We are committed to providing accessible customer service.
If you need accessible formats or communications supports, please contact us.

Nous tenons à améliorer l'accessibilité des services à la clientèle.
Si vous avez besoin de formats accessibles ou d'aide à la communication, veuillez nous contacter.

Report on Exploration Activities

Nikos Explorations Ltd.

Borden Lake Extension Project, Chapleau, Ontario

Roger Moss, Ph.D., P.Geo

24 October, 2015

Contents

List of Figures

List of Tables

1. Summary

During the period 3 July 2013 to 3 November 2014 Nikos Explorations Ltd. (Nikos) carried out a number of surveys on their Borden Lake Extension Project near Chapleau, Ontario. These surveys, aimed at evaluating the property for gold mineralization, included: geological mapping, rock sampling, soil sampling, till sampling and VLF-EM. Most of the work was undertaken in the westernmost portion of the property, to ground truth magnetic lineaments interpreted from results of a 2013 airbourne magnetic and VTEM survey. The lineaments are oriented northeast-southwest and northwest-southeast and appear to intersect in the area where the follow up work was done.

Initial geological mapping in 2013 was hampered by lack of outcrop in the area. Very few outcrops were found and most of the rock on the property appears to be glacial float and includes many large boulders. Further follow up work aimed to check for responses through the overburden. Initial soil sampling and analysis for soil gas hydrocarbons (SGH) was successful in delineating an anomaly over two lines across the northwest-southeast trending lineaments (Sutherland, 2013). Two VLF-EM test lines were run over the same area and resulted in the identification of several conductors.

Given the success of the SGH and VLF-EM techniques further work was undertaken towards the southeast along the lineament. Several conductors were identified by the VLF-EM survey, the longest of which stretches for 2.2km along the northwest-southeast trend. Follow up soil sampling has been completed and the results of the SGH work are pending as at the date of this report.

Till sampling was also undertaken in the same area and subsamples of the till sample were sent for assay. No significant gold values were found.

Further work should be carried out to follow up on the cause of the VLF conductors. Prospecting, line cutting and induced polarization to determine potential drill targets are recommended.

2. Introduction

This report is intended to summarize the work carried out on the Borden Lake Extension project of Nikos for assessment purposes. Field work was carried out during field visits during September-October 2014. The author was directly involved in all work except the VLF-EM survey.

No previous recorded exploration activity is known on the property, which was staked following the discovery of the Borden Lake gold deposit in 2010. Most of the available information is in the form of government maps and reports.

3. Property Access, Description, Location and Title

The property is located approximately 18 kilometres east of Chapleau, Ontario in the Timmins Mining District (Figure 1). Access is via paved Highway 101 that runs between Chapleau and Timmins followed by a gravel logging road that runs approximately north-south through the western part of the property.

It consists of 20 unpatented claims covering an area of 3,584 hectares (Table 1).

Table 1. List of claims making up the Borden Lake Extension property

Claim No.	Due Date	Work Required	Claim Units	Area (ha)
4260528	14-Feb-15	3,600	9	144
4260529	14-Feb-15	6,400	16	256
4260530	14-Feb-15	3,600	9	144
4259806	30-Nov-14	4,800	12	192
4259807	30-Nov-14	3,200	8	128
4259808	30-Nov-14	4,800	12	192
4259809	30-Nov-14	1,600	4	64
4259810	30-Nov-14	6,000	15	240
4256761	30-Nov-14	6,000	15	240
4275410	24-Mar-16	6,000	15	240
4275422	24-Mar-16	6,000	15	240
4275423	24-Mar-16	6,000	15	240
4275424	24-Mar-16	2,400	6	96
4275425	24-Mar-16	2,400	6	96
4270214	24-Mar-16	3,600	9	144
4274028	16-Jun-16	4,800	12	192
4274029	16-Jun-16	5,600	14	224
4274030	16-Jun-16	3,600	9	144
4274031	16-Jun-16	6,000	15	240
4274032	16-Jun-16	3,200	8	128
Total		89,600	224	3584

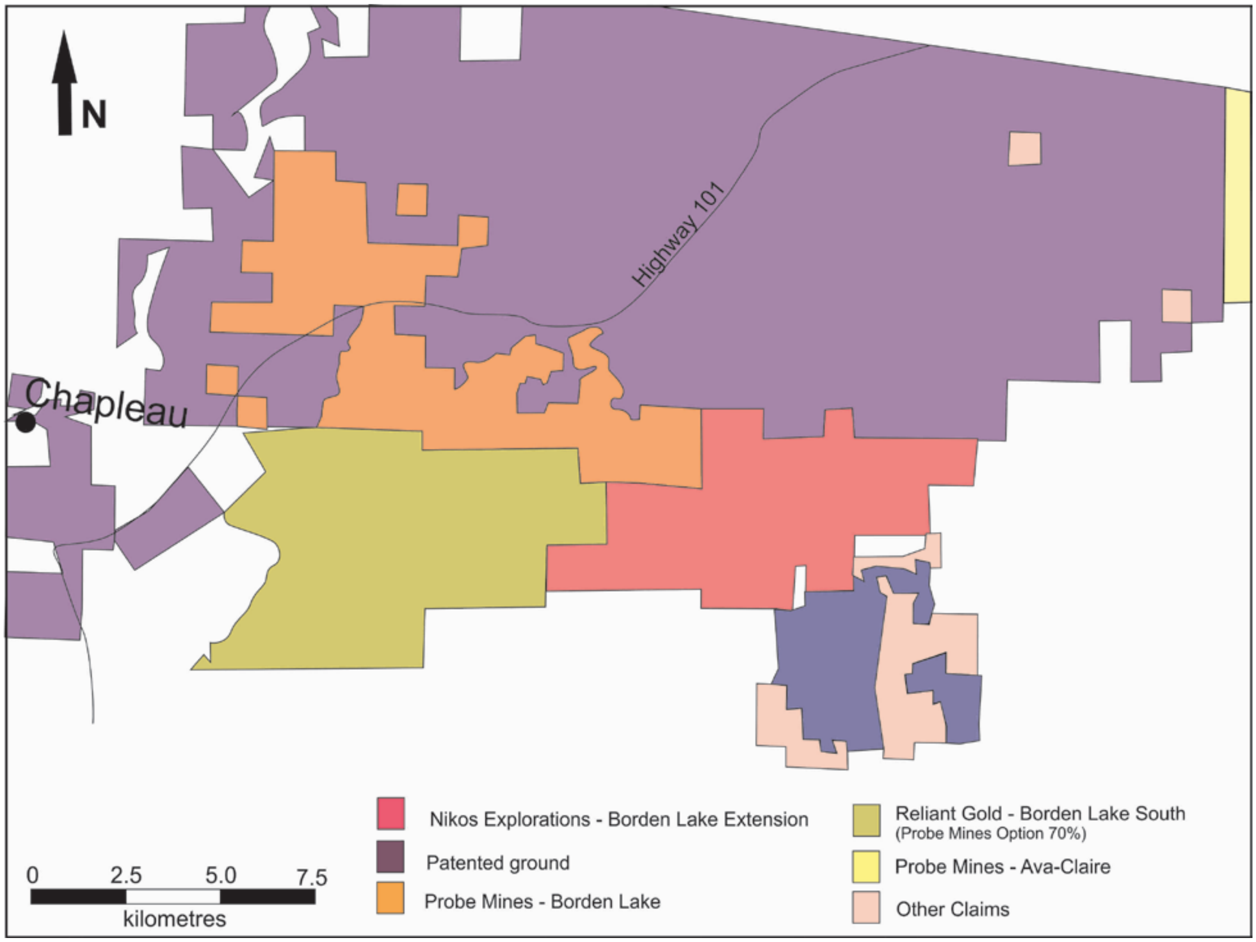


Figure 1. Location of the Borden Lake Extension Property

Nikos has signed two option agreements to earn 100% in all claims comprising the property. The first agreement, signed in December, 2012, gives Nikos the right to acquire a 100% interest in claims 4260528 to 4260530 and 4259806 to 4259810 under the following conditions:

Issue a total of 1,000,000 Nikos shares and pay $100,000 cash to the Vendors as follows:
250,000 Nikos Shares and $3,000 cash on TSX-V acceptance of the agreement (completed)
250,000 Nikos shares and $15,000 cash on or before 14 December, 2013 (renegotiated and completed by a cash payment of $6,000 and the issuance of 850,000 Shares)
250,000 Nikos shares and $27,000 cash on or before 14 December, 2014 (completed)
250,000 Nikos shares and $55,000 cash on or before 14 December, 2015.

Incur cumulative exploration expenditures in the amounts and dates as set out below:
$40,000 on or before 14 December, 2013 (completed)
$100,000 on or before 14 December, 2014 (completed) and
$200,000 on or before 14 December, 2015 (waived)

The vendors retain a 2% NSR royalty, half of which may be bought back by Nikos for $1 million at any time.

The second agreement was signed on May 13, 2014, and Nikos entered into an option agreement to earn a 100% interest in six claims 4275410, 4275422 to 4275425 and 4270214 under the following terms:
On receipt of TSX-V approval: payment of $6,000 and issuance of 75,000 Shares (completed);
On or before May 13, 2015: payment of $15,000 and issuance of 105,000 Shares (completed);
On or before May 13, 2016: payment of $24,000 and issuance of 150,000 Shares;
On or before May 13, 2017: payment of $36,000 and issuance of 180,000 Shares;

A 2% NSR, half of which may be bought back for $1,000,000 and
On receipt of a National Instrument 43-101 compliant report showing an indicated resource of at least 1 million ounces of gold a payment of $600,000.

4. Geological Setting and Mineralization

4.1 Regional Geology

The property is located in the Archean –aged Superior Province of the Canadian Shield and covers variably metamorphosed rocks of the Kapuskasing Structural Zone (KSZ). The KSZ is over 300km long and strikes north east, separating rocks of the Abitibi Subprovince to the east from those of the Wawa Subprovince to the west (Figure 2). The KSZ is separated from the Swayze greenstone belt to the east by the Ivanhoe Lake fault zone. Rocks include mafic gneiss and paragneiss, tonalite gneiss and metaconglomerate as well as intrusions of tonalite, anorthosite and diorite (Heather et al. 1995). In addition three alkali intrusives occur in the region (Percival, 1981).

4.2 Property Geology

Published maps of the area covered by the property show it to be underlain predominantly by metasedimentary gneiss, with minor mafic gneiss and tonalitic gneiss (Percival, 1981). The Lackner Alkalic complex occurs immediately south of the property (Figure 3). The Borden Lake Belt occurs to the northwest and runs for approximately 35km east-west. It is primarily comprised of metasedimentary, including a metaconglomerate, and metavolcanic rocks (Heather et al., 1995).

4.3 Mineralization

There is currently no known mineralization on the Borden Lake Extension property. However, gold mineralization was discovered By Probe Mines in 2010 on the adjacent Borden Lake Property currently held by Goldcorp Inc. Current resources on the property total 4.3 million ounces of gold (Probe Mines Corporate Presentation September 2014). In addition, IAMGOLD's Cote Lake and Jerome deposits, located along the Ridout shear zone in the Swayze Greenstone Belt to the east, contain 8.2 and 1.3 million ounces of gold, respectively (see Figure 2).

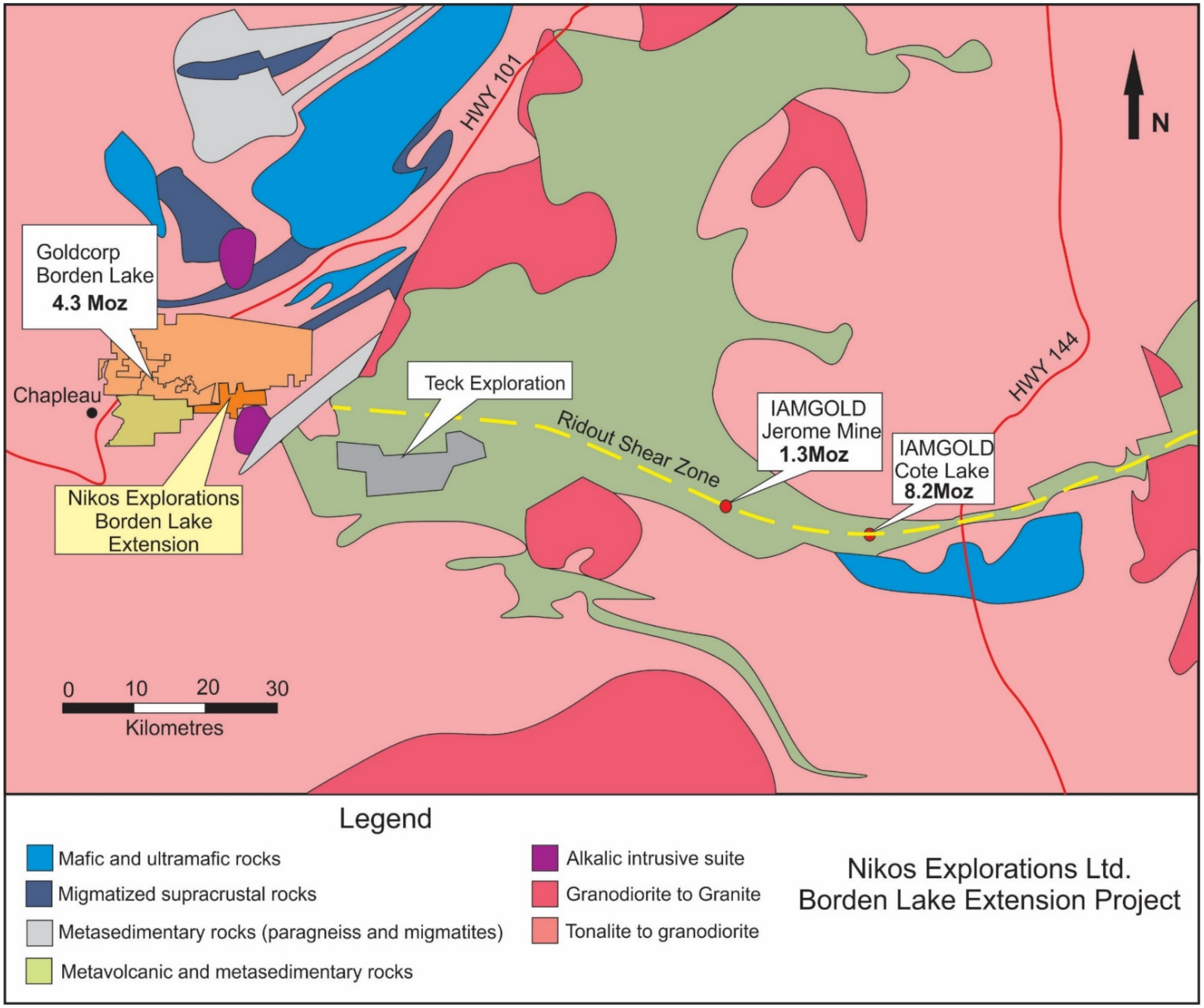


Figure 2. Regional Geology of the area around the Borden Lake Extension project

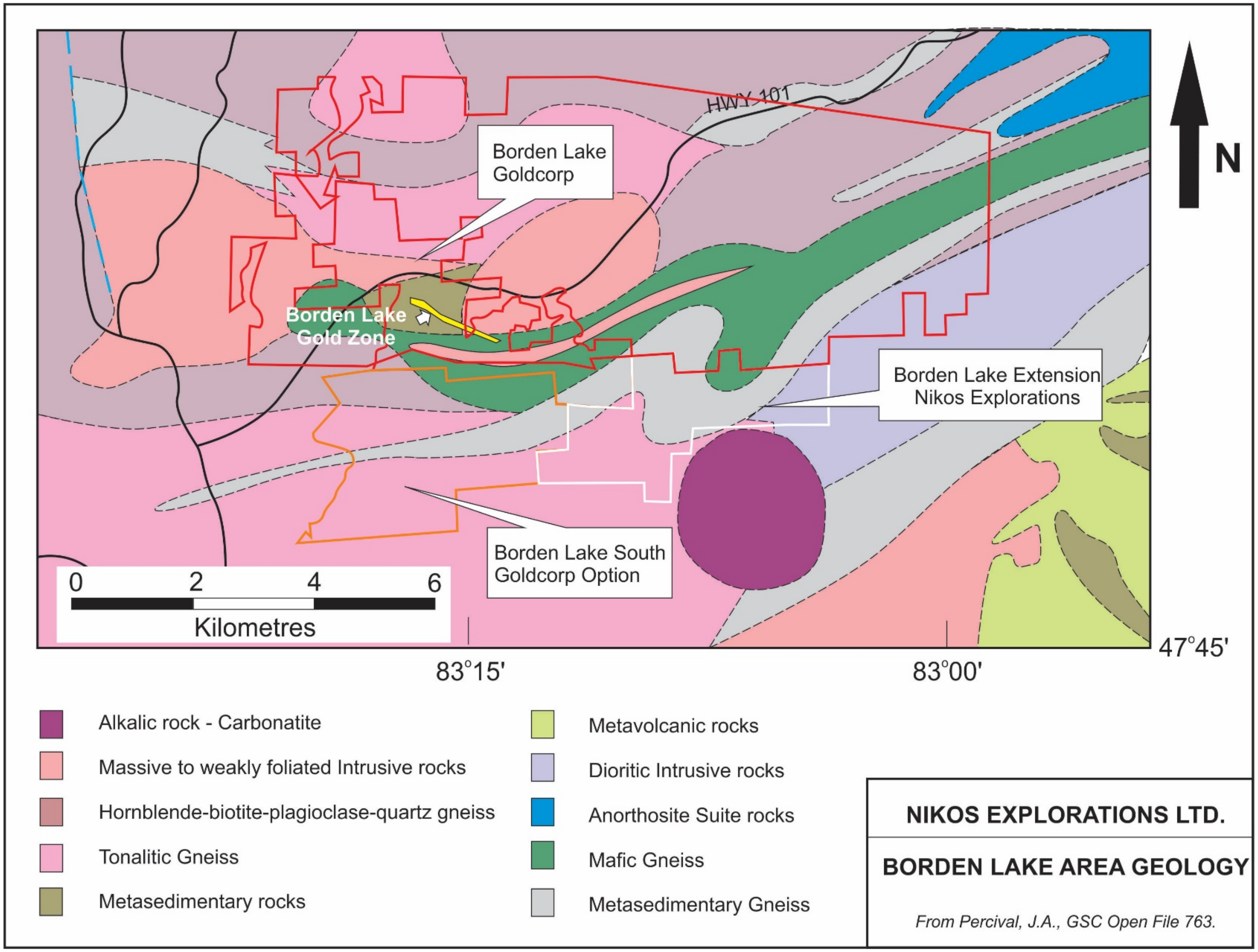


Figure 3 Detailed Geology of the Borden Lake extension area (from Percival, 1981).

5. Exploration

5.1 Geochemistry

5.1.1 Soil Gas Hydrocarbons

During October 2014, a total of 96 soil samples were taken over three lines oriented northeast-southwest in order to follow up on preliminary VLF-EM results that indicated northwest-southeast trending conductors. Samples were spaced at 25 metres along each line. A sample location map is shown in figure 4.

Results of the survey are described in detail in the accompanying report (Sutherland, 2014).

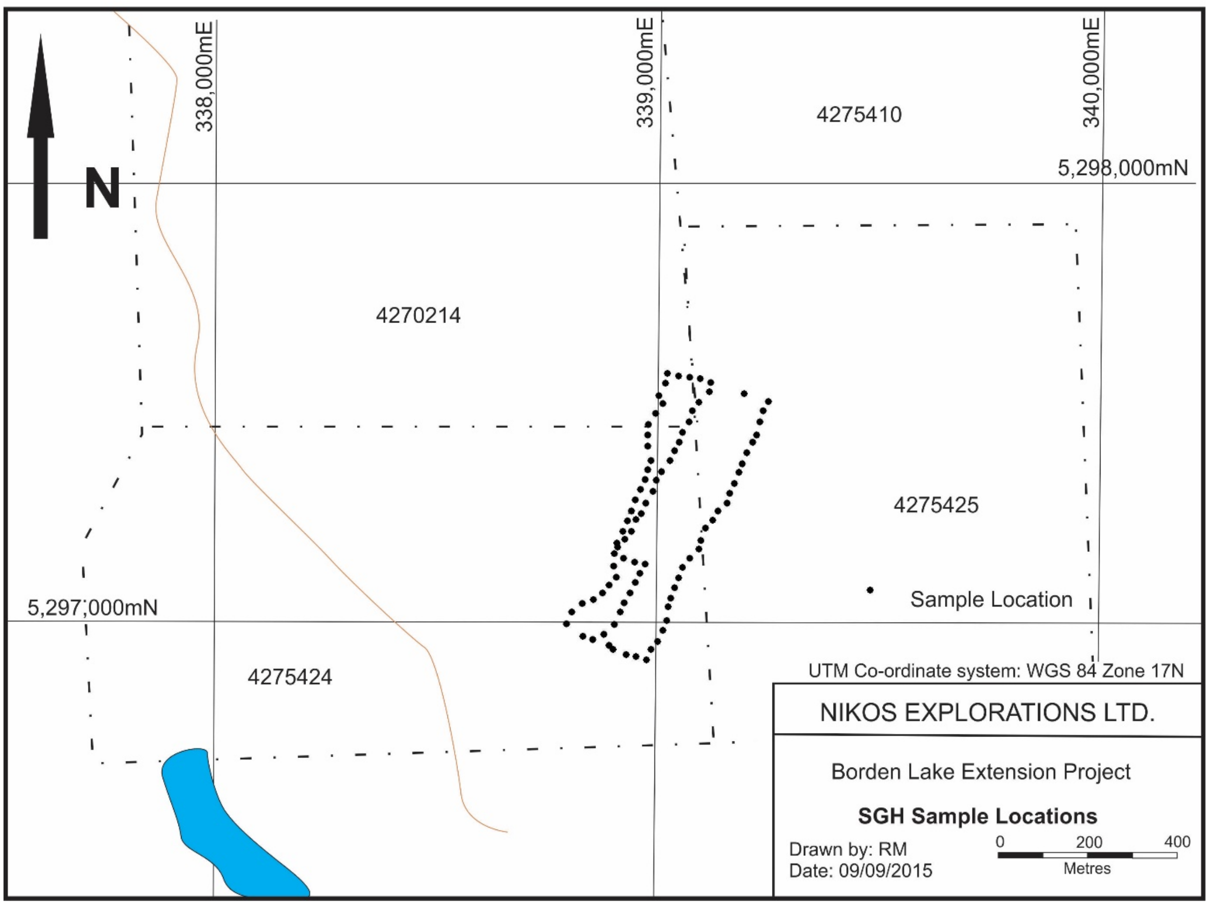


Figure 4. Location of Soil Gas Hydrocarbon (SGH) samples.

5.2 VLF-EM

Initially two lines of VLF-EM were run across a SGH anomaly in the north of claim 4260529 in the spring of 2014 to test the potential of the technique to pick up structures related to northwest-southeast trending lineaments. Several conductors were found on both lines and a larger survey was carried out to test the ground to the southeast.

A total of 25 line kilometres of VLF-EM was carried out on lines oriented at 020° at a spacing of 200m and 20m station intervals along the lines (see Figure 5).

At each line station, 2 transmitter stations were read using a Geonics VLF-Em-16 receiver. The following parameters were used throughout the survey:

VLF Transmitters Used–NAA-24.0 Hz. Cutler, Maine. NML-25.2 Hz. La Moure, N. Dakota
VLF survey direction -The VLF Em-16 receiver was facing a 200 azimuth along the surveys
VLF survey stations -All readings were taken at approximately 20 meter stations along survey lines
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.

Preliminary results of the VLF survey were reported by Moss, 2014. A detailed 3D interpretation of the results was carried out by Sean Parent and used as the basis to recommend drill targets. The interpretation and recommended drill targets are detailed in the accompanying report (Parent, 2014).

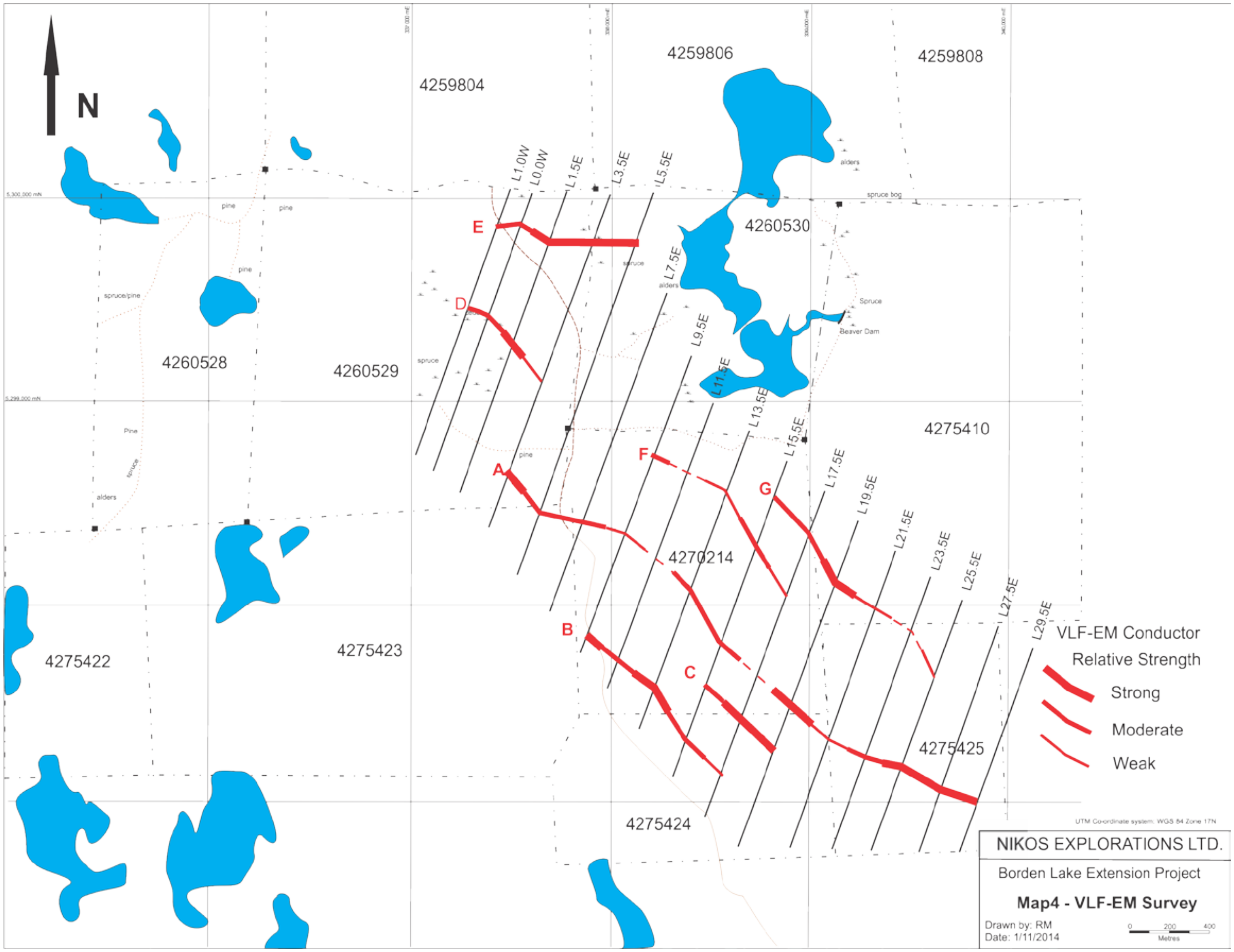


Figure 5. Location of VLF-EM conductors.

6. Conclusions and Recommendations

Exploration on the Borden Lake Extension project over the last two years has focussed on an area in the western portion of the claims where magnetic and topographic lineaments indicate the potential for structural trends that may have potential to host gold mineralization.

Lack of significant outcrop on the property has resulted in attempts to find techniques that can be cost effectively used for reconnaissance scale exploration. Two techniques, VLF-EM and SGH have resulted in anomalies in the area. Results of the VLF-EM survey indicates seven conductors of varying strength, the longest of which stretches over 2.6km in a northwest-southeast direction. While results of the SGH survey did not show a high degree of correlation with gold deposits, they did indicate the possible presence of a fault/structure.

Further work is recommended for the property to follow up on the results of the VLF and SGH surveys. Prospecting should be undertaken along conductors to attempt to find the cause, although with the scarce outcrop it is likely that soil sampling and assaying for SGH and/or MMI (Mobile Metal Ion) will also need to be carried out. Further encouraging results along the conductors should be followed up with line cutting and an induced polarization survey to determine potential drill targets.

7. References

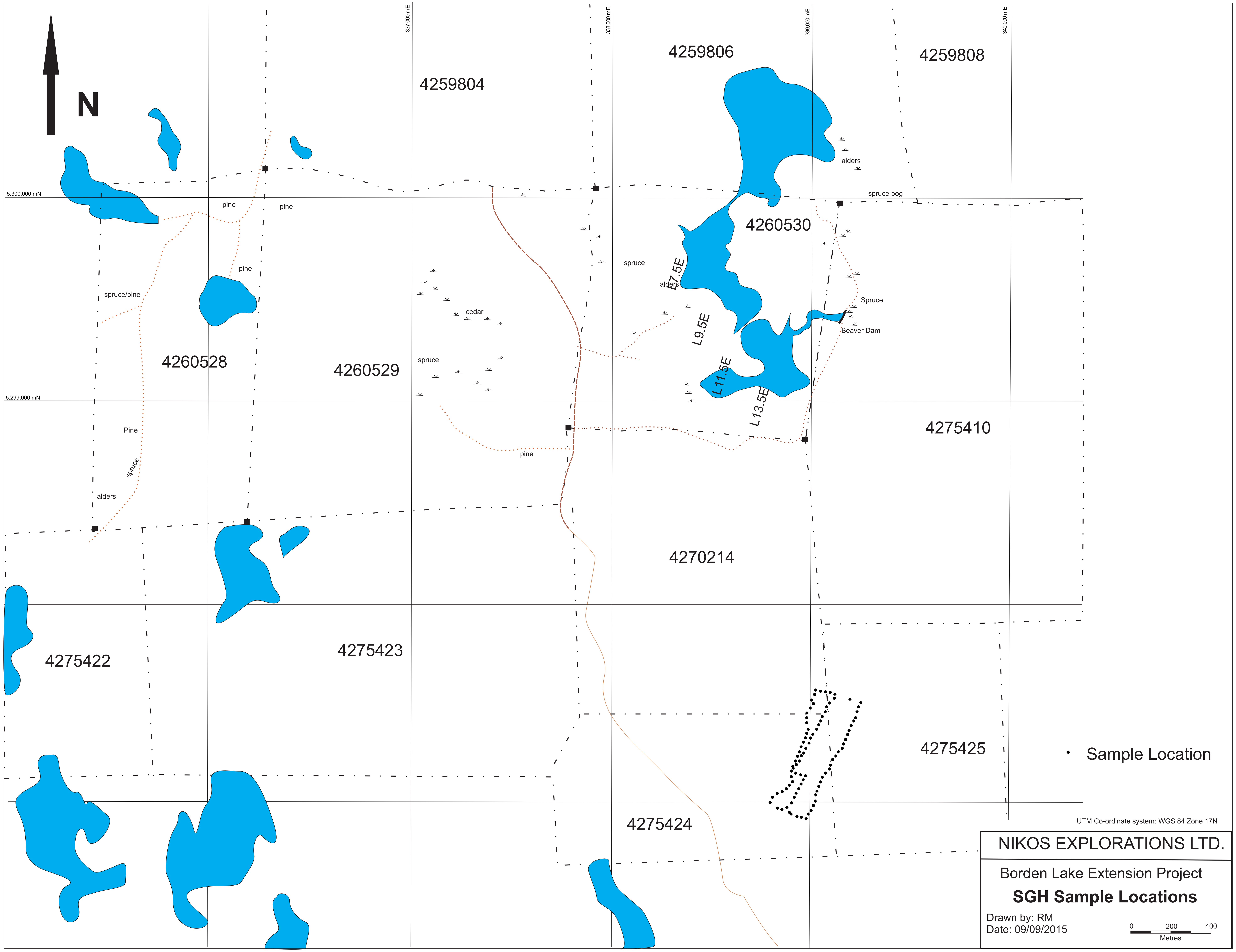
Heather, K.B., Percival, J.A., Moser, D., Bleeker, W. 1995,Tectonics and metallogeny of Archaean crust in the Abitibi-Kapuskasing-Wawa region, Geological Survey of Canada Open File 3141.

Moss, R., 2014, Report on Exploration Activities, Nikos Explorations Ltd., Borden Lake Extension Project, Chapleau, Ontario, Unpublished Assessment Report, 36p.

Parent, S., 2014, A VLF EM-16 Surveying Report on Borden East Property, McNaught Township, District of Patricia, Ontario. Unpublished internal report, 211p.

Percival, J.A.,1981. Preliminary Map, Geology of the Kapuskasing Structural Zone in the Chapleau-Foleyet Area, Ontario, Geological Survey of Canada, Open File 763.

Sutherland, D., 2014, SGH – Soil Gas Hydrocarbon, Predictive Geochemistry for Nikos Exploration Ltd., Borden Lake Extension - SGH Soil Survey. Unpublished Internal report, 59p.



N
4259804
4259806
4259808
4260530
4260528
4260529
4275410
4270214
4275422
4275423
4275425
4275424
L7.5E
L9.5E
L11.5E
L13.5E
5,300,000 mN
5,299,000 mN
337,000 mE
338,000 mE
339,000 mE
340,000 mE
pine
spruce/pine
Pine
spruce
alders
cedar
spruce bog
Spruce
Beaver Dam
• Sample Location
UTM Co-ordinate system: WGS 84 Zone 17N
NIKOS EXPLORATIONS LTD.
Borden Lake Extension Project
SGH Sample Locations
Drawn by: RM
Date: 09/09/2015
0
200
400
Metres


N
4259804
4259806
4259808
4260530
4260528
4260529
4275410
4270214
4275422
4275423
4275425
4275424
L1.0W
L0.0W
L1.5E
L3.5E
L5.5E
L7.5E
L9.5E
L11.5E
L13.5E
L15.5E
L17.5E
L19.5E
L21.5E
L23.5E
L25.5E
L27.5E
L29.5E
5,300,000 mN
5,299,000 mN
pine
spruce/pine
Pine
spruce
alders
cedar
spruce bog
Spruce
Beaver Dam
UTM Co-ordinate system: WGS 84 Zone 17N
NIKOS EXPLORATIONS LTD.
Borden Lake Extension Project
VLF-EM Survey Lines
Drawn by: RM
Date: 01/11/2014
Updated: 14/09/2015
0 200 400
Metres

A

VLF EM-16 Surveying Report

On

Borden East Property

McNaught Township

District of Patricia

Ontario

Prepared For

Nikos Exploration

By

Shaun Parent

Superior Exploration Adventure and Climbing Co. Ltd.

December 18, 2014

Contents

Executive Summary:

The VLF survey took place on property located in McNaught Township, District of Patricia in Northern Ontario.

The objective of the VLF EM-16 survey was to determine if it could delineate the location of interpreted structures on strike and southeast of the Probe Minerals, Borden Lake deposit.

In October 2014, a complimentary VLF EM-16 survey was carried out using a VLF EM-16 and a handheld Garmin GPS-60C. Two transmitter stations were read: NAA – Cutler, Maine and NML- La Moure, North Dakota.

This survey was a follow up to an earlier VLF EM-16 survey which was done in March 2014, which included 2 VLF lines: 1W and 00. These two lines are also included in this report.

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 VLF2DMF 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 Software can invert VLF-EM data acquired along a surveyed line at different frequencies. Data collected in the survey can be processed and profiles can be generated and displayed such as Raw Data, Fraser Filtered Data, KH, Resistivity and a (2-D) Modelled Inversion. The software can also generate plan maps and slices of Fraser, KH and 2D Inversion models of separate VLF survey lines.

Personnel

The VLF EM-16 operator and GPS field navigator responsible for the collection of all raw data was Shaun Parent who was assisted by field Assistant Sandra Slater. Interpretation of the VLF data using the VLF2DMF Software was completed by Shaun Parent.

Figure A: General Location Map of VLF Survey

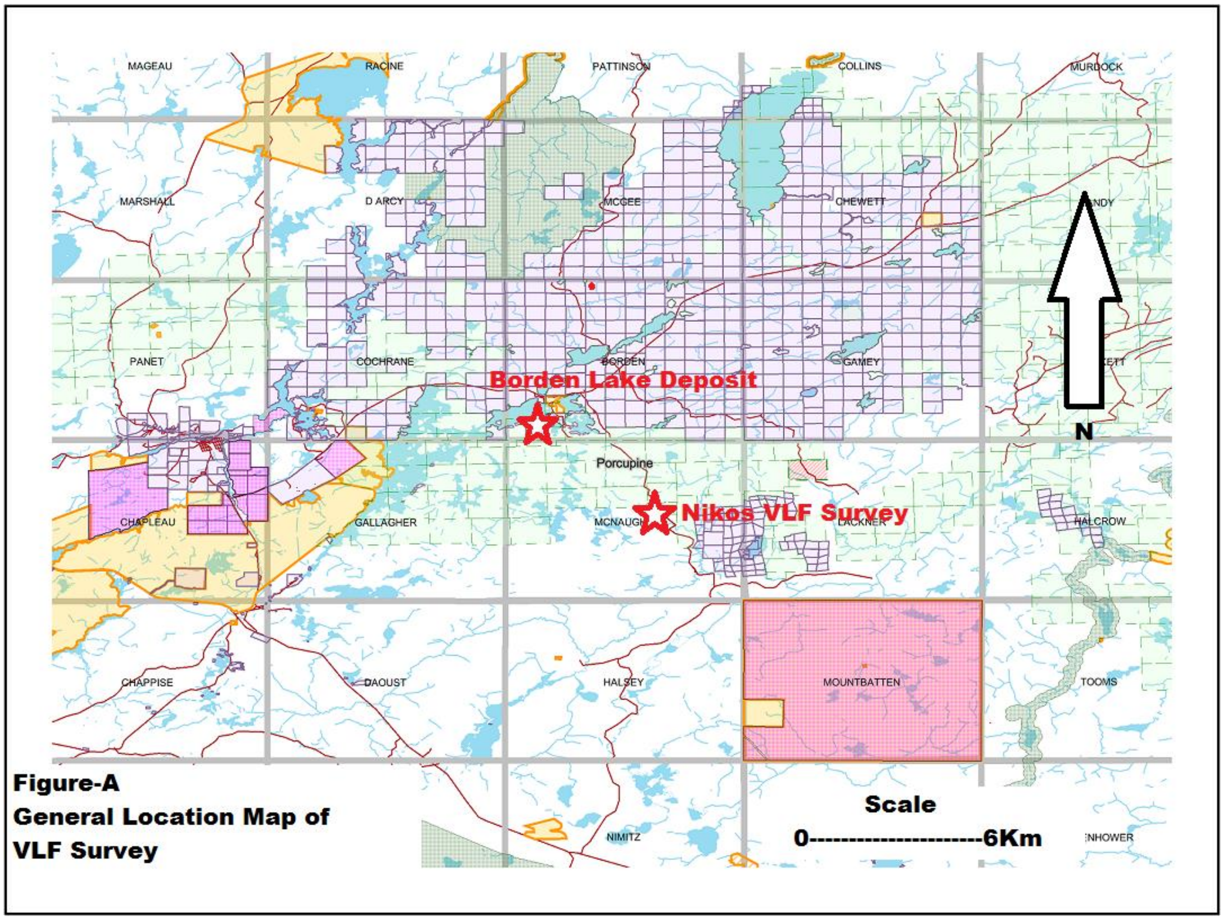
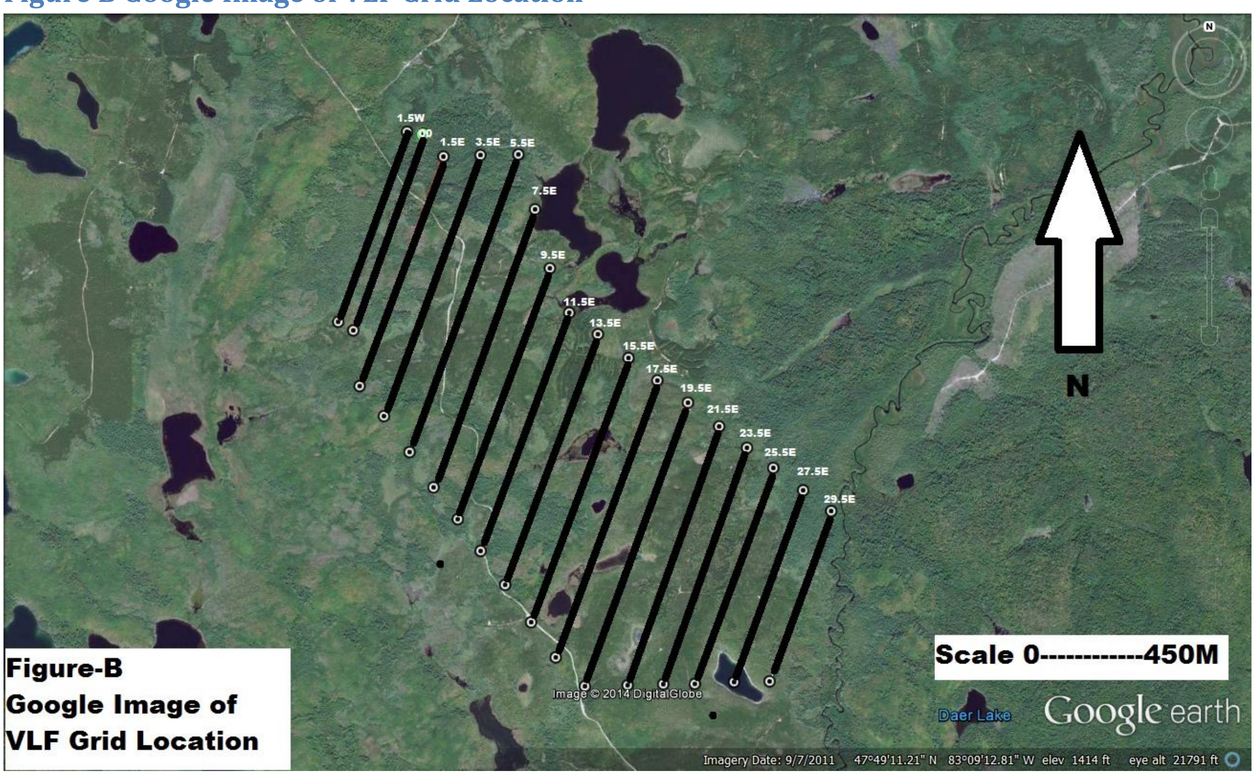


Figure B Google Image of VLF Grid Location



Work Performed

The VLF EM-16 survey consisted of running 15 VLF Lines in a direction of 20-200 degrees true azimuth using a handheld Garmin GPS. Line 00 and 1W were surveyed in March 2014. All VLF lines were approximately 150 meters apart.

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 (East) and NML-25.2 KHz-La Moure, North Dakota (West).

VLF survey direction: The VLF Em-16 receiver was facing 200 degrees along all lines. All lines began with station 0+00 located at northern end of each line.

VLF survey stations: All readings were taken at approximately 20 meter stations along the survey line. Stations were flagged every 100 meters along 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 GPS Unit (including local features such swamps, creeks 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)
- 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.

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	swamp
2+20N	8	4	2	4	oc
2+40N	6	5	0	2	creek

VLF Data Profiles

VLF data collected from each survey line was processed using the VLF2DMF software. Profiles for both frequencies read on each line are listed at the end of this report and consist of 5 figures for each transmitter: TX NAA Figures 1-5-NAA and TX NML Figures 1-5-NML.

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 2000 ohm's was used for all lines.

5: VLF Model 2000 Ohm for NAA-NML

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.

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 KH Profile and VLF Model.

- A summary of VLF anomalies for TX-NAA are listed in Tables 2 through 19. VLF anomalies for TX-NML are listed in Tables 20 through 35. These tables include the UTM and station location of each VLF anomaly and include the (anomaly symbol).
- NAA VLF Interpreted conductor locations are shown on a Google image in Figure C and NML VLF Interpreted conductors are shown on Google image in Figure D.

- The best VLF responses calculated from the apparent resistivity are summarized in the following tables.
- Table 36 refers to the best low resistivity responses for TX NAA.
- Table 37 refers to the best low resistivity responses for TX NML.
- Table 38 refers to the NAA/NML Resistivity Trend length and Comparisons
- Table 39 refers to the recommended drill hole locations to test the best VLF Conductors
- The trend of the low resistivity responses for NAA is shown in Figure E while the NML responses are shown in Figure F.

Table 2: VLF Interpretation Table Line 1W TX NAA

The maximum depth estimate is based on the depth calculated from the model with a resistivity of 2000 ohms and TX frequency of 24.0 which is 144 meters.

Transmitter NAA- Cutler, Maine 24.0 Hz.

Location	Line Location	VLF Anomaly Symbol	Notes
337494 5299850	2+20S	1W-NAA-A	
337436 5299682	4+00S	1W NAA-B	
337368 5299506	6+00S	1W NAA-C	
337350 5299450	6+60S	1W NAA-D	
337327 5299391	7+20S	1W NAA-E	
337297 5299333	7+80S	1W NAA-F	
337215 5299122	10+00S	1W NAA-G	
337177 5299053	10+80S	1W-NAA-H	

Table 3: VLF Interpretation Table Line 00 TX NAA

Transmitter NAA- Cutler, Maine 24.0

Location	Line Location	VLF Anomaly Symbol	Notes
337595 5299830	2+10S	00-NAA-A	
337557 5299748	2+80S	00-NAA-B	
337439 5299448	6+00S	00-NAA-C	
337400 5299359	7+00S	00-NAA-D	
337323 5299130	9+40S	00-NAA-E	
337295 5299058	10+20S	00-NAA-F	
337254 5298967	11+20S	00-NAA-G	

Table 4: VLF Interpretation Table Line 1.5E TX NAA

Transmitter NAA- Cutler, Maine 24.0

Location	Line Location	VLF Anomaly Symbol	Notes
337735 5299781	1+40S	1.5E-NAA-A	Swamp
337668 5299612	3+10S	1.5E-NAA-B	
337631 5299520	4+10S	1.5E-NAA-C	
337594 5299426	5+20S	1.5E-NAA-D	
337544 5299316	6+40S	1.5E-NAA-E	Swamp
337469 5299113	8+60S	1.5E-NAA-F	Swamp
337393 5298929	10+60S	1.5E-NAA-G	Swamp
337373 5298873	11+20S	1.5E-NAA-H	
337332 5298741	12+60S	1.5E-NAA-I	
337285 5298650	13+60S	1.5E-NAA-J	
337254 5298575	14+40S	1.5E-NAA-K	

Table 5: VLF Interpretation Table Line 3.5E TX NAA

Transmitter NAA- Cutler, Maine 24.0

Location	Line Location	VLF Anomaly Symbol	Notes
337937 5299766	1+60S	3.5E NAA-A	
337903 5299675	2+60S	3.5E NAA-B	
337771 5299337	6+10S	3.5E NAA-C	
337731 5299242	7+20S	3.5E NAA-D	
337678 5299114	8+60S	3.5E NAA-E	
337662 5299056	9+20S	3.5E NAA-F	Swamp Creek
337619 5298964	10+10S	3.5E NAA-G	
337553 5298798	12+00S	3.5E NAA-H	
337493 5298651	13+60S	3.5E NAA-I	

Table 6: VLF Interpretation Table Line 5.5E TX NAA

Transmitter NAA- Cutler, Maine 24.0

Location	Line Location	VLF Anomaly Symbol	Notes
338180 5299820	1+00S	5.5E NAA-A	
338143 5299725	2+00S	5.5E NAA-B	Swamp
338048 5299483	4+50S	5.5E NAA-C	
338013 5299389	5+50S	5.5E NAA-D	
337966 5299299	6+60S	5.5E NAA-E	Swamp
337913 5299149	8+20S	5.5E NAA-F	
337800 5298855	11+40S	5.5E NAA-G	
337660 5298507	15+20S	5.5E NAA-H	
337587 5298338	17+00S	5.5E NAA-I	

Table 7: VLF Interpretation Table Line 7.5E TX NAA

Transmitter NAA- Cutler, Maine 24.0

Location	Line Location	VLF Anomaly Symbol	Notes
338224 5299391	2+20S	7.5E NAA-A	Swamp
338187 5299299	3+20S	7.5E NAA-B	
338100 5299073	5+50S	7.5E NAA-C	Swamp
337937 5298663	10+00S	7.5E NAA-D	Outcrop
337912 5298609	10+60S	7.5E NAA-E	Outcrop
337851 5298460	12+20S	7.5E NAA-F	
337769 5298233	12+50S	7.5E NAA-G	
337700 5298067	16+40S	7.5E-NAA-H	

Table 8: VLF Interpretation Table Line 9.5E TX NAA

Transmitter NAA- Cutler, Maine 24.0

Location	Line Location	VLF Anomaly Symbol	Notes
338283 5299016	2+60S	9.5E NAA-A	
338235 5298885	4+00S	9.5E NAA-B	
338186 5298757	5+40S	9.5E NAA-C	
338134 5298645	6+60S	9.5E NAA-D	
338102 5298552	7+60S	9.5E NAA-E	
338063 5298469	8+40S	9.5E NAA-F	Swamp
338042 5298404	9+20S	9.5E NAA-G	
338003 5298312	10+20S	9.5E NAA-H	
337955 5298184	11+50S	9.5E NAA- I	
337883 5298038	13+20S	9.5E NAA-J	
337838 5297912	14+60S	9.5E NAA-K	Swamp

Table 9: VLF Interpretation Table Line 11.5E TX NAA

Transmitter NAA- Cutler, Maine 24.0KHz

Location	Line Location	VLF Anomaly Symbol	Notes
338435 5298861	1+40S	11.5E NAA-A	Outcrop
338397 5298770	2+40S	11.5E NAA-B	
338353 5298660	3+60S	11.5E NAA-C	
338229 5298365	6+80S	11.5E NAA-D	
338203 5298289	7+50S	11.5E NAA-E	
338164 5298218	8+40S	11.5E NAA-F	Swamp
338098 5298026	10+40S	11.5E NAA-G	Creek
338022 5297863	12+20S	11.5E NAA-H	
337993 5297766	13+20S	11.5E NAA-I	
337956 5297653	14+40S	11.5E-NAA-J	

Table 10: VLF Interpretation Table Line 13.5E TX NAA

Transmitter NAA- Cutler, Maine 24.0KHz

Location	Line Location	VLF Anomaly Symbol	Notes
338594 5298731	1+40S	13.5E NAA-A	
338530 5298566	3+20S	13.5E NAA-B	
338477 5298459	4+40S	13.5E NAA-C	
338406 5298247	6+60S	13.5E NAA-D	
338339 5298124	8+00S	13.5E NAA-E	
338273 5297933	10+00S	13.5E NAA-F	
338212 5297761	11+80S	13.5E-NAA-G	
338152 5297658	13+00S	13.5E-NAA-H	
338113 5297543	14+10S	13.5E NAA-I	
338065 5297441	15+40S	13.5E-NAA-J	

Table 11: VLF Interpretation Table Line 15.5E TX NAA

Transmitter NAA- Cutler, Maine 24.0KHz

Location	Line Location	VLF Anomaly Symbol	Notes
338748 5298551	1+80S	15.5E NAA-A	
338696 5298423	3+20S	15.5E NAA-B	
338654 5298311	4+40S	15.5E NAA-C	
338598 5298175	5+80S	15.5E NAA-D	
338475 5297864	9+20S	15.5E NAA-E	
338460 5297806	9+70S	15.5E NAA-F	
338405 5297661	11+40S	15.5E NAA-G	
338369 5297610	12+00S	15.5E NAA-H	
338314 5297580	13+40S	15.5E NAA-I	
338290 5297428	14+00S	15.5E NAA-J	
338246 5297292	15+40S	15.5E NAA-K	

Table 12: VLF Interpretation Table Line 17.5E TX NAA

Transmitter NAA- Cutler, Maine 24.0KHz

Location	Line Location	VLF Anomaly Symbol	Notes
338895 5298381	2+20S	17.5E NAA-A	Pond
338839 5298240	3+80S	17.5E NAA-B	
338808 5298170	4+60S	17.5E NAA-C	
338784 5298092	5+40S	17.5E NAA-D	
338751 5298011	6+20S	17.5E NAA-E	Swamp
338736 5297961	6+80S	17.5E NAA-F	Swamp
338676 5297811	8+30S	17.5E NAA-G	
338633 5297722	9+30S	17.5E NAA-H	
338549 5297516	11+60S	17.5E NAA-I	
338444 5297242	14+60S	17.5E NAA-J	
338397 5297129	15+80S	17.5E NAA-K	

Table 13: VLF Interpretation Table Line 19.5E TX NAA

Transmitter NAA- Cutler, Maine 24.0KHz

Location	Line Location	VLF Anomaly Symbol	Notes
339116 5298398	0+50S	19.5E NAA-A	
339086 5298310	1+50S	19.5E NAA-B	
339022 5298145	3+40S	19.5E NAA-C	Creek
338994 5298074	4+20S	19.5E NAA-D	
338941 5297941	5+50S	19.5E NAA-E	
338911 5297864	6+30S	19.5E NAA-F	
338869 5297752	7+50S	19.5E NAA-G	
338813 5297581	9+30S	19.5E NAA-H	
338747 5297456	10+70S	19.5E NAA-I	
338719 5297359	11+80S	19.5E NAA-J	
338689 5297288	12+60S	19.5E NAA-K	
338631 5297137	14+10S	19.5E NAA-L	
338590 5297006	15+60S	19.5E NAA-M	

Table 14: VLF Interpretation Table Line 21.5E TX NAA

Transmitter NAA- Cutler, Maine 24.0KHz

Location	Line Location	VLF Anomaly Symbol	Notes
339304 5298242	0+80S	21.5E NAA-A	Creek
339250 5298115	2+20S	21.5E NAA-B	Creek
339231 5298062	2+80S	21.5E NAA-C	
339201 5297986	3+60S	21.5E NAA-D	
339180 5297931	4+10S	21.5E NAA-E	
339124 5297798	5+60S	21.5E NAA-F	
339097 5297724	6+30S	21.5E NAA-G	
339067 5297647	7+20S	21.5E NAA-H	
339036 5297576	8+00S	21.5E NAA-I	
338980 5297427	9+60S	21.5E NAA-J	
338912 5297260	11+40S	21.5E NAA-K	
338837 5297157	12+60S	21.5E NAA-L	Pond
338770 5296952	14+60S	21.5E NAA-M	

Table 15: VLF Interpretation Table Line 23.5E TX NAA

Transmitter NAA- Cutler, Maine 24.0KHz

Location	Line Location	VLF Anomaly Symbol	Notes
339453 5298102	1+00S	23.5E NAA-A	
339373 5297894	3+10S	23.5E NAA-B	
339347 5297839	3+80S	23.5E NAA-C	
339259 5297641	6+00S	23.5E NAA-D	
339207 5297488	7+60S	23.5E NAA-E	
339168 5297397	8+60S	23.5E NAA-F	
339118 5297247	10+20S	23.5E NAA-G	
339037 5297043	12+30S	23.5E NAA-H	

Table 16: VLF Interpretation Table Line 25.5E TX NAA

Transmitter NAA- Cutler, Maine 24.0KHz

Location	Line Location	VLF Anomaly Symbol	Notes
339595 5297979	0+90S	25.5E NAA-A	
339573 5297924	1+60S	25.5E NAA-B	
339535 5297833	2+50S	25.5E NAA-C	
339494 5297719	3+80S	25.5E NAA-D	
339470 5297662	4+40S	25.5E NAA-E	Swamp
339428 5297554	5+60S	25.5E NAA-F	
339300 5297215	9+20S	25.5E NAA-G	
339243 5297108	10+30S	25.5E NAA-H	
339243 5297108	11+10S	25.5E NAA-I	
339183 5296917	12+40S	25.5E NAA-J	

Table 17: VLF Interpretation Table Line 27.5E TX NAA

Transmitter NAA- Cutler, Maine 24.0KHz

Location	Line Location	VLF Anomaly Symbol	Notes
339732 5297751	2+00S	27.5E NAA-A	
339720 5297718	2+40S	27.5E NAA-B	
339668 5297604	3+60S	27.5E NAA-C	
339623 5297492	4+70S	27.5E NAA-D	
339529 5297271	7+10S	27.5E NAA-E	
339523 5297253	7+40S	27.5E NAA-F	
339483 5297140	8+60S	27.5E NAA-G	
339449 5297068	9+40S	27.5E NAA-H	

Table 18: VLF Interpretation Table Line 29.5E TX NAA

Transmitter NAA- Cutler, Maine 24.0KHz

Location	Line Location	VLF Anomaly Symbol	Notes
339903 5297695	1+40S	29.5E NAA-A	Swamp
339799 5297438	4+20S	29.5E NAA-B	Swamp
339670 5297122	7+50S	29.5E NAA-C	
339644 5297047	8+40S	29.5E NAA-D	
339612 5296974	9+20S	29.5E NAA-E	

Table 19: VLF Interpretation Table Line 1W TX NML

The maximum depth estimate is based on the depth calculated from the model with a resistivity of 2000 ohms and TX frequency of 25.2 which is 140 meters

Transmitter NML- La Moure N. Dakota, 25.2Khz

Location	Line Location	VLF Anomaly Symbol	Notes
337542 5299963	1+00S	1W NML-A	
337522 5299907	1+60S	1W NML-B	
337491 5299831	2+40S	1W NML-C	
337477 5299777	3+00S	1W NML-D	
337436 5299682	3+90S	1W NML-E	
337356 5299473	6+40S	1W NML-F	
337320 5299372	7+40S	1W NML-G	
337297 5299333	7+80S	1W NML-H	
337215 5299122	10+00S	1W NML-I	
337165 5299013	11+20S	1W NML-J	

Table 20: VLF Interpretation Table Line 00 TX NML

Transmitter NML- La Moure N. Dakota, 25.2Khz

Location	Line Location	VLF Anomaly Symbol	Notes
337635 5299932	0+80S	00-NML-A	
337600 5299840	1+80S	00-NML-B	
337487 5299580	4+50S	00-NML-C	
337439 5299448	6+00S	00-NML-D	
337407 5299377	6+80S	00-NML-E	
337361 5299245	8+10S	00-NML-F	
337323 5299130	9+40S	00-NML-G	
337295 5299058	10+20S	00-NML-H	
337250 5298948	11+40S	00-NML-I	

Table 21: VLF Interpretation Table Line 1.5E TX NML

Transmitter NML- La Moure N. Dakota, 25.2Khz

Location	Line Location	VLF Anomaly Symbol	Notes
337735 5299781	1+40S	1.5E NML-A	Swamp
337676 5299630	3+00S	1.5E NML-B	
337631 5299520	4+10S	1.5E NML-C	
337594 5299426	5+20S	1.5E NML-D	
337544 5299316	6+40S	1.5E NML-E	Swamp
337479 5299131	8+40S	1.5E NML-F	Swamp
337431 5299019	9+50S	1.5E NML-G	
337393 5298929	10+60S	1.5E NML-H	Swamp
337373 5298873	11+20S	1.5E NML-I	
337322 5298741	12+60S	1.5E NML-J	
337285 5298650	13+60S	1.5E NML-K	
337247 5298557	14+60S	1.5E NML-L	

Table 22: VLF Interpretation Table Line 3.5E TX NML

Transmitter NML- La Moure N. Dakota, 25.2Khz

Location	Line Location	VLF Anomaly Symbol	Notes
337937 5299766	1+60S	3.5E NML-A	
337903 5299675	2+60S	3.5E NML-B	
337840 5299523	4+10S	3.5E NML-C	
337800 5299412	5+30S	3.5E NML-D	
337775 5299358	6+00S	3.5E NML-E	
337731 5299242	7+20S	3.5E NML-F	
337678 5299114	8+60S	3.5E NML-G	
337655 5299038	9+40S	3.5E NML-H	Swamp
337611 5298946	10+40S	3.5E NML-I	
337553 5298798	12+00S	3.5E NML-J	
337531 5298741	12+60S	3.5E NML-K	
337493 5298651	13+60S	3.5E NML-L	
337448 5298543	14+70S	3.5E NML-M	

Table 23: VLF Interpretation Table Line 5.5E TX NML

Transmitter NML- La Moure N. Dakota, 25.2Khz

Location	Line Location	VLF Anomaly Symbol	Notes
338189 5299840	0+80S	5.5E NML-A	Swamp
338143 5299725	2+00S	5.5E NML-B	Swamp
338013 5299389	5+60S	5.5E NML-C	
337966 5299299	6+60S	5.5E NML-D	Swamp
337913 5299149	8+20S	5.5E NML-E	
337867 5299037	9+40S	5.5E NML-F	
337840 5298966	10+20S	5.5E NML-G	
337800 5298855	11+40S	5.5E NML-H	
337768 5298799	12+00S	5.5E NML-I	
337711 5298652	13+50S	5.5E NML-J	
337660 5298507	15+50S	5.5E NML-K	
337587 5298338	17+00S	5.5E NML-L	

Table 24: VLF Interpretation Table Line 7.5E TX NML

Transmitter NML- La Moure N. Dakota, 25.2Khz

Location	Line Location	VLF Anomaly Symbol	Notes
338224 5299391	2+20S	7.5E NML-A	Swamp
338187 5299299	3+20S	7.5E NML-B	
338150 5299202	4+10S	7.5E NML-C	
338100 5299073	5+60S	7.5E NML-D	Creek
338035 5298849	7+10S	7.5E NML-E	
338011 5298849	8+00S	7.5E NML-F	
337985 5298773	8+80S	7.5E NML-G	
337961 5298719	9+40S	7.5E NML-H	
337912 5298609	10+60S	7.5E NML-I	Outcrop
337851 5298460	12+20S	7.5E NML-J	
337797 5298330	13+70S	7.5E NML-K	
337769 5298233	14+60S	7.5E NML-L	

