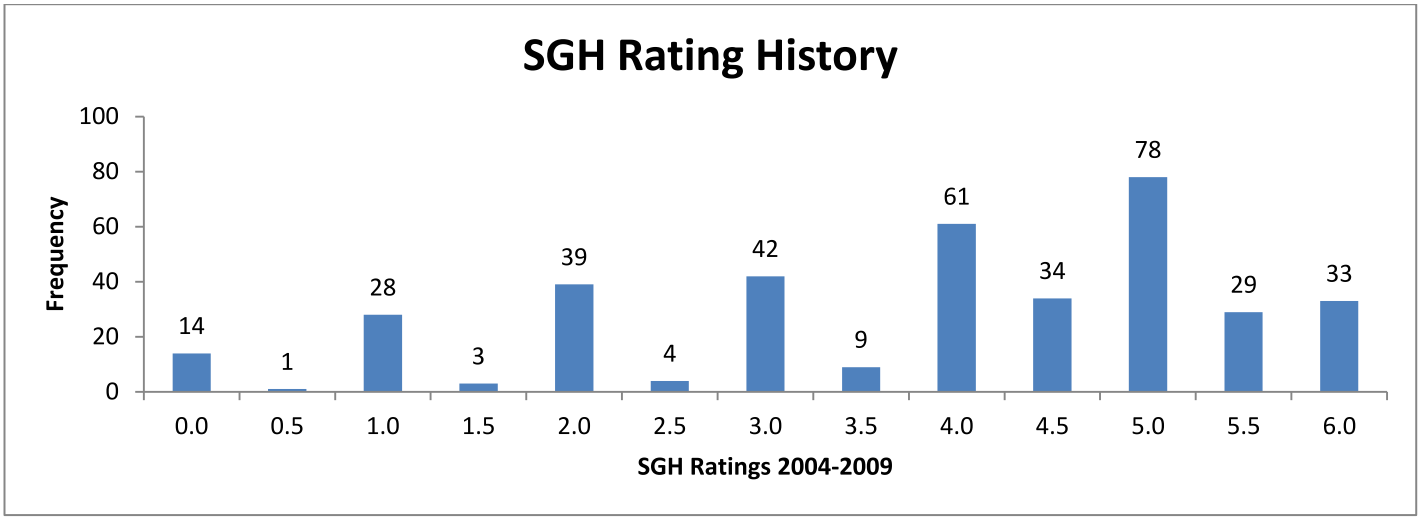
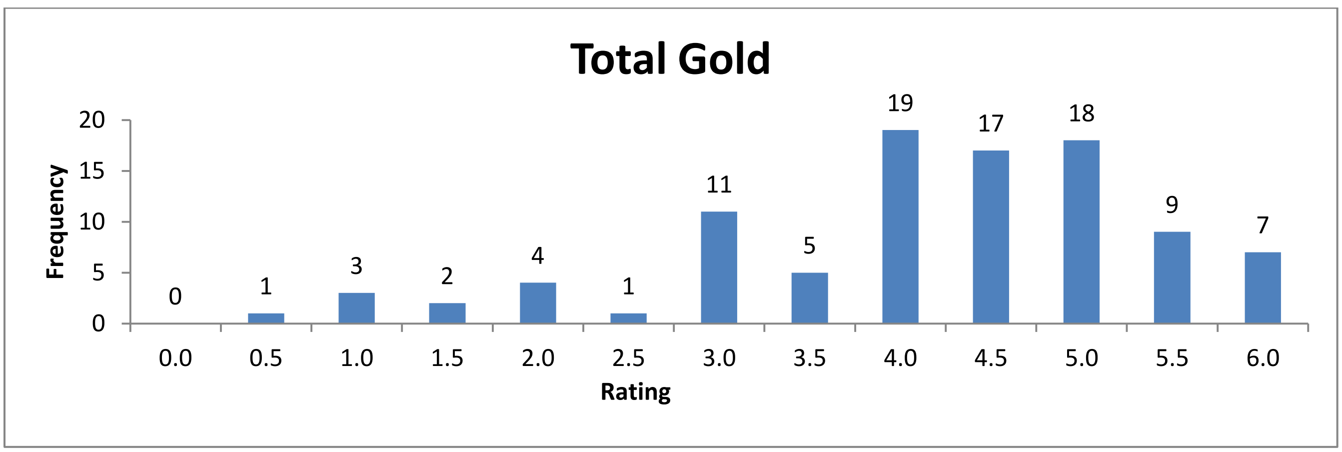
The overall rating frequency for over 400 targets from January 2004 to December 2009 is shown in the chart below illustrating that surveys over more promising targets are most often submitted for best use of research or exploration dollars. It also indicates that the 0.5 increments were less frequent as they started in 2007.



More specific for SGH interpretation for Gold targets, the overall rating frequency for 97 targets from January 2004 to December 2009 is shown in the chart below that also illustrates that surveys over more promising Gold targets are most often submitted for best use of research or exploration dollars.



1336 Sandhill Drive ● Ancaster, ON ● L9G 4V5 ● CANADA ● Tel: (905) 648-9611 ● Fax: (905) 648-9613 ● Toll Free: 1-888-ACTLABS

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APPENDIX "H"

NOTE: THERE IS NEW PRICING FOR THE SGH AND OSG GEOCHEMISTRIES AS OF 2014

SAMPLE PREPARATION: CODE S4 - $4.20 CDN per sample

INTERPRETATION FOR ONE COMMODITY TARGETS: Included in the price of analysis of $48.00 CDN per sample

INTERPRETATION FOR MULTI-COMMODITY TARGETS: i.e. VMS, SEDEX, Polymetallic, IOCG, IOCGU, Cu-Au-Porphyry, etc. – add additional price of $500 is applied to cover the additional time in interpretation.

"SUPPLEMENTAL REPORT": ($ 1,200.00)

Those clients who have determined that these SGH results will add an important aspect to their exploration effort can request a "Supplemental Report". This report contains the additional SGH Pathfinder Classes and an explanation of their use in the SGH interpretation that supports the initial applied "Rating" for the survey as a relative comparison to the results previously obtained in case studies that were used to create the SGH template for the general target type.

"ADDITIONAL INTERPRETATIONS": ($ 1,200.00) - if 30 days after delivery of the report.

The SGH data can be interpreted multiple times in comparison to a variety of SGH templates developed for exploration for different mineral targets or petroleum plays. The samples do not have to be reanalyzed. This can be addressed as a separate section of a report or as a separate report based on the client's wishes. The price is per survey area, e.g. if there are two projects in a submission, perhaps a North area and South area, and both survey areas are to be interpreted for say Gold and Copper, the first interpretation is included in the SGH analysis price, the second interpretation for each area would be priced at $1,200 per area, thus a total of $2,400.

"BASIC OR SUPPLEMENTAL REPORT GIS PACKAGE": ($ 300.00)

Those clients that wish to import the SGH results into their GIS software can request a "GIS Package", which will include the geo-referenced image files that reflect the mapped SGH Pathfinder Class or Classes contained in the Standard or Supplemental Report and an Excel CSV file(s) containing the associated Class Sum data.

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	001 - LA	002 - LA	003 - LB	004 - LA	005 - LB	006 - LB	007 - LA	008 - LB	009 - LB	010 - LB	011 - LA	012 - LB	013 - LBA
00 7+00N	18	160	2	1	2	1	-1	6	2	2	-1	-1	-1
00 7+50N	18	163	4	1	3	1	-1	7	3	2	-1	-1	-1
00 8+00N	16	150	3	1	1	-1	-1	3	1	-1	-1	-1	-1
00 8+50N	18	164	5	1	4	2	-1	12	4	4	1	-1	-1
00 9+00N	16	148	3	1	1	-1	-1	3	-1	-1	-1	-1	-1
00 9+00N-R	18	155	4	1	2	1	-1	4	-1	-1	-1	-1	-1
00 9+50N	15	144	3	1	-1	-1	-1	2	-1	-1	-1	-1	-1
1E 13+00N	18	169	5	1	3	1	-1	8	3	3	1	-1	1
1E 12+50N	19	157	3	1	2	1	-1	4	-1	1	-1	-1	-1
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1E 6+50N-R	22	175	9	1	2	-1	-1	4	-1	-1	-1	-1	-1
1E 6+00N	18	164	4	1	2	1	-1	4	-1	1	-1	-1	-1
1E 5+50N	20	177	4	1	3	1	-1	7	1	2	-1	-1	-1
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2E 9+00N DUP	25	182	7	1	4	2	-1	7	3	2	1	-1	1
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5E 3+50N	18	163	4	1	1	-1	-1	2	-1	-1	-1	-1	-1
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5E 7+00N-R	18	158	3	1	2	1	-1	3	-1	-1	-1	-1	-1

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3E 7+50N	19	169	3	1	2	-1	-1	4	-1	1	-1	-1	-1
3E 8+00N	25	193	3	1	5	2	-1	10	2	2	2	-1	1
3E 8+00N-R	26	207	4	1	7	3	-1	13	5	4	2	-1	2
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3E 9+50N	21	197	3	1	3	2	-1	8	1	2	2	-1	1
3E 10+00N	23	194	3	1	3	2	-1	8	1	2	-1	-1	1
3E 10+50N	21	188	4	1	5	2	1	12	4	4	2	-1	2
3E 11+00N	26	205	4	2	6	3	-1	16	6	5	2	-1	2

	001 - LA	002 - LA	003 - LB	004 - LA	005 - LB	006 - LB	007 - LA	008 - LB	009 - LB	010 - LB	011 - LA	012 - LB	013 - LBA
3E 11+50N	24	208	3	2	4	2	1	10	4	3	2	-1	2
3E 12+00N	28	203	4	2	4	2	1	10	4	3	2	-1	1
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3E 13+00N	30	227	5	2	13	5	2	24	9	7	4	-1	3
2E 13+00N	22	175	3	1	2	1	-1	3	-1	-1	-1	-1	-1
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2E 9+50N	38	229	11	2	1	-1	-1	2	-1	-1	-1	-1	-1
LMB-QA	15	138	2	1	-1	-1	-1	-1	-1	-1	-1	-1	-1
LMB-QA	15	144	2	1	-1	-1	-1	-1	-1	-1	-1	-1	-1
LMB-QA	15	141	2	1	-1	-1	-1	-1	-1	-1	-1	-1	-1
LMB-QA	15	142	2	1	-1	-1	-1	-1	-1	-1	-1	-1	-1

SOIL GAS HYDROCARBONS (SGH) by GC/MS

A14-07256 - Date: October 8, 2014 - Activation Laboratories Ltd.
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Dave Burda
Knight Township Project

R=Replicate Sample
-1=Reporting Limit of 1pg/g (ppt=parts per trillion)
LMB-QA = Laboratory Materials Blank - Quality Assurance

LEGEND FOR COLUMN HEADINGS - SGH COMPOUND CLASSES

LA, HA, LBA, HBA = ALKYL-ALKANES
LB, HB, LPB, HPB = ALKYL-BENZENES
LAR, MAR, HAR = ALKYL-AROMATICS
LBI, MBI, HBI, LPH, MPH, HPH = ALKYL-POLYAROMATICS
THI = ALKYL-DIVINYLENE SULPHIDES
ALK = ALKYL-ALKENES

	014 - LB	015 - LAR	016 - LB	017 - LB	018 - LB	019 - LB	020 - LA	021 - LPH	022 - LBA	023 - LAR	024 - LB	025 - LAR	026 - LBA
00 7+00N	-1	-1	-1	-1	2	2	-1	-1	-1	-1	-1	-1	2
00 7+50N	-1	-1	-1	-1	2	2	-1	-1	1	-1	-1	-1	2
00 8+00N	-1	-1	-1	-1	1	1	-1	-1	1	-1	-1	-1	2
00 8+50N	-1	-1	-1	-1	3	3	-1	-1	-1	-1	-1	-1	4
00 9+00N	-1	-1	-1	-1	1	1	-1	-1	-1	-1	-1	-1	1
00 9+00N-R	-1	-1	-1	-1	-1	1	-1	-1	-1	-1	-1	-1	2
00 9+50N	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
1E 13+00N	-1	-1	-1	-1	3	3	2	-1	1	-1	-1	1	4
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1E 12+00N	-1	-1	-1	-1	3	3	2	-1	2	-1	-1	1	3
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1E 11+00N	-1	-1	-1	-1	2	2	-1	-1	1	-1	-1	-1	2
1E 10+50N	-1	-1	-1	-1	3	3	2	-1	2	-1	-1	1	3
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1E 9+00N	-1	-1	-1	-1	3	3	2	-1	1	-1	-1	-1	3
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1E 6+50N-R	-1	-1	-1	-1	1	1	1	-1	2	-1	-1	-1	2
1E 6+00N	-1	-1	-1	-1	2	2	1	-1	-1	-1	-1	-1	3
1E 5+50N	-1	-1	-1	-1	2	2	2	-1	2	-1	-1	-1	2
1E 5+00N	-1	-1	-1	-1	2	2	2	-1	2	1	-1	-1	3
1E 4+50N	-1	-1	-1	-1	2	2	2	-1	1	-1	-1	-1	3
1E 4+00N	-1	-1	-1	-1	1	1	-1	-1	-1	-1	-1	-1	2
1E 3+50N	-1	-1	-1	-1	3	3	-1	-1	1	1	-1	1	3
1E 3+00N	-1	-1	-1	-1	3	3	2	-1	1	-1	-1	-1	3
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2E 3+50N	-1	-1	-1	-1	1	2	2	-1	2	-1	-1	-1	3
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2E 4+50N	-1	-1	-1	-1	2	2	2	-1	1	-1	-1	-1	3
2E 5+00N	-1	-1	-1	-1	-1	1	-1	-1	-1	-1	-1	-1	3
2E 5+50N	-1	-1	-1	-1	1	1	-1	-1	-1	-1	-1	-1	2
2E 6+00N	-1	-1	-1	-1	3	3	2	-1	2	1	-1	-1	3
2E 6+50N	-1	-1	-1	-1	1	1	-1	-1	-1	-1	-1	-1	2
2E 6+50N-R	-1	-1	-1	-1	1	1	-1	-1	-1	-1	-1	-1	-1
2E 7+00N	-1	-1	-1	-1	4	4	4	-1	2	2	-1	1	5
2E 7+50N	-1	-1	-1	-1	1	2	-1	-1	1	-1	-1	-1	2
2E 8+00N	-1	-1	-1	-1	1	2	2	-1	1	-1	-1	-1	-1
2E 8+50N	-1	-1	-1	-1	-1	1	2	-1	1	-1	-1	-1	2
2E 9+00N	-1	-1	-1	-1	2	2	3	-1	4	3	-1	-1	1
2E 9+00N DUP	-1	-1	-1	-1	1	1	2	-1	2	2	-1	-1	3
5E 3+00N	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	1
5E 3+50N	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	2
5E 4+00N	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	1
5E 4+50N	-1	-1	-1	-1	2	2	2	-1	2	1	-1	-1	2
5E 5+00N	-1	-1	-1	-1	-1	-1	1	-1	1	-1	-1	-1	-1
5E 5+50N	-1	-1	-1	-1	-1	1	1	-1	2	-1	-1	-1	-1
5E 6+00N	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
5E 6+50N	-1	-1	-1	-1	1	1	-1	-1	-1	-1	-1	-1	1
5E 7+00N	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	1
5E 7+00N-R	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	1

-1=Reporting Limit of 1pg/g (ppt=parts per trillion)

	014 - LB	015 - LAR	016 - LB	017 - LB	018 - LB	019 - LB	020 - LA	021 - LPH	022 - LBA	023 - LAR	024 - LB	025 - LAR	026 - LBA
5E 7+50N	-1	-1	-1	-1	3	3	-1	-1	1	1	-1	1	3
5E 8+00N	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	1
5E 8+50N	-1	-1	-1	-1	1	1	1	-1	1	-1	-1	-1	1
5E 9+00N	-1	-1	-1	-1	2	2	2	-1	2	1	-1	-1	-1
5E 9+50N	-1	-1	-1	-1	2	2	-1	-1	-1	-1	-1	-1	2
5E 10+00N	-1	-1	-1	-1	1	1	-1	-1	-1	-1	-1	-1	-1
5E 10+50N	-1	-1	-1	-1	1	1	-1	-1	-1	-1	-1	-1	1
5E 11+00N	-1	-1	-1	-1	1	1	-1	-1	-1	-1	-1	-1	1
5E 11+50N	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
5E 12+00N	-1	-1	-1	-1	2	2	4	-1	4	3	-1	-1	3
5E 12+50N	-1	-1	-1	-1	2	2	5	-1	2	3	-1	-1	3
5E 13+00N	-1	-1	-1	-1	-1	-1	2	-1	-1	1	-1	-1	1
4E 13+00N	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
4E 12+50N	-1	-1	-1	-1	1	1	1	-1	1	-1	-1	-1	1
4E 12+00N	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
4E 12+00N-R	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
4E 11+50N	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
4E 11+00N	-1	-1	-1	-1	-1	1	-1	-1	-1	-1	-1	-1	-1
4E 10+50N	-1	-1	-1	-1	1	1	-1	-1	-1	-1	-1	-1	-1
4E 10+00N	-1	-1	-1	-1	1	1	1	-1	1	-1	-1	-1	-1
4E 9+50N	-1	-1	-1	-1	1	2	-1	-1	-1	-1	-1	-1	-1
4E 9+00N	-1	-1	-1	-1	1	1	1	-1	1	-1	-1	-1	-1
4E 8+50N	-1	-1	-1	-1	1	1	-1	-1	-1	-1	-1	-1	1
4E 8+00N	-1	-1	-1	-1	2	2	3	-1	3	2	-1	-1	2
4E 7+50N	-1	-1	-1	-1	2	2	-1	-1	1	-1	-1	-1	2
4E 7+00N	-1	-1	-1	-1	1	1	-1	-1	1	-1	-1	-1	-1
4E 6+50N	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
4E 6+00N	-1	-1	-1	-1	2	2	1	-1	2	-1	-1	-1	1
4E 5+50N	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
4E 5+00N	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	1
4E 4+50N	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
4E 4+50N-R	-1	-1	-1	-1	-1	-1	1	-1	-1	-1	-1	-1	-1
4E 4+00N	-1	-1	-1	-1	2	2	2	-1	2	2	-1	-1	2
4E 3+50N	-1	-1	-1	-1	1	1	-1	-1	-1	-1	-1	-1	2
4E 3+00N	-1	-1	-1	-1	1	1	1	-1	1	1	-1	-1	-1
3E 3+00N	-1	-1	-1	-1	1	2	2	-1	2	-1	-1	-1	2
3E 3+50N	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	1
3E 4+00N	-1	-1	-1	-1	-1	-1	-1	-1	1	-1	-1	-1	-1
3E 4+50N	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	1
3E 5+00N	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
3E 5+50N	-1	-1	-1	-1	-1	1	-1	-1	-1	-1	-1	-1	-1
3E 6+00N	-1	-1	-1	-1	2	2	2	-1	2	-1	-1	-1	1
3E 6+50N	-1	-1	-1	-1	1	2	2	-1	-1	-1	-1	-1	1
3E 7+00N	-1	-1	-1	-1	-1	1	1	-1	1	-1	-1	-1	-1
3E 7+00N DUP	-1	-1	-1	-1	1	1	1	-1	1	-1	-1	-1	-1
3E 7+50N	-1	-1	-1	-1	-1	1	-1	-1	-1	-1	-1	-1	-1
3E 8+00N	-1	-1	-1	-1	1	2	2	-1	2	-1	-1	-1	1
3E 8+00N-R	-1	-1	-1	-1	2	2	2	-1	2	-1	-1	-1	2
3E 8+50N	-1	-1	-1	-1	1	2	2	-1	2	-1	-1	-1	1
3E 9+00N	-1	-1	-1	-1	1	2	2	-1	2	-1	-1	-1	1
3E 9+50N	-1	-1	-1	-1	2	2	2	-1	2	-1	-1	-1	2
3E 10+00N	-1	-1	-1	-1	2	2	2	-1	2	-1	-1	-1	1
3E 10+50N	-1	-1	-1	-1	3	3	2	-1	2	-1	-1	-1	2
3E 11+00N	-1	-1	-1	-1	4	4	-1	-1	1	-1	-1	2	2

SOIL GAS HYDROCARBONS
(SGH) by GC/MS
KNIGHT TOWNSHIP PROJECT

	014 - LB	015 - LAR	016 - LB	017 - LB	018 - LB	019 - LB	020 - LA	021 - LPH	022 - LBA	023 - LAR	024 - LB	025 - LAR	026 - LBA
3E 11+50N	-1	-1	-1	-1	3	3	2	-1	1	2	-1	1	4
3E 12+00N	-1	-1	-1	-1	2	2	2	-1	-1	2	-1	-1	1
3E 12+50N	-1	-1	-1	-1	2	2	2	-1	-1	1	-1	-1	2
3E 13+00N	-1	-1	-1	-1	6	6	5	-1	2	3	-1	2	4
2E 13+00N	-1	-1	-1	-1	-1	-1	1	-1	1	-1	-1	-1	2
2E 12+50N	-1	-1	-1	-1	2	2	2	-1	-1	-1	-1	-1	2
2E 12+00N	-1	-1	-1	-1	1	1	-1	-1	-1	1	-1	-1	-1
2E 11+50N	-1	-1	-1	-1	1	2	2	-1	-1	-1	-1	-1	1
2E 11+00N	-1	-1	-1	-1	1	2	2	-1	2	-1	-1	-1	1
2E 11+00N-R	-1	-1	-1	-1	1	1	-1	-1	-1	-1	-1	-1	-1
2E 10+50N	-1	-1	-1	-1	2	2	2	-1	-1	1	-1	-1	2
2E 10+00N	-1	-1	-1	-1	2	2	2	-1	2	1	-1	-1	2
2E 9+50N	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
LMB-QA	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
LMB-QA	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
LMB-QA	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
LMB-QA	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1

	027 - LB	028 - ALK	029 - HB	030 - HB	031 - HB	032 - HB	033 - HB	034 - HB	035 - LAR	036 - LBA	037 - HB	038 - LBA	039 - LAR
00 7+00N	2	-1	-1	-1	1	1	1	-1	-1	-1	-1	1	-1
00 7+50N	2	-1	-1	-1	1	1	1	-1	-1	-1	-1	1	-1
00 8+00N	2	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
00 8+50N	4	1	1	-1	2	2	2	-1	-1	1	-1	2	-1
00 9+00N	1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
00 9+00N-R	1	-1	-1	-1	-1	-1	-1	-1	-1	1	-1	1	-1
00 9+50N	1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
1E 13+00N	4	2	1	-1	2	2	2	-1	-1	3	-1	3	-1
1E 12+50N	2	1	-1	-1	1	1	1	-1	-1	1	-1	1	-1
1E 12+00N	3	2	1	-1	1	1	1	-1	-1	2	-1	2	-1
1E 11+50N	2	-1	-1	-1	-1	1	1	-1	-1	2	-1	2	-1
1E 11+00N	2	1	-1	-1	1	1	-1	-1	-1	1	-1	1	-1
1E 10+50N	3	2	1	-1	1	1	1	-1	-1	1	-1	2	-1
1E 10+00N	3	1	-1	-1	1	1	1	-1	-1	-1	-1	2	-1
1E 9+50N	2	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	1	-1
1E 9+00N	3	1	-1	-1	1	1	1	-1	-1	2	-1	2	-1
1E 8+50N	4	1	1	-1	1	1	1	-1	-1	2	-1	2	-1
1E 8+00N	5	2	1	-1	2	2	2	1	-1	2	-1	2	-1
1E 7+50N	3	1	-1	-1	1	1	1	-1	-1	2	-1	2	-1
1E 7+00N	2	1	-1	-1	-1	-1	-1	-1	-1	-1	-1	1	-1
1E 6+50N	2	1	-1	-1	-1	-1	-1	-1	-1	1	-1	1	-1
1E 6+50N-R	2	2	-1	-1	-1	-1	-1	-1	-1	1	-1	1	-1
1E 6+00N	2	1	-1	-1	1	1	1	-1	-1	1	-1	2	-1
1E 5+50N	3	2	-1	-1	1	1	1	-1	-1	1	-1	2	-1
1E 5+00N	3	3	-1	-1	-1	1	-1	-1	-1	2	-1	2	-1
1E 4+50N	3	1	-1	-1	1	1	-1	-1	-1	2	-1	2	-1
1E 4+00N	2	1	-1	-1	-1	-1	-1	-1	-1	1	-1	1	-1
1E 3+50N	4	2	-1	-1	2	1	1	-1	-1	-1	-1	2	-1
1E 3+00N	4	2	1	-1	1	1	1	-1	-1	2	-1	2	-1
2E 3+00N	2	1	-1	-1	-1	-1	-1	-1	-1	2	-1	2	-1
2E 3+50N	2	2	-1	-1	-1	-1	-1	-1	-1	2	-1	2	-1
2E 4+00N	4	3	1	-1	2	2	1	-1	-1	-1	-1	1	-1
2E 4+50N	3	2	1	-1	1	1	1	-1	-1	2	-1	2	-1
2E 5+00N	2	1	-1	-1	-1	-1	-1	-1	-1	2	-1	2	-1
2E 5+50N	2	1	-1	-1	-1	-1	-1	-1	-1	-1	-1	2	-1
2E 6+00N	4	3	1	-1	2	2	1	-1	-1	-1	-1	3	-1
2E 6+50N	2	2	-1	-1	-1	-1	-1	-1	-1	-1	-1	2	-1
2E 6+50N-R	2	2	-1	-1	-1	-1	-1	-1	-1	-1	-1	1	-1
2E 7+00N	5	3	2	-1	2	2	2	-1	-1	1	-1	3	-1
2E 7+50N	2	2	-1	-1	1	-1	-1	-1	-1	2	-1	2	-1
2E 8+00N	2	2	-1	-1	1	-1	-1	-1	-1	2	-1	2	-1
2E 8+50N	2	2	-1	-1	-1	-1	-1	-1	-1	2	-1	2	-1
2E 9+00N	3	3	-1	-1	1	1	1	-1	-1	2	-1	2	-1
2E 9+00N DUP	2	3	-1	-1	-1	-1	-1	-1	-1	1	-1	2	-1
5E 3+00N	1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
5E 3+50N	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
5E 4+00N	1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
5E 4+50N	2	3	-1	-1	1	1	-1	-1	-1	1	-1	2	-1
5E 5+00N	1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
5E 5+50N	1	1	-1	-1	-1	-1	-1	-1	-1	1	-1	1	-1
5E 6+00N	1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
5E 6+50N	1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
5E 7+00N	1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
5E 7+00N-R	1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1

SOIL GAS HYDROCARBONS (SGH) by GC/MS
KNIGHT TOWNSHIP PROJECT

	027 - LB	028 - ALK	029 - HB	030 - HB	031 - HB	032 - HB	033 - HB	034 - HB	035 - LAR	036 - LBA	037 - HB	038 - LBA	039 - LAR
5E 7+50N	4	2	1	-1	2	2	1	-1	-1	2	-1	2	-1
5E 8+00N	1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
5E 8+50N	2	1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
5E 9+00N	3	1	-1	-1	-1	1	1	-1	-1	1	-1	1	-1
5E 9+50N	2	2	-1	-1	-1	-1	-1	-1	-1	-1	-1	1	-1
5E 10+00N	2	1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
5E 10+50N	2	1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
5E 11+00N	2	1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
5E 11+50N	2	1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
5E 12+00N	2	-1	-1	-1	-1	1	-1	-1	-1	2	-1	3	-1
5E 12+50N	3	4	-1	-1	-1	1	1	-1	-1	3	-1	3	-1
5E 13+00N	-1	2	-1	-1	-1	-1	-1	-1	-1	-1	-1	1	-1
4E 13+00N	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
4E 12+50N	2	2	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
4E 12+00N	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
4E 12+00N-R	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
4E 11+50N	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
4E 11+00N	1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
4E 10+50N	2	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
4E 10+00N	2	1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
4E 9+50N	2	1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
4E 9+00N	2	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
4E 8+50N	2	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
4E 8+00N	2	3	-1	-1	-1	-1	-1	-1	-1	2	-1	2	-1
4E 7+50N	2	1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
4E 7+00N	1	1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
4E 6+50N	1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
4E 6+00N	2	2	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
4E 5+50N	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
4E 5+00N	1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
4E 4+50N	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
4E 4+50N-R	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
4E 4+00N	2	3	-1	-1	1	-1	-1	-1	-1	2	-1	2	-1
4E 3+50N	2	1	-1	-1	-1	-1	-1	-1	-1	-1	-1	1	-1
4E 3+00N	2	2	-1	-1	-1	-1	-1	-1	-1	1	-1	1	-1
3E 3+00N	2	2	-1	-1	-1	-1	-1	-1	-1	1	-1	2	-1
3E 3+50N	1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
3E 4+00N	1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
3E 4+50N	1	1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
3E 5+00N	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
3E 5+50N	1	1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
3E 6+00N	2	-1	-1	-1	-1	-1	-1	-1	-1	1	-1	1	-1
3E 6+50N	2	1	-1	-1	-1	-1	-1	-1	-1	1	-1	1	-1
3E 7+00N	1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
3E 7+00N DUP	2	2	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
3E 7+50N	2	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
3E 8+00N	2	2	-1	-1	-1	-1	-1	-1	-1	-1	-1	1	-1
3E 8+00N-R	2	-1	-1	-1	-1	-1	-1	-1	-1	1	-1	2	-1
3E 8+50N	3	-1	-1	-1	-1	-1	-1	-1	-1	1	-1	1	-1
3E 9+00N	2	-1	-1	-1	-1	-1	-1	-1	-1	1	-1	1	-1
3E 9+50N	2	2	-1	-1	-1	-1	-1	-1	-1	1	-1	2	-1
3E 10+00N	3	-1	-1	-1	-1	1	-1	-1	-1	1	-1	1	-1
3E 10+50N	4	2	1	-1	2	1	1	-1	-1	2	-1	2	-1
3E 11+00N	6	2	2	-1	2	2	2	1	-1	2	-1	2	-1

Results represent only the material tested. Actlabs is not liable for any claim/damage from use of this report in excess of the test cost. Unless requested samples are discarded in 90 days. This report is only to be reproduced in full.

-1=Reporting Limit of 1pg/g (ppt=parts per trillion)

R=Replicate Sample

	027 - LB	028 - ALK	029 - HB	030 - HB	031 - HB	032 - HB	033 - HB	034 - HB	035 - LAR	036 - LBA	037 - HB	038 - LBA	039 - LAR
3E 11+50N	6	4	-1	-1	2	2	2	-1	-1	3	-1	3	-1
3E 12+00N	4	3	1	-1	2	2	1	-1	-1	2	-1	2	-1
3E 12+50N	4	3	1	-1	2	1	1	-1	-1	2	-1	2	-1
3E 13+00N	12	6	-1	1	4	3	3	1	-1	3	-1	4	-1
2E 13+00N	2	1	-1	-1	-1	-1	-1	-1	-1	1	-1	1	-1
2E 12+50N	3	3	1	-1	1	1	1	-1	-1	2	-1	2	-1
2E 12+00N	3	3	-1	-1	1	-1	-1	-1	-1	2	-1	2	-1
2E 11+50N	3	2	-1	-1	1	1	1	-1	-1	1	-1	1	-1
2E 11+00N	3	2	-1	-1	1	1	1	-1	-1	1	-1	1	-1
2E 11+00N-R	3	2	-1	-1	1	1	1	-1	-1	1	-1	1	-1
2E 10+50N	3	2	-1	-1	-1	1	-1	-1	-1	1	-1	1	-1
2E 10+00N	2	3	-1	-1	-1	-1	-1	-1	-1	2	-1	2	-1
2E 9+50N	1	1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
LMB-QA	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
LMB-QA	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
LMB-QA	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
LMB-QA	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1

SOIL GAS HYDROCARBONS
(SGH) by GC/MS
KNIGHT TOWNSHIP PROJECT

	040 - LPB	041 - LBA	042 - LPB	043 - HB	044 - HB	045 - LA	046 - LPH	047 - LBA	048 - HB	049 - HB	050 - LBA	051 - LBI	052 - LPB
00 7+00N	-1	1	-1	-1	-1	1	-1	1	-1	-1	-1	-1	-1
00 7+50N	-1	1	-1	-1	-1	-1	-1	1	-1	-1	-1	-1	-1
00 8+00N	-1	-1	-1	-1	-1	-1	-1	1	-1	-1	-1	-1	-1
00 8+50N	-1	2	-1	-1	-1	3	-1	2	-1	-1	1	-1	-1
00 9+00N	-1	-1	-1	-1	-1	-1	-1	1	-1	-1	-1	-1	-1
00 9+00N-R	-1	1	-1	-1	-1	1	-1	1	-1	-1	-1	-1	-1
00 9+50N	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
1E 13+00N	-1	4	-1	-1	-1	4	-1	4	-1	-1	2	-1	-1
1E 12+50N	-1	2	-1	-1	-1	2	-1	2	-1	-1	1	-1	-1
1E 12+00N	-1	3	-1	-1	-1	3	-1	-1	-1	-1	2	-1	-1
1E 11+50N	-1	2	-1	-1	-1	2	-1	2	-1	-1	-1	-1	-1
1E 11+00N	-1	2	-1	-1	-1	2	-1	-1	-1	-1	-1	-1	-1
1E 10+50N	-1	3	-1	-1	-1	3	-1	2	-1	-1	1	-1	-1
1E 10+00N	-1	2	-1	-1	-1	2	-1	2	-1	-1	1	-1	-1
1E 9+50N	-1	1	-1	-1	-1	1	-1	1	-1	-1	-1	-1	-1
1E 9+00N	-1	3	-1	-1	-1	4	-1	3	-1	-1	1	-1	-1
1E 8+50N	-1	2	-1	-1	-1	3	-1	2	-1	-1	1	-1	-1
1E 8+00N	-1	4	-1	-1	-1	4	-1	1	-1	-1	2	-1	-1
1E 7+50N	-1	3	-1	-1	-1	3	-1	3	-1	-1	1	-1	-1
1E 7+00N	-1	2	-1	-1	-1	3	-1	2	-1	-1	-1	-1	-1
1E 6+50N	-1	1	-1	-1	-1	1	-1	-1	-1	-1	1	-1	-1
1E 6+50N-R	-1	1	-1	-1	-1	1	-1	1	-1	-1	-1	-1	-1
1E 6+00N	-1	2	-1	-1	-1	3	-1	2	-1	-1	1	-1	-1
1E 5+50N	-1	2	-1	-1	-1	3	-1	-1	-1	-1	-1	-1	-1
1E 5+00N	-1	4	-1	-1	-1	4	-1	3	-1	-1	2	-1	-1
1E 4+50N	-1	3	-1	-1	-1	3	-1	-1	-1	-1	2	-1	-1
1E 4+00N	-1	2	-1	-1	-1	2	-1	1	-1	-1	-1	-1	-1
1E 3+50N	-1	4	-1	-1	-1	4	-1	3	-1	-1	2	-1	-1
1E 3+00N	-1	2	-1	-1	-1	3	-1	1	-1	-1	2	-1	-1
2E 3+00N	-1	2	-1	-1	-1	3	-1	1	-1	-1	1	-1	-1
2E 3+50N	-1	2	-1	-1	-1	3	-1	2	-1	-1	1	-1	-1
2E 4+00N	-1	3	-1	-1	-1	4	-1	3	-1	-1	2	-1	-1
2E 4+50N	-1	2	-1	-1	-1	1	-1	3	-1	-1	2	-1	-1
2E 5+00N	-1	2	-1	-1	-1	3	-1	2	-1	-1	1	-1	-1
2E 5+50N	-1	2	-1	-1	-1	2	-1	2	-1	-1	1	-1	-1
2E 6+00N	-1	3	-1	-1	-1	4	-1	4	-1	-1	2	-1	-1
2E 6+50N	-1	2	-1	-1	-1	2	-1	3	-1	-1	1	-1	-1
2E 6+50N-R	-1	2	-1	-1	-1	2	-1	2	-1	-1	-1	-1	-1
2E 7+00N	-1	5	-1	-1	-1	6	-1	4	-1	-1	2	-1	-1
2E 7+50N	-1	2	-1	-1	-1	-1	-1	3	-1	-1	-1	-1	-1
2E 8+00N	-1	4	-1	-1	-1	4	-1	4	-1	-1	2	-1	-1
2E 8+50N	-1	3	-1	-1	-1	3	-1	-1	-1	-1	2	-1	-1
2E 9+00N	-1	5	-1	-1	-1	5	-1	1	-1	-1	2	-1	-1
2E 9+00N DUP	-1	3	-1	-1	-1	3	-1	2	-1	-1	1	-1	-1
5E 3+00N	-1	-1	-1	-1	-1	1	-1	1	-1	-1	-1	-1	-1
5E 3+50N	-1	-1	-1	-1	-1	1	-1	-1	-1	-1	-1	-1	-1
5E 4+00N	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
5E 4+50N	-1	4	-1	-1	-1	4	-1	-1	-1	-1	1	-1	-1
5E 5+00N	-1	2	-1	-1	-1	2	-1	-1	-1	-1	-1	-1	-1
5E 5+50N	-1	2	-1	-1	-1	2	-1	-1	-1	-1	1	-1	-1
5E 6+00N	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
5E 6+50N	-1	1	-1	-1	-1	1	-1	-1	-1	-1	-1	-1	-1
5E 7+00N	-1	-1	-1	-1	-1	1	-1	-1	-1	-1	-1	-1	-1
5E 7+00N-R	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1

Dave Burda

-1=Reporting Limit of 1pg/g (ppt=parts per trillion)

