Report on S.G.H. Sampling

Thornloe Property
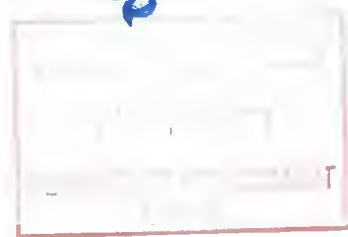

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True North Mineral Laboratories Inc.
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Introduction

True North Mineral Laboratories was hired on a contract basis, to carry out a field sampling program on the Thorneloe Property. Sampling was carried out in a grid pattern, designed specifically for use with SGH (Soil Gas Hydrocarbon) predictive geochemistry.

SGH is a deep penetrating geochemistry that involves the analysis of surficial samples from over potential mineral or petroleum targets. In the case of the Thorneloe Property, the potential target would be the presence of a gold deposit.

Property Description

Claim Numbers 4217944 and 4247257 are located in Thorneloe Township - Porcupine Mining Division, approximately 32Km (by road) SW of Timmins, Ontario.

Refer to *Figure 1* (Location and Access map) and *Figure 3* (Claim Location map) for more detailed property and claim locations.

Access

The claims were accessed from Timmins by traveling west along highway 101 and south on highway 144 for approximately 32km.

Refer to *Figure 1* (Location and Access map) and *Figure 3* (Claim Location map) for more detailed access information. Access to L3,4 and 5 is shown on *Figure 3*. An old logging road had to be re-cut on November 21st to gain access to the east part of the grid. Access to L1 and 2 was drivable by 4x4 Jeep without re-cutting.
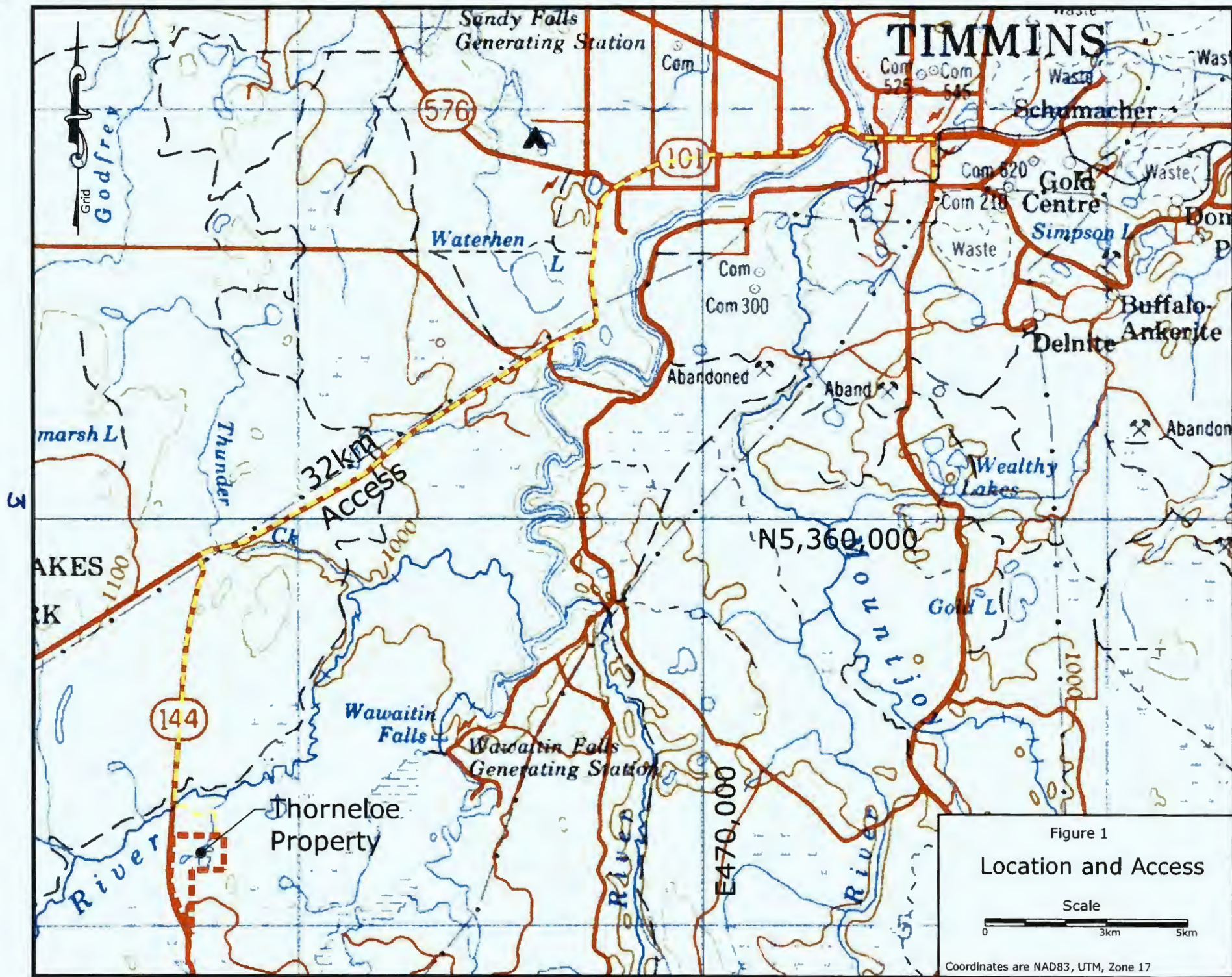