Table 25: VLF Interpretation Table Line 9.5E TX NML

Transmitter NML- La Moure N. Dakota, 25.2Khz

Location	Line Location	VLF Anomaly Symbol	Notes
338283 5299016	2+60S	9.5E NML-A	
338229 5298865	4+20S	9.5E NML-B	
338186 5298757	5+40S	9.5E NML-C	
338134 5298645	6+60S	9.5E NML-D	
338102 5298552	7+60S	9.5E NML-E	
338077 5298495	8+20S	9.5E NML-F	Swamp
338042 5298404	9+20S	9.5E NML-G	
338003 5298312	10+20S	9.5E NML-H	
337955 5298184	11+60S	9.5E NML-I	
337883 5298038	13+20S	9.5E NML-J	
337856 5297938	14+20S	9.5E NML-K	Swamp

Table 26: VLF Interpretation Table Line 11.5E TX NML

Transmitter NML- La Moure N. Dakota, 25.2Khz

Location	Line Location	VLF Anomaly Symbol	Notes
338435 5298861	1+40S	11.5E NML-A	Outcrop
338397 5298770	2+40S	11.5E NML-B	
338353 5298660	3+60S	11.5E NML-C	
338324 5298603	4+10S	11.5E NML-D	
338278 5298472	5+60S	11.5E NML-E	
338229 5298365	6+70S	11.5E NML-F	
338164 5298218	8+40S	11.5E NML-G	
338118 5298108	9+60S	11.5E NML-H	
338098 5298027	10+40S	11.5E NML-I	Creek
338072 5297970	11+00S	11.5E NML-J	
338018 5297841	12+40S	11.5E NML-K	
337969 5297710	13+80S	11.5E NML-M	

Table 27: VLF Interpretation Table Line 13.5E TX NML

Transmitter NML- La Moure N. Dakota, 25.2Khz

Location	Line Location	VLF Anomaly Symbol	Notes
338562 5298658	2+20S	13.5E NML-A	
338530 5298566	3+20S	13.5E NML-B	
338477 5298459	4+10S	13.5E NML-C	
338406 5298247	6+50S	13.5E NML-D	
338339 5298124	8+00S	13.5E NML-E	
338254 5297897	10+40S	13.5E NML-F	
338237 5297839	10+90S	13.5E NML-G	
338212 5297761	11+80S	13.5E NML-H	
338152 5297658	13+00S	13.5E NML-I	
338103 5297528	14+30S	13.5E NML-J	

Table 28: VLF Interpretation Table Line 15.5E TX NML

Transmitter NML- La Moure N. Dakota, 25.2Khz

Location	Line Location	VLF Anomaly Symbol	Notes
338748 5298551	1+80S	15.5E NML-A	
338696 5298423	3+20S	15.5E NML-B	
338654 5298311	4+40S	15.5E NML-C	
338598 5298175	5+80S	15.5E NML-D	
338475 5297864	9+20S	15.5E NML-E	
338460 5297806	9+80S	15.5E NML-F	
338405 5297806	11+40S	15.5E NML-G	
338369 5297610	12+00S	15.5E NML-H	
338314 5297480	13+40S	15.5E NML-I	
338290 5297428	14+00S	15.5E NML-J	

Table 29: VLF Interpretation Table Line 17.5E TX NML

Transmitter NML- La Moure N. Dakota, 25.2Khz

Location	Line Location	VLF Anomaly Symbol	Notes
338895 5298381	2+20S	17.5E NML-A	Pond
338870 5298311	2+90S	17.5E NML-B	
338839 5298240	3+80S	17.5E NML-C	
338808 5298170	4+60S	17.5E NML-D	Creek
338788 5298110	5+20S	17.5E NML-E	
338779 5298071	5+50S	17.5E NML-F	
338676 5297811	8+30S	17.5E NML-G	
338643 5297740	9+10S	17.5E NML-H	
338610 5297648	10+20S	17.5E NML-I	
338549 5297516	11+60S	17.5E NML-J	
338511 5297409	12+70S	17.5E NML-K	
338484 5297334	13+60S	17.5E NML-L	
338444 5297242	14+60S	17.5E NML-M	
338404 5297148	15+60S	17.5E NML-N	
338384 5297093	16+20S	17.5E NML-O	

Table 30: VLF Interpretation Table Line 19.5E TX NML

Transmitter NML- La Moure N. Dakota, 25.2Khz

Line 19.5E

Location	Line Location	VLF Anomaly Symbol	Notes
339085 5298310	1+60S	19.5E NML-A	
339043 5298210	2+70S	19.5E NML-B	
339022 5298145	3+40S	19.5E NML-C	Creek
338994 5298074	4+20S	19.5E NML-D	
338905 5297828	6+70S	19.5E NML-E	
338879 5297772	7+30S	19.5E NML-F	
338835 5297678	8+30S	19.5E NML-G	
338805 5297564	9+60S	19.5E NML-H	
338696 5297308	12+40S	19.5E NML-I	
338666 5297229	13+10S	19.5E NML-J	
338590 5297006	15+60S	19.5E NML-K	

Table 31: VLF Interpretation Table Line 21.5E TX NML

Transmitter NML- La Moure N. Dakota, 25.2Khz

Line 21.5E

Location	Line Location	VLF Anomaly Symbol	Notes
339304 5298242	0+70S	21.5E NML-A	Swamp
339250 5298115	2+20S	21.5E NML-B	Swamp
339231 5298062	2+80S	21.5E NML-C	
339201 5297986	3+60S	21.5E NML-D	
339176 5297913	4+40S	21.5E NML-E	
339124 5297798	5+60S	21.5E NML-F	
339089 5297704	6+60S	21.5E NML-G	
339067 5297647	7+20S	21.5E NML-H	
339036 5297576	8+00S	21.5E NML-I	
338980 5297427	9+60S	21.5E NML-J	
338929 5297294	11+00S	21.5E NML-K	
338823 5297143	12+70S	21.5E NML-L	Pond
338770 5296952	14+80S	21.5E NML-M	

Table 32: VLF Interpretation Table Line 23.5E TX NML

Transmitter NML- La Moure N. Dakota, 25.2Khz
Line 23.5E

Location	Line Location	VLF Anomaly Symbol	Notes
339453 5298102	1+00S	23.5E NML-A	
339378 5297913	3+00S	23.5E NML-B	
339339 5297819	4+00S	23.5E NML-C	
339265 5297660	5+70S	23.5E NML-D	
339207 5297488	7+60S	23.5E NML-E	
339168 5297397	8+50S	23.5E NML-F	
339137 5297302	9+60S	23.5E NML-G	
339118 5297247	10+20S	23.5E NML-H	
339085 5297175	10+90S	23.5E NML-I	
339037 5297043	12+40S	23.5E NML-J	
339007 5296969	13+40S	23.5E NML-K	

Table 33: VLF Interpretation Table Line 25.5E TX NML

Transmitter NML- La Moure N. Dakota, 25.2Khz
Line 25.5E

Location	Line Location	VLF Anomaly Symbol	Notes
339573 5297924	1+60S	25.5E NML-A	
339535 5297833	2+60S	25.5E NML-B	
339501 5297736	3+50S	25.5E NML-C	
339470 5297662	4+40S	25.5E NML-D	
339428 5297554	5+60S	25.5E NML-E	
339360 5297384	7+30S	25.5E NML-F	
339310 5297254	8+70S	25.5E NML-G	
339243 5297108	10+30S	25.5E NML-H	
339214 5297033	11+10S	25.5E NML-I	
339183 5296917	12+40S	25.5E NML-J	

Table 34: VLF Interpretation Table Line 27.5E TX NML

Transmitter NML- La Moure N. Dakota, 25.2Khz
Line 27.5E

Location	Line Location	VLF Anomaly Symbol	Notes
339760 5297860	0+70S	27.5E NML-A	Swamp
339720 5297718	2+40S	27.5E NML-B	
339686 5297642	3+20S	27.5E NML-C	
339604 5297437	5+40S	27.5E NML-D	
339582 5297359	6+20S	27.5E NML-E	
339539 5297291	7+00S	27.5E NML-F	
339509 5297194	8+00S	27.5E NML-G	
339483 5297140	8+60S	27.5E NML-H	

Table 35: VLF Interpretation Table Line 29.5E TX NML

Transmitter NML- La Moure N. Dakota, 25.2Khz
Line 29.5E

Location	Line Location	VLF Anomaly Symbol	Notes
339889 5297659	1+80S	29.5E NML-A	
339822 5297493	3+60S	29.5E NML-B	
339799 5297438	4+20S	29.5E NML-C	Swamp
339725 5297250	6+20S	29.5E NML-D	
339690 5297158	7+20S	29.5E NML-E	
339670 5297122	7+60S	29.5E NML-F	
339644 5297047	8+40S	29.5E NML-G	
339620 5296993	8+90S	29.5E NML-H	

Figure C: Google Image of TX-NAA Fraser Picks

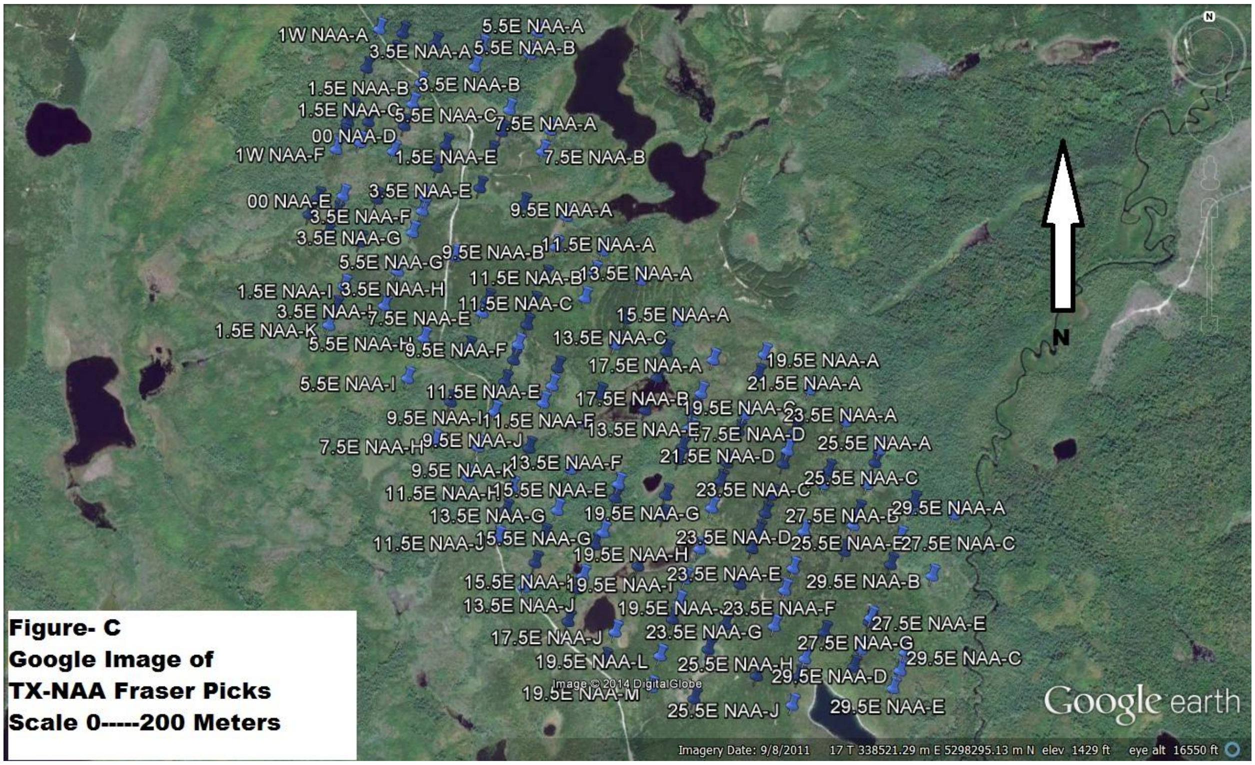


Figure D: Google Image of TX NML Fraser Picks

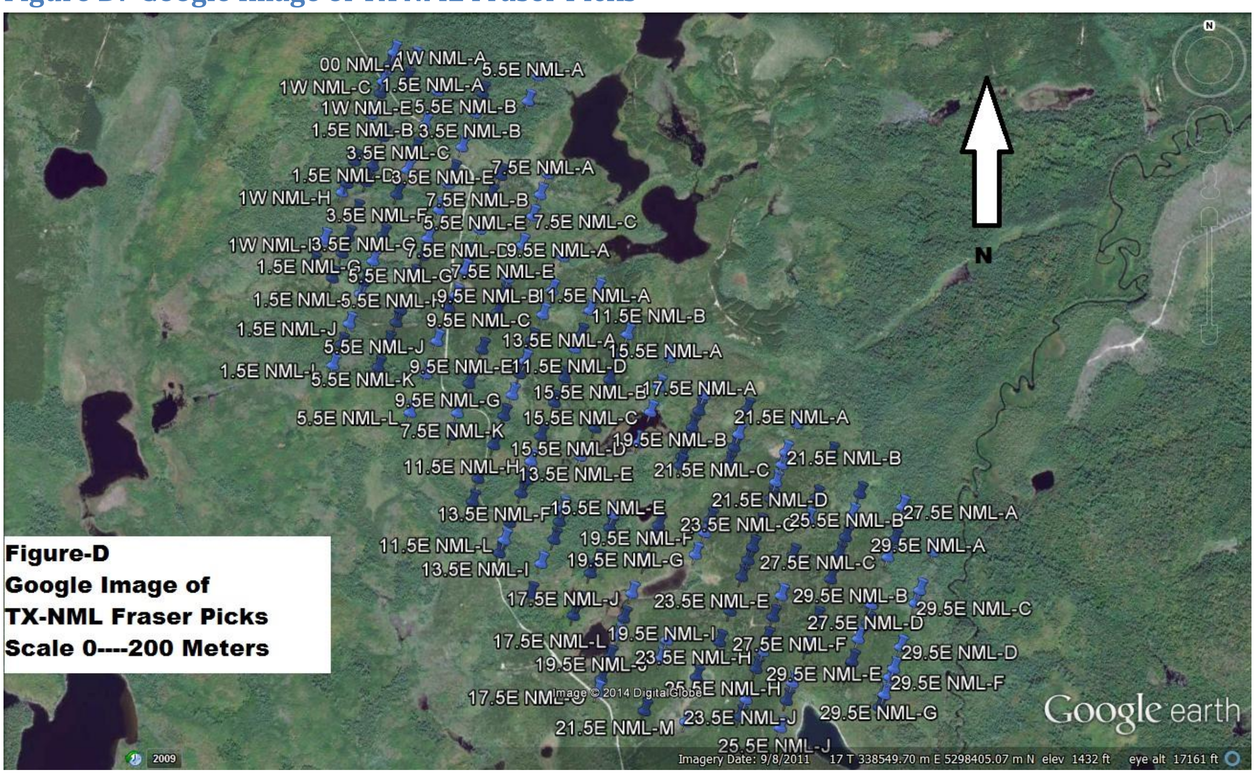


Table 36: TX NAA VLF Calculated Resistivity Anomalies at 2000 Ohm

Line Number	UTM	Station Location	NAA Resistivity Anomaly	NAA Resistivity Trend
1W	337491 5299840	2+20S	1W-NAA R-A	Trend 1
1W	337353 5299462	6+40S	1W-NAA R-B	Trend 3
1W	337211 5299113	10+00S	1W-NAA R-C	
00	337605 5299850	1+60S	00-NAA R-A	Trend 1
00	337438 5299438	6+00W	00-NAA R-B	Trend 3
1.5E	337732 5299770	1+40S	1.5E-NAA R-A	Trend 1
1.5E	337542 5299307	6+40S	1.5E-NAA R-B	Trend 3
1.5E	337281 5298639	13+60S	1.5E-NAA R-C	
3.5E	337936 5299757	1+60S	3.5E-NAA R-A	Trend 1
3.5E	337675 5299105	8+60S	3.5E-NAA R-B	Trend 3
3.5E	337659 5299047	9+20S	3.5E-NAA R-C	
3.5E	337497 5298661	13+40S	3.5E-NAA R-D	Trend 6
5.5E	338147 5299735	1+80S	5.5E-NAA R-A	Trend 1
5.5E	337909 5299139	8+20S	5.5E-NAA R-B	Trend 2
5.5E	337656 5298496	15+20S	5.5E-NAA R-C	Trend 6
7.5E	338222 5299382	2+20S	7.5E-NAA R-A	
7.5E	338112 5299103	5+20S	7.5E-NAA R-B	Trend 2
7.5E	337851 5298450	12+20S	7.5E-NAA R-C	Trend 6
9.5E	338184 5298749	5+40S	9.5E-NAA R-A	Trend 5
9.5E	338036 5298395	9+20S	9.5E-NAA R-B	Trend 6
9.5E	337843 5297916	14+40S	9.5E-NAA R-C	Trend 8
11.5E	337997 5297776	13+00S	11.5E-NAA R-A	Trend 6
13.5E	338525 5298556	3+20S	13.5E-NAA R-A	Trend 5
13.5E	338337 5298115	8+00S	13.5E-NAA R-B	Trend 6
13.5E	338148 5297648	13+00S	13.5E-NAA R-C	Trend 8
13.5E	338063 5297435	15+40S	13.5E NAA R -D	

15.5E	338745 5298541	1+80S	15.5E-NAA R-A	Trend 4
15.5E	338650 5298302	4+40S	15.5E-NAA R-B	Trend 5
15.5E	338472 5297856	9+20S	15.5E-NAA R-C	Trend 6
15.5E	338401 5297652	11+40S	15.5E-NAA R-D	Trend 7
15.5E	338287 5297418	14+00S	15.5E-NAA R-E	Trend 8
17.5E	338893 5298371	2+20S	17.5E-NAA R-A	Trend 4
17.5E	338783 5298081	5+40S	17.5E-NAA R-B	Trend 5
17.5E	338546 5297504	11+60S	17.5E-NAA R-C	Trend 7
17.5E	338449 5297252	14+40S	17.5E-NAA R-D	Trend 8
19.5E	339013 5298115	3+60S	19.5E-NAA R-A	Trend 4
19.5E	338799 5297556	9+60S	19.5E-NAA R -B	Trend 6
19.5E	338713 5297333	12+00S	19.5E-NAA R-C	Trend 7
21.5E	338966 5297379	10+00S	21.5E-NAA R-A	Trend 6
23.5E	339366 5297867	3+40S	23.5E-NAA R-A	Trend 4
23.5E	339194 5297440	8+00S	23.5E-NAA R-B	
23.5E	339172 5297406	8+40S	23.5E-NAA R-C	
23.5E	339134 5297293	9+60S	23.5E-NAA R-D	Trend 6
23.5E	338979 5296906	13+80S	23.5E-NAA R-E	Trend 9
25.5E	339467 5297653	4+40S	25.5E-NAA R-A	Trend 4
25.5E	339306 5297245	8+80S	25.5E-NAA R-B	Trend 6
25.5E	339170 5296888	12+60S	25.5E-NAA R-C	Trend 9
27.5E	339704 5297688	2+60S	27.5E-NAA R-A	
27.5E	339521 5297243	7+40S	27.5E-NAA R-B	
27.5E	339480 5297133	8+60S	27.5E-NAA R-C	Trend 6
29.5E	339900 5297686	1+40S	29.5E-NAA R-A	Trend 6
29.5E	339818 5297482	3+60S	29.5E-NAA R-B	
29.5E	339649 5297057	8+20S	29.5E-NAA R-C	Trend 6

Table 37: TX NML VLF Calculated Resistivity Anomalies at 2000 Ohm

Line Number	UTM	Station Location	NML Resistivity Anomaly	NML Resistivity Trend
1W	337518 5299896	1+60S	1W-NML R-A	
1W	337498 5299860	2+00S	1W-NML R-B	Trend 1
1W	337353 5299462	6+40S	1W-NML R-C	Trend 3
1W	337211 5299113	11+00S	1W-NML R-D	Trend 8
00	337605 5299850	1+60S	00-NML R-A	Trend 1
00	337438 5299438	6+00S	00-NML R-B	Trend 3
1.5E	337732 5299770	1+40S	1.5E-NML R-A	Trend 1
1.5E	337542 5299307	6+40S	1.5E-NML R-B	Trend 3
1.5E	337349 5298807	11+80S	1.5E-NML R-C	Trend 8
1.5E	337281 5298639	13+60S	1.5E-NML R-D	
3.5E	337936 5299757	1+60S	3.5E-NML R-A	Trend 1
3.5E	337695 5299140	8+20S	3.5E-NML R-B	
3.5E	337675 5299105	8+60S	3.5E-NML R-C	Trend 3
3.5E	337659 5299047	9+20S	3.5E-NML R-D	
3.5E	337616 5298955	10+20S	3.5E-NML R-E	
3.5E	337497 5298661	13+40S	3.5E-NML R-F	Trend 8
5.5E	338147 5299735	1+80S	5.5E-NML R-A	Trend 1
5.5E	337909 5299139	8+20S	5.5E-NML R-B	Trend 2
5.5E	337656 5298496	15+20S	5.5E-NML R-C	Trend 8
7.5E	338222 5299382	2+20S	7.5E-NML R-A	
7.5E	338108 5299083	5+40S	7.5E-NML R-B	Trend 2
7.5E	337851 5298450	12+20S	7.5E-NML R-C	Trend 8
7.5E	337696 5298056	16+40S	7.5E-NML R-D	Trend 10
9.5E	338184 5298749	5+40S	9.5E-NML R-A	Trend 5
9.5E	338036 5298395	9+20S	9.5E-NML R-B	Trend 8

9.5E	337854 5297932	14+20S	9.5E-NML R-C	Trend 10
11.5E	337990 5297757	13+20S	11.5E-NML R-A	Trend 10
13.5E	338525 5298556	3+20S	13.5E-NML R-A	Trend 5
13.5E	338337 5298115	8+00S	13.5E-NML R-B	Trend 8
13.5E	338148 5297648	13+00S	13.5E-NML R-C	Trend 10
13.5E	338068 5297447	15+20S	13.5E-NML R-D	
15.5E	338745 5298541	1+80S	15.5E-NML R-A	Trend 4
15.5E	338650 5298302	4+40S	15.5E-NML R-B	Trend 5
15.5E	338472 5297856	9+20S	15.5E-NML R-C	Trend 8
15.5E	338401 5297652	11+40S	15.5E-NML R-D	Trend 9
15.5E	338287 5297418	14+00S	15.5E-NML R-E	Trend 10
17.5E	338893 5298371	2+20S	17.5E-NML R-A	Trend 4
17.5E	338808 5298160	4+60S	17.5E-NML R-B	Trend 5
17.5E	338546 5297504	11+60S	17.5E-NML R-C	Trend 9
17.5E	338440 5297232	14+60S	17.5E-NML R-D	Trend 10
19.5E	339021 5298134	3+40S	19.5E-NML R-A	Trend 4
19.5E	338799 5297556	9+60S	19.5E-NML R-B	Trend 8
19.5E	338692 5297297	12+40S	19.5E-NML R-C	Trend 9
21.5E	339254 5298126	2+00S	21.5E-NML R-A	Trend 7
21.5E	338966 5297379	10+00S	21.5E-NML R-B	Trend 8
21.5E	338926 5297286	11+00S	21.5E-NML R-C	
23.5E	339447 5298096	1+00S	23.5E-NML R-A	Trend 6
23.5E	339370 5297883	3+20S	23.5E-NML R-B	Trend 7
23.5E	339194 5297440	8+00S	23.5E-NML R-C	
23.5E	339172 5297406	8+40S	23.5E-NML R-D	
23.5E	339158 5297370	8+80S	23.5E-NML R-E	
23.5E	339147 5297335	9+20S	23.5E-NML R-F	
23.5E	339134	9+60S	23.5E-NML R-G	Trend 8

	5297293			
23.5E	338979 5296906	13+80S	23.5E-NML R-H	Trend 11
25.5E	339606 5298006	0+60S	25.5E-NML R-A	
25.5E	339539 5297844	2+40S	25.5E-NML R-B	Trend 6
25.5E	339467 5297653	4+40S	25.5E-NML R-C	Trend 7
25.5E	339306 5297245	8+80S	25.5E-NML R-D	Trend 8
25.5E	339180 5296906	12+40S	25.5E-NML R-E	Trend 11
27.5E	339690 5297649	3+00S	27.5E-NML R-A	Trend 6
27.5E	339599 5297426	5+40S	27.5E-NML R-B	Trend 7
27.5E	339533 5297279	7+00S	27.5E-NML R-C	
27.5E	339480 5297133	8+60S	27.5E-NML R-D	Trend 8
29.5E	339885 5297650	1+80S	29.5E-NML R-A	
29.5E	339818 5297482	3+60S	29.5E-NML R-B	Trend 6
29.5E	339640 5297037	8+40S	29.5E-NML R-C	Trend 8

Figure E: VLF Resistivity Trends TX-NAA

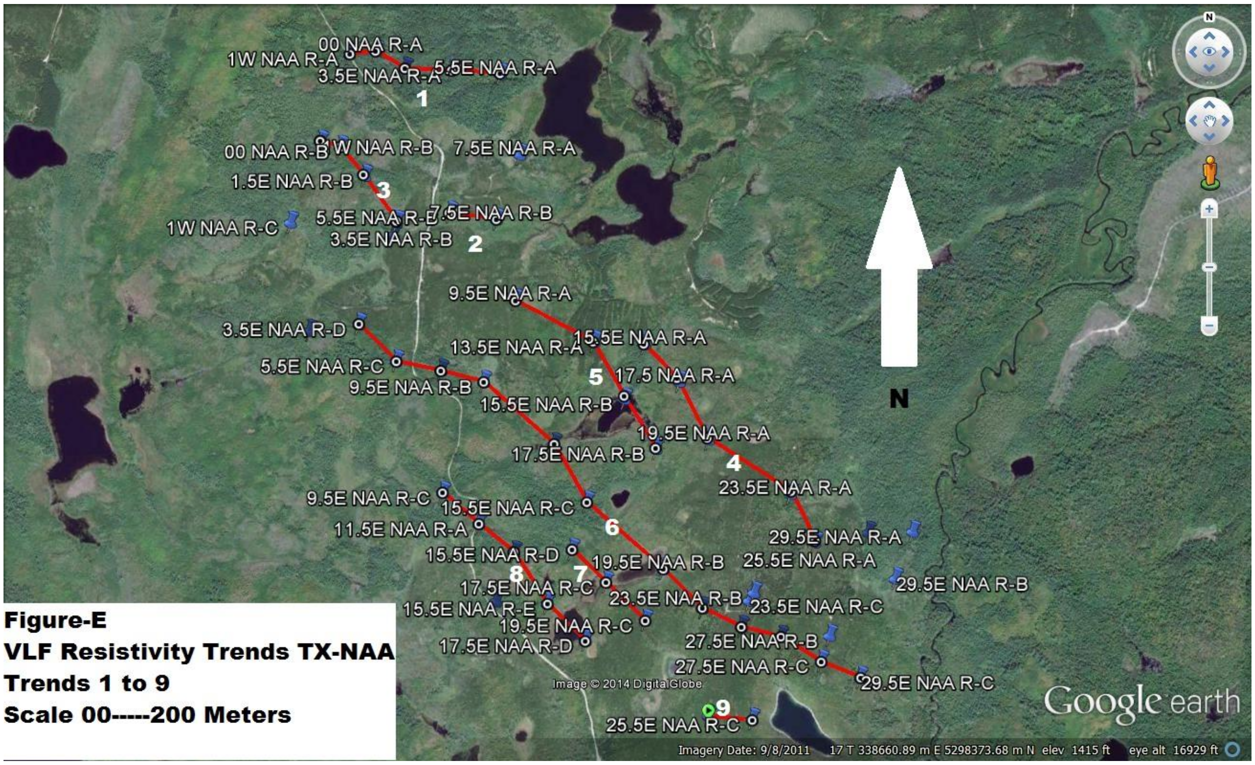


Figure-E
VLF Resistivity Trends TX-NAA
Trends 1 to 9
Scale 00-----200 Meters

Figure F: VLF Resistivity Trends TX-NML

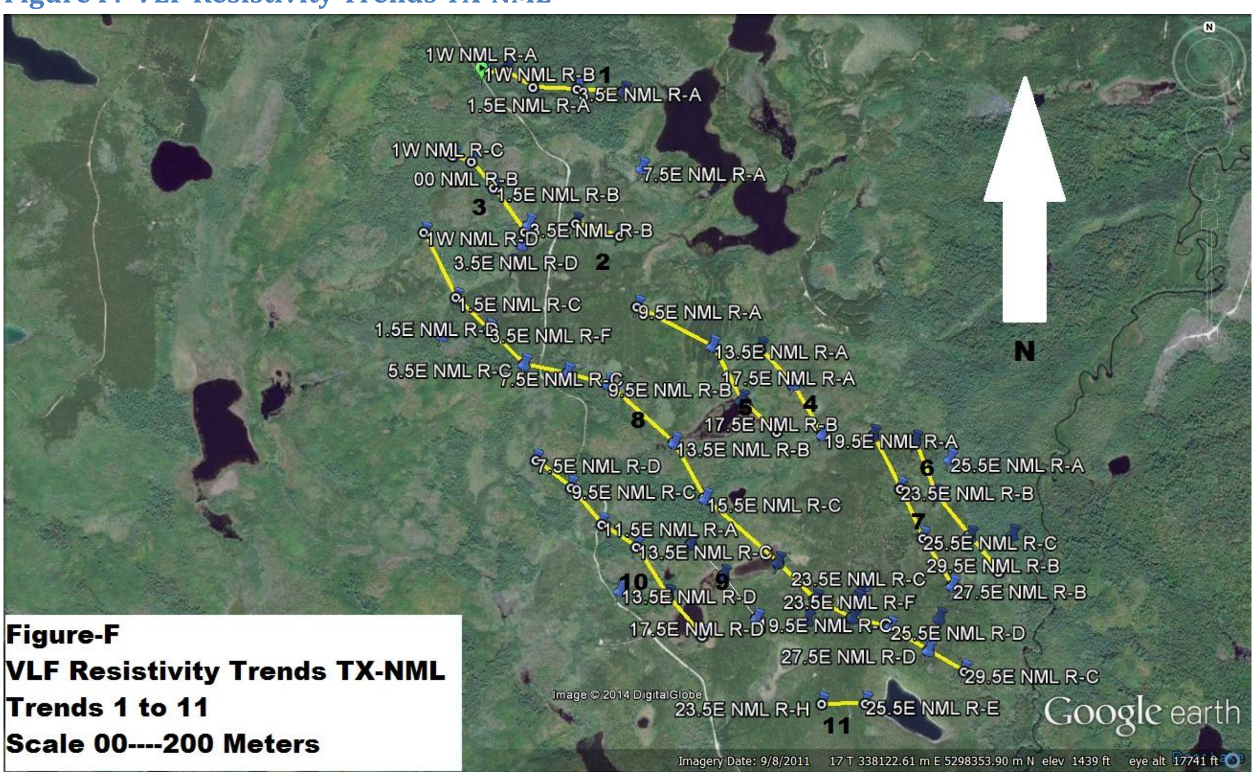


Figure-F
VLF Resistivity Trends TX-NML
Trends 1 to 11
Scale 00----200 Meters

Table 38: VLF TX NAA/NML Resistivity Trend Comparison and Lengths

NAA Trend Number	NAA Trend Length (Meters)	NML Trend Number	NML Trend Length (Meters)
1	677	1	677
2	208	2	211
3	499	3	499
4	1200	4	492
5	923	5	894
6	2800	8	3300
7	447	9	458
8	909	10	1100
9	196	11	200
		6	728
		7	783

Conclusions

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

a) 9 VLF NAA Trends and 11 VLF NML trends on the Nikos Property. (See Table 38) Several NAA/NML trends are mirror images with and without similar strike lengths.
b) Delineation of several very conductive bedrock conductors located on Trends NAA 1, 3 & 6 and NML 1, 3 & 8. Drill holes are recommended for these conductors and are listed in Table 39.
c) The use of 2 transmitters, TX-NAA and TX-NML confirmed and delineated true bedrock conductors from surficial responses.
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) There are 3 interesting trends identified that require further VLF surveying at 100 meter spaced lines.
f) Only on certain lines was bedrock identified along the VLF lines in order to correlate geology with VLF conductors.

Recommendations

1) Ground proofing and prospecting of the 3 priority VLF trends to determine if these anomalies are related to mineralization, fault zones 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 three trends, NAA: 1, 3 & 6, and NML: 1, 3 & 8 are shown in Figures E and F.

2) More VLF surveying on 100 meter lines at 2W, 0.75W, 0.75E, 2.5E, 20.5E, 22.5E, 24.5E & 26.5E in order to obtain tighter control on the dimensions of the best VLF targets.

3) Geochemical sampling SGH of soils over VLF trends NAA: 1, 3 & 6 and NML 1, 3 & 8 in order to determine if the VLF conductors are related to economic mineralization.

4) Processing of the Fraser filtered VLF data and Resistivity data into 3D shaded relief maps.

5) Processing of soil sample geochemistry results with VLF data in order to produce a 3D shaded relief map.

6) Further processing of the VLF data into a 2D model of the complete grid surveyed including the additional lines recommended in (2). The current 200 meter spaced lines completed are too widely spaced to process an accurate and balanced VLF interpretation in 2D.

7) Based on the present VLF survey data and models the following drill holes are recommended to test the best conductive zones.

Table 39: Recommended Drill Holes

DDH Number Line Location	Drill Location UTM	Azimuth	Dip	Length
1W-A 4+80S	337403/5299600	200	-50	200M
1W-B 8+80S	337255/5299231	200	-50	200M
1.5E-A 5+20S	337591/5299418	200	-50	200M
1.5E-B 7+40S	337509/5299213	200	-50	200M
23.5-A 8+20S	339185/5297425	200	-50	200M
25.5-A 7+60S	339356/5297353	200	-50	200M