SOIL GAS HYDROCARBONS
(SGH) by GC/MS
KNIGHT TOWNSHIP PROJECT

Activation Laboratories Ltd.
Date: October 9, 2014
R=Replicate Sample

	040 - LPB	041 - LBA	042 - LPB	043 - HB	044 - HB	045 - LA	046 - LPH	047 - LBA	048 - HB	049 - HB	050 - LBA	051 - LBI	052 - LPB
5E 7+50N	-1	3	-1	-1	-1	3	-1	2	-1	-1	1	-1	-1
5E 8+00N	-1	1	-1	-1	-1	1	-1	-1	-1	-1	-1	-1	-1
5E 8+50N	-1	2	-1	-1	-1	2	-1	1	-1	-1	1	-1	-1
5E 9+00N	-1	3	-1	-1	-1	3	-1	-1	-1	-1	1	-1	-1
5E 9+50N	-1	2	-1	-1	-1	2	-1	-1	-1	-1	1	-1	-1
5E 10+00N	-1	1	-1	-1	-1	1	-1	-1	-1	-1	-1	-1	-1
5E 10+50N	-1	1	-1	-1	-1	1	-1	1	-1	-1	-1	-1	-1
5E 11+00N	-1	1	-1	-1	-1	1	-1	-1	-1	-1	-1	-1	-1
5E 11+50N	-1	-1	-1	-1	-1	1	-1	-1	-1	-1	-1	-1	-1
5E 12+00N	-1	6	-1	-1	-1	6	-1	1	-1	-1	2	-1	-1
5E 12+50N	-1	7	-1	-1	-1	7	-1	1	-1	-1	3	-1	-1
5E 13+00N	-1	2	-1	-1	-1	2	-1	-1	-1	-1	1	-1	-1
4E 13+00N	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
4E 12+50N	-1	2	-1	-1	-1	2	-1	-1	-1	-1	-1	-1	-1
4E 12+00N	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
4E 12+00N-R	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
4E 11+50N	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
4E 11+00N	-1	1	-1	-1	-1	1	-1	-1	-1	-1	-1	-1	-1
4E 10+50N	-1	2	-1	-1	-1	2	-1	-1	-1	-1	-1	-1	-1
4E 10+00N	-1	2	-1	-1	-1	2	-1	-1	-1	-1	-1	-1	-1
4E 9+50N	-1	1	-1	-1	-1	1	-1	-1	-1	-1	-1	-1	-1
4E 9+00N	-1	2	-1	-1	-1	2	-1	-1	-1	-1	-1	-1	-1
4E 8+50N	-1	2	-1	-1	-1	2	-1	-1	-1	-1	-1	-1	-1
4E 8+00N	-1	5	-1	-1	-1	4	-1	1	-1	-1	2	-1	-1
4E 7+50N	-1	2	-1	-1	-1	2	-1	1	-1	-1	-1	-1	-1
4E 7+00N	-1	2	-1	-1	-1	2	-1	-1	-1	-1	-1	-1	-1
4E 6+50N	-1	2	-1	-1	-1	1	-1	-1	-1	-1	-1	-1	-1
4E 6+00N	-1	2	-1	-1	-1	2	-1	-1	-1	-1	-1	-1	-1
4E 5+50N	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
4E 5+00N	-1	2	-1	-1	-1	2	-1	-1	-1	-1	-1	-1	-1
4E 4+50N	-1	2	-1	-1	-1	2	-1	-1	-1	-1	-1	-1	-1
4E 4+50N-R	-1	2	-1	-1	-1	2	-1	-1	-1	-1	-1	-1	-1
4E 4+00N	-1	6	-1	-1	-1	6	-1	1	-1	-1	2	-1	-1
4E 3+50N	-1	3	-1	-1	-1	4	-1	-1	-1	-1	1	-1	-1
4E 3+00N	-1	3	-1	-1	-1	3	-1	-1	-1	-1	1	-1	-1
3E 3+00N	-1	4	-1	-1	-1	4	-1	-1	-1	-1	2	-1	-1
3E 3+50N	-1	2	-1	-1	-1	1	-1	-1	-1	-1	-1	-1	-1
3E 4+00N	-1	2	-1	-1	-1	2	-1	-1	-1	-1	-1	-1	-1
3E 4+50N	-1	1	-1	-1	-1	1	-1	1	-1	-1	-1	-1	-1
3E 5+00N	-1	1	-1	-1	-1	1	-1	1	-1	-1	1	-1	-1
3E 5+50N	-1	1	-1	-1	-1	1	-1	-1	-1	-1	-1	-1	-1
3E 6+00N	-1	3	-1	-1	-1	4	-1	3	-1	-1	1	-1	-1
3E 6+50N	-1	3	-1	-1	-1	4	-1	-1	-1	-1	1	-1	-1
3E 7+00N	-1	2	-1	-1	-1	2	-1	-1	-1	-1	-1	-1	-1
3E 7+00N DUP	-1	2	-1	-1	-1	2	-1	-1	-1	-1	-1	-1	-1
3E 7+50N	-1	2	-1	-1	-1	1	-1	-1	-1	-1	-1	-1	-1
3E 8+00N	-1	2	-1	-1	-1	2	-1	-1	-1	-1	-1	-1	-1
3E 8+00N-R	-1	3	-1	-1	-1	3	-1	-1	-1	-1	1	-1	-1
3E 8+50N	-1	3	-1	-1	-1	3	-1	-1	-1	-1	1	-1	-1
3E 9+00N	-1	2	-1	-1	-1	3	-1	-1	-1	-1	1	-1	-1
3E 9+50N	-1	4	-1	-1	-1	4	-1	-1	-1	-1	2	-1	-1
3E 10+00N	-1	3	-1	-1	-1	3	-1	-1	-1	-1	1	-1	-1
3E 10+50N	-1	4	-1	-1	-1	4	-1	-1	-1	-1	2	-1	-1
3E 11+00N	1	4	-1	-1	-1	4	-1	-1	-1	-1	2	-1	-1

	040 - LPB	041 - LBA	042 - LPB	043 - HB	044 - HB	045 - LA	046 - LPH	047 - LBA	048 - HB	049 - HB	050 - LBA	051 - LBI	052 - LPB
3E 11+50N	-1	5	-1	-1	-1	5	-1	6	-1	-1	3	-1	-1
3E 12+00N	-1	4	-1	-1	-1	5	-1	-1	-1	-1	2	-1	-1
3E 12+50N	-1	5	-1	-1	-1	5	-1	1	-1	-1	2	-1	-1
3E 13+00N	1	10	-1	-1	-1	10	-1	2	-1	-1	4	-1	-1
2E 13+00N	-1	2	-1	-1	-1	2	-1	-1	-1	-1	1	-1	-1
2E 12+50N	-1	3	-1	-1	-1	3	-1	-1	-1	-1	2	-1	-1
2E 12+00N	-1	4	-1	-1	-1	4	-1	-1	-1	-1	2	-1	-1
2E 11+50N	-1	3	-1	-1	-1	3	-1	-1	-1	-1	1	-1	-1
2E 11+00N	-1	4	-1	-1	-1	4	-1	-1	-1	-1	2	-1	-1
2E 11+00N-R	-1	2	-1	-1	-1	2	-1	-1	-1	-1	1	-1	-1
2E 10+50N	-1	3	-1	-1	-1	3	-1	2	-1	-1	1	-1	-1
2E 10+00N	-1	3	-1	-1	-1	3	-1	1	-1	-1	2	-1	-1
2E 9+50N	-1	1	-1	-1	-1	1	-1	-1	-1	-1	-1	-1	-1
LMB-QA	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
LMB-QA	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
LMB-QA	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
LMB-QA	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1

	053 - LPB	054 - HB	055 - LPB	056 - LBI	057 - ALK	058 - LPB	059 - LPB	060 - LPH	061 - LBI	062 - LBA	063 - LPH	064 - LBA	065 - HPB
00 7+00N	-1	-1	-1	-1	-1	-1	-1	2	-1	2	2	4	-1
00 7+50N	-1	-1	-1	-1	-1	-1	-1	1	-1	2	-1	4	-1
00 8+00N	-1	-1	-1	-1	-1	-1	-1	-1	-1	2	-1	4	-1
00 8+50N	-1	-1	-1	-1	-1	-1	-1	2	-1	2	1	5	-1
00 9+00N	-1	-1	-1	-1	-1	-1	-1	-1	-1	1	-1	3	-1
00 9+00N-R	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	3	-1
00 9+50N	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	3	-1
1E 13+00N	-1	-1	-1	-1	1	-1	-1	3	-1	3	2	6	-1
1E 12+50N	-1	-1	-1	-1	-1	-1	-1	1	-1	1	-1	5	-1
1E 12+00N	-1	-1	-1	-1	-1	-1	-1	2	-1	3	-1	4	-1
1E 11+50N	-1	-1	-1	-1	-1	-1	-1	2	-1	2	1	4	-1
1E 11+00N	-1	-1	-1	-1	-1	-1	-1	1	-1	2	-1	4	-1
1E 10+50N	-1	-1	-1	-1	1	-1	-1	2	-1	3	1	6	-1
1E 10+00N	-1	-1	-1	-1	-1	-1	-1	2	-1	2	-1	5	-1
1E 9+50N	-1	-1	-1	-1	-1	-1	-1	1	-1	2	-1	4	-1
1E 9+00N	-1	-1	-1	-1	-1	-1	-1	2	-1	3	-1	5	-1
1E 8+50N	-1	-1	-1	-1	-1	-1	-1	2	-1	1	1	4	-1
1E 8+00N	-1	-1	-1	-1	-1	-1	-1	2	-1	3	1	4	-1
1E 7+50N	-1	-1	-1	-1	-1	-1	-1	1	-1	2	-1	5	-1
1E 7+00N	-1	-1	-1	-1	-1	-1	-1	1	-1	-1	-1	3	-1
1E 6+50N	-1	-1	-1	-1	-1	-1	-1	-1	-1	2	-1	3	-1
1E 6+50N-R	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	2	-1
1E 6+00N	-1	-1	-1	-1	-1	-1	-1	2	-1	1	1	5	-1
1E 5+50N	-1	-1	-1	-1	-1	-1	-1	2	-1	2	-1	3	-1
1E 5+00N	-1	-1	-1	-1	1	-1	-1	2	-1	4	2	9	-1
1E 4+50N	-1	-1	-1	-1	-1	-1	-1	2	-1	3	-1	4	-1
1E 4+00N	-1	-1	-1	-1	-1	-1	-1	1	-1	2	-1	4	-1
1E 3+50N	-1	-1	-1	-1	1	-1	-1	2	-1	4	-1	5	-1
1E 3+00N	-1	-1	-1	-1	-1	-1	-1	2	-1	4	2	6	-1
2E 3+00N	-1	-1	-1	-1	-1	-1	-1	1	-1	1	-1	4	-1
2E 3+50N	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	3	-1
2E 4+00N	-1	-1	-1	-1	-1	-1	-1	2	-1	3	1	6	-1
2E 4+50N	-1	-1	-1	-1	-1	-1	-1	2	-1	3	2	5	-1
2E 5+00N	-1	-1	-1	-1	-1	-1	-1	1	-1	2	-1	3	-1
2E 5+50N	-1	-1	-1	-1	-1	-1	-1	-1	-1	2	-1	5	-1
2E 6+00N	-1	-1	-1	-1	-1	-1	-1	2	-1	3	1	7	-1
2E 6+50N	-1	-1	-1	-1	-1	-1	-1	1	-1	3	-1	5	-1
2E 6+50N-R	-1	-1	-1	-1	-1	-1	-1	-1	-1	2	-1	3	-1
2E 7+00N	-1	-1	-1	-1	1	-1	-1	2	-1	4	1	3	-1
2E 7+50N	-1	-1	-1	-1	-1	-1	-1	1	-1	2	-1	3	-1
2E 8+00N	-1	-1	-1	-1	-1	-1	-1	1	-1	1	-1	4	-1
2E 8+50N	-1	-1	-1	-1	-1	-1	-1	1	-1	1	-1	4	-1
2E 9+00N	-1	-1	-1	-1	-1	-1	-1	-1	-1	2	-1	2	-1
2E 9+00N DUP	-1	-1	-1	-1	1	-1	-1	-1	-1	3	-1	4	-1
5E 3+00N	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	3	-1
5E 3+50N	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	3	-1
5E 4+00N	-1	-1	-1	-1	-1	-1	-1	-1	-1	1	-1	2	-1
5E 4+50N	-1	-1	-1	-1	-1	-1	-1	1	-1	2	-1	4	-1
5E 5+00N	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	2	-1
5E 5+50N	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	3	-1
5E 6+00N	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	2	-1
5E 6+50N	-1	-1	-1	-1	-1	-1	-1	-1	-1	1	-1	2	-1
5E 7+00N	-1	-1	-1	-1	-1	-1	-1	-1	-1	1	-1	2	-1
5E 7+00N-R	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	2	-1

SOIL GAS HYDROCARBONS
(SGH) by GC/MS
KNIGHT TOWNSHIP PROJECT

	053 - LPB	054 - HB	055 - LPB	056 - LBI	057 - ALK	058 - LPB	059 - LPB	060 - LPH	061 - LBI	062 - LBA	063 - LPH	064 - LBA	065 - HPB
5E 7+50N	-1	-1	-1	-1	1	-1	-1	2	-1	3	1	3	-1
5E 8+00N	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	2	-1
5E 8+50N	-1	-1	-1	-1	-1	-1	-1	-1	-1	2	-1	2	-1
5E 9+00N	-1	-1	-1	-1	-1	-1	-1	1	-1	2	-1	3	-1
5E 9+50N	-1	-1	-1	-1	-1	-1	-1	2	-1	3	1	4	-1
5E 10+00N	-1	-1	-1	-1	-1	-1	-1	-1	-1	1	-1	3	-1
5E 10+50N	-1	-1	-1	-1	-1	-1	-1	-1	-1	1	-1	-1	-1
5E 11+00N	-1	-1	-1	-1	-1	-1	-1	-1	-1	1	-1	2	-1
5E 11+50N	-1	-1	-1	-1	-1	-1	-1	1	-1	1	-1	2	-1
5E 12+00N	-1	-1	-1	-1	-1	-1	-1	1	-1	3	-1	4	-1
5E 12+50N	-1	-1	-1	-1	-1	-1	-1	1	-1	4	-1	5	-1
5E 13+00N	-1	-1	-1	-1	-1	-1	-1	-1	-1	2	-1	2	-1
4E 13+00N	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
4E 12+50N	-1	-1	-1	-1	-1	-1	-1	-1	-1	1	-1	2	-1
4E 12+00N	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
4E 12+00N-R	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	1	-1
4E 11+50N	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	2	-1
4E 11+00N	-1	-1	-1	-1	-1	-1	-1	-1	-1	1	-1	2	-1
4E 10+50N	-1	-1	-1	-1	-1	-1	-1	-1	-1	1	-1	2	-1
4E 10+00N	-1	-1	-1	-1	-1	-1	-1	-1	-1	1	-1	3	-1
4E 9+50N	-1	-1	-1	-1	-1	-1	-1	-1	-1	1	-1	2	-1
4E 9+00N	-1	-1	-1	-1	-1	-1	-1	-1	-1	1	-1	2	-1
4E 8+50N	-1	-1	-1	-1	-1	-1	-1	-1	-1	2	-1	2	-1
4E 8+00N	-1	-1	-1	-1	-1	-1	-1	-1	-1	3	-1	4	-1
4E 7+50N	-1	-1	-1	-1	-1	-1	-1	-1	-1	1	-1	2	-1
4E 7+00N	-1	-1	-1	-1	-1	-1	-1	-1	-1	2	-1	3	-1
4E 6+50N	-1	-1	-1	-1	-1	-1	-1	-1	-1	1	-1	2	-1
4E 6+00N	-1	-1	-1	-1	-1	-1	-1	-1	-1	1	-1	2	-1
4E 5+50N	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	2	-1
4E 5+00N	-1	-1	-1	-1	-1	-1	-1	-1	-1	1	-1	2	-1
4E 4+50N	-1	-1	-1	-1	-1	-1	-1	-1	-1	1	-1	2	-1
4E 4+50N-R	-1	-1	-1	-1	-1	-1	-1	-1	-1	1	-1	2	-1
4E 4+00N	-1	-1	-1	-1	-1	-1	-1	2	-1	3	1	4	-1
4E 3+50N	-1	-1	-1	-1	-1	-1	-1	1	-1	2	-1	1	-1
4E 3+00N	-1	-1	-1	-1	-1	-1	-1	1	-1	2	-1	1	-1
3E 3+00N	-1	-1	-1	-1	-1	-1	-1	1	-1	1	-1	5	-1
3E 3+50N	-1	-1	-1	-1	-1	-1	-1	-1	-1	1	-1	2	-1
3E 4+00N	-1	-1	-1	-1	-1	-1	-1	-1	-1	1	-1	2	-1
3E 4+50N	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	2	-1
3E 5+00N	-1	-1	-1	-1	-1	-1	-1	-1	-1	1	-1	-1	-1
3E 5+50N	-1	-1	-1	-1	-1	-1	-1	-1	-1	1	-1	2	-1
3E 6+00N	-1	-1	-1	-1	-1	-1	-1	1	-1	2	-1	3	-1
3E 6+50N	-1	-1	-1	-1	-1	-1	-1	1	-1	2	-1	2	-1
3E 7+00N	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	2	-1
3E 7+00N DUP	-1	-1	-1	-1	-1	-1	-1	-1	-1	1	-1	2	-1
3E 7+50N	-1	-1	-1	-1	-1	-1	-1	-1	-1	1	-1	2	-1
3E 8+00N	-1	-1	-1	-1	-1	-1	-1	-1	-1	1	-1	2	-1
3E 8+00N-R	-1	-1	-1	-1	-1	-1	-1	-1	-1	2	-1	3	-1
3E 8+50N	-1	-1	-1	-1	-1	-1	-1	1	-1	-1	1	3	-1
3E 9+00N	-1	-1	-1	-1	-1	-1	-1	1	-1	2	-1	3	-1
3E 9+50N	-1	-1	-1	-1	-1	-1	-1	1	-1	2	-1	3	-1
3E 10+00N	-1	-1	-1	-1	-1	-1	-1	2	-1	2	-1	3	-1
3E 10+50N	-1	-1	-1	-1	-1	-1	-1	2	-1	3	2	4	-1
3E 11+00N	-1	-1	-1	-1	-1	-1	-1	5	-1	4	4	2	-1

	053 - LPB	054 - HB	055 - LPB	056 - LBI	057 - ALK	058 - LPB	059 - LPB	060 - LPH	061 - LBI	062 - LBA	063 - LPH	064 - LBA	065 - HPB
3E 11+50N	-1	-1	-1	-1	-1	-1	-1	5	-1	3	4	9	-1
3E 12+00N	-1	-1	-1	-1	-1	-1	-1	3	-1	3	2	4	-1
3E 12+50N	-1	-1	-1	-1	-1	-1	-1	4	-1	4	3	4	-1
3E 13+00N	-1	-1	-1	-1	-1	-1	-1	8	-1	6	5	4	-1
2E 13+00N	-1	-1	-1	-1	-1	-1	-1	2	-1	2	2	3	-1
2E 12+50N	-1	-1	-1	-1	-1	-1	-1	2	-1	2	2	2	-1
2E 12+00N	-1	-1	-1	-1	-1	-1	-1	3	-1	3	2	4	-1
2E 11+50N	-1	-1	-1	-1	-1	-1	-1	3	-1	2	3	3	-1
2E 11+00N	-1	-1	-1	-1	-1	-1	-1	3	-1	3	2	4	-1
2E 11+00N-R	-1	-1	-1	-1	-1	-1	-1	3	-1	2	2	2	-1
2E 10+50N	-1	-1	-1	-1	-1	-1	-1	2	-1	2	1	2	-1
2E 10+00N	-1	-1	-1	-1	-1	-1	-1	2	-1	8	-1	4	-1
2E 9+50N	-1	-1	-1	-1	-1	-1	-1	-1	-1	2	-1	3	-1
LMB-QA	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
LMB-QA	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
LMB-QA	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
LMB-QA	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1

Dave Burda

-1=Reporting Limit of 1pg/g (ppt=parts per trillion)

SOIL GAS HYDROCARBONS
(SGH) by GC/MS
KNIGHT TOWNSHIP PROJECT

Activation Laboratories Ltd.
Date: October 9, 2014
R=Replicate Sample

	066 - LBA	067 - LBI	068 - HPB	069 - LA	070 - HPB	071 - HPB	072 - HPB	073 - HBA	074 - HBA	075 - HPB	076 - LPH	077 - MAR	078 - ALK
00 7+00N	2	-1	-1	3	-1	1	2	1	2	2	-1	-1	1
00 7+50N	2	-1	-1	2	-1	1	2	-1	2	-1	-1	-1	1
00 8+00N	2	-1	-1	2	-1	-1	1	2	2	-1	-1	-1	-1
00 8+50N	4	-1	-1	4	-1	1	2	2	3	1	-1	-1	1
00 9+00N	2	-1	-1	2	-1	-1	-1	2	2	-1	-1	-1	-1
00 9+00N-R	3	-1	-1	3	-1	-1	-1	3	2	-1	-1	-1	-1
00 9+50N	2	-1	-1	2	-1	-1	-1	2	2	-1	-1	-1	-1
1E 13+00N	5	-1	-1	5	-1	1	2	3	4	-1	-1	-1	2
1E 12+50N	4	-1	-1	4	-1	-1	1	3	4	-1	-1	-1	1
1E 12+00N	4	-1	-1	5	-1	1	2	3	4	-1	-1	-1	2
1E 11+50N	2	-1	-1	2	-1	1	1	2	3	1	-1	-1	1
1E 11+00N	4	-1	-1	4	-1	2	2	4	4	-1	-1	-1	2
1E 10+50N	7	-1	1	7	2	5	7	3	6	-1	1	1	3
1E 10+00N	5	-1	-1	5	2	3	5	4	3	-1	-1	1	2
1E 9+50N	3	-1	-1	3	1	2	4	-1	3	2	-1	-1	2
1E 9+00N	5	-1	-1	5	-1	2	2	-1	5	-1	-1	-1	2
1E 8+50N	4	-1	-1	4	-1	-1	1	4	3	-1	-1	-1	1
1E 8+00N	5	-1	-1	5	-1	2	2	4	4	-1	-1	-1	-1
1E 7+50N	4	-1	-1	4	-1	-1	1	4	4	-1	-1	-1	1
1E 7+00N	3	-1	-1	3	-1	-1	-1	1	3	-1	-1	-1	-1
1E 6+50N	3	-1	-1	3	-1	-1	-1	3	3	-1	-1	-1	1
1E 6+50N-R	2	-1	-1	2	-1	-1	-1	2	2	-1	-1	-1	-1
1E 6+00N	5	-1	-1	5	-1	1	1	4	4	-1	-1	-1	2
1E 5+50N	4	-1	-1	4	-1	1	2	3	4	-1	-1	-1	2
1E 5+00N	11	1	-1	11	3	7	12	2	10	12	2	1	3
1E 4+50N	6	-1	-1	6	1	2	4	5	5	-1	-1	-1	2
1E 4+00N	4	-1	-1	4	-1	-1	-1	4	3	-1	-1	-1	1
1E 3+50N	5	-1	-1	5	1	2	2	3	5	-1	-1	-1	-1
1E 3+00N	8	-1	-1	7	3	6	10	1	7	4	1	1	-1
2E 3+00N	4	-1	-1	4	-1	1	2	4	4	-1	-1	-1	2
2E 3+50N	3	-1	-1	3	-1	-1	-1	2	3	-1	-1	-1	1
2E 4+00N	5	-1	-1	5	-1	1	1	2	5	-1	-1	-1	2
2E 4+50N	4	-1	-1	4	-1	-1	1	4	4	-1	-1	-1	1
2E 5+00N	3	-1	-1	3	-1	-1	-1	2	4	-1	-1	-1	-1
2E 5+50N	4	-1	-1	3	-1	-1	-1	4	3	-1	-1	-1	1
2E 6+00N	5	-1	-1	4	-1	-1	-1	5	4	-1	-1	-1	2
2E 6+50N	5	-1	-1	5	-1	1	2	5	5	-1	-1	-1	2
2E 6+50N-R	3	-1	-1	3	-1	-1	-1	3	3	-1	-1	-1	1
2E 7+00N	5	-1	-1	5	1	2	2	4	5	-1	-1	-1	-1
2E 7+50N	3	-1	-1	3	-1	-1	-1	3	4	-1	-1	-1	1
2E 8+00N	4	-1	-1	4	-1	-1	-1	4	5	-1	-1	-1	1
2E 8+50N	4	-1	-1	4	-1	-1	1	4	5	-1	-1	-1	1
2E 9+00N	5	-1	-1	5	-1	1	1	4	5	-1	-1	-1	2
2E 9+00N DUP	5	-1	-1	5	-1	2	2	3	5	-1	-1	-1	2
5E 3+00N	2	-1	-1	2	-1	-1	1	2	2	-1	-1	-1	-1
5E 3+50N	2	-1	-1	2	-1	-1	-1	2	2	-1	-1	-1	-1
5E 4+00N	2	-1	-1	2	-1	-1	1	2	2	-1	-1	-1	-1
5E 4+50N	4	-1	-1	4	-1	-1	1	3	4	-1	-1	-1	-1
5E 5+00N	2	-1	-1	2	-1	-1	-1	2	3	-1	-1	-1	-1
5E 5+50N	3	-1	-1	3	-1	-1	-1	-1	3	-1	-1	-1	-1
5E 6+00N	2	-1	-1	1	-1	-1	-1	1	2	-1	-1	-1	-1
5E 6+50N	2	-1	-1	2	-1	-1	-1	-1	2	-1	-1	-1	-1
5E 7+00N	2	-1	-1	2	-1	-1	1	-1	2	-1	-1	-1	-1
5E 7+00N-R	2	-1	-1	1	-1	-1	-1	-1	2	-1	-1	-1	-1

-1=Reporting Limit of 1pg/g (ppt=parts per trillion)

	066 - LBA	067 - LBI	068 - HPB	069 - LA	070 - HPB	071 - HPB	072 - HPB	073 - HBA	074 - HBA	075 - HPB	076 - LPH	077 - MAR	078 - ALK
5E 7+50N	5	-1	-1	5	1	2	2	3	5	-1	-1	-1	2
5E 8+00N	2	-1	-1	2	-1	-1	-1	-1	3	-1	-1	-1	-1
5E 8+50N	3	-1	-1	3	-1	-1	1	2	3	-1	-1	-1	-1
5E 9+00N	4	-1	-1	4	-1	1	2	3	4	-1	-1	-1	-1
5E 9+50N	4	-1	-1	4	1	2	-1	2	5	-1	-1	-1	2
5E 10+00N	2	-1	-1	2	-1	-1	-1	-1	2	-1	-1	-1	-1
5E 10+50N	2	-1	-1	1	-1	-1	-1	-1	2	-1	-1	-1	-1
5E 11+00N	2	-1	-1	2	-1	-1	-1	1	3	-1	-1	-1	-1
5E 11+50N	2	-1	-1	2	-1	-1	-1	-1	2	-1	-1	-1	-1
5E 12+00N	6	-1	-1	6	-1	-1	-1	5	6	-1	-1	-1	2
5E 12+50N	6	-1	-1	6	-1	-1	1	5	6	-1	-1	-1	2
5E 13+00N	3	-1	-1	2	-1	-1	-1	2	3	-1	-1	-1	-1
4E 13+00N	1	-1	-1	1	-1	-1	-1	-1	1	-1	-1	-1	-1
4E 12+50N	2	-1	-1	2	-1	-1	-1	2	2	-1	-1	-1	-1
4E 12+00N	-1	-1	-1	1	-1	-1	-1	-1	1	-1	-1	-1	-1
4E 12+00N-R	1	-1	-1	1	-1	-1	-1	-1	-1	-1	-1	-1	-1
4E 11+50N	1	-1	-1	1	-1	-1	-1	-1	1	-1	-1	-1	-1
4E 11+00N	2	-1	-1	2	-1	-1	-1	1	2	-1	-1	-1	-1
4E 10+50N	2	-1	-1	2	-1	-1	-1	-1	2	-1	-1	-1	-1
4E 10+00N	2	-1	-1	2	-1	-1	-1	-1	2	-1	-1	-1	-1
4E 9+50N	2	-1	-1	2	-1	-1	-1	-1	2	-1	-1	-1	-1
4E 9+00N	2	-1	-1	2	-1	-1	-1	-1	3	-1	-1	-1	-1
4E 8+50N	2	-1	-1	2	-1	-1	-1	-1	3	-1	-1	-1	-1
4E 8+00N	4	-1	-1	4	-1	-1	-1	4	5	-1	-1	-1	1
4E 7+50N	2	-1	-1	2	-1	-1	-1	1	2	-1	-1	-1	-1
4E 7+00N	3	-1	-1	3	-1	-1	-1	-1	3	-1	-1	-1	-1
4E 6+50N	2	-1	-1	2	-1	-1	-1	-1	2	-1	-1	-1	-1
4E 6+00N	2	-1	-1	2	-1	-1	-1	2	2	-1	-1	-1	-1
4E 5+50N	1	-1	-1	1	-1	-1	-1	-1	2	-1	-1	-1	-1
4E 5+00N	2	-1	-1	2	-1	-1	-1	3	3	-1	-1	-1	-1
4E 4+50N	2	-1	-1	2	-1	-1	-1	-1	3	-1	-1	-1	-1
4E 4+50N-R	2	-1	-1	2	-1	-1	-1	-1	3	-1	-1	-1	-1
4E 4+00N	5	-1	-1	5	-1	-1	-1	-1	5	-1	-1	-1	-1
4E 3+50N	3	-1	-1	4	-1	-1	-1	-1	4	-1	-1	-1	-1
4E 3+00N	4	-1	-1	4	-1	-1	-1	-1	5	-1	-1	-1	1
3E 3+00N	5	-1	-1	5	-1	-1	-1	2	6	-1	-1	-1	1
3E 3+50N	2	-1	-1	2	-1	-1	-1	2	2	-1	-1	-1	-1
3E 4+00N	2	-1	-1	2	-1	-1	-1	2	3	-1	-1	-1	-1
3E 4+50N	2	-1	-1	2	-1	-1	-1	-1	2	-1	-1	-1	-1
3E 5+00N	2	-1	-1	2	-1	-1	-1	1	2	-1	-1	-1	-1
3E 5+50N	2	-1	-1	2	-1	-1	-1	2	2	-1	-1	-1	-1
3E 6+00N	3	-1	-1	3	-1	-1	-1	-1	4	-1	-1	-1	1
3E 6+50N	4	-1	-1	4	-1	-1	-1	3	4	-1	-1	-1	1
3E 7+00N	2	-1	-1	2	-1	-1	-1	-1	3	-1	-1	-1	-1
3E 7+00N DUP	2	-1	-1	2	-1	-1	-1	2	2	-1	-1	-1	-1
3E 7+50N	2	-1	-1	2	-1	-1	-1	2	3	-1	-1	-1	-1
3E 8+00N	2	-1	-1	2	-1	-1	-1	-1	3	-1	-1	-1	-1
3E 8+00N-R	3	-1	-1	3	-1	-1	-1	3	4	-1	-1	-1	-1
3E 8+50N	3	-1	-1	3	-1	-1	-1	3	4	-1	-1	-1	-1
3E 9+00N	3	-1	-1	3	-1	-1	-1	2	3	-1	-1	-1	-1
3E 9+50N	4	-1	-1	4	-1	-1	-1	-1	4	-1	-1	-1	-1
3E 10+00N	3	-1	-1	3	-1	-1	-1	-1	4	-1	-1	-1	-1
3E 10+50N	5	-1	-1	5	-1	-1	-1	4	5	-1	-1	-1	1
3E 11+00N	5	-1	-1	5	-1	1	-1	-1	6	1	-1	-1	1

	066 - LBA	067 - LBI	068 - HPB	069 - LA	070 - HPB	071 - HPB	072 - HPB	073 - HBA	074 - HBA	075 - HPB	076 - LPH	077 - MAR	078 - ALK
3E 11+50N	8	-1	-1	8	-1	1	1	3	10	1	-1	-1	2
3E 12+00N	5	-1	-1	5	-1	-1	-1	-1	5	-1	-1	-1	1
3E 12+50N	5	-1	-1	5	-1	-1	-1	4	5	-1	-1	-1	-1
3E 13+00N	9	-1	-1	9	-1	1	1	6	6	-1	-1	-1	-1
2E 13+00N	3	-1	-1	3	-1	-1	-1	-1	3	-1	-1	-1	-1
2E 12+50N	3	-1	-1	3	-1	-1	-1	-1	3	-1	-1	-1	-1
2E 12+00N	4	-1	-1	4	-1	-1	-1	-1	5	-1	-1	-1	-1
2E 11+50N	3	-1	-1	3	-1	-1	-1	-1	3	-1	-1	-1	-1
2E 11+00N	4	-1	-1	4	-1	-1	-1	2	4	-1	-1	-1	-1
2E 11+00N-R	3	-1	-1	3	-1	-1	-1	2	2	-1	-1	-1	-1
2E 10+50N	3	-1	-1	3	-1	-1	-1	2	3	-1	-1	-1	-1
2E 10+00N	3	-1	-1	3	-1	-1	-1	-1	4	-1	-1	-1	1
2E 9+50N	3	-1	-1	3	-1	-1	-1	-1	3	-1	-1	-1	-1
LMB-QA	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
LMB-QA	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
LMB-QA	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
LMB-QA	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1

-1=Reporting Limit of 1pg/g (ppt=parts per trillion)

KNIGHT TOWNSHIP PROJECT

R=Replicate Sample

	079 - LBI	080 - LPH	081 - MAR	082 - LPH	083 - HBA	084 - HBA	085 - LPH	086 - LBI	087 - MAR	088 - HBA	089 - THI	090 - HPB	091 - LBI
00 7+00N	-1	-1	-1	-1	2	1	4	1	-1	5	-1	1	-1
00 7+50N	-1	-1	-1	-1	2	1	-1	-1	-1	4	-1	1	-1
00 8+00N	-1	-1	-1	-1	2	1	-1	-1	-1	4	-1	-1	-1
00 8+50N	-1	-1	-1	-1	3	1	5	-1	-1	6	-1	-1	-1
00 9+00N	-1	-1	-1	-1	2	-1	-1	-1	1	4	-1	-1	-1
00 9+00N-R	-1	-1	-1	-1	2	-1	2	-1	-1	4	-1	-1	-1
00 9+50N	-1	-1	-1	-1	1	-1	-1	-1	-1	3	-1	-1	-1
1E 13+00N	-1	-1	-1	-1	4	1	8	1	-1	9	-1	1	-1
1E 12+50N	-1	-1	-1	-1	3	1	3	-1	-1	6	-1	-1	-1
1E 12+00N	-1	-1	-1	-1	5	-1	9	1	-1	9	-1	-1	-1
1E 11+50N	-1	-1	-1	-1	7	1	8	1	-1	6	-1	-1	-1
1E 11+00N	-1	-1	-1	-1	3	2	6	1	-1	7	-1	1	-1
1E 10+50N	-1	2	1	2	7	1	13	2	2	8	-1	-1	2
1E 10+00N	-1	-1	-1	1	7	-1	2	1	2	5	-1	1	1
1E 9+50N	-1	-1	-1	-1	3	-1	7	1	2	1	-1	1	1
1E 9+00N	-1	-1	-1	1	5	-1	11	1	-1	12	-1	1	1
1E 8+50N	-1	-1	-1	-1	3	1	6	1	-1	6	-1	-1	-1
1E 8+00N	-1	-1	-1	-1	5	-1	5	1	-1	9	-1	-1	-1
1E 7+50N	-1	-1	-1	-1	3	1	4	-1	-1	7	-1	-1	-1
1E 7+00N	-1	-1	-1	-1	3	-1	3	-1	-1	5	-1	-1	-1
1E 6+50N	-1	-1	-1	-1	3	-1	3	-1	-1	6	-1	-1	-1
1E 6+50N-R	-1	-1	-1	-1	2	-1	4	-1	-1	4	-1	-1	-1
1E 6+00N	-1	-1	-1	-1	3	-1	7	1	-1	8	-1	-1	-1
1E 5+50N	-1	-1	-1	-1	3	-1	6	1	-1	6	-1	-1	-1
1E 5+00N	-1	2	1	2	12	2	25	2	3	25	-1	2	2
1E 4+50N	-1	-1	-1	-1	6	-1	11	1	-1	12	-1	1	1
1E 4+00N	-1	-1	-1	-1	3	-1	3	-1	-1	6	-1	-1	-1
1E 3+50N	-1	-1	-1	-1	6	-1	11	1	-1	10	-1	-1	1
1E 3+00N	-1	2	1	2	20	1	21	2	4	11	-1	2	2
2E 3+00N	-1	-1	-1	-1	4	-1	8	1	-1	9	-1	-1	1
2E 3+50N	-1	-1	-1	-1	3	1	6	-1	-1	7	-1	-1	-1
2E 4+00N	-1	-1	-1	-1	4	1	4	-1	-1	7	-1	-1	-1
2E 4+50N	-1	-1	-1	-1	3	1	4	1	-1	8	-1	-1	-1
2E 5+00N	-1	-1	-1	-1	4	1	3	-1	-1	6	-1	-1	-1
2E 5+50N	-1	-1	-1	-1	3	-1	5	-1	-1	5	-1	-1	-1
2E 6+00N	-1	-1	-1	-1	3	-1	7	-1	-1	8	-1	-1	-1
2E 6+50N	-1	-1	-1	-1	5	1	6	-1	-1	11	-1	-1	1
2E 6+50N-R	-1	-1	-1	-1	3	-1	6	-1	-1	6	-1	1	-1
2E 7+00N	-1	-1	-1	-1	8	2	5	-1	-1	8	-1	-1	-1
2E 7+50N	-1	-1	-1	-1	3	1	4	-1	-1	7	-1	-1	-1
2E 8+00N	-1	-1	-1	-1	4	-1	5	-1	-1	8	-1	-1	-1
2E 8+50N	-1	-1	-1	-1	4	1	5	1	-1	8	-1	-1	-1
2E 9+00N	-1	-1	-1	-1	12	1	11	-1	-1	11	-1	-1	-1
2E 9+00N DUP	-1	-1	-1	-1	7	2	4	1	-1	8	-1	-1	-1
5E 3+00N	-1	-1	-1	-1	2	-1	-1	-1	-1	4	-1	-1	-1
5E 3+50N	-1	-1	-1	-1	2	-1	-1	-1	-1	4	-1	-1	-1
5E 4+00N	-1	-1	-1	-1	2	-1	-1	-1	1	3	-1	-1	-1
5E 4+50N	-1	-1	-1	-1	5	-1	4	-1	-1	6	-1	-1	-1
5E 5+00N	-1	-1	-1	-1	2	-1	3	-1	-1	5	-1	-1	-1
5E 5+50N	-1	-1	-1	-1	3	-1	3	-1	-1	6	-1	-1	-1
5E 6+00N	-1	-1	-1	-1	1	-1	-1	-1	-1	3	-1	-1	-1
5E 6+50N	-1	-1	-1	-1	2	-1	2	-1	-1	4	-1	-1	-1
5E 7+00N	-1	-1	-1	-1	2	1	-1	-1	1	5	-1	-1	-1
5E 7+00N-R	-1	-1	-1	-1	1	-1	-1	-1	-1	3	-1	-1	-1

	079 - LBI	080 - LPH	081 - MAR	082 - LPH	083 - HBA	084 - HBA	085 - LPH	086 - LBI	087 - MAR	088 - HBA	089 - THI	090 - HPB	091 - LBI
5E 7+50N	-1	-1	-1	-1	8	1	10	-1	-1	9	-1	-1	1
5E 8+00N	-1	-1	-1	-1	2	-1	2	-1	-1	4	-1	-1	-1
5E 8+50N	-1	-1	-1	-1	5	1	3	-1	-1	5	-1	-1	-1
5E 9+00N	-1	-1	-1	-1	4	1	5	-1	-1	8	-1	-1	-1
5E 9+50N	-1	-1	-1	-1	4	-1	4	1	-1	8	-1	1	-1
5E 10+00N	-1	-1	-1	-1	2	-1	-1	-1	-1	4	-1	-1	-1
5E 10+50N	-1	-1	-1	-1	2	-1	-1	-1	-1	3	-1	-1	-1
5E 11+00N	-1	-1	-1	-1	2	-1	2	-1	-1	4	-1	-1	-1
5E 11+50N	-1	-1	-1	-1	2	-1	-1	-1	-1	3	-1	-1	-1
5E 12+00N	-1	-1	-1	-1	14	1	9	1	-1	13	-1	-1	-1
5E 12+50N	-1	-1	-1	-1	5	-1	11	1	-1	11	-1	1	1
5E 13+00N	-1	-1	-1	-1	6	-1	5	-1	-1	6	-1	1	-1
4E 13+00N	-1	-1	-1	-1	-1	-1	4	-1	-1	2	-1	-1	-1
4E 12+50N	-1	-1	-1	-1	2	-1	4	-1	-1	4	-1	-1	-1
4E 12+00N	-1	-1	-1	-1	1	-1	2	-1	1	2	-1	-1	-1
4E 12+00N-R	-1	-1	-1	-1	-1	-1	2	-1	-1	2	-1	-1	-1
4E 11+50N	-1	-1	-1	-1	1	-1	-1	-1	-1	2	-1	-1	-1
4E 11+00N	-1	-1	-1	-1	2	-1	2	-1	-1	4	-1	-1	-1
4E 10+50N	-1	-1	-1	-1	2	-1	4	-1	-1	4	-1	-1	-1
4E 10+00N	-1	-1	-1	-1	2	-1	2	-1	-1	3	-1	-1	-1
4E 9+50N	-1	-1	-1	-1	2	-1	-1	-1	-1	3	-1	-1	-1
4E 9+00N	-1	-1	-1	-1	3	-1	4	-1	1	4	-1	-1	-1
4E 8+50N	-1	-1	-1	-1	3	-1	5	-1	-1	5	-1	-1	-1
4E 8+00N	-1	-1	-1	-1	10	-1	8	1	-1	9	-1	-1	-1
4E 7+50N	-1	-1	-1	-1	4	-1	4	-1	1	4	-1	-1	-1
4E 7+00N	-1	-1	-1	-1	4	-1	5	-1	1	5	-1	-1	-1
4E 6+50N	-1	-1	-1	-1	3	-1	3	-1	1	3	-1	-1	-1
4E 6+00N	-1	-1	-1	-1	4	-1	4	-1	-1	4	-1	-1	-1
4E 5+50N	-1	-1	-1	-1	1	-1	3	-1	-1	3	-1	-1	-1
4E 5+00N	-1	-1	-1	-1	2	-1	3	-1	-1	5	-1	-1	-1
4E 4+50N	-1	-1	-1	-1	2	-1	4	-1	1	4	-1	-1	-1
4E 4+50N-R	-1	-1	-1	-1	3	-1	4	-1	-1	4	-1	-1	-1
4E 4+00N	-1	-1	-1	-1	9	-1	10	1	-1	10	-1	-1	1
4E 3+50N	-1	-1	-1	-1	4	-1	7	1	-1	7	-1	-1	-1
4E 3+00N	-1	-1	-1	-1	4	-1	7	1	-1	7	-1	-1	-1
3E 3+00N	-1	-1	-1	-1	6	-1	6	1	-1	9	-1	-1	-1
3E 3+50N	-1	-1	-1	-1	3	-1	4	-1	-1	4	-1	-1	-1
3E 4+00N	-1	-1	-1	-1	5	-1	5	-1	1	5	-1	-1	-1
3E 4+50N	-1	-1	-1	-1	2	-1	-1	-1	-1	3	-1	-1	-1
3E 5+00N	-1	-1	-1	-1	3	-1	2	-1	-1	4	-1	-1	-1
3E 5+50N	-1	-1	-1	-1	2	-1	4	-1	-1	4	-1	-1	-1
3E 6+00N	-1	-1	-1	-1	3	-1	4	1	-1	6	-1	-1	-1
3E 6+50N	-1	-1	-1	-1	8	-1	8	1	-1	8	-1	-1	-1
3E 7+00N	-1	-1	-1	-1	4	-1	3	-1	-1	5	-1	-1	-1
3E 7+00N DUP	-1	-1	-1	-1	2	-1	2	-1	-1	4	-1	-1	-1
3E 7+50N	-1	-1	-1	-1	2	-1	2	-1	-1	4	-1	-1	-1
3E 8+00N	-1	-1	-1	-1	2	-1	2	-1	-1	4	-1	-1	-1
3E 8+00N-R	-1	-1	-1	-1	8	-1	5	1	-1	7	-1	-1	-1
3E 8+50N	-1	-1	-1	-1	5	-1	6	1	-1	7	-1	-1	-1
3E 9+00N	-1	-1	-1	-1	7	-1	4	1	-1	6	-1	-1	-1
3E 9+50N	-1	-1	-1	-1	9	-1	5	1	-1	8	-1	1	-1
3E 10+00N	-1	-1	-1	-1	4	-1	3	-1	-1	5	-1	-1	-1
3E 10+50N	-1	-1	-1	-1	8	-1	5	1	-1	7	-1	-1	-1
3E 11+00N	-1	-1	-1	-1	11	-1	5	-1	-1	9	-1	1	-1

	079 - LBI	080 - LPH	081 - MAR	082 - LPH	083 - HBA	084 - HBA	085 - LPH	086 - LBI	087 - MAR	088 - HBA	089 - THI	090 - HPB	091 - LBI
3E 11+50N	-1	-1	-1	-1	10	1	8	-1	-1	15	-1	1	-1
3E 12+00N	-1	-1	-1	-1	9	-1	8	1	-1	8	-1	-1	-1
3E 12+50N	-1	-1	-1	-1	10	-1	9	1	-1	9	-1	-1	-1
3E 13+00N	-1	-1	-1	-1	16	-1	13	2	-1	14	-1	-1	-1
2E 13+00N	-1	-1	-1	-1	5	-1	5	-1	-1	5	-1	-1	-1
2E 12+50N	-1	-1	-1	-1	6	-1	5	-1	-1	6	-1	-1	-1
2E 12+00N	-1	-1	-1	-1	8	-1	5	1	-1	9	-1	-1	-1
2E 11+50N	-1	-1	-1	-1	4	-1	5	-1	-1	5	-1	-1	-1
2E 11+00N	-1	-1	-1	-1	7	-1	7	1	-1	6	-1	-1	-1
2E 11+00N-R	-1	-1	-1	-1	6	-1	5	-1	-1	5	-1	-1	-1
2E 10+50N	-1	-1	-1	-1	6	-1	6	1	-1	6	-1	-1	-1
2E 10+00N	-1	-1	-1	-1	7	-1	6	-1	-1	6	-1	-1	-1
2E 9+50N	-1	-1	-1	-1	-1	-1	5	-1	-1	-1	-1	-1	-1
LMB-QA	-1	-1	-1	-1	-1	-1	1	-1	-1	1	-1	-1	-1
LMB-QA	-1	-1	-1	-1	-1	-1	-1	-1	-1	1	-1	-1	-1
LMB-QA	-1	-1	-1	-1	-1	-1	1	-1	-1	1	-1	-1	-1
LMB-QA	-1	-1	-1	-1	-1	-1	-1	-1	-1	1	-1	-1	-1

	092 - LPH	093 - LA	094 - LBI	095 - MAR	096 - LPH	097 - HBA	098 - THI	099 - LPH	100 - LPH	101 - MAR	102 - MBI	103 - LPH	104 - MAR
00 7+00N	-1	6	-1	-1	2	6	-1	1	1	-1	-1	1	1
00 7+50N	-1	6	-1	-1	1	6	-1	1	1	-1	-1	1	1
00 8+00N	-1	5	-1	-1	1	6	-1	1	1	-1	-1	-1	1
00 8+50N	1	10	-1	-1	2	10	-1	2	-1	-1	-1	1	-1
00 9+00N	-1	1	-1	-1	1	5	-1	-1	-1	-1	-1	-1	-1
00 9+00N-R	-1	5	-1	-1	-1	5	-1	1	-1	-1	-1	-1	-1
00 9+50N	-1	4	-1	-1	1	4	-1	-1	-1	-1	-1	-1	-1
1E 13+00N	1	15	-1	-1	2	16	1	2	1	-1	-1	1	1
1E 12+50N	-1	9	-1	-1	1	9	1	1	1	-1	-1	-1	1
1E 12+00N	-1	16	-1	-1	2	17	-1	1	1	-1	-1	1	1
1E 11+50N	-1	9	-1	-1	1	9	-1	1	1	-1	-1	1	1
1E 11+00N	-1	11	-1	-1	1	11	-1	1	1	-1	-1	1	1
1E 10+50N	1	23	2	-1	2	24	2	1	1	1	1	1	2
1E 10+00N	-1	19	2	-1	1	20	2	1	1	1	-1	1	2
1E 9+50N	-1	12	1	-1	1	12	1	1	1	-1	-1	1	2
1E 9+00N	-1	20	-1	-1	1	21	2	1	1	-1	-1	1	1
1E 8+50N	-1	9	-1	-1	1	10	1	1	1	-1	-1	1	1
1E 8+00N	-1	14	-1	-1	-1	14	1	1	-1	-1	-1	1	-1
1E 7+50N	-1	11	-1	-1	1	12	1	1	1	-1	-1	1	1
1E 7+00N	-1	9	-1	-1	-1	9	1	1	-1	-1	-1	-1	-1
1E 6+50N	-1	9	-1	-1	1	9	1	1	-1	-1	-1	-1	-1
1E 6+50N-R	-1	7	-1	-1	1	7	-1	-1	-1	-1	-1	-1	1
1E 6+00N	-1	13	-1	-1	1	13	1	1	1	-1	-1	1	1
1E 5+50N	-1	11	-1	-1	1	11	-1	1	-1	-1	-1	1	1
1E 5+00N	1	44	3	-1	2	47	2	2	1	1	1	1	2
1E 4+50N	-1	18	-1	-1	1	19	-1	1	1	-1	-1	1	1
1E 4+00N	-1	10	-1	-1	1	11	1	1	1	-1	-1	-1	-1
1E 3+50N	1	25	-1	1	2	25	2	1	1	-1	1	1	1
1E 3+00N	1	35	3	-1	2	37	2	2	1	1	2	1	3
2E 3+00N	-1	16	-1	-1	1	16	1	1	1	-1	-1	-1	1
2E 3+50N	-1	12	-1	-1	1	12	1	1	-1	-1	-1	-1	1
2E 4+00N	-1	13	-1	-1	-1	13	1	1	-1	-1	-1	1	-1
2E 4+50N	-1	11	-1	-1	1	12	-1	1	1	-1	-1	-1	1
2E 5+00N	-1	12	-1	-1	-1	12	1	1	-1	-1	-1	-1	-1
2E 5+50N	-1	8	-1	-1	-1	8	1	-1	-1	-1	-1	-1	-1
2E 6+00N	-1	12	-1	-1	1	13	1	1	1	-1	-1	-1	1
2E 6+50N	-1	20	-1	-1	1	21	2	1	1	-1	-1	1	1
2E 6+50N-R	-1	12	-1	-1	1	12	-1	1	1	-1	-1	-1	1
2E 7+00N	-1	17	-1	-1	2	17	1	1	1	-1	-1	1	1
2E 7+50N	-1	13	-1	-1	1	14	-1	1	1	-1	-1	1	1
2E 8+00N	-1	17	-1	-1	1	17	1	1	1	-1	-1	1	1
2E 8+50N	-1	14	-1	-1	1	15	1	1	1	-1	-1	1	1
2E 9+00N	-1	25	-1	1	1	26	2	1	1	-1	-1	-1	1
2E 9+00N DUP	-1	15	1	-1	1	15	-1	1	1	-1	-1	1	1
5E 3+00N	-1	5	-1	-1	1	5	-1	-1	-1	-1	-1	-1	-1
5E 3+50N	-1	6	-1	-1	-1	6	-1	-1	-1	-1	-1	-1	-1
5E 4+00N	-1	4	-1	-1	1	5	-1	-1	-1	-1	-1	-1	-1
5E 4+50N	-1	12	-1	-1	-1	13	1	1	-1	-1	-1	-1	-1
5E 5+00N	-1	7	-1	-1	1	8	-1	-1	-1	-1	-1	-1	-1
5E 5+50N	-1	9	-1	-1	1	10	1	-1	-1	-1	-1	-1	-1
5E 6+00N	-1	4	-1	-1	-1	4	-1	-1	-1	-1	-1	-1	-1
5E 6+50N	-1	5	-1	-1	-1	5	-1	-1	-1	-1	-1	-1	-1
5E 7+00N	-1	7	-1	-1	1	7	-1	-1	-1	-1	-1	-1	-1
5E 7+00N-R	-1	4	-1	-1	-1	4	-1	-1	-1	-1	-1	-1	-1

-1=Reporting Limit of 1pg/g (ppt=parts per trillion)

	092 - LPH	093 - LA	094 - LBI	095 - MAR	096 - LPH	097 - HBA	098 - THI	099 - LPH	100 - LPH	101 - MAR	102 - MBI	103 - LPH	104 - MAR
5E 7+50N	-1	20	-1	-1	2	21	2	1	1	-1	-1	1	1
5E 8+00N	-1	6	-1	-1	-1	6	-1	-1	-1	-1	-1	-1	-1
5E 8+50N	-1	10	-1	-1	1	10	1	-1	-1	-1	-1	-1	-1
5E 9+00N	-1	16	-1	-1	-1	17	1	1	-1	-1	-1	-1	-1
5E 9+50N	-1	13	1	-1	1	13	1	1	1	-1	-1	1	1
5E 10+00N	-1	5	-1	-1	-1	5	-1	-1	-1	-1	-1	-1	-1
5E 10+50N	-1	5	-1	-1	-1	5	-1	-1	-1	-1	-1	-1	-1
5E 11+00N	-1	7	-1	-1	1	7	-1	-1	-1	-1	-1	-1	-1
5E 11+50N	-1	5	-1	-1	-1	5	-1	-1	-1	-1	-1	-1	-1
5E 12+00N	-1	32	-1	-1	1	33	2	1	1	-1	-1	1	1
5E 12+50N	-1	25	-1	2	1	26	-1	1	1	-1	-1	1	1
5E 13+00N	-1	12	-1	1	-1	12	-1	-1	-1	-1	-1	-1	1
4E 13+00N	-1	7	-1	-1	-1	7	1	-1	-1	-1	-1	-1	-1
4E 12+50N	-1	6	-1	-1	-1	6	-1	-1	-1	-1	-1	-1	-1
4E 12+00N	-1	3	-1	-1	-1	3	-1	-1	-1	-1	-1	-1	-1
4E 12+00N-R	-1	3	-1	-1	-1	2	-1	-1	-1	-1	-1	-1	-1
4E 11+50N	-1	3	-1	-1	-1	3	-1	-1	-1	-1	-1	-1	-1
4E 11+00N	-1	6	-1	-1	-1	7	-1	-1	-1	-1	-1	-1	-1
4E 10+50N	-1	6	-1	-1	-1	6	-1	-1	-1	-1	-1	-1	-1
4E 10+00N	-1	6	-1	-1	-1	6	-1	-1	-1	-1	-1	-1	-1
4E 9+50N	-1	4	-1	-1	-1	4	-1	-1	-1	-1	-1	-1	-1
4E 9+00N	-1	8	-1	-1	-1	8	1	-1	-1	-1	-1	-1	-1
4E 8+50N	-1	9	-1	-1	-1	9	-1	-1	-1	-1	-1	-1	-1
4E 8+00N	-1	16	-1	-1	1	17	-1	1	-1	-1	-1	-1	-1
4E 7+50N	-1	8	-1	-1	-1	8	1	-1	-1	-1	-1	-1	-1
4E 7+00N	-1	9	-1	-1	-1	9	-1	-1	-1	-1	-1	-1	-1
4E 6+50N	-1	6	-1	-1	-1	6	-1	-1	-1	-1	-1	-1	-1
4E 6+00N	-1	7	-1	-1	-1	7	-1	-1	-1	-1	-1	-1	-1
4E 5+50N	-1	4	-1	-1	-1	4	-1	-1	-1	-1	-1	-1	-1
4E 5+00N	-1	7	-1	-1	-1	7	-1	-1	-1	-1	-1	-1	-1
4E 4+50N	-1	8	-1	-1	-1	8	-1	-1	-1	-1	-1	-1	-1
4E 4+50N-R	-1	8	-1	-1	-1	9	1	-1	-1	-1	-1	-1	-1
4E 4+00N	1	24	1	-1	1	25	2	-1	1	-1	-1	-1	1
4E 3+50N	-1	16	-1	-1	1	16	2	1	-1	-1	-1	-1	-1
4E 3+00N	-1	14	-1	-1	1	15	1	1	-1	-1	-1	-1	-1
3E 3+00N	-1	20	1	-1	1	20	2	1	1	-1	-1	1	1
3E 3+50N	-1	6	-1	-1	-1	7	-1	-1	-1	-1	-1	-1	-1
3E 4+00N	-1	9	-1	-1	-1	9	-1	-1	-1	-1	-1	-1	-1
3E 4+50N	-1	5	-1	-1	-1	5	-1	-1	-1	-1	-1	-1	-1
3E 5+00N	-1	8	-1	-1	-1	8	-1	-1	-1	-1	-1	-1	-1
3E 5+50N	-1	6	-1	-1	-1	6	-1	-1	-1	-1	-1	-1	-1
3E 6+00N	-1	13	-1	-1	1	13	-1	1	-1	-1	-1	-1	-1
3E 6+50N	-1	19	1	-1	1	19	-1	1	-1	-1	-1	1	-1
3E 7+00N	-1	8	-1	-1	-1	8	-1	-1	-1	-1	-1	-1	-1
3E 7+00N DUP	-1	7	-1	-1	-1	8	-1	-1	-1	-1	-1	-1	-1
3E 7+50N	-1	7	-1	-1	-1	8	-1	-1	-1	-1	-1	-1	-1
3E 8+00N	-1	7	-1	-1	1	7	-1	-1	-1	-1	-1	-1	-1
3E 8+00N-R	-1	15	-1	-1	1	15	1	1	-1	-1	-1	-1	-1
3E 8+50N	-1	12	-1	-1	1	13	1	1	1	-1	-1	-1	-1
3E 9+00N	-1	12	-1	-1	1	13	-1	1	1	-1	-1	1	-1
3E 9+50N	-1	16	-1	-1	1	16	1	1	1	-1	-1	-1	-1
3E 10+00N	-1	10	-1	-1	1	11	-1	1	-1	-1	-1	1	-1
3E 10+50N	-1	16	-1	-1	1	16	1	1	1	-1	-1	1	1
3E 11+00N	2	17	-1	-1	2	17	-1	-1	2	-1	-1	2	1

Dave Burda

-1=Reporting Limit of 1pg/g (ppt=parts per trillion)

SOIL GAS HYDROCARBONS
(SGH) by GC/MS
KNIGHT TOWNSHIP PROJECT

Activation Laboratories Ltd.
Date: October 9, 2014
R=Replicate Sample

	092 - LPH	093 - LA	094 - LBI	095 - MAR	096 - LPH	097 - HBA	098 - THI	099 - LPH	100 - LPH	101 - MAR	102 - MBI	103 - LPH	104 - MAR
3E 11+50N	2	29	1	-1	3	30	2	1	2	1	-1	2	1
3E 12+00N	1	18	1	-1	2	18	1	-1	1	-1	-1	-1	1
3E 12+50N	2	18	-1	-1	2	18	2	-1	1	-1	-1	-1	1
3E 13+00N	3	27	1	-1	1	27	2	1	2	-1	-1	-1	1
2E 13+00N	1	6	-1	-1	1	6	-1	-1	1	-1	-1	-1	-1
2E 12+50N	2	8	-1	-1	1	8	-1	-1	1	-1	-1	-1	-1
2E 12+00N	1	18	-1	-1	2	18	-1	-1	1	-1	-1	-1	-1
2E 11+50N	1	8	-1	-1	1	8	-1	-1	1	-1	-1	-1	-1
2E 11+00N	1	11	-1	-1	1	11	-1	-1	1	-1	-1	-1	-1
2E 11+00N-R	1	8	-1	-1	1	9	1	-1	1	-1	-1	1	-1
2E 10+50N	1	13	-1	-1	1	12	1	-1	1	-1	-1	1	-1
2E 10+00N	1	10	-1	-1	1	11	-1	-1	1	-1	-1	1	-1
2E 9+50N	-1	8	-1	-1	-1	8	-1	-1	-1	-1	-1	-1	-1
LMB-QA	-1	-1	-1	-1	-1	1	-1	-1	-1	-1	-1	-1	-1
LMB-QA	-1	1	-1	-1	-1	1	-1	-1	-1	-1	-1	-1	-1
LMB-QA	-1	1	-1	-1	-1	1	-1	-1	-1	-1	-1	-1	-1
LMB-QA	-1	1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1

-1=Reporting Limit of 1pg/g (ppt=parts per trillion)

KNIGHT TOWNSHIP PROJECT

R=Replicate Sample

	105 - ALK	106 - MBI	107 - MBI	108 - LPH	109 - MAR	110 - HBA	111 - MAR	112 - MBI	113 - HBA	114 - MBI	115 - MBI	116 - MAR	117 - HA
00 7+00N	1	-1	-1	4	3	12	-1	4	13	7	7	-1	2
00 7+50N	1	-1	-1	4	3	10	-1	4	11	6	6	-1	25
00 8+00N	1	-1	-1	4	3	10	-1	4	11	-1	6	-1	18
00 8+50N	2	-1	-1	4	3	14	-1	4	17	-1	8	2	38
00 9+00N	-1	-1	-1	4	3	10	-1	4	11	-1	4	-1	20
00 9+00N-R	-1	-1	-1	4	3	10	-1	4	11	-1	5	-1	2
00 9+50N	-1	-1	-1	-1	3	8	-1	-1	9	-1	4	-1	19
1E 13+00N	2	-1	-1	4	4	21	3	5	23	1	8	2	41
1E 12+50N	2	-1	-1	4	3	14	3	5	16	-1	6	-1	28
1E 12+00N	2	-1	-1	4	4	20	3	5	22	1	7	2	38
1E 11+50N	2	-1	-1	4	4	16	-1	5	19	7	7	2	26
1E 11+00N	3	-1	-1	4	5	16	-1	5	18	1	6	2	32
1E 10+50N	6	1	-1	4	11	34	4	6	37	3	13	3	64
1E 10+00N	5	1	1	4	8	30	4	6	33	1	8	3	60
1E 9+50N	-1	-1	-1	4	5	20	3	5	22	1	6	2	32
1E 9+00N	4	-1	-1	4	6	29	3	5	35	1	7	2	68
1E 8+50N	2	-1	-1	4	3	15	-1	5	17	-1	6	-1	29
1E 8+00N	3	-1	-1	4	4	20	3	5	22	-1	6	2	30
1E 7+50N	2	-1	-1	4	3	15	3	5	17	-1	5	2	30
1E 7+00N	1	-1	-1	4	3	13	-1	4	14	6	6	-1	28
1E 6+50N	2	-1	-1	4	3	14	3	5	16	-1	6	-1	29
1E 6+50N-R	1	-1	-1	4	3	12	-1	4	13	-1	5	-1	23
1E 6+00N	2	-1	-1	4	4	19	3	5	22	-1	8	2	45
1E 5+50N	2	-1	-1	4	3	17	-1	5	18	-1	5	2	21
1E 5+00N	7	1	1	5	11	52	4	8	60	2	12	3	106
1E 4+50N	3	-1	-1	4	5	25	4	5	28	1	7	2	40
1E 4+00N	1	-1	-1	4	3	14	-1	4	16	-1	5	-1	32
1E 3+50N	3	-1	-1	4	5	26	4	5	29	2	11	2	66
1E 3+00N	8	1	1	5	13	53	4	8	59	2	11	4	86
2E 3+00N	3	-1	-1	4	4	21	3	5	24	1	6	2	39
2E 3+50N	2	-1	-1	4	3	16	-1	5	18	-1	6	-1	2
2E 4+00N	2	-1	-1	4	3	18	-1	5	21	3	8	2	40
2E 4+50N	2	-1	-1	4	3	18	3	4	22	1	6	2	4
2E 5+00N	2	-1	-1	4	3	16	3	5	17	-1	6	2	28
2E 5+50N	1	-1	-1	4	3	13	-1	4	15	-1	5	-1	34
2E 6+00N	1	-1	-1	4	3	16	-1	5	20	-1	5	-1	38
2E 6+50N	3	-1	-1	4	4	26	4	5	30	1	8	2	41
2E 6+50N-R	1	-1	-1	4	3	15	3	4	18	1	5	-1	21
2E 7+00N	2	-1	-1	4	3	20	3	5	22	-1	8	2	30
2E 7+50N	1	-1	-1	4	3	16	3	4	18	1	5	-1	23
2E 8+00N	2	-1	-1	4	3	19	3	5	22	1	6	2	31
2E 8+50N	2	-1	-1	4	3	18	3	5	21	-1	6	2	30
2E 9+00N	2	-1	-1	4	3	4	3	5	25	1	6	2	35
2E 9+00N DUP	2	-1	-1	4	4	17	-1	5	18	3	8	2	41
5E 3+00N	1	-1	-1	4	3	9	-1	-1	10	-1	5	-1	21
5E 3+50N	-1	-1	-1	-1	3	9	-1	-1	11	-1	4	-1	23
5E 4+00N	-1	-1	-1	-1	3	9	-1	-1	10	-1	4	-1	12
5E 4+50N	1	-1	-1	4	3	14	-1	4	16	-1	5	-1	19
5E 5+00N	1	-1	-1	-1	3	11	-1	4	13	-1	5	-1	18
5E 5+50N	1	-1	-1	4	3	14	-1	4	15	-1	5	-1	19
5E 6+00N	-1	-1	-1	-1	3	7	-1	-1	9	-1	4	-1	10
5E 6+50N	-1	-1	-1	-1	3	9	-1	-1	11	-1	4	-1	16
5E 7+00N	1	-1	-1	4	3	12	-1	4	14	5	5	2	18
5E 7+00N-R	-1	-1	-1	-1	3	8	-1	-1	10	-1	4	-1	18

	105 - ALK	106 - MBI	107 - MBI	108 - LPH	109 - MAR	110 - HBA	111 - MAR	112 - MBI	113 - HBA	114 - MBI	115 - MBI	116 - MAR	117 - HA
5E 7+50N	3	-1	-1	4	4	25	4	5	29	1	7	2	3
5E 8+00N	1	-1	-1	-1	3	11	-1	4	12	-1	4	-1	22
5E 8+50N	2	-1	-1	4	3	14	-1	4	15	-1	5	2	22
5E 9+00N	2	-1	-1	4	4	19	3	5	22	1	5	2	26
5E 9+50N	2	-1	-1	4	4	18	-1	5	20	-1	6	2	30
5E 10+00N	-1	-1	-1	-1	3	9	-1	-1	10	4	4	-1	21
5E 10+50N	-1	-1	-1	4	3	9	-1	-1	9	5	5	-1	12
5E 11+00N	1	-1	-1	4	3	11	-1	4	12	-1	5	-1	21
5E 11+50N	-1	-1	-1	-1	3	9	-1	-1	10	5	4	-1	16
5E 12+00N	2	-1	-1	4	3	25	4	5	31	1	6	2	32
5E 12+50N	2	-1	-1	4	3	22	3	5	26	1	6	2	30
5E 13+00N	1	-1	-1	4	3	13	-1	5	15	5	4	-1	17
4E 13+00N	1	-1	-1	4	3	11	-1	4	12	7	7	2	27
4E 12+50N	-1	-1	-1	-1	3	10	-1	-1	11	-1	4	-1	15
4E 12+00N	-1	-1	-1	-1	3	6	-1	-1	7	-1	4	-1	16
4E 12+00N-R	-1	-1	-1	-1	3	5	-1	-1	6	-1	-1	-1	14
4E 11+50N	-1	-1	-1	-1	3	7	-1	-1	8	-1	4	-1	17
4E 11+00N	-1	-1	-1	-1	3	10	-1	-1	11	-1	4	-1	14
4E 10+50N	-1	-1	-1	-1	3	10	-1	-1	11	5	4	-1	14
4E 10+00N	-1	-1	-1	-1	3	10	-1	-1	11	5	5	-1	18
4E 9+50N	-1	-1	-1	-1	3	8	-1	-1	9	-1	4	-1	11
4E 9+00N	1	-1	-1	-1	3	12	-1	4	14	-1	4	-1	16
4E 8+50N	1	-1	-1	-1	3	13	-1	4	15	5	5	-1	26
4E 8+00N	2	-1	-1	4	3	20	3	5	22	-1	6	2	29
4E 7+50N	-1	-1	-1	4	3	11	-1	4	12	5	5	-1	25
4E 7+00N	1	-1	-1	-1	3	13	-1	4	14	-1	4	-1	19
4E 6+50N	-1	-1	-1	-1	3	9	-1	-1	10	4	4	-1	15
4E 6+00N	-1	-1	-1	-1	3	10	-1	-1	11	-1	4	-1	12
4E 5+50N	-1	-1	-1	-1	2	7	-1	-1	9	-1	4	-1	15
4E 5+00N	-1	-1	-1	-1	3	11	-1	-1	13	5	5	-1	19
4E 4+50N	-1	-1	-1	-1	3	11	-1	4	13	-1	4	-1	18
4E 4+50N-R	-1	-1	-1	-1	3	12	-1	4	13	-1	4	-1	19
4E 4+00N	2	-1	-1	4	3	20	3	5	23	-1	6	2	26
4E 3+50N	2	-1	-1	4	3	18	3	5	19	-1	6	2	32
4E 3+00N	1	-1	-1	4	3	17	3	5	19	-1	6	-1	32
3E 3+00N	2	-1	-1	4	3	20	3	5	22	-1	6	2	37
3E 3+50N	-1	-1	-1	-1	3	10	-1	-1	11	4	4	-1	16
3E 4+00N	1	-1	-1	-1	3	14	-1	4	15	-1	4	-1	21
3E 4+50N	-1	-1	-1	-1	3	9	-1	-1	10	4	4	-1	19
3E 5+00N	-1	-1	-1	-1	3	11	-1	4	12	-1	5	-1	19
3E 5+50N	-1	-1	-1	-1	3	10	-1	-1	11	-1	4	-1	13
3E 6+00N	1	-1	-1	4	3	14	-1	4	16	-1	5	-1	20
3E 6+50N	2	-1	-1	4	3	4	3	5	22	-1	5	-1	26
3E 7+00N	-1	-1	-1	-1	3	11	-1	-1	13	-1	4	-1	14
3E 7+00N DUP	-1	-1	-1	-1	3	11	-1	4	13	-1	5	-1	14
3E 7+50N	-1	-1	-1	-1	3	11	-1	-1	13	-1	4	-1	17
3E 8+00N	-1	-1	-1	-1	3	11	-1	-1	12	-1	5	-1	17
3E 8+00N-R	1	-1	-1	4	3	16	-1	4	20	-1	6	-1	25
3E 8+50N	1	-1	-1	-1	3	14	-1	4	16	-1	5	-1	20
3E 9+00N	1	-1	-1	4	3	14	-1	4	16	-1	5	-1	18
3E 9+50N	2	-1	-1	4	3	4	-1	5	19	-1	6	-1	25
3E 10+00N	1	-1	-1	3	3	3	-1	4	14	-1	5	-1	17
3E 10+50N	1	-1	-1	4	3	16	3	4	19	-1	5	-1	28
3E 11+00N	2	-1	-1	4	3	18	3	5	21	-1	8	2	33

-1=Reporting Limit of 1pg/g (ppt=parts per trillion)

	105 - ALK	106 - MBI	107 - MBI	108 - LPH	109 - MAR	110 - HBA	111 - MAR	112 - MBI	113 - HBA	114 - MBI	115 - MBI	116 - MAR	117 - HA
3E 11+50N	3	-1	-1	4	3	28	4	5	33	1	9	2	50
3E 12+00N	2	-1	-1	4	3	4	3	5	22	-1	7	2	33
3E 12+50N	2	-1	-1	4	3	4	3	5	21	3	8	-1	35
3E 13+00N	2	-1	-1	4	3	27	4	5	29	2	10	2	37
2E 13+00N	-1	-1	-1	-1	3	3	-1	-1	12	5	5	-1	18
2E 12+50N	1	-1	-1	3	3	3	-1	4	14	5	5	-1	17
2E 12+00N	2	-1	-1	4	3	4	3	5	22	-1	6	2	24
2E 11+50N	1	-1	-1	-1	3	13	-1	4	13	-1	5	-1	18
2E 11+00N	1	-1	-1	4	3	3	-1	4	17	-1	6	-1	26
2E 11+00N-R	1	-1	-1	4	3	3	-1	4	14	-1	5	-1	16
2E 10+50N	1	-1	-1	4	3	13	-1	4	14	5	6	-1	29
2E 10+00N	1	-1	-1	4	3	3	-1	4	15	-1	5	-1	29
2E 9+50N	1	-1	-1	-1	3	12	-1	4	13	-1	4	-1	20
LMB-QA	-1	-1	-1	-1	3	5	-1	-1	-1	-1	-1	-1	-1
LMB-QA	-1	-1	-1	-1	2	4	-1	-1	4	-1	-1	-1	7
LMB-QA	-1	-1	-1	-1	2	4	-1	-1	5	-1	-1	-1	9
LMB-QA	-1	-1	-1	-1	2	4	-1	-1	5	-1	-1	-1	7

Dave Burda

SOIL GAS HYDROCARBONS
(SGH) by GC/MS
KNIGHT TOWNSHIP PROJECT

Activation Laboratories Ltd.
Date: October 9, 2014
R=Replicate Sample

-1=Reporting Limit of 1pg/g (ppt=parts per trillion)

	118 - MPH	119 - HBA	120 - THI	121 - MPH	122 - MPH	123 - MPH	124 - MBI	125 - HAR	126 - MPH	127 - MPH	128 - MPH	129 - HAR	130 - HAR
00 7+00N	6	6	-1	7	220	7	5	7	4	4	3	3	3
00 7+50N	6	5	-1	7	231	6	4	12	4	4	3	3	4
00 8+00N	4	3	-1	5	61	4	4	5	4	4	-1	3	3
00 8+50N	12	6	-1	13	834	12	5	57	4	4	4	3	4
00 9+00N	3	11	-1	4	14	4	4	2	3	4	-1	3	3
00 9+00N-R	4	4	-1	5	79	4	4	9	3	4	-1	3	3
00 9+50N	-1	9	-1	-1	4	3	4	2	3	4	-1	-1	3
1E 13+00N	4	20	-1	5	21	4	5	4	4	4	3	3	3
1E 12+50N	3	14	-1	4	6	4	5	2	4	4	-1	3	4
1E 12+00N	4	17	-1	4	15	4	5	3	4	4	3	3	3
1E 11+50N	3	15	-1	4	4	4	4	2	4	4	-1	3	3
1E 11+00N	4	8	-1	4	26	4	5	4	4	4	3	3	4
1E 10+50N	4	13	-1	5	81	-1	6	10	4	4	4	4	4
1E 10+00N	4	33	2	4	5	4	5	3	4	4	4	3	4
1E 9+50N	4	19	-1	4	7	4	5	3	4	4	3	3	4
1E 9+00N	4	13	-1	5	40	4	5	7	4	4	3	3	4
1E 8+50N	3	15	-1	4	6	4	4	2	3	4	-1	3	3
1E 8+00N	3	17	-1	4	6	4	5	3	4	4	-1	3	4
1E 7+50N	3	16	-1	4	6	4	4	2	3	4	-1	3	3
1E 7+00N	5	5	-1	6	220	5	4	20	4	4	-1	3	4
1E 6+50N	3	15	-1	4	9	4	4	3	3	4	-1	-1	3
1E 6+50N-R	4	4	-1	4	76	4	4	5	3	4	-1	3	3
1E 6+00N	5	7	-1	6	167	5	5	16	4	4	-1	3	3
1E 5+50N	3	14	-1	-1	3	4	4	2	3	4	-1	3	3
1E 5+00N	5	24	3	6	113	5	7	9	4	4	4	4	4
1E 4+50N	4	23	-1	4	22	4	5	4	4	4	3	3	4
1E 4+00N	3	14	-1	4	4	4	4	2	3	3	-1	-1	3
1E 3+50N	5	13	-1	5	101	5	5	12	4	4	3	3	4
1E 3+00N	4	21	3	5	51	5	6	7	4	4	4	4	5
2E 3+00N	4	20	-1	4	25	4	5	4	3	4	-1	3	3
2E 3+50N	4	5	-1	4	57	4	5	6	4	4	-1	3	4
2E 4+00N	3	18	-1	4	4	4	5	2	3	4	-1	3	4
2E 4+50N	4	5	-1	4	52	4	5	5	4	4	-1	3	3
2E 5+00N	4	7	-1	4	71	4	4	8	3	4	-1	3	4
2E 5+50N	3	15	-1	-1	9	3	4	3	3	3	-1	-1	3
2E 6+00N	3	18	-1	4	3	4	4	2	3	4	-1	-1	3
2E 6+50N	3	22	-1	4	5	4	5	3	4	4	3	3	3
2E 6+50N-R	3	13	-1	-1	3	4	5	2	3	4	-1	-1	3
2E 7+00N	4	17	-1	4	4	4	5	2	4	4	-1	3	4
2E 7+50N	3	14	-1	-1	4	4	4	2	3	4	-1	-1	4
2E 8+00N	4	18	-1	4	8	4	5	3	4	4	-1	3	4
2E 8+50N	3	15	-1	4	4	4	5	2	4	4	-1	3	3
2E 9+00N	3	16	-1	4	4	4	4	2	3	3	-1	3	3
2E 9+00N DUP	3	14	-1	4	4	4	5	2	3	4	3	3	3
5E 3+00N	3	4	-1	4	35	4	4	4	3	4	-1	-1	3
5E 3+50N	4	3	-1	4	69	4	4	5	3	3	-1	-1	3
5E 4+00N	-1	8	-1	-1	3	-1	4	2	-1	3	-1	-1	3
5E 4+50N	3	12	-1	4	3	3	4	2	3	4	-1	-1	3
5E 5+00N	3	11	-1	4	9	3	4	2	3	3	-1	-1	-1
5E 5+50N	3	12	-1	4	8	3	4	2	3	4	-1	-1	3
5E 6+00N	-1	7	-1	-1	3	-1	4	2	-1	-1	-1	-1	-1
5E 6+50N	-1	5	-1	4	31	4	4	4	3	-1	-1	-1	-1
5E 7+00N	4	3	-1	4	62	4	4	5	3	3	-1	3	3
5E 7+00N-R	3	5	-1	4	30	4	4	4	3	3	-1	-1	3

-1=Reporting Limit of 1pg/g (ppt=parts per trillion)