Appendix A - NAA Line 1W

Figure 1: Line 1W - Raw Data Profile

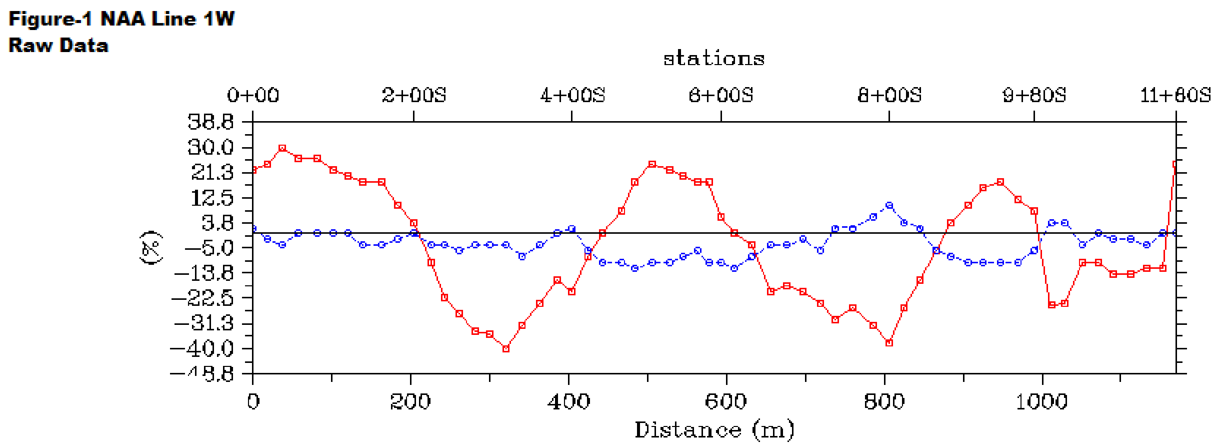


Figure 2: Line 1W – Fraser Filter Profile

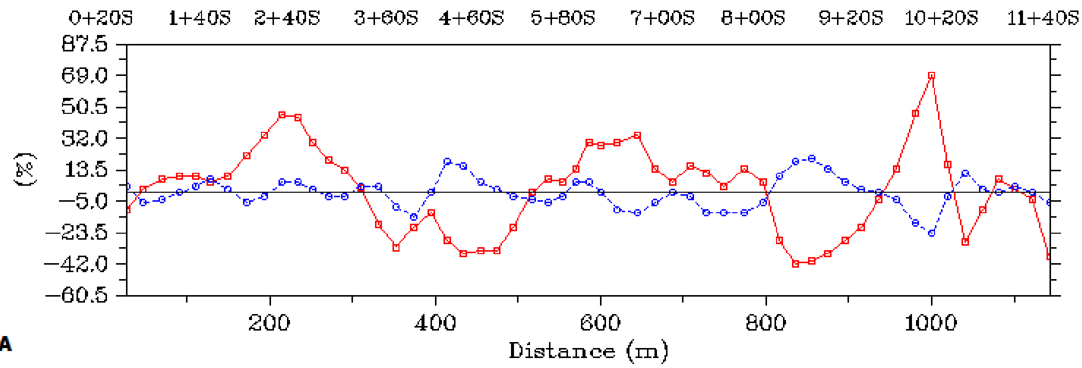


Figure-2 NAA
Line 1W
Fraser Filter Profile

Figure 3: Line 1W – KH Profile

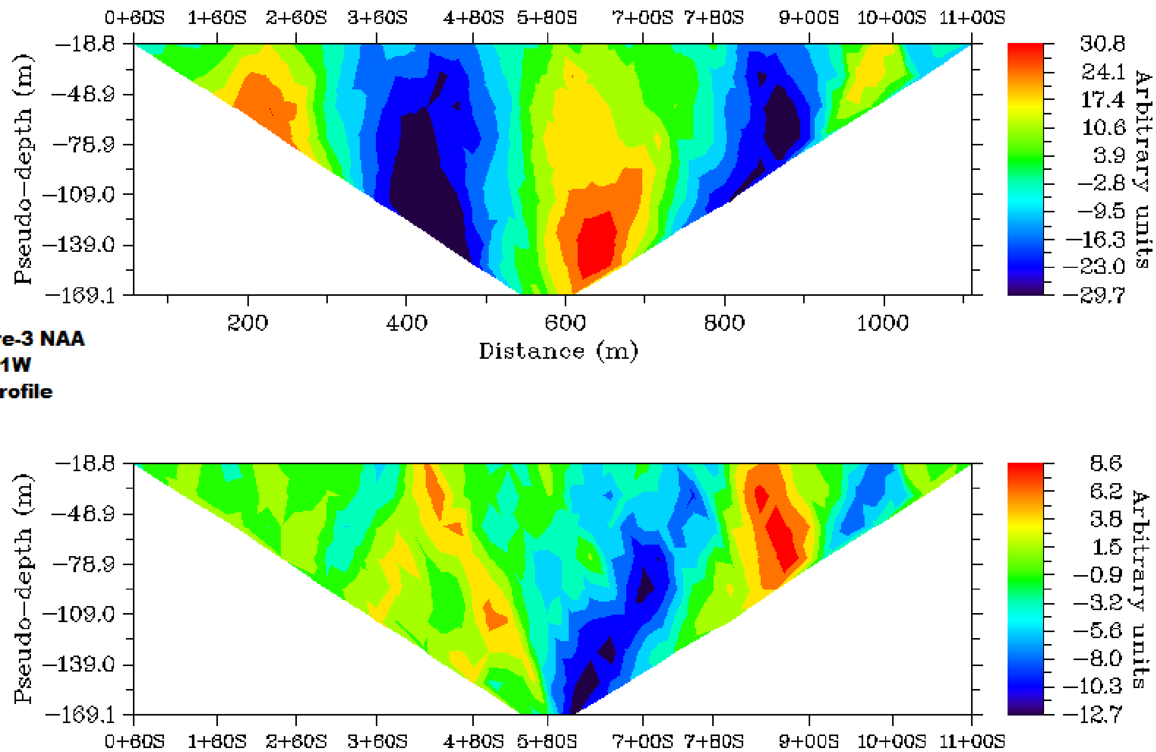


Figure-3 NAA
Line 1W
KH Profile

Figure 4: Line 1W – Resistivity

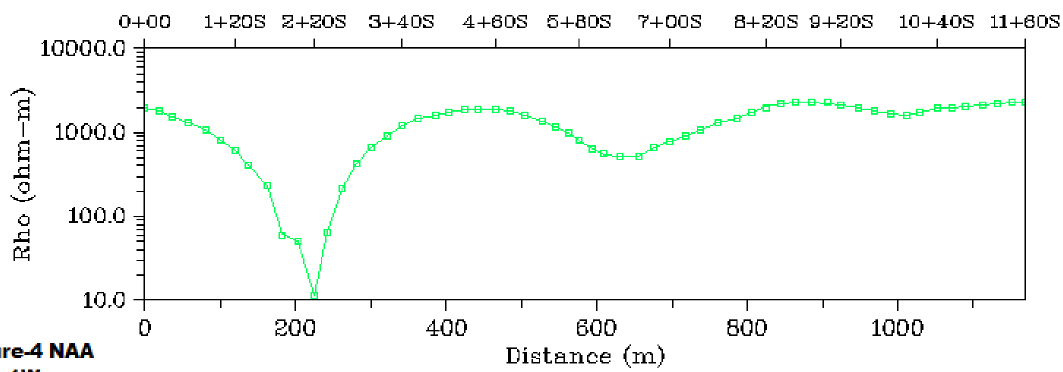


Figure-4 NAA
Line 1W
Resistivity 2000 Profile

Figure 5: Line 1W – Model

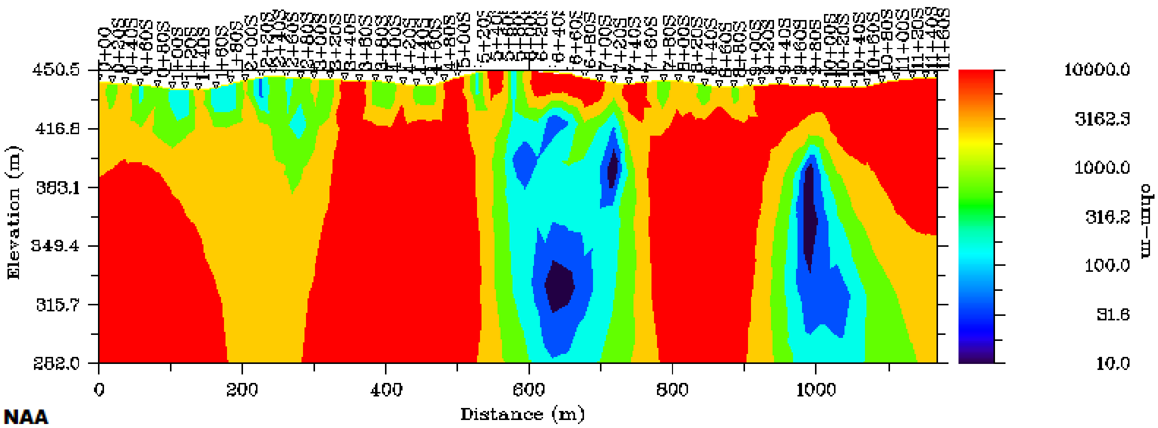


Figure-5 NAA
Line 1W
Model 2000 Ohm Profile

Appendix B - NAA Line 00

Figure 1: Line 00 - Raw Data Profile

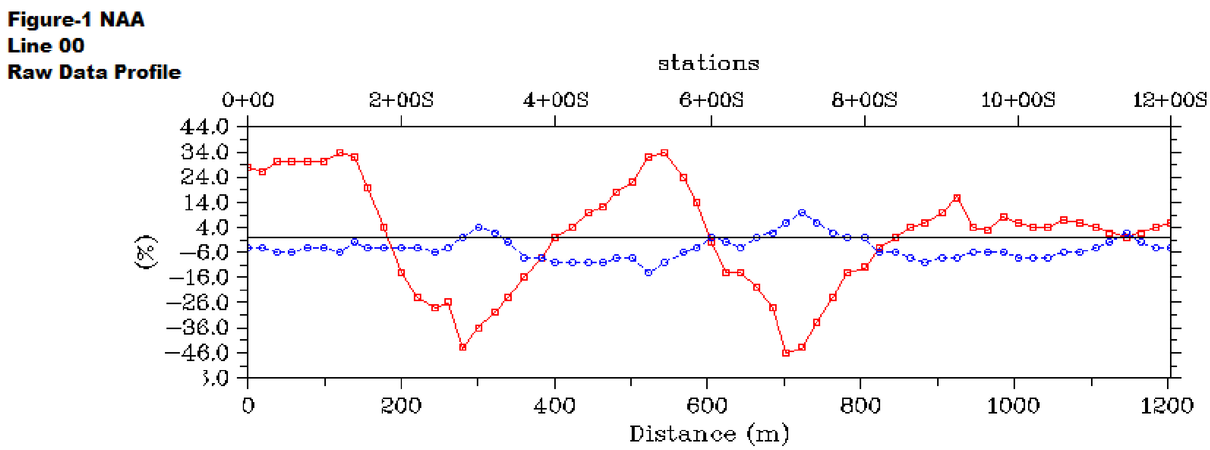


Figure 2: Line 00 – Fraser Filter Profile

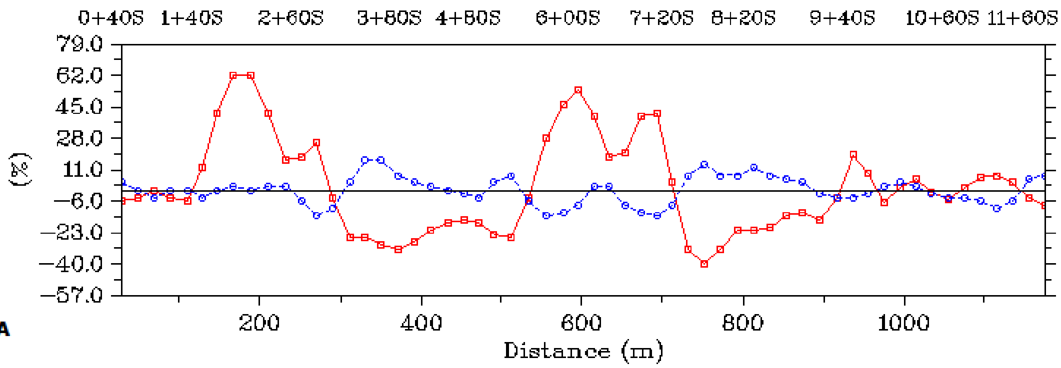


Figure-2 NAA
Line 00
Fraser Filter Profile

Figure 3: Line 00 – KH Profile

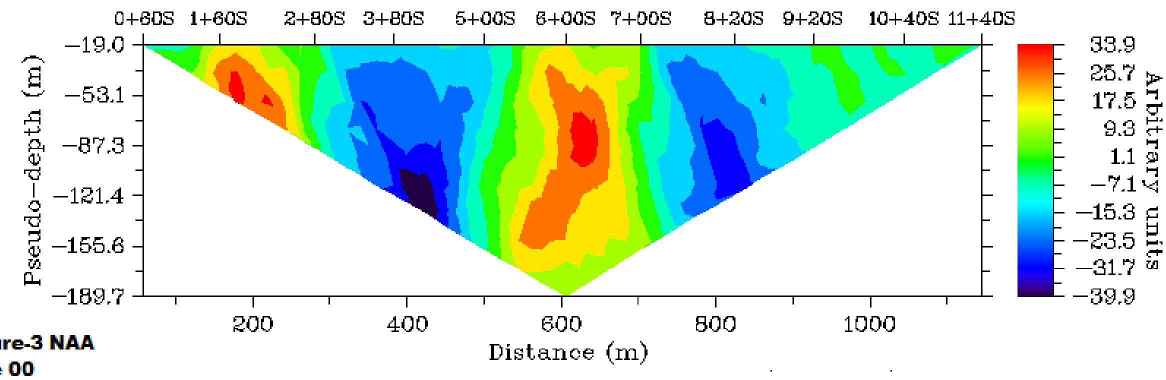


Figure-3 NAA
Line 00
KH Profile

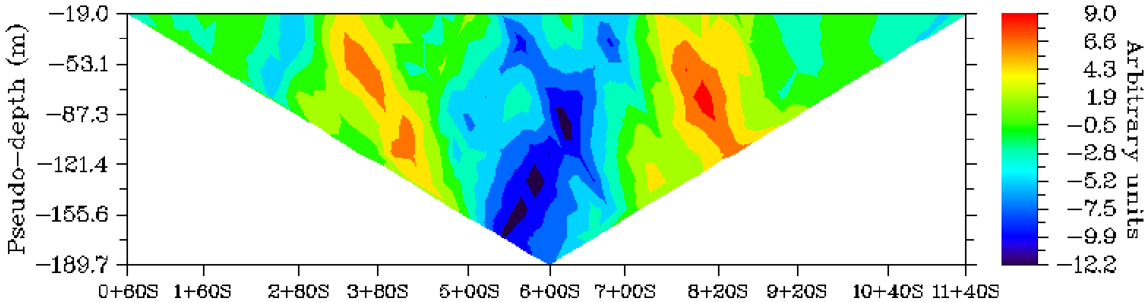


Figure 4: Line 00 - Resistivity Profile

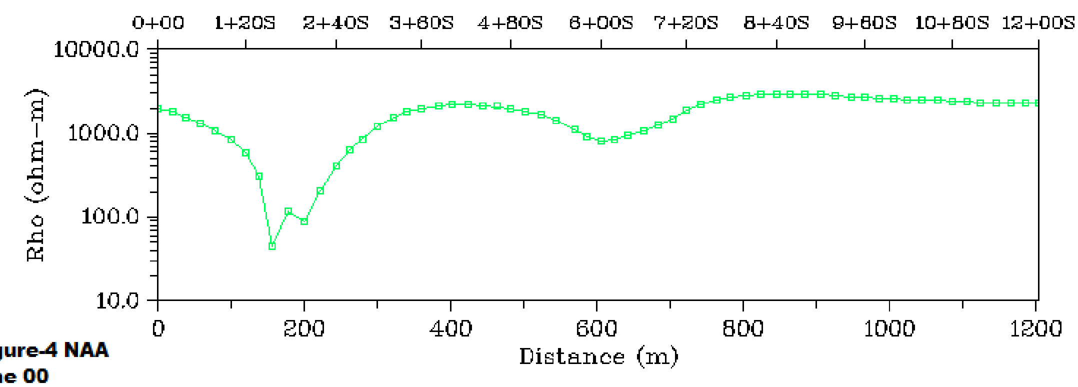


Figure-4 NAA
Line 00
Resisitivty 2000

Figure 5: Line 00 – Model

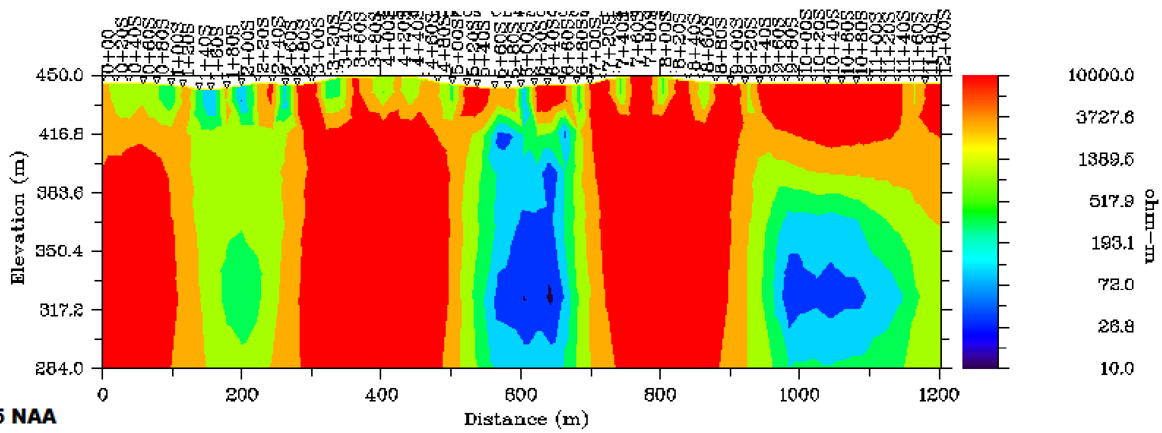


Figure-5 NAA
Line 00
Model 2000 Ohm

Appendix C - NAA Line 1.5E

Figure 1: Line 1.5E - Raw Data Profile

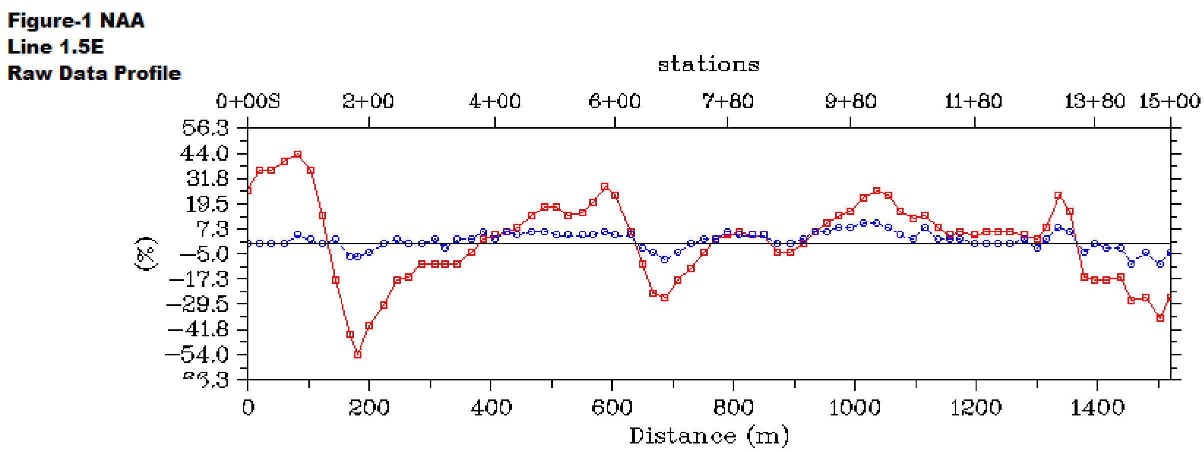


Figure 2: Line 1.5E – Fraser Filter Profile

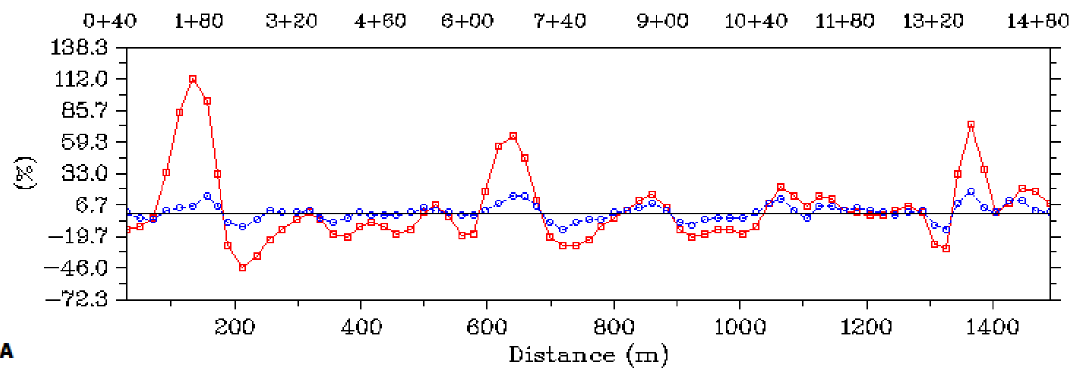


Figure-2 NAA
Line 1.5E
Fraser Filter Profile

Figure 3: Line 1.5E – KH Profile

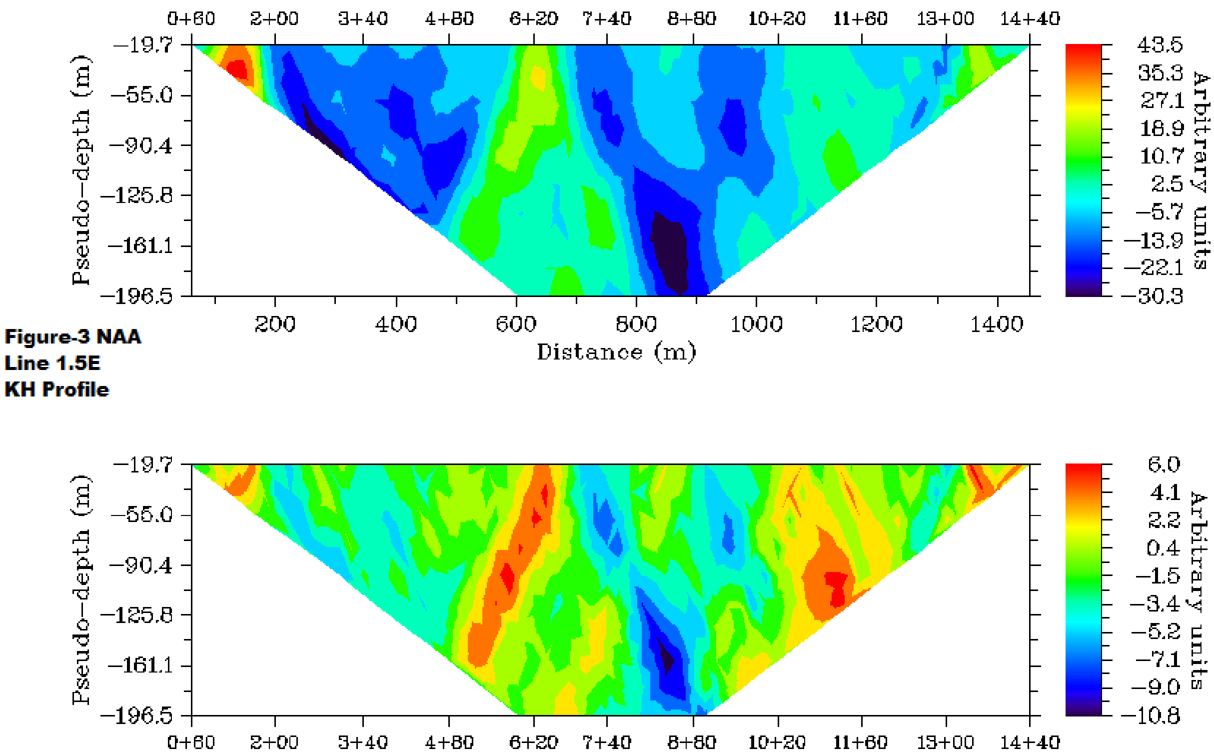


Figure 4: Line 1.5E – Resistivity Profile

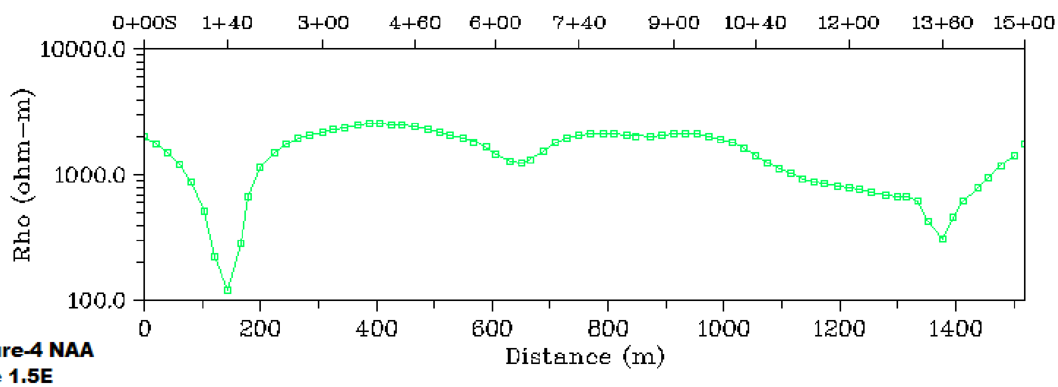


Figure-4 NAA
Line 1.5E
Resisitivty 2000 Profile

Figure 5: Line 1.5E – Model

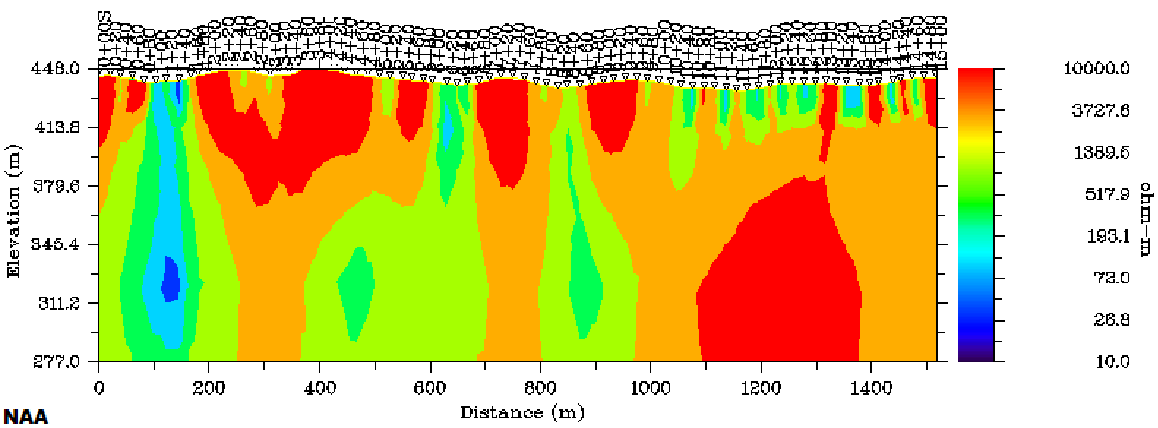


Figure-5 NAA
Line 1.5E
Model 2000 Ohm Profile

Appendix D - NAA Line 3.5E

Figure 1: Line 3.5E – Raw Data Profile

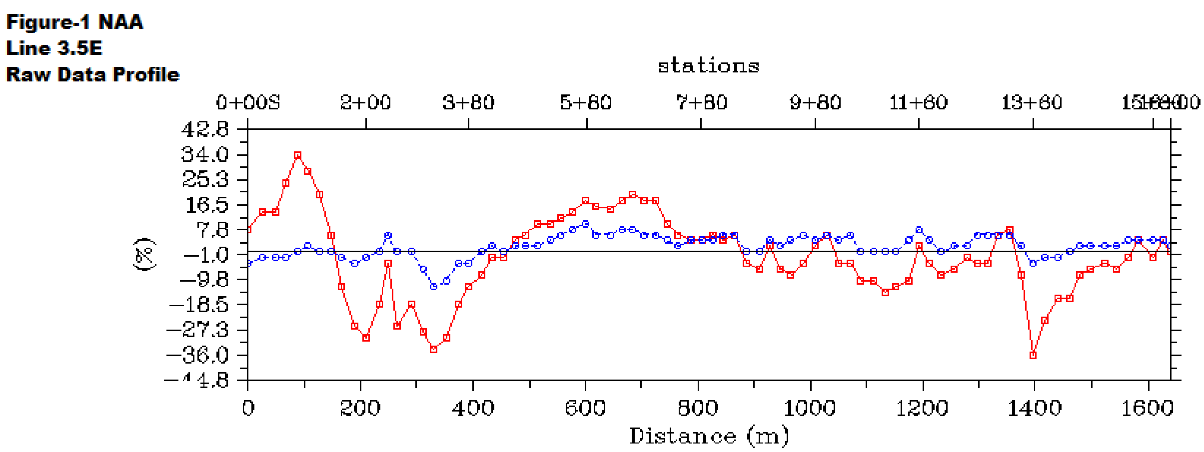


Figure 2: Line 3.5E – Fraser Filter Profile

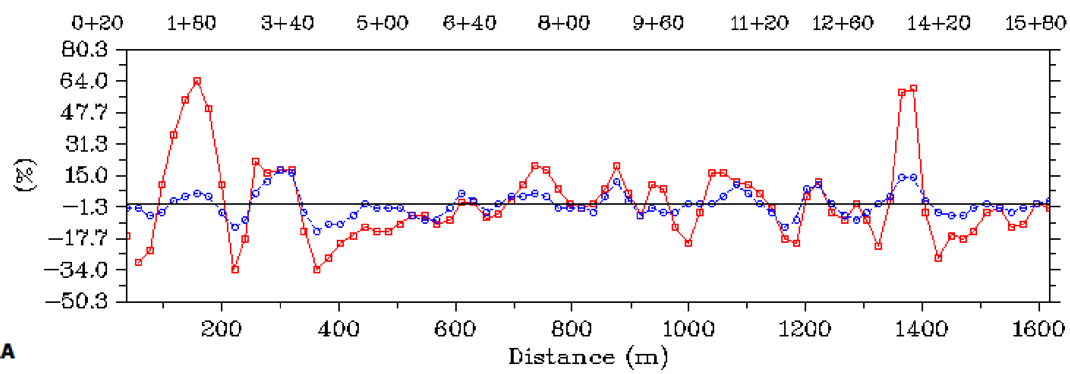


Figure-2 NAA
Line 3.5E
Fraser Filter Profile

Figure 3: Line 3.5E – KH Profile

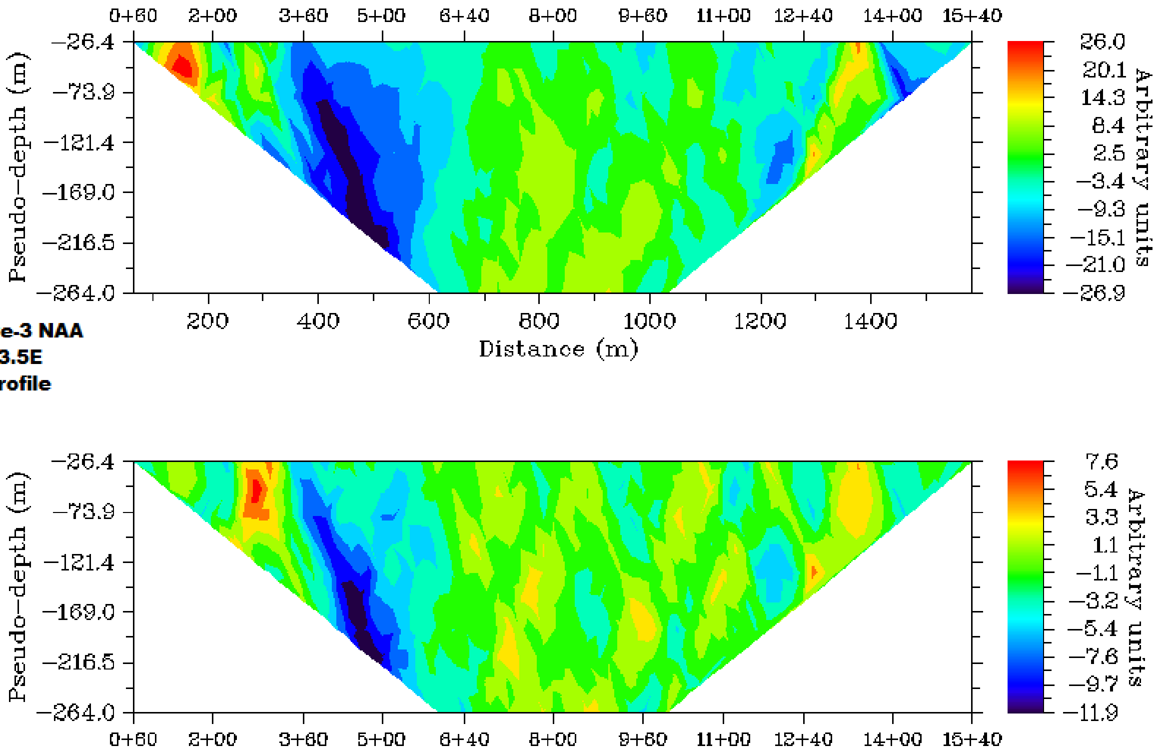


Figure-3 NAA
Line 3.5E
KH Profile

Figure 4: Line 3.5E – Resistivity Profile

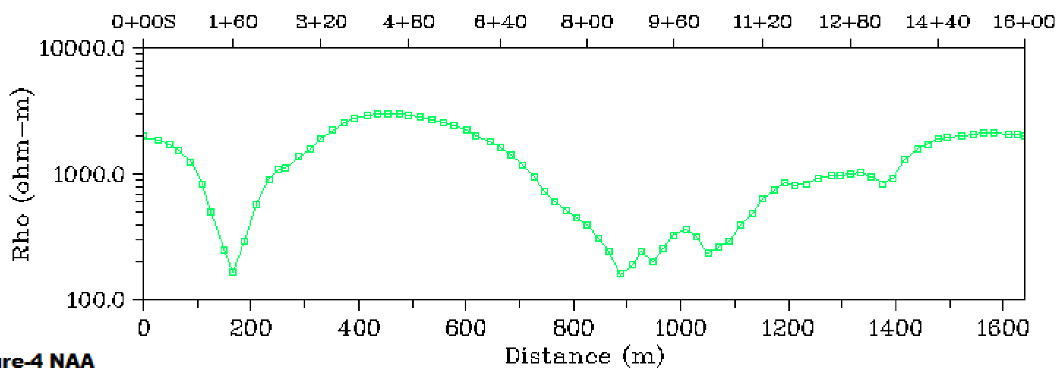


Figure-4 NAA
Line 3.5E
Resistivity 2000 Ohm Profile

Figure 5: Line 3.5E – Model

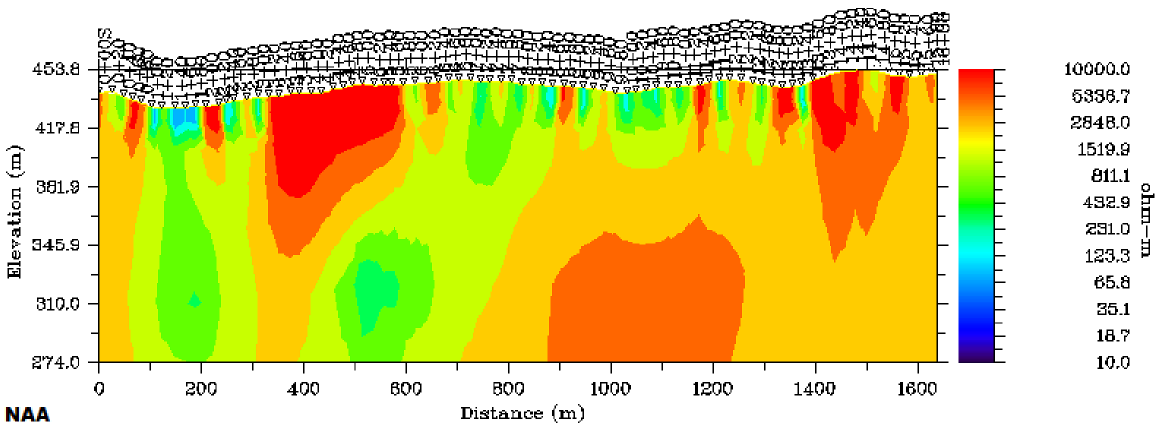


Figure-5 NAA
Line 3.5E
Model 2000 Ohm Profile

Appendix E - NAA Line 5.5E

Figure 1: Line 5.5E – Raw Data Profile

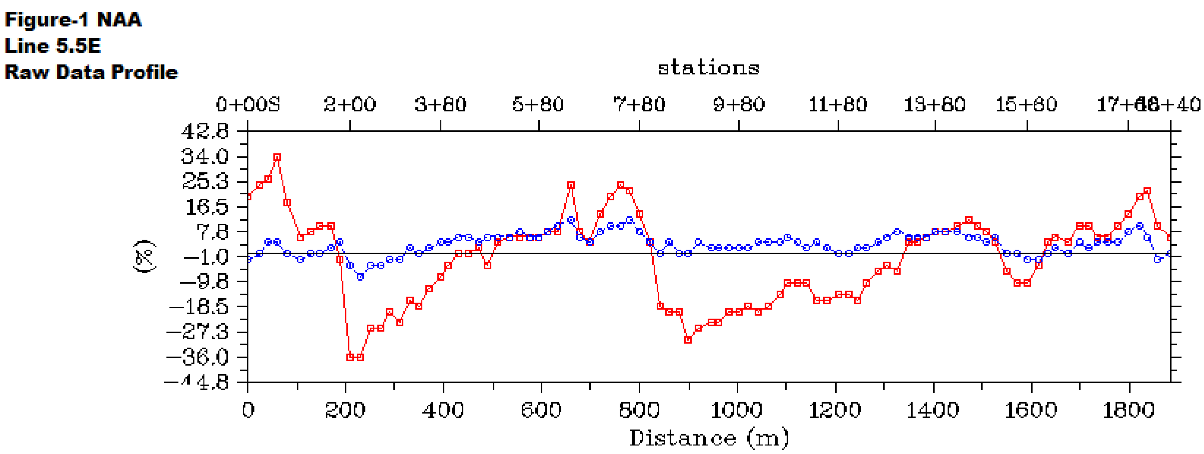


Figure 2: Line 5.5E – Fraser Filter Profile

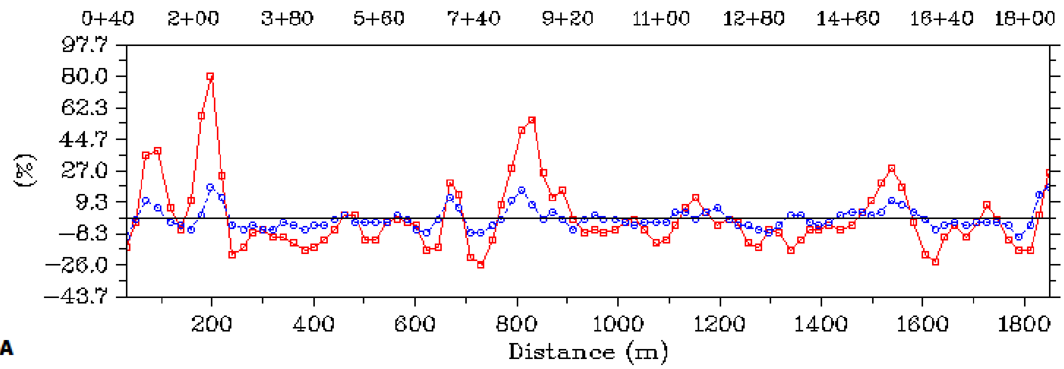


Figure-2 NAA
Line 5.5E
Fraer Filter Profile

Figure 3: Line 5.5E – KH Profile

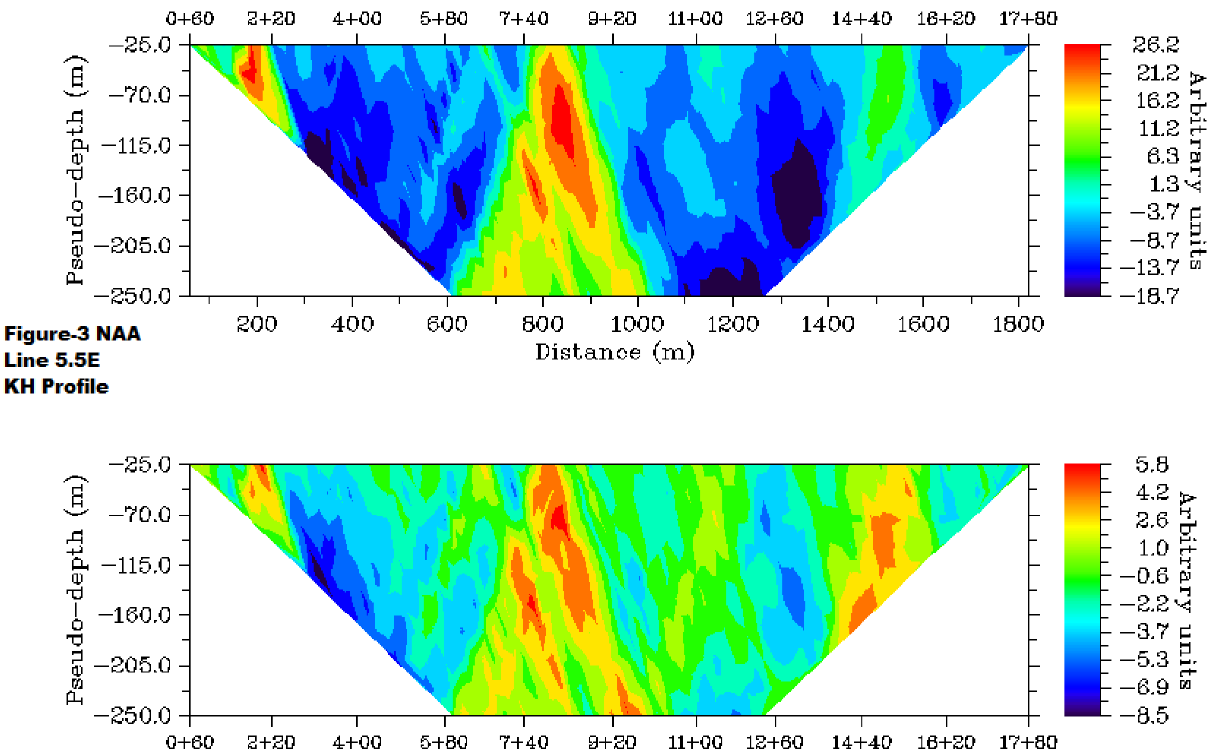


Figure 4: Line 5.5E – Resistivity Profile

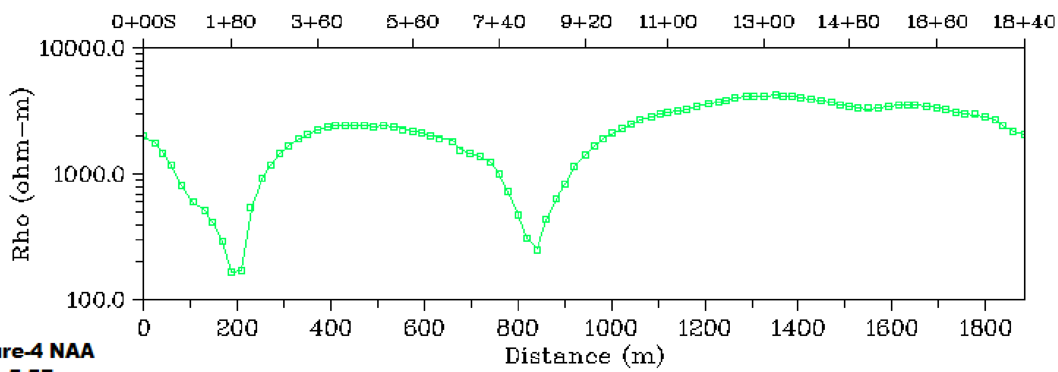


Figure-4 NAA
Line 5.5E
Resistivity 2000 Ohm Profile

Figure 5: Line 5.5E – Model

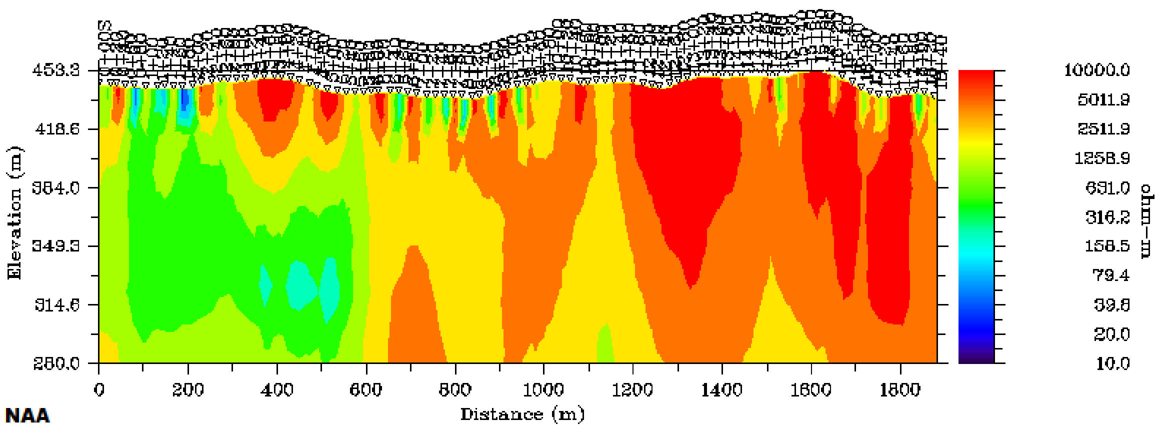


Figure-5 NAA
Line 5.5E
Model 2000 Ohm Profile

Appendix F - NAA Line 7.5E

Figure 1: Line 7.5E – Raw Data Profile

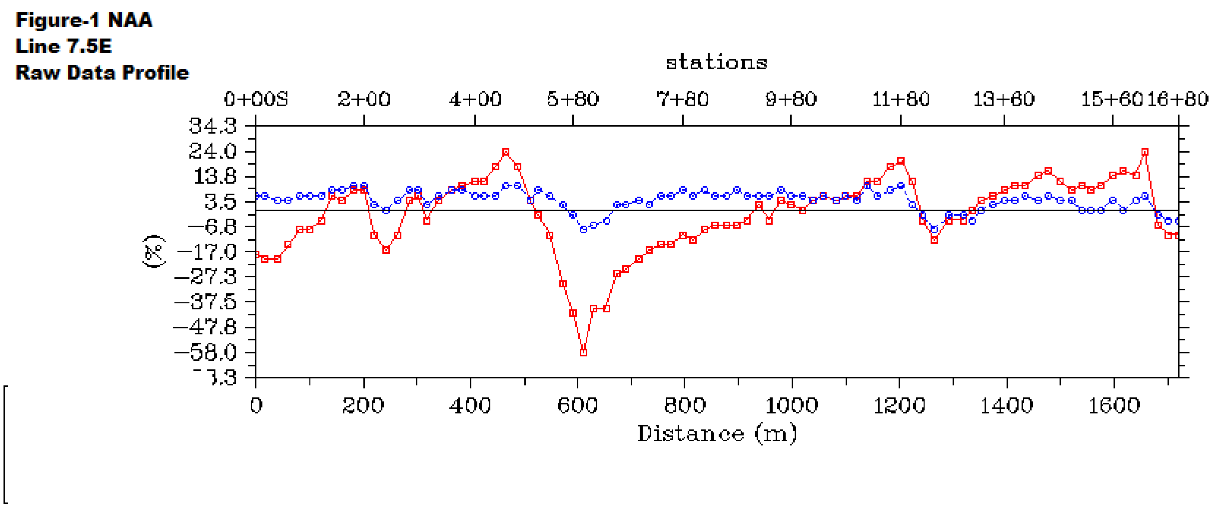


Figure 2: Line 7.5E – Fraser Filter Profile

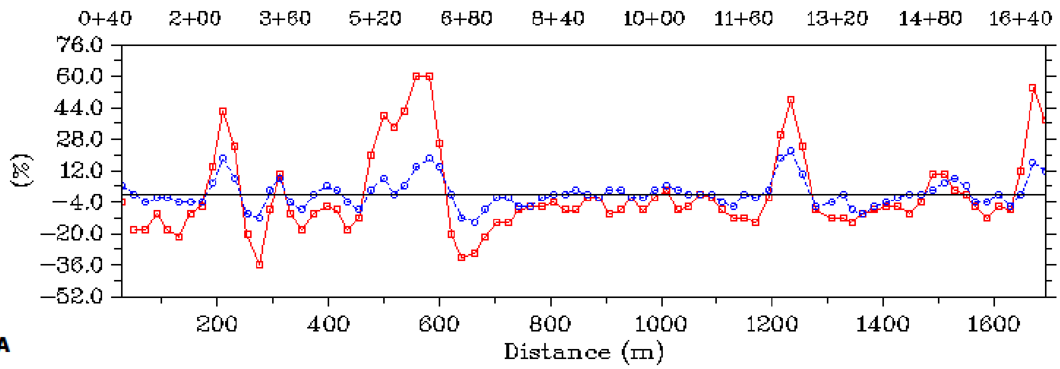


Figure-2 NAA
Line 7.5E
Fraser Filter Profile

Figure 3: Line 7.5E – KH Profile

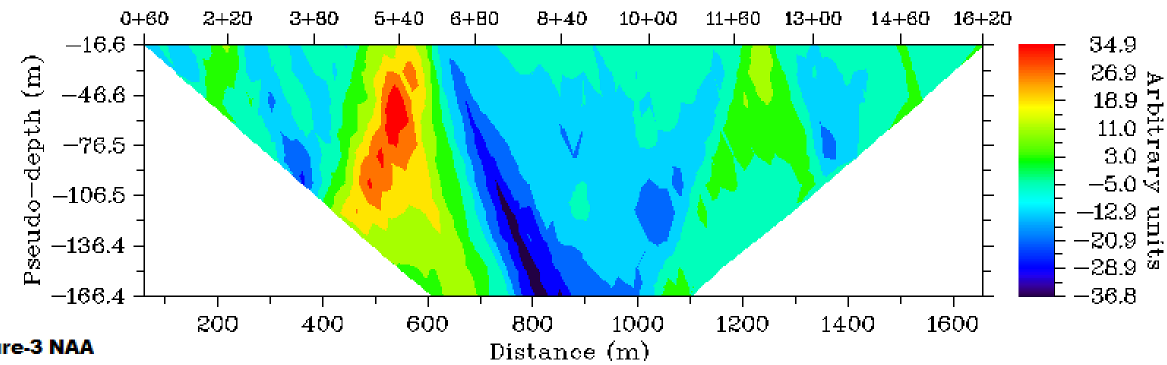


Figure-3 NAA
Line 7.5E
KH Profile

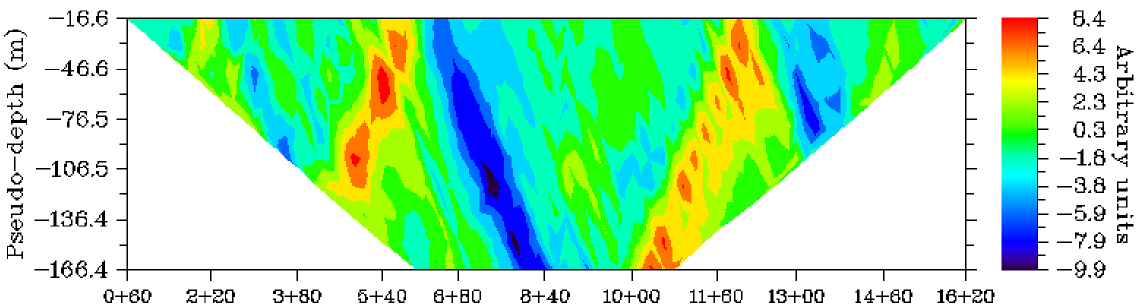


Figure 4: Line 7.5E – Resistivity Profile

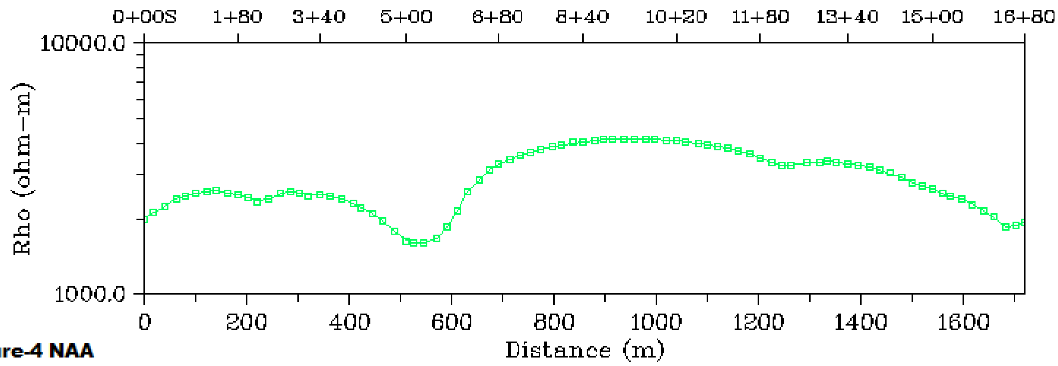


Figure-4 NAA
Line 7.5E
Resistivity 2000 Profile

Figure 5: Line 7.5E – Model

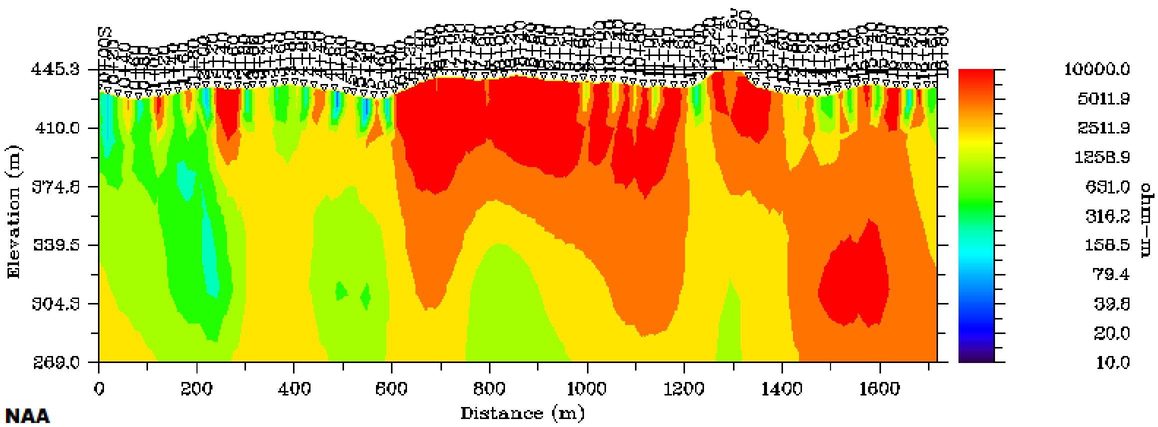


Figure-5 NAA
Line 7.5E
Model 2000 Ohm Profile

Appendix G - NAA Line 9.5E

Figure 1: Line 9.5E – Raw Data Profile

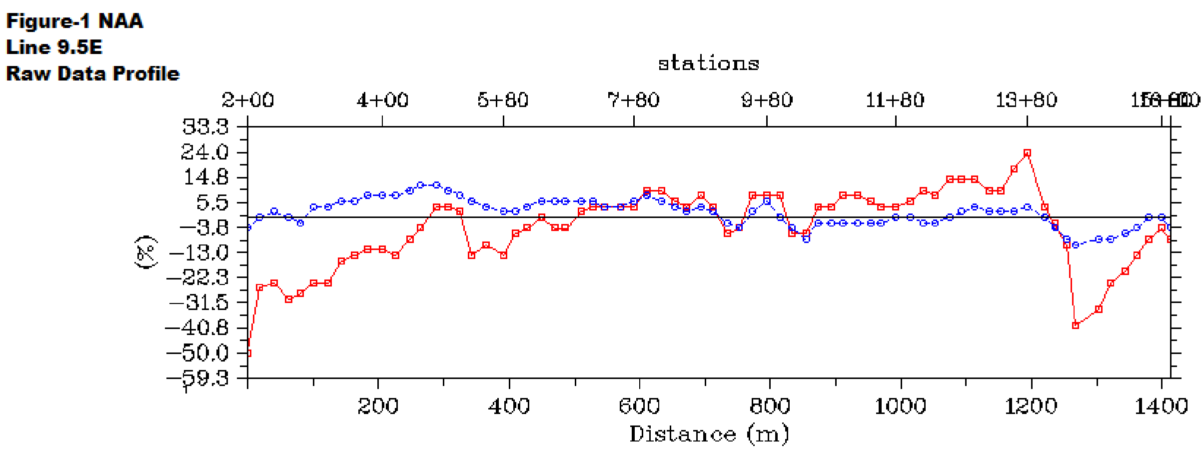


Figure 2: Line 9.5E – Fraser Filter Profile

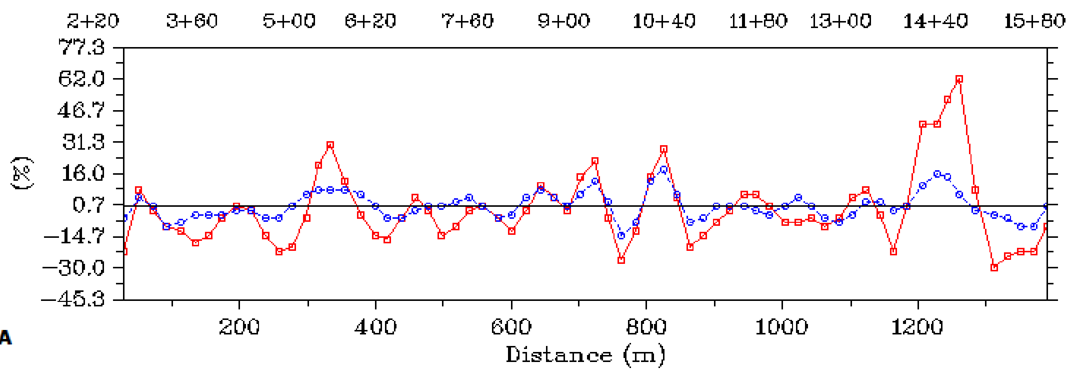


Figure-2 NAA
Line 9.5E
Fraser Filter Profile

Figure 3: Line 9.5E – KH Profile

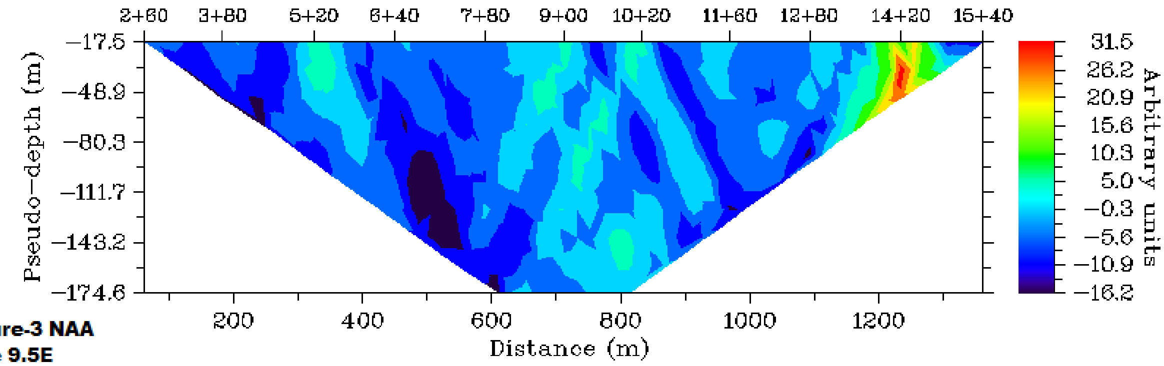


Figure-3 NAA
Line 9.5E
KH Profile

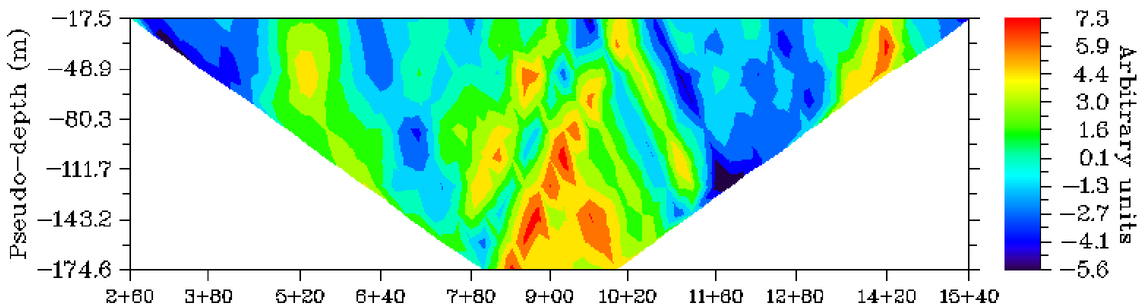


Figure 4: Line 9.5E – Resistivity Profile

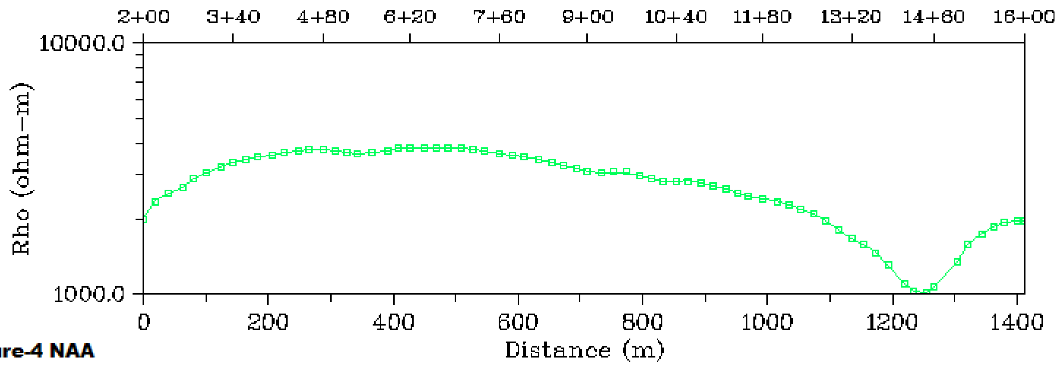


Figure-4 NAA
Line 9.5E
Resistivity 2000 Profile

Figure 5: Line 9.5E – Model

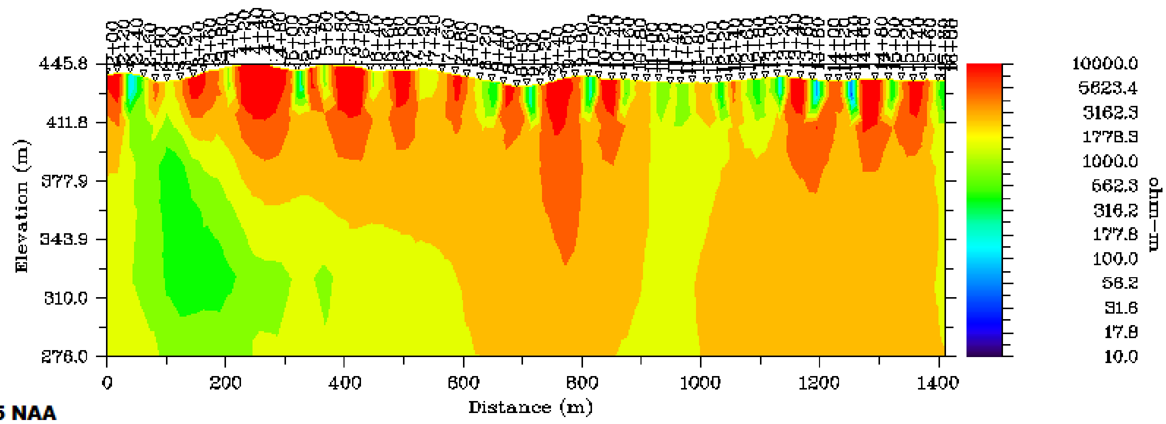


Figure-5 NAA
Line 9.5E
Model 2000 Ohm Profile

Appendix H - NAA Line 11.5E

Figure 1: Line 11.5E – Raw Data Profile

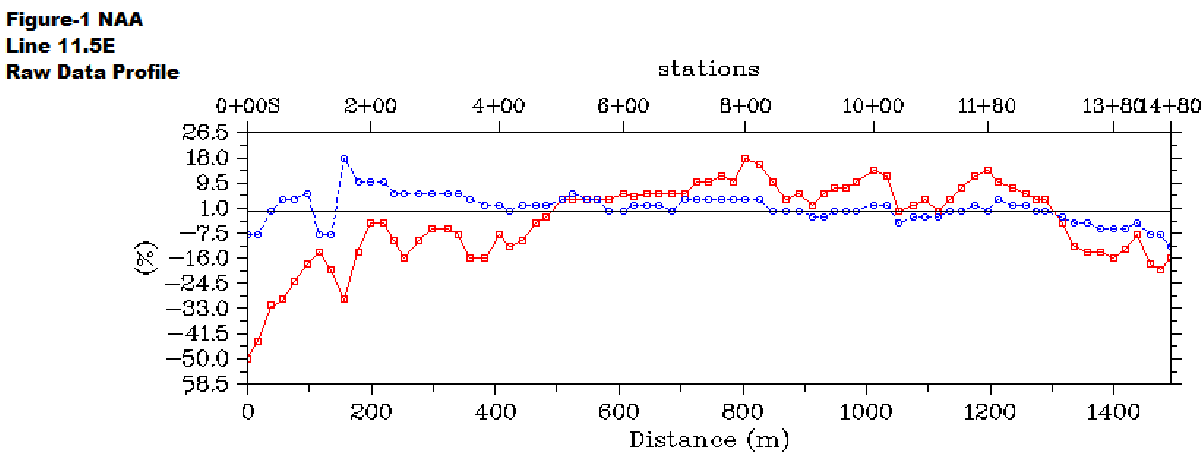


Figure 2: Line 11.5E – Fraser Filter Profile

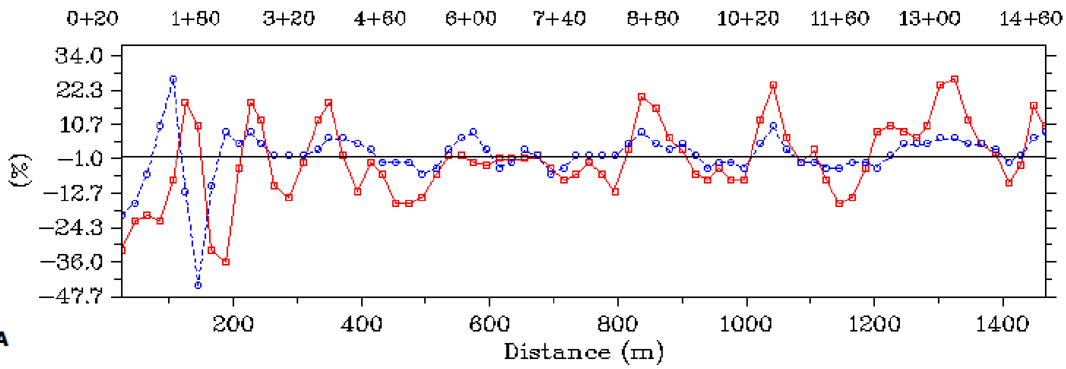