KNIGHT TOWNSHIP PROJECT

R=Replicate Sample

	118 - MPH	119 - HBA	120 - THI	121 - MPH	122 - MPH	123 - MPH	124 - MBI	125 - HAR	126 - MPH	127 - MPH	128 - MPH	129 - HAR	130 - HAR
5E 7+50N	4	9	-1	5	107	5	5	11	4	4	-1	3	3
5E 8+00N	3	11	-1	4	4	3	4	2	3	-1	-1	-1	-1
5E 8+50N	3	13	-1	4	15	4	4	3	3	3	-1	-1	3
5E 9+00N	3	15	-1	4	8	4	4	2	3	4	-1	-1	3
5E 9+50N	4	8	-1	4	28	4	4	4	3	4	-1	3	4
5E 10+00N	-1	11	-1	-1	5	-1	4	2	-1	-1	-1	-1	3
5E 10+50N	-1	9	-1	4	9	3	4	2	3	3	-1	-1	3
5E 11+00N	3	4	-1	4	36	4	4	4	3	4	-1	-1	3
5E 11+50N	-1	10	-1	-1	3	-1	4	2	-1	3	-1	-1	3
5E 12+00N	3	19	-1	4	3	4	5	2	3	4	-1	3	3
5E 12+50N	4	19	-1	4	7	4	4	3	4	4	-1	3	4
5E 13+00N	-1	11	-1	4	5	3	4	2	3	-1	-1	-1	3
4E 13+00N	3	5	-1	4	33	4	4	5	-1	-1	-1	-1	-1
4E 12+50N	-1	9	-1	-1	3	-1	4	2	-1	-1	-1	-1	-1
4E 12+00N	4	3	-1	4	83	4	4	10	-1	-1	-1	-1	-1
4E 12+00N-R	-1	4	-1	4	24	3	-1	4	-1	-1	-1	-1	-1
4E 11+50N	-1	8	-1	-1	3	-1	-1	2	-1	-1	-1	-1	-1
4E 11+00N	-1	9	-1	-1	5	3	4	2	-1	-1	-1	-1	-1
4E 10+50N	-1	9	-1	-1	3	-1	4	2	-1	-1	-1	-1	-1
4E 10+00N	-1	10	-1	-1	4	-1	4	2	-1	3	-1	-1	3
4E 9+50N	-1	8	-1	-1	3	-1	4	2	-1	-1	-1	-1	-1
4E 9+00N	-1	11	-1	-1	3	3	4	2	-1	-1	-1	-1	-1
4E 8+50N	3	14	-1	4	16	3	4	4	-1	3	-1	-1	3
4E 8+00N	3	17	-1	4	4	3	4	2	3	3	-1	3	3
4E 7+50N	4	4	-1	5	113	4	4	14	3	3	-1	-1	-1
4E 7+00N	3	11	-1	-1	4	-1	4	2	-1	-1	-1	-1	-1
4E 6+50N	-1	10	-1	4	13	3	4	3	-1	-1	-1	-1	-1
4E 6+00N	-1	8	-1	-1	3	-1	4	-1	-1	-1	-1	-1	-1
4E 5+50N	-1	9	-1	-1	3	-1	4	2	-1	-1	-1	-1	-1
4E 5+00N	-1	11	-1	-1	7	-1	4	2	-1	-1	-1	-1	-1
4E 4+50N	-1	11	-1	-1	3	-1	4	2	-1	-1	-1	-1	-1
4E 4+50N-R	-1	11	-1	-1	4	-1	4	2	-1	-1	-1	-1	-1
4E 4+00N	3	18	-1	4	3	4	4	2	4	4	-1	-1	4
4E 3+50N	3	17	-1	-1	16	4	4	4	3	4	-1	-1	4
4E 3+00N	3	17	-1	4	10	4	4	3	3	4	-1	-1	3
3E 3+00N	3	20	-1	4	23	4	5	4	3	4	-1	3	3
3E 3+50N	-1	10	-1	-1	4	-1	4	2	-1	-1	-1	-1	-1
3E 4+00N	-1	13	-1	4	15	3	4	3	-1	-1	-1	-1	-1
3E 4+50N	3	5	-1	4	23	3	4	4	-1	-1	-1	-1	3
3E 5+00N	3	4	-1	4	35	4	4	5	-1	3	-1	-1	3
3E 5+50N	-1	9	-1	-1	3	-1	4	2	-1	-1	-1	-1	-1
3E 6+00N	3	12	-1	4	3	3	4	2	3	3	-1	-1	3
3E 6+50N	3	16	-1	4	16	4	4	3	3	4	-1	-1	3
3E 7+00N	-1	9	-1	-1	3	-1	4	2	-1	-1	-1	-1	3
3E 7+00N DUP	-1	10	-1	-1	3	-1	4	2	-1	3	-1	-1	-1
3E 7+50N	-1	10	-1	-1	3	-1	4	-1	-1	3	-1	-1	-1
3E 8+00N	-1	10	-1	-1	4	-1	4	2	-1	3	-1	-1	-1
3E 8+00N-R	3	15	-1	4	5	3	4	2	3	3	-1	-1	3
3E 8+50N	3	12	-1	4	6	4	4	2	3	4	-1	-1	3
3E 9+00N	3	11	-1	4	3	3	4	2	3	4	-1	-1	-1
3E 9+50N	3	14	-1	4	5	4	5	2	3	4	-1	-1	3
3E 10+00N	3	11	-1	4	3	3	4	2	3	4	-1	-1	3
3E 10+50N	4	7	-1	4	41	-1	4	5	3	4	-1	-1	3
3E 11+00N	4	18	-1	-1	14	4	5	3	4	4	-1	-1	3

	118 - MPH	119 - HBA	120 - THI	121 - MPH	122 - MPH	123 - MPH	124 - MBI	125 - HAR	126 - MPH	127 - MPH	128 - MPH	129 - HAR	130 - HAR
3E 11+50N	4	27	-1	-1	15	5	6	3	4	4	3	3	4
3E 12+00N	3	17	-1	4	5	4	4	2	3	4	-1	-1	3
3E 12+50N	4	18	-1	4	9	4	5	3	4	4	-1	-1	4
3E 13+00N	4	21	-1	-1	16	5	5	4	4	4	-1	3	4
2E 13+00N	3	11	-1	-1	6	3	4	2	-1	4	-1	-1	-1
2E 12+50N	3	10	-1	4	3	4	4	2	3	4	-1	-1	-1
2E 12+00N	3	16	-1	4	3	4	4	2	3	4	-1	-1	4
2E 11+50N	3	12	-1	4	3	-1	4	-1	-1	4	-1	-1	-1
2E 11+00N	3	15	-1	4	4	4	4	2	3	4	-1	-1	-1
2E 11+00N-R	3	10	-1	4	3	-1	4	2	-1	3	-1	-1	3
2E 10+50N	4	5	-1	5	105	4	4	14	3	3	-1	-1	3
2E 10+00N	3	15	-1	-1	10	4	4	3	3	4	-1	-1	3
2E 9+50N	3	11	-1	4	3	-1	4	2	-1	4	-1	-1	-1
LMB-QA	-1	7	-1	-1	3	-1	-1	2	-1	-1	-1	-1	-1
LMB-QA	-1	6	-1	-1	3	-1	-1	2	-1	-1	-1	-1	-1
LMB-QA	-1	6	-1	-1	3	-1	-1	-1	-1	-1	-1	-1	-1
LMB-QA	-1	6	-1	-1	3	-1	-1	2	-1	-1	-1	-1	-1

-1=Reporting Limit of 1pg/g (ppt=parts per trillion)

	131 - MPH	132 - ALK	133 - HAR	134 - HAR	135 - MPH	136 - MPH	137 - HBI	138 - HBI	139 - HPH	140 - HPH	141 - HBI	142 - HPH	143 - HA
00 7+00N	4	28	-1	20	20	19	19	19	19	19	20	-1	53
00 7+50N	4	27	-1	21	20	19	19	19	-1	19	19	-1	53
00 8+00N	3	22	-1	21	20	19	19	19	-1	-1	19	-1	49
00 8+50N	4	35	-1	22	22	20	20	20	19	20	20	19	62
00 9+00N	3	24	-1	19	19	-1	19	19	-1	-1	19	-1	47
00 9+00N-R	3	24	-1	21	19	19	19	19	-1	-1	19	-1	47
00 9+50N	3	26	-1	19	20	-1	19	18	-1	-1	-1	-1	49
1E 13+00N	4	36	-1	21	20	19	20	20	19	19	19	19	11
1E 12+50N	3	28	-1	22	20	18	19	19	-1	-1	19	-1	51
1E 12+00N	3	28	-1	21	20	19	19	19	-1	-1	19	-1	55
1E 11+50N	3	30	-1	21	20	19	21	21	19	19	19	-1	56
1E 11+00N	4	37	-1	24	20	18	19	20	-1	-1	19	-1	56
1E 10+50N	4	74	21	32	22	20	22	22	20	20	20	19	78
1E 10+00N	4	63	22	36	21	19	23	23	19	19	20	19	74
1E 9+50N	3	35	-1	25	20	19	20	19	-1	-1	19	-1	51
1E 9+00N	4	64	22	30	21	19	21	21	19	19	20	-1	55
1E 8+50N	3	34	-1	20	20	-1	19	19	-1	-1	19	-1	56
1E 8+00N	3	28	-1	23	19	-1	19	19	-1	-1	19	-1	8
1E 7+50N	4	38	-1	22	20	-1	20	20	-1	19	19	-1	68
1E 7+00N	3	27	-1	22	20	19	19	19	-1	-1	19	-1	55
1E 6+50N	3	31	-1	20	19	18	19	19	-1	-1	19	-1	56
1E 6+50N-R	3	26	-1	19	19	18	19	19	-1	-1	19	-1	48
1E 6+00N	4	43	-1	20	21	19	19	19	19	19	19	-1	70
1E 5+50N	3	24	-1	22	19	-1	19	19	-1	-1	19	-1	7
1E 5+00N	4	96	24	38	23	21	23	23	20	20	20	19	19
1E 4+50N	3	35	-1	24	19	-1	19	19	-1	-1	19	-1	10
1E 4+00N	3	30	-1	22	20	-1	19	19	-1	-1	19	-1	11
1E 3+50N	4	45	19	24	21	20	21	20	19	19	20	18	102
1E 3+00N	4	86	24	43	22	20	24	24	19	19	20	19	10
2E 3+00N	3	36	-1	21	19	-1	19	19	-1	-1	19	-1	10
2E 3+50N	3	26	-1	22	19	18	19	19	-1	-1	19	-1	6
2E 4+00N	3	38	-1	22	20	19	20	19	-1	19	20	-1	66
2E 4+50N	3	30	-1	22	19	19	20	19	-1	-1	19	-1	11
2E 5+00N	3	29	-1	23	19	-1	19	19	-1	-1	19	-1	65
2E 5+50N	3	35	-1	21	20	-1	18	19	-1	-1	18	-1	60
2E 6+00N	4	41	-1	21	21	-1	19	19	-1	-1	19	-1	72
2E 6+50N	4	41	-1	23	20	18	20	20	-1	-1	19	-1	8
2E 6+50N-R	3	25	-1	22	19	-1	18	19	-1	-1	19	-1	6
2E 7+00N	3	31	-1	23	20	-1	20	19	-1	-1	19	-1	8
2E 7+50N	3	27	-1	22	19	-1	19	19	-1	-1	19	-1	62
2E 8+00N	4	35	-1	24	20	18	20	19	-1	-1	19	-1	8
2E 8+50N	3	30	-1	21	19	-1	19	19	-1	-1	19	-1	8
2E 9+00N	3	30	-1	22	19	19	19	19	-1	-1	19	-1	74
2E 9+00N DUP	3	30	-1	20	20	18	19	19	-1	-1	19	-1	8
5E 3+00N	3	25	-1	19	19	-1	18	18	-1	-1	18	-1	47
5E 3+50N	-1	25	-1	19	19	-1	18	-1	-1	-1	18	-1	46
5E 4+00N	-1	-1	-1	19	-1	-1	-1	-1	-1	-1	-1	-1	37
5E 4+50N	3	25	-1	20	19	-1	19	19	-1	-1	-1	-1	8
5E 5+00N	-1	-1	-1	20	-1	-1	-1	-1	-1	-1	-1	-1	7
5E 5+50N	3	22	-1	20	-1	-1	18	18	-1	-1	18	-1	6
5E 6+00N	-1	-1	-1	20	-1	-1	-1	-1	-1	-1	-1	-1	6
5E 6+50N	3	-1	-1	21	19	-1	-1	-1	-1	-1	-1	-1	41
5E 7+00N	3	24	-1	22	19	-1	19	18	-1	-1	19	-1	47
5E 7+00N-R	3	23	-1	19	19	-1	-1	-1	-1	-1	-1	-1	42

-1=Reporting Limit of 1pg/g (ppt=parts per trillion)

R=Replicate Sample

	131 - MPH	132 - ALK	133 - HAR	134 - HAR	135 - MPH	136 - MPH	137 - HBI	138 - HBI	139 - HPH	140 - HPH	141 - HBI	142 - HPH	143 - HA
5E 7+50N	3	38	19	23	20	19	20	20	-1	-1	19	-1	73
5E 8+00N	3	26	-1	21	19	-1	-1	-1	-1	-1	-1	-1	47
5E 8+50N	3	21	-1	22	-1	-1	19	-1	-1	-1	-1	-1	6
5E 9+00N	3	27	-1	20	18	-1	19	19	-1	-1	18	-1	8
5E 9+50N	3	35	-1	23	20	-1	19	19	-1	-1	19	-1	56
5E 10+00N	3	27	-1	21	19	-1	18	18	-1	-1	-1	-1	52
5E 10+50N	3	-1	-1	20	-1	-1	-1	-1	-1	-1	18	-1	6
5E 11+00N	3	24	-1	20	19	-1	-1	18	-1	-1	19	-1	7
5E 11+50N	3	24	-1	19	19	-1	18	18	-1	-1	18	-1	48
5E 12+00N	3	35	-1	21	19	-1	19	19	-1	20	19	-1	87
5E 12+50N	3	30	-1	22	19	-1	19	19	-1	-1	19	-1	9
5E 13+00N	-1	-1	-1	21	-1	-1	-1	-1	-1	-1	-1	-1	43
4E 13+00N	-1	-1	-1	21	-1	-1	-1	-1	-1	-1	-1	-1	47
4E 12+50N	3	-1	-1	20	19	-1	-1	-1	-1	-1	-1	-1	43
4E 12+00N	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	32
4E 12+00N-R	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	36
4E 11+50N	-1	-1	-1	-1	19	-1	-1	-1	-1	-1	-1	-1	43
4E 11+00N	-1	-1	-1	19	-1	-1	-1	-1	-1	-1	-1	-1	5
4E 10+50N	-1	-1	-1	19	-1	-1	-1	-1	-1	-1	-1	-1	41
4E 10+00N	3	23	-1	21	19	-1	-1	-1	-1	-1	18	-1	47
4E 9+50N	-1	-1	-1	18	-1	-1	-1	-1	-1	-1	-1	-1	35
4E 9+00N	-1	-1	-1	20	-1	-1	-1	-1	-1	-1	-1	-1	6
4E 8+50N	3	26	-1	21	19	-1	-1	-1	-1	-1	-1	-1	8
4E 8+00N	3	29	-1	22	19	-1	18	19	-1	-1	-1	-1	6
4E 7+50N	-1	21	-1	19	-1	-1	-1	-1	-1	-1	-1	-1	44
4E 7+00N	-1	23	-1	19	19	-1	18	-1	-1	-1	-1	-1	6
4E 6+50N	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	38
4E 6+00N	-1	-1	-1	20	-1	-1	-1	-1	-1	-1	-1	-1	5
4E 5+50N	-1	-1	-1	-1	19	-1	-1	-1	-1	-1	-1	-1	40
4E 5+00N	-1	22	-1	20	19	-1	-1	-1	-1	-1	-1	-1	7
4E 4+50N	3	24	-1	20	19	-1	-1	-1	-1	-1	-1	-1	7
4E 4+50N-R	-1	-1	-1	20	-1	-1	-1	-1	-1	-1	-1	-1	6
4E 4+00N	3	33	-1	24	19	-1	20	19	-1	-1	19	-1	67
4E 3+50N	3	30	-1	23	19	-1	19	19	-1	-1	19	-1	6
4E 3+00N	3	31	-1	22	19	-1	18	19	-1	-1	19	-1	9
3E 3+00N	3	38	-1	21	20	-1	19	19	-1	-1	19	-1	22
3E 3+50N	-1	-1	-1	20	-1	-1	-1	-1	-1	-1	-1	-1	42
3E 4+00N	-1	21	-1	19	-1	-1	-1	-1	-1	-1	-1	-1	47
3E 4+50N	-1	23	-1	21	-1	-1	-1	-1	-1	-1	18	-1	44
3E 5+00N	3	21	-1	19	-1	-1	-1	-1	-1	-1	18	-1	6
3E 5+50N	-1	-1	-1	20	-1	-1	-1	-1	-1	-1	-1	-1	37
3E 6+00N	3	26	-1	22	19	-1	18	18	-1	-1	18	-1	8
3E 6+50N	3	28	-1	21	19	-1	18	19	-1	-1	19	-1	64
3E 7+00N	-1	-1	-1	20	-1	-1	-1	-1	-1	-1	-1	-1	7
3E 7+00N DUP	-1	-1	-1	21	-1	-1	-1	-1	-1	-1	-1	-1	5
3E 7+50N	-1	24	-1	19	-1	-1	-1	-1	-1	-1	-1	-1	45
3E 8+00N	3	-1	-1	19	-1	-1	-1	-1	-1	-1	-1	-1	42
3E 8+00N-R	3	25	-1	21	-1	-1	-1	-1	-1	-1	-1	-1	7
3E 8+50N	3	24	-1	19	-1	-1	-1	-1	-1	-1	-1	-1	7
3E 9+00N	3	22	-1	19	-1	-1	-1	-1	-1	-1	-1	-1	8
3E 9+50N	3	27	-1	21	19	-1	19	19	-1	-1	19	-1	6
3E 10+00N	3	22	-1	21	-1	-1	-1	-1	-1	-1	18	-1	8
3E 10+50N	3	27	-1	20	19	-1	19	18	-1	-1	18	-1	7
3E 11+00N	4	35	-1	21	20	-1	19	19	-1	-1	19	-1	10

	131 - MPH	132 - ALK	133 - HAR	134 - HAR	135 - MPH	136 - MPH	137 - HBI	138 - HBI	139 - HPH	140 - HPH	141 - HBI	142 - HPH	143 - HA
3E 11+50N	4	55	-1	25	22	-1	21	21	-1	20	21	-1	16
3E 12+00N	3	32	-1	21	19	-1	19	19	-1	-1	19	-1	7
3E 12+50N	3	31	-1	23	19	-1	19	19	-1	-1	19	-1	8
3E 13+00N	4	32	-1	24	20	-1	20	20	-1	-1	19	-1	58
2E 13+00N	3	22	-1	19	-1	-1	-1	-1	-1	-1	-1	-1	5
2E 12+50N	3	-1	-1	20	-1	-1	-1	-1	-1	-1	-1	-1	5
2E 12+00N	3	28	-1	23	19	-1	19	19	-1	-1	19	-1	61
2E 11+50N	3	24	-1	19	19	-1	18	-1	-1	-1	-1	-1	47
2E 11+00N	3	28	-1	21	19	-1	19	18	-1	-1	-1	-1	7
2E 11+00N-R	3	-1	-1	19	-1	-1	18	-1	-1	-1	-1	-1	41
2E 10+50N	3	23	-1	21	-1	-1	19	-1	-1	-1	-1	-1	6
2E 10+00N	3	27	-1	21	19	-1	18	18	-1	-1	-1	-1	50
2E 9+50N	3	24	-1	19	19	-1	-1	-1	-1	-1	-1	-1	7
LMB-QA	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	28
LMB-QA	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	27
LMB-QA	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	29
LMB-QA	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	26

-1=Reporting Limit of 1pg/g (ppt=parts per trillion)

	144 - HBI	145 - HBA	146 - HPH	147 - HBI	148 - HPH	149 - HBI	150 - HPH	151 - HBI	152 - HPH	153 - HPH	154 - HPH	155 - HPH	156 - HBI
00 7+00N	18	29	-1	17	-1	-1	-1	-1	-1	-1	-1	-1	-1
00 7+50N	18	29	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
00 8+00N	-1	28	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
00 8+50N	18	32	17	18	-1	-1	-1	-1	-1	-1	-1	-1	-1
00 9+00N	-1	27	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
00 9+00N-R	-1	28	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
00 9+50N	-1	27	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
1E 13+00N	18	35	-1	17	-1	-1	-1	-1	-1	-1	-1	-1	-1
1E 12+50N	18	29	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
1E 12+00N	18	30	-1	17	-1	-1	-1	-1	-1	-1	-1	-1	-1
1E 11+50N	18	32	-1	17	-1	-1	-1	-1	-1	-1	-1	-1	-1
1E 11+00N	18	29	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
1E 10+50N	18	37	18	17	-1	-1	-1	-1	-1	-1	-1	-1	-1
1E 10+00N	18	37	-1	18	-1	-1	-1	-1	-1	-1	-1	-1	-1
1E 9+50N	17	29	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
1E 9+00N	18	41	-1	18	-1	-1	-1	-1	-1	-1	-1	-1	-1
1E 8+50N	17	30	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
1E 8+00N	-1	30	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
1E 7+50N	17	34	-1	17	-1	-1	-1	-1	-1	-1	-1	-1	-1
1E 7+00N	-1	29	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
1E 6+50N	-1	30	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
1E 6+50N-R	-1	28	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
1E 6+00N	18	34	-1	17	-1	-1	-1	-1	-1	-1	-1	-1	-1
1E 5+50N	-1	29	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
1E 5+00N	19	51	17	18	-1	-1	-1	-1	-1	-1	-1	-1	-1
1E 4+50N	18	32	-1	17	-1	-1	-1	-1	-1	-1	-1	-1	-1
1E 4+00N	-1	31	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
1E 3+50N	19	42	17	18	-1	-1	-1	-1	-1	-1	-1	-1	-1
1E 3+00N	18	43	17	18	-1	-1	-1	-1	-1	-1	-1	-1	-1
2E 3+00N	18	34	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
2E 3+50N	-1	32	-1	17	-1	-1	-1	-1	-1	-1	-1	-1	-1
2E 4+00N	18	34	-1	18	-1	-1	-1	-1	-1	-1	-1	-1	-1
2E 4+50N	18	34	-1	17	-1	-1	-1	-1	-1	-1	-1	-1	-1
2E 5+00N	18	34	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
2E 5+50N	-1	30	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
2E 6+00N	17	35	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
2E 6+50N	18	38	-1	17	-1	-1	-1	-1	-1	-1	-1	-1	-1
2E 6+50N-R	17	32	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
2E 7+00N	18	35	-1	18	-1	-1	-1	-1	-1	-1	-1	-1	-1
2E 7+50N	17	33	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
2E 8+00N	18	37	-1	18	-1	-1	-1	-1	-1	-1	-1	-1	-1
2E 8+50N	18	32	-1	17	-1	-1	-1	-1	-1	-1	-1	-1	-1
2E 9+00N	18	34	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
2E 9+00N DUP	17	29	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
5E 3+00N	-1	27	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
5E 3+50N	-1	26	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
5E 4+00N	-1	24	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
5E 4+50N	-1	30	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
5E 5+00N	-1	25	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
5E 5+50N	-1	28	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
5E 6+00N	-1	23	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
5E 6+50N	-1	25	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
5E 7+00N	-1	28	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
5E 7+00N-R	-1	25	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1

-1=Reporting Limit of 1pg/g (ppt=parts per trillion)

	144 - HBI	145 - HBA	146 - HPH	147 - HBI	148 - HPH	149 - HBI	150 - HPH	151 - HBI	152 - HPH	153 - HPH	154 - HPH	155 - HPH	156 - HBI
5E 7+50N	18	35	-1	18	-1	-1	-1	-1	-1	-1	-1	-1	-1
5E 8+00N	-1	26	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
5E 8+50N	-1	28	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
5E 9+00N	-1	32	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
5E 9+50N	17	29	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
5E 10+00N	-1	26	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
5E 10+50N	-1	23	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
5E 11+00N	-1	27	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
5E 11+50N	-1	26	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
5E 12+00N	18	41	-1	17	-1	-1	-1	-1	-1	-1	-1	-1	-1
5E 12+50N	-1	33	-1	17	-1	-1	-1	-1	-1	53	-1	-1	-1
5E 13+00N	-1	25	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
4E 13+00N	-1	25	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
4E 12+50N	-1	25	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
4E 12+00N	-1	21	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
4E 12+00N-R	-1	22	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
4E 11+50N	-1	23	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
4E 11+00N	-1	23	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
4E 10+50N	-1	23	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
4E 10+00N	-1	26	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
4E 9+50N	-1	22	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
4E 9+00N	-1	25	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
4E 8+50N	-1	27	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
4E 8+00N	-1	28	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
4E 7+50N	-1	25	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
4E 7+00N	-1	26	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
4E 6+50N	-1	22	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
4E 6+00N	-1	22	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
4E 5+50N	-1	23	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
4E 5+00N	-1	25	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
4E 4+50N	-1	26	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
4E 4+50N-R	-1	25	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
4E 4+00N	18	32	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
4E 3+50N	18	31	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
4E 3+00N	-1	30	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
3E 3+00N	17	31	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
3E 3+50N	-1	24	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
3E 4+00N	-1	25	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
3E 4+50N	-1	25	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
3E 5+00N	-1	26	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
3E 5+50N	-1	23	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
3E 6+00N	-1	28	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
3E 6+50N	-1	31	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
3E 7+00N	-1	25	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
3E 7+00N DUP	-1	25	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
3E 7+50N	-1	25	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
3E 8+00N	-1	25	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
3E 8+00N-R	-1	29	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
3E 8+50N	-1	27	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
3E 9+00N	-1	26	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
3E 9+50N	-1	30	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
3E 10+00N	-1	27	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
3E 10+50N	-1	28	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
3E 11+00N	18	30	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1

	144 - HBI	145 - HBA	146 - HPH	147 - HBI	148 - HPH	149 - HBI	150 - HPH	151 - HBI	152 - HPH	153 - HPH	154 - HPH	155 - HPH	156 - HBI
3E 11+50N	19	43	17	18	-1	-1	-1	-1	-1	-1	-1	-1	-1
3E 12+00N	-1	30	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
3E 12+50N	17	31	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
3E 13+00N	18	33	-1	17	-1	-1	-1	-1	-1	-1	-1	-1	-1
2E 13+00N	-1	26	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
2E 12+50N	-1	24	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
2E 12+00N	17	32	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
2E 11+50N	-1	27	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
2E 11+00N	-1	28	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
2E 11+00N-R	-1	25	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
2E 10+50N	-1	26	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
2E 10+00N	-1	27	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
2E 9+50N	-1	26	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
LMB-QA	-1	21	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
LMB-QA	-1	20	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
LMB-QA	-1	20	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
LMB-QA	-1	19	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1

	157 - HAR	158 - HBA	159 - HBA	160 - HBI	161 - HA	162 - HPH
00 7+00N	-1	68	-1	-1	86	-1
00 7+50N	-1	71	-1	-1	86	-1
00 8+00N	-1	69	-1	-1	84	-1
00 8+50N	-1	70	-1	-1	88	-1
00 9+00N	-1	71	-1	-1	86	-1
00 9+00N-R	-1	71	-1	-1	86	-1
00 9+50N	-1	67	-1	-1	82	-1
1E 13+00N	-1	77	-1	-1	96	-1
1E 12+50N	-1	71	-1	-1	86	-1
1E 12+00N	-1	74	-1	-1	92	-1
1E 11+50N	-1	74	-1	-1	92	-1
1E 11+00N	-1	71	-1	-1	86	-1
1E 10+50N	-1	76	-1	-1	92	-1
1E 10+00N	-1	72	-1	-1	90	-1
1E 9+50N	-1	65	-1	-1	83	-1
1E 9+00N	-1	80	-1	-1	101	-1
1E 8+50N	-1	72	-1	-1	89	-1
1E 8+00N	-1	74	-1	-1	89	-1
1E 7+50N	-1	80	-1	-1	99	-1
1E 7+00N	-1	72	-1	-1	87	-1
1E 6+50N	-1	71	-1	-1	88	-1
1E 6+50N-R	-1	70	-1	-1	88	-1
1E 6+00N	-1	74	-1	-1	92	-1
1E 5+50N	-1	68	-1	-1	86	-1
1E 5+00N	-1	89	-1	-1	109	-1
1E 4+50N	-1	71	-1	-1	87	-1
1E 4+00N	-1	73	-1	-1	88	-1
1E 3+50N	-1	91	-1	-1	112	-1
1E 3+00N	-1	77	-1	-1	99	-1
2E 3+00N	-1	74	-1	-1	90	-1
2E 3+50N	-1	73	-1	-1	91	-1
2E 4+00N	-1	74	-1	-1	96	-1
2E 4+50N	-1	72	-1	-1	91	-1
2E 5+00N	-1	74	-1	-1	93	-1
2E 5+50N	-1	74	-1	-1	89	-1
2E 6+00N	-1	75	-1	-1	91	-1
2E 6+50N	-1	79	-1	-1	96	-1
2E 6+50N-R	-1	70	-1	-1	86	-1
2E 7+00N	-1	78	-1	-1	97	-1
2E 7+50N	-1	76	-1	-1	92	-1
2E 8+00N	-1	74	-1	-1	94	-1
2E 8+50N	-1	74	-1	-1	93	-1
2E 9+00N	-1	77	-1	-1	93	-1
2E 9+00N DUP	-1	70	-1	-1	88	-1
5E 3+00N	-1	68	-1	-1	86	-1
5E 3+50N	-1	67	-1	-1	84	-1
5E 4+00N	-1	63	-1	-1	79	-1
5E 4+50N	-1	74	-1	-1	89	-1
5E 5+00N	-1	65	-1	-1	79	-1
5E 5+50N	-1	68	-1	-1	83	-1
5E 6+00N	-1	60	-1	-1	78	-1
5E 6+50N	-1	61	-1	-1	78	-1
5E 7+00N	-1	65	-1	-1	83	-1
5E 7+00N-R	-1	64	-1	-1	78	-1

SOIL GAS HYDROCARBONS
(SGH) by GC/MS
KNIGHT TOWNSHIP PROJECT

	157 - HAR	158 - HBA	159 - HBA	160 - HBI	161 - HA	162 - HPH
5E 7+50N	-1	74	-1	-1	92	-1
5E 8+00N	-1	66	-1	-1	81	-1
5E 8+50N	-1	65	-1	-1	83	-1
5E 9+00N	-1	71	-1	-1	89	-1
5E 9+50N	-1	69	-1	-1	84	-1
5E 10+00N	-1	65	-1	-1	79	-1
5E 10+50N	-1	63	-1	-1	79	-1
5E 11+00N	-1	67	-1	-1	83	-1
5E 11+50N	-1	67	-1	-1	84	-1
5E 12+00N	-1	82	-1	-1	102	-1
5E 12+50N	-1	69	-1	-1	87	-1
5E 13+00N	-1	63	-1	-1	77	-1
4E 13+00N	-1	70	-1	-1	84	-1
4E 12+50N	-1	68	-1	-1	80	-1
4E 12+00N	-1	60	-1	-1	73	-1
4E 12+00N-R	-1	58	-1	-1	73	-1
4E 11+50N	-1	62	-1	-1	77	-1
4E 11+00N	-1	61	-1	-1	77	-1
4E 10+50N	-1	62	-1	-1	78	-1
4E 10+00N	-1	62	-1	-1	80	-1
4E 9+50N	-1	60	-1	-1	75	-1
4E 9+00N	-1	64	-1	-1	78	-1
4E 8+50N	-1	65	-1	-1	79	-1
4E 8+00N	-1	66	-1	-1	81	-1
4E 7+50N	-1	65	-1	-1	82	-1
4E 7+00N	-1	65	-1	-1	79	-1
4E 6+50N	-1	59	-1	-1	75	-1
4E 6+00N	-1	60	-1	-1	73	-1
4E 5+50N	-1	59	-1	-1	74	-1
4E 5+00N	-1	63	-1	-1	77	-1
4E 4+50N	-1	62	-1	-1	77	-1
4E 4+50N-R	-1	62	-1	-1	75	-1
4E 4+00N	-1	68	-1	-1	85	-1
4E 3+50N	-1	70	-1	-1	85	-1
4E 3+00N	-1	69	-1	-1	84	-1
3E 3+00N	-1	69	-1	-1	84	-1
3E 3+50N	-1	62	-1	-1	75	-1
3E 4+00N	-1	62	-1	-1	76	-1
3E 4+50N	-1	65	-1	-1	79	-1
3E 5+00N	-1	64	-1	-1	80	-1
3E 5+50N	-1	60	-1	-1	74	-1
3E 6+00N	-1	65	-1	-1	80	-1
3E 6+50N	-1	67	-1	-1	82	-1
3E 7+00N	-1	59	-1	-1	77	-1
3E 7+00N DUP	-1	62	-1	-1	76	-1
3E 7+50N	-1	62	-1	-1	75	-1
3E 8+00N	-1	59	-1	-1	74	-1
3E 8+00N-R	-1	63	-1	-1	81	-1
3E 8+50N	-1	63	-1	-1	79	-1
3E 9+00N	-1	62	-1	-1	78	-1
3E 9+50N	-1	67	-1	-1	82	-1
3E 10+00N	-1	63	-1	-1	80	-1
3E 10+50N	-1	63	-1	-1	79	-1
3E 11+00N	-1	67	-1	-1	84	-1

	157 - HAR	158 - HBA	159 - HBA	160 - HBI	161 - HA	162 - HPH
3E 11+50N	-1	78	-1	-1	96	-1
3E 12+00N	-1	66	-1	-1	83	-1
3E 12+50N	-1	69	-1	-1	85	-1
3E 13+00N	-1	69	-1	-1	84	-1
2E 13+00N	-1	62	-1	-1	76	-1
2E 12+50N	-1	60	-1	-1	75	-1
2E 12+00N	-1	69	-1	-1	84	-1
2E 11+50N	-1	61	-1	-1	77	-1
2E 11+00N	-1	61	-1	-1	79	-1
2E 11+00N-R	-1	63	-1	-1	79	-1
2E 10+50N	-1	62	-1	-1	76	-1
2E 10+00N	-1	64	-1	-1	78	-1
2E 9+50N	-1	62	-1	-1	76	-1
LMB-QA	-1	61	-1	-1	76	-1
LMB-QA	-1	56	-1	-1	73	-1
LMB-QA	-1	55	-1	-1	70	-1
LMB-QA	-1	54	-1	-1	68	-1

Report on

VLF EM-16/ SGH Gold-Copper

Responses On

Line 2E

C Anomaly

Knight Township

Prepared For

Dave Burda

By

Shaun Parent

Superior Exploration, Adventure and Climbing Co. Ltd.

February 28, 2015

Executive Summary

This report covers VLF Line 2E at Anomaly C is located in Knight Township in the District of Larder Lake in Northern Ontario.

A VLF EM-16 survey program was carried out in early June 2014, with a Geonics VLF EM-16 and a handheld Garmin GPS-60C. Two transmitter stations were read during the course of the survey; NAA 24.0 KHz – Cutler, Maine and NML 25.2KHz - La Moure, North Dakota. The complete VLF survey report is referenced at the end of this report.

The objective of this report is to determine if there is a correlation between the VLF Survey and a Soil Geochemistry survey that was carried out over the VLF survey grid in the area of Card Anomalies C on claims owned by Dave Burda (Figure A).

Previous VLF surveying was carried out in the fall of 2013 by Frank Racicot over the B and C anomalies. The VLF Grid covered 2 VLF lines surveyed by Frank Racicot in October 2013. An assessment report was filed by Frank Racicot with the MNDM.

In October 2014, a SGH Soil Geochemical survey was carried out over the VLF EM-16 lines in order to determine if there were Gold and Copper anomalies associated with the Interpreted VLF Anomalies. The complete SGH Soil survey report is attached to this report (Appendix C).

Introduction

A VLF-EM16 survey is a relatively simple and economic geophysical survey that is used to better understand shallow, vertical and sub vertical bedrock conductors.

This report describes the findings and results of the VLF EM-16 survey along line 2E utilizing the new VLF 2DMF processing software of which the author of this report has assisted in its development. The software produces inversions of electromagnetic (EM) induction data acquired at a Very Low Frequency (VLF).

VLF2DMF is capable of inverting VLF-EM data acquired along a surveyed line at different frequencies. Data collected in a survey area can also be processed. The software allows the display of the survey as profiles of the Raw Data, Fraser Filtered Data, KH, Resistivity and a (2-D) Modelled Inversion. The software also allows for plan maps and slices of Fraser, KH and Inversion models of separate VLF survey lines.

This report also compares the location of the SGH soil survey with the VLF anomalies located on Line 2E.

Figure A General Location Map of VLF Survey

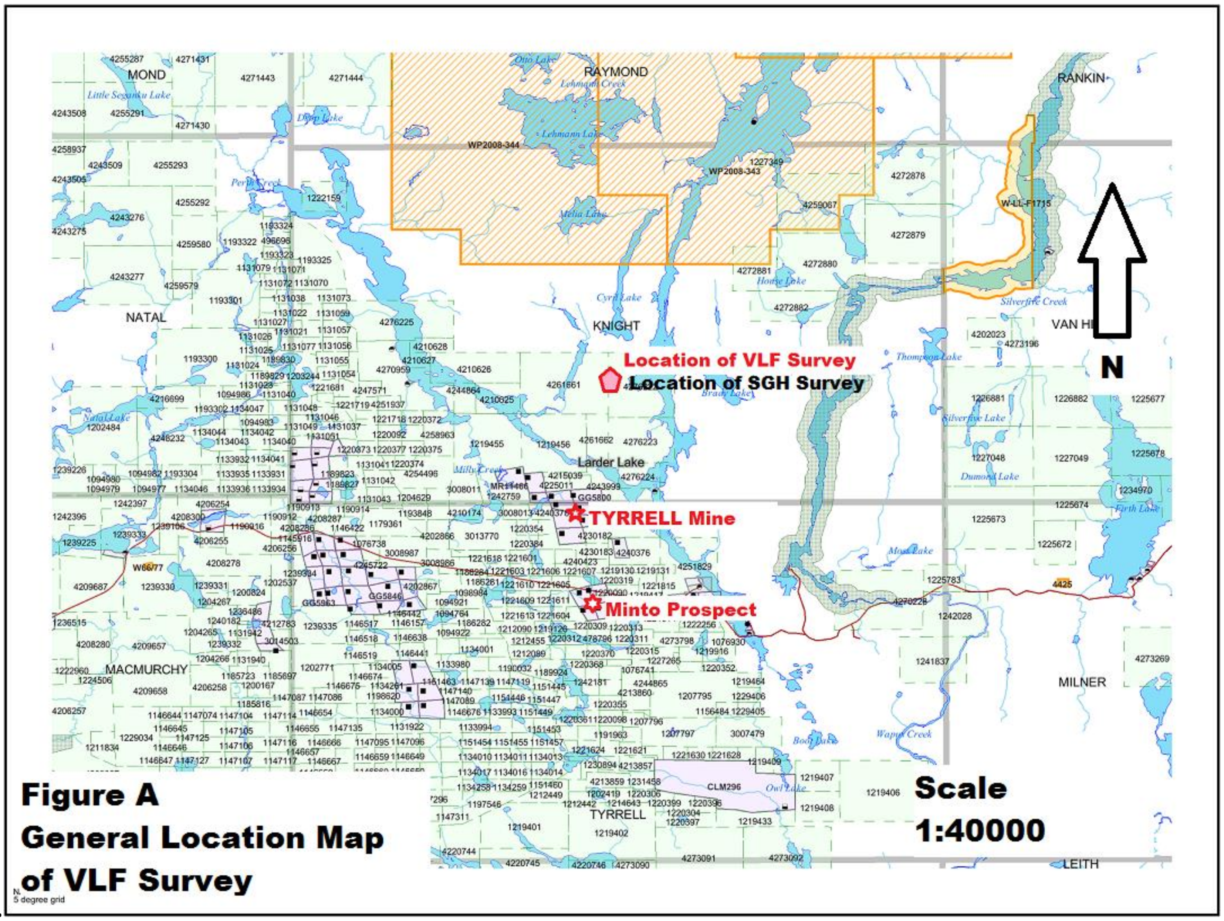
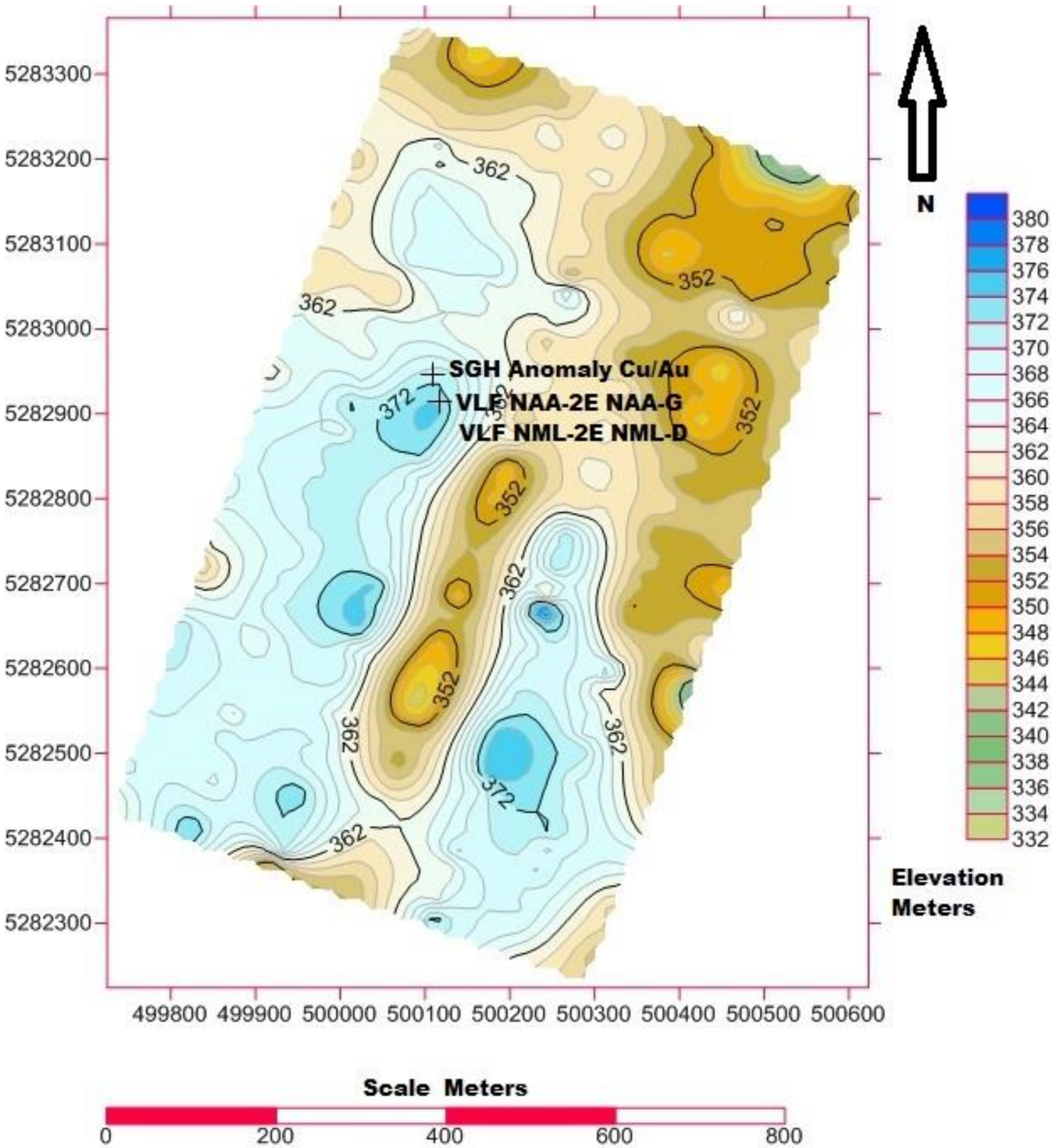


Figure B Elevation Map with SGH and VLF Anomaly Locations



Work Performed

The VLF EM-16 survey consisted of running 6 VLF Lines in a direction of 20-200 degrees true azimuth using a handheld Garmin GPS. This report focuses on Line 2E

The VLF lines were completed while using a handheld Garmin 60-CSX GPS. Each VLF station was located based on a northerly azimuth and distance from the start of the survey line. At each line station, 2 transmitter stations were read using the Geonics VLF-Em-16 receiver. The following parameters were used throughout the survey.

VLF Transmitters Used: NAA-24.0 KHz. Cutler, Maine and NML-25.2 KHz. La Moure, North Dakota.

VLF survey direction: The VLF Em-16 receiver was facing 020 degrees along all lines.

VLF survey stations: All readings were taken at approximately 20 meter stations along the survey line. Each 100 meter station was flagged on all lines surveyed.

Parameters of Measurement: In-phase and Quad-phase components of vertical magnetic field as a percentage of horizontal primary fields. (Tangent of tilt angle and ellipticity). VLF transmitter NAA was to the east. The transmitters are chosen so that the direction to the transmitting station is as close to the orientation of the bedrock strike.

VLF Data Processing

Field data was collected as follows on each surveyed line.

- Each station was saved onto the Handheld Garmin 60CSX Handheld GPS Unit (including local features such as power lines, fences and geological structures)
- VLF readings for each station were recorded in a notebook as In-Phase and Quadrature corresponding to the line number and station number. (See example in Table 1)

Table 1 Example of VLF Field Data Collection

Line 0+00	NAA In phase	NAA Quadrature	NML In phase	NML Quadrature	Notes
2+00N	10	6	4	5	
2+20N	8	4	2	4	
2+40N	6	5	0	2	

- Field information was transferred to a Garmin Map Source program where line and station information could be viewed.
- Garmin and VLF data were compiled onto an excel spreadsheet and then inputted into the VLF2DMF processing software.

VLF Data Profiles

All VLF data collected on the 7 lines, was processed with the VLF2DMF software. Each line profile includes the frequency used. The VLF profiles for Line 2E are divided into 7 figures which are found at the end of this report. Figures 1-7 NAA refers to those TX-NAA anomalies. Figures 1-7, NML refers to TX-NML anomalies.

1: VLF Raw and Filtered Data Profiles:

The raw data for each frequency was plotted for each line surveyed. A running average filter of the raw data is run to smooth the survey profile.

2: Fraser Filter Profiles:

Filtered raw data for frequency NAA and NML was run through the Fraser filter. This filter transforms In-Phase cross overs and inflections into positive peak anomalies. In-Phase inflections and cross overs are usually positive to negative, while Quadrature responses are negative to positive giving a negative peak anomaly when the Fraser Filter is applied. VLF anomalies were chosen based on the location of the peaks on the Fraser Filter Profile.

3: VLF K-H Profiles:

Filtered data for frequency NAA and NML was run through the Karous-Hjelt (K-H) filter. The filter is applied to obtain a section of current density. The higher values are in general associated with conductive structures.

4: VLF Resistivity Profiles:

The Apparent Resistivity for frequency NAA and NML was calculated and plotted. The resistivity can be calculated if the mean environmental resistivity is known at the beginning of the VLF profile. A mean resistivity of 1000 ohm’s was used for all lines.

5: VLF Model 1000 Ohm’s:

A resistivity of 1000 Ohm’s was used to build an initial model used in the inversion to obtain a realistic cross section of the line surveyed. Conductive zones are colored blue while resistive zones are colored orange. A Pseudo depth scale is found on the left side of model profiles. Surface conductive zones show little depth extent, have a horizontal display and are limited in depth.

- Deeper conductors have more depth extent with a vertical display.
- Calculated depth for TX-NAA @ 1000 Ohm’s is 102.1 Meters.
- Calculated depth for TX-NML @ 1000 Ohm’s is 99.6 Meters.

6: VLF Model 2000 Ohm’s:

A resistivity of 2000 Ohm’s was used to build an initial model used in the inversion to obtain a realistic cross section of the line surveyed. Conductive zones are colored blue while resistive zones are colored orange. A Pseudo depth scale is found on the left side of model profiles. Surface conductive zones show little depth extent, have a horizontal display and are limited in depth.

- Deeper conductors have more depth extent with a vertical display.
- Calculated depth for TX-NAA @2000 Ohm's is 144 Meters.
- Calculated depth for TX-NML @2000 Ohm's is 140 Meters.

7: VLF Model 3000 Ohm's:

A resistivity of 3000 Ohm's was used to build an initial model used in the inversion to obtain a realistic cross section of the line surveyed. Conductive zones are colored blue while resistive zones are colored orange. A Pseudo depth scale is found on the left side of model profiles. Surface conductive zones show little depth extent, have a horizontal display and are limited in depth.

- Deeper conductors have more depth extent with a vertical display.
- Calculated depth for TX-NAA @3000 Ohm's is 176 Meters.
- Calculated depth for TX-NML @3000 Ohm's is 172 Meters.

Discussion of Results

The VLF data for transmitter NAA and NML was plotted and interpreted separately.
The modelling profiles in Figure 5 provide a basis for the delineation of shallow subsurface conductors from deeper bedrock conductors. The approximate depth to a VLF anomaly is calculated from the VLF Model.

A summary of VLF anomalies found on Line 2E TX-NAA are listed in Table 2.
The most important VLF anomaly on Line 2E is highlighted in yellow in Table 2.
Anomaly 2E-NAA-G is located on Line 2E @ station 9+00N (UTM 500116E/5282916N)

A summary of VLF anomalies found on Line 2E TX-NML are listed in Table 3. The most important VLF anomaly on Line 2E is highlighted in yellow in Table 3.
Anomaly 2E-NML-D is located on Line 2E @ station 9+00N (UTM 500116E/5282916N)

The location of the SGH Gold anomaly on Line 2E is on Line 2E station 9+00N (UTM 500108E/5282948N) while the location of the SGH Copper anomaly on Line 2E is on Line 2E station 9+00N (UTM 500108E/5282948N).

There is an offset between the location of the VLF and SGH anomalies of approximately 8 meters east and 32 meters north. This difference may be due to the accuracy of the GPS units used during the VLF survey and the Soil survey.

The location of VLF anomaly 2E-NAA-G and the SGH Gold/Copper Anomaly are shown on Figures C, E, G & I while VLF anomaly 2E-NML-D and the SGH/Copper Anomaly are shown on Figures D, F, H & J.

Table 2 VLF Interpretation Table Line 2E TX NAA

Transmitter NAA- Cutler, Maine 24.0

Line 2E

Location	Line Location	VLF Anomaly Symbol	VLF Anomaly Type	Depth Estimate Meters	Notes
499939 5282426	Station 3+80N	2E-NAA-A	Surficial	00-20	
499975 5282520	Station 4+80N	2E-NAA-B	Bedrock contact	00-40	
499998 5282575	Station 5+40N	2E-NAA-C	Bedrock	00-102	
500031 5282669	Station 6+40N	2E-NAA-D	Bedrock contact	00-40	
500051 5282733	Station 7+20N	2E-NAA-E	Surficial	00-20	
500076 5282810	Station 7+80N	2E-NAA-F	Bedrock	00-102	
500116 5282916	Station 9+00N	2E-NAA-G	Bedrock	00-102	Based on 1000 Ohm
500176 5283057	Station 10+60N	2E-NAA-H	Bedrock contact	00-102	

Table 3 VLF Interpretation Table Line 2E TX NML

Transmitter NML- La Moure N. Dakota, 25.2Khz

Line 2E

Location	Line Location	VLF Anomaly Symbol	VLF Anomaly Type	Depth Estimate Meters	Notes
499975 5282520	Station 4+80N	2E NML-A	Bedrock contact	00-99.6	
499998 5282575	Station 5+40N	2E NML-B	Bedrock	00-99.6	
500024 5282649	Station 6+20N	2E NML-C	Bedrock contact?	00-99.6	
500116 5282916	Station 9+00N	2E NML-D	Bedrock	00-99.6	Based on 1000 Ohm
500151 5283007	Station 10+00N	2E NML-E	Bedrock?	00-99.6	
500176 5283057	Station 10+60N	2E NML-F	Bedrock contact	00-99.6	

Figure C   SGH Gold/ VLF-NAA Fraser Contour Maps

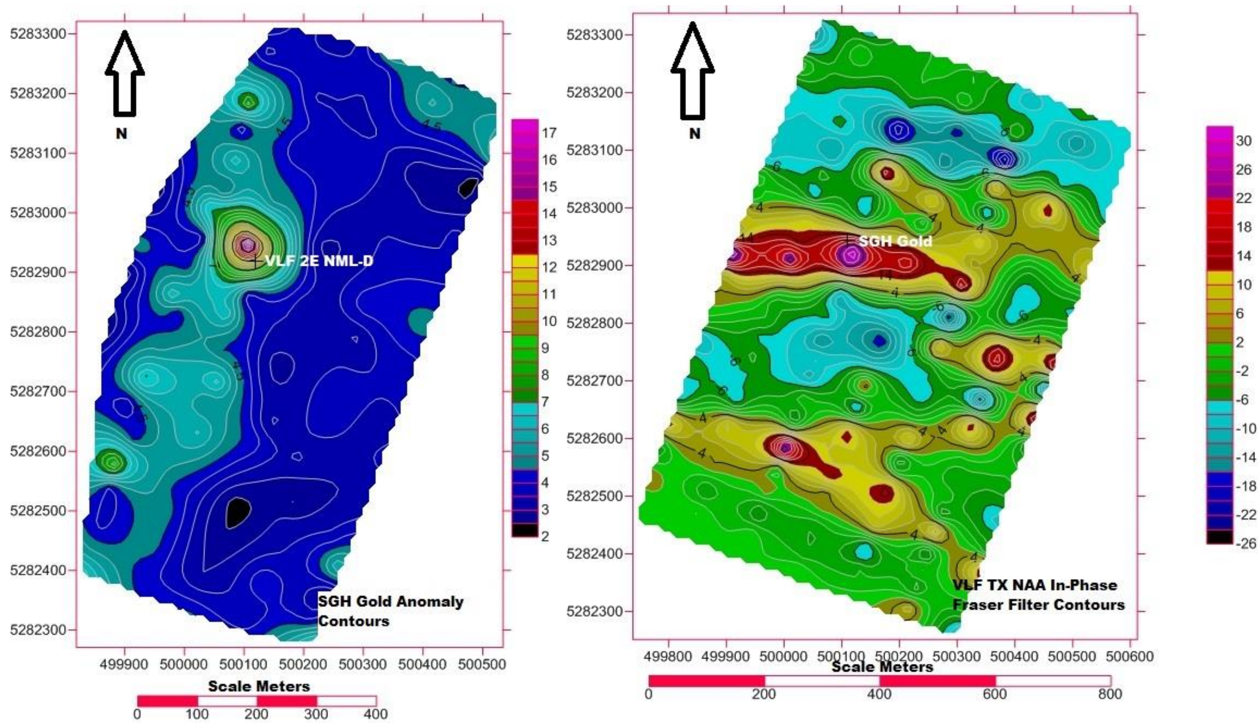


Figure D   SGH Gold/ VLF-NML Fraser Contour Maps

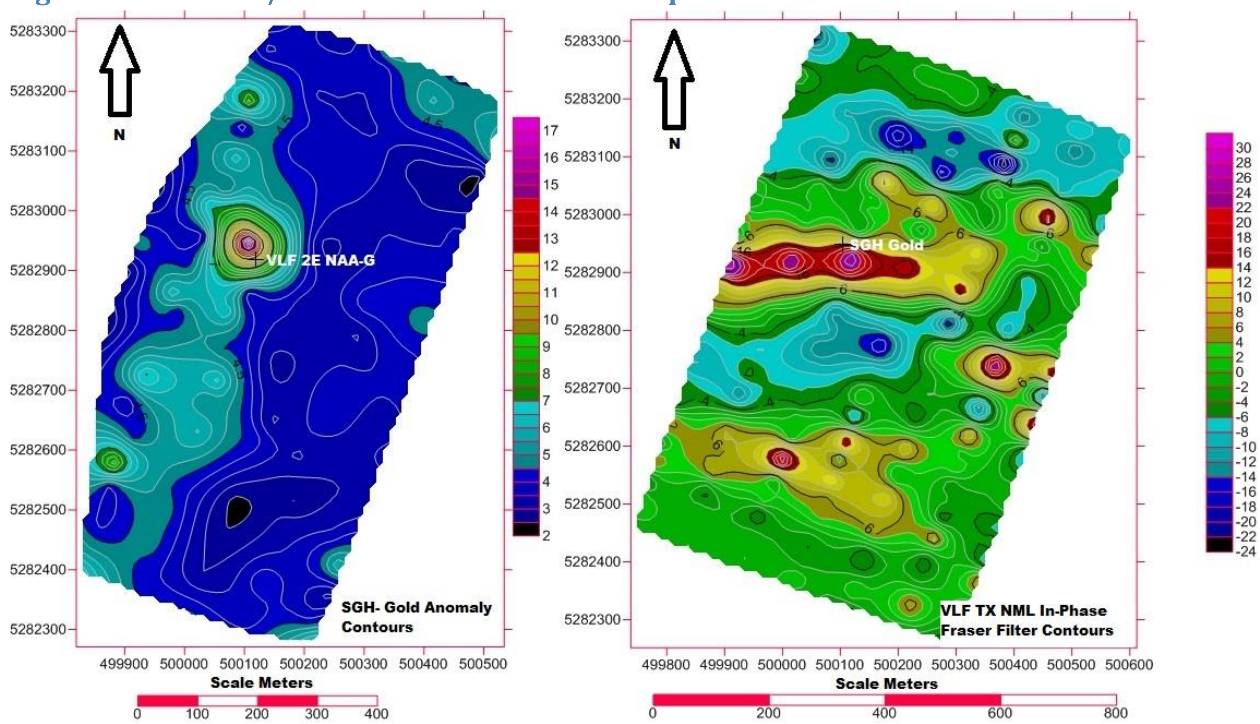
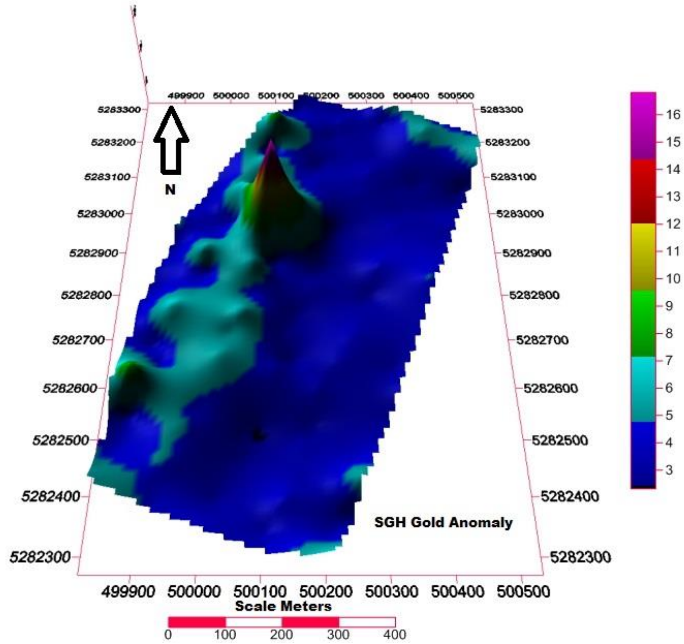


Figure E SGH Gold/VLF-NAA Fraser 3 D Image Maps



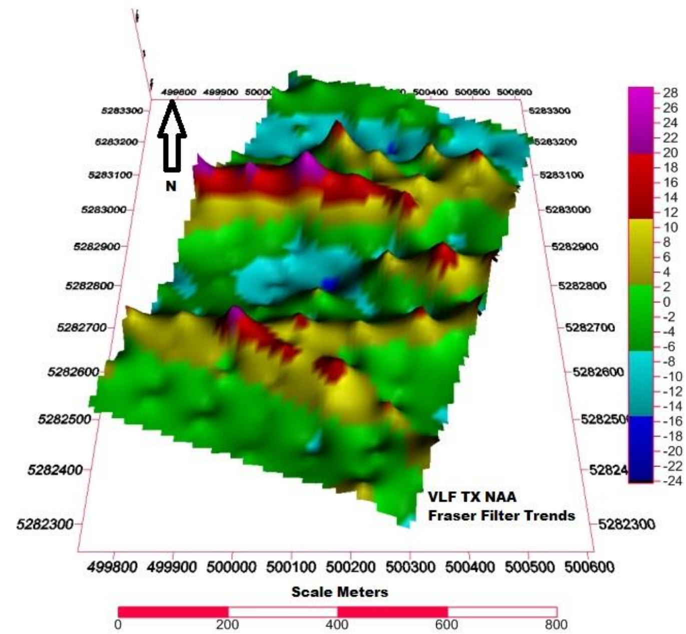
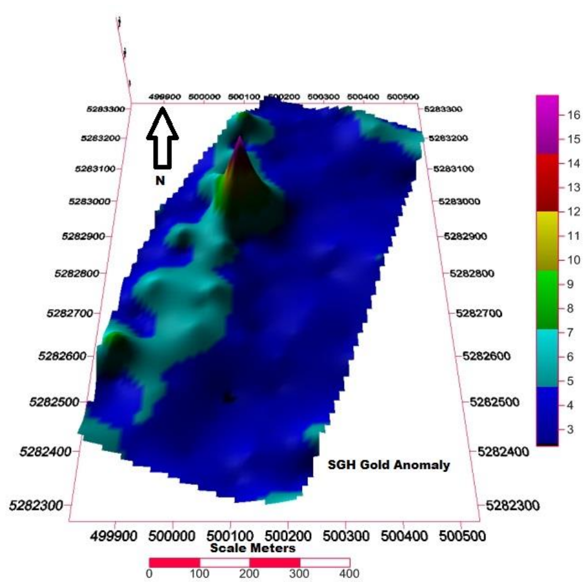


Figure F SGH Gold/VLF-NML Fraser 3D Image Maps



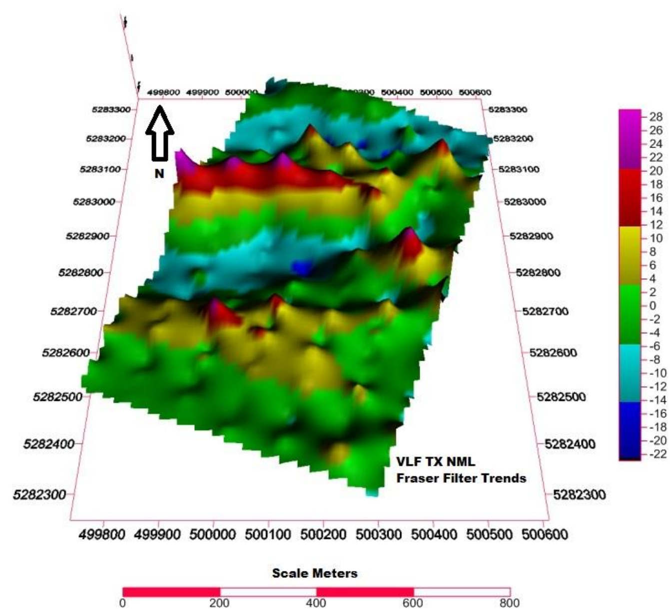


Figure G SGH Copper/VLF-NAA Fraser Contour Maps

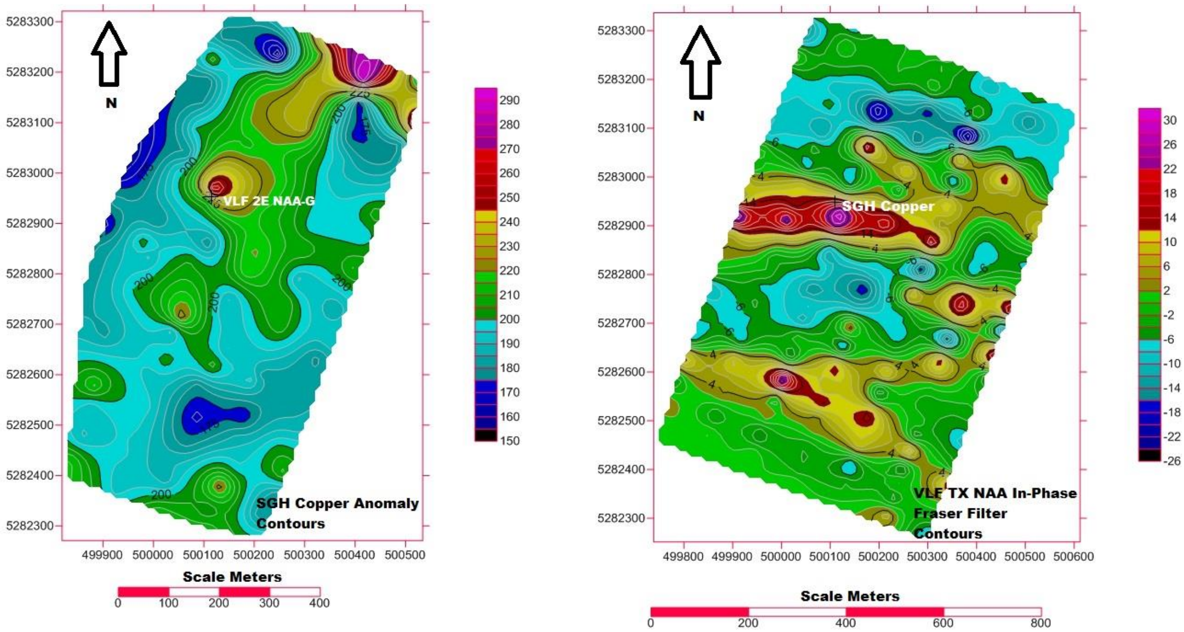


Figure H SGH Copper/VLF-NML Fraser Contour Maps

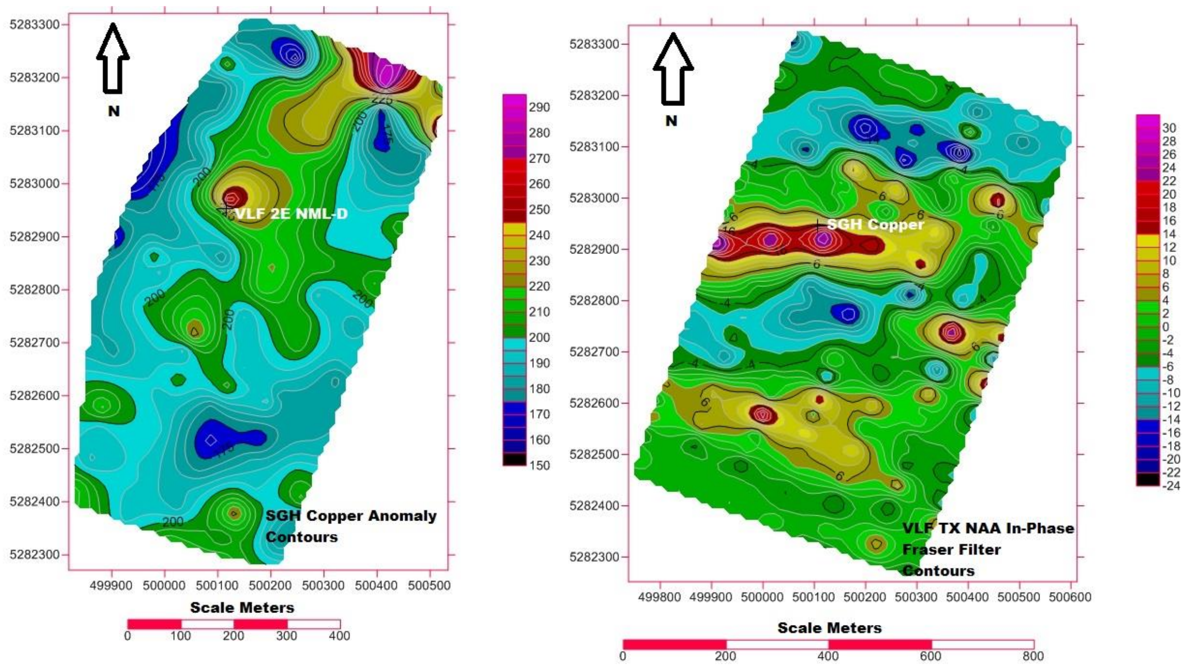


Figure I SGH Copper/VLF-NAA Fraser 3D Image Maps

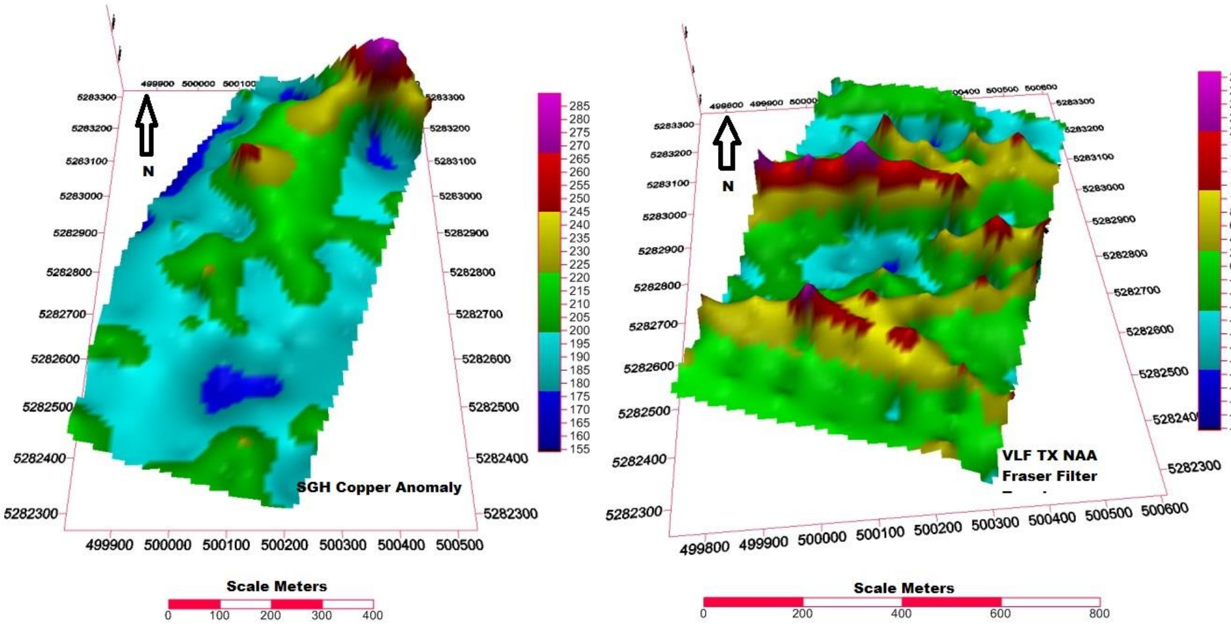
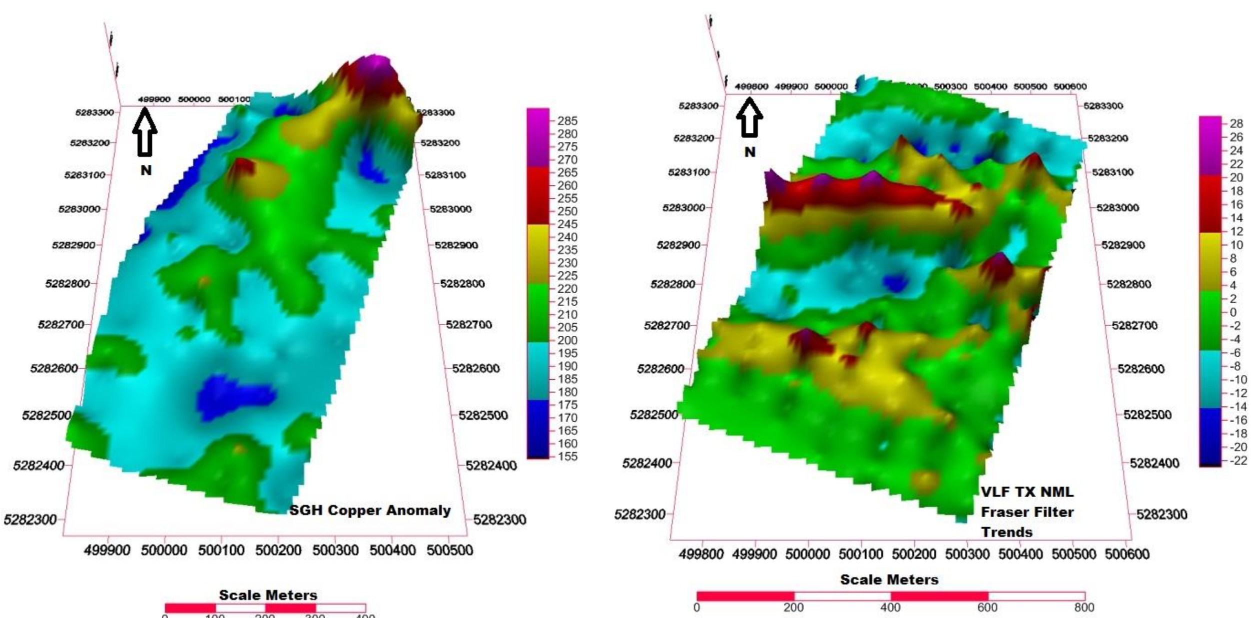


Figure J SGH Copper/VLF-NML Fraser 3D Image Maps



Conclusions

1) The use of 2 transmitters TX-NAA and TX-NPM confirmed and delineated the VLF trends and a conductor on Line 2E 9+00N.
2) The processing of raw VLF data using the VLF2D Software program was successful in identifying and modelling the bedrock conductor on Line 2E 9+00N.
3) The VLF conductor on Line 2E 9+00N has an apparent dip of -70 to the south and extends from the surface to -170 meters
4) The SGH anomalies for Gold and Copper are located very close to the approximate surface projection of VLF anomaly 2E NAA-G and 2E NML-D.

Recommendations

1) VLF surveying of 50 meter lines at 1+50E and 2+50E @ 20 meter stations with azimuth of 20-200 to obtain more detailed information on the NAA, NML Anomaly located at 9+00N. Lines can be 400 meter in length centered at 9+00N.
2) VLF surveying of 3-50 meter spaced lines to cover VLF anomaly at 9+00N. Each line should be 400 meters in length with azimuth of 110-290. The middle line should be run directly over the VLF and SGH anomaly on Line 2E 9+00N
3) Further SGH soil sampling along the above 3 VLF Lines at same spacing as VLF stations.
4) See recommendations for further exploration on page 30 of the SGH Report.
5) A drill hole to test the VLF anomaly and the SGH Gold/Copper anomaly. The drill hole should be located on Line 2E 8+20N (UTM 500096E/5282848N) Azimuth of 200 Inclination of -45 for a length of 200 meters.