Figure-2 NAA
Line 11.5E
Fraser Filter Profile

Figure 3: Line 11.5E – KH Profile

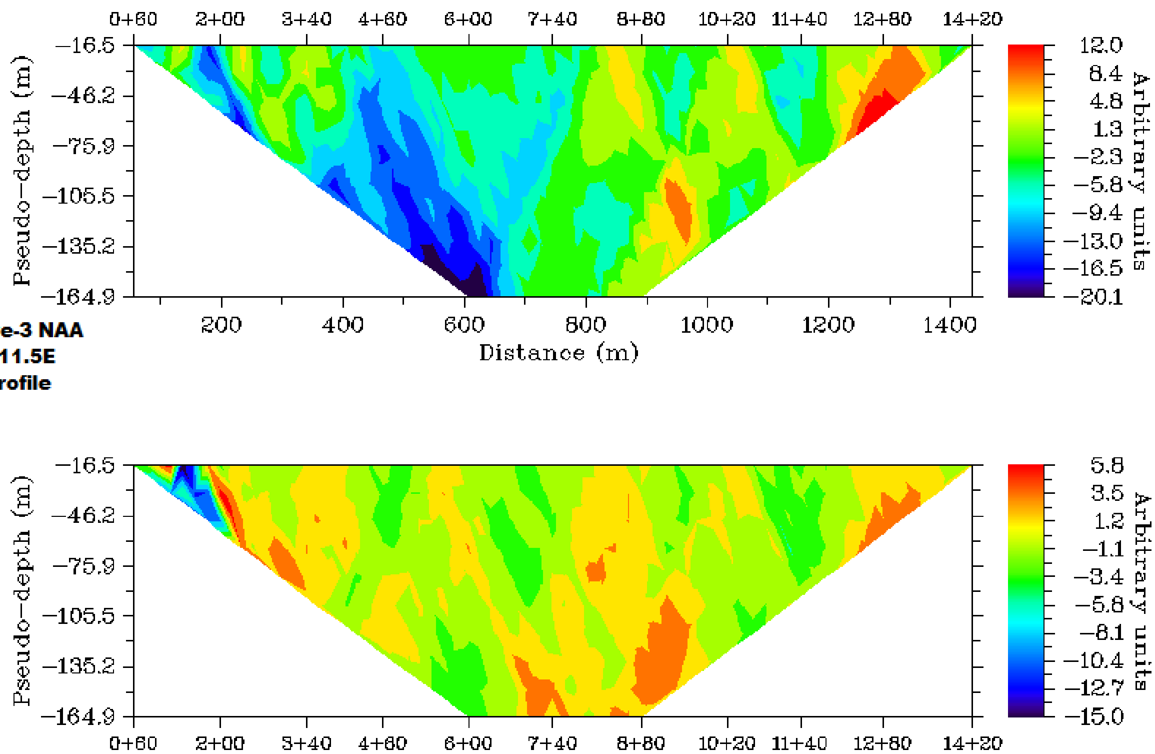


Figure-3 NAA
Line 11.5E
KH Profile

Figure 4: Line 11.5E – Resistivity Profile

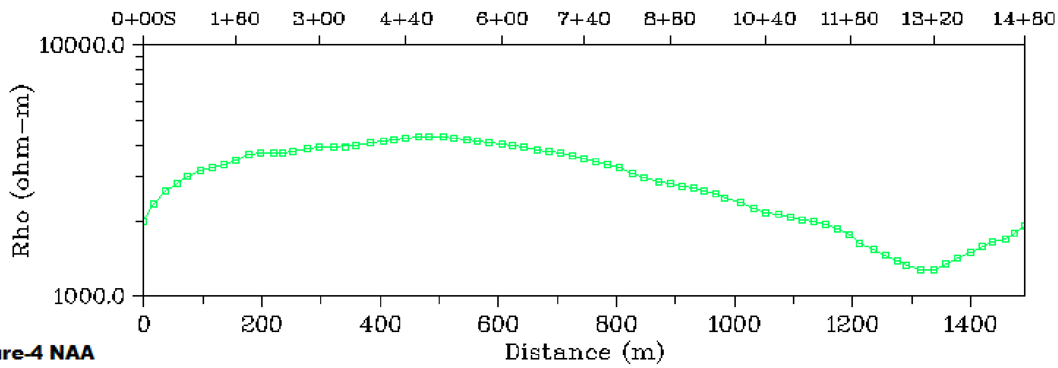


Figure-4 NAA
Line 11.5E
Resistivity 2000 Profile

Figure 5: Line 11.5E – Model

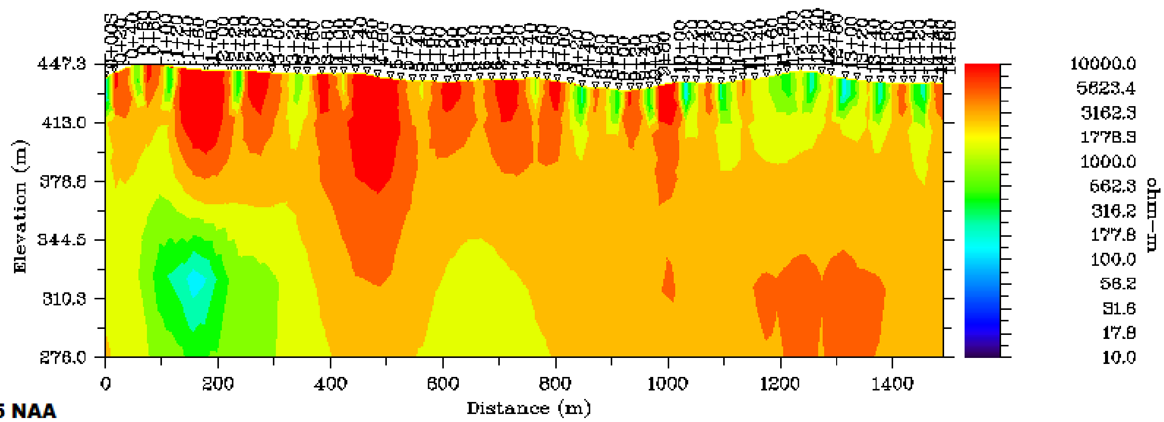


Figure-5 NAA
Line 11.5E
Model 2000 Ohm Profile

Appendix I - NAA Line 13.5E

Figure 1: Line 13.5E – Raw Data Profile

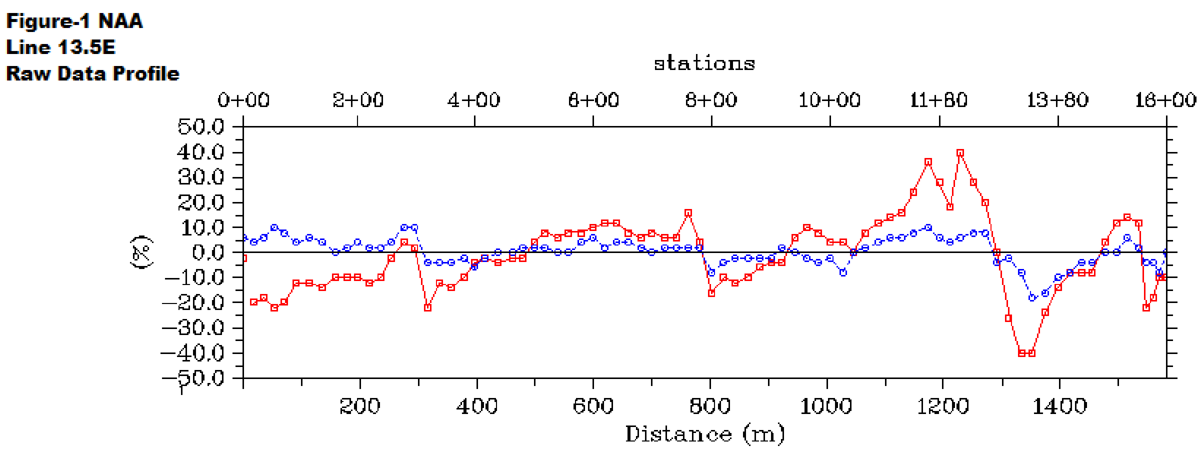


Figure 2: Line 13.5E – Fraser Filter Profile

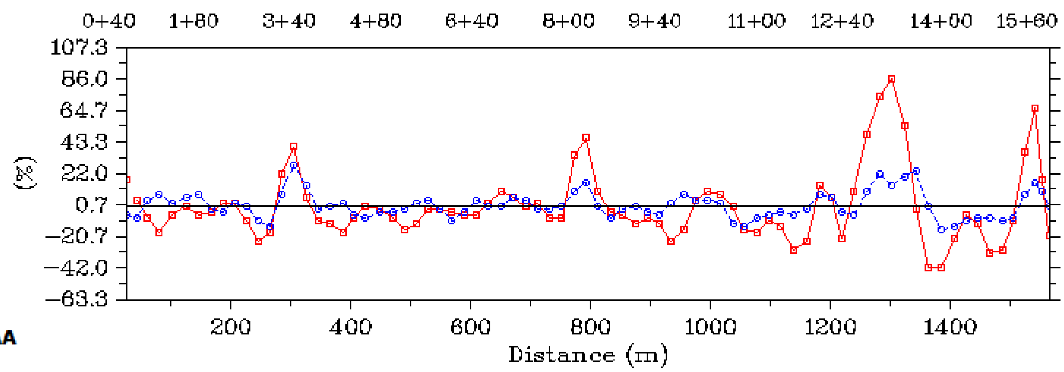


Figure-2 NAA
Line 13.5E
Fraser Filter Profile

Figure 3: Line 13.5E – KH Profile

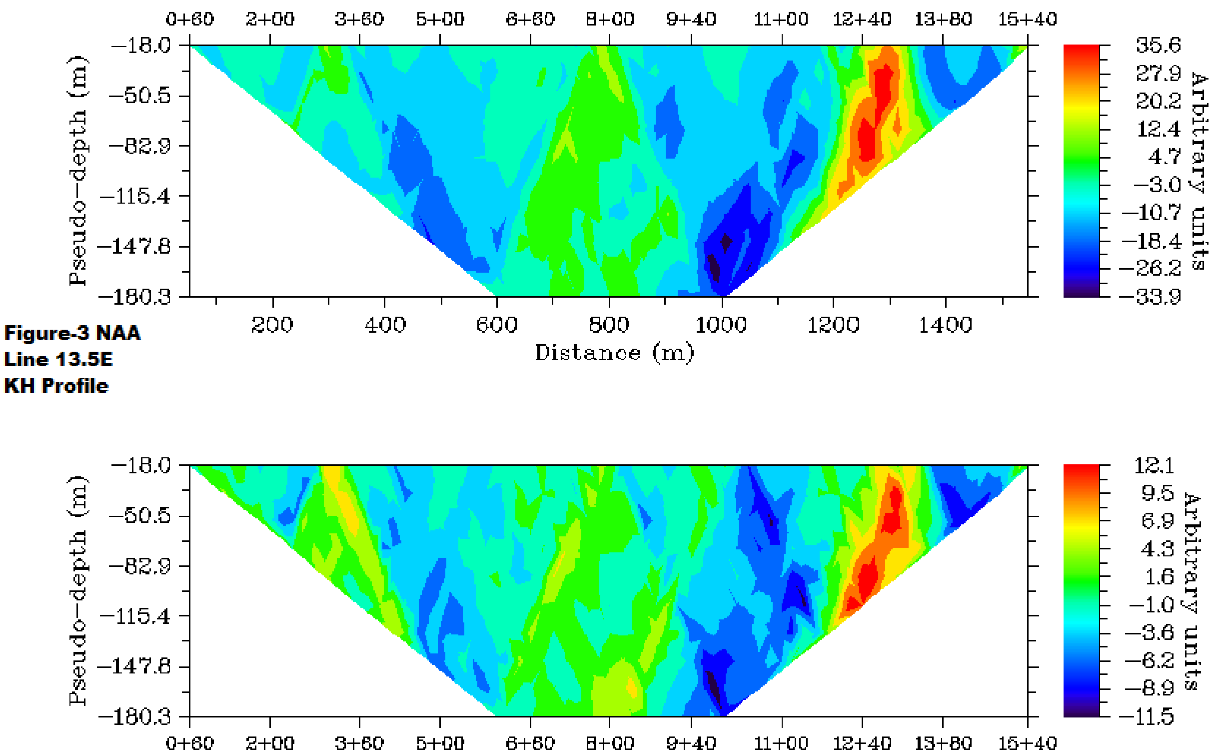


Figure 4: Line 13.5E – Resistivity Profile

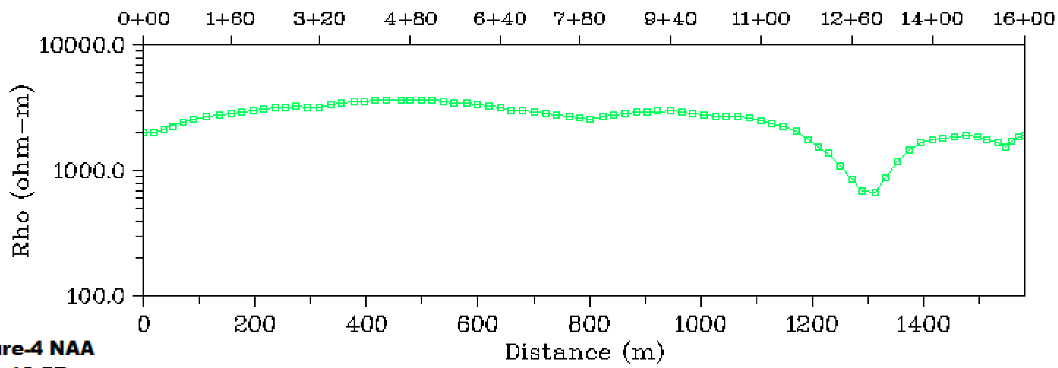


Figure-4 NAA
Line 13.5E
Resistivity 2000 Ohm Profile

Figure 5: Line 13.5E – Model

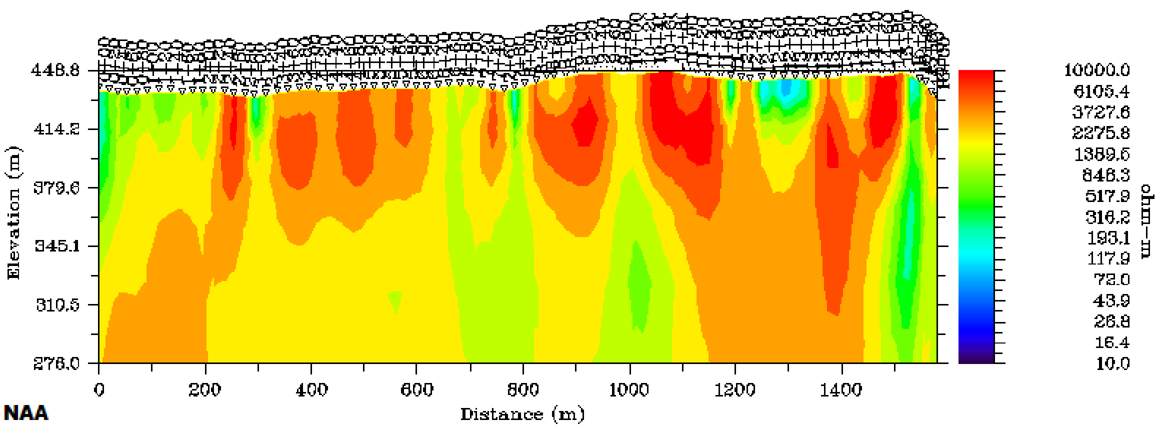


Figure-5 NAA
Line 13.5E
Model 2000 Ohm Profile

Appendix J - NAA Line 15.5E

Figure 1: Line 15.5E – Raw Data Profile

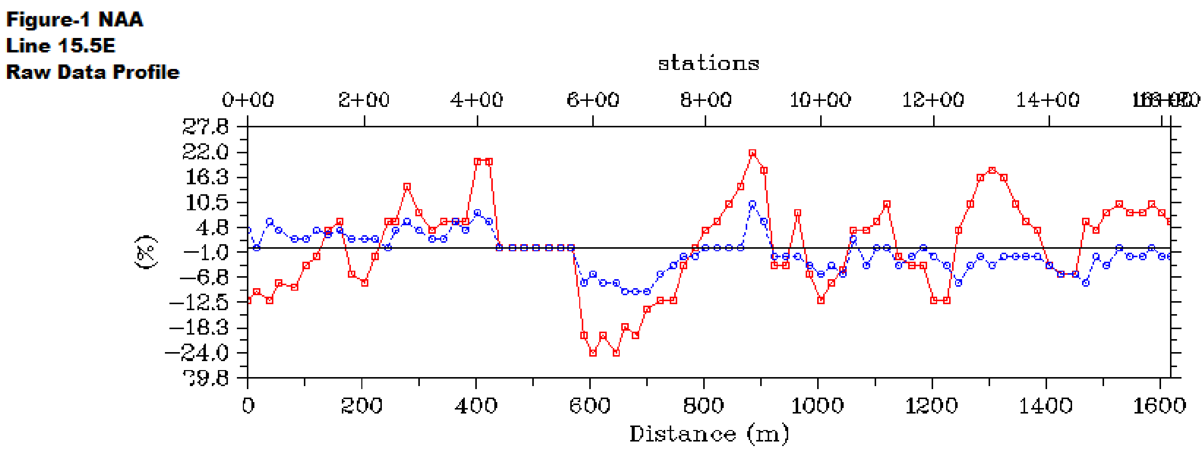


Figure 2: Line 15.5E – Fraser Filter Profile

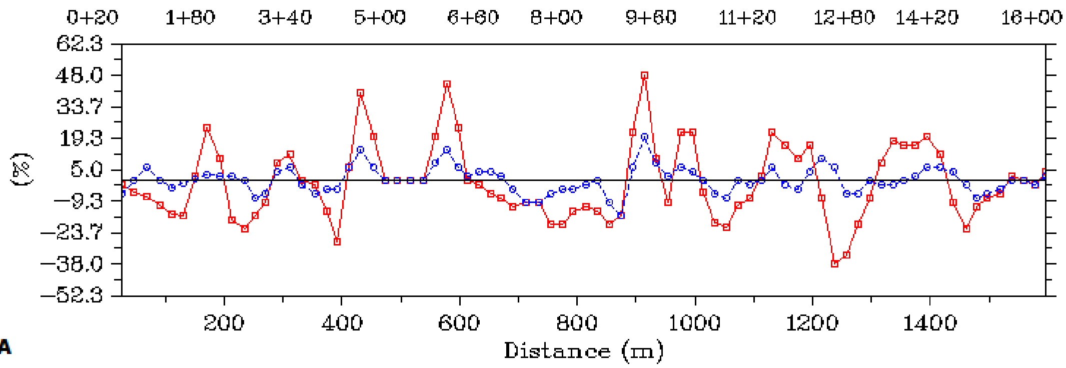


Figure-2 NAA
Line 15.5E
Fraser Filter Profile

Figure 3: Line 15.5E – KH Profile

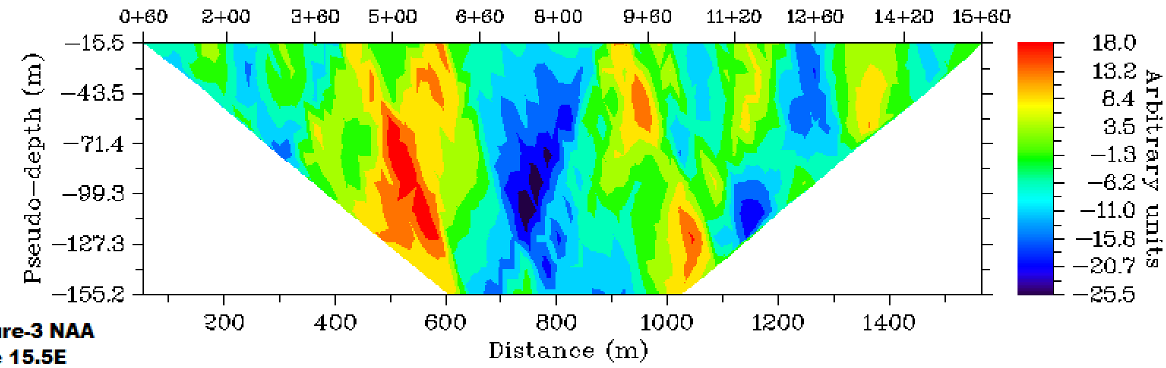


Figure-3 NAA
Line 15.5E
KH Profile

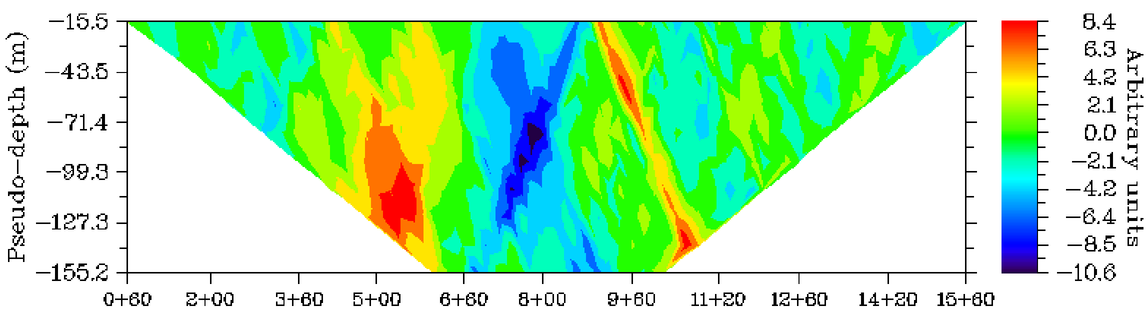


Figure 4: Line 15.5E – Resistivity Profile

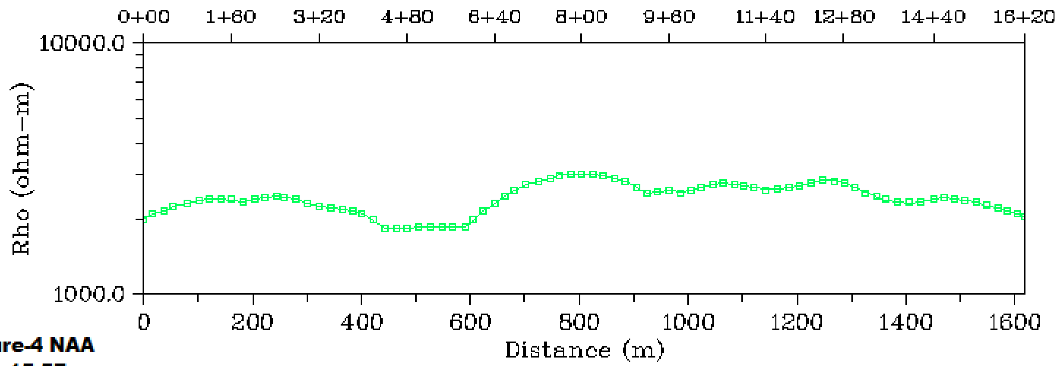


Figure-4 NAA
Line 15.5E
Resistivity 2000 Ohm Profile

Figure 5: Line 15.5E – Model

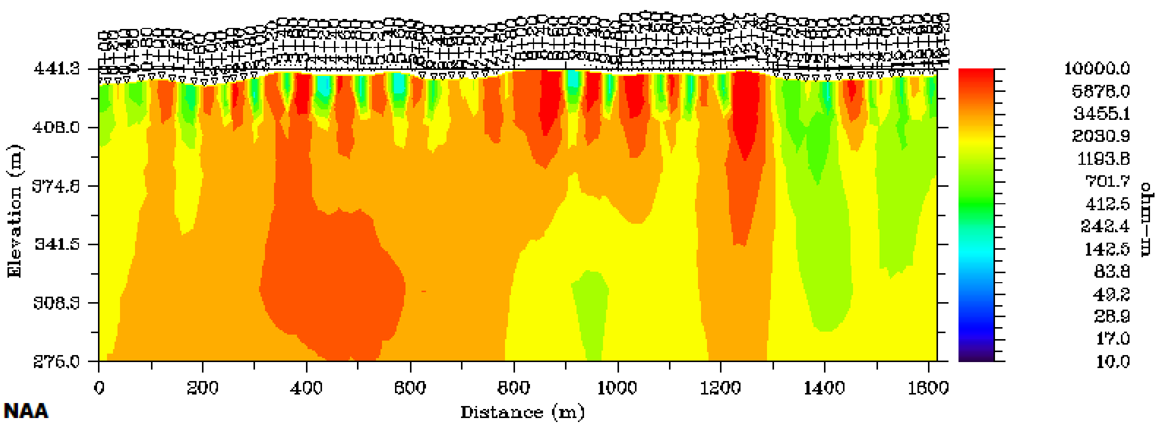


Figure-5 NAA
Line 15.5E
Model 2000 Ohm Profile

Appendix K - NAA Line 17.5E

Figure 1: Line 17.5E – Raw Data Profile

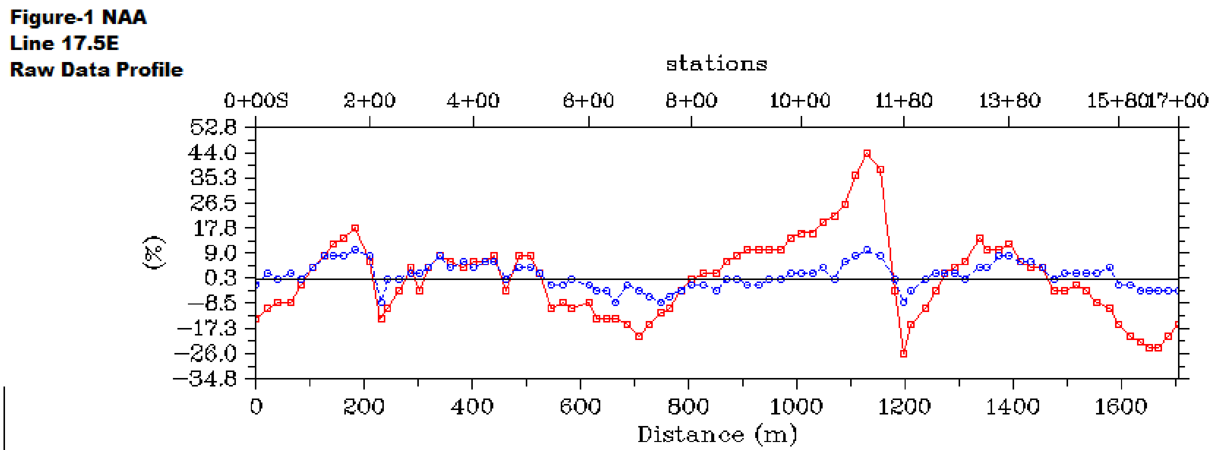


Figure 2: Line 17.5E – Fraser Filter Profile

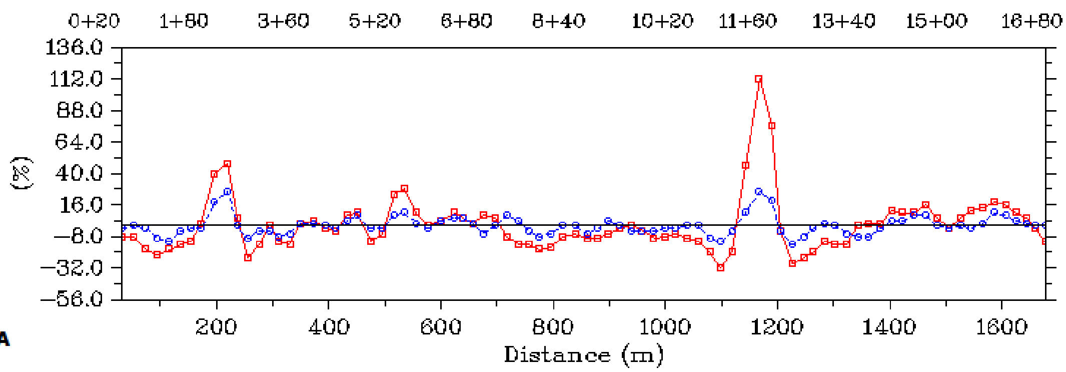


Figure-2 NAA
Line 17.5E
Fraser Filter Profile

Figure 3: Line 17.5E – KH Profile

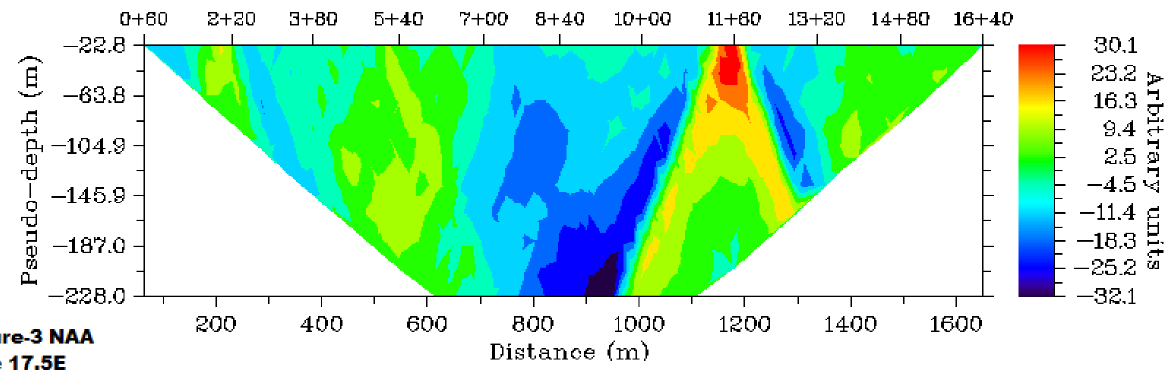


Figure-3 NAA
Line 17.5E
KH Profile

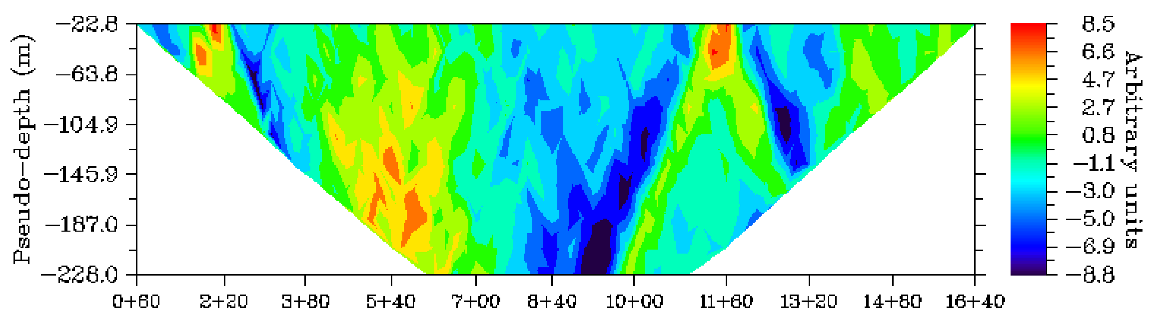


Figure 4: Line 17.5E – Resistivity Profile

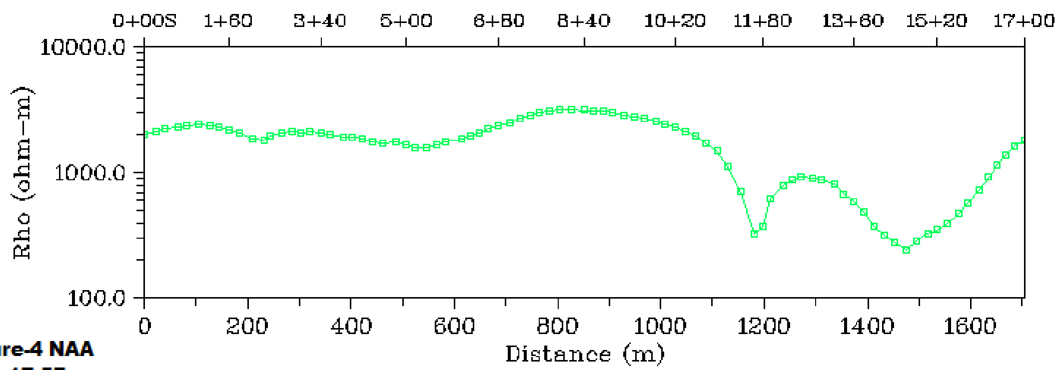


Figure-4 NAA
Line 17.5E
Resistivity 2000 Ohm Profile

Figure 5: Line 17.5E – Model

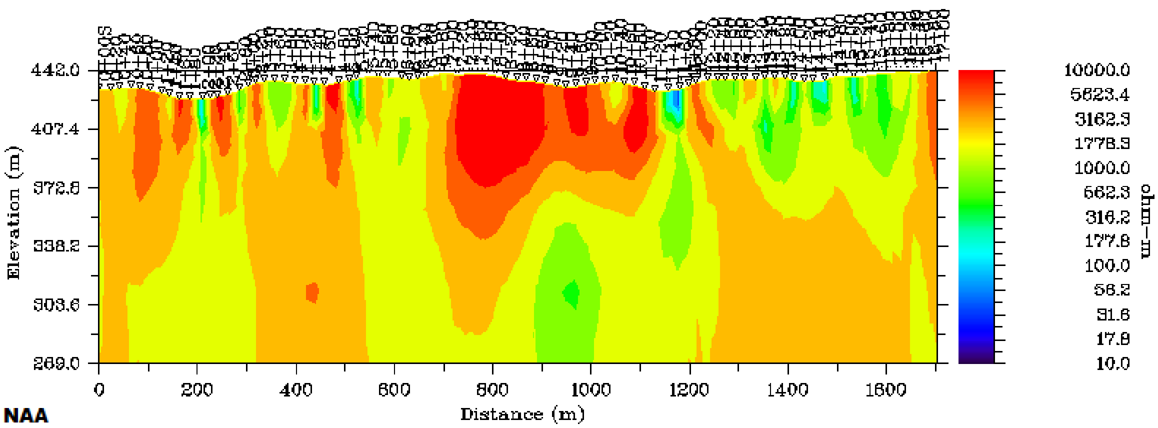


Figure-5 NAA
Line 17.5E
Model 2000 Ohm Profile

Appendix L - NAA Line 19.5E

Figure 1: Line 19.5E – Raw Data Profile

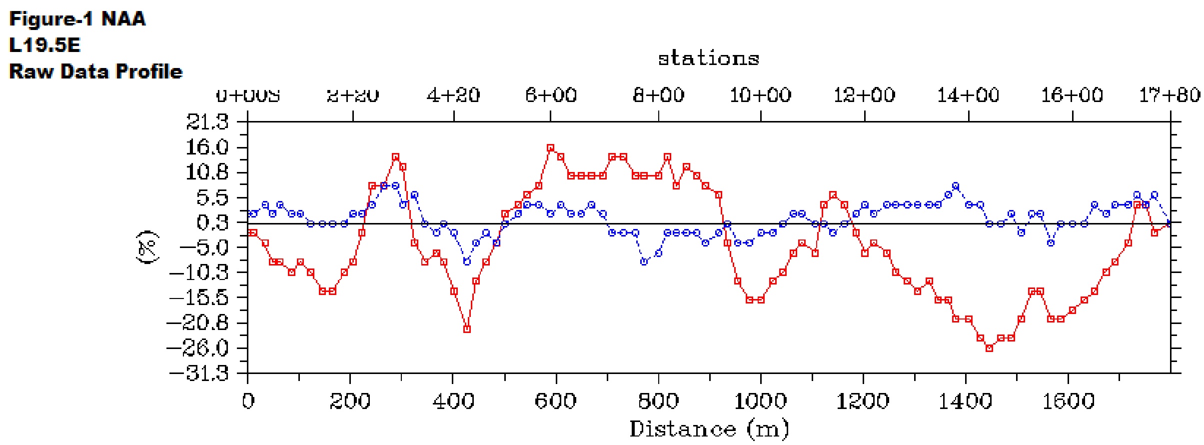


Figure 2: Line 19.5E – Fraser Filter Profile

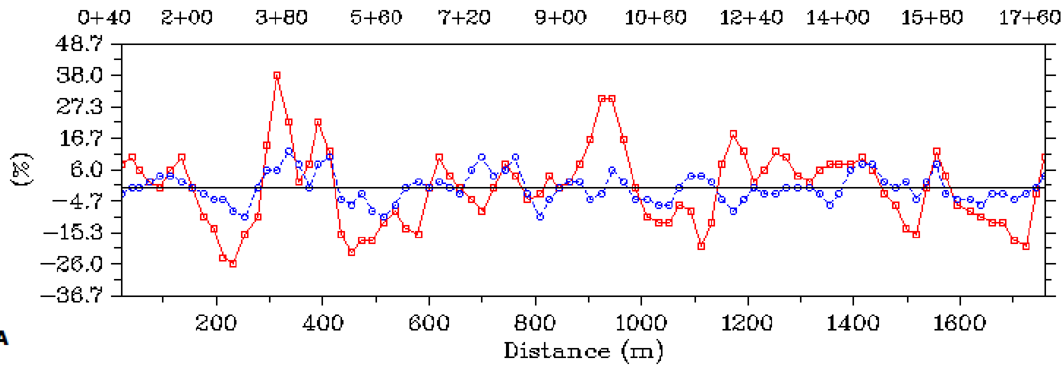


Figure-2 NAA
Line 19.5E
Fraser Filter Profile

Figure 3: Line 19.5E – KH Profile

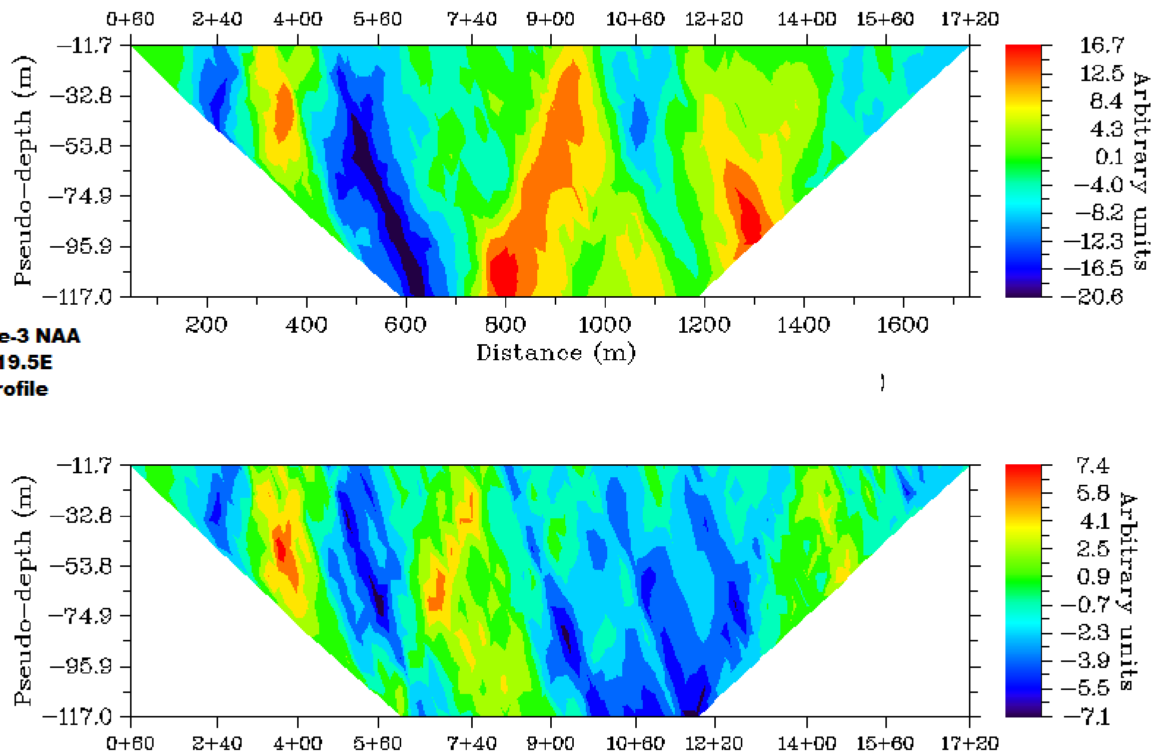


Figure-3 NAA
Line 19.5E
KH Profile

Figure 4: Line 19.5E – Resistivity Profile

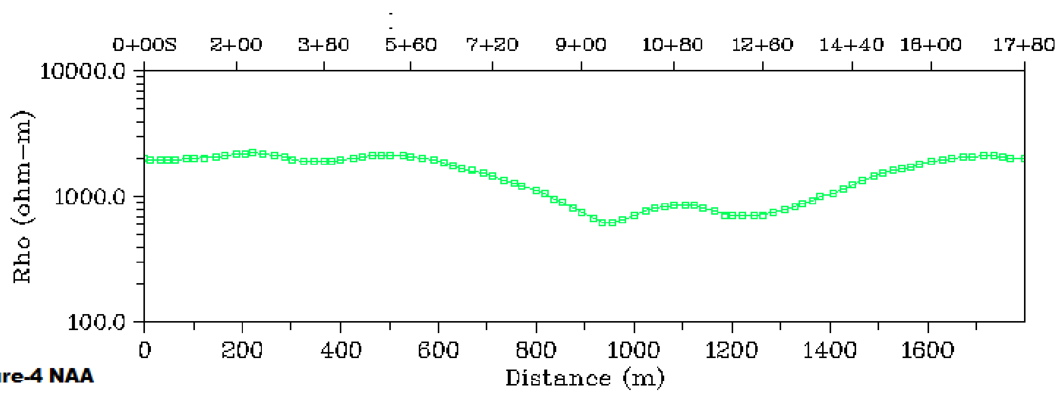


Figure-4 NAA
Line 19.5E
Resistivity 2000 Ohm Profile

Figure 5: Line 19.5E – Model

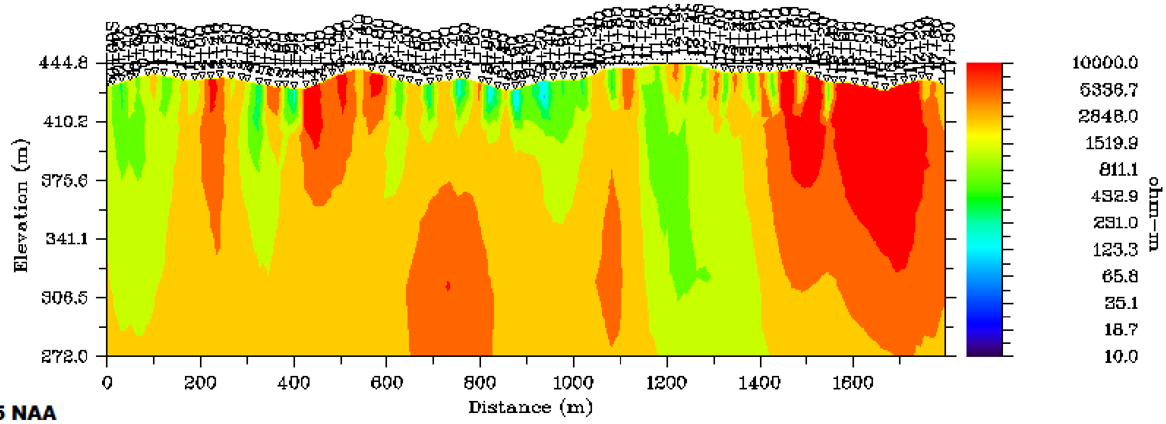


Figure-5 NAA
Line 19.5E
Model 2000 Ohm Profile

Appendix M - NAA Line 21.5E

Figure 1: Line 21.5E – Raw Data Profile

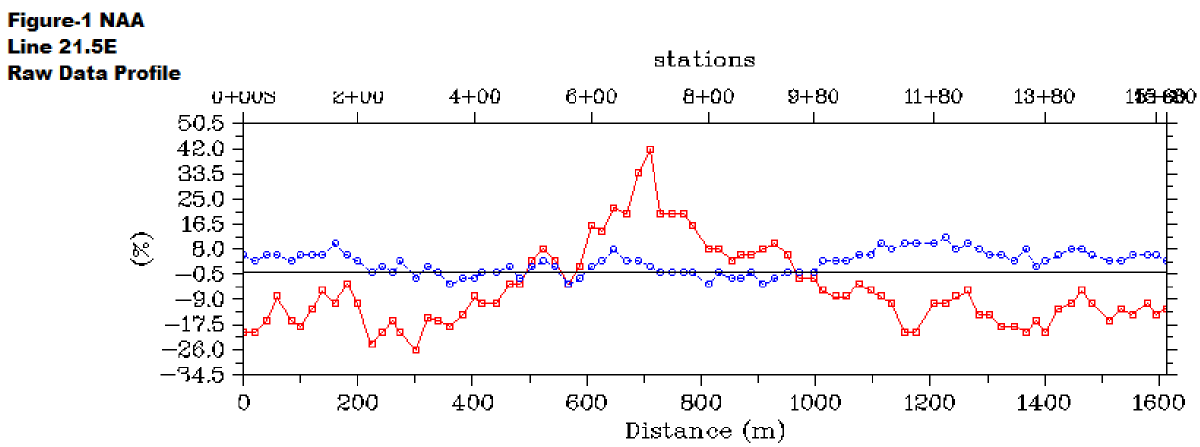


Figure 2: Line 21.5E – Fraser Filter Profile

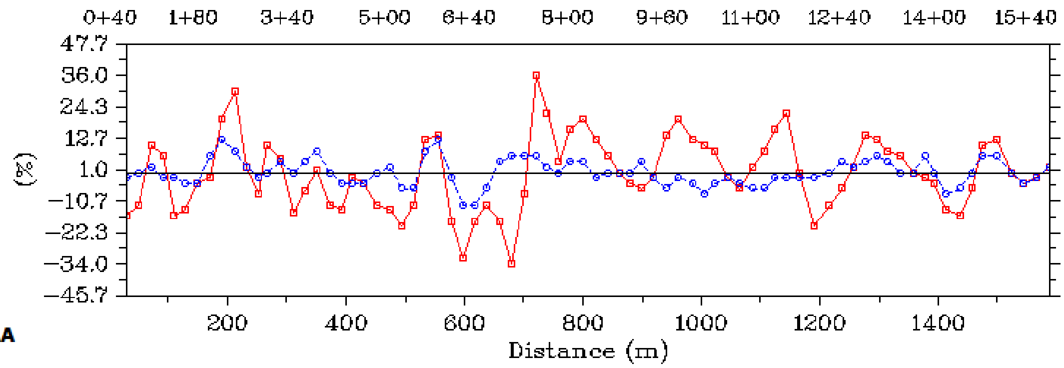


Figure-2 NAA
Line 21.5E
Fraser Filter Profile

Figure 3: Line 21.5E – KH Profile

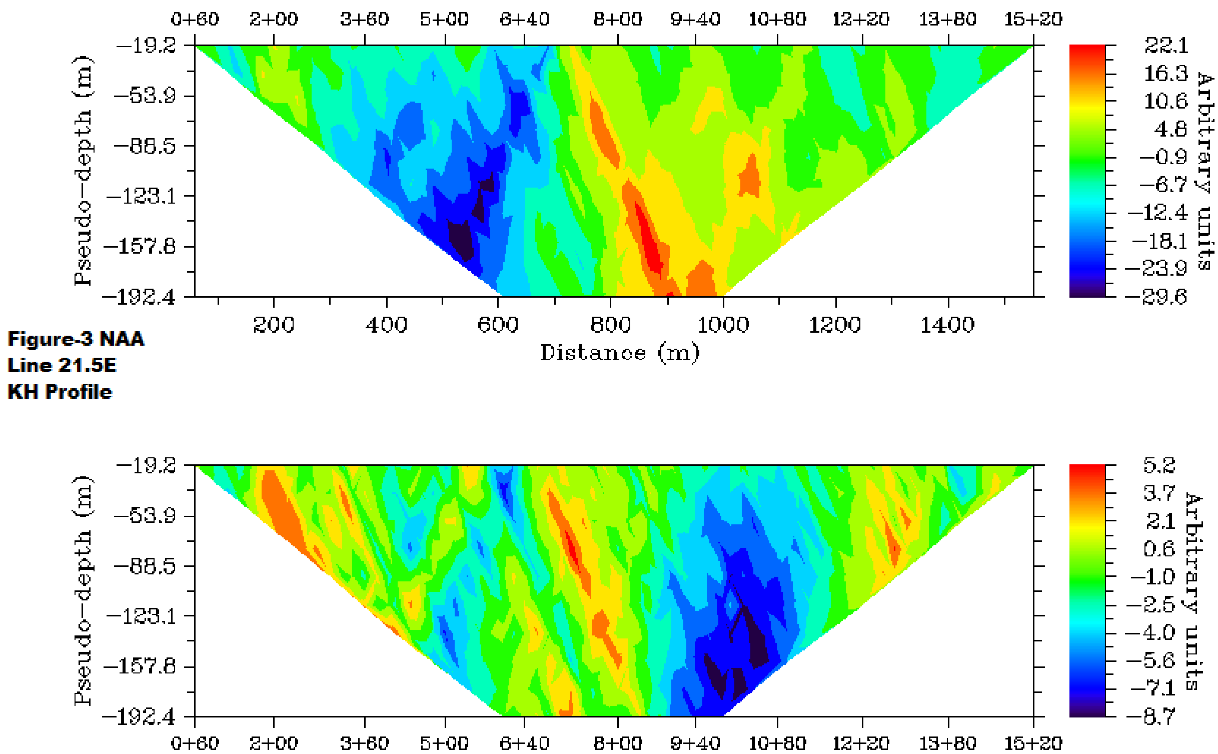


Figure 4: Line 21.5E – Resistivity Profile

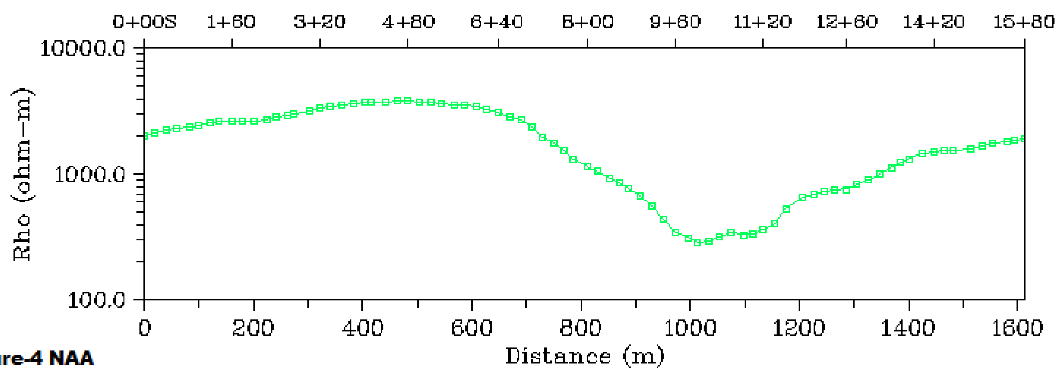


Figure-4 NAA
Line 21.5E
Resistivity 2000 Profile

Figure 5: Line 21.5E – Model

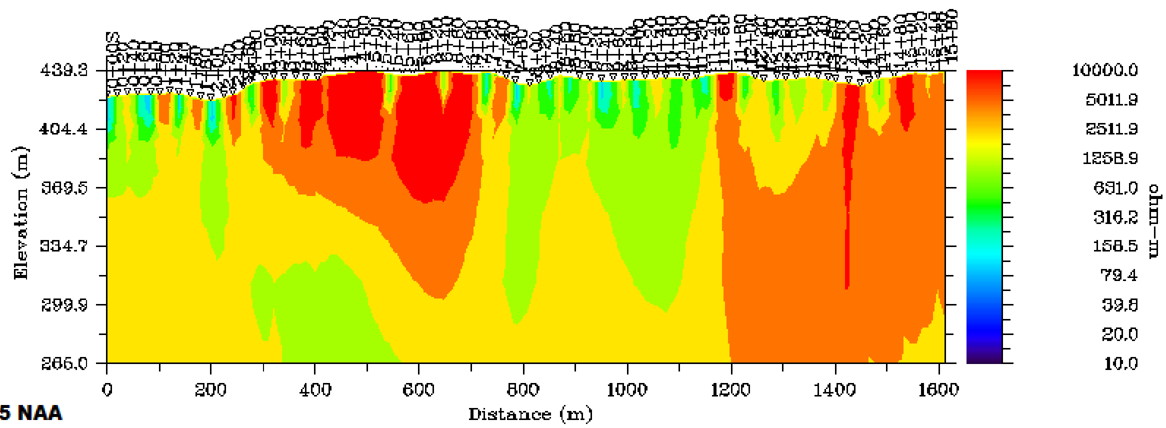


Figure-5 NAA
Line 21.5E
Model 2000 Ohm Profile

Appendix N - NAA Line 23.5E

Figure 1: Line 23.5E – Raw Data Profile

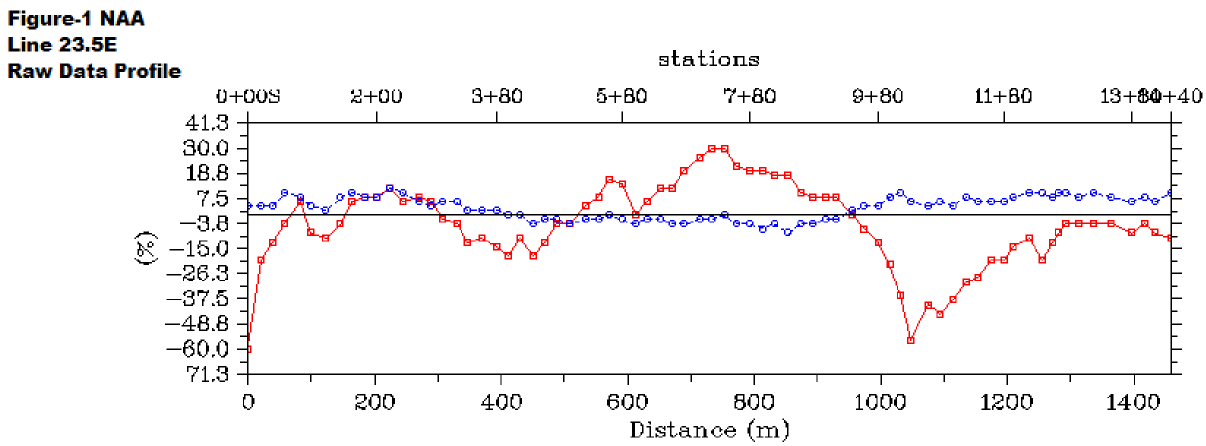


Figure 2: Line 23.5E – Fraser Filter Profile

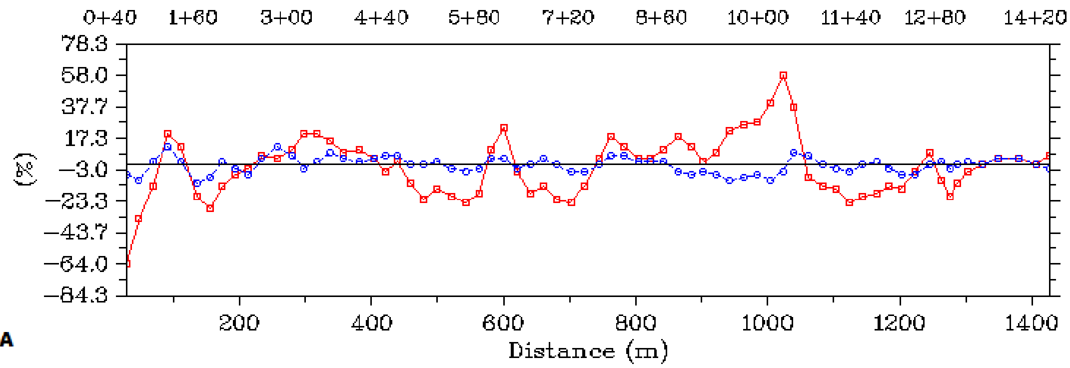


Figure-2 NAA
Line 23.5E
Fraser Filter Profile

Figure 3: Line 23.5E – KH Profile

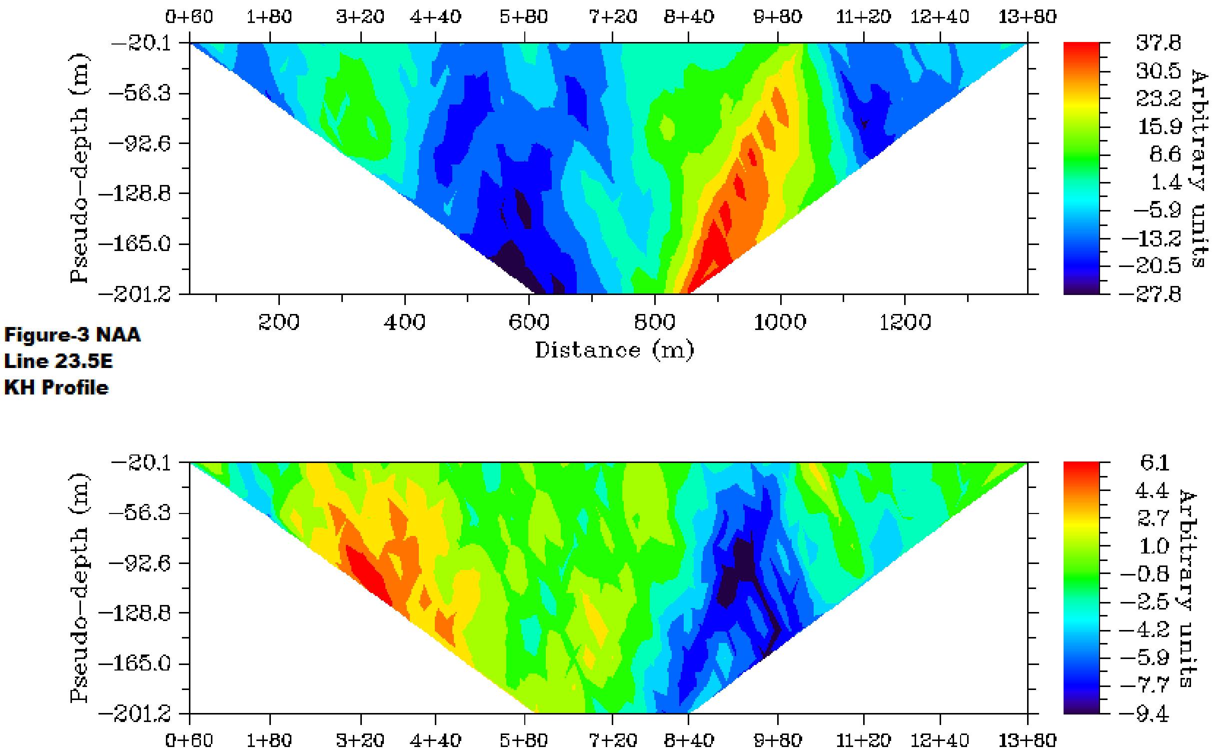


Figure 4: Line 23.5E – Resistivity Profile

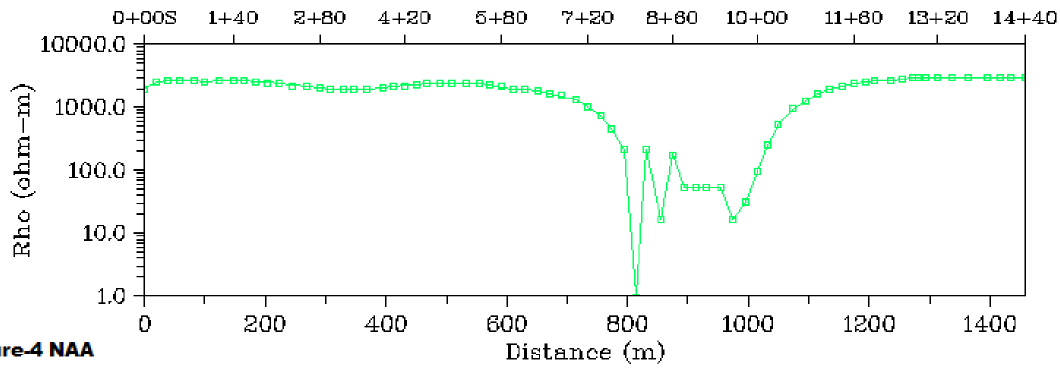


Figure-4 NAA
Line 23.5E
Resistivity 2000 Ohm Profile

Figure 5: Line 23.5E – Model

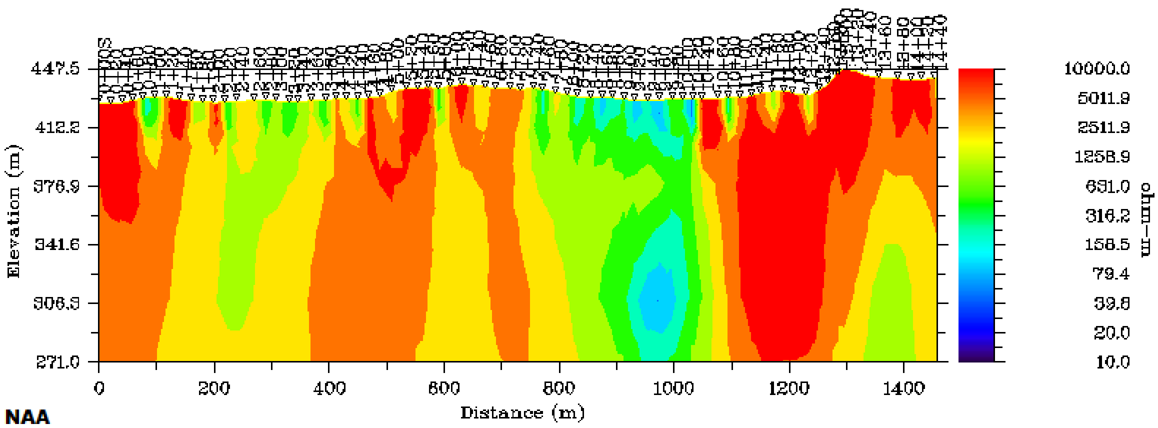


Figure-5 NAA
Line 23.5E
Model 2000 Ohm Profile

Appendix O - NAA Line 25.5E

Figure 1: Line 25.5E – Raw Data Profile

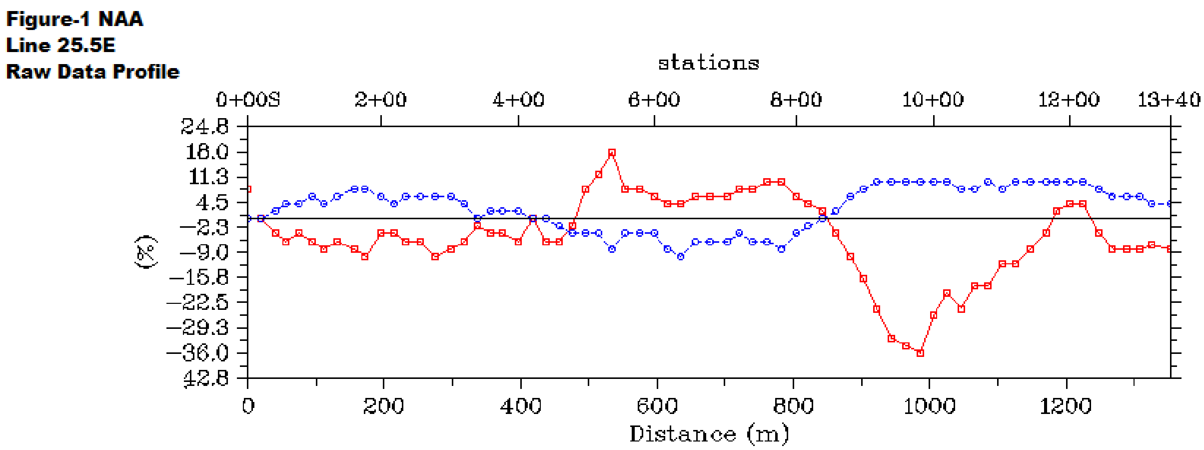


Figure 2: Line 25.5E – Fraser Filter Profile

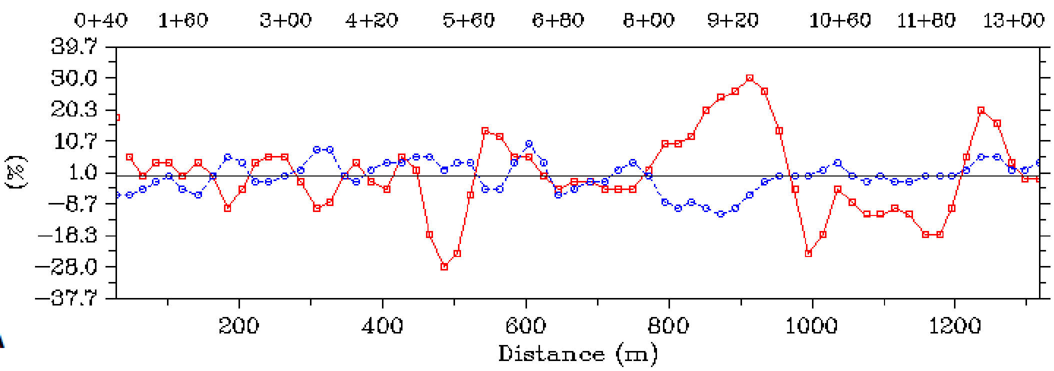


Figure-2 NAA
Line 25.5E
Fraser Filter Profile

Figure 3: Line 25.5E – KH Profile

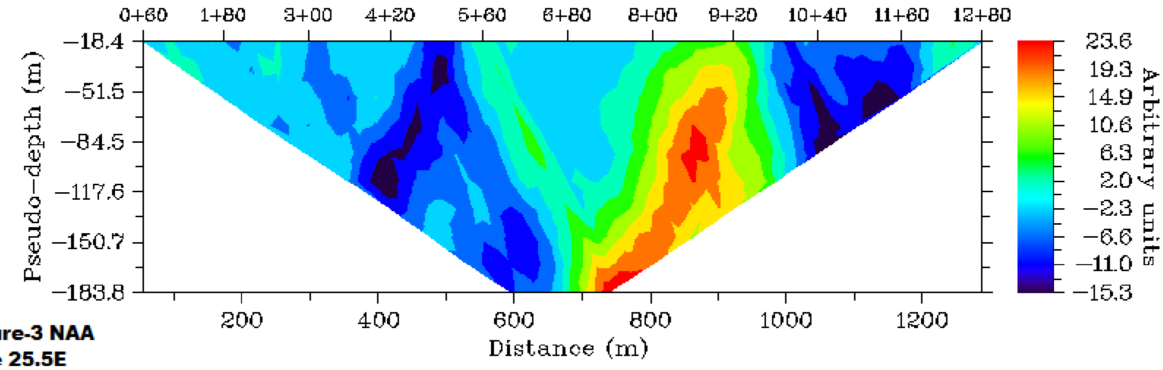