Appendix A– NAA L2+00E

Figure 1: NAA Line 2+00E – Raw Data Profile

Figure-1 NAA 2E
Raw Data Profile

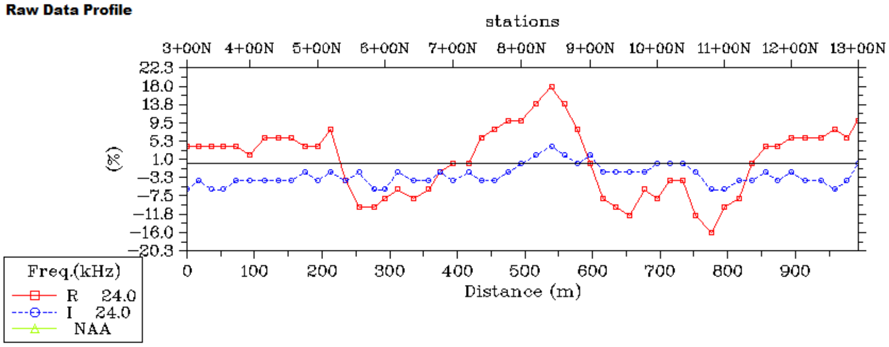


Figure 2: NAA Line 2+00E – Fraser Filter Profile

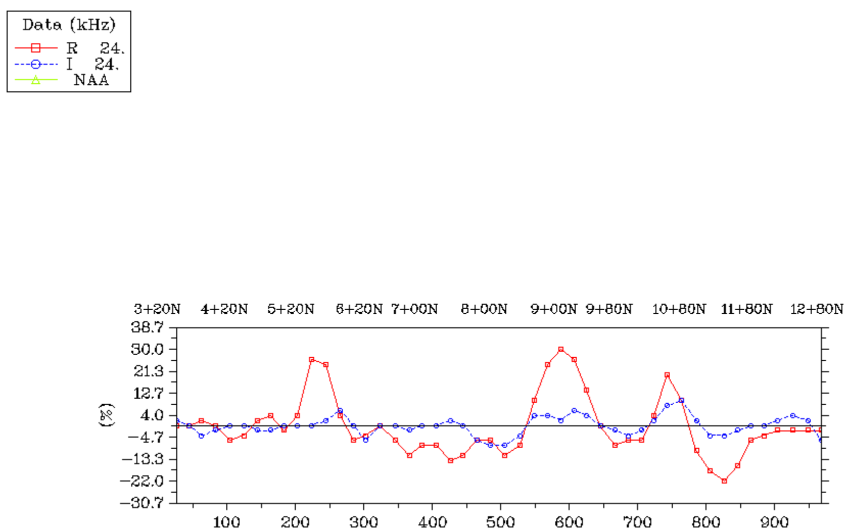


Figure-2 NAA 2E
Fraser Filter Profile

Figure 3: NAA Line 2+00E – KH Profile

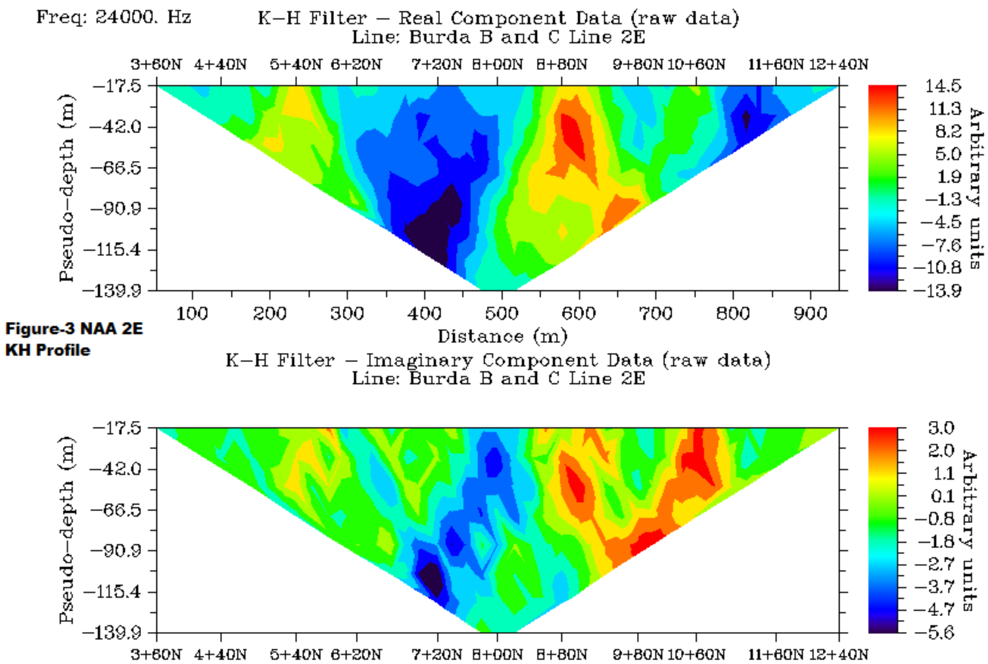


Figure 4: NAA Line 2+00E – Apparent Resistivity Profile

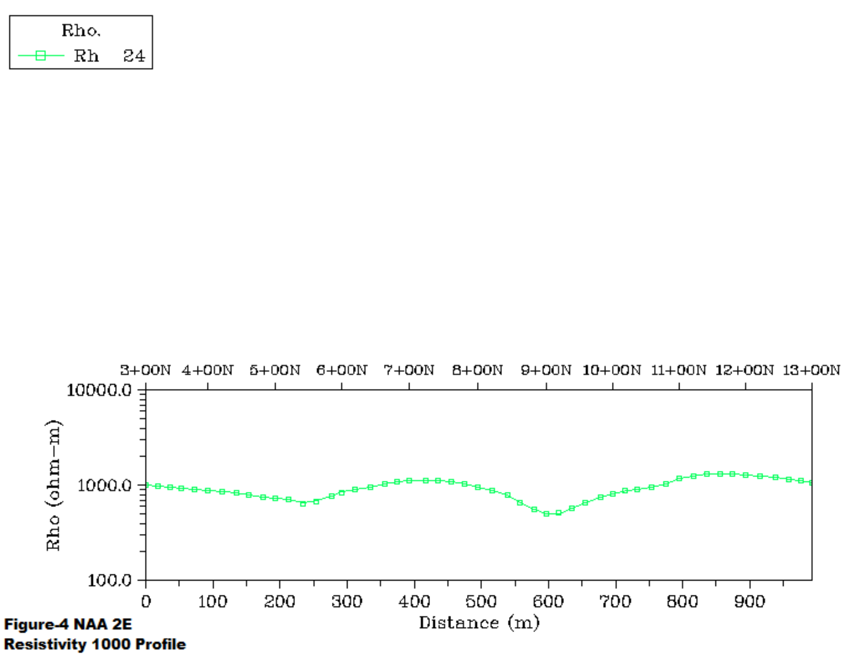


Figure 5: NAA Line 2+00E – Model 1000 Ohms

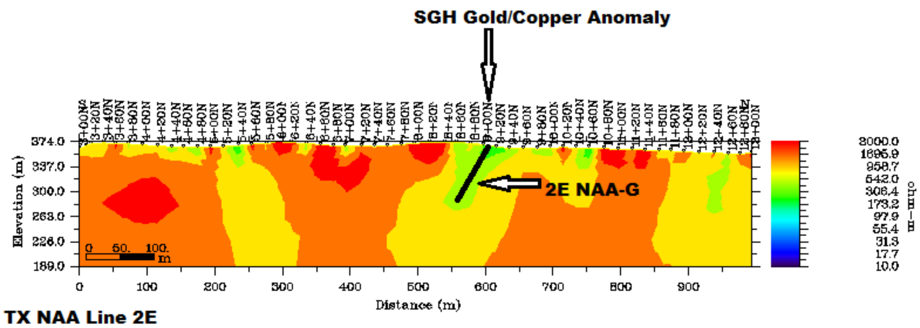


Figure-5 TX NAA Line 2E
Model 1000 Ohm Profile

Figure 6: NAA Line 2+00E – Model 2000 Ohms

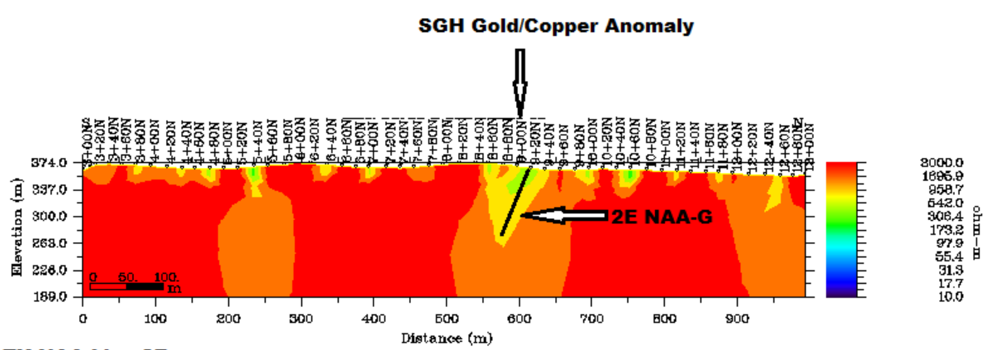


Figure-6 TX NAA Line 2E
Model 2000 Ohm Profile

Figure 7: NAA Line 2+00E – Model 3000 Ohms

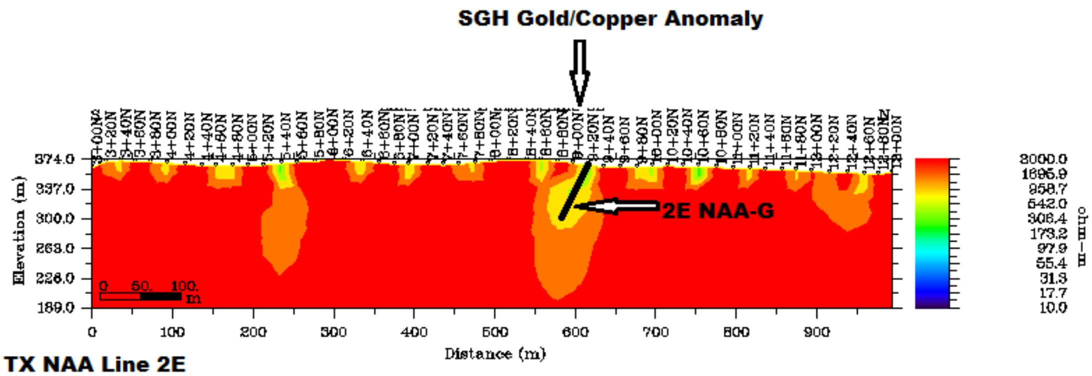


Figure-7 TX NAA Line 2E
Model 3000 Ohm Profile

Appendix B– NML L2+00E

Figure 1: NML Line 2+00E – Raw Data Profile

Figure-1 NML 2E
Raw Data Profile

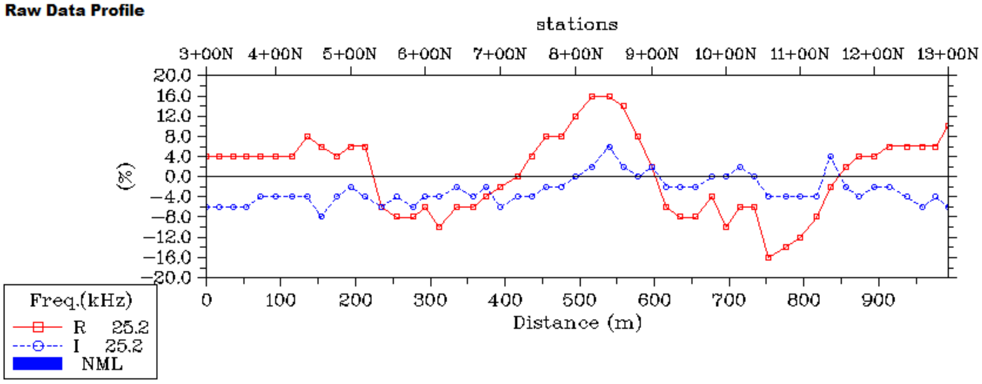


Figure 2: NML Line 2+00E – Fraser Filter Profile

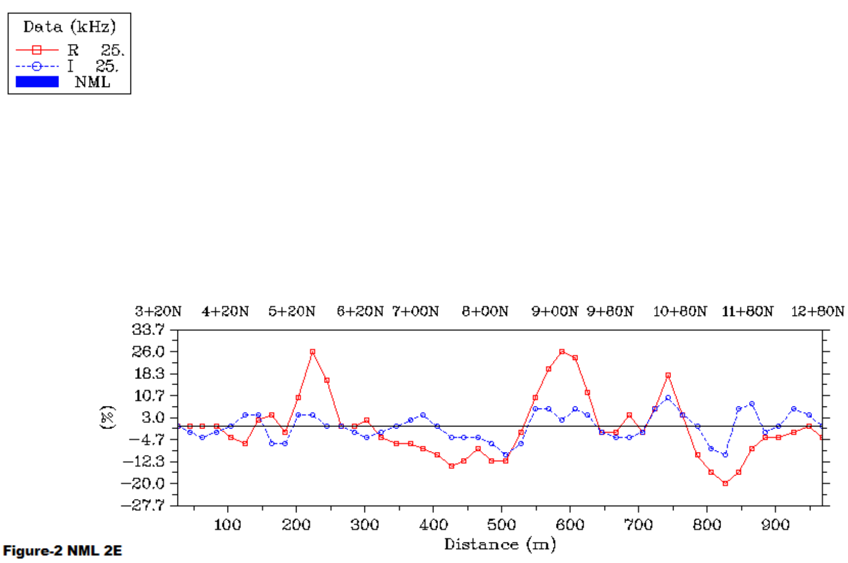


Figure-2 NML 2E
Fraser Filter Profile

Figure 3: NML Line 2+00E – KH Profile

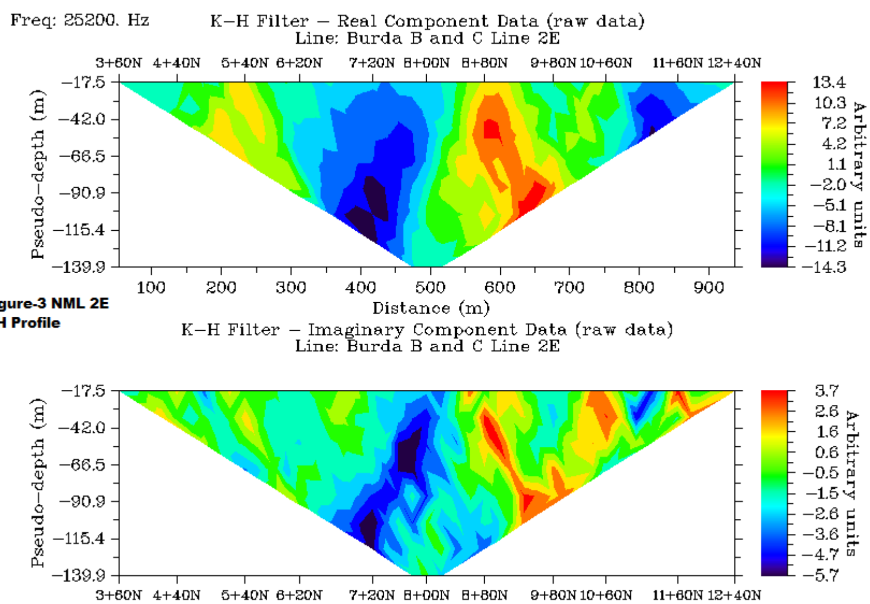


Figure-3 NML 2E
KH Profile

Figure 4: NML Line 2+00E – Apparent Resistivity Profile

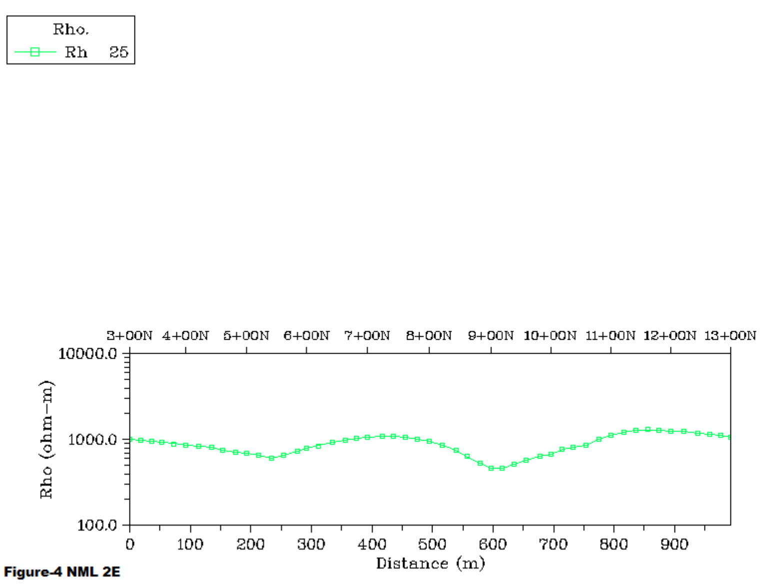


Figure-4 NML 2E
Resistivity 1000 Ohm Profile

Figure 5: NML Line 2+00E – Model 1000 Ohms

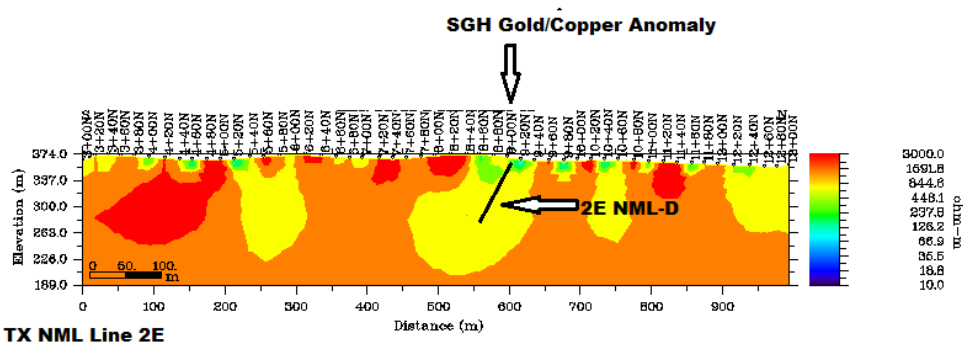


Figure-5 TX NML Line 2E
Model 1000 Ohm Profile

Figure 6: NML Line 2+00E – Model 2000 Ohms

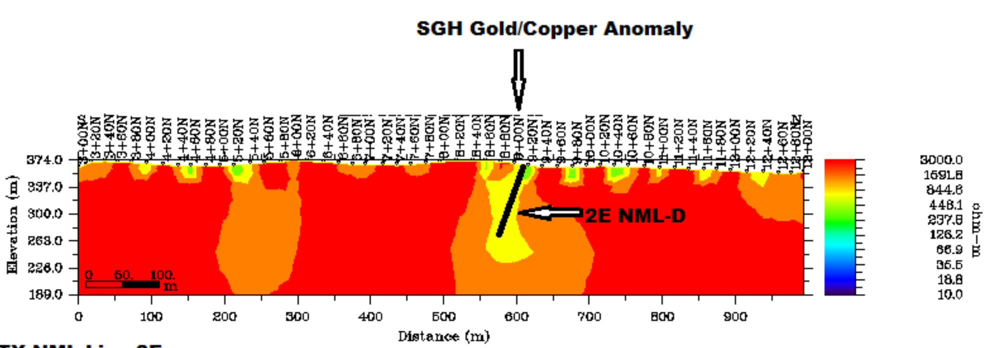


Figure-6 TX NML Line 2E
Model 2000 Ohm Profile

Figure 7: NML Line 2+00E – Model 3000 Ohms

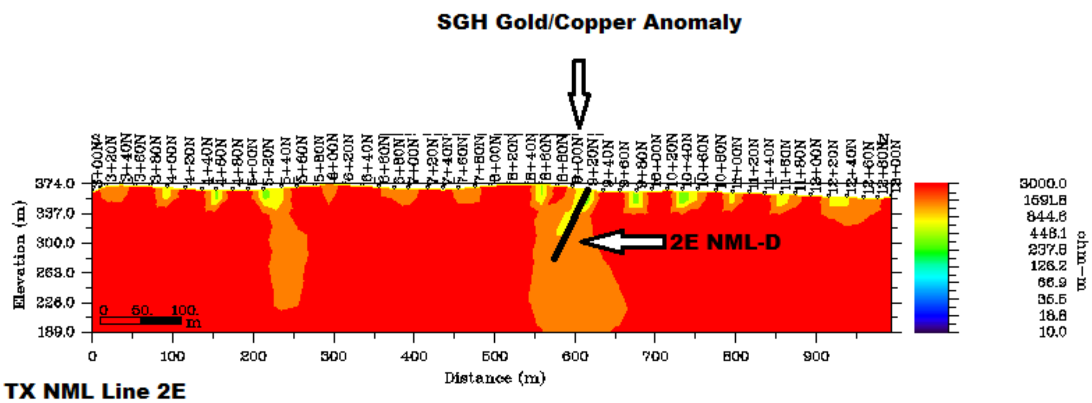


Figure-7 TX NML Line 2E
Model 3000 Ohm Profile

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Certificate of Qualifications

I, Shaun Parent, P. Geo (LTD.) residing at 282 B Whispering Pines Road, Batchawana Bay, Ontario do certify that:

1. I am a consulting Geoscientist with Superior Exploration, Adventure & Climbing Co. Ltd.

2. I graduated with a Geological Technician Diploma from Sir Sandford Fleming College in 1986.

3. I graduated with a BSc. from the University of Toronto in 1986

4. I am a member in good standing with the Association of Professional Geoscientists of Ontario #1955 and a member of the Prospectors and Developers Association of Canada.

5. I have been employed continuously as a Geoscientist for the past 26 years since my graduation from University.

6. The nature of my involvement with this project was to carry out the VLF Survey and the interpretation of the VLF data using the EMTOMO VLF2D Software of which I have been developing with Dr. Fernando Santos of Lisbon, Portugal.

7. I was responsible for the Interpretation of the VLF data in this report.

Dated this 28th day of February 2015

Shaun Parent, Dipl-Geo, BSc. P. Geo (Limited)

Appendix C

SGH Soil Survey: Act Labs: 2014 3D-SGH "A Spatiotemporal Geochemical Hydrocarbon Interpretation"

Quality Analysis ... Actlabs Innovative Technologies

3D - SGH

"A SPATIOTEMPORAL GEOCHEMICAL HYDROCARBON INTERPRETATION"

DAVE BURDA
KNIGHT TOWNSHIP SGH SOIL SURVEY

November 7, 2014 Activation Laboratories Ltd. A14-07256 Page 1 of 54

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Quality Analysis ... Innovative Technologies

SGH – SOIL GAS HYDROCARBON Predictive Geochemistry

for

DAVE BURDA

KNIGHT TOWNSHIP SGH SOIL SURVEY

November 7, 2014

** Dale Sutherland,*

Activation Laboratories Ltd

(- author, originator)*

EVALUATION OF SAMPLE DATA - EXPLORATION FOR: "COPPER AND GOLD" TARGETS

THE SGH COPPER AND SGH GOLD INTERPRETATION TEMPLATES ARE USED FOR THIS REPORT

Workorder: A14-07256

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PREFACE

THIS "STANDARD" SGH INTERPRETATION REPORT:

The purpose of this Soil Gas Hydrocarbon (SGH) interpretation "Standard Report" is to ensure that clients and other potential reviewers of the results have a good understanding of this organic, deep penetrating geochemistry. As SGH provides such a large data set and is not interpreted in the same way as an inorganic geochemical method, this interpretation and report enables the user to realize the results in a timely fashion and capitalizes on years of research and development since the inception of SGH in 1976 combined with the knowledge obtained by Activation Laboratories through the interpretation of SGH data from over hundreds of surveys for a wide variety of target types in various lithologies from many geographical locations. Although referenced today as a "nano-technology", the analysis of SGH has not changed since inception. The report is compulsory as it is the only known organic geochemistry that, in spite of the name, uses non-gaseous semi-volatile organic compounds interpreted using a forensic signature approach. It is typically based solely on SGH data and does not include the consideration or interpretation from any other geochemistry (inorganic), geology, or geophysics that may exist related to this survey area(s). This report can also provide evidence of project maintenance. To keep the price to a minimum and to provide as short a turnaround time as practically possible, usually only one SGH Pathfinder Class map is illustrated in a "Standard Report" with an applied interpretation although several other SGH Pathfinder Class maps are used and referenced. Definitions of certain terms or phrases used in this report can be found in Appendix A. A Supplemental Report and/or interpretations for other target types are available. A GIS package of georeferenced images is also available. (See Appendix H)

The interpretation in this report has used the results from some of the research with SGH in recent years which has focused on the potential that the SGH data might be able to further dissect and understand the relationships between the chemical Redox conditions in the overburden the development of an electrochemical cell and its affect in shaping geochemical anomalies. This research has resulted in the development by Activation Laboratories of a new enhanced model of the Electrochemical/ Redox Cell theory originated by Govett (1976) that was further developed to the model by Hamilton (2004, 2009). The new enhanced model developed by Sutherland (2011) takes the general anomalies expected by the Hamilton model to a higher level of detail and specificity. This has resulted in a more confident level of interpretation which has been referenced as 3D-SGH or **3D-"Spatiotemporal Geochemical Hydrocarbons**. This model has been formally introduced at the International Applied Geochemistry Symposium (IAGS) organized by The Association of Applied Geochemists that took place in Rovaniemi, Finland, in August 2011. This new level of understanding of the expected anomaly types that can be observed with SGH provides a new level of quality control in the interpretation process as the symmetry of SGH anomalies can assure the interpreter which anomalies are as a result of a buried target. With the enhanced 3D-SGH interpretation that was introduced in 2012, we also mark the beginning of the ability to make some statements regarding the possible depth to mineralization for some projects as we dissect the Redox cell relative to the new Electrochemical Cell theory. The cover of this report is an artist's rendering of the pathways of different classes of Spatiotemporal Geochemical Hydrocarbons which migrate through the overburden. This model is used as the new 3D-SGH interpretation approach.

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DISCLAIMER

This "SGH Interpretation Report" has been prepared to assist the user in understanding the development and capabilities of this Organic based Geochemistry. The interpretation of the Soil Gas Hydrocarbon (SGH) data is in reference to a template or group of SGH classes of compounds specific to a type of mineralization or target that is chosen by the client (i.e. the template for gold, copper, VMS, uranium, etc.). The various templates of SGH Pathfinder Classes that together define the forensic identification signature for a wide range of commodity target types; Gold, Nickel, VMS, SEDEX, Uranium, Cu-Ni-PGE, IOCG, Base Metal, Tungsten, Lithium, Polymetallic, and Copper, as well as for Kimberlites, Coal Seam, Wet Gas and Oil Play, have been developed through years of research and have been further refined from review of case studies and orientation studies has proven to be able to also address a wide range of lithologies. Even with 15+ years of development and experience with SGH, Activation Laboratories Ltd. cannot guarantee that the templates used are applicable to every type of target in every type of environment. The interpretation in this report attempts to identify an anomaly that has the best SGH signature in the survey for the type of mineralization or target chosen by the client. However, this interpretation is not exhaustive and there may be additional SGH anomalies that may warrant interest. It should not be viewed due to the generation of this SGH report, that Activation Laboratories Ltd. has the expertise or is in the business of interpreting any type of geochemical data as a general service. As the author is the originator of the SGH geochemistry, has researched and developed this exploration tool since 1996, and has produced similar interpretations using SGH data for close to 1,000 surveys, he is perhaps the best qualified to prepare this interpretation as assistance to clients wishing to use this SGH geochemistry. Activation Laboratories Ltd. can offer assistance in general suggestions for sampling protocols and in sample grid design; however we accept no responsibility to the appropriateness of the samples taken. Activation Laboratories Ltd. has made every attempt to ensure the accuracy and reliability of the information provided in this report. Activation Laboratories Ltd. or its employees do not accept any responsibility or liability for the accuracy, content, completeness, legality, or reliability of the information or description of processes contained in this report. The information is provided "as is" without a guarantee of any kind in the interpretation or use of the results of the SGH geochemistry. The client or user accepts all risks and responsibility for losses, damages, costs and other consequences resulting directly or indirectly from using any information or material contained in this report or using data from the associated spreadsheet of results.

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Cautionary Note Regarding Assumptions and Forward Looking Statements

The statements and target rating made in the Soil Gas Hydrocarbon (SGH) interpretive report or in other communications may contain or imply certain forward-looking information related to the quality of a target or SGH anomaly.

Statements related to the rating of a target are based on comparison of the SGH signatures derived by Activation Laboratories Ltd. through previous research on known case studies. The rating is not derived from any statistics or other formula. The rating is a subjective value on a scale of 0 to 6 relative to the similarity of the SGH signature reviewed compared to the results of previous scientific research and case studies based on the analysis of surficial samples over known ore bodies. No information on the results from other geochemical methods, geophysics, or geology is usually available as additional information for the interpretation and assignment of a rating value unless otherwise stated. The rating does not imply ore grade and is not to be used in mineral resource estimate calculations. References to the rating should be viewed as forward-looking statements to the extent that it involves a subjective comparison to known SGH case studies. As with other geochemical methods, an implied rating and associated anticipated target characteristics may be different than that actually encountered if the target is drilled tested or the property developed.

Activation Laboratories Ltd. may also make a scientifically based reference in this interpretive report to an area that might be used as a drill target. Usually the nearest sample is identified as an approximation to a "possible drill target" location. This is based only on SGH results and is to be regarded as a guide based on the current state of this science.

Unless otherwise stated, Activation Laboratories Ltd. has not physically observed the exploration site and has no prior knowledge of any site description or details or previous test results. Actlabs makes general recommendations for sampling and shipping of samples. Unless stated, the laboratory does not witness sampling, does not take into consideration the specific sampling procedures used, or factors such as the season of sampling, samples handling, packaging, or shipping methods. The majority of the time, Activation Laboratories Ltd. has had no input into sampling survey design. Where specified Activation Laboratories Ltd. may not have conducted sample preparation procedures as it may have been conducted at the client's assigned laboratory external to Actlabs. Although Actlabs has attempted to identify important factors that could cause actual actions, events or results to differ scientifically which may impact the associated interpretation and target rating from those described in forward-looking statements, there may be other factors that cause actions, events or results that are not anticipated, estimated or intended.

In general, any statements that express or involve discussions with respect to predictions, expectations, beliefs, plans, projections, objectives, assumptions, future events or performance are not statements of historical fact. These "scientifically based educated theories" should be viewed as "forward-looking statements".

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Readers of this interpretive report are cautioned not to place undue reliance on forward-looking information. Forward looking statements are made based on scientific beliefs, estimates and opinions on the date the statements are made and the interpretive report issued. The Company undertakes no obligation to update forward-looking statements or otherwise revise previous reports if these beliefs, estimates and opinions, future scientific developments, other new information, or other circumstances should change that may affect the analytical results, rating, or interpretation.

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SOIL GAS HYDROCARBON (SGH) GEOCHEMISTRY – OVERVIEW

In the search for minerals and elements, geology requires tools to assess the location and potential quantity of minerals and ores. In the past people looked at the landscape to find the deposit. Similar landscapes indicate similar mineral and metal deposits. This is searching on a macro level, while geochemistry is searching on a micro level. Organic material requires many minerals and elements, so organic materials can be biomarker of the present of the minerals and elements.

SGH is a deep penetrating geochemistry that involves the analysis of surficial samples from over potential mineral or petroleum targets. The analysis involves the testing for 162 hydrocarbon compounds in the C5-C17 carbon series range applicable to a wide variety of sample types. The hydrocarbons are residues from the decomposition of bacteria and microbe that feed on the target commodity as they require inorganic metallic's to catalyze the reactions necessary to develop hydrocarbons and grow in their life cycle. Specific classes of hydrocarbons (SGH) have been successful for delineating targets found at over 900 metres in depth. Samples of various media have been successfully analyzed such as soil (any horizon), sand, till, drill core, rock, peat, humus, lake-bottom sediments and even snow. After preparation in the laboratory, the SGH analysis incorporates a very weak leach, essentially aqueous, that only extracts the surficial bound hydrocarbon compounds and those compounds in interstitial spaces around the sample particles. These are the hydrocarbons that have been mobilized from the target depth. SGH is unique and should not be confused with other hydrocarbon tests or traditional analyses that measure C1 (Methane) to C5 (Pentane) or other gases. Thus, in spite of the name, SGH does not analyze for any hydrocarbons that are actually gaseous at room temperature and can be used to analyze for hydrocarbons in sample types other than soil. SGH is also different from soil hydrocarbon tests that thermally extracts or desorbs all of the hydrocarbons from the whole soil sample. This test is less specific as it does not separate the hydrocarbons and thus does not identify or measure the responses as precisely. These tests also do not use a forensic approach to identification. The hydrocarbons in the SGH extract are separated by high resolution capillary column gas chromatography and then detected by mass spectrometry to isolate, confirm, and measure the presence of only the individual hydrocarbons that have been found to be of interest from initial research and development and from performance testing especially from the two Canadian Mining Industry Research Organization (CAMIRO) projects (97E04 and 01E02).

Over the past 15+ years of research, Activation Laboratories Ltd. has developed an in-depth understanding of the unique SGH signatures associated with different commodity targets. Using a forensic approach we have developed target signatures or templates for identification, and the understanding of the expected geochromatography that is exhibited by each class of SGH compounds. In 2004 we began to include an SGH interpretation report delivered with the data to enable our clients to realize the complete value and understanding of the SGH results in the shortest time frame and provide the benefit from past research sponsored by Actlabs, CAMIRO, OMET and other industrial sponsors. In 2011, a new model of Electrochemical/Redox Cell theory was proposed and the new 3D-SGH interpretation approach based on this theory was incorporated in 2012 on a routine basis for SGH interpretation reports.

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SGH has attracted the attention of a large number of Exploration companies. In the above mentioned research projects the sponsors have included (in no order): Western Mining Corporation, BHP-Billiton, Inco, Noranda, Outokumpu, Xstrata, Cameco, Cominco, Rio Algom, Alberta Geological Survey, Ontario Geological Survey, Manitoba Geological Survey and OMET. Further, beyond this research, Activation Laboratories Ltd. has interpreted the SGH data for over 700 targets from clients since January of 2004. In both CAMIRO research projects over known mineralization and in exploration projects over unknown targets, SGH has performed exceptionally well. As an example, in the first CAMIRO research project that commenced in 1997 (Project 97E04), there were 10 study areas that were submitted blindly to Actlabs. These study sites were selected since other inorganic geochemical methods were unsuccessful at illustrating anomalies related to the target.

Although Actlabs was only provided with the samples and their coordinates, SGH was able to locate the blind mineralization with exceptional accuracy in 9 of the 10 surveys. In 2007, SGH has recently been very successful in exploration and discovery of unknown targets e.g. Golden Band Resources drilled an SGH anomaly and discovered a significant vein containing "visible" gold. (www.goldenbandresources.com)

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SOIL GAS HYDROCARBON SURVEY DESIGN AND SAMPLING

Summary: See Appendix C for more details

In summary, the best conditions for the sample type and survey design include:

- Fist sized samples are usually retrieved from a shallow dug hole in the 15 to 40 cm range of depth.
- Different sample types can be taken even "within" the same survey or transect, data leveling is rarely ever required. SGH is highly effective in areas of very difficult terrain. The Golden Rule is to always take a sample.
- Samples should be evenly spaced in a grid or a series of transects with sample lines spaced at a ratio of up to 4:1 (line spacing: sample spacing).
- A minimum of 50 sample "locations" is recommended with one-third over the target and one-third on each side of the target into background if this can be predicted. This provides the opportunity of optimal data contrast.
- If very wet, samples can be drip dried in the field. No special preservation is required for shipping.
- Relative or UTM sample location coordinates are required to allow interpretation.

SAMPLE PREPARATION AND SGH ANALYSIS

Summary: See Appendix D for more details

Upon receipt at Activation Laboratories:

- The samples are air-dried at a relatively low temperature of 40°C.
- The samples are then sieved and the -60 mesh sieve fraction (<250 microns, although different mesh sizes can be used at the preference of the exploration geologist) is collected.
- The collected "pulp" is packaged in a Kraft paper envelope and transported from our sample preparation department to our analytical building also located in the industrial park in Ancaster Ontario.
- Each sample is then extracted, compounds separated by gas chromatography and detected by mass spectrometry at a *Reporting Limit* of one part-per-trillion (ppt).
- The results of the SGH analysis is reported in raw data form in an Excel spreadsheet as "semi-quantitative" concentrations without any additional statistical modification.

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SGH DATA QUALITY

Summary: See Appendix E for more details

Reporting Limit:

- The Excel spreadsheet of concentrations for each of the 162 compounds monitored is in units of ppt as "parts-per-trillion" which is equivalent to nanograms/kilogram (ng/Kg). The reporting limit of 1 ppt represents a value of approximately 5 times the standard deviation of low level analysis. Essentially all background noise has already been eliminated. All data reported should be used in geochemical mapping. Actual detectable levels can be significantly < 1 ppt.

Laboratory Replicate Analysis:

- An equal aliquot of a random sample is analyzed as a laboratory replicate.
- Due to the large amount of data, the estimate of method variability is reported as the percent coefficient of Variation (%CV).
- A laboratory replicate analysis is reported at a frequency of 1 for every 15 samples analyzed.
- The variability of field duplicate samples are similarly reported if identified.

Historical SGH Precision:

- Although the SGH analysis reports results at such trace ppt concentration levels, the average %CV for laboratory replicates is 8% within a range of ±4%.
- Field duplicates have historically been 5% higher than laboratory replicates.

Laboratory Materials Blank (LMB-QA):

- The LMB-QA values are only an early warning as a quality assurance procedure to indicate the relative cleanliness of laboratory glassware, vials, caps, and the laboratory water supply at the ppt concentration level.
- The LMB-QA values should not be subtracted from any SGH data as any background or noise characteristics have already been removed through the use of a Reporting Limit.

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SGH DATA INTERPRETATION

Summary: See Appendix F for more details

SGH Interpretation and Report:

- Due to the very large data set provided by the SGH analysis, this interpretation report is provide to offer guidance in regard to the results of this geochemistry for their survey.
- In our interpretation procedure, we separate the 162 compound results into 19 SGH sub-classes. These classes include specific alkanes, alkenes, Thiophenes, aromatic, and polyaromatic compounds. The concentrations of the individual hydrocarbons within a class are simply summed. None of these compounds are gaseous at room temperature.
- At this time the magnitude of the hydrocarbon class data has not been proven to imply a higher grade or quantity of the mineralization if present.
- A "geochemical anomaly threshold value" should not be calculated for SGH data as any background or noise has already been filtered out through the use of a Reporting Limit instead of some type of detection limit.
- SGH hydrocarbons data should never be interpreted individually. Interpretation must always be by compound class.
- Multiple SGH Classes are compared. Multiple SGH Classes that have been associated with the presence of specific mineralization are called SGH Pathfinder Classes that together represent the forensic signature or fingerprint identification for a specific type of mineralization or petroleum play.
- The anomalies of each class are compared as to their geochromatographic dispersion and ability to vector to a common location that may be referenced as a potential drill target.
- The agreement and behaviour between SGH Pathfinder Classes for a type of target, as a template of Classes, is compared against SGH research and orientation studies. The quality of agreement is expressed as an SGH Rating of confidence that the SGH anomalies of the survey being interpreted are similar to the behaviour of these classes over known mineralization.
- The interpretation is customized for the project survey by the Author. The SGH Rating and Interpretation is thus subjective and based on the experience of close to 1,000 SGH survey interpretations. The interpretation is not conducted by any computerized process.

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SGH CHARACTERISTICS

Summary: See Appendix G for more details

SGH Characteristics:

- The pattern of SGH anomalies are usually of high contrast and easily observed.
- SGH is able to illustrate exceptionally symmetrical anomalies in spite of exotic overburden and barriers such as permafrost, shale and basalt caps, previously thought to be impenetrable.
- Inorganic geochemistry can illustrate anomalies of metals that have been mobilized by surficial physical processes. As SGH is essentially "blind" to the inorganic content of a sample, SGH anomalies illustrate the true source of mineralization.
- AS SGH hydrocarbons are essentially non-polar, highly symmetrical anomalies are observed. As such symmetry is rare this provides a quality control to the interpretation resulting in higher confidence that is reflected by a higher SGH Rating Score in comparison to known case studies.
- SGH can be analyzed on samples collected in different seasons or adjacent years. The combined data rarely require any data leveling.

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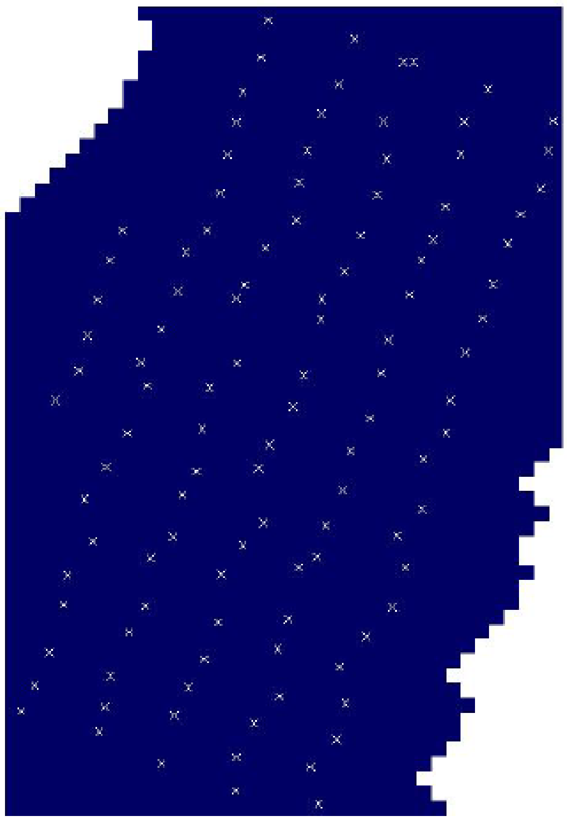
INTERPRETATION OF SGH RESULTS
A14-07256 – DAVE BURDA - KNIGHT TOWNSHIP SGH SOIL SURVEY

This report is based on the SGH results from the analysis of a total of 113 soil samples. The KNIGHT TOWNSHIP SGH Soil Survey Area is described by a rectangular grid with samples spaced at approximately 50 metres along six transects that were 100 metres apart. These samples were collected in September of 2014 and shipped for analysis on September 30th. Analysis was conducted at Actlabs Global Headquarters in Ancaster Ontario Canada. The samples were prepared and then analyzed from October 8th to 9th. Sample coordinates were provided for mapping of the SGH results for these samples in UTM – Zone 17 format. A sample location map is shown below

KNIGHT TOWNSHIP SGH SOIL SURVEY - SAMPLE LOCATION MAP



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GH SURVEY INTERPRETATION
A14-07256 – DAVE BURDA - QUALITY ASSURANCE
KNIGHT TOWNSHIP SGH SOIL SURVEY

Note that the associated SGH results are presented in a separate Excel spreadsheet. This data is semi-quantitative and is presented in units of pg/g or *parts-per-trillion* (ppt) as the concentration of specific hydrocarbons in the sample. The number of samples submitted for this survey is adequate to use SGH as an exploration tool. As SGH is an organic geochemistry it is essentially "blind" to the elemental presence of any inorganic species as actual VMS, gold, silver, uranium, etc. content in the each sample analyzed. SGH has been proven to discriminate between false or mobilized soil anomalies and is able to actually locate the source target deposition. SGH is a deep-penetrating geochemistry and has been proven to locate Copper, Gold, VMS, and other types of mineralization at several hundred metres below the surface irrespective of the type of overburden. Note that the SGH data is only reviewed for the particular target deposit type requested, in this case for the presence of a Gold target. It is assumed that there is only one potential target. If known, in surveys with several complex geophysical targets, to obtain the best interpretation the client should indicate that there are possibly multiple targets. The possibility of multiple geophysical targets should be known due to potential overlap and increased complexity of the resulting geochromatographic anomalies, which could alter the interpretation as to which targets are mineralized or not.

The overall precision of the SGH analysis for the samples at the KNIGHT TOWNSHIP SGH Soil Survey was excellent as demonstrated by 8 different samples taken from this survey which were used for laboratory replicate analysis and were randomized within the analytical run list. The average Coefficient of Variation (%CV) of the replicate results for the survey samples in this submission was **9.6%** which represents an excellent level of analytical performance especially at such low parts-per-trillion concentrations.

Two **Field Duplicate samples were identified in the KNIGHT TOWNSHIP SGH Soil Survey.** The average Coefficient of Variation (%CV) of the replicate results for these field duplicate samples was **7.9%** which represents an excellent level of survey performance. It is typically observed that the variability of field duplicates are 5% to 8% CV higher than for laboratory duplicates of random samples taken from the survey. The fact that the %CV for field duplicates is so close to laboratory replicates is largely due to the very high specificity of the SGH geochemical method that only targets relatively rare hydrocarbons that have been proven to be associated with the decomposition of bacterial that have been in proximity to the target mineralization at depth. Note that the SGH geochemistry does not detect all organic hydrocarbons present in the samples. No other statistics were used on the data for this report for mapping or interpretation purposes aside from the use of a Kriging trending algorithm in the GeoSoft Oasis Montaj mapping software. **This interpretation is based only on the analytical results provided by the SGH Nano-Geochemistry from this submission of samples for the KNIGHT TOWNSHIP SGH Soil Survey.** A template or group of SGH Pathfinder Classes that have been found to be associated with buried Gold targets was used as the basis for the interpretation of the KNIGHT TOWNSHIP SGH Soil Survey. The final interpretation is customized and conducted by the author. Although the term "template" or "signature" often appears in an SGH Interpretation Report, a computerized interpretation is not used.

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A14-07256 – DAVE BURDA - KNIGHT TOWNSHIP SGH SOIL SURVEY SGH INTERPRETATION - SGH TARGET PATHFINDER CLASS MAPS

The maps shown in plan and in 3D views in this report are SGH "Pathfinder Class maps" for targeting various chemical classes of hydrocarbon flux signatures related to Redox conditions and for Gold and Copper type targets. The maps shown represent the simple summation of several individual hydrocarbon compound concentrations that are grouped from within the same organic chemical class. SGH Pathfinder Class maps have been shown to be robust as they are each described using from 4 to 14 chemically related SGH compounds (unless otherwise stated) which are simply summed to create each chemical class map. Thus each map has a higher level of confidence as it is not illustrating just one compound measurement. A legend of the compound classes appears at the bottom of the SGH data spreadsheet.

The Copper template of SGH Pathfinder Classes uses low molecular weight classes of hydrocarbons while the Gold template of SGH Pathfinder Classes uses primarily low and medium molecular weight classes of hydrocarbon compounds. At least three Pathfinder Class maps, associated with the SGH signature developed for Copper and/or Gold must be present to begin to be considered for assignment of a good rating relative to the SGH performance in case studies over known Copper or Gold type mineralization (Some of these maps might not be shown in this report). These SGH classes must also concur and support a consistent interpretation in relation to the expected geochromatographic characteristics of the Pathfinder Class. The *overall* SGH interpretation Rating has even a higher level of confidence as it further implies the consensus between at least the three pathfinder classes. A combination of these SGH Pathfinder Classes potentially defines the signature of a target at depth if present. Each of the SGH Pathfinder Class maps shown in this report is a specific *portion* of the SGH signature relative to the presence of Gold as described. Each pathfinder class map is still just one of the Pathfinder Class maps used in the interpretation template for Copper or for Gold. Additional interpretation information which may contain additional SGH Pathfinder Class maps is available as a Supplementary Report at an additional price (see Appendix H).

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A14-07256 – DAVE BURDA - KNIGHT TOWNSHIP SGH SOIL SURVEY SGH INTERPRETATION - SGH TARGET PATHFINDER CLASS MAPS

Note that any concentration value in the accompanying Excel spreadsheet greater than the "Reporting Limit" of 1 ppt is important data and has been able to depict mineralization at depth. The majority of the variability or noise has already been eliminated; additional filtering will adversely affect any interpretation. Note again that a Kriging trending algorithm has been applied to the mapping routine in the Geosoft Oasis Montaj software in the development of the SGH Class maps. SGH concentrations are in some way probably related to the amount of mineralization present and the grade of mineralization, which probably defines the characteristics of the biofilm(s) in contact with the deposit, as well as being related to the depth to mineralization. SGH results have also been shown to correlate well with geophysical measurements such as magnetic anomalies and those of CSAMT.

The SGH Class maps are the plot of the sums of the particular hydrocarbon class in parts-per-trillion concentration. The dark blue represents very low or non-detect values. For plotting purposes the values at the Reporting Limit are plotted as one-half of this filtering, or one-half of 1.0 ppt. The hotter colours represent higher concentrations of the sum of the class with the highest values being purple in colour.

SGH is a "deep penetrating" geochemistry but also works well for relatively shallow targets. Targets shallower than about 3 to 5 metres will have a reduced SGH signal due to interaction with atmospheric conditions and samples taken right at surface outcrops will have even weaker signals due to a higher degree of weathering from various environmental processes on these volatile and semi-volatile organic hydrocarbons.

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A14-07256 – DAVE BURDA - KNIGHT TOWNSHIP SGH SOIL SURVEY SGH INTERPRETATION RATING AND CLARIFICATION

Often a geochemistry such as SGH is used as an economical exploration investigation tool to provide more information on an exploration target as some geological body or help prioritize some geophysical target. Such occurrences are in general expected to change the chemistry of the immediate overburden which in turn is expected to result in a chemical anomaly as detected in surficial samples. The author believes that it is important to convey to the client of an anomaly even if there is only part of the SGH signature present that may be related to the mineral signature or template requested. In other words, the anomaly illustrated in the report may not be representative of the mineralization sought as only a part of the SGH signature is present, but the anomaly may confirm the presence of some geological or geophysical target which may be valuable to the client for comparison with other data. In addition it would confirm the ability and sensitivity of SGH to show geological or geophysical occurrences. Example: A well defined rabbit-ear anomaly on an SGH Pathfinder Class map in a report, even though it may have a lower rating of 2.0 or 3.0, may illustrate to the exploration geologist that SGH does agree that there is some geological body at depth that is changing the chemistry and forming a Redox cell in the overburden. However the SGH forensic signature Rating indicates that there is a lower confidence that the "identification" of that body is likely to be say Gold (if the SGH Gold template is requested). This information would provide a confirmation that a target does exist, however if the SGH Rating indicates that the target has a lower level of confidence then the target does not have the forensic signature of the mineralization sought. SGH would thus provide a savings to the exploration program and divert focus to potentially other targets having a higher confidence in the SGH identification Rating.

Thus, the SGH rating must always be considered in conjunction with the SGH Pathfinder Class map shown in the report. It is this rating that provides an insight into the authors' complete interpretation and is a measure of the confidence and to what degree the complete SGH signature compares with the SGH results from over case studies of similar known deposits. Unfortunately, the interpretation of a visual, as the SGH map provided, is so ingrained in humans that the reader may erroneously disregard the author's subjective rating to a large degree. As of November 25, 2011, the author now highlights the rating directly on the page having the plan view of the SGH Pathfinder Class map chosen to be illustrated. Thus to the reader of the report, the authors Rating is actually **MORE IMPORTANT** than the readers instinctive interpretation of just the one map provided. Again, SGH should not be used in isolation from other site information, and that a Rating of 4.0 is when, in the authors' estimation, a signature only starts to have a good identification relative to that type of mineralization, and that the survey may warrant further study although it is not a specific recommendation to drill test the anomaly. As the SGH interpretation is represented by a signature, the SGH Pathfinder Class map(s) illustrated in reports is always only "PART" of the specific SGH signature or template that the client requests (i.e. for Gold, etc.). No one SGH map can represent the complete signature due to the different amounts of spatial dispersion expected for the variety of SGH chemical classes within each signature. Thus the author selects the one SGH Class Map relative to the mineralization requested that best represents an anomaly that estimates the overall signature found in the survey.

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A14-07256 – DAVE BURDA - KNIGHT TOWNSHIP SGH SOIL SURVEY
SGH "REDOX" INTERPRETATION

As a general comment in regard to the SGH results at this KNIGHT TOWNSHIP SGH Soil Survey, the SGH data in general had a moderate signal strength and the SGH Class maps in this report are fairly good in contrast. It is important to not think of contrast with SGH as Signal:Noise as by using a reporting limit the noise has already been nearly completely removed.

One of the first steps in the interpretation of SGH data is to locate potential Redox conditions in the overburden. Redox conditions have been well known to be related to blind mineral targets; however, Redox conditions can also be attributed to other geological bodies that are of no particular interest. SGH signatures are able to differentiate between these targets. SGH has been described by the Ontario Geological Survey of Canada (OGS) as a "Redox Cell locator". Redox Cells can be related to the presence of bacteriological activity related to mineralization but also may be related to the presence of geological bodies such as Granite Gneiss, Dunite, etc. Recently SGH has been shown to be far more sensitive to depicting Redox conditions than even measurements using pH or ORP tests. It is important to understand that; not only is SGH a Redox cell locator, but due to the forensic signature of mineralization used in the interpretation process, SGH can discriminate mineral targets and other target types from geological bodies, other magnetically detected targets, mineralized versus non-mineralized conductors, cultural effects, etc. even in surveys over highly difficult or exotic terrain that often requires the collection of multiple sample types. In the interpretation it is not necessary to detect a Redox cell if mineralization is within approximately 20 metres of the surface as this would be insufficient depth to develop a dispersion halo anomaly.

Many SGH surveys for Gold, and other mineral targets can result in multiple types of anomalies, depending on the class of SGH compounds, even over the same target and in the same set of samples. Thus "Apical", "Segmented-Nested-Halo", and "Rabbit-Ear" or "Segmented Halo" type anomalies are all typically observed within the SGH data set from the effect of Redox cells that have developed over mineralization and their interaction with Redox conditions and the electromotive forces produced by the subsequent Electrochemical Cell. Different types of anomalies have also been associated with the depth to the target. The types of anomalies developed have been recently explained by the use of the 3D-SGH model of interpretation. The highly symmetrical anomalies illustrated by SGH data closely follow the expected self-organizing patterns of neutral species within an electrochemical cell in recent experiments in physics Laboratories. The highly symmetrical anomalies are also able to be observed as the Nano-sized dimensions of these organic hydrocarbons are much smaller than inorganic oxides and sulphides. Thus the SGH hydrocarbons can migrate through the Nano-sized fissures of even clay, basalt, and permafrost caps by means of Nano-capillary action. The simple fact that the SGH anomalies are geometrically symmetrical and not random further improves the confidence of SGH interpretations.

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A14-07256 – DAVE BURDA - KNIGHT TOWNSHIP SGH SOIL SURVEY SGH "GOLD" INTERPRETATION

This report illustrates an SGH Gold Pathfinder Class map on page 23 in plan view and on page 24 in 3D view that has been very reliable in its association with the presence of Gold mineralization. This SGH Class map is only a portion of the SGH Gold signature used in the interpretation. There is not any one SGH Class map that can, as a single map, be reliably used to interpret the presence of Gold or any other type of mineralization. It should also be noted that some SGH Classes can be used as a portion of other SGH mineral signatures, i.e. some portions of SGH signatures overlap in their use.

The SGH Gold Pathfinder Classes are often expected to illustrate an apical response as a vertical projection over mineralization at the shallowest part of the structure if it is within approx. 50-100 metres of surface. Although the map on page 24 is only based on one hydrocarbon response, it is the most representative of the full SGH signature relative to Gold. This SGH Pathfinder map for Gold best illustrates the slightly bent North-South trend comprised of undulating anomalies. As best observed in the 3D map on page 24, the SGH data may indicate pods or pinched out regions of Gold mineralization along this trend. The SGH hydrocarbon signatures are predicted to be associated with Gold targets as the detection of those hydrocarbon residues produced by the decomposition of microbes and bacteria from the life cycle death phase that have been feeding on Gold mineralization. These residues have subsequently migrated to the surface as a flux of different classes of hydrocarbons or decomposition products. During migration to the surface, dispersion away from the mineralization is expected. The distance of dispersion is dependent on the principle of geochromatography that is in generally related to the average molecular weight of the class. It has been found that the complexity of the overburden does not affect the geochromatographic dispersion of the SGH classes of this Nano-Geochemistry, unless a situation is encountered such as that of a "major" fault that may result is a very slight deflection of this path. This is the basis of the 3D-SGH interpretation as the relatively neutral hydrocarbons that SGH detects are spatially observed as very symmetrical anomalies (as presented by the author at the IAGS conference in Finland in 2011 and further at the IAGS conference in New Zealand in November of 2013).

The SGH Class map illustrated in plan view on page 23 and in 3D view on page 24 are diagnostic for depicting Gold mineralization. This map illustrates apical anomalies that are expected to be related to relatively shallow mineralization. The few other anomalies around the edges of the map on page 23 are mostly single sample anomalies. These anomalies are not interpreted due to the lack of neighbouring sample data. <u>A dotted yellow interpretation outline is placed just outside of the anomalies in the SGH Gold Pathfinder Class map on page 23 that illustrates the bent northerly trending zone of possible Gold mineralization</u>. The 3D view of this map appears on page 24 illustrates the undulating apical anomalous trend which might be showing the vertical location of Gold pods.

Again, as signals or anomalies due to "noise" from any analytical, sample preparation, or sampling procedure have been removed through the use of the Reporting Limit filter, any SGH anomaly on this Pathfinder Class Map has a high probability of illustrating a real feature.

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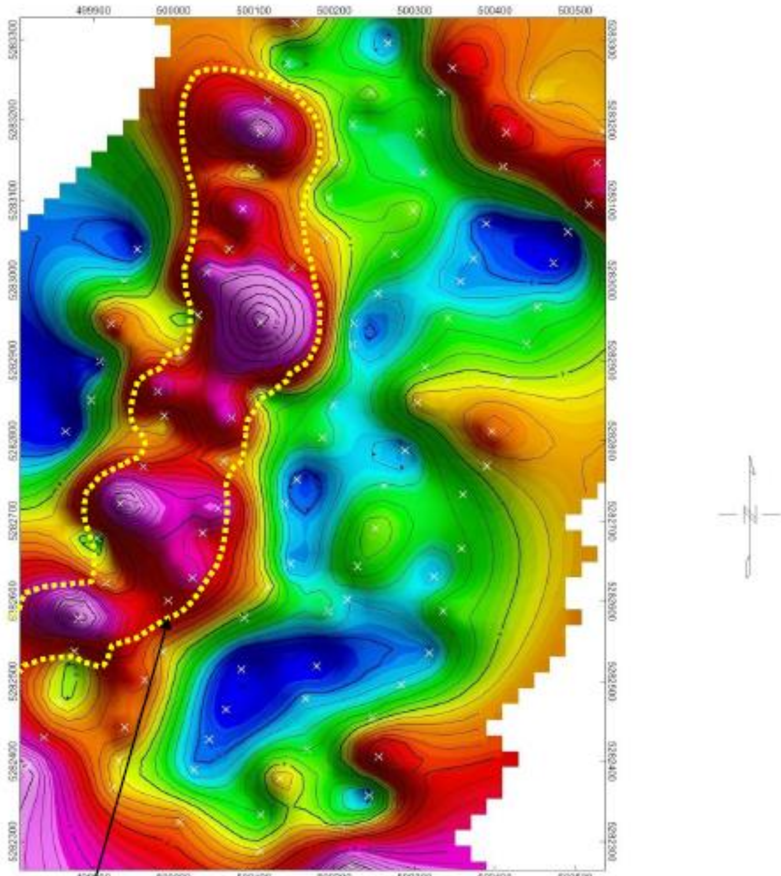
A14-07256 – DAVE BURDA - KNIGHT TOWNSHIP SGH SOIL SURVEY - SGH "GOLD" PATHFINDER CLASS



GOLD ZONE DETECTED BY SGH WITHIN DOTTED YELLOW OUTLINE

SGH SIGNATURE RATING RELATIVE TO "GOLD" = 5.0 OF 6.0

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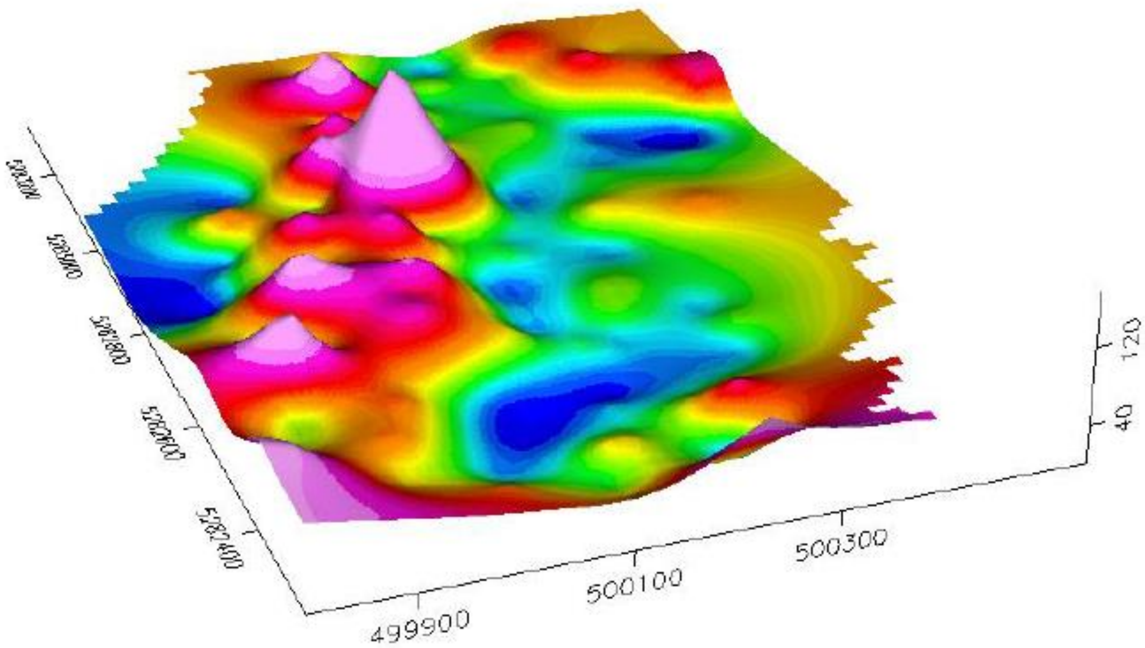
A14-07256 – DAVE BURDA - KNIGHT TOWNSHIP SGH SOIL SURVEY
SGH "GOLD" PATHFINDER CLASS



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A14-07256 – DAVE BURDA - KNIGHT TOWNSHIP SGH SOIL SURVEY SGH "COPPER" INTERPRETATION

The SGH Class map illustrated in plan view on page 26 and in 3D view on page 27 is a portion of the SGH signature for Copper mineralization. The plan map on page 26 appears to illustrate a northeasterly trending apical anomalous zone within the dotted black outline. This zone flanks and partially overlaps the SGH Gold anomaly shown on page 23. The SGH Gold interpretation from the plan view map on page 23 is also shown on page 26 for reference.

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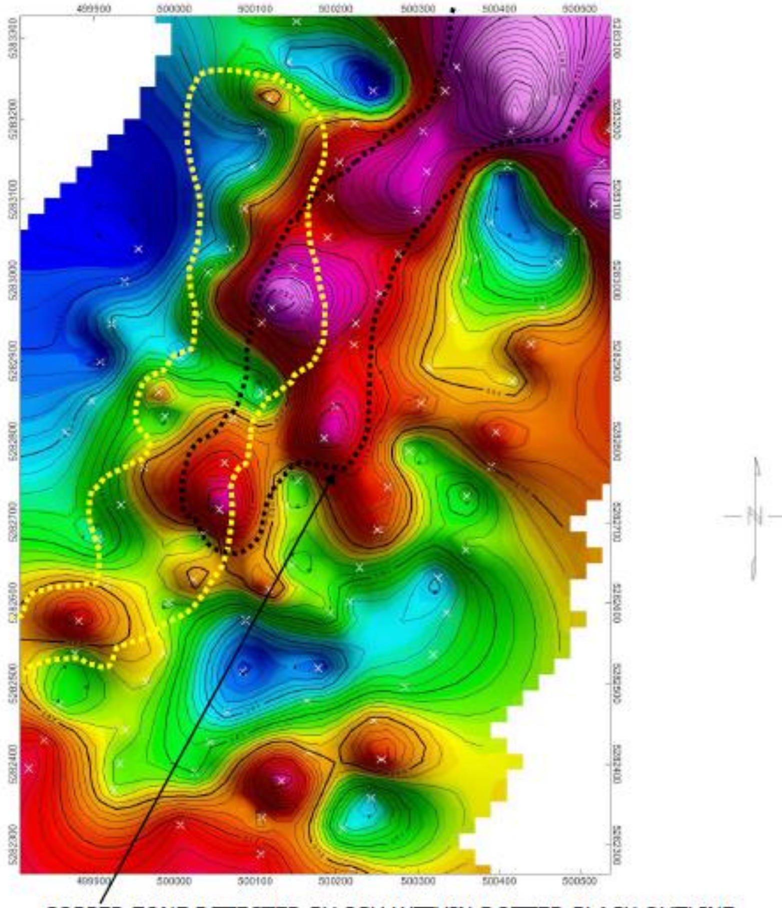

COPPER ZONE DETECTED BY SGH WITHIN DOTTED BLACK OUTLINE

SGH SIGNATURE RATING RELATIVE TO "COPPER" = 4.5 OF 6.0

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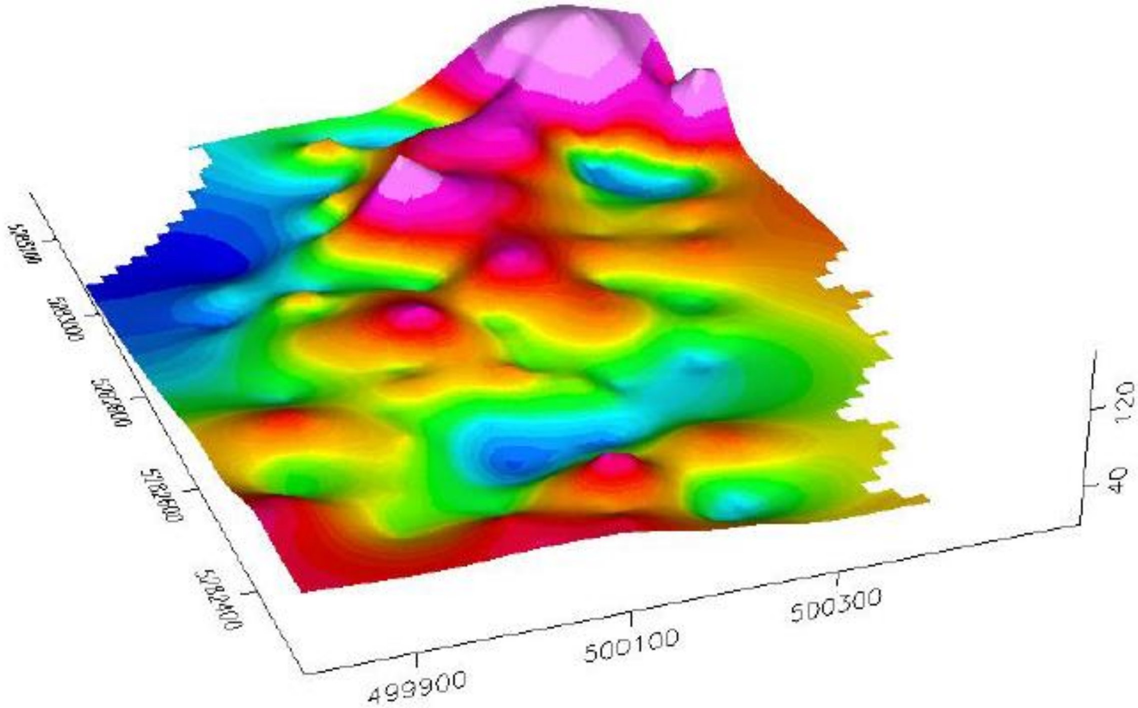
SGH "GOLD" PATHFINDER CLASS



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A14-07256 – DAVE BURDA - KNIGHT TOWNSHIP SGH SOIL SURVEY SGH "REDOX" INTERPRETATION

The SGH Class maps relative to Gold and Copper illustrated in this report are indicative of a relatively shallow depth to mineralization (approx. <50 metres). In support of this, there was no strong location of Redox conditions found which is usually associated in SGH with deeper mineralization.

As shown by the interpretations in other non-related reports the SGH results can become quite complex when mineralization appears to be showing anomalies from a variety of depths.

As a reminder, in the interpretation of SGH data there are several goals. In order of importance they are:

- Vector to the location of a mineral target
- Delineate the mineral target
- Identify the type of mineral target
- Describe the features of the possible mineral target
- See if there is information on the basement structure
- Predict the possible depth to the mineral target

Not every goal is expected to be able to be achieved with each SGH data set.

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A14-07256 – DAVE BURDA - KNIGHT TOWNSHIP SGH SOIL SURVEY SGH INTERPRETATION FOR "GOLD AND COPPER" MINERALIZATION

The interpretation of the SGH data relative to the presence of Gold and Copper mineralization at the Dave Burda KNIGHT TOWNSHIP SGH Soil Survey is described by what appears to be the presence of a bent North-South trending apical anomaly potentially indicating Gold mineralization at a relatively shallow depth as pods that may be pinched out in a Gold mineralized vein (perhaps at a depth in the neighbourhood of 10 to 50 metres) that flanks and partially overlaps an SGH Copper signature as a more northeasterly trending zone in the north half of the survey. This zone would also possibly be from mineralization that is at a shallow depth vein (again perhaps at a depth in the neighbourhood of 10 to 50 metres) in the KNIGHT TOWNSHIP survey.

NOTE: The depths to mineralization estimates are very approximate and are a result of the development of the 3D-SGH interpretation process that recognizes the importance of symmetrical anomalies. Such estimates cannot be calibrated except from the responses from those SGH clients that have offered feedback from actual drilling results or prior site knowledge. The feedback obtained regarding depth since the use of 3D-SGH has been quite encouraging. SGH is the only geochemistry to our knowledge that is able to make some statement with regards to the depth to blind mineralization.

The SGH Ratings shown in this and all SGH reports are based on a scale of 6.0, in 0.5 increments, with a value of 6.0 being the best. The SGH Ratings discussed in relation to Gold represents the similarity of these SGH results with other SGH case studies over known mineralization. Theses SGH signatures or templates have been constantly refined and enhanced since inception and has been proven to be effective and reliable. The SGH templates are based on the interpretation from over 1,000 interpretations for many other surveys in many different geographical regions and for a wide variety of lithologies. The degree of confidence in the SGH Rating only starts to be "good" at a level of 4.0. A Rating of 4.0 is an indication that this SGH Nano-Geochemistry predicts that the zone(s) described may warrant more work or more consideration.

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A14-07256 – DAVE BURDA-KNIGHT TOWNSHIP SGH SOIL SURVEY SGH INTERPRETATION FOR MINERALIZATION

As seen in other projects, deeper mineralization is often expected to be centrally located within Redox zones. In areas predicted to have shallower mineralization, as at the Knight Township survey, the SGH anomalies are very reliable at showing vertical projections of mineralization and thus directly illustrating the location of possible drill targets. From client feedback in recent years, a few grass roots exploration surveys that have been interpreted with an SGH Confidence Rating of 4.0 (±0.5) have been drill tested and have had successful Gold intersections. However the frequency of success is much more prevalent for those targets that have had an associated SGH Rating Scores of ≥5.0.

The apical anomalies as possible mineralized pods would be possible drill targets for consideration at the Knight Township survey. The suggestion or specific identification of a drill target is not an explicit recommendation by Activation Laboratories Ltd. to drill test the associated location or SGH anomaly. A drill target is implied to ensure that the reader is aware of the location having the highest confidence of being the location of the vertical projection of possibly the location of the nearest structure of mineralization to the surface, based only on SGH data. This is also not a recommendation for vertical drilling. Vertical drilling may not be the best approach to test the SGH anomaly in this area. Activation Laboratories Ltd. has no experience in actual exploration drilling techniques. Other geological, geochemical and/or geophysical information should also be considered.

It must be remembered that other SGH Class maps not shown in this report have also been reviewed to support the interpretation shown. To deduce the most scientifically sound interpretation of the KNIGHT TOWNSHIP survey, the client should use a combination of the SGH results shown in this report with additional geochemical, geophysical, and geological information to possibly obtain a more confident and precise target location. This is not a statement to convey some lower level of confidence in SGH results. This statement is made to recognize the proper use and interpretation of any scientific data. Whenever possible, multiple methods should always be employed so that any decisions do not rely on any one technique.

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A14-07256 – DAVE BURDA - KNIGHT TOWNSHIP SGH SOIL SURVEY SGH SURVEY RECOMMENDATIONS

The sample survey design using 50 metre sample spacing in 6 transects at 100 metre spacing was appropriate and nicely illustrated the possible Copper and Gold features at the KNIGHT TOWNSHIP SGH survey. Based on these results it is doubtful that a higher resolution grid from any infill samples would provide any significant or additional detail using SGH. Infill sampling should probably only be considered as an economical way to obtain more accuracy to provide more precise drill targets if needed. The highest resolution recommended for use with SGH is 25 metre spacing.

Any additional infill sampling may be added to the current SGH data and interpretation, even if sampled at a later time, and may provide information greater accuracy for shallow targets and may provide more detail that may lead to the observation of more symmetry of deeper targets as a segmented anomaly reflecting Redox conditions in the overburden in a 3D-SGH interpretation process. This would further improve confidence in the interpretation. Should additional sampling be considered, please refer to the general recommendations for additional or in-fill sampling for SGH in the next paragraph of this report.

GENERAL RECOMMENDATIONS FOR ADDITIONAL OR IN-FILL SAMPLING FOR SGH ANALYSIS

Based on the results of this report and/or other information, the client may decide that in-fill sampling may be warranted. To obtain the best results from additional sampling for SGH it is recommended that sample locations from the original survey within, or bordering, the area of interest be re-sampled rather than just combining new sample results with the sample data from the initial survey. Although several SGH surveys have previously been easily and directly, combined without data leveling, it cannot be guaranteed that data leveling will not be required. It has been found that data leveling is more apt to be required should the new samples be collected under significantly different environmental conditions than during the initial sample survey, i.e. summer collection versus winter collection. The process of data leveling adds a minimum of 3 to 5 days of work to conduct the additional data evaluation, develop additional plots of the results, conduct new interpretations, and in additional report descriptions. Results from data leveling is also always considered "an approximation", thus the confidence in a combined interpretation will be lower that the interpretation from samples collected during one excursion to the field and submitted as one survey. An additional cost will be invoiced should data leveling operations be required if the client requests that two SGH data sets be interpreted and reported together. Thus re-sampling a few of the original sample locations will provide a faster turnaround time for results and provide more accurate and confident surveys for evaluation and aid in deciding specific drill targets.

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Date Received at Actlabs Ancaster: October 2, 2014

Date Analyzed: October 8-9, 2014

Interpretation Report: November 7, 2014

Dave Burda

50 Pheasant Run Dr.

Nepean, Ontario K2J 2R4

Attention: Mr. Dave Burda

RE: Your Reference: **KNIGHT TOWNSHIP SGH SOIL SURVEY**

Activation Laboratories Workorder: A14-07256

CERTIFICATE OF ANALYSIS

This Certificate applies to the associated Excel Spreadsheet of Hydrocarbon results combined with the discussion and SGH Pathfinder Class maps of the data shown in this report.

113 Samples were analyzed for this submission.

Sample preparation –Actlabs Ancaster - S4: Drying at 40°C and Sieving with -80 mesh collected

Interpretation relative to Copper and Gold targets was requested.

The following analytical package was requested and analyzed at Actlabs Ancaster Canada:

Analysis Code SGH – Soil Gas Hydrocarbon Geochemistry using High Resolution Gas Chromatography/Mass Spectrometry (HRGC/MS)

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REPORT/WORKORDER: A14-07256

This report may be reproduced without our consent. If only selected portions of the report are reproduced, permission must be obtained. If no instructions were given at the time of sample submittal regarding excess material, it will be discarded within 90 days of this report. Our liability is limited solely to the analytical cost of these analyses. Test results are representative only of the material submitted for analysis.

Notes: The SGH – Soil Gas Hydrocarbon Geochemistry is a semi-quantitative analytical procedure to detect and measure 162 hydrocarbon compounds as the organic signature in the sample material collected from a survey area. It is not an assay of mineralization but is a predictive geochemical tool used for exploration. This certificate pertains only to the SGH data presented in the associated Microsoft Excel spreadsheet of results.

The author of this SGH Interpretation Report, Mr. Dale Sutherland, is the creKnight Townshipr of the SGH and OSG organic geochemical methods. He is a Chartered Chemist (C.Chem.) and Forensic Scientist specializing in organic chemistry. He is a member of the Association of the Chemical Profession of Ontario, the Association of Applied Geochemists, the International Association of GeoChemistry, the Ontario Prospectors Association, the Association for Mineral Exploration British Columbia, the Geochemical Society Association, the Ontario Petroleum institute, the Chemical Institute of Canada, and the Canadian Society for Chemistry, as well as having memberships in several national and international Forensic associations. He is not a professional geologist.

CERTIFIED BY:

Dale Sutherland, B.Sc.,B.Sc.,B.Ed.,C.Chem.,MCIC
Forensic Scientist, Organics Manager,
Director of Research
Activation Laboratories Ltd.

ASSOCIATION OF THE CHEMICAL PROFESSION OF ONTARIO
CHARTERED
Dale A. Sutherland
CHEMIST

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APPENDIX "A"

List of terms

1. **SGH** – "SOIL GAS HYDROCARBON" GEOCHEMISTRY – a Predictive Geochemistry, used for delineate buried inorganic mineral deposits and organic petroleum plays. This is the original name used to describe this geochemistry since inception in 1996. Code SGH is still used when submitting samples.
2. **3D-SGH**- "3D- SPATIAL TEMPORAL GEOCHEMICAL HYDROCARBONS - the method of interpreting SGH and OSG results based on the Redox/Electrochemical Cell model developed by Activation Laboratories Ltd. in 2011.
3. **Redox cell**- an area of oxidation-reduction reactions or exchange of electrons that is produced over geological bodies, mineralization and petroleum based plays.
4. **Electrochemical cell**- the effect of adjacent chemically reduced areas and chemically oxidized areas as a Redox cell produces a electrical gradient that obeys the physics of a typical Electrochemical cell.
5. **Anthropogenic contamination**- the introduction of impurities/compounds of the same type as those that are being analyzed by human actions that could lead to erroneous results.
6. **Background areas**- the area around a mineral deposit that is beyond the effect of the Redox cell formed over geological bodies or exploration targets. Sampling is required into background areas to produce data that has sufficient contrast to illustrate and differentiate anomalies associated with exploration targets.
7. **Background subtracted**- A sample taken some distances away as to not contain any elements of the target being analyzed.
8. **Biofilm**- a layer of microorganisms and microbe and their related secretions and decomposition products, in this case found to inhabit mineral deposits .
9. **Biomarker**- a compound used as an indicKnight Townshipr of a biological state. In this case a biological substance used to indicate the presence of a mineral deposit.
10. **Blind mineralization** – buried mineralization that shows no physical indication of its existence at the surface
11. **Compound** – used synonymously with the term hydrocarbon in this report
12. **Compound chemical class** – a group of hydrocarbons that are similar in size, structure, and molecular weight such that their chemical characteristics, such as water solubility, partition coefficients, vapour pressures, etc. are similar
13. **Cultural activities** – human initiated processes that may affect the physical and chemical characteristics at the earth's surface
14. **Delineating targets**- indicate the position or outlines of an exploration target as a vertical projection of the target at depth.
15. **Geochemical anomalies** – inorganic element or organic hydrocarbon measurements that are significantly different than the average low level measurements or background in a survey i.e. the needle in a haystack is an anomaly

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16. **Dispersion patterns** – the movement/ spreading of something. In this context the spatial arrangements of hydrocarbons caused by their movements to the surface from some depth.
17. **Exploration tool** – a geological, geophysical or geochemical method that attempts to illustrate data in exploration activities that may indicate the presence of mineralization or petroleum plays.
18. **Fit for purpose**- this method is ideal for its intended use.
19. **Forensic signature**- a grouping or pattern found to identify a substance having multiple characteristics with a high degree of specificity.
20. **High specificity**- as in being very specific to the mineralization.
21. **Anomalies**- this is the spatial representation of data that illustrates a high or low response as well as the combined spatial shape of anomalous data from several neighbouring samples in a survey that can form anomalies described as Rabbit-Ear, Halo, Segmented-halo, nested-halo, etc.
22. **Inorganic geochemistry** – the measurement of inorganic elements in a survey of near surface samples as a tool for exploration
23. **Data leveling** – a technique that attempts to normalize the data sets obtained between two or more sampling programs. The results of data leveling is always considered as an approximation.
24. **Lithologies**- the characteristics and classifications of rock.
25. **Locations**- the physical/ geographical position or coordinates of samples in a survey.
26. **Noise**- interference in a measurement which is independent of the data signal.
27. **Nugget effect**- Anomalously high precious metal assays resulting from the analysis of samples that may not adequately represent the composition of the bulk material tested due to non-uniform distribution of high-grade nuggets in the material to be sampled. (Webster's online dictionary)
28. **Organic geochemistry**- the Soil Gas Hydrocarbon geochemistry (SGH), or now more accurately named as Spatiotemporal Geochemical Hydrocarbons, is the analysis to detect specific organic, or carbon based, hydrocarbon compounds in a sample. The Organo-Sulphur Geochemistry (OSG) is the analysis to detect specific organic compounds that have sulphur joined to carbon in its molecular structure.
29. **Percent Coefficient of Variation (%CV)** – a measure of data variability
30. **Project maintenance** – an activity where the associated cost is applied to the exploration, advancement, and/or operation of activities associated with a particular claim
31. **Rating**- a value given to the overall confidence in the SGH results
32. **Real (in relation to data)**- any rational or irrational number
33. **Reporting Limit** – minimum concentration of an analyte that can be accurately measured for a given analytical method.
34. **Sample matrix**- the components of a sample other than the analyte.
35. **Sample type** – soil, till, humus, lake bottom sediment, sand, snow, etc.
36. **Semi-quantitative**- yielding an approximation of the quantity or amount of a substance
37. **SGH anomalies** ("Apical", "Nested-Halo", and "Rabbit-Ear" or "Halo")
38. **SGH Pathfinder** (class map/compounds)

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39. **SGH template** – a set of hydrocarbon classes that together form a geochemical signature that has been associated with the presence of a particular type of mineralization the majority of the time
40. **Surficial bound hydrocarbons** –
41. **Surficial samples**- a sample from near the earth's surface.
42. **Survey**- the area, position, or boundaries of a region to be analyzed, as set out by the client.
43. **Project**- a planned undertaking
44. **Transect**- A straight line or narrow section through an object or across a section of land.
45. **Target**- Target refers to the ore body of interest
    Target signature: the unique characteristics that identify the target.
    Target type:
    i.e. Gold, Nickel, Copper, Uranium, SEDEX, VMS, Lithium Pegmatites, IOCG, Silver, Ni-Cu-PGE, Tungsten, Polymetallic, Kimberlite as well as Coal, Oil and Gas.
46. **Threshold**- level or point at which data is accepted as significant or true.
47. **Total measurement error**- An estimate of the error in a measurement. Based on either limitation of the measuring instruments or from statistical fluctuations in the quantity being measured.
48. **Visible (in terms of signature)**- the portion shown in a chart or map

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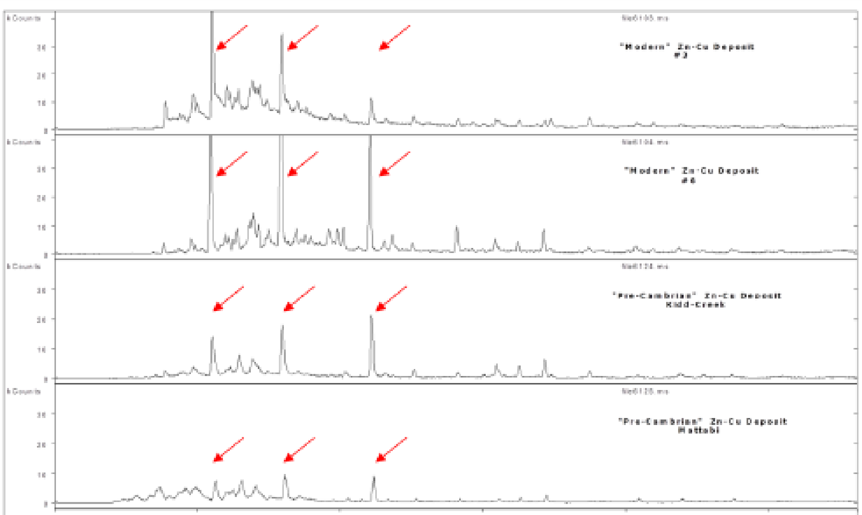
APPENDIX "B"

EXAMPLE OF AN SGH FORENSIC GEOCHEMICAL SIGNATURE EXAMPLE SHOWN FOR A VMS TARGET

The following analyses examine the Volcanic Massive Sulphide (VMS) deposit in various known locations. These analyses show how the gas chromatography indicates the reality of deposits. For all the profiles in this section, the red arrows indicate the signature of the VMS, which have all been found by organic geochemistry. These forensic geochemical signatures are shown to be consistent for similar target areas; therefore, the analyses are reliable indicators for the presence of VMS.