Figure-3 NAA
Line 25.5E
KH Profile

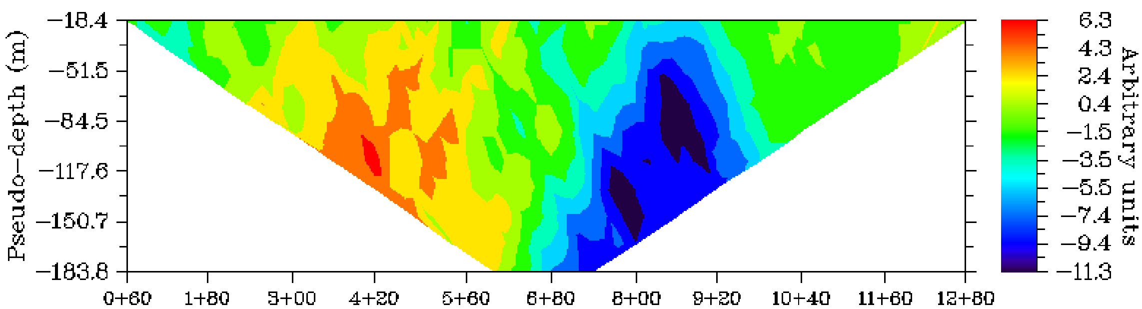


Figure 4: Line 25.5E – Resistivity Profile

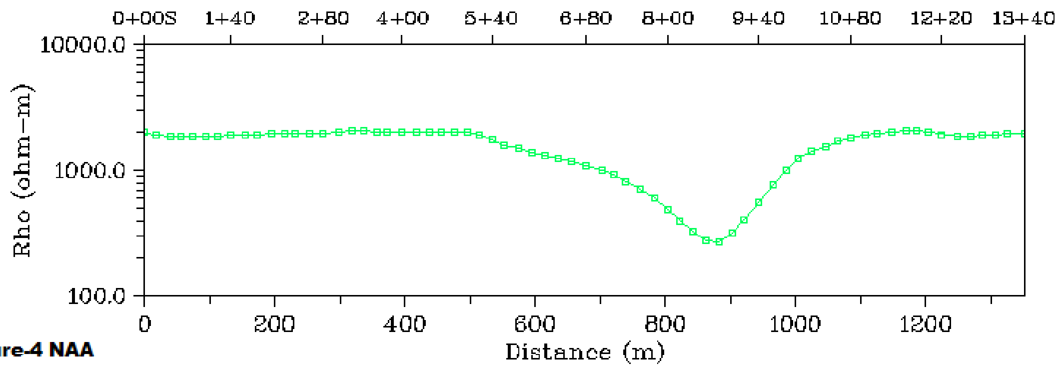


Figure-4 NAA
Line 25.5E
Resistivity 2000 Ohm Profile

Figure 5: Line 25.5E – Model

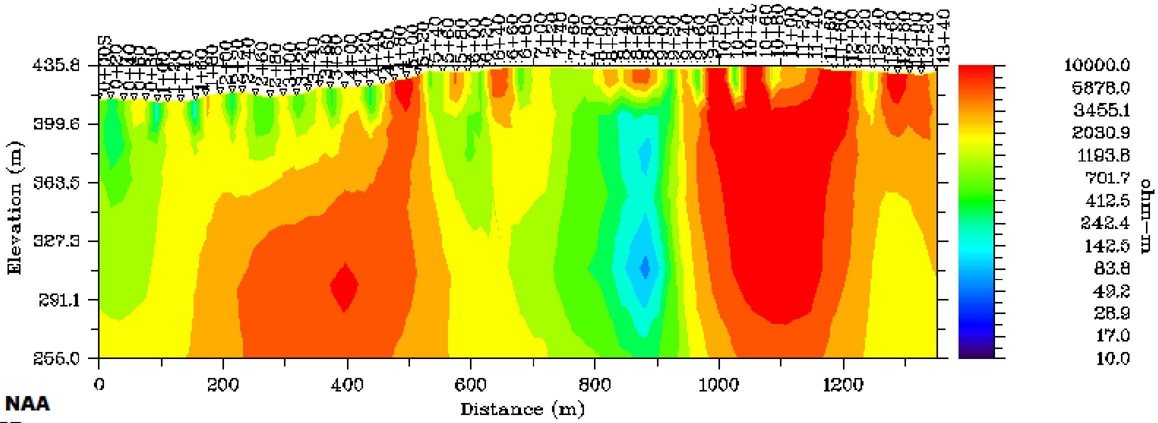


Figure-5 NAA
Line 25.5E
Model 2000 Ohm Profile

Appendix P - NAA Line 27.5E

Figure 1: Line 27.5E – Raw Data Profile

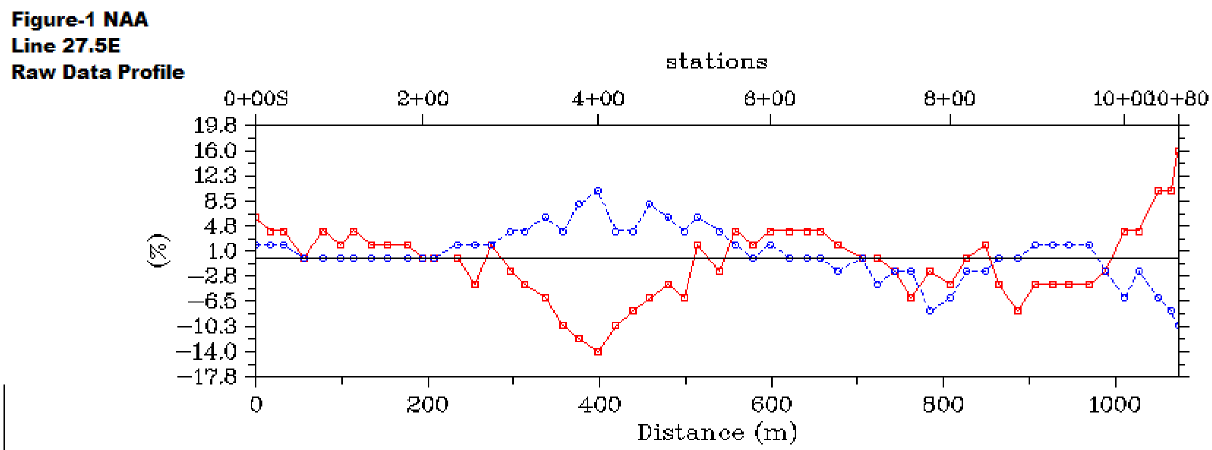


Figure 2: Line 27.5E – Fraser Filter Profile

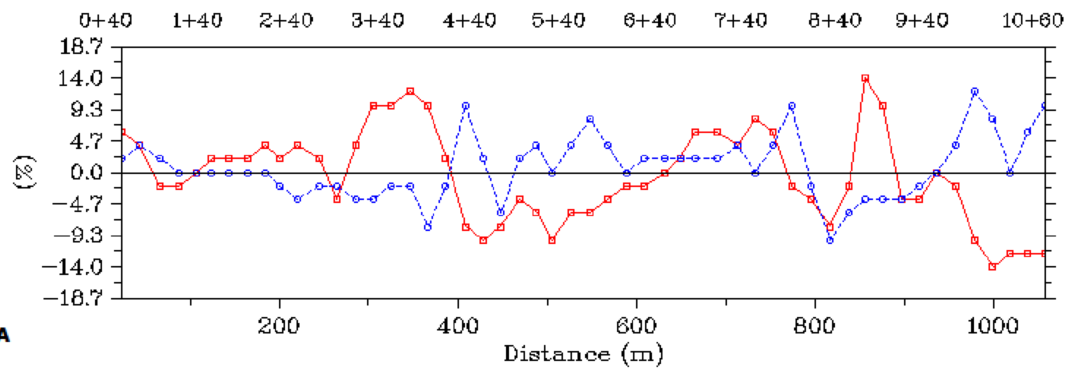


Figure-2 NAA
Line 27.5E
Fraser Filter Profile

Figure 3: Line 27.5E – KH Profile

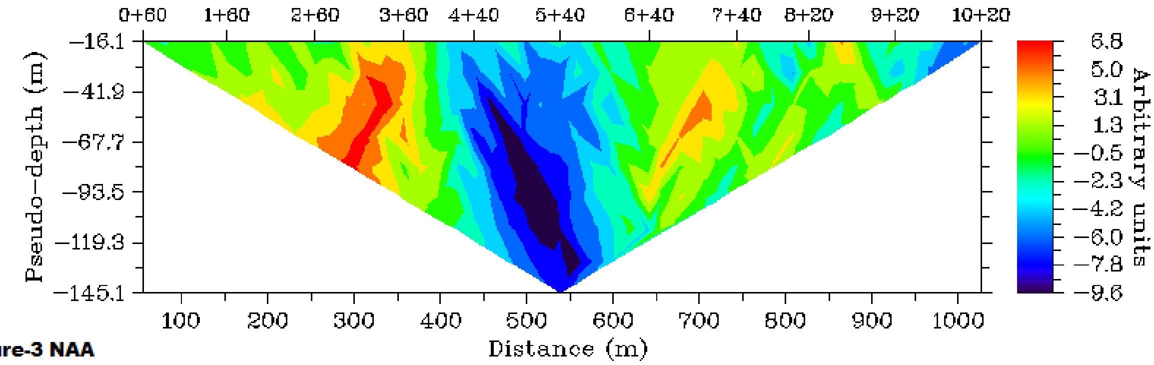


Figure-3 NAA
Line 27.5E
KH Profile

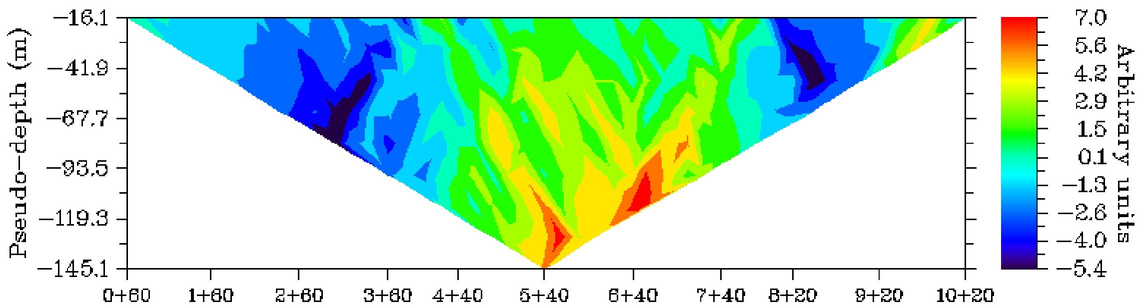


Figure 4: Line 27.5E – Resistivity Profile

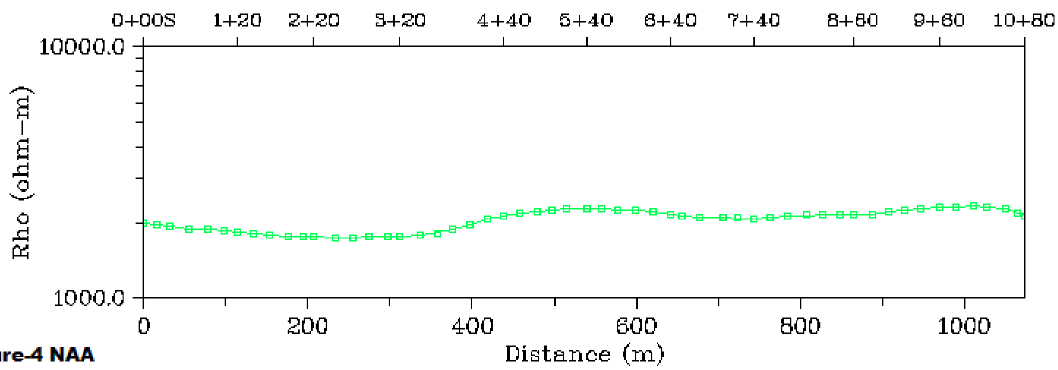


Figure-4 NAA
Line 27.5 E
Resistivity 2000 Ohm Profile

Figure 5: Line 27.5E – Model

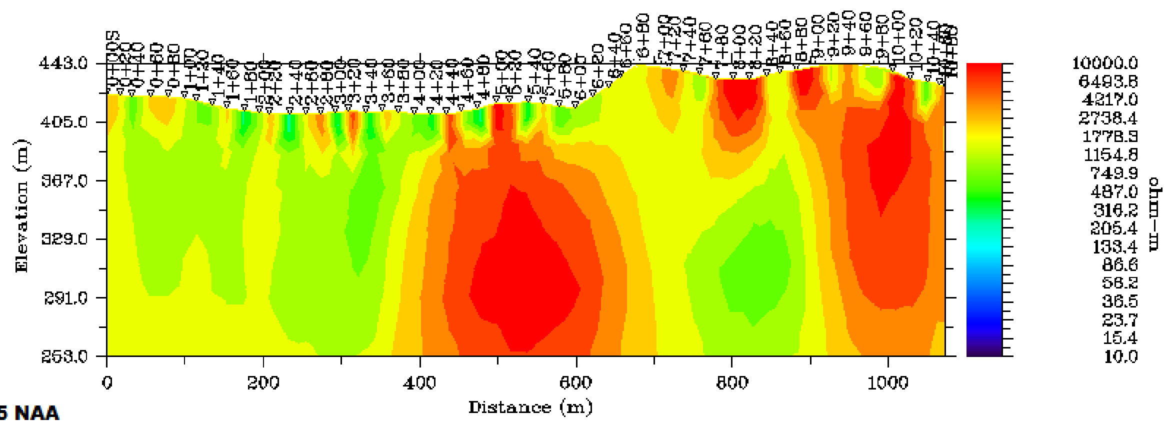


Figure-5 NAA
Line 27.5E
Model 2000 Ohm Profile

Appendix Q - NAA Line 29.5E

Figure 1: Line 29.5E – Raw Data Profile

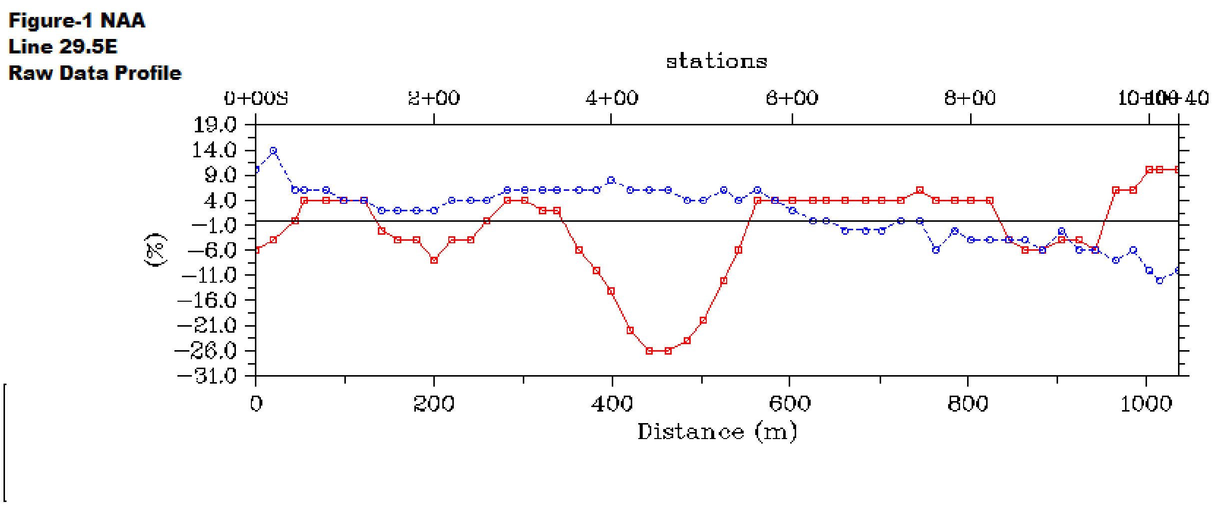


Figure 2: Line 29.5E – Fraser Filter Profile

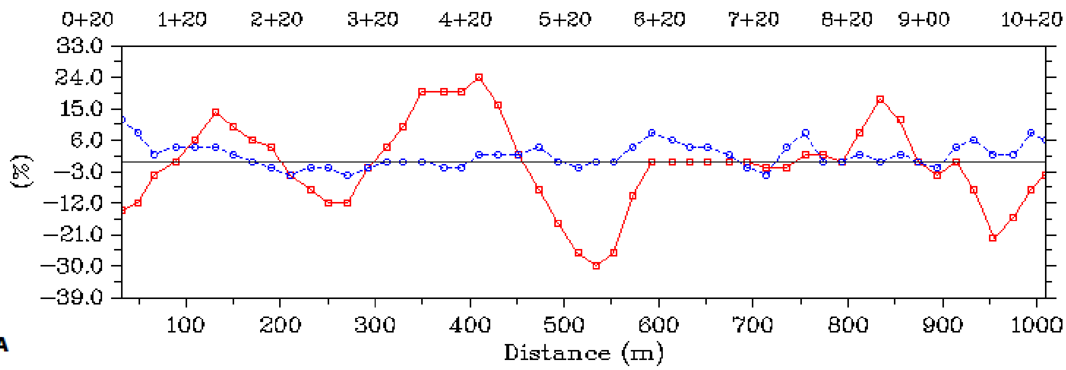


Figure-2 NAA
Line 29.5E
Fraser Filter Profile

Figure 3: Line 29.5E – KH Profile

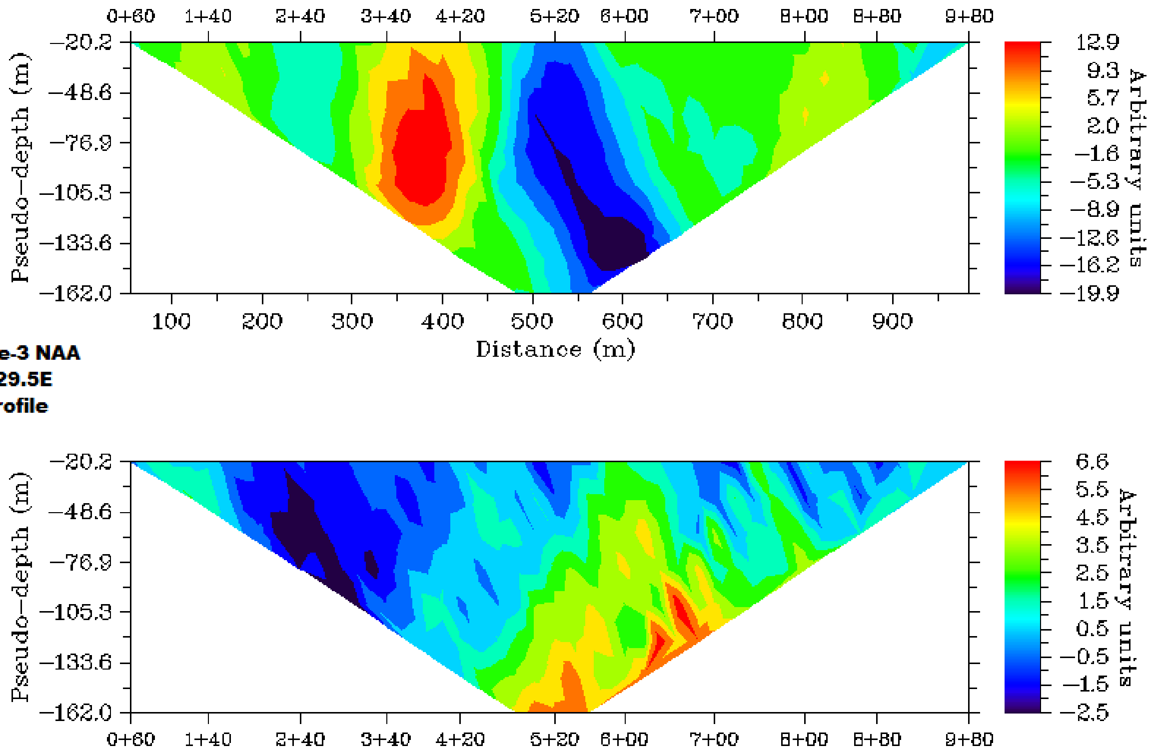


Figure-3 NAA
Line 29.5E
KH Profile

Figure 4: Line 29.5E – Resistivity Profile

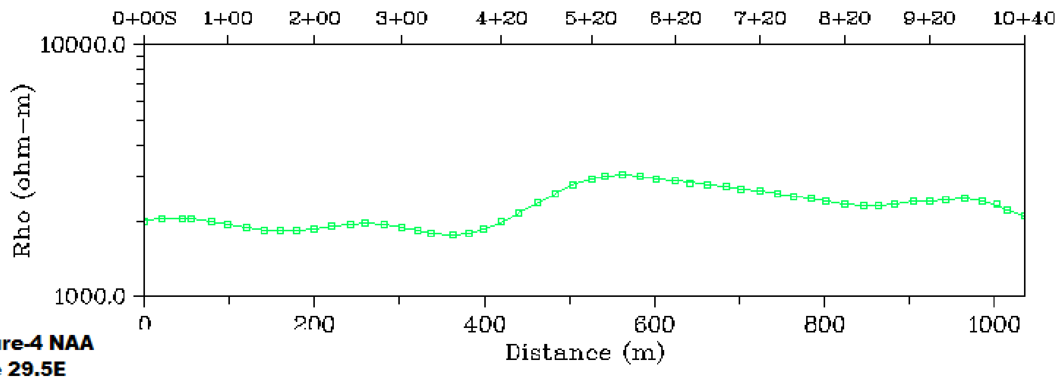


Figure-4 NAA
Line 29.5E
Resistivity 2000 Ohm Profile

Figure 5: Line 29.5E – Model

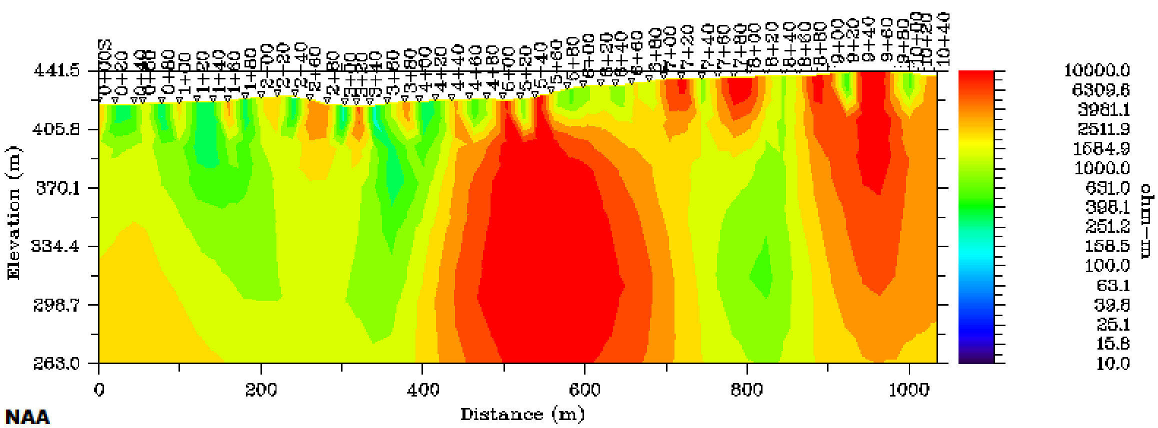


Figure-5 NAA
Line 29.5E
Model 2000 Ohm Profile

Appendix AA - NML Line 1W

Figure 1: Line 1W – Raw Data Profile

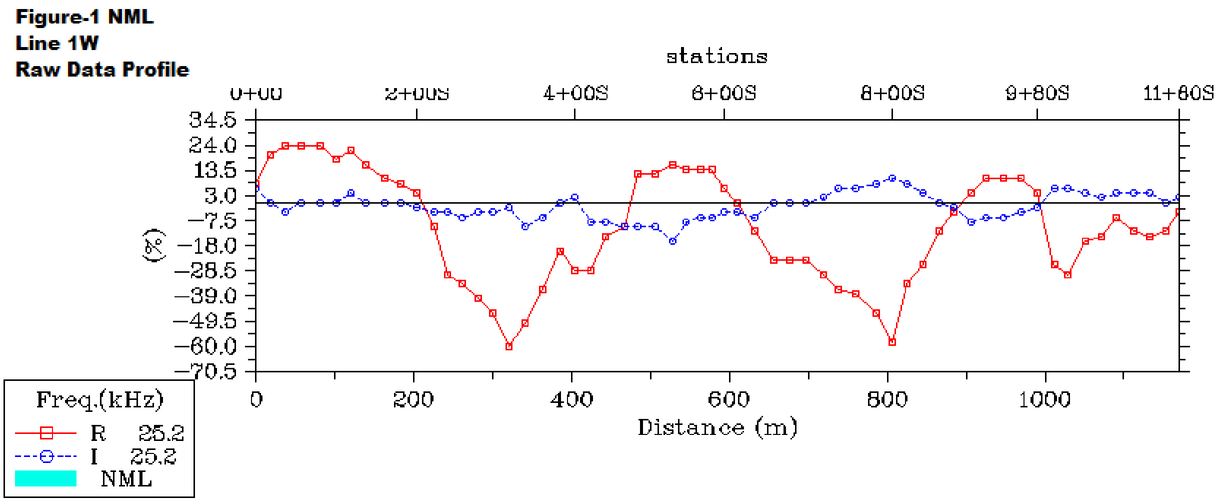


Figure 2: Line 1W – Fraser Filter Profile

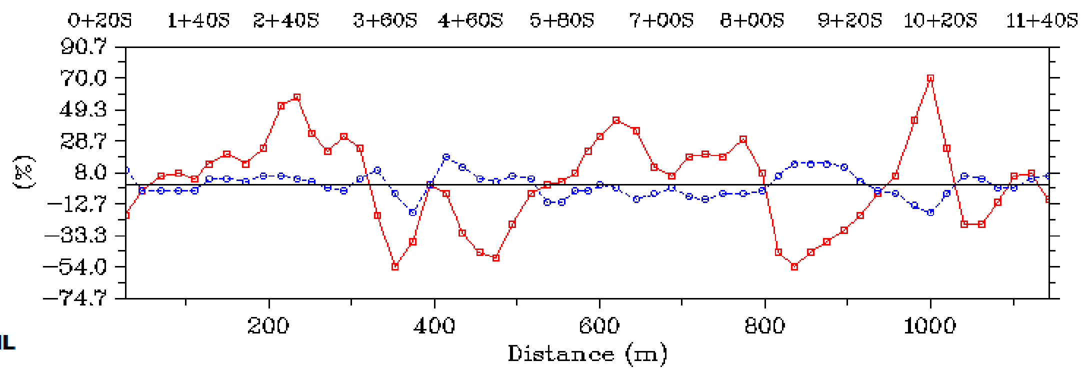


Figure-2 NML
Line 1W
Fraser Filter Profile

Figure 3: Line 1W – KH Profile

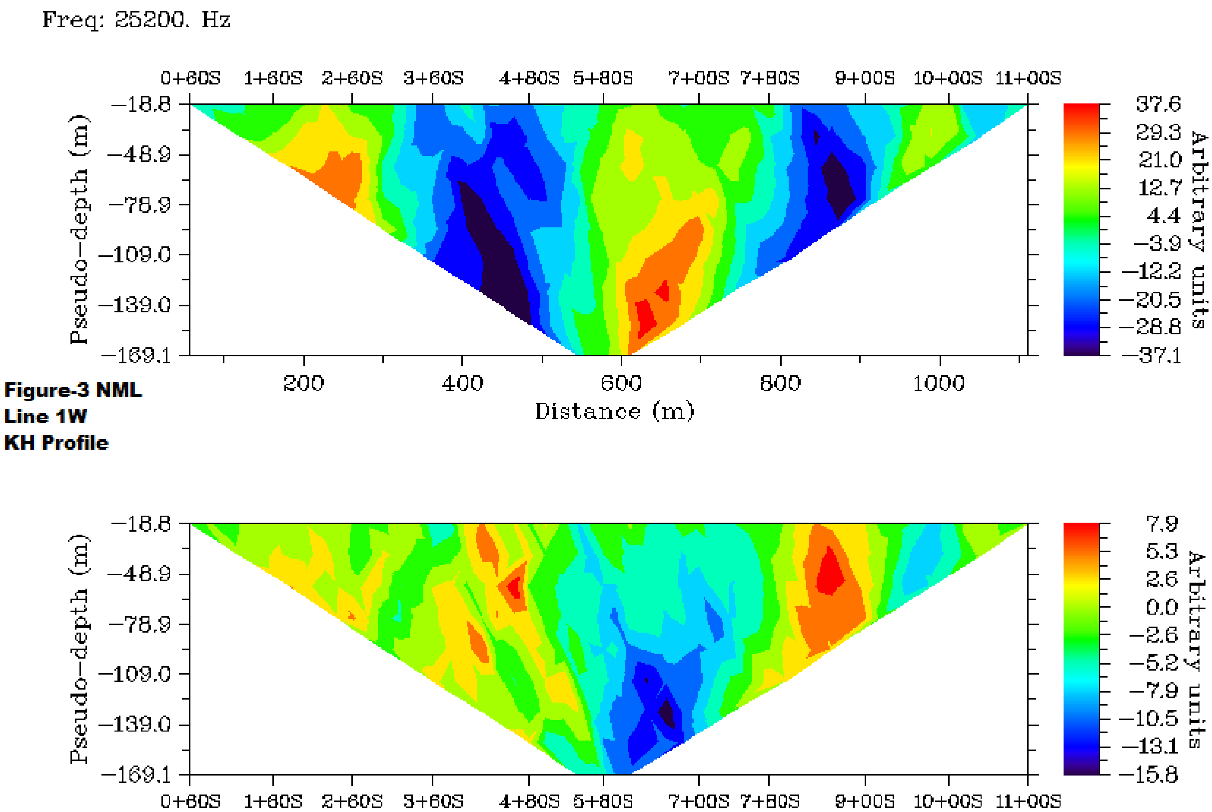


Figure 4: Line 1W – Resistivity Profile

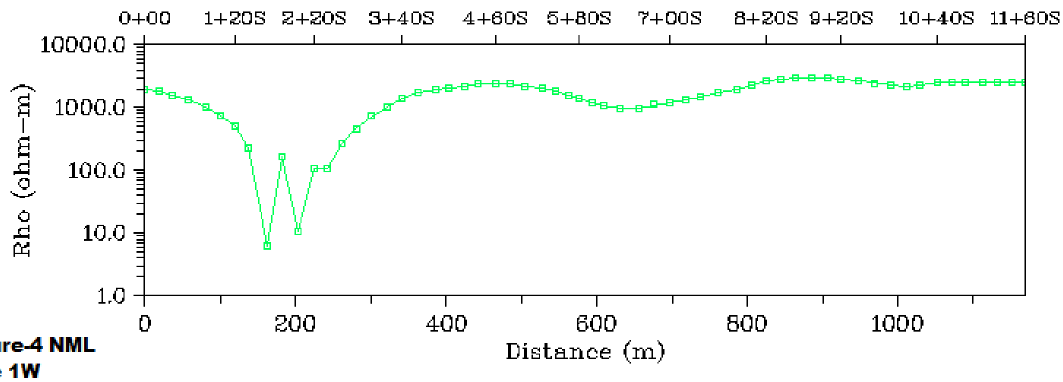


Figure-4 NML
Line 1W
Resitivity 2000 Ohm Profile

Figure 5: Line 1W – Model

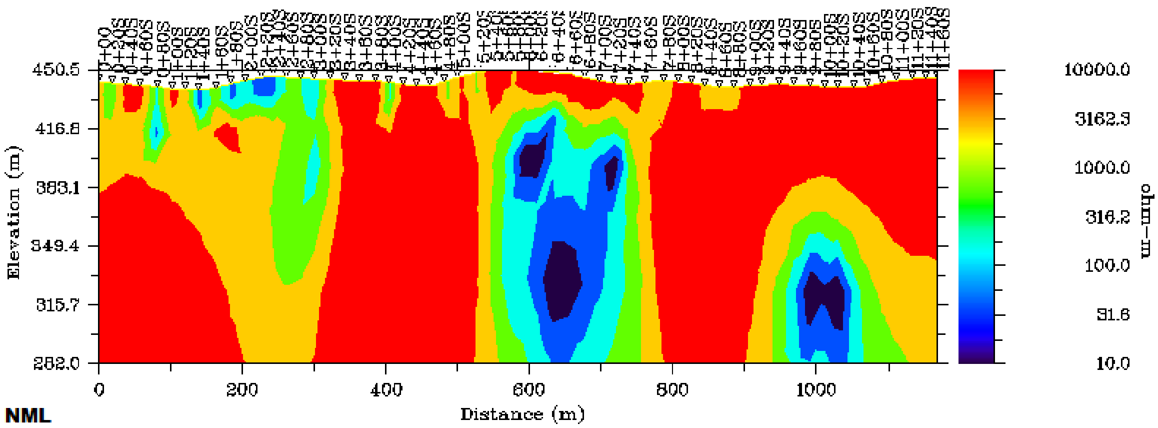


Figure-5 NML
Line 1W
Model 2000 Ohm Profile

Appendix BB - NML Line 00

Figure 1: Line 00 – Raw Data Profile

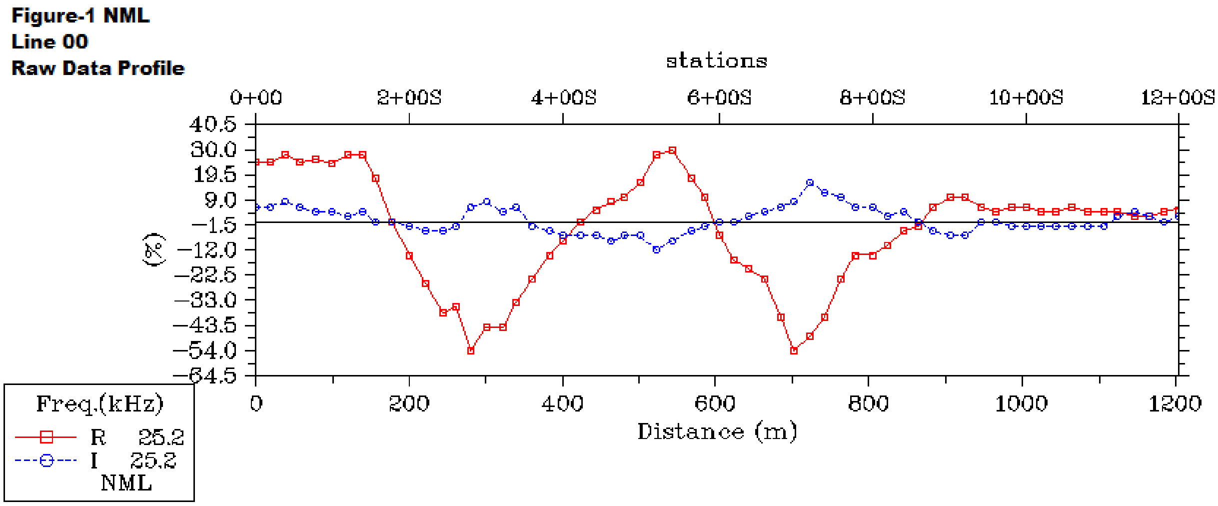


Figure 2: Line 00 – Fraser Filter Profile

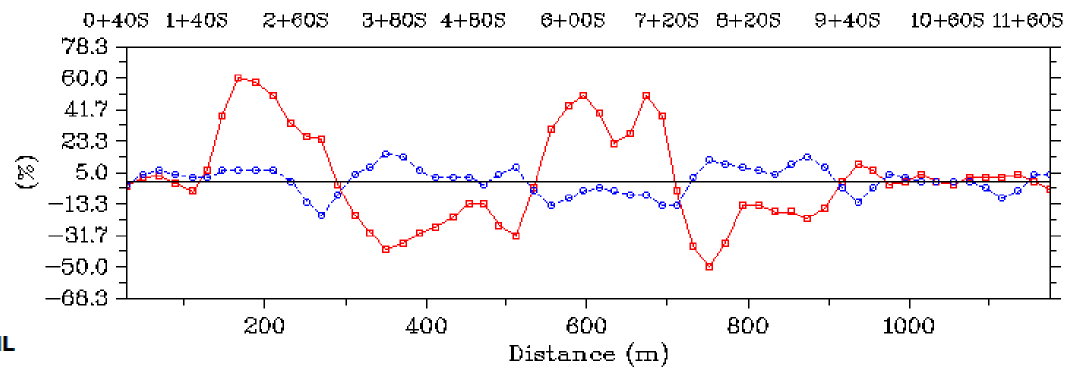


Figure-2 NML
Line 00
Fraser Filter Profile

Figure 3: Line 00 – KH Profile

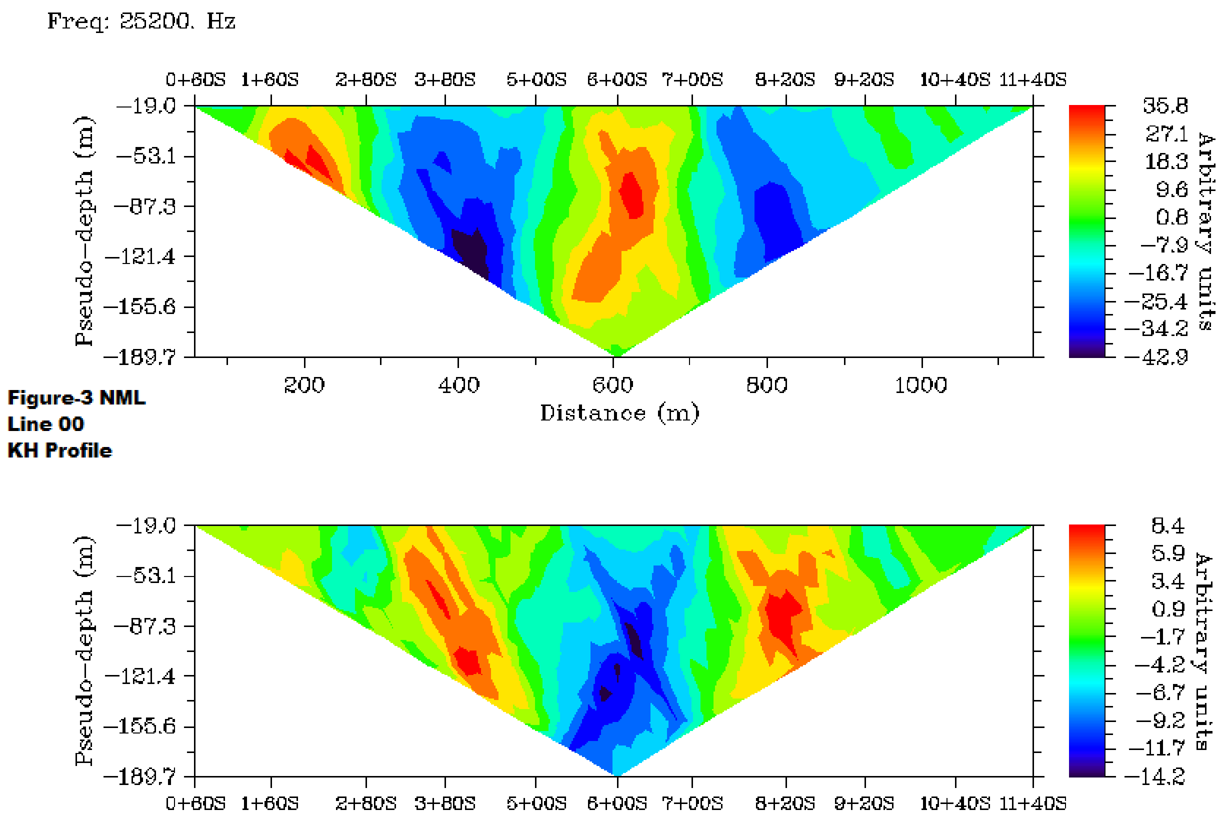


Figure 4: Line 00 – Resistivity Profile

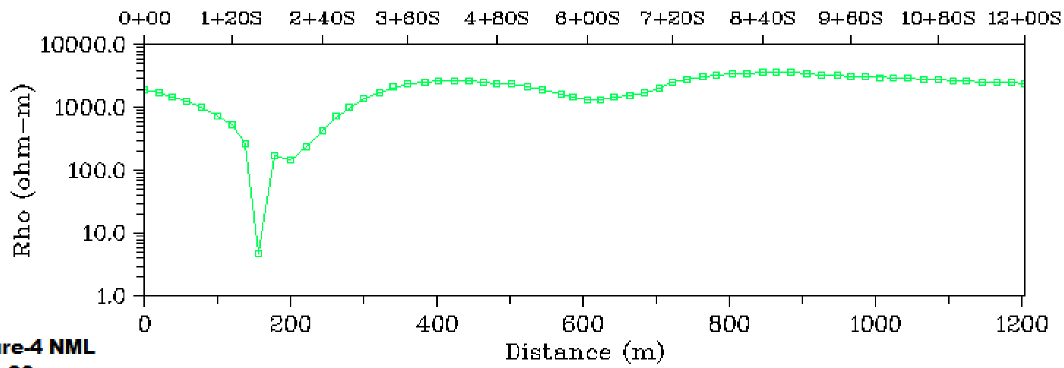


Figure-4 NML
Line 00
Resistivity 2000 Ohm Profile

Figure 5: Line 00 – Model

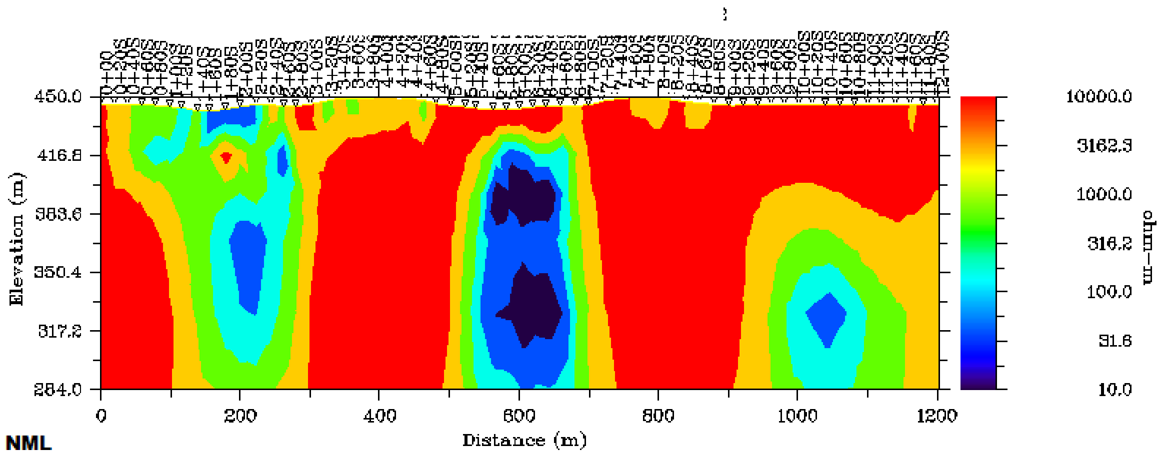


Figure-5 NML
Line 00
Model 2000 Ohm Profile

Appendix CC - NML Line 1.5E

Figure 1: Line 1.5E – Raw Data Profile

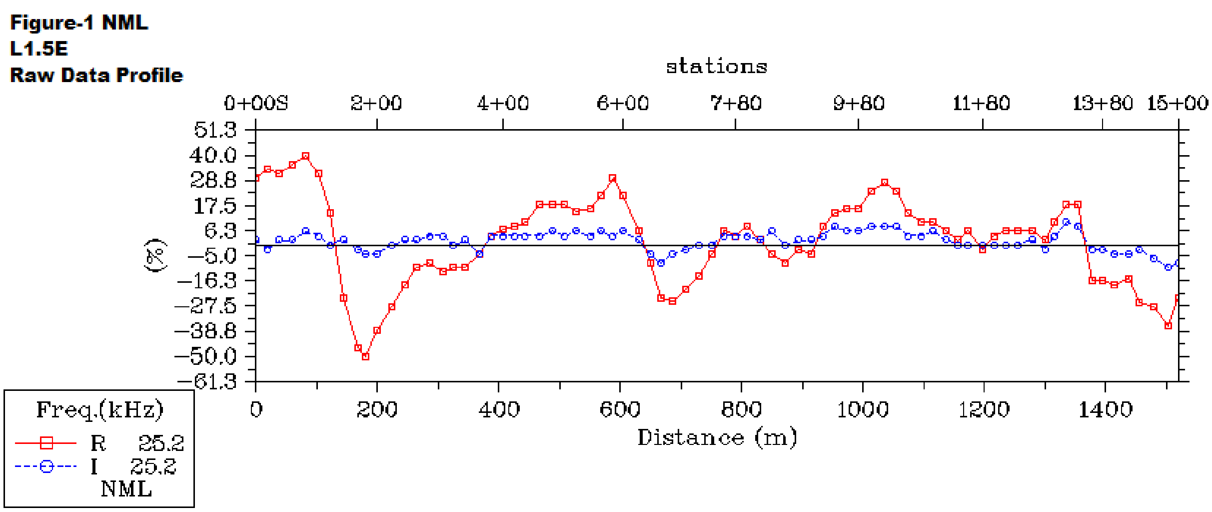


Figure 2: Line 1.5E – Fraser Filter Profile

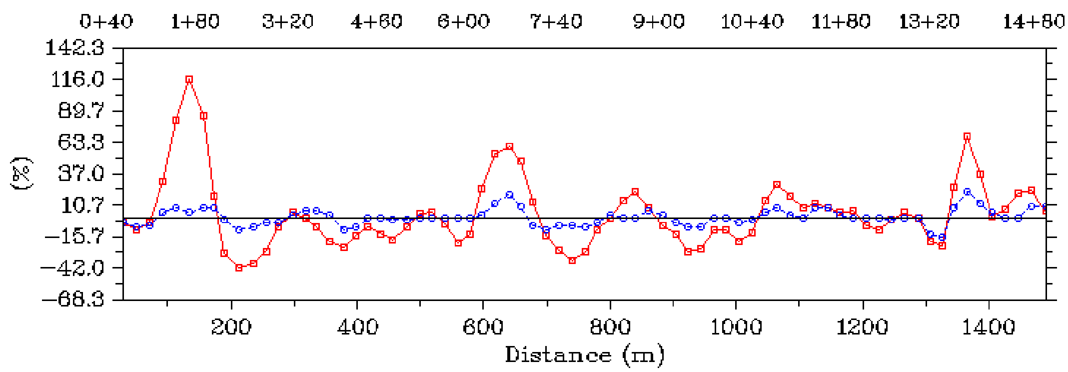


Figure-2 NML
Line 1.5E
Fraser Filter Profile

Figure 3: Line 1.5E – KH Profile

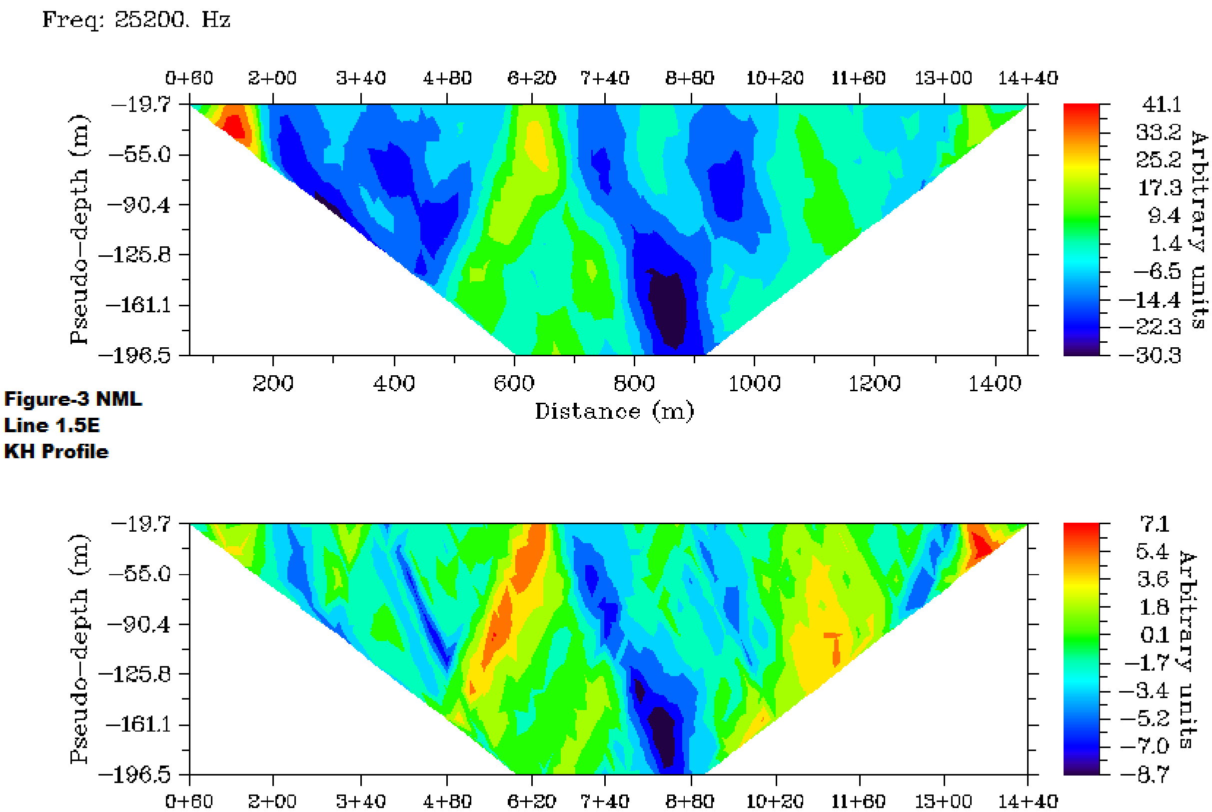


Figure 4: Line 1.5E – Resistivity Profile

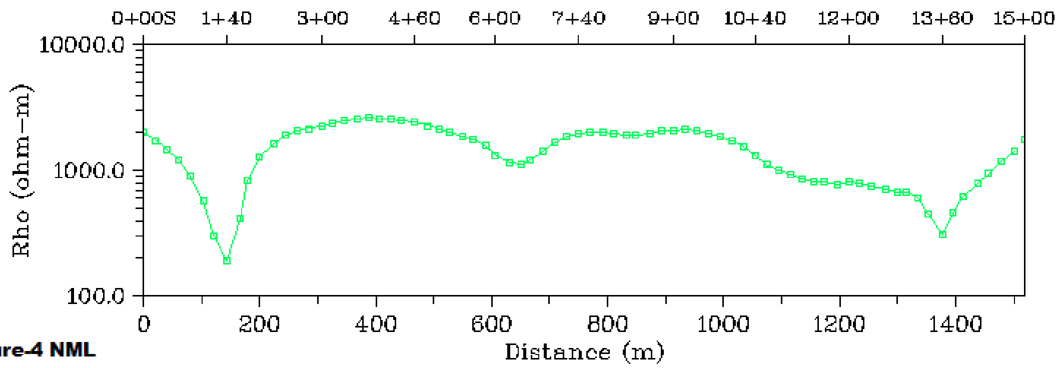


Figure-4 NML
Line 1.5E
Resistivity 2000 Ohm Profile

Figure 5: Line 1.5E – Model

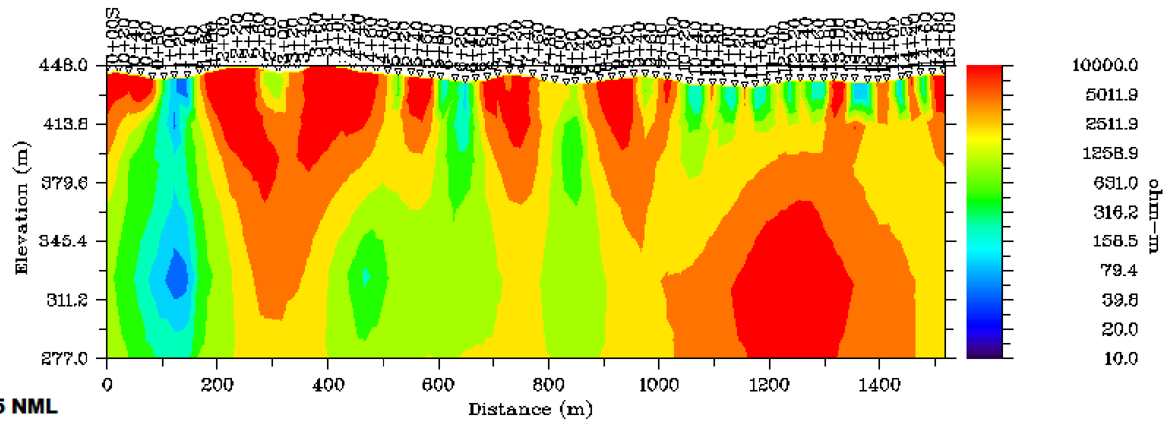


Figure-5 NML
Line 1.5E
Model 2000 Ohm Profile

Appendix DD - NML Line 3.5E

Figure 1: Line 3.5E – Raw Data Profile

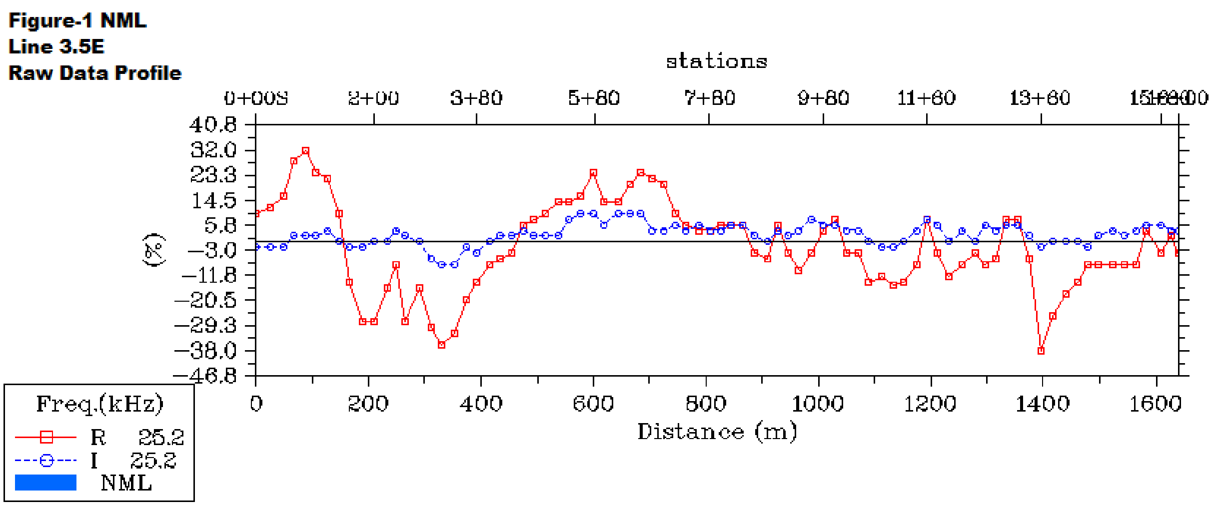


Figure 2: Line 3.5E – Fraser Filter Profile

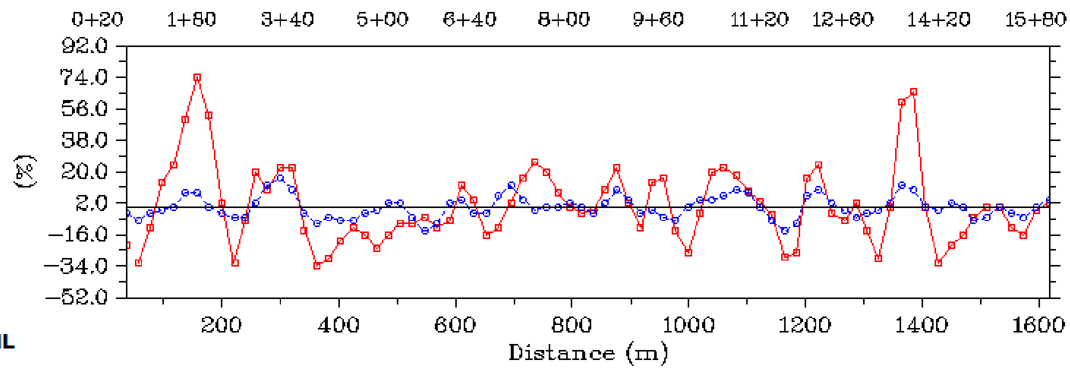


Figure-2 NML
Line 3.5E
Fraser Filter Profile

Figure 3: Line 3.5E – KH Profile

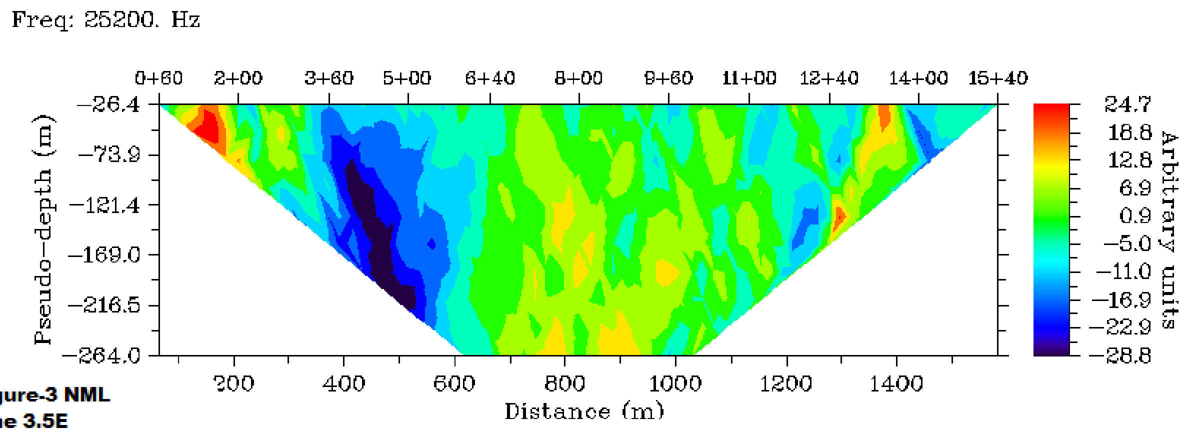


Figure-3 NML
Line 3.5E
KH Profile

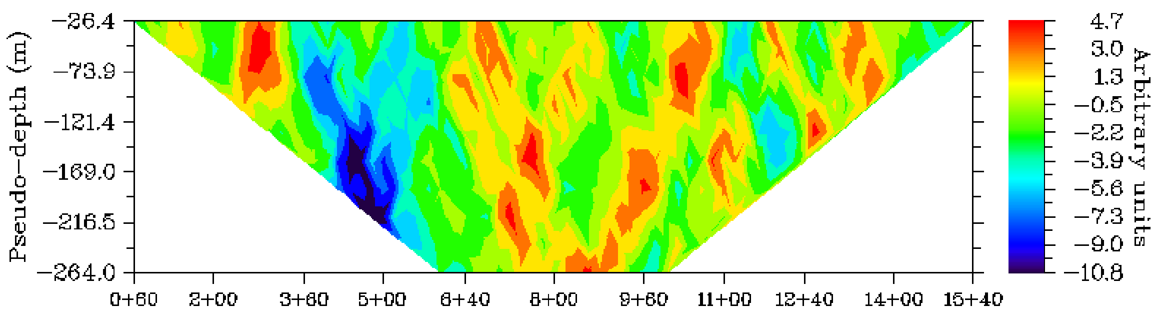


Figure 4: Line 3.5E – Resistivity Profile

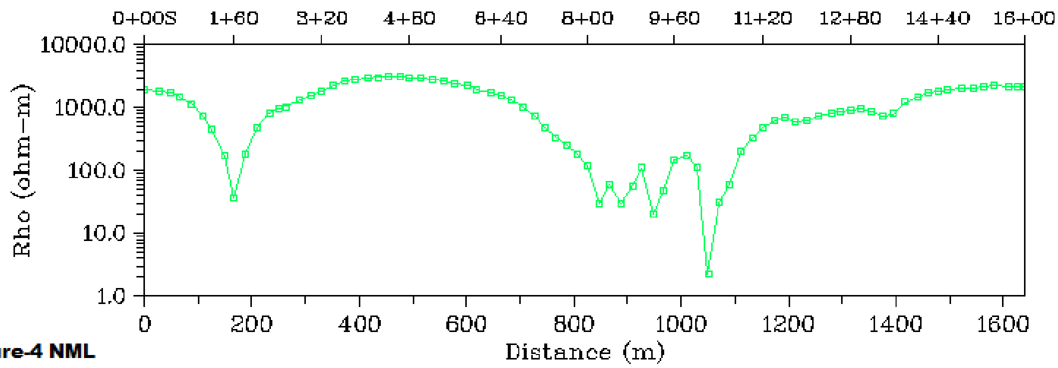


Figure-4 NML
Line 3.5E
Resistivity 2000 Ohm Profile

Figure 5: Line 3.5E – Model

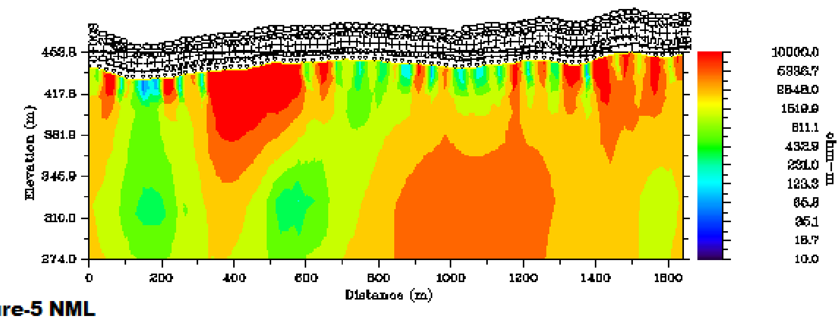


Figure-5 NML
Line 3.5E
Model 2000 Ohm Profile

Appendix EE - NML Line 5.5E

Figure 1: Line 5.5E – Raw Data Profile

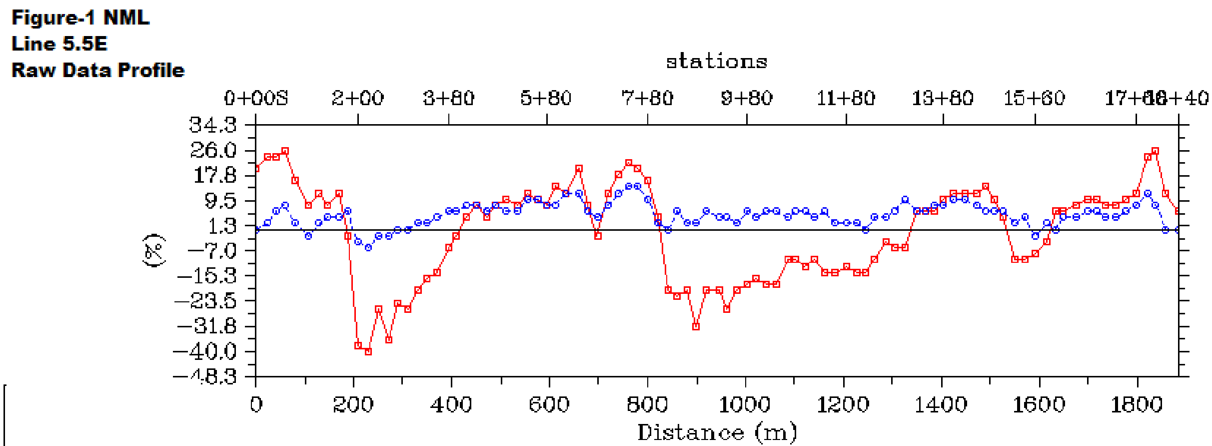


Figure 2: Line 5.5E – Fraser Filter Profile

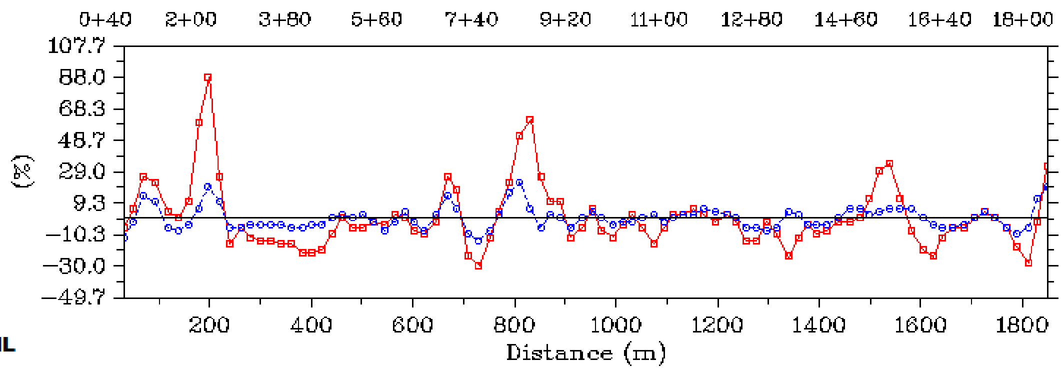


Figure-2 NML
Line 5.5E
Fraser Filter Profile

Figure 3: Line 5.5E – KH Profile

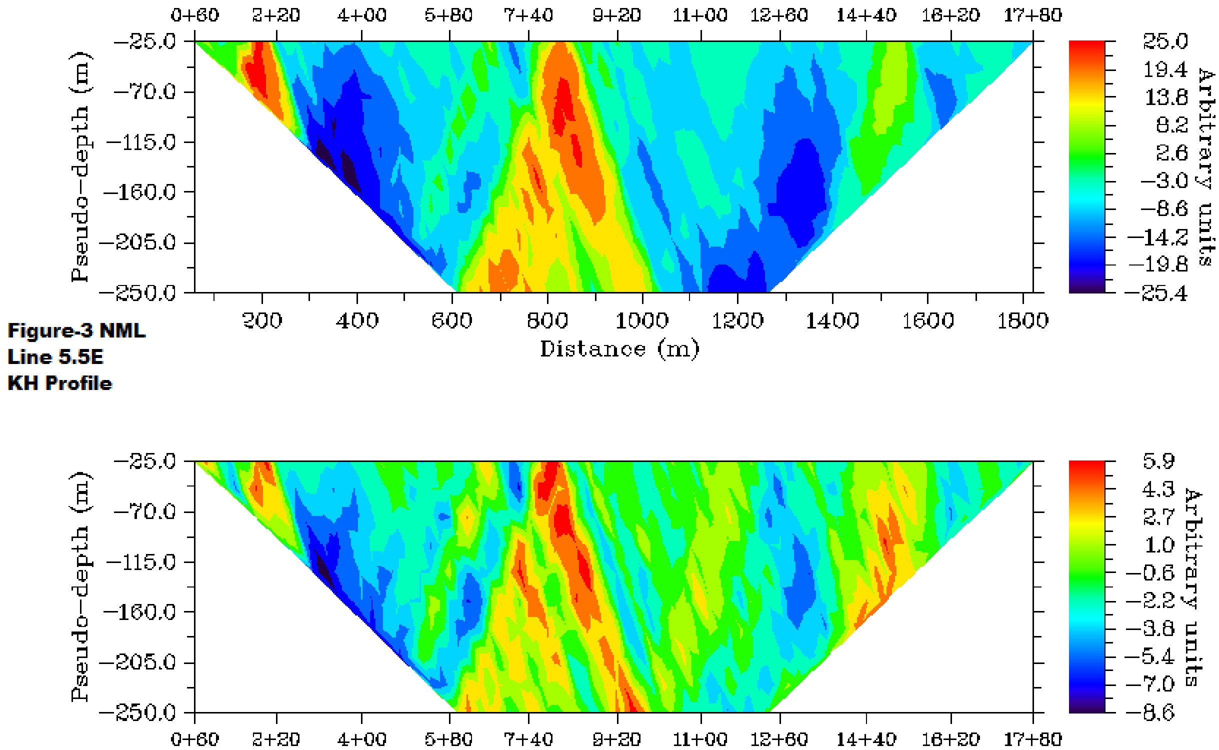


Figure 4: Line 5.5E – Resistivity Profile

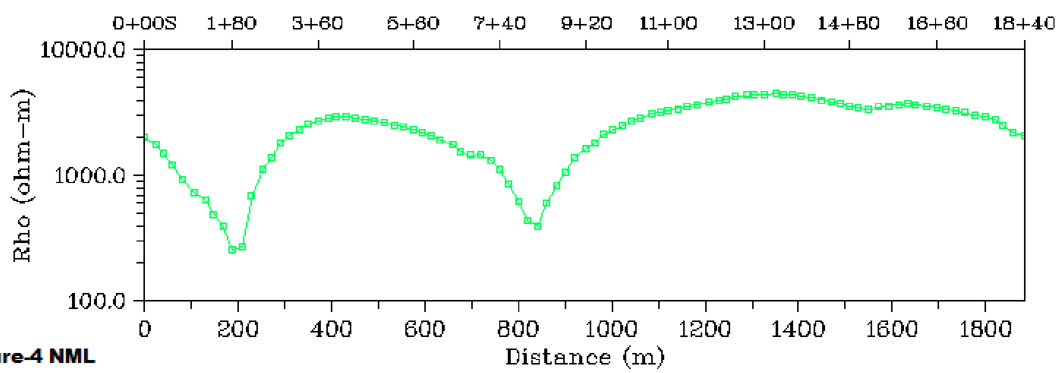
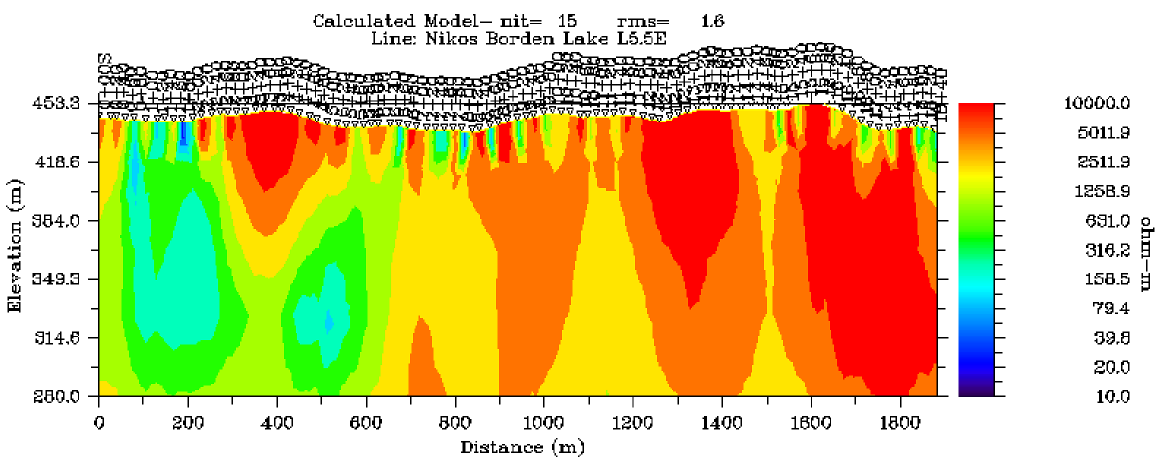


Figure-4 NML
Line 5.5E
Resistivity 2000 Ohm Profile

Figure 5: Line 5.5E – Model



Emissor: NML

Appendix FF - NML Line 7.5E

Figure 1: Line 7.5E – Raw Data Profile

Figure-1 NAA
Line 7.5E
Raw Data Profile

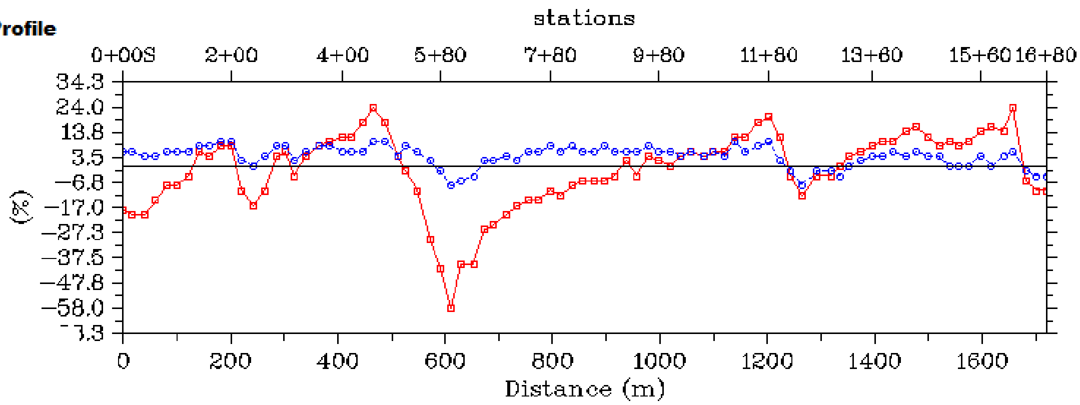


Figure 2: Line 7.5E – Fraser Filter Profile

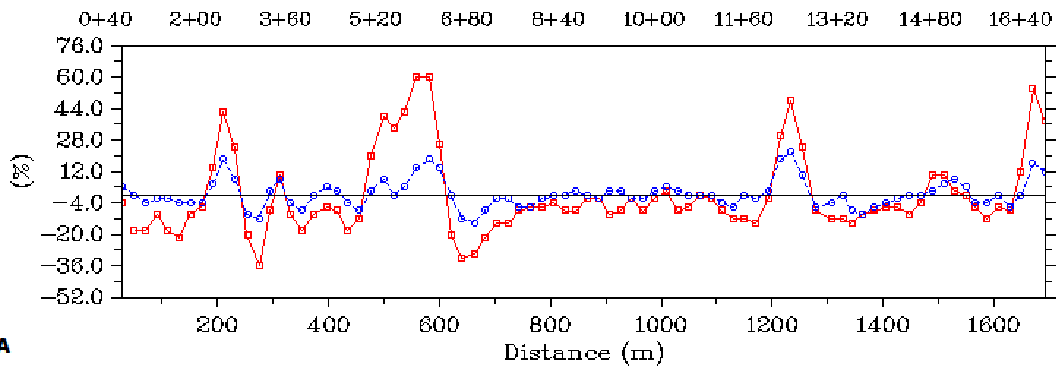


Figure-2 NAA
Line 7.5E
Fraser Filter Profile

Figure 3: Line 7.5E – KH Profile

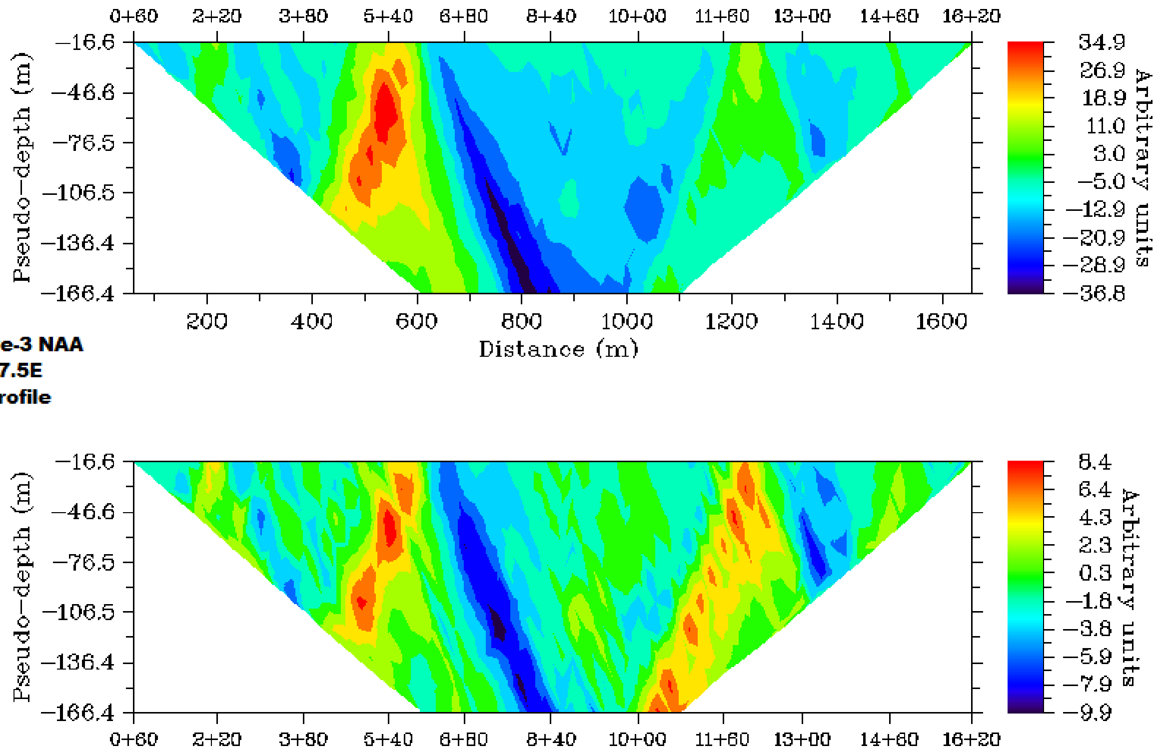


Figure 4: Line 7.5E – Resistivity Profile

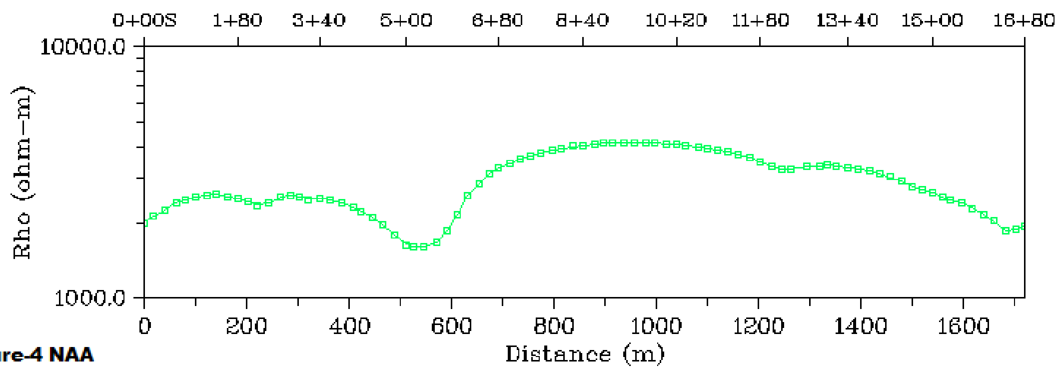


Figure-4 NAA
Line 7.5E
Resistivity 2000 Profile

Figure 5: Line 7.5E – Model

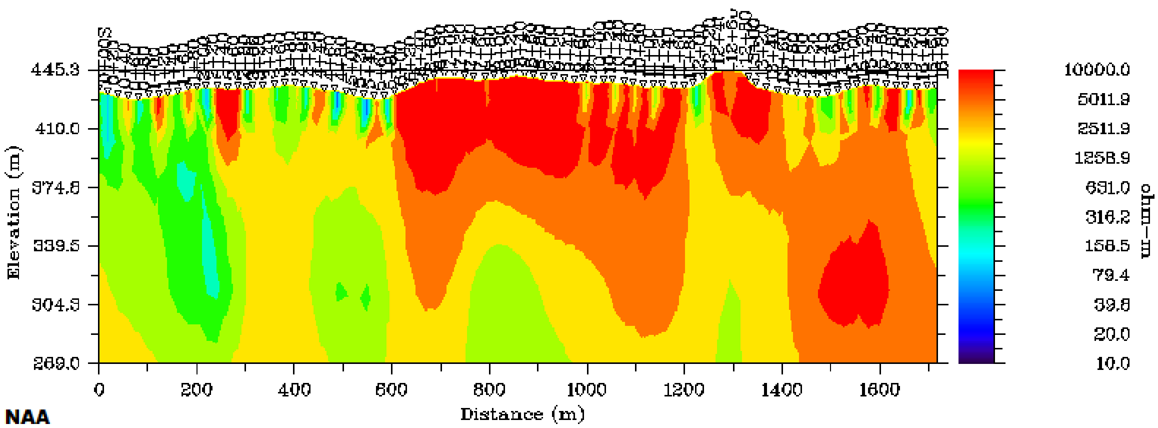


Figure-5 NAA
Line 7.5E
Model 2000 Ohm Profile

Appendix GG - NML Line 9.5E

Figure 1: Line 9.5E – Raw Data Profile

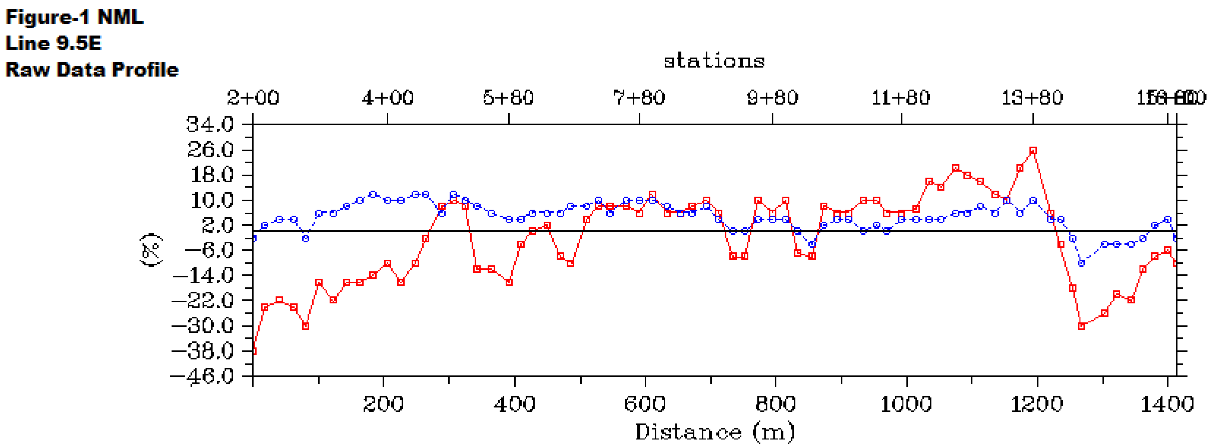


Figure 2: Line 9.5E – Fraser Filter Profile

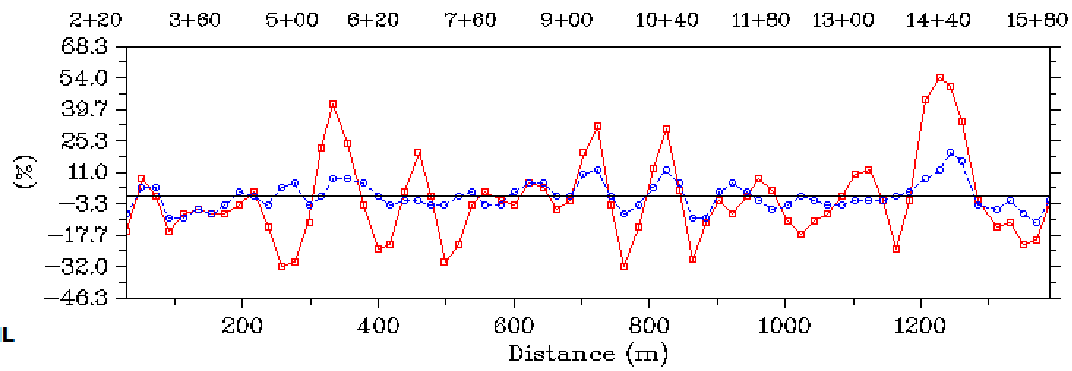


Figure-2 NML
Line 9.5E
Fraser Filter Profile

Figure 3: Line 9.5E – KH Profile

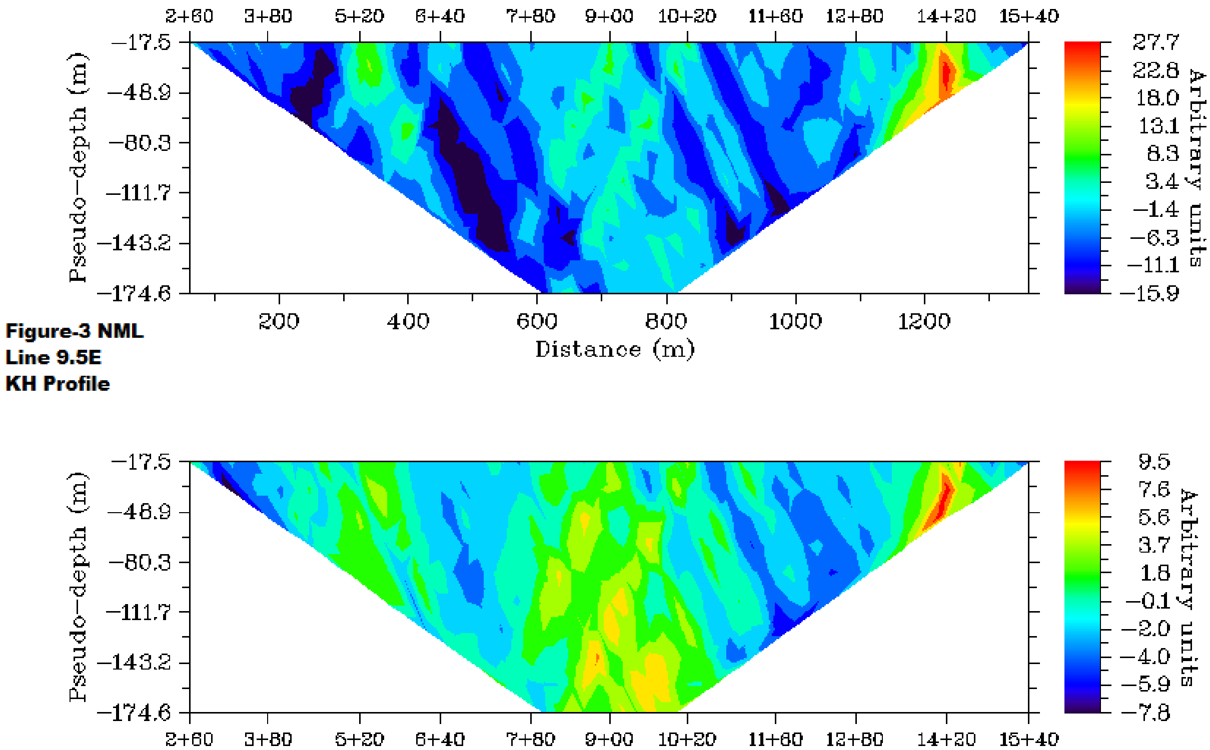


Figure 4: Line 9.5E – Resistivity Profile

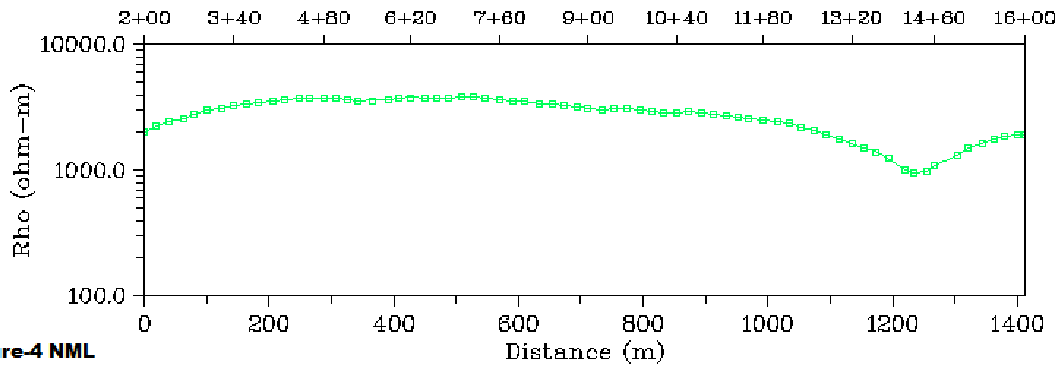


Figure-4 NML
Line 9.5E
Resistivity 2000 Ohm Profile

Figure 5: Line 9.5E – Model

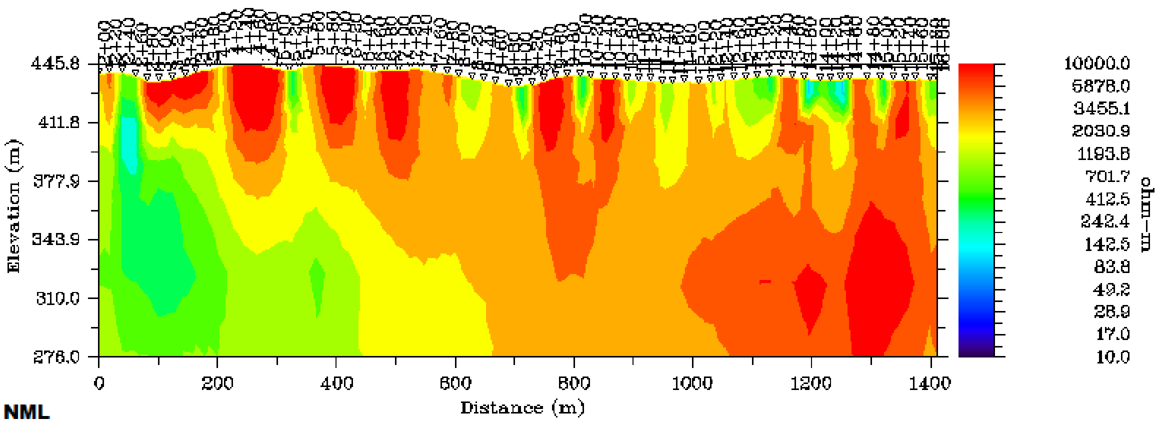


Figure-5 NML
Line 9.5E
Model 2000 Ohm Profile

Appendix HH - NML Line 11.5E

Figure 1: Line 11.5E – Raw Data Profile

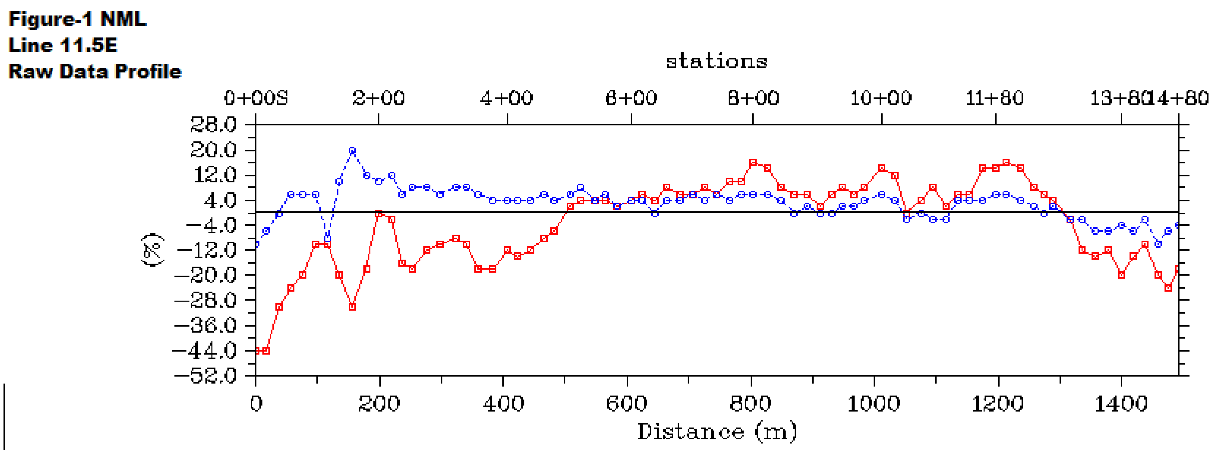


Figure 2: Line 11.5E – Fraser Filter Profile

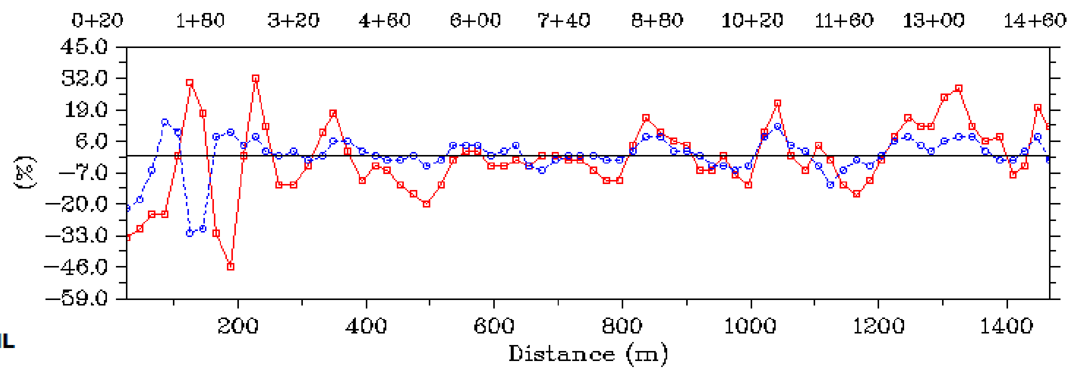


Figure-2 NML
Line 11.5E
Fraser Filter Profile

Figure 3: Line 11.5E – KH Profile

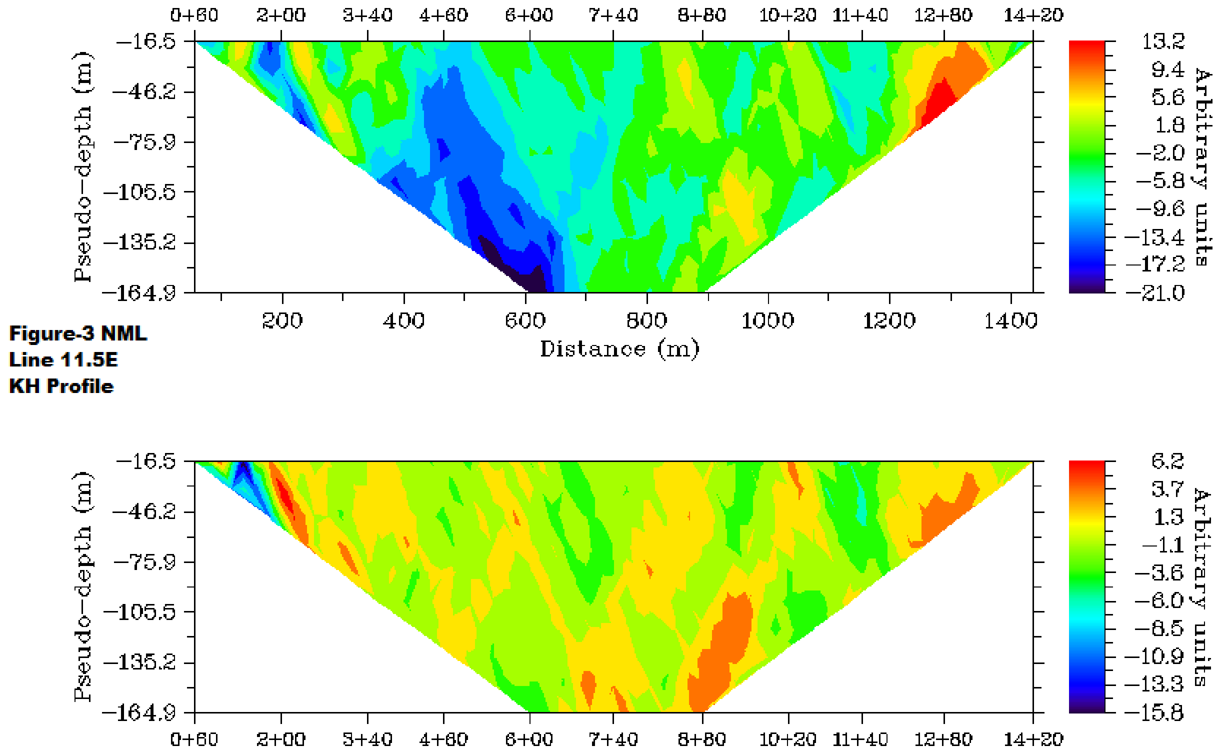


Figure 4: Line 11.5E – Resistivity Profile

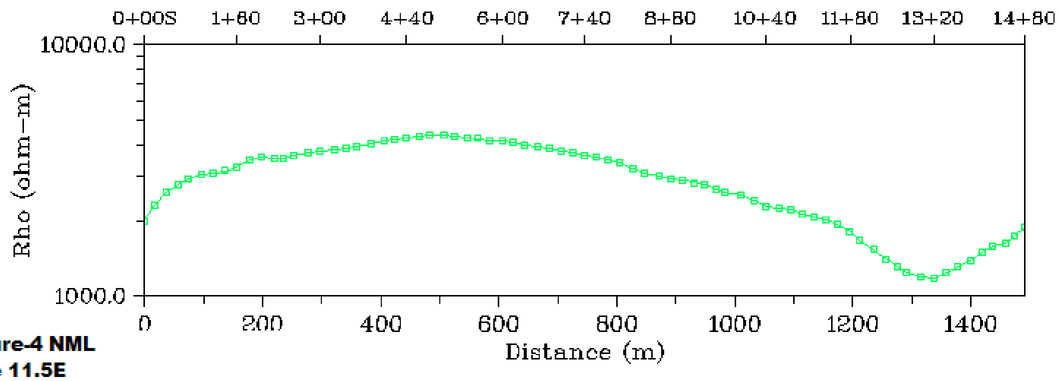


Figure-4 NML
Line 11.5E
Resistivity 2000 Ohm Profile

Figure 5: Line 11.5E – Model

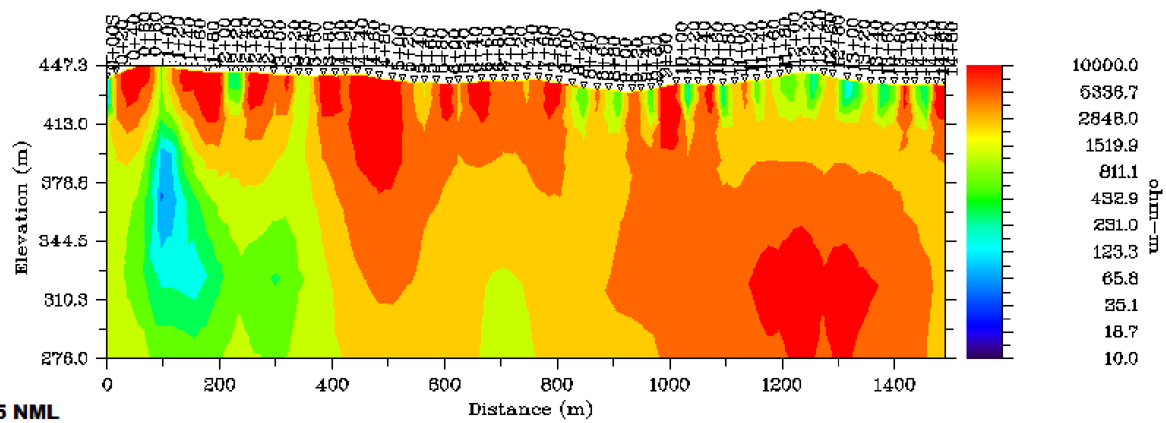


Figure-5 NML
Line 11.5E
Model 2000 Ohm Profile

Appendix II - NML Line 13.5E

Figure 1: Line 13.5E – Raw Data Profile

Figure-1 NML
Line 13.5E
Raw Data Profile

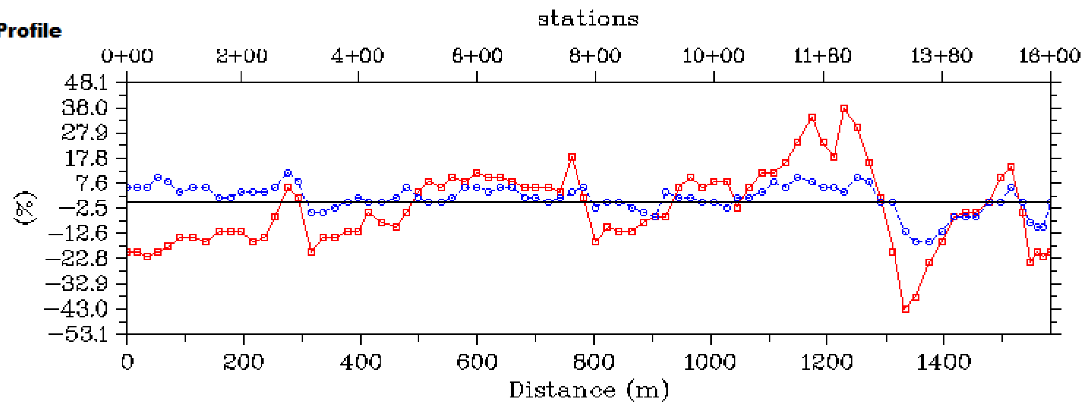


Figure 2: Line 13.5E – Fraser Filter Profile

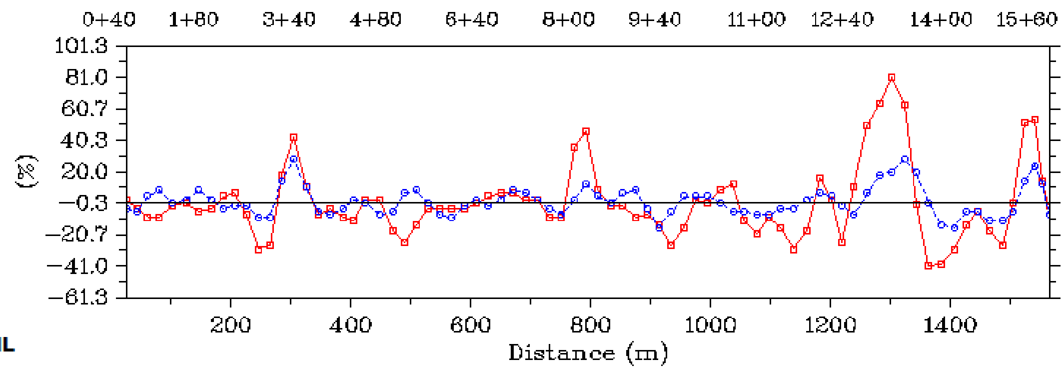


Figure-2 NML
Line 13.5E
Fraser Filter Profile

Figure 3: Line 13.5E – KH Profile

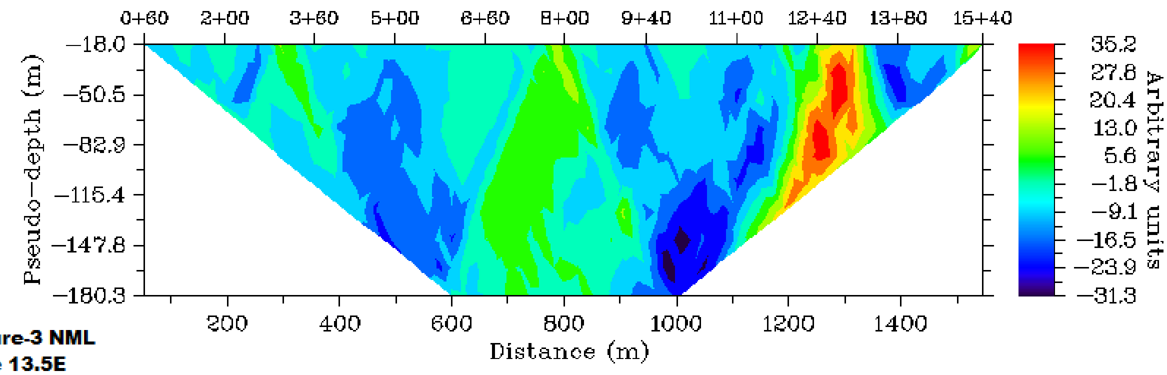


Figure-3 NML
Line 13.5E
KH Profile

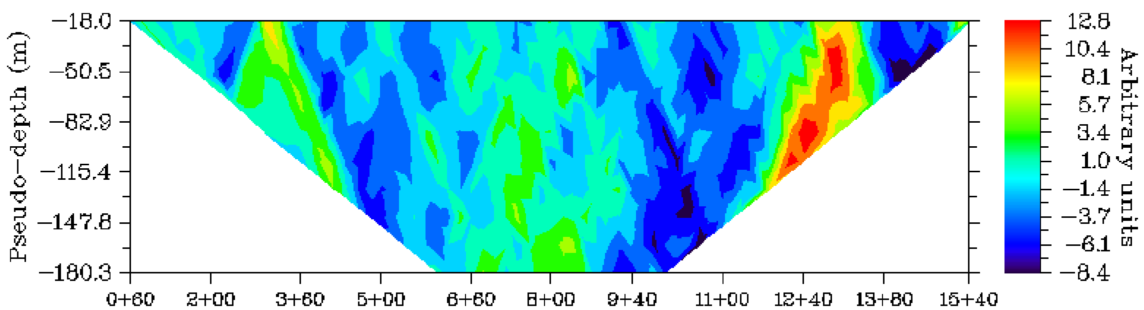


Figure 4: Line 13.5E – Resistivity Profile

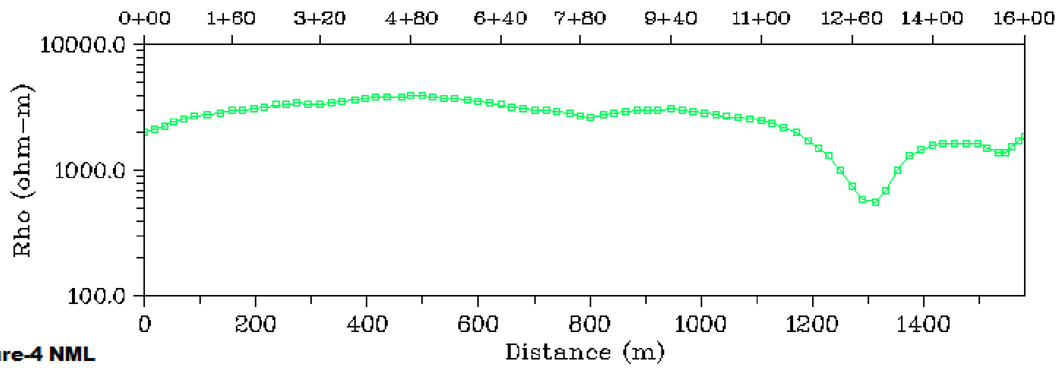


Figure-4 NML
Line 13.5E
Resistivity 2000 Ohm Profile

Figure 5: Line 13.5E – Model

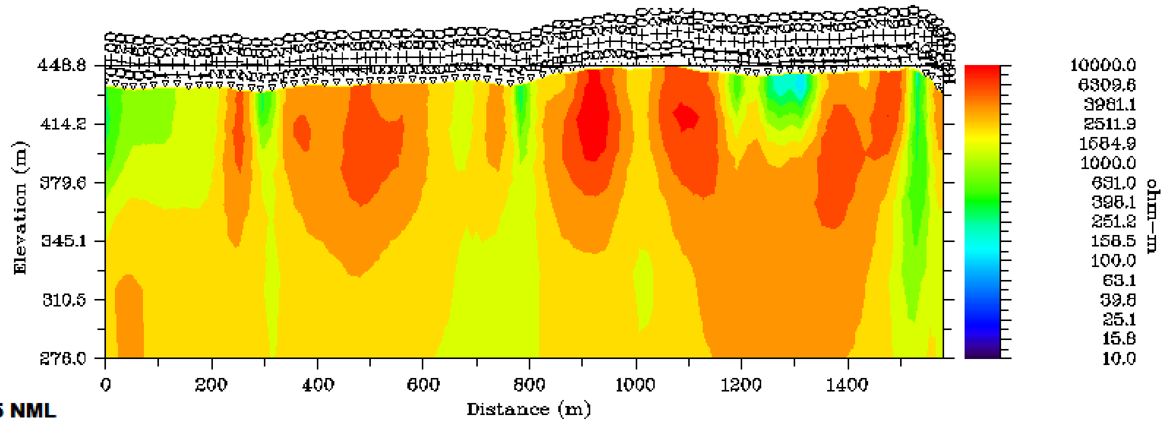


Figure-5 NML
Line 13.5E
Model 2000 Ohm Profile

Appendix JJ - NML Line 15.5E

Figure 1: Line 15.5E – Raw Data Profile

Figure-1 NML
Line 15.5E
Raw Data Profile

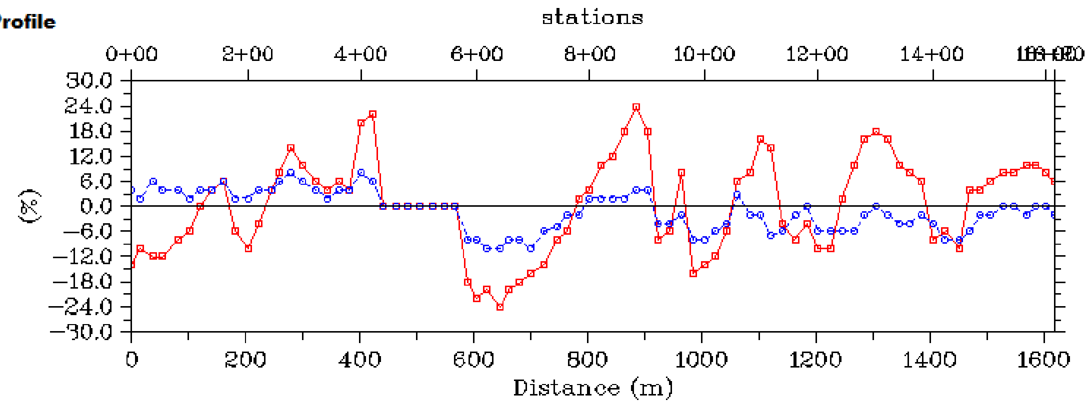


Figure 2: Line 15.5E – Fraser Filter Profile

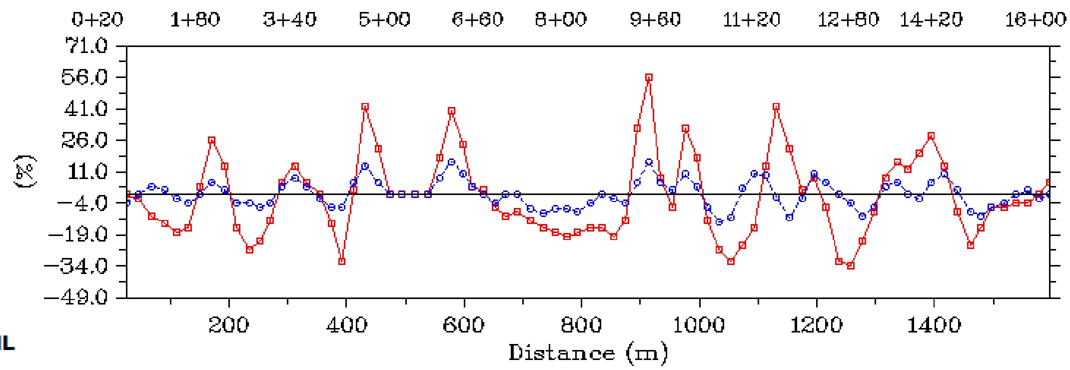


Figure-2 NML
Line 15.5E
Fraser Filter Profile

Figure 3: Line 15.5E – KH Profile

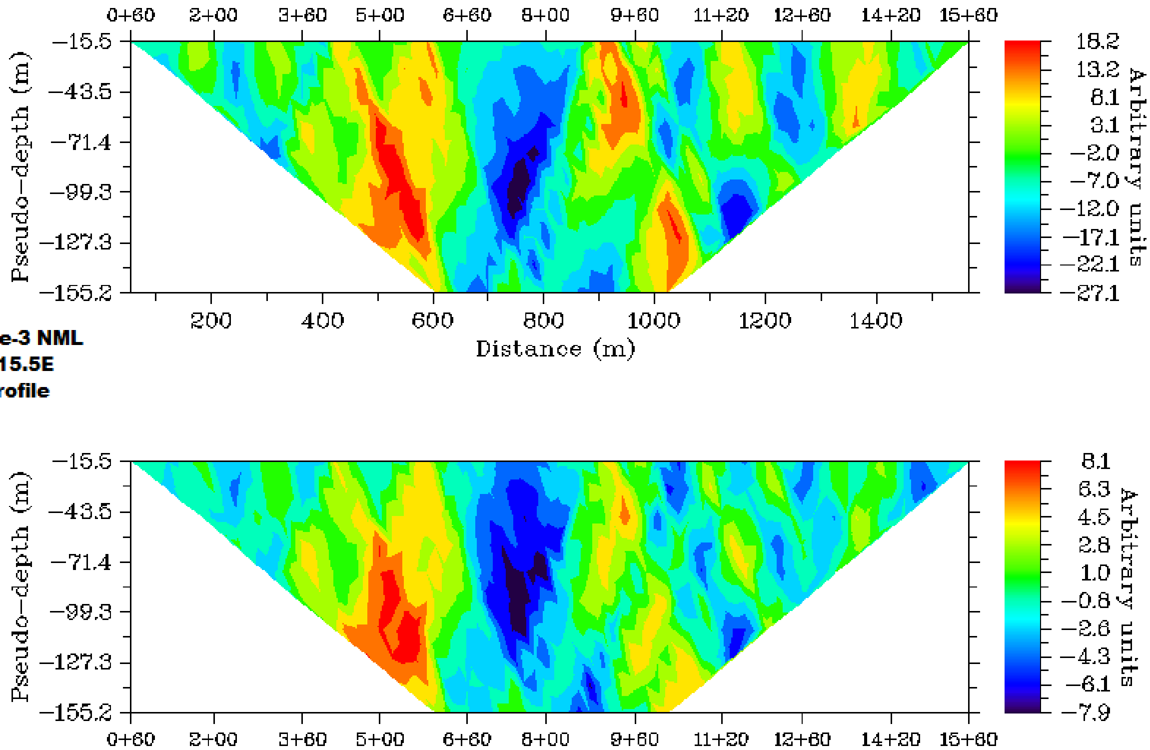


Figure-3 NML
Line 15.5E
KH Profile

Figure 4: Line 15.5E – Resistivity Profile

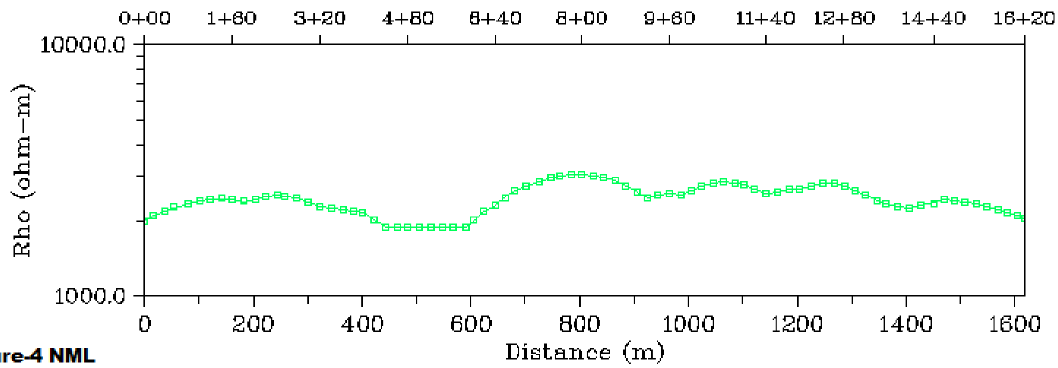


Figure-4 NML
Line 15.5E
Resistivity 2000 Ohm Profile

Figure 5: Line 15.5E – Model

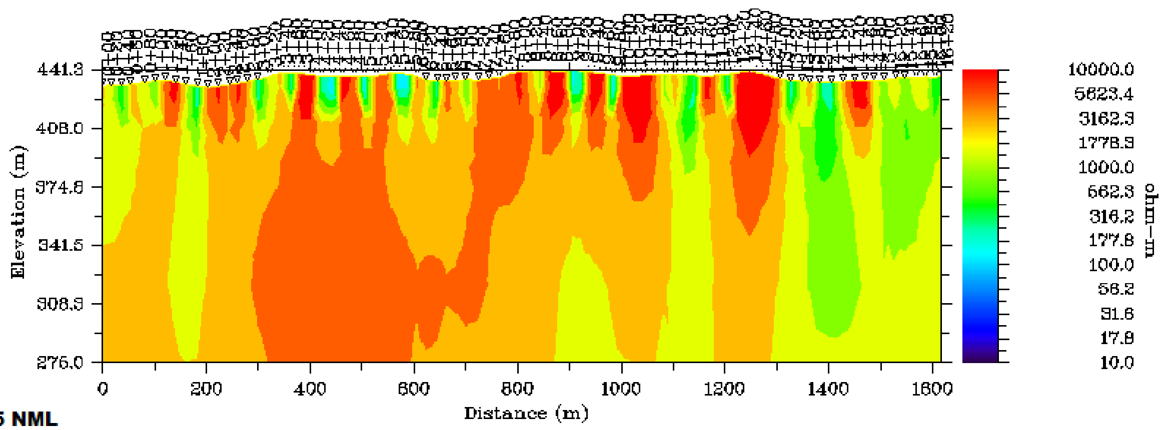


Figure-5 NML
Line 15.5E
Model 2000 Ohm Profile

Appendix KK - NML Line 17.5E

Figure 1: Line 17.5E – Raw Data Profile

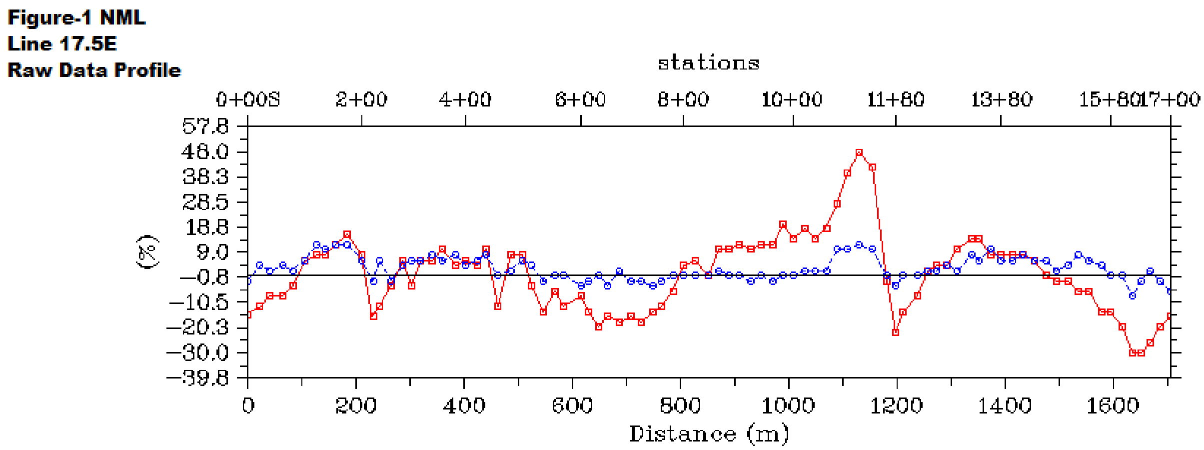


Figure 2: Line 17.5E – Fraser Filter Profile

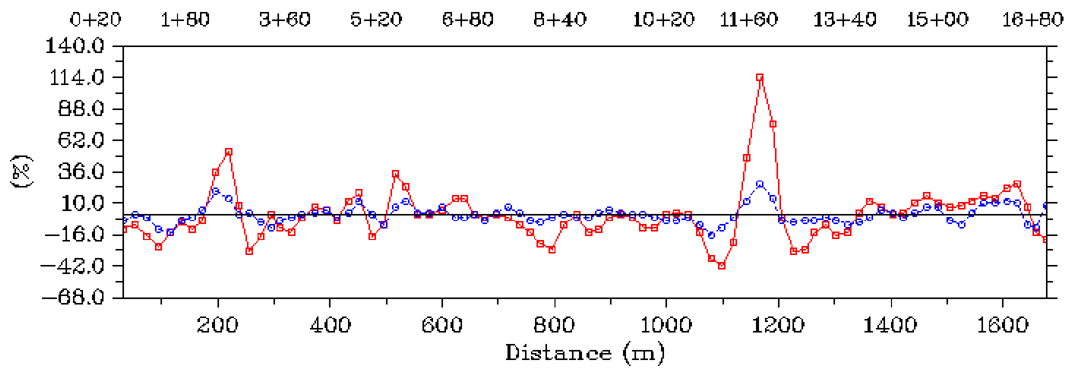


Figure-2 NML
Line 17.5E
Fraser Filter Profile

Figure 3: Line 17.5E – KH Profile

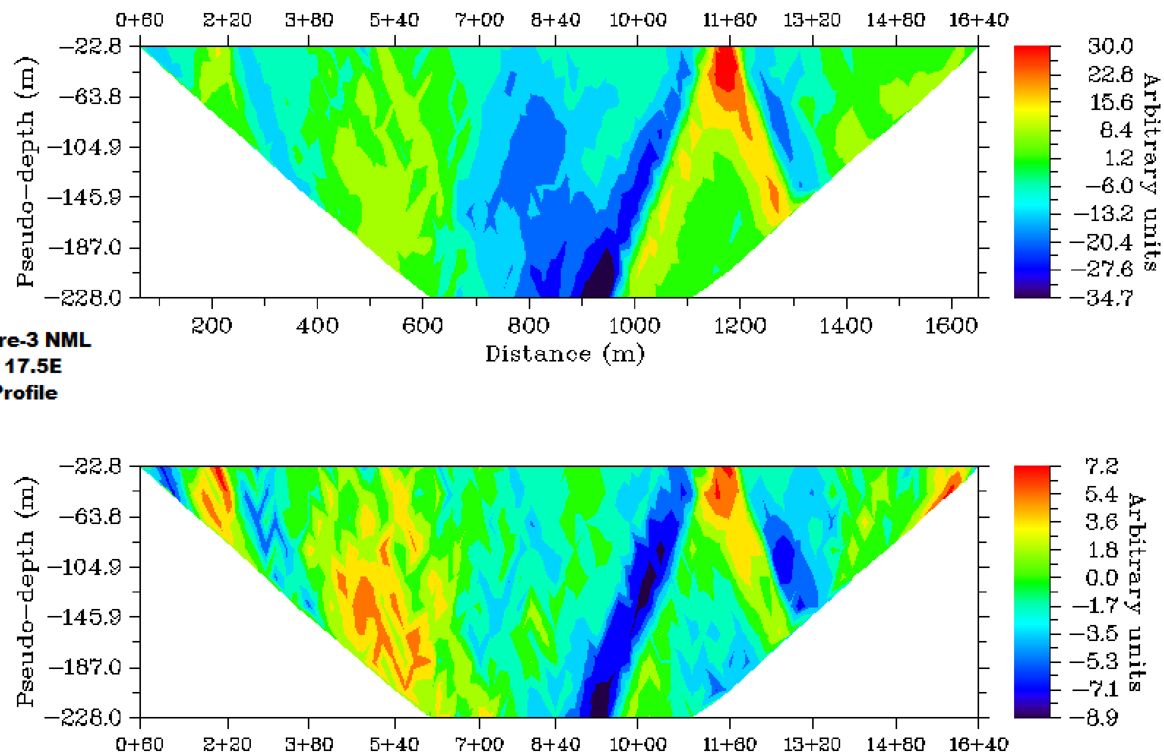


Figure 4: Line 17.5E – Resistivity Profile

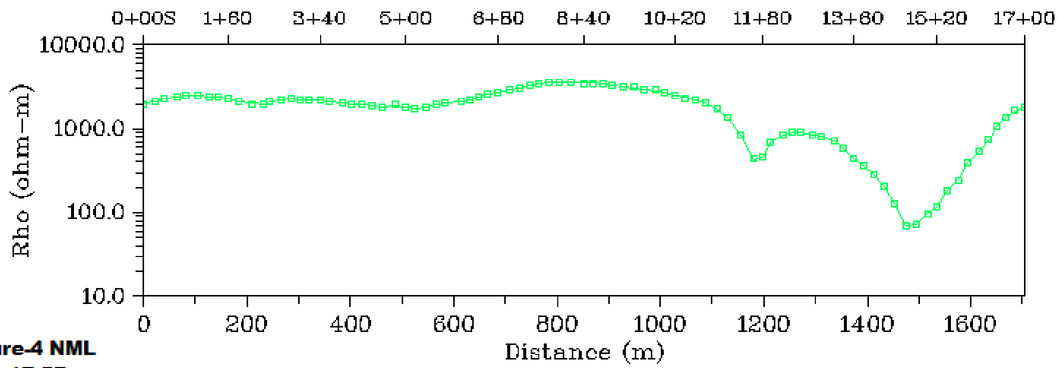


Figure-4 NML
Line 17.5E
Resistivity 2000 Ohm Profile

Figure 5: Line 17.5E – Model

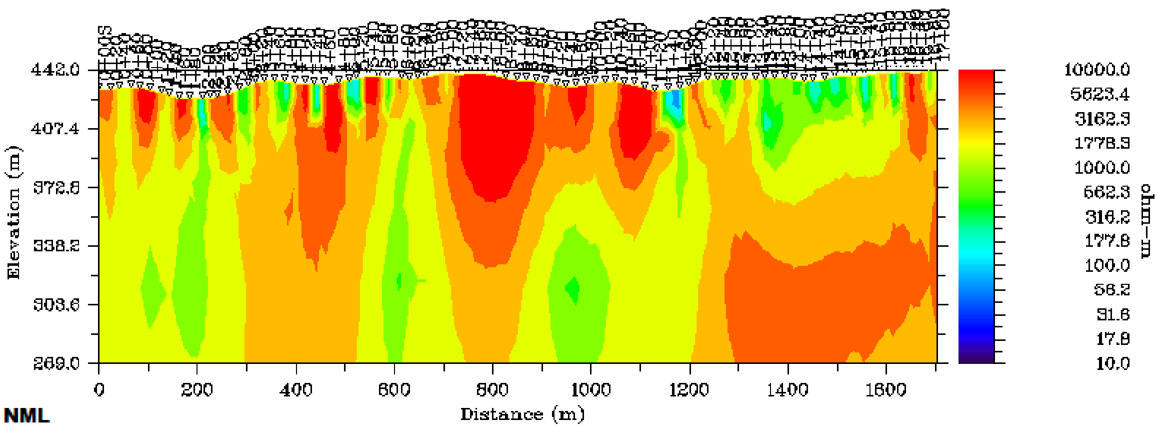


Figure-5 NML
Line 17.5E
Model 2000 Ohm Profile

Appendix LL - NML Line 19.5E

Figure 1: Line 19.5E – Raw Data Profile

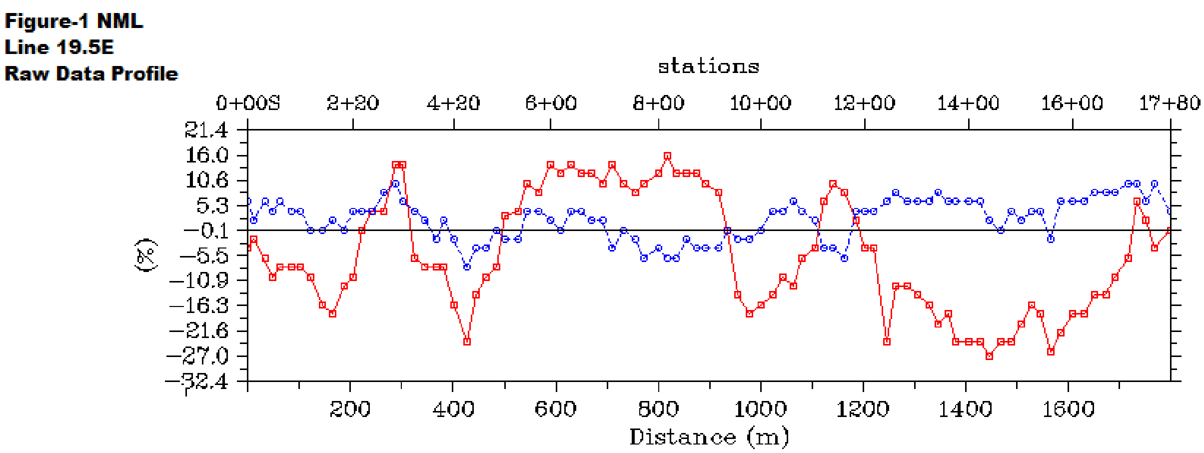


Figure 2: Line 19.5E – Fraser Filter Profile

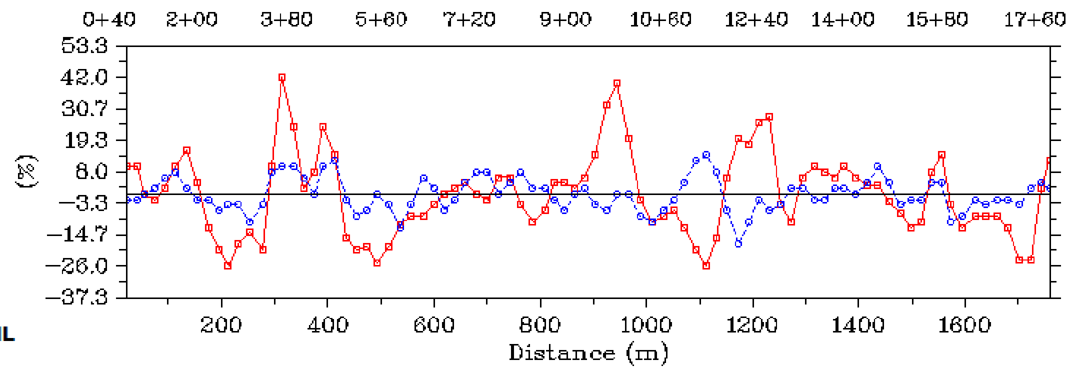


Figure-2 NML
Line 19.5E
Fraser Filter Profile

Figure 3: Line 19.5E – KH Profile

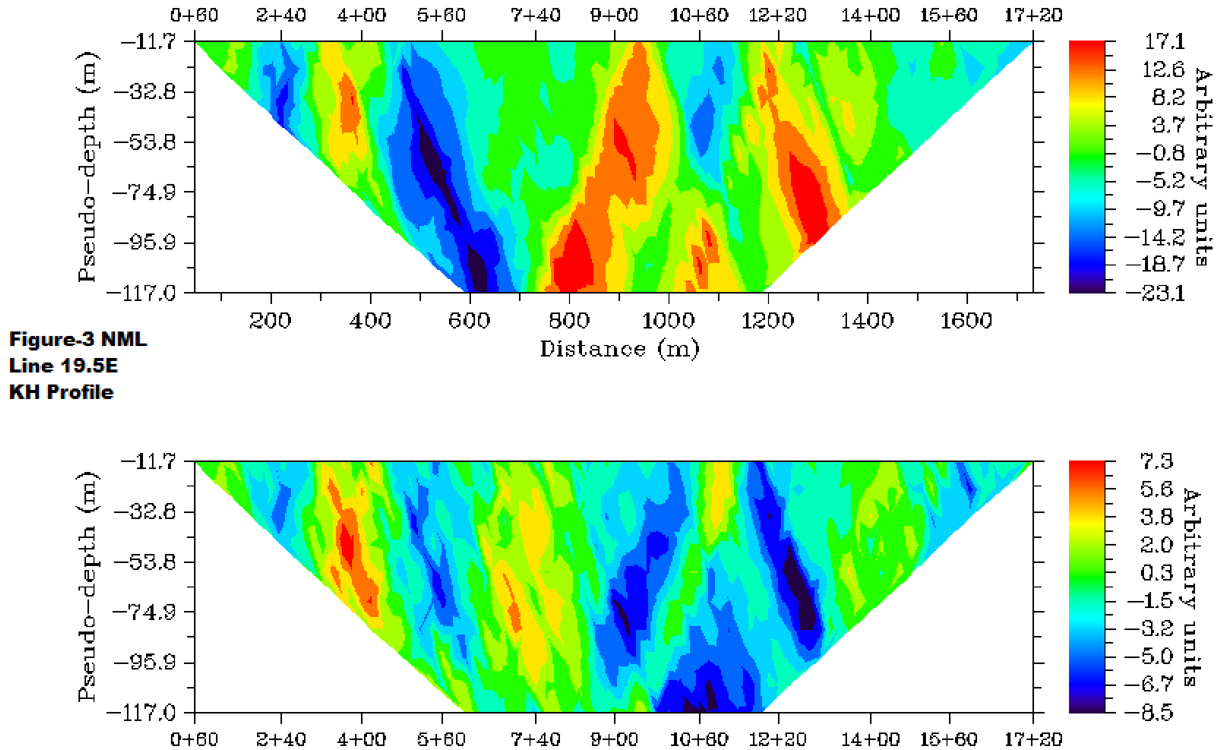


Figure 4: Line 19.5E – Resistivity Profile

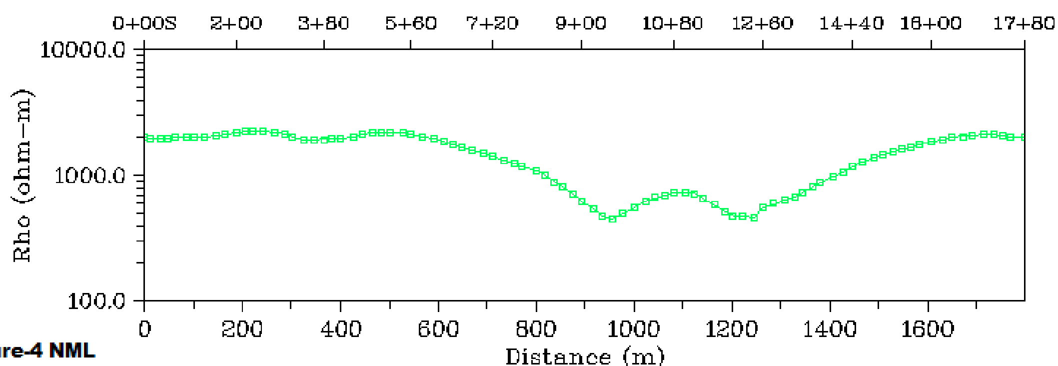


Figure-4 NML
Line 19.5E
Resistivity 2000 Ohm Profile

Figure 5: Line 19.5E – Model

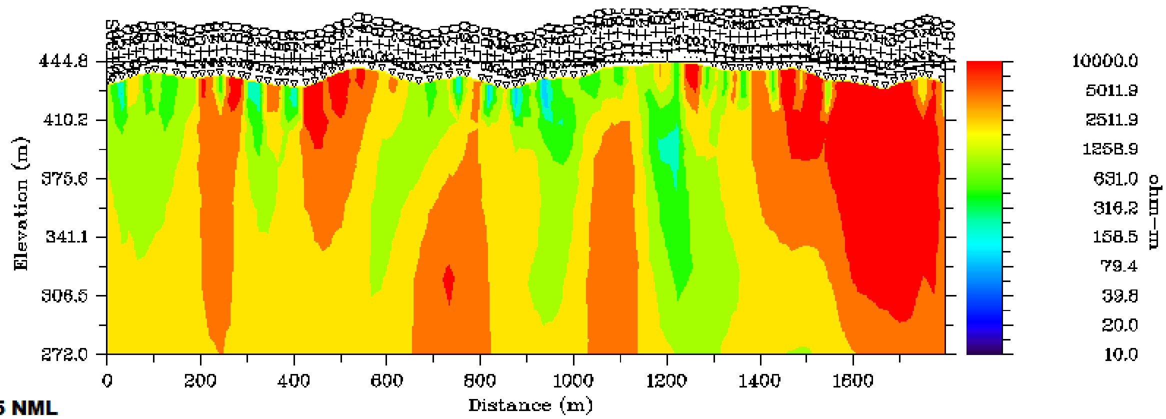


Figure-5 NML
Line 19.5E
Model 2000 Ohm Profile

Appendix   MM - NML Line 21.5E

Figure 1: Line 21.5E – Raw Data Profile

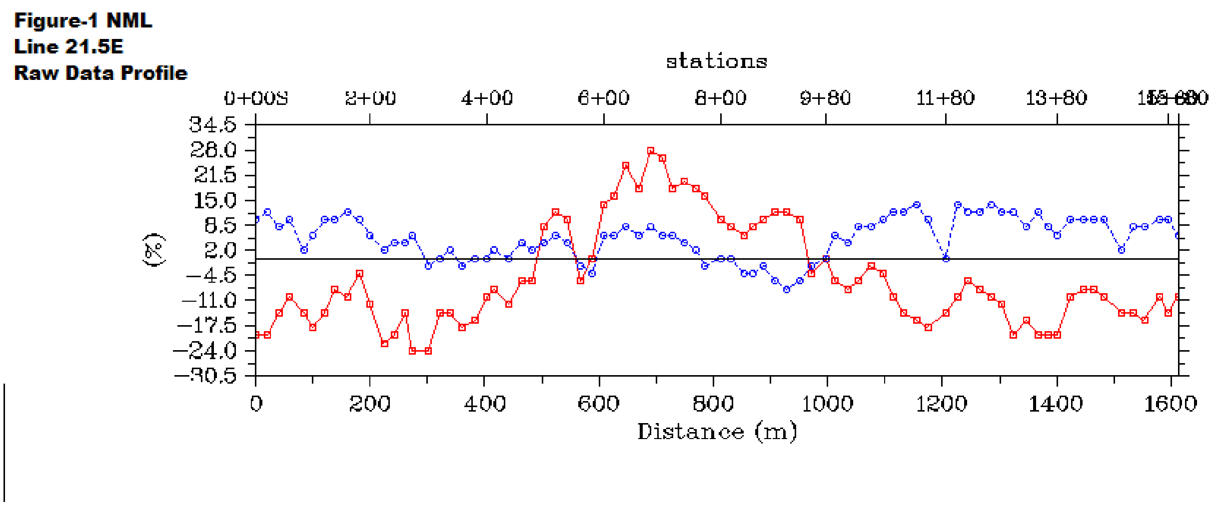


Figure 2: Line 21.5E – Fraser Filter Profile

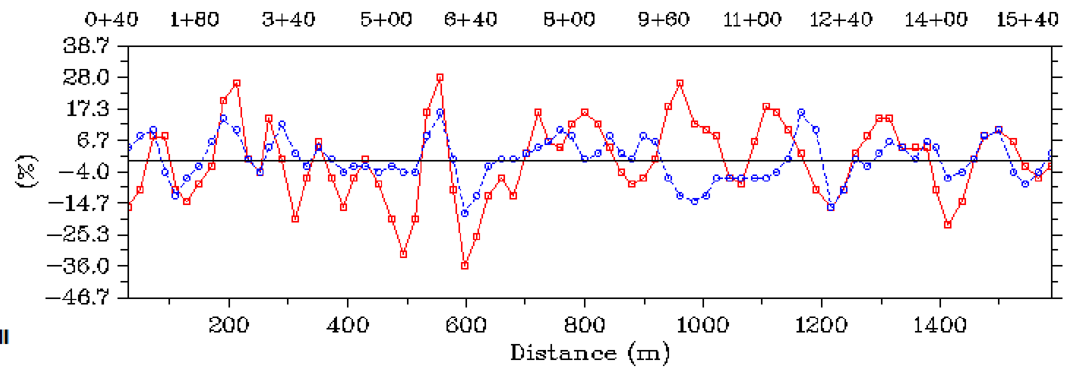


Figure-2 NMI
Line 21.5E
Fraser Filter Profile

Figure 3: Line 21.5E – KH Profile

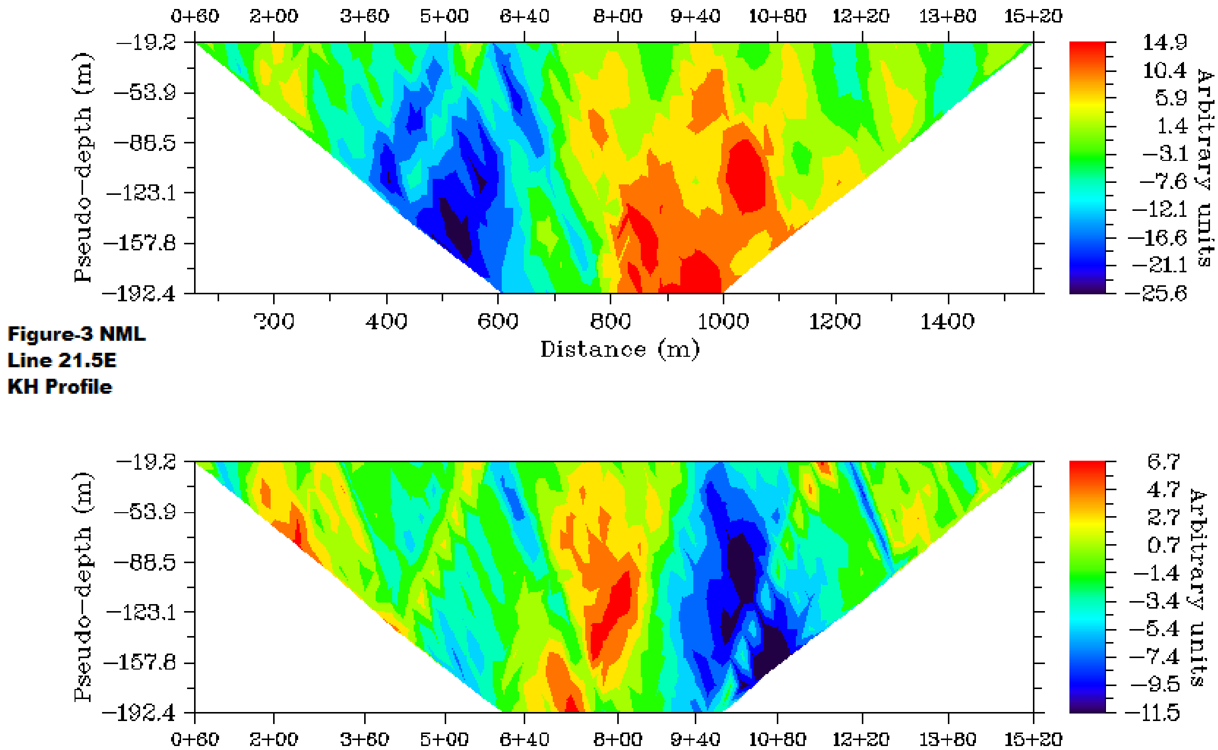


Figure 4: Line 21.5E – Resistivity Profile

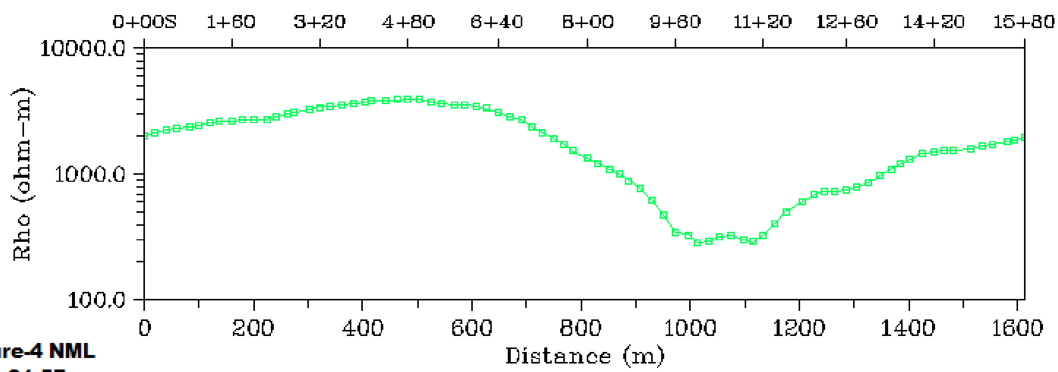


Figure-4 NML
Line 21.5E
Resistivity 2000 Ohm Profile

Figure 5: Line 21.5E – Model

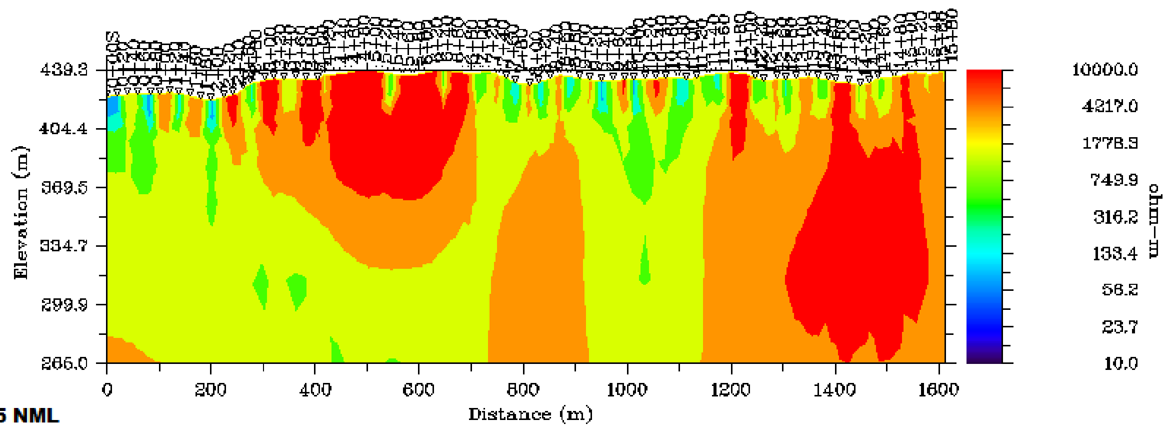


Figure-5 NML
Line 21.5E
Model 2000 Ohm Profile

Appendix NN - NML Line 23.5E

Figure 1: Line 23.5E – Raw Data Profile

Figure-1 NML
Line 23.5E
Raw Data Profile

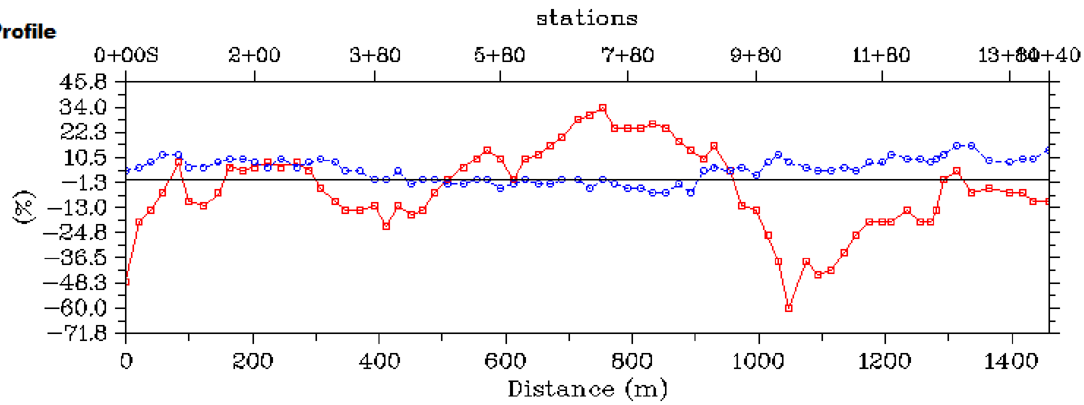


Figure 2: Line 23.5E – Fraser Filter Profile

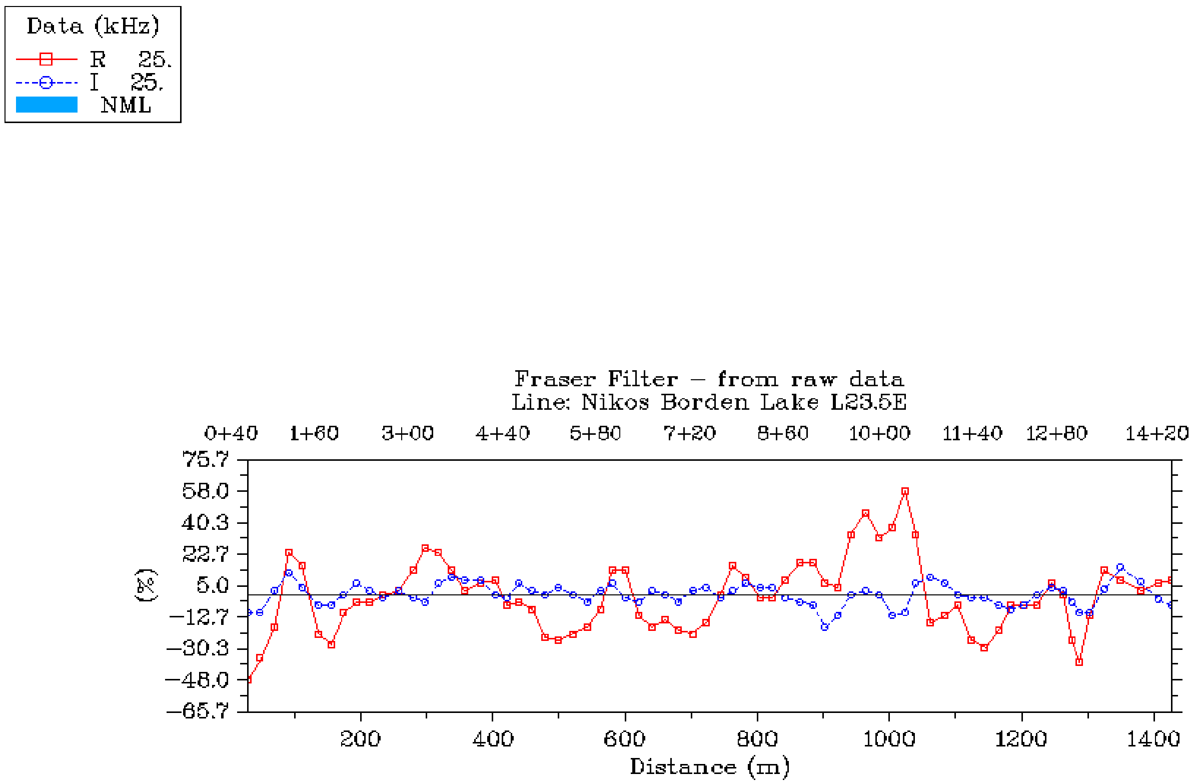


Figure 3: Line 23.5E – KH Profile

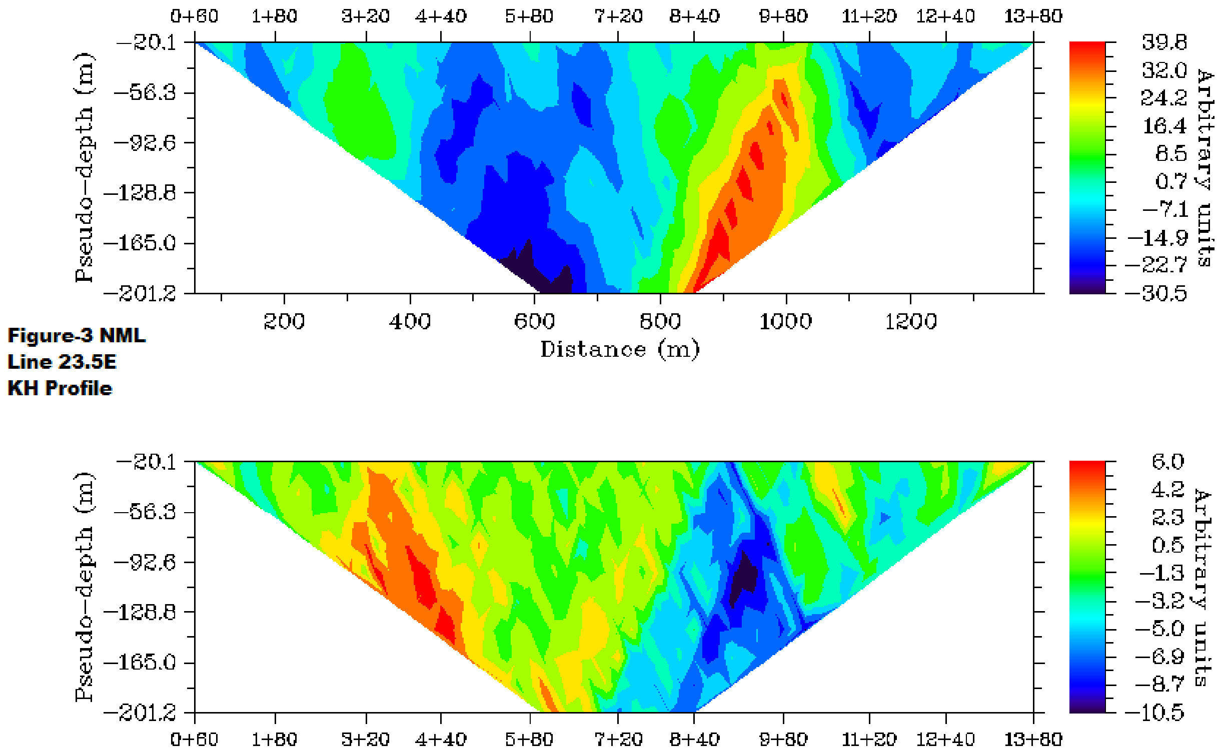


Figure 4: Line 23.5E – Resistivity Profile

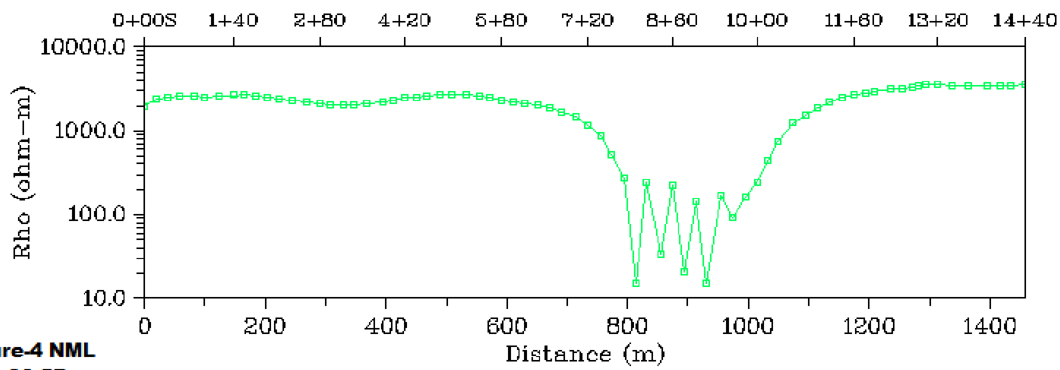


Figure-4 NML
Line 23.5E
Resistivity 2000 Ohm Profile

Figure 5: Line 23.5E – Model

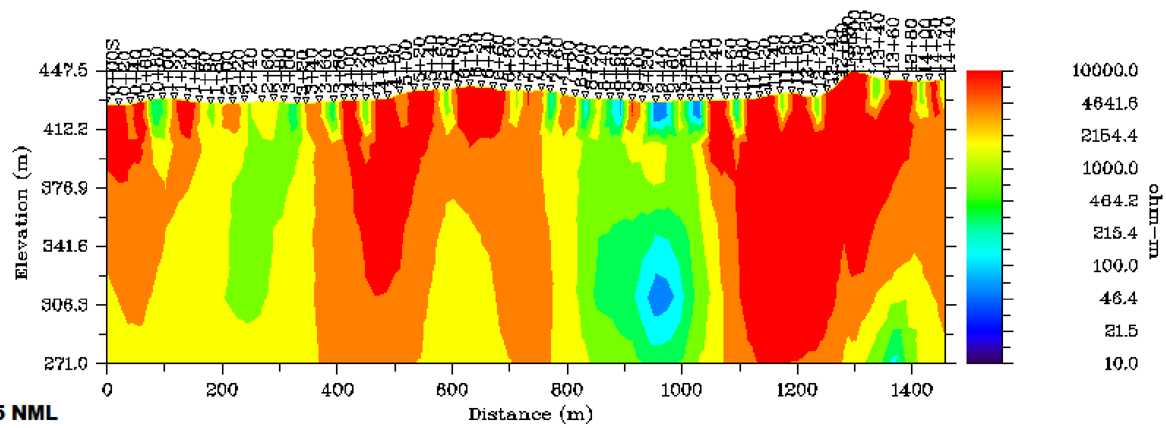


Figure-5 NML
Line 23.5E
Model 2000 Ohm Profile

Appendix OO - NML Line 25.5E

Figure 1: Line 25.5E – Raw Data Profile

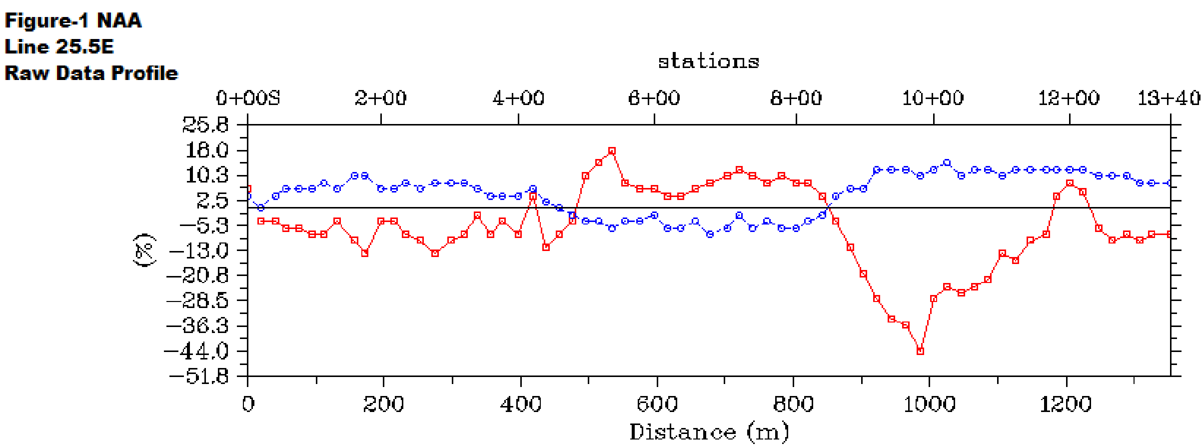


Figure 2: Line 25.5E – Fraser Filter Profile

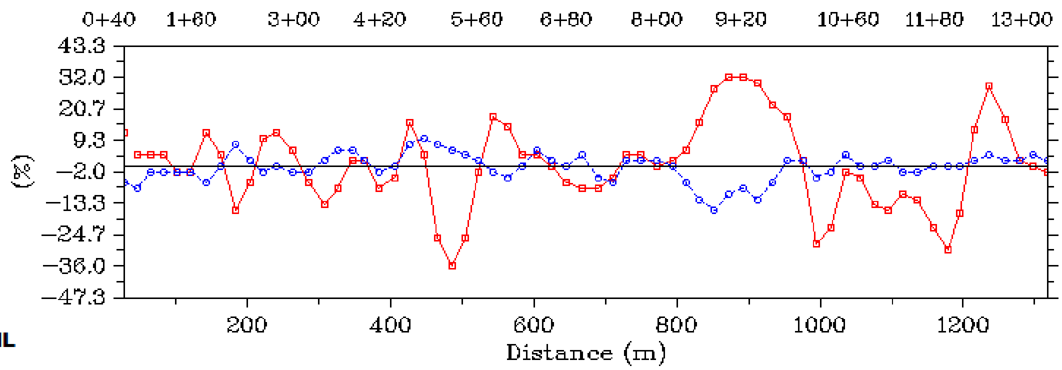


Figure-2 NML
Line 25.5E
Fraser Filter Profile

Figure 3: Line 25.5E – KH Profile

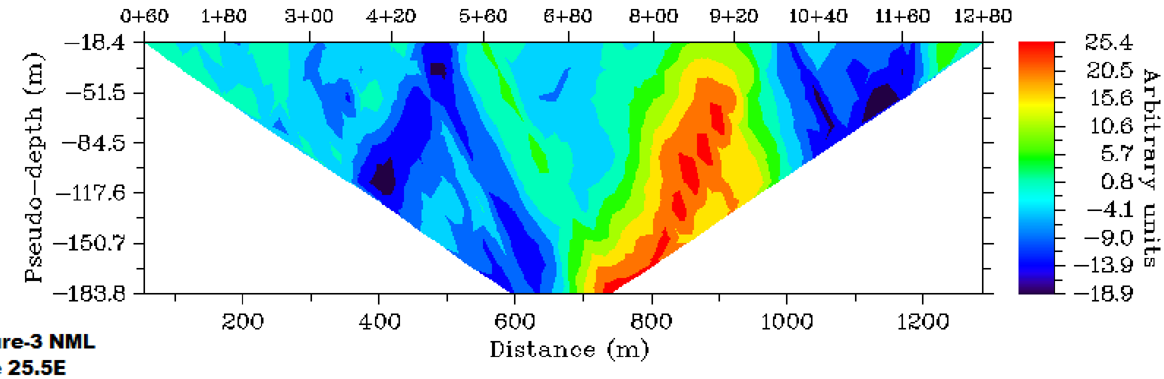


Figure-3 NML
Line 25.5E
KH Profile

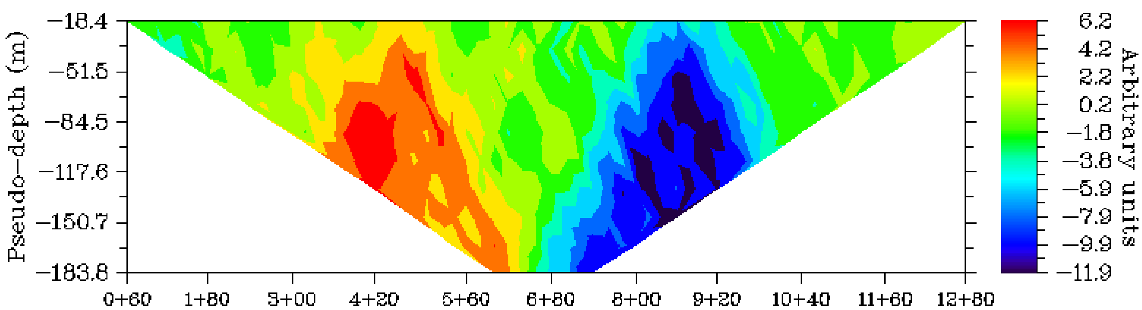


Figure 4: Line 25.5E – Resistivity Profile

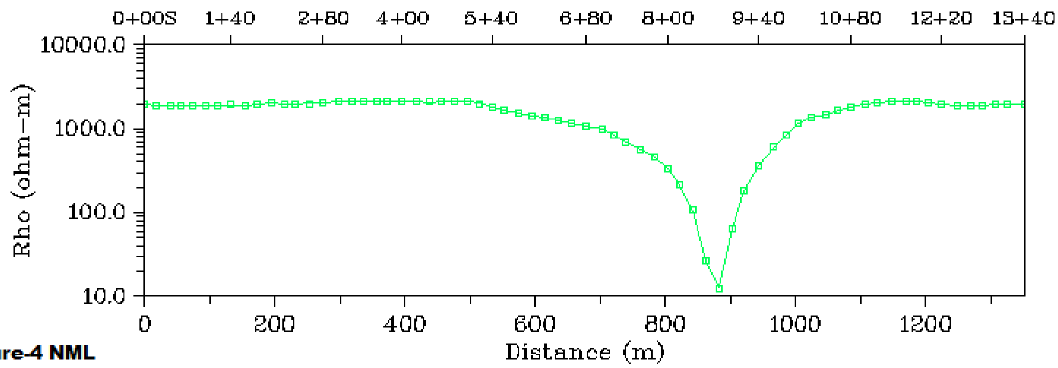


Figure-4 NML
Line 25.5E
Resistivity 2000 Ohm Profile

Figure 5: Line 25.5E – Model

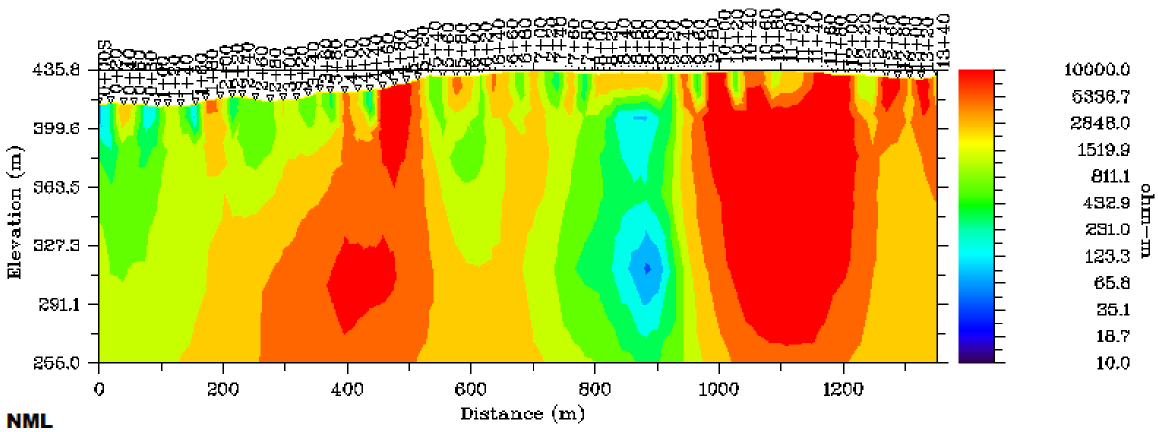


Figure-5 NML
Line 25.5E
Model 2000 Ohm Profile

Appendix PP - NML Line 27.5E

Figure 1: Line 27.5E – Raw Data Profile

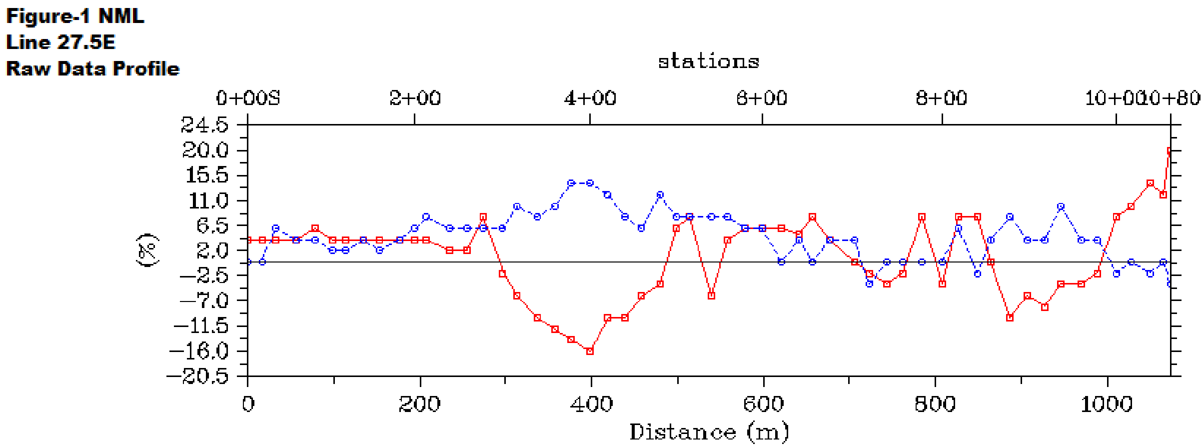


Figure 2: Line 27.5E – Fraser Filter Profile

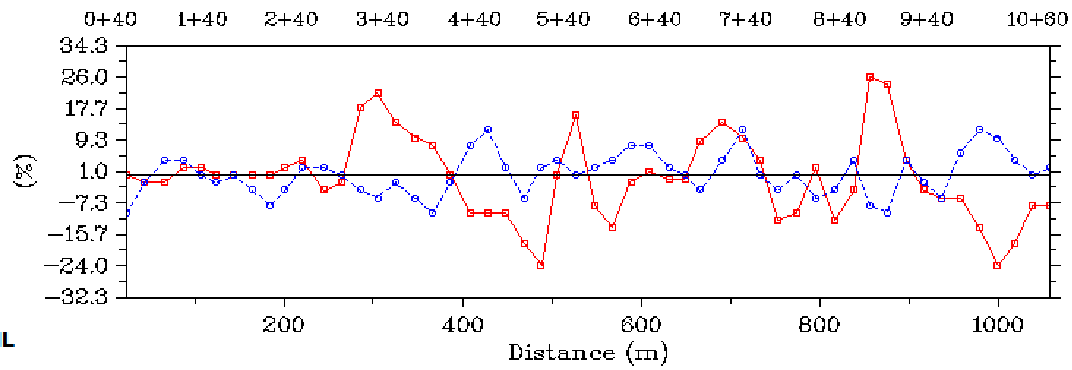


Figure-2 NML
Line 27.5E
Fraser Filter Profile

Figure 3: Line 27.5E – KH Profile

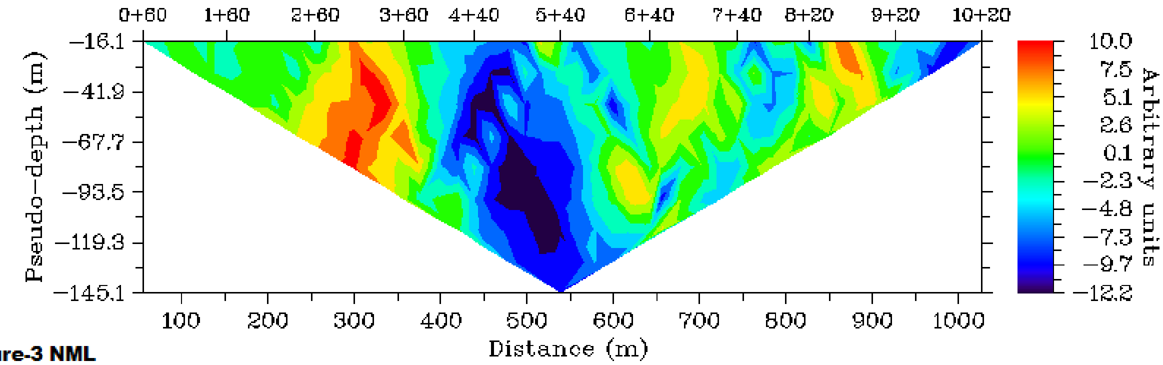


Figure-3 NML
Line 27.5E
KH Profile

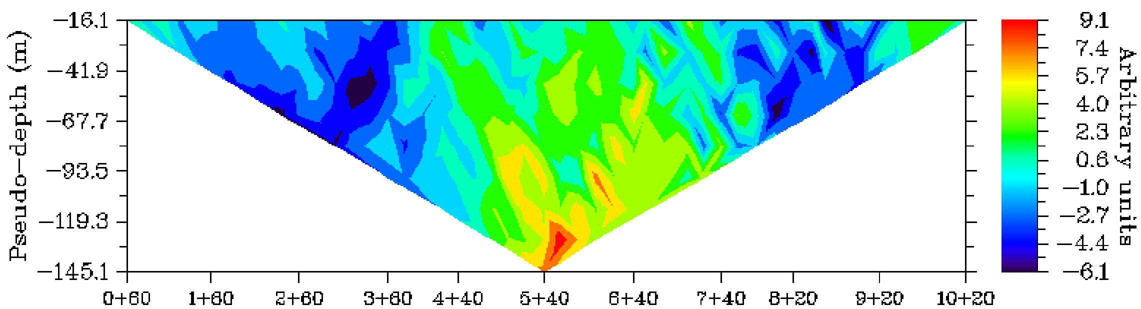


Figure 4: Line 27.5E – Resistivity Profile

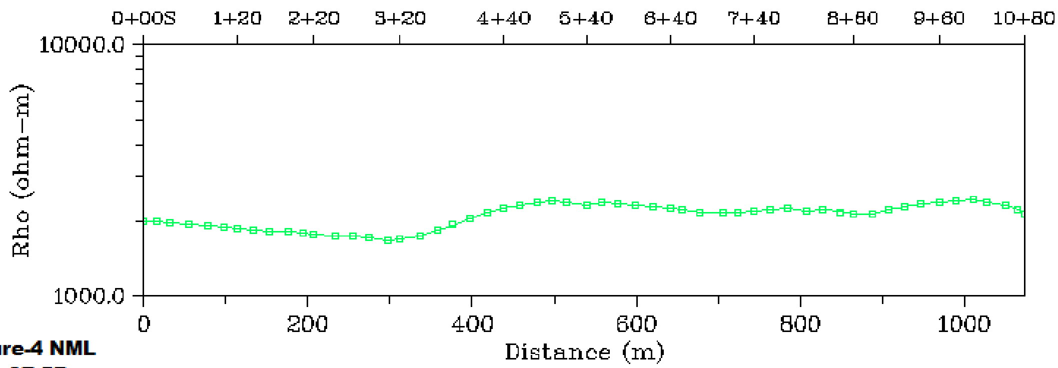


Figure-4 NML
Line 27.5E
Resistivity 2000 Ohm Profile

Figure 5: Line 27.5E – Model

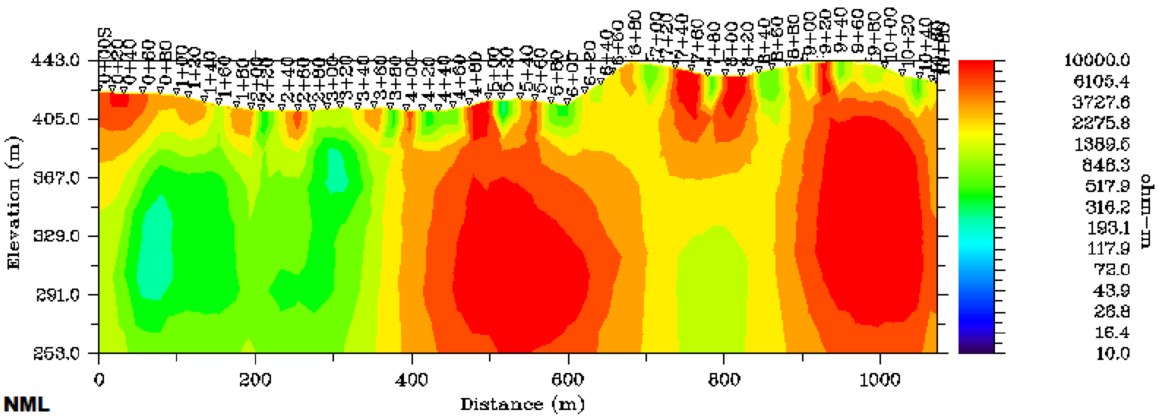


Figure-5 NML
Line 27.5E
Model 2000 Ohm Profile

Appendix QQ - NML Line 29.5E

Figure 1: Line 29.5E – Raw Data Profile

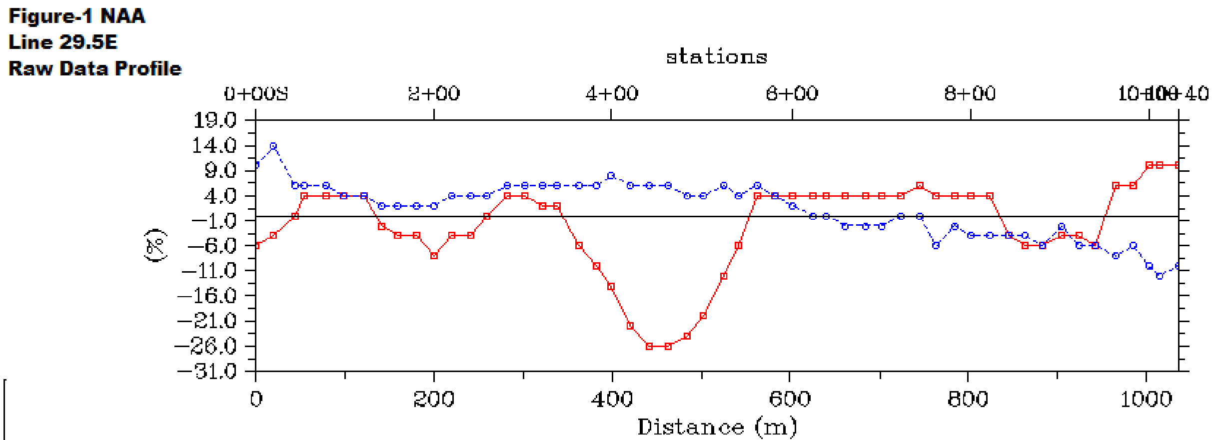


Figure 2: Line 29.5E – Fraser Filter Profile

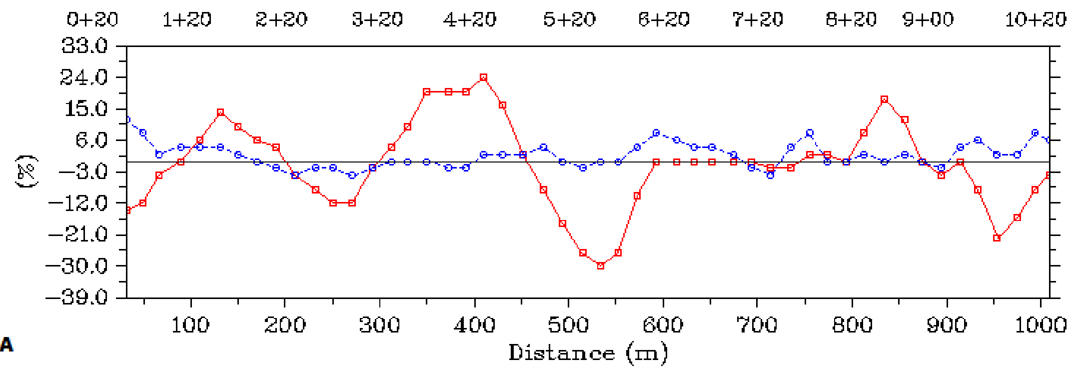


Figure-2 NAA
Line 29.5E
Fraser Filter Profile

Figure 3: Line 29.5E – KH Profile

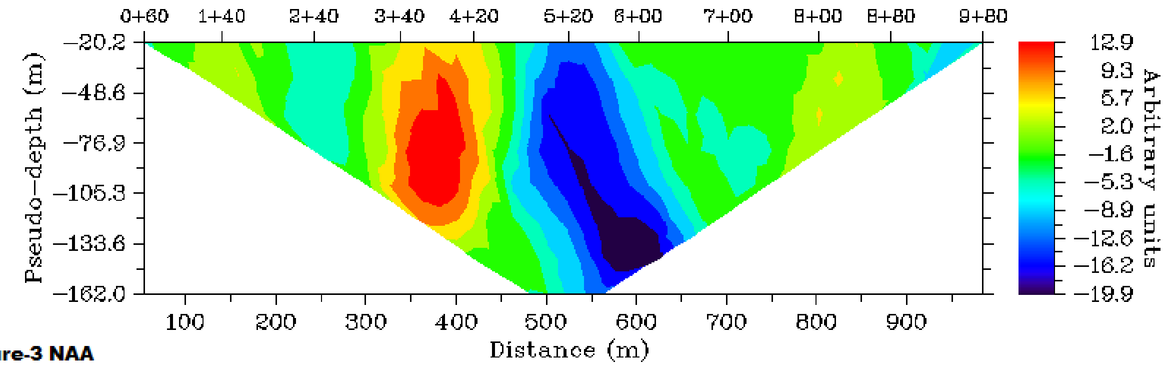


Figure-3 NAA
Line 29.5E
KH Profile

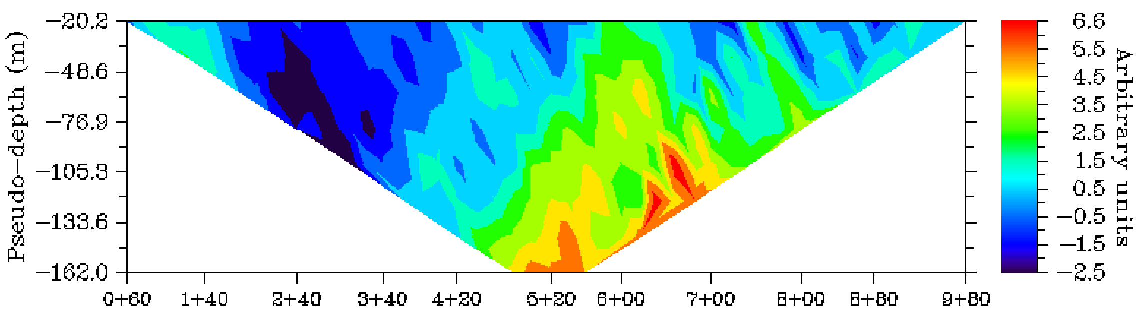


Figure 4: Line 29.5E –Resistivity Profile

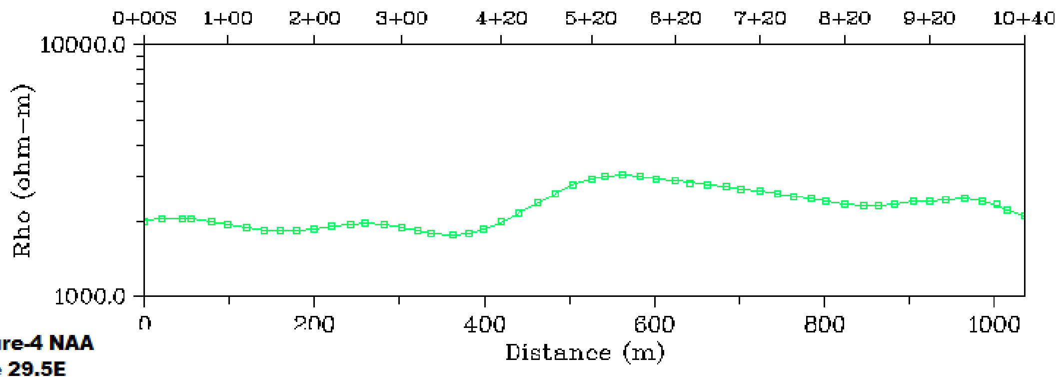


Figure-4 NAA
Line 29.5E
Resistivity 2000 Ohm Profile

Figure 5: Line 29.5E –Model

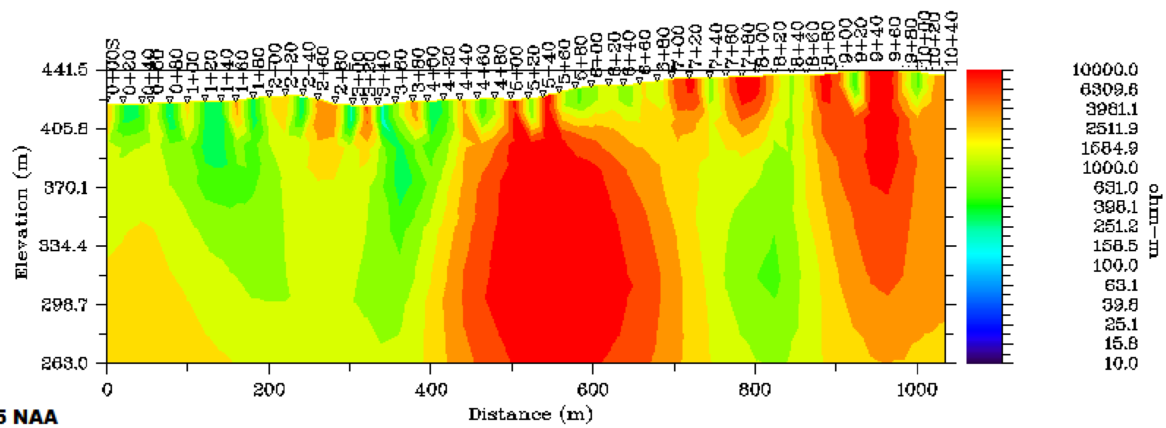


Figure-5 NAA
Line 29.5E
Model 2000 Ohm Profile

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

Racicot, F.C; 2014 VLF Report, Knight Township, Larder Lake Mining District, N.T.S 41 P/NE

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 V1.3 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 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.

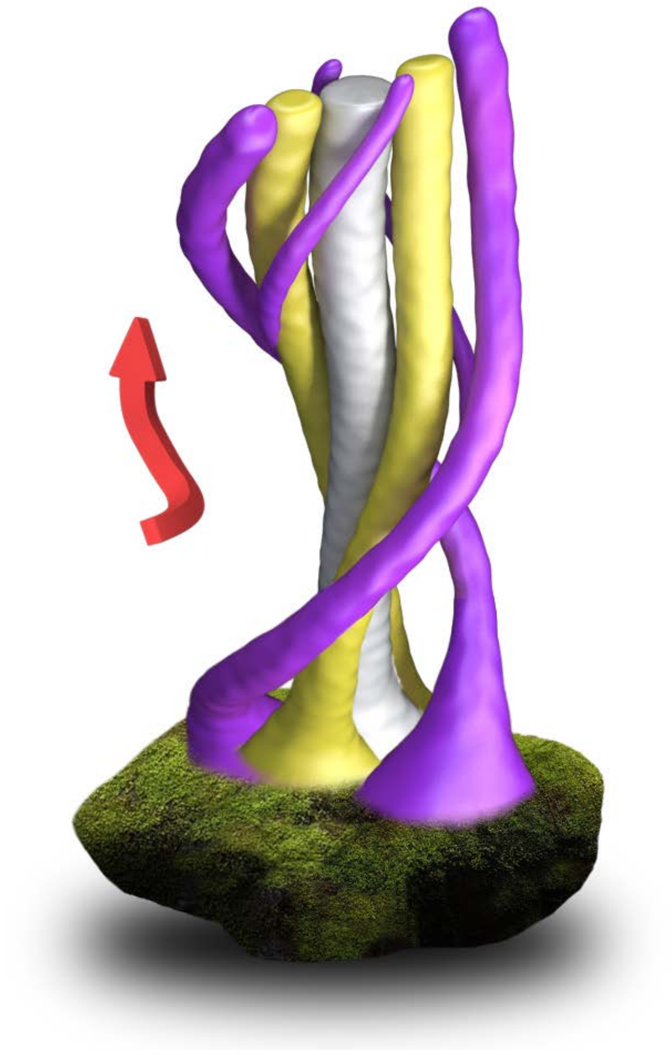
Dated this 18th day of December 2014

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

3D - SGH

"A SPATIOTEMPORAL GEOCHEMICAL HYDROCARBON INTERPRETATION"

NIKOS EXPLORATION LTD.
BORDEN LAKE EXTENSION SGH SOIL SURVEY



14 Bittern St. ● Ancaster, ON ● L9G 4V5 ● CANADA ● Tel: (905) 648-9611 ● Fax: (905) 648-9613 ● Toll Free: 1-888-ACTLABS

E-mail: dalesutherland@actlabsint.com ● Web Site: www.actlabs.com

(This page purposely left blank)

14 Bittern St. ● Ancaster, ON ● L9G 4V5 ● CANADA ● Tel: (905) 648-9611 ● Fax: (905) 648-9613 ● Toll Free: 1-888-ACTLABS

E-mail: dalesutherland@actlabsint.com ● Web Site: www.actlabs.com

SGH – SOIL GAS HYDROCARBON
Predictive Geochemistry

for

NIKOS EXPLORATION LTD.

BORDEN LAKE EXTENSION - SGH SOIL SURVEY

December 31, 2014

** Dale Sutherland,*

Activation Laboratories Ltd

(- author, originator)*

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

THE SGH GOLD INTERPRETATION TEMPLATES ARE USED FOR THIS REPORT

Workorder: A14-08426

14 Bittern St. ● Ancaster, ON ● L9G 4V5 ● CANADA ● Tel: (905) 648-9611 ● Fax: (905) 648-9613 ● Toll Free: 1-888-ACTLABS

E-mail: dalesutherland@actlabsint.com ● Web Site: www.actlabs.com

Table of Contents

14 Bittern St. ● Ancaster, ON ● L9G 4V5 ● CANADA ● Tel: (905) 648-9611 ● Fax: (905) 648-9613 ● Toll Free: 1-888-ACTLABS

E-mail: dalesutherland@actlabsint.com ● Web Site: www.actlabs.com

14 Bittern St. ● Ancaster, ON ● L9G 4V5 ● CANADA ● Tel: (905) 648-9611 ● Fax: (905) 648-9613 ● Toll Free: 1-888-ACTLABS

E-mail: dalesutherland@actlabsint.com ● Web Site: www.actlabs.com

14 Bittern St. ● Ancaster, ON ● L9G 4V5 ● CANADA ● Tel: (905) 648-9611 ● Fax: (905) 648-9613 ● Toll Free: 1-888-ACTLABS

E-mail: dalesutherland@actlabsint.com ● Web Site: www.actlabs.com

Executive Summary

It is important to read the Report Preface on the next page as an introduction to the report. For more detail the Overview section on page 12 could also be read.

The customized section for the Borden Lake Extension Survey starts on page 19. In the author's opinion, although SGH appeared to perform well is did not illustration anomalies with the SGH signature of Gold that had an associated high level of confidence. SGH confidently illustrated a central Redox Zone and also illustrated the location of what might be a fault or major shear zone.

This SGH survey thus may help explain previous geophysical results or interpretations of geology. Note that it still may be possible that the small apical anomalies could represent Gold mineralization that is very near surface (i.e. approximately within 30 metres) but SGH does not predict much confidence in the interpretation of the occurrence of shallow Gold mineralization.

14 Bittern St. ● Ancaster, ON ● L9G 4V5 ● CANADA ● Tel: (905) 648-9611 ● Fax: (905) 648-9613 ● Toll Free: 1-888-ACTLABS

E-mail: dalesutherland@actlabsint.com ● Web Site: www.actlabs.com

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, the provision of 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 1996 combined with the knowledge obtained by Activation Laboratories through the interpretation of SGH data from over 1,000 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. Many different sample types can be used in the same survey. Interpretation is based solely on SGH data and does not include the consideration from any other geochemistry (inorganic), geology, or geophysics that may exist related to the 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. Options include, a Supplemental Report and/or interpretations for other target types and/or a GIS package. (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 is 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.

14 Bittern St. ● Ancaster, ON ● L9G 4V5 ● CANADA ● Tel: (905) 648-9611 ● Fax: (905) 648-9613 ● Toll Free: 1-888-ACTLABS

E-mail: dalesutherland@actlabsint.com ● Web Site: www.actlabs.com

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 other 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 the best qualified person 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.

14 Bittern St. ● Ancaster, ON ● L9G 4V5 ● CANADA ● Tel: (905) 648-9611 ● Fax: (905) 648-9613 ● Toll Free: 1-888-ACTLABS

E-mail: dalesutherland@actlabsint.com ● Web Site: www.actlabs.com

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 the 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 prediction 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, sample 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".

14 Bittern St. ● Ancaster, ON ● L9G 4V5 ● CANADA ● Tel: (905) 648-9611 ● Fax: (905) 648-9613 ● Toll Free: 1-888-ACTLABS

E-mail: dalesutherland@actlabsint.com ● Web Site: www.actlabs.com