One of the first experiments in 1996 in the development of the SGH analysis was to observe if an SGH response could be obtained directly from an ore sample. From office shelf specimens, small rock chips were obtained which were then crushed and milled. The fine pulp obtained was then subjected to the SGH analysis. These shelf specimen samples were from well known VMS deposits of the Mattabi deposit from the Archean Sturgeon Lake Camp in Northwestern Ontario and from the Kidd Creek Archean volcanic-hosted copper-zinc deposit. Even these specimen samples contain a geochemical record of the hydrocarbons produced by the bacteria that had been feeding on these deposits at depth. As a comparison, SGH analysis were similarly conducted on modern-day VMS ore samples taken from a "black smoker" hydrothermal volcanic vent from the deep sea bed of the Juan de Fuca Ridge where high concentrations of microbial growth was also known to exist. The raw data profiles as GC/MS Total Ion Chromatograms are shown below to illustrate the *"visible"* portion of the VMS signature obtained from the SGH analysis.



The above profiles are:

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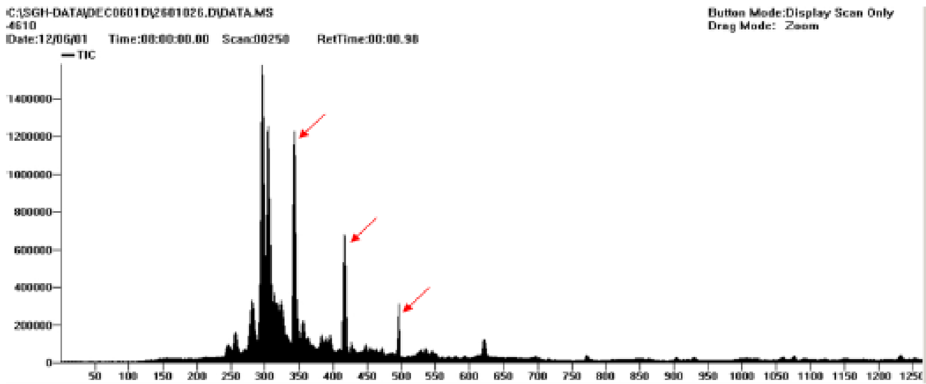
- First profile: Samples from modern day "black smokers"
- Second profile: Samples from modern day "black smokers"
- Third profile: Samples from Pre-Cambrian Zn-Cu Kidd Creek deposit
- Fourth profile: Samples from Mattabi deposit

The red arrows point to three compounds that are a *portion* of the SGH signature for VMS type deposits. This visible portion of the VMS signature of hydrocarbons can easily be seen in the analysis of each of these four samples.

The next question in our early objectives was to see if this SGH signature could also be observed in *surficial soil samples* that had been taken over VMS deposits. Through our research projects, soil samples were obtained from over the Ruttan Cu-Zn VMS deposit near Leaf Rapids, Manitoba and located in the Paleoproterozoic Rusty Lake greenstone belt. The profile obtained, as observed in the raw GC/MS chromatogram, is shown in this next image below:



The three compounds indicated by the red arrows represent the same *visible portion* of the VMS signature observed from the modern day black smoker samples and the ore samples taken from the Mattabi and Kidd Creek, even though this soil was taken from over a different VMS deposit in a geographically different area. Is this coincidence?

Another soil sample was obtained from Noranda's Gilmour South base-metal occurrence in the Bathurst Mining camp in northern New Brunswick. As shown below, this sample contained a very complex SGH signature, however the visible portion of the VMS signature as indicated by the red arrows is still observed as in the black smoker, Mattabi and Kidd Creek ore samples.

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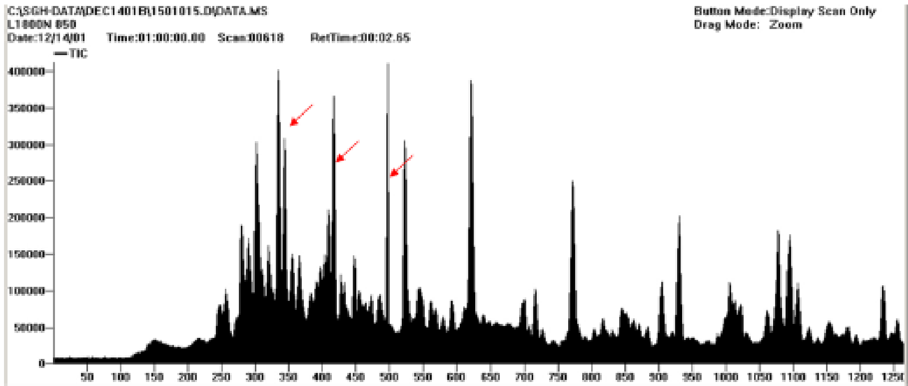

In research conducted by the Ontario Geological Survey, this same portion of the SGH signature was also observed over the VMS deposit at Cross Lake in Ontario. **Note that the visible signature shown as the three compounds indicated by the red arrows is only a small portion of the complete SGH VMS signature.** The full VMS signature is made up of at least three groups, as three organic chemical classes, that together contain at least 35 of the individual SGH hydrocarbons.

The chromatograms shown on the preceding page from the GC/MS analysis are not used directly in the interpretation of SGH data. As we are only interested in a specific list of 162 hydrocarbons, the mass spectrometer and associated software programs specifically identifies the hydrocarbons of interest, runs calculations using relative responses to a short list of hydrocarbons used as standards, and develops an Excel spreadsheet of semi-quantitative concentration data to represent the sample. Thus the SGH results for a sample, like that observed in ore from the Ruttan, are filtered to obtain the concentrations for the specific 162 hydrocarbons. A simple bar graph drawn from the Excel spreadsheet of the hydrocarbons and their concentrations results in a DNA like *forensic SGH signature* as shown below. The portion discussed hear as the "visible" SGH VMS signature in the GC/MS chromatograms, is again shown by the red arrows.

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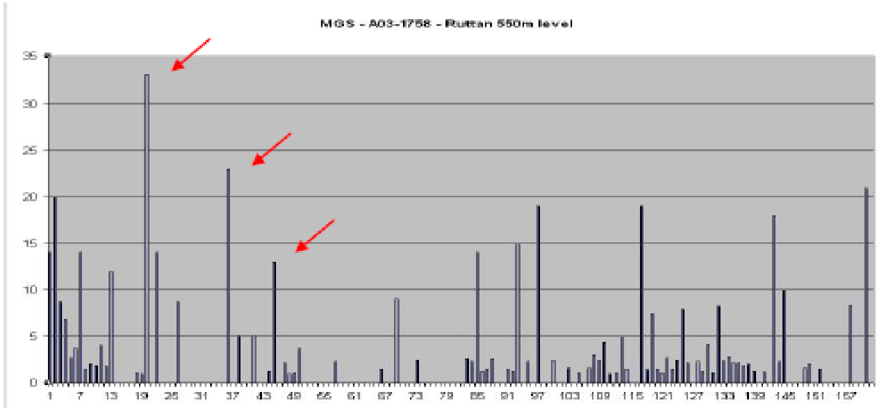

Through the work done in the SGH CAMIRO research projects, it was observed that the hydrocarbon signature produced by the SGH technique appeared to also be able to be used to differentiate barren from ore-bearing conductors. This was explored further through the submission and analysis of specific specimen samples that represented a barren pyritic conductor and a barren graphitic conductor.

The GC/MS chromatograms from these two specimens are compared to that obtained from the Kidd-Creek ore as shown below. This diagram conclusively shows that the SGH signatures obtained from the two types of barren conductors are completely different than that obtained by SGH over VMS type ore. SGH is thus able to differentiate between ore-bearing conductors and barren conductors as **the Forensic SGH Geochemical signature is different.**

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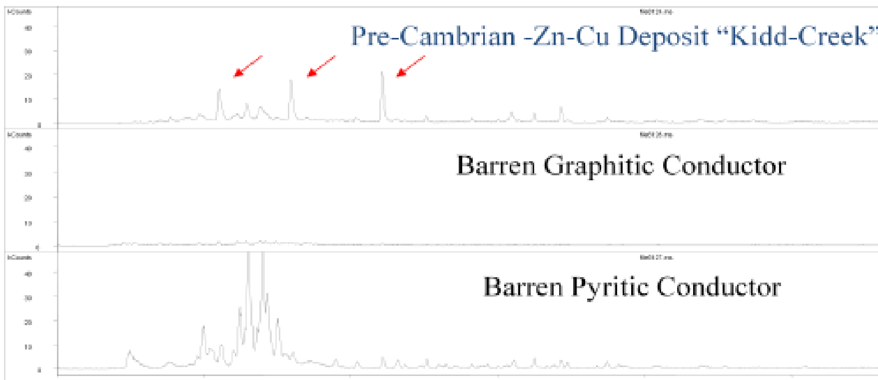

SGH has been described by the Ontario Geological Survey of Canada (OGS) as a "REDOX cell locator". Many SGH surveys for Gold and other mineral targets can result in multiple types of anomalies, depending on the class of SGH compounds, even over the same target and in the same set of samples. Thus "Apical", "Nested-Halo", and "Rabbit-Ear" or "Halo" type SGH anomalies are all typically observed from the effect of REDOX cells that have developed over deposits. REDOX cells are also related to the presence of bacteriological activity.

The VMS template of SGH Pathfinder Classes uses low and medium weight classes of hydrocarbon compounds. Again, at least three Pathfinder Class group maps, associated with the SGH signature for VMS, must be present to begin to be considered for assignment of a good rating. The Pathfinder Class anomalies in these maps must logically concur and support a consistent interpretation in relation to the expected geochromatographic characteristics of the Pathfinder Class, for a specific area.

The interpretation development history for VMS SGH Pathfinder Class map(s) shown in this report is similar to the development history for other target types. The reader should not draw a conclusion that SGH is used only for sulphide based mineralization as some of the most intense SGH anomaly has been associated with Kimberlites where sulphides are essentially not present.

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APPENDIX "C"

SOIL GAS HYDROCARBON SURVEY DESIGN AND SAMPLING

Sample Type and Survey Design: It is highly recommended that a ***minimum*** of 50 sample "locations" is preferred to obtain enough samples into background areas on both sides of *small* suspected targets (wet gas plays, Kimberlite pipes, Uranium Breccia pipes, veins, etc.). SGH is not interpreted in the same way as inorganic based geochemical method. SGH must have enough samples over both the target and background areas in order to fully study the dispersion patterns or geochromatography of the SGH classes of compounds. Based on our minimum recommendation of at least 50 sample locations we further suggest that all samples be *evenly spaced* with about one-third of the samples over the target and one-third on each side of the target in order for SGH to be used for exploration. Targets other than gas plays, pipes, dykes or veins usually require additional samples to represent both the target and background areas.

SGH has been shown to be very robust to the use of different sample types even "within" the same survey or transect. Research has illustrated that it is far more important to the ultimate interpretation of the results to take a complete sample transect or grid than to skip samples due to different sample media. The most ideal natural sample is still believed to be soil from the "Upper B-Horizon", however excellent results can also be obtained from other soil horizons, humus, peat, lake-bottom sediments, and even snow. The sampling design is suggested to use evenly spaced samples from 15 metres to 200 metres and line spacing from 50 metres to 500 metres depending on the size and type of target. A 4:1 ratio is suggested, however, larger orientation surveys have also been successful. Ideally even large grids should have one-third of the samples over the target and two-thirds of the samples into anticipated background areas. This will allow the proper assessment of the SGH geochromatographic vectoring and background site signature levels with minimal bias. Individual samples taken at significant distances from the main survey area to represent background are not of value in the SGH interpretation as SGH results are not background subtracted. Samples can be drip dried in the field and do not need special preservation for shipping and has been specifically designed to avoid common contaminants from sample handling and shipping. SGH has also been shown to be robust to cultural activities even to the point that successful results and interpretation has been obtained from roadside right-of-ways. In conclusion, the conditions for the sample type and survey design include:

- Fist sized samples are usually retrieved from a shallow dug hole in the 15 to 40 cm range of depth.
- Different sample types can be taken even "within" the same survey or transect, data leveling is rarely ever required. SGH is highly effective is areas of very difficult terrain. The Golden Rule is to always take a sample.
- Samples should be evenly spaced in a grid or a series of transects with sample lines spaced at a ratio of up to 4:1 (line spacing: sample spacing).

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- A minimum of 50 sample "locations" is recommended with one-third over the target and one-third on each side of the target into background if this can be predicted. This provides the opportunity of optimal data contrast.
- If very wet, samples can be drip dried in the field.
- No special preservation is required for shipping.

APPENDIX "D"
SAMPLE PREPARATION AND ANALYSIS

Upon receipt at Activation Laboratories the samples are air-dried in isolated and dedicated environmentally controlled rooms set to 40°C. The dried samples are then sieved. In the sieving process, it is important that compressed air is not used to clean the sieves between samples as trace amounts of compressor oils "may" poison the samples and significantly affect some target signatures. At Activation Laboratories a vacuum is used to clean the sieve between each sample. The -60 mesh sieve fraction (<250 microns, although different mesh sizes can be used at the preference of the exploration geologist) is collected and packaged in a Kraft paper envelope and transported from our sample preparation building to our analytical building on the same street in Ancaster Ontario. Each sample is then extracted, separated by gas chromatography and analyzed by mass spectrometry using customized parameters enabling the highly specific detection of the 162 targeted hydrocarbons at a *reporting limit* of one part-per-trillion (ppt). This trace level limit of reporting is critical to the detection of these hydrocarbons that, through research, have been found to be related at least in part to the breakdown and release of hydrocarbons from the death phase of microbes directly interacting with a deposit at depth. The hydrocarbon signatures are directly linked to the deposit type, which is used as a food source. The hydrocarbons that are mobilized and metabolized by the microbes are released in the death phase of each successive generation. Very few of the hydrocarbons measured are actually due to microbe cell structure, or hydrocarbons present or formed in the genesis of the deposit or from anthropogenic contamination. The results of the SGH analysis is reported in raw data form in an Excel spreadsheet as "semi-quantitative" concentrations without any additional statistical modification.

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APPENDIX "E"
SGH DATA QUALITY
Reporting Limit

The SGH Excel spreadsheet of results contains the raw unaltered concentrations of the individual SGH compounds in units of "part-per-trillion" (ppt). The reporting of these ultra low levels is vital to the measurement of the small amounts of hydrocarbons now known to be leached/metabolized and subsequently released by dead bacteria that have been interacting with the ore at depth. To ensure that the data has a high level of confidence, a "reporting limit" is used. The reporting limit of 1 ppt actually represents a level of confidence of approximately 5 standard deviations where SGH data is assured to be "real" and non-zero. Thus in SGH the use of a reporting limit automatically removes site variability, and there is no need to further background subtract any data as the reporting limit has already filtered out any site background effects. Thus we recommend that all data that is equal to or greater than 2 ppt should be used in any data review. It is important to review all SGH data as low values that may be the centre of halo anomalies and higher values as apical anomalies or as halo ridges are all important.

Laboratory Replicate Analysis

A laboratory replicate is a sample taken randomly from the submitted survey being analyzed and are not unrelated samples taken from some large stockpile of bulk material. In the Organics laboratory an equal portion of this sieved sample, or pulp, is taken and analyzed in the same manner using the Gas Chromatography/Mass Spectrometer. The comparison of laboratory replicate and field duplicate results for chemical tests in the parts-per-million or even parts-per-billion range has typically been done using an absolute "relative percent difference (RPD)" statistic which is an easy proxy for error estimation rather than a more complete analysis of precision as specified by Thompson and Howarth. An RPD statistic is not appropriate for SGH results as the reporting limit for SGH is *1 part-per-trillion*. Further, *SGH is a semi-quantitative technique* and was not designed to have the same level of precision as other less sensitive geochemistry's as it is only used as an exploration tool and not for any assay work. SGH is also designed to cover a wide range of organic compounds with an unprecedented 162 compounds being measured for each sample. In order to analyze such a wide molecular weight range of compounds, sacrifices were made to the variability especially in the low molecular weight range of the SGH analysis. The result is that the first fifteen SGH compounds in the Excel spreadsheet is expected to exhibit more imprecision than the other 147 compounds. An SGH laboratory replicate is a large set of data for comparison even for just a few pairs of analyses. Precision calculations using a Thompson and Howarth approach should only be used for estimating error in individual measurements, and not for describing the average error in a larger data set. In geochemical exploration geochemists seek concentration patterns to interpret and thus rigorous precision in individual samples is not required because the concentrations of many samples are interpreted collectively. For these reasons recent and independent research at Acadia University in Canada promote that a percent Coefficient of Variation (%CV) should be used as a universal measurement of relative error in all geochemical applications. As SGH results are a relatively large data set for nearly all submissions, %CV is a better statistic for use with SGH. By using %CV, the concentration of duplicate pairs is irrelevant because the units of concentration cancel out in the formation of the coefficient of variation ratio. For SGH, the

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%CV is calculated on all values ≥ 2 ppt. These values are averaged and represent a value for each pair of replicate analysis of the sample. All of the %CV values for the replicates are then averaged to report one %CV value to represent the overall estimate of the relative error in the laboratory sub-sampling from the prepared samples, and any instrumental variability, in the SGH data set for the survey. Actlabs' has successfully addressed the analytical challenge to minimize analytical variability for such a large list of compounds. Thus as SGH is also interpreted as a signature and is solely used for exploration and not assay measurement, the data from SGH is *"fit for purpose"* as a geochemical exploration tool.

Historical SGH Precision

In the general history of geochemistry, studies indicate that a large component of total measurement error is introduced during the collection of the initial sample and in sub-sampling, and that only a subordinate amount of error in the result is introduced during preparation and analysis. A historical record encompassing many projects for SGH, including a wide variety of sample types, geology and geography, shows that the consistency and precision for the analysis of SGH *is excellent* with an overall precision of 6.8% Coefficient of Variation (%CV). When last calculated, this number had a range of a maximum of 12.4% CV, a minimum of 3.0% CV, with a standard deviation of 1.6%, in a population made up of over 400 targets (over 45,000 samples) interpreted since June of 2004. Again the precision of 6.8% CV included all of the sample types as soil from different horizons, peat, till, humus, lake-bottom sediments, ocean-bottom sediments, and even snow. When field duplicates have been revealed to us, we have found that the precision of the field duplicates are in the range of about 9 to 12 %CV. As SGH is interpreted using a combination of compounds as a chemical "class" or signature, the affect of a few concentrations that may be imprecise in a direct comparison of duplicates is not significant. Further, projects that have been re-sampled at different times or seasons are expected to have different SGH concentrations. The SGH anomalies may not be in exactly the same position or of the same intensity due to variable conditions that may have affected the dispersion of different pathfinder classes. However, the SGH "signature" as to the presence of the specific mix of SGH pathfinder classes will definitely still exist, and will retain the ability to identify the deposit type and vector to the same target location.

Laboratory Materials Blank – Quality Assurance (LMB-QA)

The Laboratory Materials Blank Quality Assurance measurements (LMB-QA) shown in the SGH spreadsheet of results are matrix free blanks analyzed for SGH. These blanks are not standard laboratory blanks as they do not accurately reflect an amount expected to be from laboratory handling or laboratory conditions that may be present and affect the sample analysis result. The LMB-QA measurements are a pre-warning system to only detect any contamination originating from laboratory glassware, vials or caps. As there is no substrate to emulate the sample matrix, the full solvating power of the SGH leaching solution, effectively a water leach, is fully directed at the small surface area of the glassware, vials or caps. In a sample analysis the solvating power of the SGH leaching solution is distributed between the large sample surface area (from soil, humus, sediments, peat, till, etc.) and the relatively small contribution from the laboratory materials surfaces. The sample matrix also buffers the solvating or leaching effect in the sample versus the more vigorous leaching of the laboratory materials which do not experience this buffering effect. Thus the level of the LMB-QA reported is

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biased high relative to the sample concentration and the actual contribution of the laboratory reagents, equipment, handling, etc. to the values in samples is significantly lower. This situation in organic laboratory analysis only occurs at such extremely low part-per-trillion (ppt) measurement levels. This is one of the reasons that SGH uses a reporting limit and not a detection limit. The 1 ppt reporting limit used in the SGH spreadsheet of raw concentration data is 3 to 5 times greater than a detection limit. The reporting limit automatically filters out analytical noise, the actual LMB-QA, and most of the sample survey site background. This has been proven as SGH values of 1 to 3 parts-per-trillion (ppt) have very often illustrated the outline of anomalies directly related to mineral targets. **Thus all SGH values greater than or equal to 1 or 2 ppt should be used as reliable values for interpretations.**

The LMB-QA values thus should not be used to background subtract any SGH data. The LMB-QA values are only an early warning as a quality assurance procedure to indicate the relative cleanliness of laboratory glassware, vials, caps, and the laboratory water supply at the ppt concentration level. *Do not subtract the LMB-QA values from SGH sample data.*

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APPENDIX "F"
SGH DATA INTERPRETATION

SGH Interpretation Report

All SGH submissions must be accompanied by relative or UTM coordinates so that we may ensure that the sample survey design is appropriate for use with SGH, and to provide an SGH interpretation with the results. In our interpretation procedure, we separate the results into 19 SGH sub-classes. These classes include specific alkanes, alkenes, thiophenes, aromatic, and polyaromatic compounds. Note that none of the SGH hydrocarbons are "gaseous" at room temperature and pressure. The classes are then evaluated in terms of their geochromatography and for coincident compound class anomalies that are unique to different types of mineralization. Actlabs uses a six point scale in assigning a subjective rating of similarity of the SGH signatures found in the submitted survey to signatures previously reviewed and researched from known case studies over the same commodity type. Also factored into this rating is the appropriateness of the survey and amount of data/sample locations that is available for interpretation. This rating scale is described in detail in the following section.

SGH PATHFINDER CLASS MAGNITUDE

The magnitude of any individual concentration or that of a hydrocarbon class *does not imply* that the data is of more importance or that mineralization is of higher quantity or grade. SGH interpretation must use the review of the combination of specific hydrocarbon classes to make any interpretation.

GEOCHEMICAL ANOMALY THRESHOLD VALUE

In the interpretation of "inorganic" geochemical data one of the determinations to be made is to calculate a "Threshold" value above which data is considered anomalous. This is done on an element by element basis. In the interpretation of this "organic" geochemical data this determination is done differently. The determination of a threshold value is not calculated for each hydrocarbon compound. The determination of a threshold value is also a concentration below which geochemical data is considered as "noise" for the purposes of geochemical interpretation. As discussed, SGH uses a "Reporting Limit" instead of some type of Detection Limit. The amount of noise that is already eliminated in the data, as below the Reporting Limit of 1 part-per-trillion (shown in the data spreadsheet as "-1" as "not-detected at a Reporting Limit of 1 ppt") is equivalent to approximately 5 standard deviations of variability. *To thus calculate an additional Threshold Value is a loss of real and valuable data.* Further, in the interpretation of SGH data, individual compounds are not considered (unless explicitly mentioned in the report). The interpretation of SGH data is exclusively conducted by "compound chemical class" which is the sum of four to fourteen individual hydrocarbons in the same organic chemical class as these compounds naturally have the same chemical properties that ultimately define their spatial dispersion characteristics in their rise from a mineral target through the overburden. This combined class is more reliable than the measurement of any one compound. SGH also eliminates the need for a Threshold value determination above the Reporting Limit due to the "high specificity" of the specific hydrocarbons and the classes they form. Each of the hydrocarbons has been

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hand selected due to their lower probability of being found in general surface soils. Further, only those classes where the majority of the compounds are detected above the Reporting Limit are considered in the interpretation. This defines the SGH geochemistry as having less geochemical noise due to the use of a reporting limit and as having higher confidence in the use of groups (classes) of data instead of individual compounds. However the most important aspect of interpretation is the use of a forensic signature. At least three specific "Pathfinder" classes, based on the combinations or template of classes we have developed, must be present to define the hydrocarbon signature to confidently predict the presence of a specific type of mineral target. *Do not calculate another Threshold value.* **Fact:** It has been proven many times that important SGH anomalies that depict mineralization at depth can exist even with data at 3 ppt.

Mobilized Inorganic Geochemical Anomalies

It is important to note that SGH is essentially "blind" to any inorganic content in samples as only *organic* compounds as hydrocarbons are measured. Thus inorganic geochemical surface anomalies that have migrated away from the mineral source, and thus may be interpreted and found to be a false target location, is not detected and does not affect SGH results. This fact is of great advantage when comparing the SGH results to inorganic geochemical results. If there is agreement in the location of the anomalies between the organic and inorganic technique, such as Actlabs' Enzyme Leach, a significant increase in confidence in the target location can be realized. If there is no agreement or a shift in the location of the anomalies between the techniques, the inorganic anomaly may have been mobilized in the surficial environment.

The Nugget Effect

As SGH is "blind" to the inorganic content in the survey samples, any concern of a "nugget effect" will not be encountered with SGH data. A "nugget effect" may be of a concern for other inorganic geochemical methods from surveys over copper, gold, lead, nickel, etc. type targets.

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SGH DATA LEVELING

The combination of SGH data from different field sampling events has rarely required leveling in order to combine survey grids. The only circumstances that have occasionally required leveling has been the combination of samples that are very fine in texture, thus having a combined large surface area to samples of peat that may be in nearby areas. Even after maceration of the peat and in using the maximum size of sample amenable to this test method, peat samples have a significantly lower surface area. Peat samples have only required leveling in one survey in the last 500 SGH interpretations.

In only the last year it has been observed that SGH data *may* require leveling when different field sampling events have significantly different soil temperature. It has been documented that only when "soil" samples are taken from "frozen" ground that data leveling may be required as frozen sample act as a frozen cap to the hydrocarbon flux and may collect a higher concentration of hydrocarbon compounds compared to sampling during seasons where the samples are not frozen. Only two surveys have required leveling in the last 500 SGH interpretations.

The author has taken introductory training in the leveling of geochemical data. If leveling is required, both data sets are reviewed in terms of maximum, minimum and average values for each SGH Pathfinder Class intended for use in the interpretation. Data in sectioned into quartiles and each section is assigned specific leveling factors that is then applied to one data set. It should be noted that any type of data leveling is an approximation.

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APPENDIX "G"
SGH RATING SYSTEM DESCRIPTION

To date SGH has been found to be successful in the depiction of buried mineralization for Gold, Nickel, VMS, SEDEX, Uranium, Cu-Ni-PGE, IOCG, Base Metal, Tungsten, Lithium, Polymetallic, and Copper, as well as for Kimberlites, Coal Seam, Wet Gas and Oil Plays. SGH data has developed into a dual exploration tool. From the interpretation, a vertical projection of the predicted location of the target can be made as well as a statement on the rating of the comparability of the identification of the anticipated target type to that from known case studies, as an example: if the client anticipates the target to be a Gold deposit, what is the rating or comparability that the target is similar to the SGH results over a Gold deposit in Nunavut, shear hosted and sediment hosted deposits in Nevada, or Paleochannel Gold mineralization in Western Australia.

- **A rating of "6"** is the highest or best rating, and means that the SGH classes most important to describing a Gold related hydrocarbon signature are all present and consistently vector to the same location with well defined anomalies. To obtain this rating there also needs to be other SGH classes that when mapped lend support to the predicted location.
- **A rating of "5"** means that the SGH classes most important to describing a Gold signature are all present and consistently describe the same location with well defined anomalies. The SGH signatures may not be strong enough to also develop additional supporting classes.
- **A rating of "4"** means that the SGH classes most important to describing a Gold signature are mostly present describing the location with well defined anomalies. Supporting classes may also be present.
- **A rating of "3"** means that the SGH classes most important to describing a Gold signature are mostly present and describe the same location with fairly well defined anomalies. Some supporting classes may or may not be present.
- **A rating of "2"** means that some of the SGH classes most important to describing a Gold signature are present but a predicted location is difficult to determine. Some supporting classes may be present
- **A rating of "1"** is the lowest rating, and means that one of the SGH classes most important to describing a Gold signature is present but a predicted location is difficult to determine. Supporting classes are also not helpful.

The SGH rating is directly and significantly affected by the survey design. Small data sets, especially if significantly <50 sample locations, or transects/surveys that are geographically too short *will automatically receive a lower rating no matter how impressive an SGH anomaly might be*. When there is not enough sample locations to adequately review the SGH class geochromatography, or when the sample spacing is inadequate, or if the spacing is highly variable such that it biases the interpretation of the results, then the confidence in the interpretation of any geochemistry is adversely

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affected. The SGH rating is not just a rating of the agreement between the SGH pathfinder classes for a particular target type; it is a rating of the overall confidence in the SGH results from this particular survey. The interpretation is only based on the SGH results without any information from other geochemical, geological or geophysical information unless otherwise specified.

HISTORY & UNDERSTANDING

The subjective SGH rating system has been used since 2004 when Activation Laboratories started providing an SGH Interpretation Report with ever submission for SGH analysis to aid our clients in understanding this organic geochemistry and ensuring that they obtain the best results for their surveys. As explained in the previous section, the SGH rating is not just a rating of how definitive an SGH anomaly is, and it is not based just on the map(s) provided in this report. It is a rating of "confidence in the interpreted anomaly" from the combination of:

- (i) are the expected SGH Pathfinder Classes of compounds present from the template for this target type (one Pathfinder Class map is shown in the report, at least three must be present to adequately describe the correct signature for a particular target),
- (ii) how well do these SGH Pathfinder Classes agree in describing an particular area,
- (iii) how well does this agreement compare to SGH case studies over known targets of that type,
- (iv) how well is the interpreted anomaly defined by the survey (i.e. a single transect does not provide the same confidence as a complete grid of samples), and
- (v) is there at least a minimum of 50 sample locations in the survey so that there may be an adequate amount of data to observe the geochromatography of the different SGH Pathfinder Class of compounds.

The question often arises by clients as to the frequency of a rating, e.g. "how often is a rating of 5.0 given in an interpretation". To better understand this we present this review of the history of the SGH rating program since 2004 and some of the underlying situations that can affect the historical rating charts. Originally it was recommended that a minimum of 35 sample location be used for small target exploration, however it was quite quickly realized that this is often insufficient and at least 50 sample locations were required. In 2007 the rating scale was refined to include increments of 0.5 units rather than just integer values from 0 to 6.

A rating frequency may be biased high as most clients conduct an orientation study over a known target, thus several of these projects result in high ratings. Note that, at this time, the rating is not said to be linked to grade of a deposit or depth to the target. Even in exploration surveys clients tend to submit samples over more promising targets due to knowledge of the geology and prior geochemical or geophysical results. As shown in the following chart, projects with SGH data from 200 or more sample locations have a higher level of confidence in the interpretation as the

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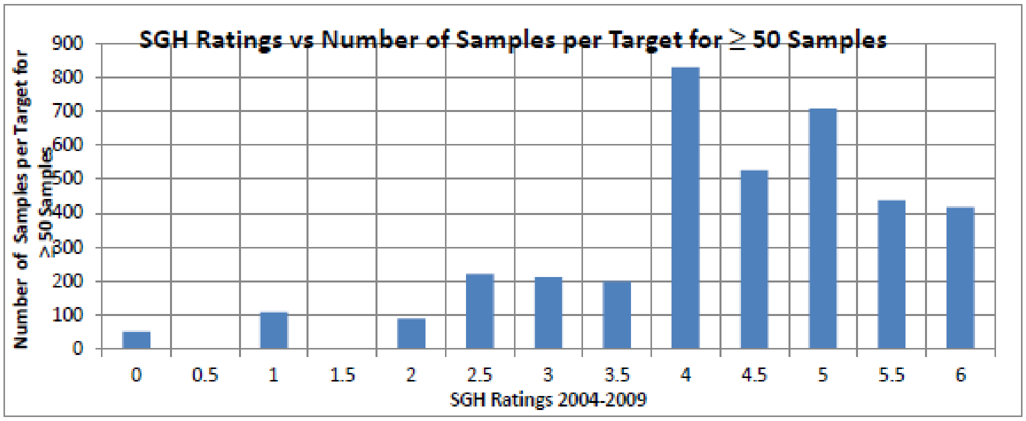
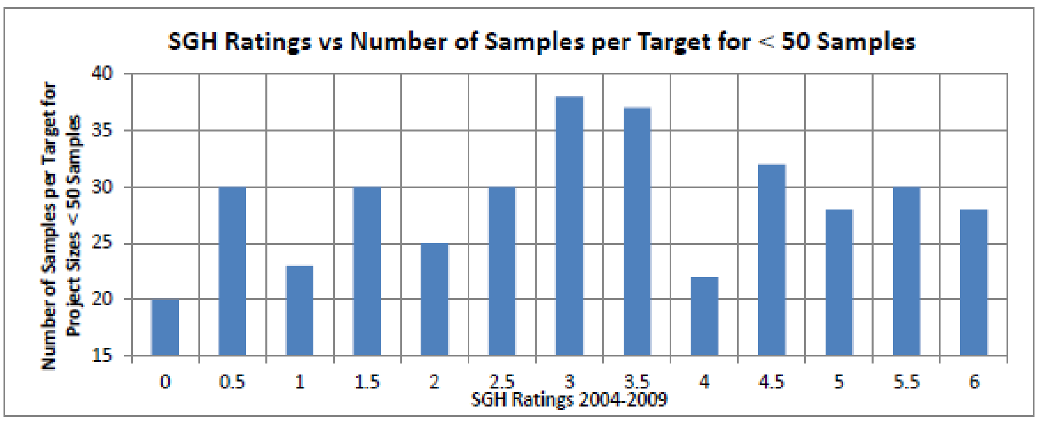
geochromatography of the SGH Pathfinder Classes of compounds can be more completely observed and reviewed.



The rating frequency may be biased low as research projects often include a bare minimum of samples to reduce costs. Research projects may also be over targets known to be difficult to depict with geochemistry. Multiple targets in close vicinity in a survey may result in a low bias as the Pathfinder Class geochromatography is more difficult to deconvelute. Ratings may also be biased low if less than the recommended 50 sample locations are submitted as indicated by the following chart. This chart also illustrates that there is no interpretation bias to a particular rating value.



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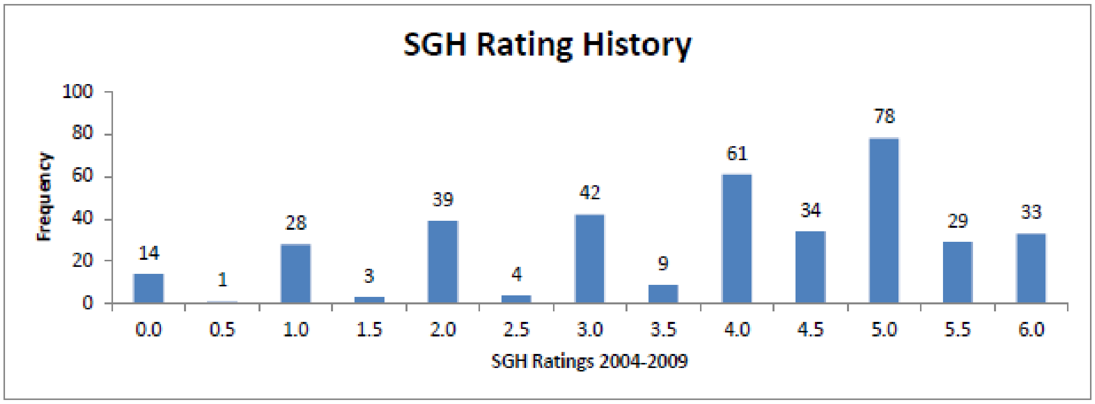
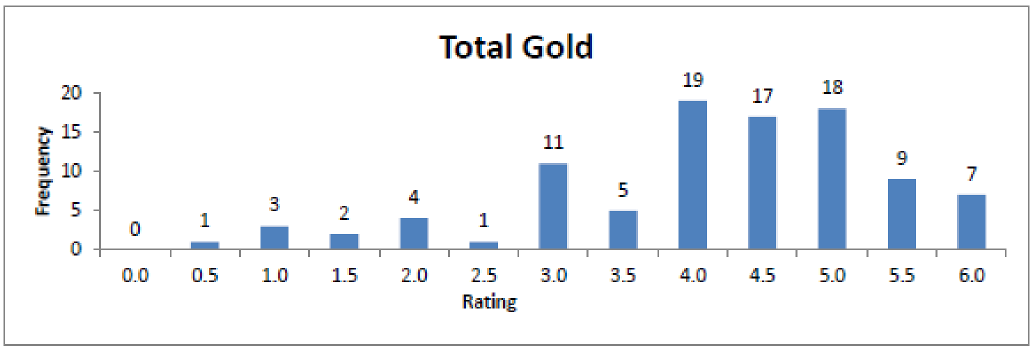
The overall rating frequency for over 400 targets from January 2004 to December 2009 is shown in the chart below illustrating that surveys over more promising targets are most often submitted for best use of research or exploration dollars. It also indicates that the 0.5 increments were less frequent as they started in 2007.



More specific for SGH interpretation for Gold targets, the overall rating frequency for 97 targets from January 2004 to December 2009 is shown in the chart below that also illustrates that surveys over more promising Gold targets are most often submitted for best use of research or exploration dollars.



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APPENDIX "H"

NOTE: THERE IS NEW PRICING FOR THE SGH AND OSG GEOCHEMISTRIES AS OF 2014

SAMPLE PREPARATION: CODE S4 - $4.20 CDN per sample

INTERPRETATION FOR ONE COMMODITY TARGETS: Included in the price of analysis of $48.00 CDN per sample

INTERPRETATION FOR MULTI-COMMODITY TARGETS: i.e. VMS, SEDEX, Polymetallic, IOCG, IOCGU, Cu-Au-Porphyry, etc. – add additional price of $500 is applied to cover the additional time in interpretation.

"SUPPLEMENTAL REPORT": ($ 1,200.00)

Those clients who have determined that these SGH results will add an important aspect to their exploration effort can request a "Supplemental Report". This report contains the additional SGH Pathfinder Classes and an explanation of their use in the SGH interpretation that supports the initial applied "Rating" for the survey as a relative comparison to the results previously obtained in case studies that were used to create the SGH template for the general target type.

"ADDITIONAL INTERPRETATIONS": ($ 1,200.00) - if 30 days after delivery of the report.

The SGH data can be interpreted multiple times in comparison to a variety of SGH templates developed for exploration for different mineral targets or petroleum plays. The samples do not have to be reanalyzed. This can be addressed as a separate section of a report or as a separate report based on the client's wishes. The price is per survey area, e.g. if there are two projects in a submission, perhaps a North area and South area, and both survey areas are to be interpreted for say Gold and Copper, the first interpretation is included in the SGH analysis price, the second interpretation for each area would be priced at $1,200 per area, thus a total of $2,400.

"BASIC OR SUPPLEMENTAL REPORT GIS PACKAGE": ($ 300.00)

Those clients that wish to import the SGH results into their GIS software can request a "GIS Package", which will include the geo-referenced image files that reflect the mapped SGH Pathfinder Class or Classes contained in the Standard or Supplemental Report and an Excel CSV file(s) containing the associated Class Sum data.

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