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 for 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.

Actlabs nor its employees shall be liable for any claims or damages as a result of this report, any interpretation, omissions in preparation, or in the test conducted. This report is to be reproduced in full, unless approved in writing.

14 Bittern St. ● Ancaster, ON ● L9G 4V5 ● CANADA ● Tel: (905) 648-9611 ● Fax: (905) 648-9613 ● Toll Free: 1-888-ACTLABS

E-mail: dalesutherland@actlabsint.com ● Web Site: www.actlabs.com

SOIL GAS HYDROCARBON (SGH) GEOCHEMISTRY – OVERVIEW

In the search for minerals and elements, geologists require 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. Surficial materials requires many minerals and elements, so surficial materials can contain indications of the presence of 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. These hydrocarbons have been shown to be residues from the decomposition of bacteria and microbes that feed on the target commodity as they require inorganic elements to catalyze the reactions necessary to develop hydrocarbons and grow cells in their life cycle. Specific classes of hydrocarbons (SGH) have been successful for delineating mineral targets found at over 950 metres in depth. Samples of various media have been successfully analyzed i.e., 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 SGH can also be used to analyze for hydrocarbons in sample types other than soil. SGH is also different from other 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 for identification. In SGH, the hydrocarbons in the sample 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 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 a short time frame and provide the benefits to them 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.

14 Bittern St. ● Ancaster, ON ● L9G 4V5 ● CANADA ● Tel: (905) 648-9611 ● Fax: (905) 648-9613 ● Toll Free: 1-888-ACTLABS

E-mail: dalesutherland@actlabsint.com ● Web Site: www.actlabs.com

SGH has attracted the attention of a large number of Exploration companies. In the above mentioned initial 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 1,000 targets from clients since January of 2004. In both CAMIRO research projects over known mineralization, client orientation studies, 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 specifically 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, shortly after providing SGH interpretation reports, SGH was credited in helping locate previously unknown mineralization, e.g. Golden Band Resources drilled an SGH anomaly and discovered a significant vein containing "visible" gold. (www.goldenbandresources.com) SGH has been very successful and mining companies have repeatedly used SGH on several reports. Of those clients that try this SGH Geochemistry, over 90+% have continued to use this technique as repeat clients. SGH has helped discover a large number of new deposits, however many clients have kept this to themselves as a competitive strategy.

14 Bittern St. ● Ancaster, ON ● L9G 4V5 ● CANADA ● Tel: (905) 648-9611 ● Fax: (905) 648-9613 ● Toll Free: 1-888-ACTLABS

E-mail: dalesutherland@actlabsint.com ● Web Site: www.actlabs.com

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 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 as a second choice, in 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. More samples representing a larger area is preferred in order to optimize 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 transferred from our sample preparation department to our Organic Geochemical department also located in our World Headquarters in Ancaster, Ontario, Canada.
- 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.

14 Bittern St. ● Ancaster, ON ● L9G 4V5 ● CANADA ● Tel: (905) 648-9611 ● Fax: (905) 648-9613 ● Toll Free: 1-888-ACTLABS

E-mail: dalesutherland@actlabsint.com ● Web Site: www.actlabs.com

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 excellent at an average of 8% within a range of ±4%.
- Field duplicates have historically been 3 to 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 from SGH data through the use of a Reporting Limit instead of a Detection Limit.

14 Bittern St. ● Ancaster, ON ● L9G 4V5 ● CANADA ● Tel: (905) 648-9611 ● Fax: (905) 648-9613 ● Toll Free: 1-888-ACTLABS

E-mail: dalesutherland@actlabsint.com ● Web Site: www.actlabs.com

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 provided to offer guidance in regards to the results of this geochemistry for the 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 hydrocarbon data should never be interpreted individually. Interpretation must always use a 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 that is associated with 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 subjective and based on the experience from 1,000+ SGH survey interpretations. The interpretation is not conducted or assisted by any computerized process.

14 Bittern St. ● Ancaster, ON ● L9G 4V5 ● CANADA ● Tel: (905) 648-9611 ● Fax: (905) 648-9613 ● Toll Free: 1-888-ACTLABS

E-mail: dalesutherland@actlabsint.com ● Web Site: www.actlabs.com

SGH CHARACTERISTICS

Summary: See Appendix G for more details

SGH Characteristics:

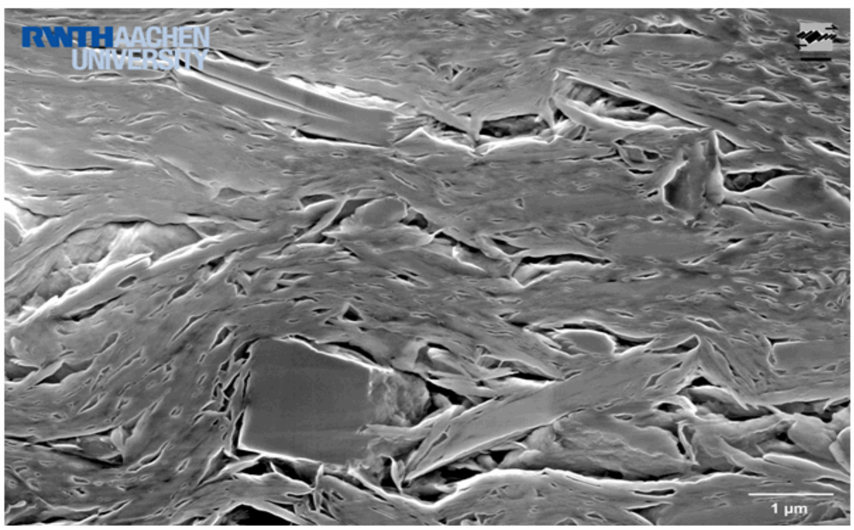
- The pattern of SGH anomalies are usually of high contrast and easily observed.
- SGH is able to illustrate exceptionally symmetrical anomalies in spite of exotic overburden and barriers such as permafrost, shale and basalt caps, previously thought to be impenetrable.
- Inorganic geochemistry can illustrate 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 it is not affected by the effects of terrain or from mobilized cover such as from glacial transport.
- As SGH hydrocarbons are essentially non-polar, highly symmetrical anomalies are observed. As such symmetry is rare in geochemistry this provides a higher level of confidence to the interpretation 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 most often does not require any data leveling.

14 Bittern St. ● Ancaster, ON ● L9G 4V5 ● CANADA ● Tel: (905) 648-9611 ● Fax: (905) 648-9613 ● Toll Free: 1-888-ACTLABS

E-mail: dalesutherland@actlabsint.com ● Web Site: www.actlabs.com

SGH INTERPRETATION – LATEST ENHANCEMENTS

SGH continues to be developed even after 18 years since inception. Although the sample preparation and analysis has stayed the same, in the last 10 years in particular it is the interpretation and understanding of the SGH data and the intricacies of the SGH signatures that have been more refined. In the last 4 years this understanding has extended to the ability to make some prediction of depth from just the use of this geochemistry. A “first” for a geochemistry that is unique to SGH. Today the latest SGH development is the introduction of the concept of the “transparent overburden”. The basis of this ability is the understanding that SGH is a Nano-geochemistry. The term “Nano” is not only used to describe the capability in detecting “Nano” quantities of these hydrocarbon based bacterial decomposition products, with the ability to detect 1 nanogram per kilogram (ng/Kg or 1 part-per-trillion), but “Nano” also describes the size of the hydrocarbon compounds detected which are typically < 1 micron in size. These relatively non-polar hydrocarbons are far smaller in size than inorganic oxides and sulphides. This difference is the reason why SGH anomalies are reliable vertical projections of mineral and/or petroleum based targets. This SGH Nano-geochemistry thus makes even the most exotic overburden “transparent”. The SEM (Scanning Electron Microscope) image below illustrates the large number of micron sized pore spaces in “Boom Clay”, specific high density clay, used to cap deep chambers of high hazard and radioactive wastes. To SGH, this is just a sieve that these hydrocarbons are able to still migrate through by Nano-Capillary action. Inorganic oxides and sulphide anomalies from targets below such complex overburden may be laterally displaced as they must rely on faults and shears in order to migrate to the surface. This topic will be presented at the 2015 International Applied Geochemistry Symposium in April, 2015.



This new understanding of the rationale of why SGH anomalies are so reliable in their vertical projection of the location of mineralization and in the ability to so accurately delineate shallow and deep mineralization has further lead to the ability to use SGH to review different layers of the overburden as it relates to the mineral target due to the wide molecular weight range of the SGH Nano-geochemistry. Another factor that aids in this review of layers, much like peeling back the layers of a sweet-onion, is the understanding of weathering processes in the 5 metres near the surface that includes the Vadose zone.

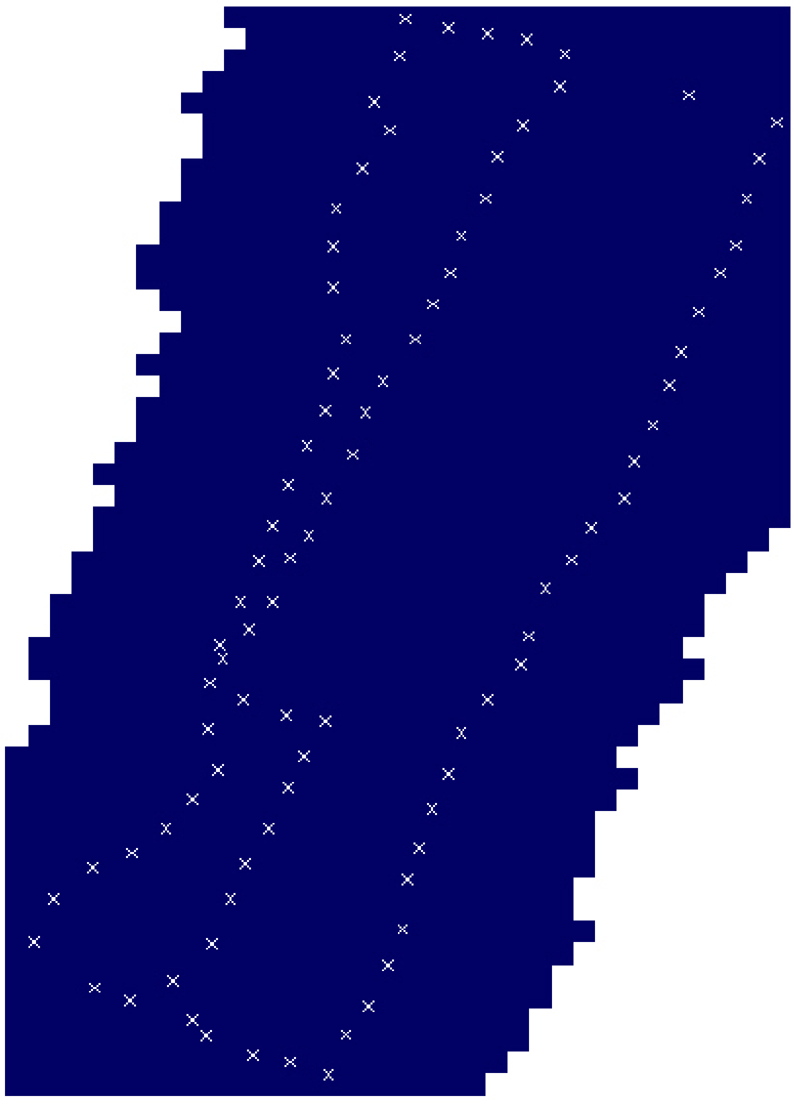
14 Bittern St. ● Ancaster, ON ● L9G 4V5 ● CANADA ● Tel: (905) 648-9611 ● Fax: (905) 648-9613 ● Toll Free: 1-888-ACTLABS

E-mail: dalesutherland@actlabsint.com ● Web Site: www.actlabs.com

INTERPRETATION OF SGH RESULTS - A14-08426 – NIKOS EXPLORATION LTD. BORDEN LAKE EXTENSION - SGH SOIL SURVEY

This report is based on the SGH results from the analysis of a total of 96 soil samples. The BORDEN LAKE EXTENSION SGH Soil Survey Area is described by three irregular transects from 35 to 160 apart trending in a northeast direction. Samples are spaced at 25 metres along each transect. Sample coordinates were provided for mapping of the SGH results for these samples in UTM format. A sample location map is shown below.

BORDEN LAKE EXTENSION - SGH SOIL SURVEY
SAMPLE LOCATION MAP



14 Bittern St. ● Ancaster, ON ● L9G 4V5 ● CANADA ● Tel: (905) 648-9611 ● Fax: (905) 648-9613 ● Toll Free: 1-888-ACTLABS

E-mail: dalesutherland@actlabsint.com ● Web Site: www.actlabs.com

SGH SURVEY INTERPRETATION
A14-08426 – NIKOS EXPLORATION LTD.
QUALITY ASSURANCE - BORDEN LAKE EXTENSION 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 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 Copper-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 BORDEN LAKE EXTENSION SGH Soil Survey is very good as demonstrated by 7 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 **10.1%** which represents a very good level of analytical performance especially at such low parts-per-trillion concentrations.

The location of **Field Duplicate samples was identified from the BORDEN LAKE EXTENSION SGH Soil Survey**. **The overall precision of the field duplicate for the samples at the BORDEN LAKE EXTENSION SGH Soil Survey is very good at 15.8%CV** as demonstrated by 5 different locations in this survey. 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 usually so low is also 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.

14 Bittern St. ● Ancaster, ON ● L9G 4V5 ● CANADA ● Tel: (905) 648-9611 ● Fax: (905) 648-9613 ● Toll Free: 1-888-ACTLABS

E-mail: dalesutherland@actlabsint.com ● Web Site: www.actlabs.com

A14-08426 – NIKOS EXPLORATION LTD.
QUALITY ASSURANCE - BORDEN LAKE EXTENSION SGH SOIL SURVEY

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 BORDEN LAKE EXTENSION 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 BORDEN LAKE EXTENSION SGH Soil Survey. The final interpretation is customized and conducted by the author. Although the term "template" or "signature" appears in this SGH Report, a computerized interpretation is not used.

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 Copper-Gold type targets. This report may have been expanded by the author to include additional SGH information that may help understand the structure of the mineralization if present at the BORDEN LAKE EXTENSION survey. 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 is in the SGH data spreadsheet.

The Copper template of SGH Pathfinder Classes uses primarily low molecular weight classes which the SGH 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-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 three SGH 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 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).

14 Bittern St. ● Ancaster, ON ● L9G 4V5 ● CANADA ● Tel: (905) 648-9611 ● Fax: (905) 648-9613 ● Toll Free: 1-888-ACTLABS

E-mail: dalesutherland@actlabsint.com ● Web Site: www.actlabs.com

A14-08426 – NIKOS EXPLORATION LTD.
BORDEN LAKE EXTENSION 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 in other projects. 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 or quantity 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. The lowest concentrations that may be at 0.5 ppt, are shown in blue.

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.

In the interpretation of SGH data there are several goals. In order of importance they are:

- Review for the presence of Redox Cells
- 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 a drill target
- Predict the possible depth to the mineral target

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

14 Bittern St. ● Ancaster, ON ● L9G 4V5 ● CANADA ● Tel: (905) 648-9611 ● Fax: (905) 648-9613 ● Toll Free: 1-888-ACTLABS

E-mail: dalesutherland@actlabsint.com ● Web Site: www.actlabs.com

A14-08426 – NIKOS EXPLORATION LTD.
BORDEN LAKE EXTENSION 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 the presence 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 for Gold in this example.

Thus, the SGH rating must always be considered in conjunction with the SGH Pathfinder Class map(s) 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 of the anomalies that are 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.

14 Bittern St. ● Ancaster, ON ● L9G 4V5 ● CANADA ● Tel: (905) 648-9611 ● Fax: (905) 648-9613 ● Toll Free: 1-888-ACTLABS

E-mail: dalesutherland@actlabsint.com ● Web Site: www.actlabs.com

A14-08426 – NIKOS EXPLORATION LTD. - BORDEN LAKE EXTENSION SGH SOIL SURVEY - SGH "REDOX" INTERPRETATION

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

A vertical black line has been added to each of the plan view maps shown. The samples to the west of this line were all submitted in 2012 while only about 30% of the samples to the east of this line were submitted in 2012. Thus 70% of the samples to the east of the line were submitted in 2011. A review was done specifically to see whether the data was significantly different from 2011 to that of 2012 in this survey. There was no significant difference between the 2011 and 2012 data in this survey, thus it was decided that data leveling would not be employed.

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 have been shown to be 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 30 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.

14 Bittern St. ● Ancaster, ON ● L9G 4V5 ● CANADA ● Tel: (905) 648-9611 ● Fax: (905) 648-9613 ● Toll Free: 1-888-ACTLABS

E-mail: dalesutherland@actlabsint.com ● Web Site: www.actlabs.com

A14-08426 – NIKOS EXPLORATION LTD.
BORDEN LAKE EXTENSION SURVEY - SGH "REDOX" INTERPRETATION

As a general comment in regard to the SGH results at this BORDEN LAKE EXTENSION SGH Soil Survey, the SGH data in general shows a moderately low signal overall however the SGH Class maps have significantly high contrast. It's important to not think of contrast with SGH as Signal:Noise since by using a reporting limit the noise has already been removed. This does not mean that all SGH anomalies are directly indicative of mineralization but they are due to the decomposition of bacteria at depth. The SGH classes were very definitive in illustrating different features in this area.

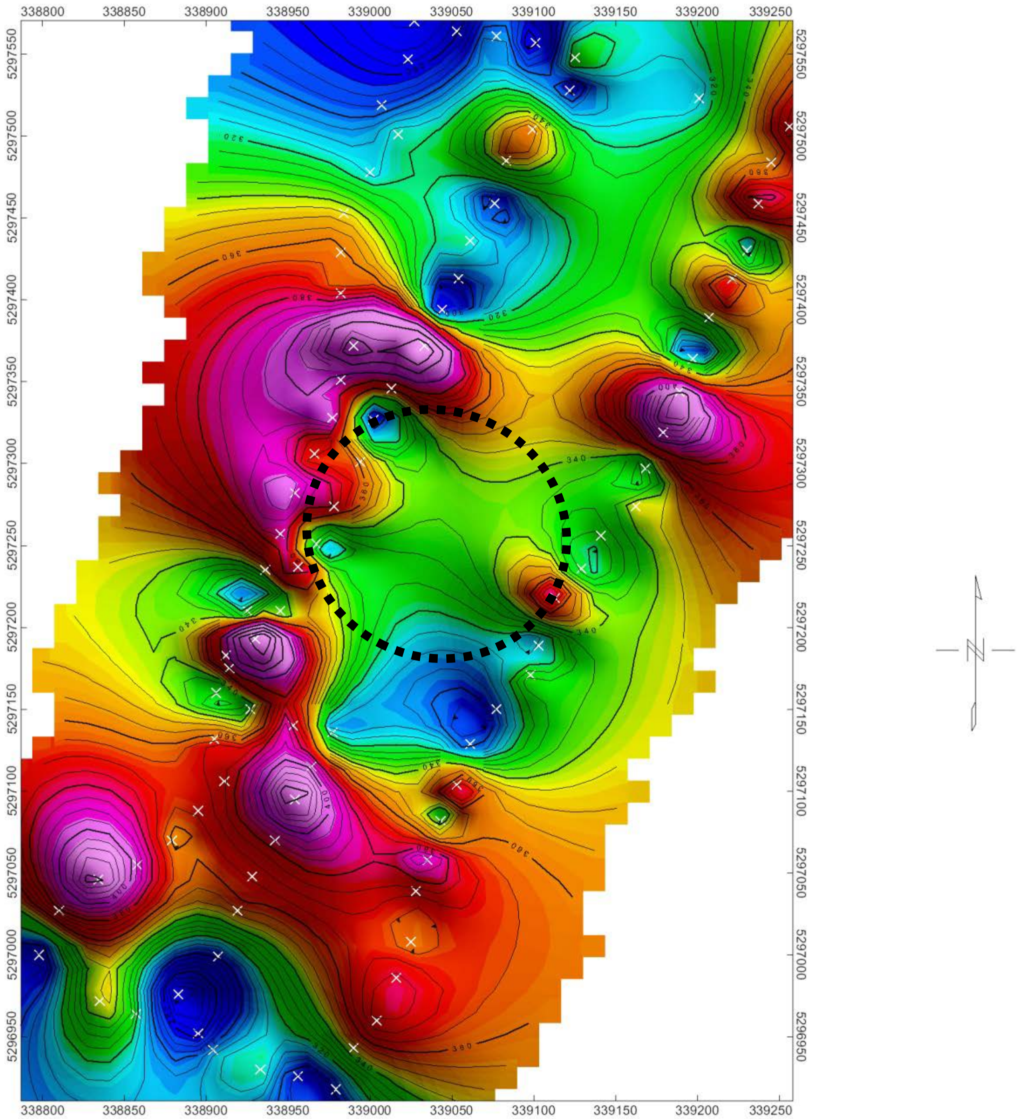
In this Borden Lake Extension SGH survey area there was one main notable Redox zone that was confidently observed. The outline for the Redox zone is shown on all of the SGH Pathfinder Class maps for reference as a dotted black oval outline that is placed within the anomalies that define the zone (so that the anomalies are not hidden by the outline and may be observed). The Redox Zone observed on page 26 is a segmented-nested-halo anomaly with a small apical centre as also seen in the 3D view on page 27.

A large number of SGH Classes at the BORDEN LAKE EXTENSION survey agree with the interpretation of the Redox zone potentially associated with Gold as shown on page 26.

14 Bittern St. ● Ancaster, ON ● L9G 4V5 ● CANADA ● Tel: (905) 648-9611 ● Fax: (905) 648-9613 ● Toll Free: 1-888-ACTLABS

E-mail: dalesutherland@actlabsint.com ● Web Site: www.actlabs.com

A14-08426 – NIKOS EXPLORATION LTD.
BORDEN LAKE EXTENSION SURVEY -SGH "REDOX" PATHFINDER CLASS



REDOX ZONE WITHIN THE DOTTED BLACK OUTLINE AS PREDICTED BY SGH

SGH SIGNATURE RATING RELATIVE TO "REDOX" = 4.0 OF 6.0

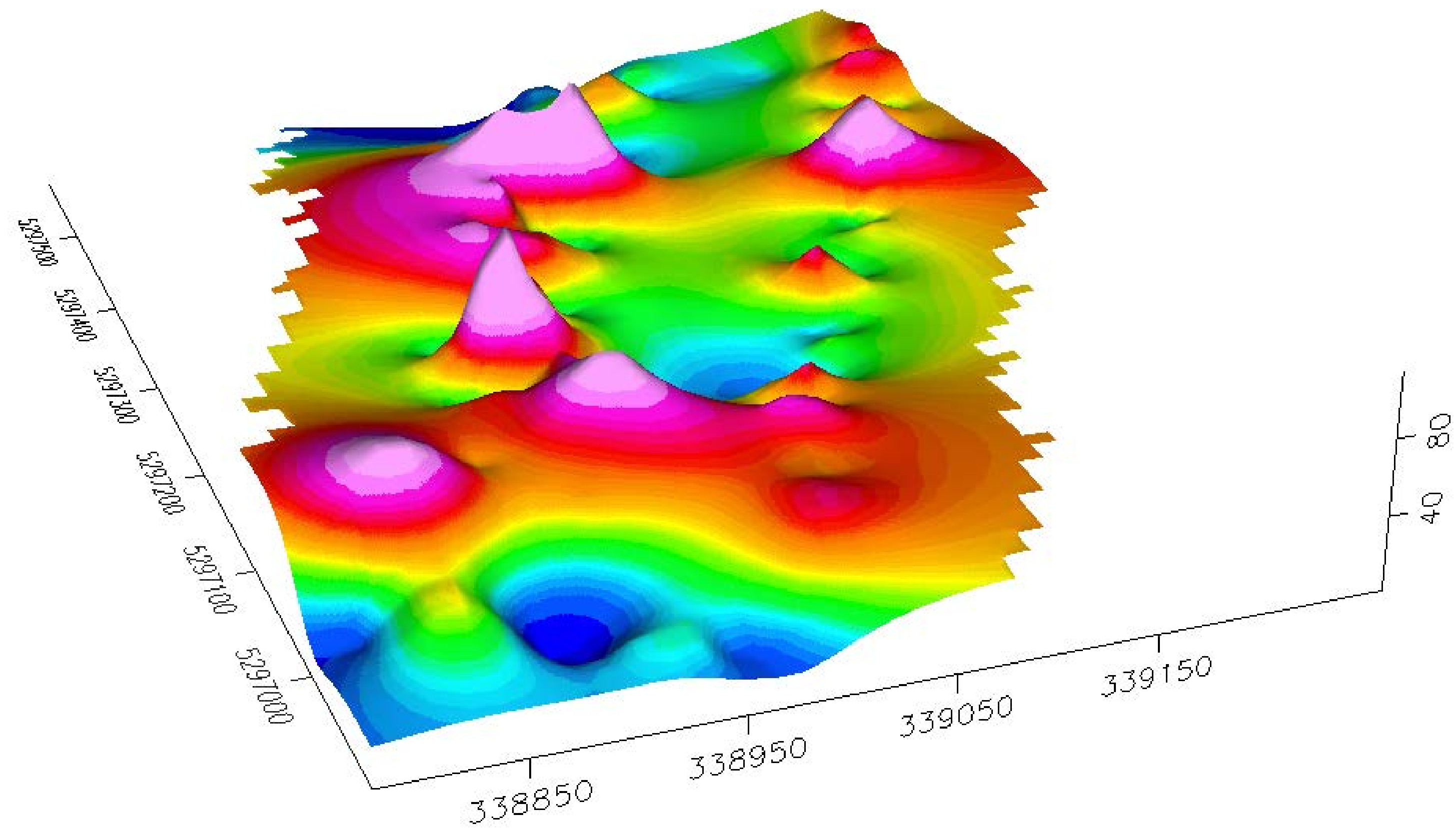
GEOSOFT

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

14 Bittern St. ● Ancaster, ON ● L9G 4V5 ● CANADA ● Tel: (905) 648-9611 ● Fax: (905) 648-9613 ● Toll Free: 1-888-ACTLABS

E-mail: dalesutherland@actlabsint.com ● Web Site: www.actlabs.com

A14-08426 – NIKOS EXPLORATION LTD.
BORDEN LAKE EXTENSION SURVEY -SGH "REDOX" PATHFINDER CLASS



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

14 Bittern St. ● Ancaster, ON ● L9G 4V5 ● CANADA ● Tel: (905) 648-9611 ● Fax: (905) 648-9613 ● Toll Free: 1-888-ACTLABS

E-mail: dalesutherland@actlabsint.com ● Web Site: www.actlabs.com

A14-08426 – NIKOS EXPLORATION LTD. - BORDEN LAKE EXTENSION SGH SOIL SURVEY - SGH "GOLD" INTERPRETATION

This report illustrates an SGH Gold Pathfinder Class map on page 29 in plan view and on page 30 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.

This SGH Gold Pathfinder Class is often expected to illustrate an apical response as a vertical projection over mineralization, at the shallowest part of the structure, if it is within approximately 100 metres of surface. The response for these SGH Pathfinder Classes for Gold at the BORDEN LAKE EXTENSION survey illustrates several apical anomalies however most are artifacts in describing the shape of the Redox Zone. Note that it may still be possible that Gold may exist in direct relation of these anomalies as shallow deposits that precipitation at the Redox Zone boundary as SGH Pathfinder Class is highly sensitive in illustrating strong results for Gold mineralization based on previous research and case studies. However, the SGH Rating is decreased as this is not typically the case, or has not been obtained by feedback from SGH customers.

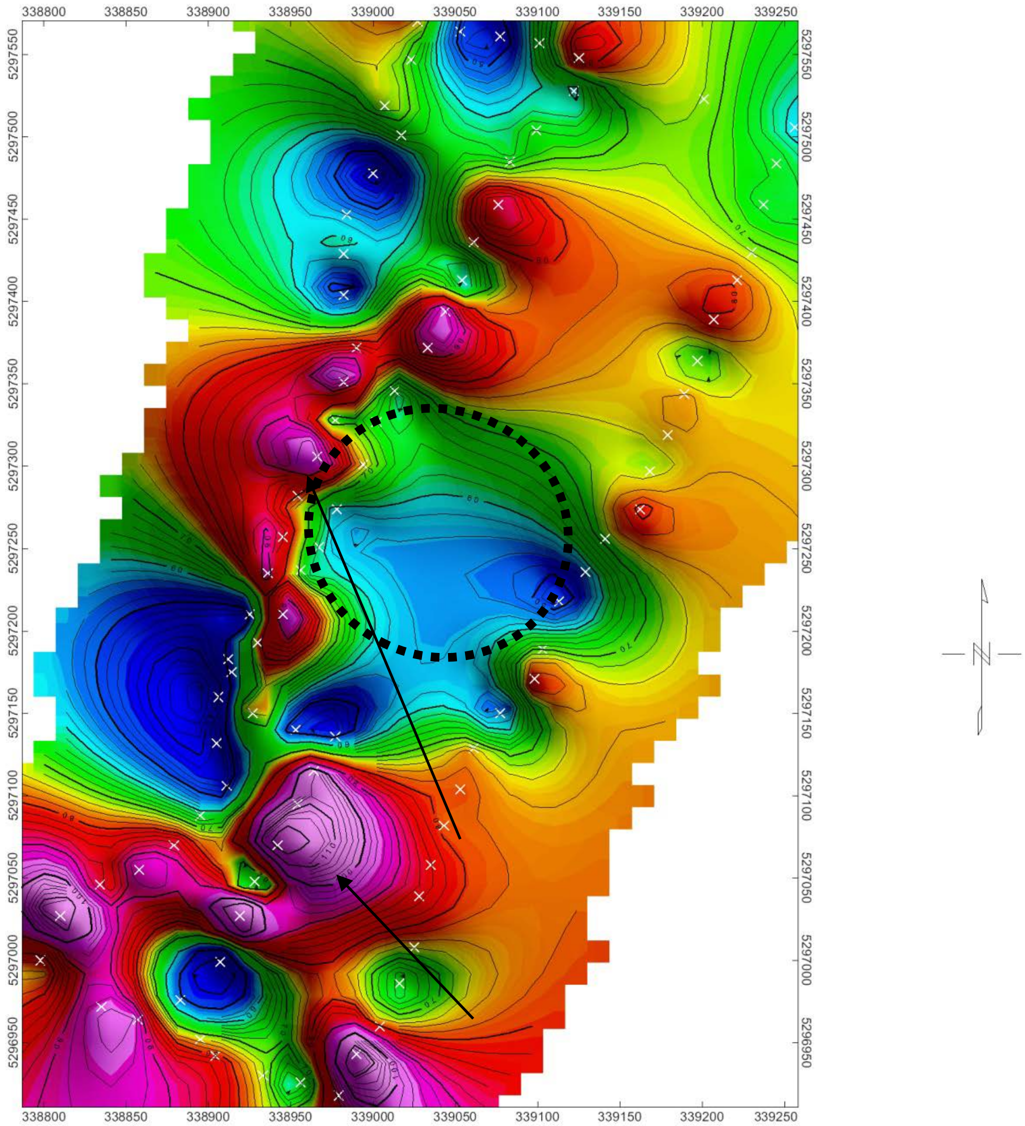
The SGH hydrocarbon signatures are predicted to be associated with Gold targets as the detection of those hydrocarbon residues produced by the decomposition of microbes and bacteria from the life cycle death phase that have been feeding on Gold mineralization. These residues have subsequently migrated 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 in 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).

Again, as signals or anomalies due to any analytical, sample preparation, or sampling procedure "noise" 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. Features at the edge of the survey, especially at the south end of the Borden Lake Extension, and thus having less associated data for interpretation, have not been interpreted.

14 Bittern St. ● Ancaster, ON ● L9G 4V5 ● CANADA ● Tel: (905) 648-9611 ● Fax: (905) 648-9613 ● Toll Free: 1-888-ACTLABS

E-mail: dalesutherland@actlabsint.com ● Web Site: www.actlabs.com

A14-08426 – NIKOS EXPLORATION LTD. - BORDEN LAKE EXTENSION SGH SOIL SURVEY - SGH "GOLD" PATHFINDER CLASS



EXAMPLES OF POSSIBLE SGH GOLD ANOMALIES

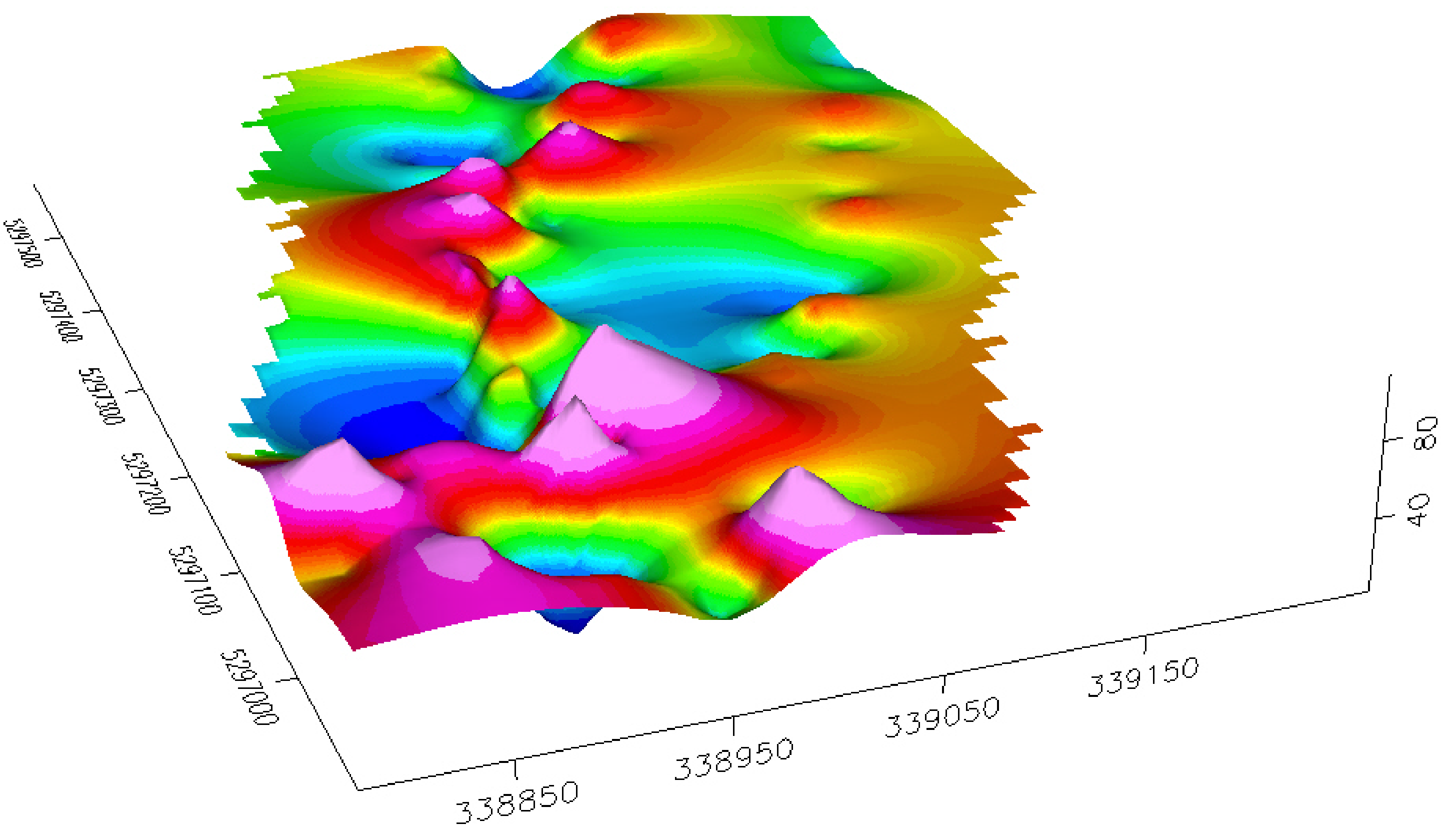
SGH SIGNATURE RATING RELATIVE TO "GOLD" = 2.5 OF 6.0

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

14 Bittern St. ● Ancaster, ON ● L9G 4V5 ● CANADA ● Tel: (905) 648-9611 ● Fax: (905) 648-9613 ● Toll Free: 1-888-ACTLABS

E-mail: dalesutherland@actlabsint.com ● Web Site: www.actlabs.com

A14-08426 – NIKOS EXPLORATION LTD. - BORDEN LAKE EXTENSION
SGH SOIL SURVEY - SGH "GOLD" PATHFINDER CLASS



14 Bittern St. ● Ancaster, ON ● L9G 4V5 ● CANADA ● Tel: (905) 648-9611 ● Fax: (905) 648-9613 ● Toll Free: 1-888-ACTLABS

E-mail: dalesutherland@actlabsint.com ● Web Site: www.actlabs.com

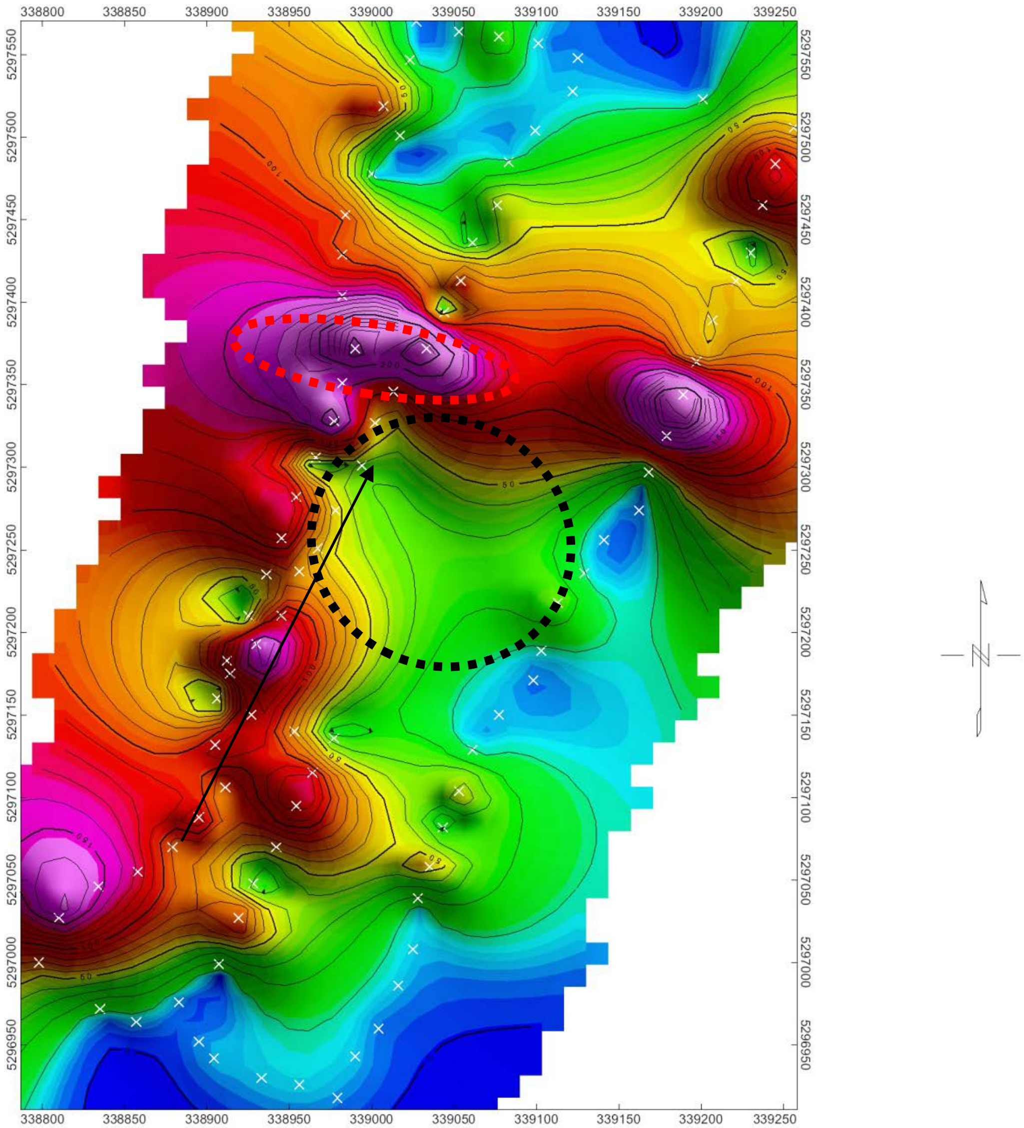
A14-08426 – NIKOS EXPLORATION LTD. - BORDEN LAKE EXTENSION SGH SOIL SURVEY - SGH "BASEMENT" PATHFINDER CLASS

The SGH Class map illustrated in plan view on page 32 and in 3D view on page 33 is an SGH signature that often is able to delineate faults and shears as basement features. This map is included as the northwest trending ridge like anomaly is very prominent in the SGH data. This anomaly appears to be associated with the northeastern edge of the identified Redox Cell which may be logical. This anomalous ridge is not expected to be associated with Gold mineralization based on the SGH results but may appear in Geophysical analyses.

14 Bittern St. ● Ancaster, ON ● L9G 4V5 ● CANADA ● Tel: (905) 648-9611 ● Fax: (905) 648-9613 ● Toll Free: 1-888-ACTLABS

E-mail: dalesutherland@actlabsint.com ● Web Site: www.actlabs.com

A14-08426 – NIKOS EXPLORATION LTD. - BORDEN LAKE EXTENSION SGH SOIL SURVEY - SGH “BASEMENT” PATHFINDER CLASS



FAULT ZONE PREDICTED BY SGH WITHIN RED OUTLINE

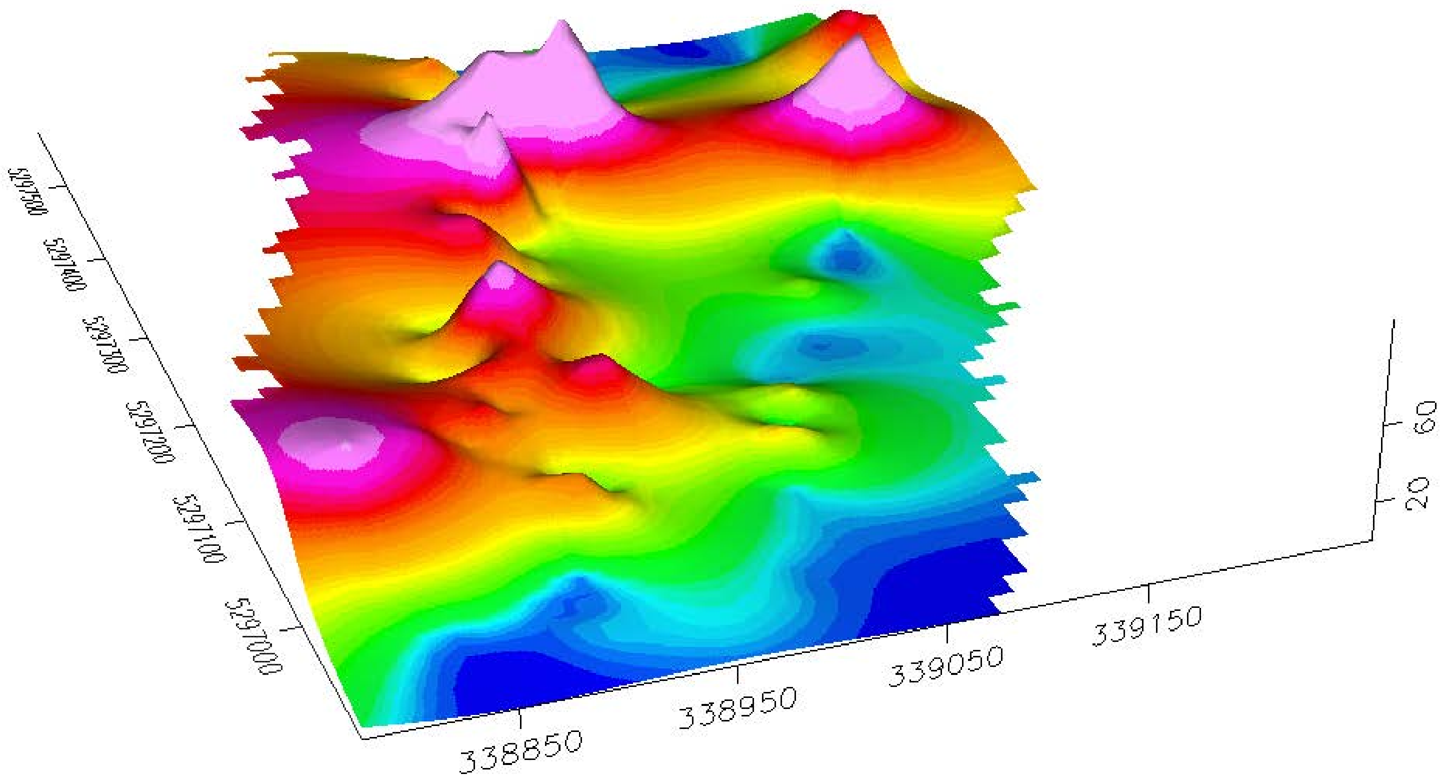
GEOSOFT.

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

14 Bittern St. ● Ancaster, ON ● L9G 4V5 ● CANADA ● Tel: (905) 648-9611 ● Fax: (905) 648-9613 ● Toll Free: 1-888-ACTLABS

E-mail: dalesutherland@actlabsint.com ● Web Site: www.actlabs.com

A14-08426 – NIKOS EXPLORATION LTD. - BORDEN LAKE EXTENSION
SGH SOIL SURVEY - SGH "BASEMENT" PATHFINDER CLASS



GEOSOFT

14 Bittern St. ● Ancaster, ON ● L9G 4V5 ● CANADA ● Tel: (905) 648-9611 ● Fax: (905) 648-9613 ● Toll Free: 1-888-ACTLABS

E-mail: dalesutherland@actlabsint.com ● Web Site: www.actlabs.com

A14-08426 – NIKOS EXPLORATION LTD. - BORDEN LAKE EXTENSION SGH SOIL SURVEY - SGH INTERPRETATION FOR "GOLD" MINERALIZATION

The interpretation of the SGH data on page 26 relative to the presence of Gold at the NIKOS EXPLORATION LTD. BORDEN LAKE EXTENSION SGH Soil Survey is described by what appears to be the presence of a Redox Cell. When a Redox Cell is depicted by this SGH Class it may potentially indicate a deep Gold zone (i.e. in excess of 500 metres from surface) however there is a reduced level of confidence as this is rarely seen from this SGH Class and the prediction of any target that is deep has a naturally lower level of confidence.

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 received 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 mineralization under cover.

The SGH Ratings shown on pages 26 and 29 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 and orientation studies over known mineralization. The 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 of surveys in many different geographical regions and from 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 or more is an indication that this SGH Nano-Geochemistry predicts that the zone(s) described may warrant more work or more consideration.

14 Bittern St. ● Ancaster, ON ● L9G 4V5 ● CANADA ● Tel: (905) 648-9611 ● Fax: (905) 648-9613 ● Toll Free: 1-888-ACTLABS

E-mail: dalesutherland@actlabsint.com ● Web Site: www.actlabs.com

A14-08426 – NIKOS EXPLORATION LTD. - BORDEN LAKE EXTENSION SGH SOIL SURVEY - SGH INTERPRETATION FOR "GOLD" MINERALIZATION

In areas predicted to have shallower mineralization the SGH anomalies are very reliable at showing vertical projections of mineralization and thus directly illustrating the location of possible drill targets. Deeper mineralization is often expected to be centrally located within Redox zones. 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 associated SGH Rating Scores of ≥5.0.

The identification of a drill target if shown 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 shallowest mineralization, 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 BORDEN LAKE EXTENSION 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.

14 Bittern St. ● Ancaster, ON ● L9G 4V5 ● CANADA ● Tel: (905) 648-9611 ● Fax: (905) 648-9613 ● Toll Free: 1-888-ACTLABS

E-mail: dalesutherland@actlabsint.com ● Web Site: www.actlabs.com

A14-08426 – NIKOS EXPLORATION LTD.
BORDEN LAKE EXTENSION SGH SOIL SURVEY - SGH SURVEY RECOMMENDATIONS

The central area of the sample survey design where transects are about 160 metres apart is a bit wide to depict the occurrence of shallow Gold mineralization i.e. small features of about 50 metres may have been missed if mineralization is of shallow depth from surface. The sample spacing of 35 metres is appropriate and represents good resolution at the BORDEN LAKE EXTENSION SGH survey. Infill sampling should probably only be considered as an economical way to obtain more accuracy to provide precise drill targets if other geochemistry, geology or geophysics shows specific promise. Infill sampling would be recommended to obtain a more regular survey grid with 50 or 75 metre spacing. The highest resolution recommended for use with SGH is 25 metre spacing.

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

In general, if the client decides that in-fill sampling may be warranted, to obtain the best results from additional sampling for SGH it is usually 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 additional report descriptions. Results from data leveling is also always considered “an approximation”, thus the confidence in a combined interpretation will be lower than 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.

14 Bittern St. ● Ancaster, ON ● L9G 4V5 ● CANADA ● Tel: (905) 648-9611 ● Fax: (905) 648-9613 ● Toll Free: 1-888-ACTLABS

E-mail: dalesutherland@actlabsint.com ● Web Site: www.actlabs.com

Date Submitted for SGH at Actlabs Ancaster: November 4, 2014

Date Analyzed: November 11 - 18, 2014

Interpretation Report: December 31, 2014

NIKOS EXPLORATION LTD.

326 Rusholme Rd.

Toronto, Ontario M6H 2Z5

Attention: Roger Moss

RE: Your Reference: BORDEN LAKE EXTENSION - SGH SOIL SURVEY

Activation Laboratories Workorder: A14-08426

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.

96 Samples were analyzed for this submission.

Sample preparation –Actlabs Ancaster - S4: Drying at 60°C and Sieving with -80 mesh collected

Interpretation relative to 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)

14 Bittern St. ● Ancaster, ON ● L9G 4V5 ● CANADA ● Tel: (905) 648-9611 ● Fax: (905) 648-9613 ● Toll Free: 1-888-ACTLABS

E-mail: dalesutherland@actlabsint.com ● Web Site: www.actlabs.com

REPORT/WORKORDER: A14-08426

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 <u>organic</u> 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 creator 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:

D Sutherland

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

14 Bittern St. ● Ancaster, ON ● L9G 4V5 ● CANADA ● Tel: (905) 648-9611 ● Fax: (905) 648-9613 ● Toll Free: 1-888-ACTLABS

E-mail: dalesutherland@actlabsint.com ● Web Site: www.actlabs.com

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 indicator 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

14 Bittern St. ● Ancaster, ON ● L9G 4V5 ● CANADA ● Tel: (905) 648-9611 ● Fax: (905) 648-9613 ● Toll Free: 1-888-ACTLABS

E-mail: dalesutherland@actlabsint.com ● Web Site: www.actlabs.com

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)

14 Bittern St. ● Ancaster, ON ● L9G 4V5 ● CANADA ● Tel: (905) 648-9611 ● Fax: (905) 648-9613 ● Toll Free: 1-888-ACTLABS

E-mail: dalesutherland@actlabsint.com ● Web Site: www.actlabs.com

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

14 Bittern St. ● Ancaster, ON ● L9G 4V5 ● CANADA ● Tel: (905) 648-9611 ● Fax: (905) 648-9613 ● Toll Free: 1-888-ACTLABS

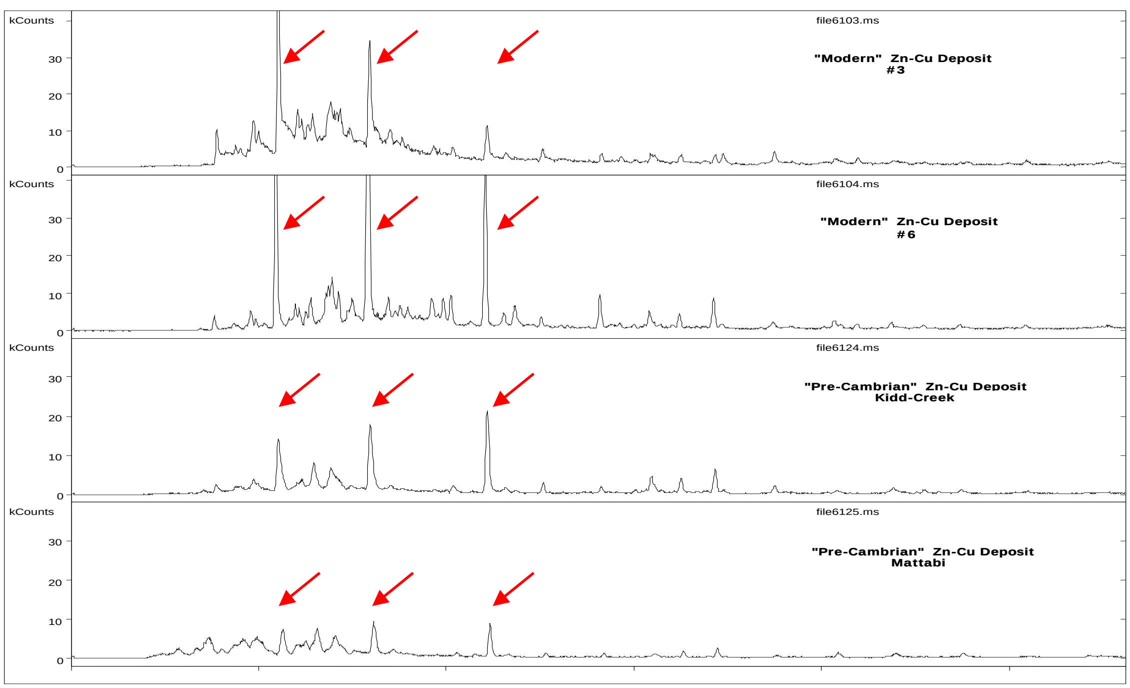
E-mail: dalesutherland@actlabsint.com ● Web Site: www.actlabs.com

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:

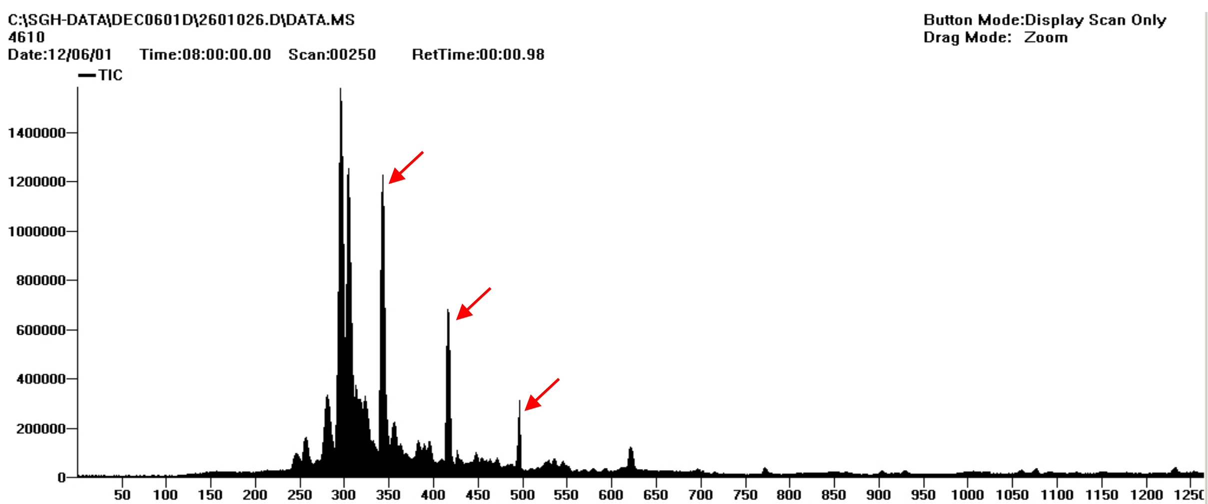
14 Bittern St. ● Ancaster, ON ● L9G 4V5 ● CANADA ● Tel: (905) 648-9611 ● Fax: (905) 648-9613 ● Toll Free: 1-888-ACTLABS

E-mail: dalesutherland@actlabsint.com ● Web Site: www.actlabs.com

- 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:

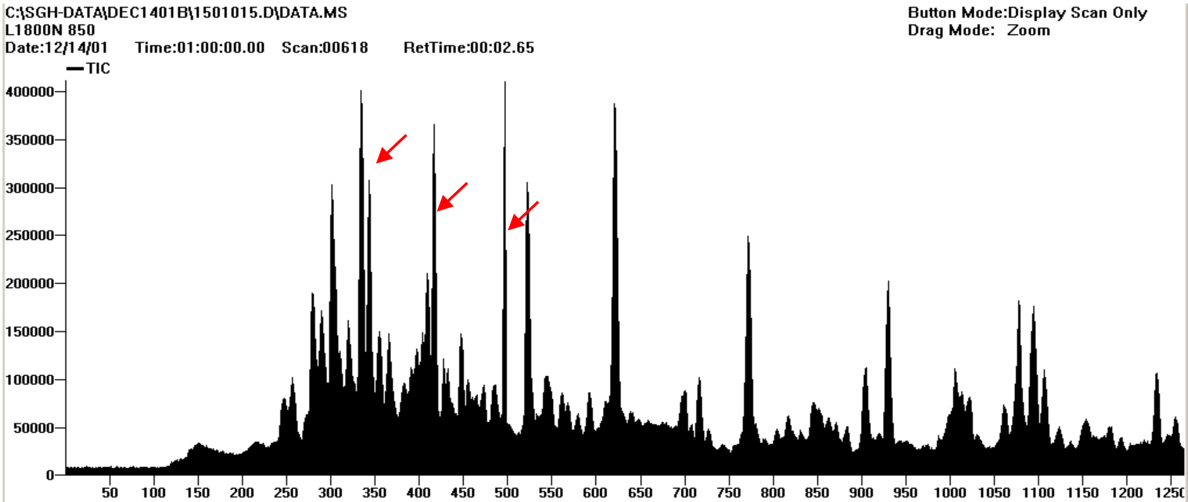


The three compounds indicated by the red arrows represent the same *visible portion* of the VMS signature observed from the modern day black smoker samples and the ore samples taken from the Mattabi and Kidd Creek, even though this soil was taken from over a different VMS deposit in a geographically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

14 Bittern St. ● Ancaster, ON ● L9G 4V5 ● CANADA ● Tel: (905) 648-9611 ● Fax: (905) 648-9613 ● Toll Free: 1-888-ACTLABS

E-mail: dalesutherland@actlabsint.com ● Web Site: www.actlabs.com

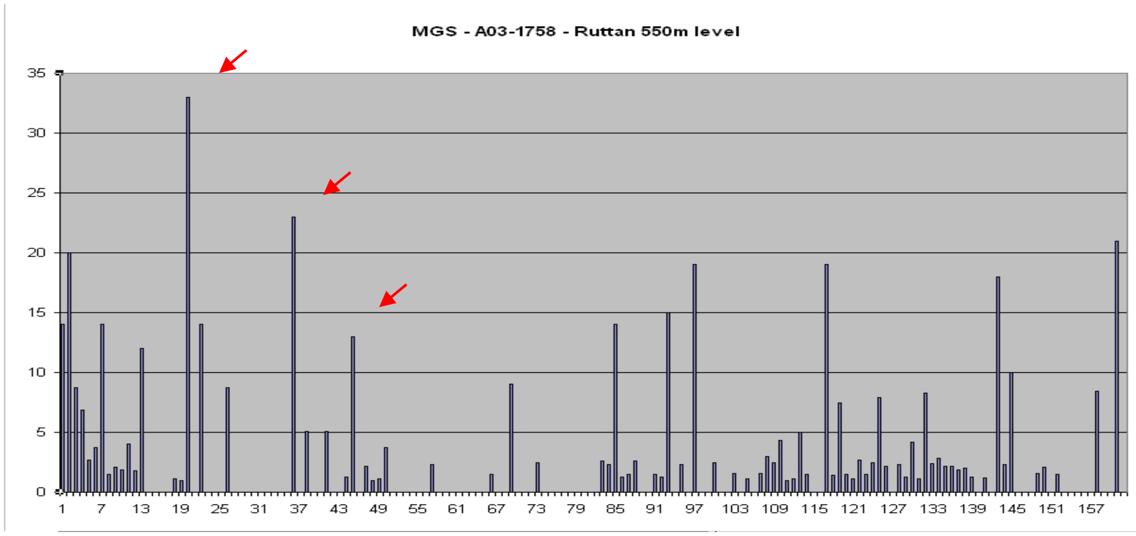


In research conducted by the Ontario Geological Survey, this same portion of the SGH signature was also observed over the VMS deposit at Cross Lake in Ontario. **Note that the visible signature shown as the three compounds indicated by the red arrows is only a small portion of the complete SGH VMS signature**. 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.

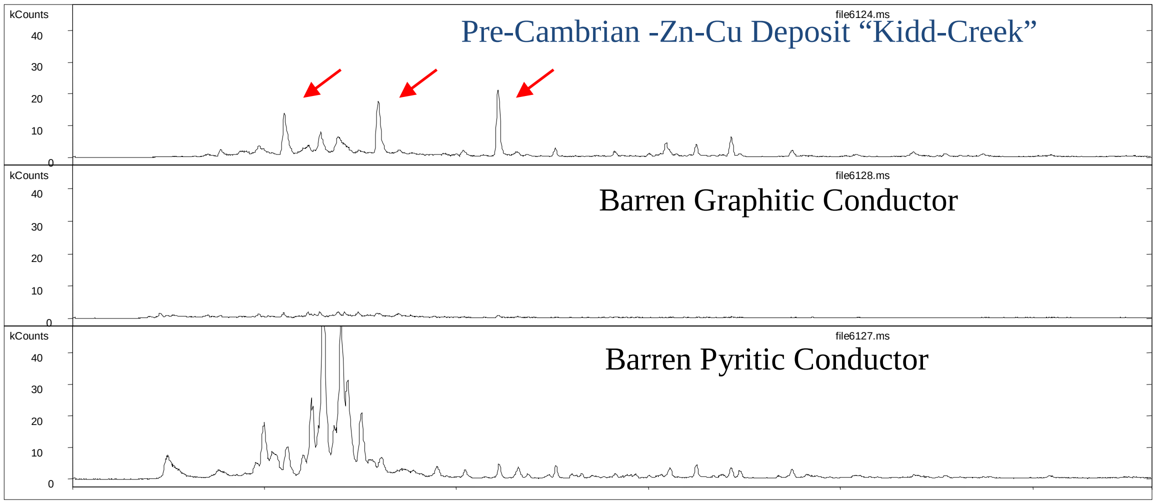
14 Bittern St. ● Ancaster, ON ● L9G 4V5 ● CANADA ● Tel: (905) 648-9611 ● Fax: (905) 648-9613 ● Toll Free: 1-888-ACTLABS

E-mail: dalesutherland@actlabsint.com ● Web Site: www.actlabs.com



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**.



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.

14 Bittern St. ● Ancaster, ON ● L9G 4V5 ● CANADA ● Tel: (905) 648-9611 ● Fax: (905) 648-9613 ● Toll Free: 1-888-ACTLABS

E-mail: dalesutherland@actlabsint.com ● Web Site: www.actlabs.com

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).

14 Bittern St. ● Ancaster, ON ● L9G 4V5 ● CANADA ● Tel: (905) 648-9611 ● Fax: (905) 648-9613 ● Toll Free: 1-888-ACTLABS

E-mail: dalesutherland@actlabsint.com ● Web Site: www.actlabs.com

- 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 transferred from our sample preparation department to our Organics Geochemical department also in our World Headquarters in Ancaster, Ontario, Canada. 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.

14 Bittern St. ● Ancaster, ON ● L9G 4V5 ● CANADA ● Tel: (905) 648-9611 ● Fax: (905) 648-9613 ● Toll Free: 1-888-ACTLABS

E-mail: dalesutherland@actlabsint.com ● Web Site: www.actlabs.com

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

14 Bittern St. ● Ancaster, ON ● L9G 4V5 ● CANADA ● Tel: (905) 648-9611 ● Fax: (905) 648-9613 ● Toll Free: 1-888-ACTLABS

E-mail: dalesutherland@actlabsint.com ● Web Site: www.actlabs.com

%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

14 Bittern St. ● Ancaster, ON ● L9G 4V5 ● CANADA ● Tel: (905) 648-9611 ● Fax: (905) 648-9613 ● Toll Free: 1-888-ACTLABS

E-mail: dalesutherland@actlabsint.com ● Web Site: www.actlabs.com

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.*

14 Bittern St. ● Ancaster, ON ● L9G 4V5 ● CANADA ● Tel: (905) 648-9611 ● Fax: (905) 648-9613 ● Toll Free: 1-888-ACTLABS

E-mail: dalesutherland@actlabsint.com ● Web Site: www.actlabs.com

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

14 Bittern St. ● Ancaster, ON ● L9G 4V5 ● CANADA ● Tel: (905) 648-9611 ● Fax: (905) 648-9613 ● Toll Free: 1-888-ACTLABS

E-mail: dalesutherland@actlabsint.com ● Web Site: www.actlabs.com

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.

14 Bittern St. ● Ancaster, ON ● L9G 4V5 ● CANADA ● Tel: (905) 648-9611 ● Fax: (905) 648-9613 ● Toll Free: 1-888-ACTLABS

E-mail: dalesutherland@actlabsint.com ● Web Site: www.actlabs.com

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 is sectioned into quartiles and each section is assigned specific leveling factors that are then applied to one data set. It should be noted that any type of data leveling is an approximation.

14 Bittern St. ● Ancaster, ON ● L9G 4V5 ● CANADA ● Tel: (905) 648-9611 ● Fax: (905) 648-9613 ● Toll Free: 1-888-ACTLABS

E-mail: dalesutherland@actlabsint.com ● Web Site: www.actlabs.com

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 <u>well</u> 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 <u>fairly well</u> 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

14 Bittern St. ● Ancaster, ON ● L9G 4V5 ● CANADA ● Tel: (905) 648-9611 ● Fax: (905) 648-9613 ● Toll Free: 1-888-ACTLABS

E-mail: dalesutherland@actlabsint.com ● Web Site: www.actlabs.com

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 every 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 a 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.

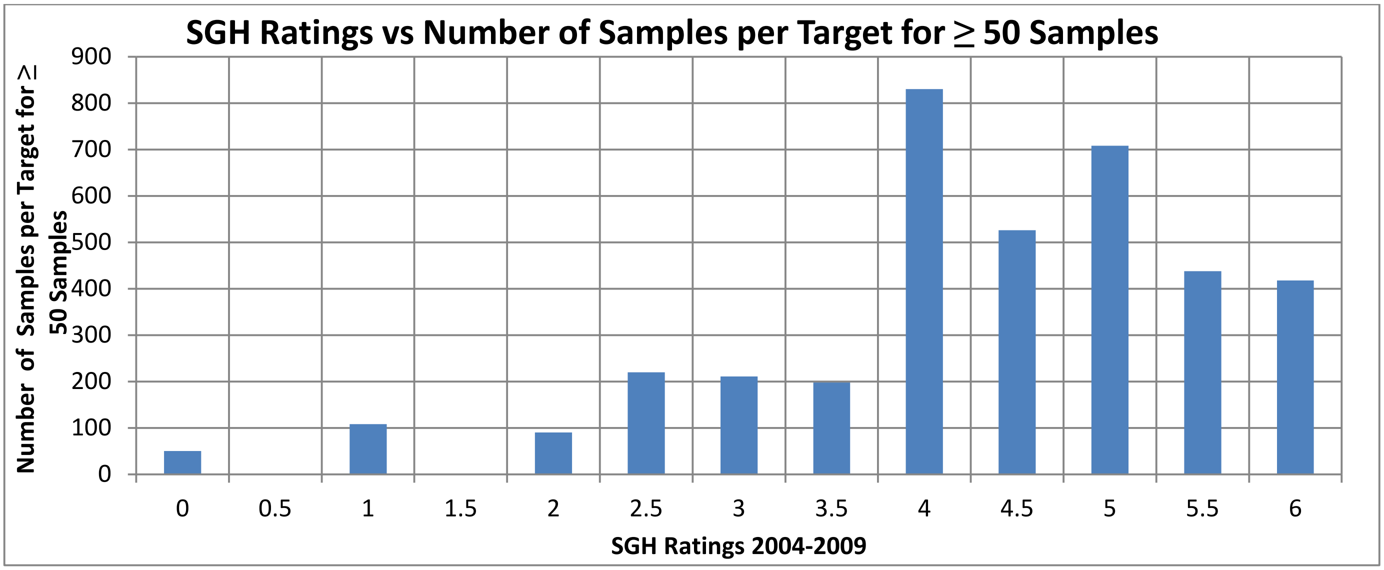
The question often arises by clients as to the frequency of a rating, e.g. “how often is a rating of 5.0 given in an interpretation”. To better understand this we present this review of the history of the SGH rating program since 2004 and some of the underlying situations that can affect the historical 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

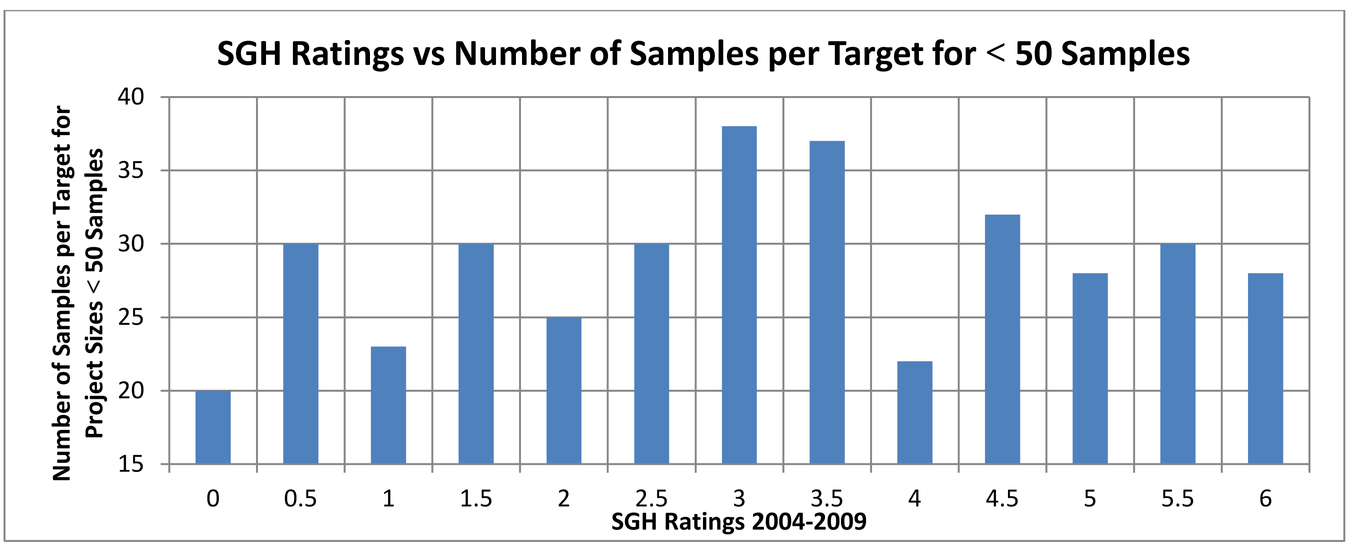
14 Bittern St. ● Ancaster, ON ● L9G 4V5 ● CANADA ● Tel: (905) 648-9611 ● Fax: (905) 648-9613 ● Toll Free: 1-888-ACTLABS

E-mail: dalesutherland@actlabsint.com ● Web Site: www.actlabs.com

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



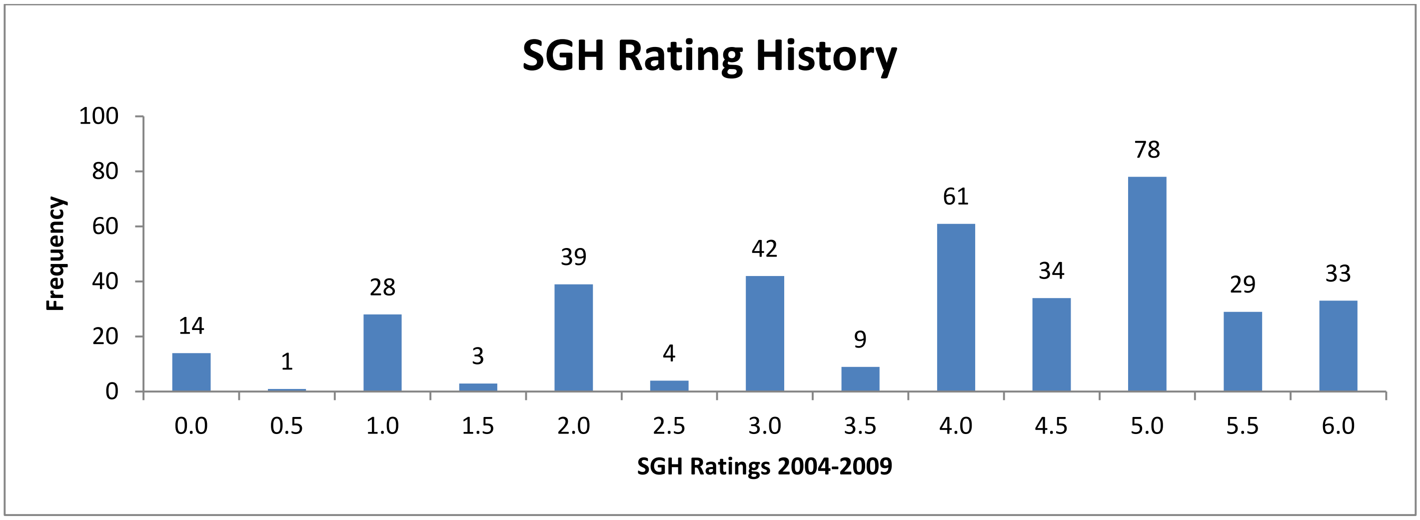
The rating frequency may be biased low as research projects often include a bare minimum of samples to reduce costs. Research projects may also be over targets known to be difficult to depict with geochemistry. Multiple targets in close vicinity in a survey may result in a low bias as the Pathfinder 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.



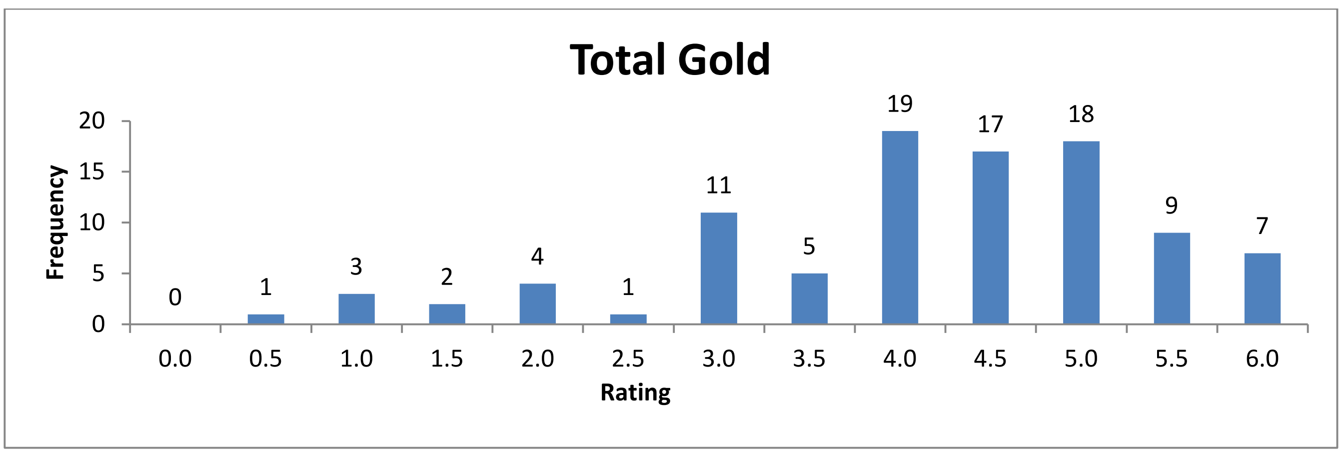
14 Bittern St. ● Ancaster, ON ● L9G 4V5 ● CANADA ● Tel: (905) 648-9611 ● Fax: (905) 648-9613 ● Toll Free: 1-888-ACTLABS

E-mail: dalesutherland@actlabsint.com ● Web Site: www.actlabs.com

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.



14 Bittern St. ● Ancaster, ON ● L9G 4V5 ● CANADA ● Tel: (905) 648-9611 ● Fax: (905) 648-9613 ● Toll Free: 1-888-ACTLABS

E-mail: dalesutherland@actlabsint.com ● Web Site: www.actlabs.com

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.

14 Bittern St. ● Ancaster, ON ● L9G 4V5 ● CANADA ● Tel: (905) 648-9611 ● Fax: (905) 648-9613 ● Toll Free: 1-888-ACTLABS

E-mail: dalesutherland@actlabsint.com ● Web Site: www.actlabs.com