Re-cutting old road - November 21, 2010

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Figure 1

Location and Access

Scale

Coordinates are NAD83, UTM, Zone 17

1202572

1206999

HWY 144

Grown-in
no access

Re-cut road (L3,4,5)

November 21/10

Fault

L1 L2 L3 L4 L5

Parking

N5,352,000

Grown-in
no access

14 13

71 samples
Total

15 13

4217944

16

Thorneloe
Property

1207652

End of
Road

Access for
L1 and L2

4247257
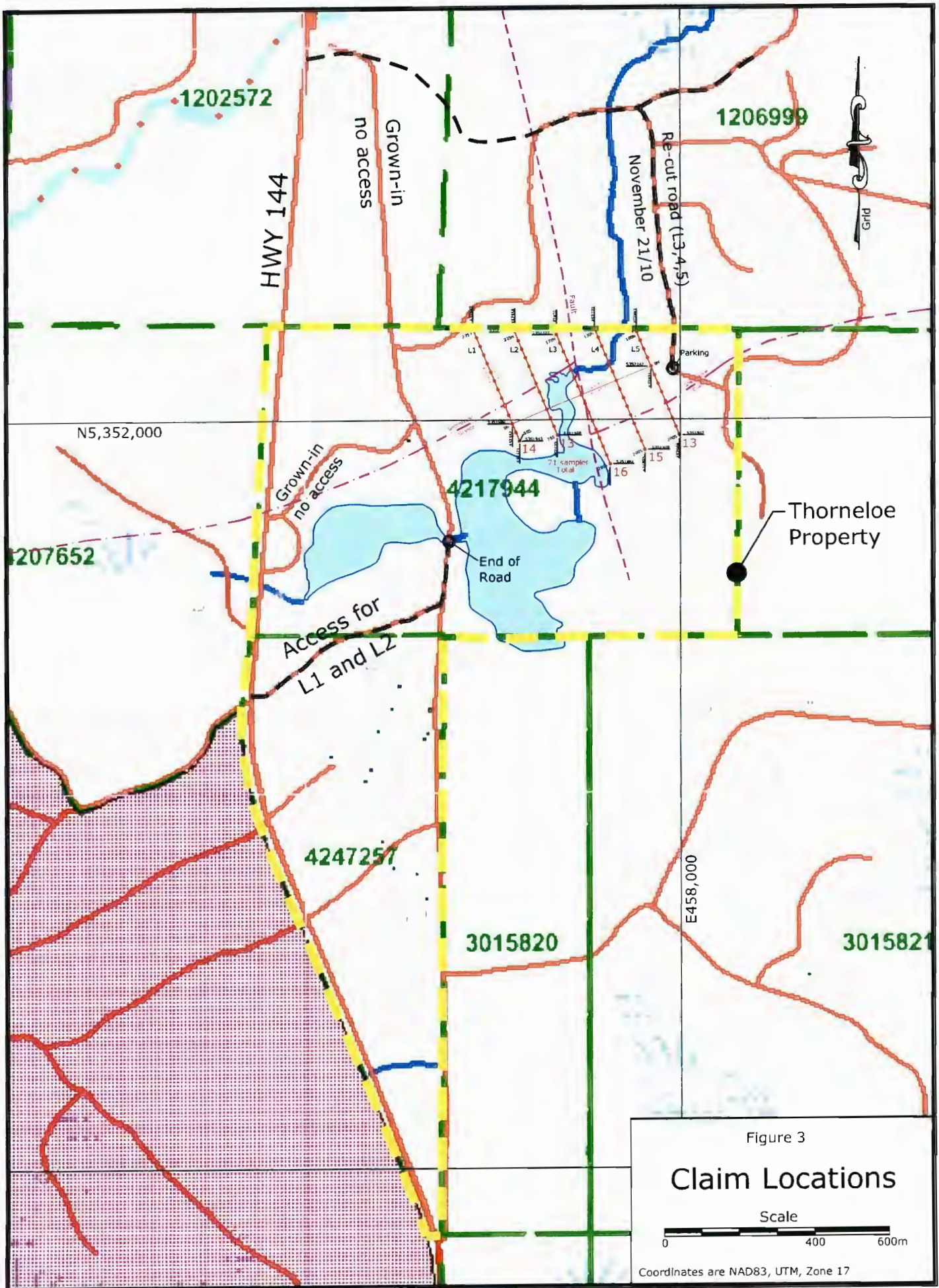
E458,000

3015820

3015821
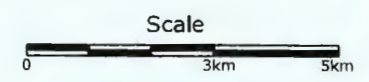
Figure 3

Claim Locations

Scale

0   400   600m

Coordinates are NAD83, UTM, Zone 17

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Work Program

Field Work was carried out between November 21 and November 23, 2010.

44 samples were retrieved on November 22, 2010 from L3,4 and 5.
27 samples were retrieved on November 23, 2010 from L1 and 2.

Typical markers for sample sites

Samples were retrieved at 25m spacing along gridlines using handheld GPS for navigation. Refer to *Figure 2* (Sample Location map) for detailed sample locations.

Field Sampling

71 samples were retrieved in total.
Samples were shipped to Activation Laboratories on November 23, 2010.

Methods

Hand Auger Sampling

Samples were gathered using portable hand auger with detachable T-handle and bit with individual 3ft rod sections held together with bayonet style coupler. The typical sample for this program consisted of sandy material as described in the field logs. Sample depths are included in the field logs as well.

Sample locations and field notations can be found in *Appendix V.*
Simplified version of sample locations is found on *Figure 2* (Sample Location map)

Figure 2

Sample Locations

Scale

0   100   150m

Coordinates are NAD83, UTM, Zone 17

71 samples
Total

Parking

Fault

Greenstone
Granite

Greenstone
Granite

L1 L2 L3 L4 L5

Az157°33'
Az337°33'

Az67°33'
Az247°33'

275N 225N 175N 150N 100N

457447 457558 457670 457772 457883

5352224 5352235 5352227 5352242 5352234

5352227

ON

5351989
ON

457552

50S
5351943

75S
457673

5351958

13

14

457571

5351957
200S

13

457998

5351919
200S

15

457905

200S

5351881

16

457813

457921

5352142 ON

Grid

Material Handling

Handling of sample material was carried out by Actlabs (Activation Laboratories –
Ancaster). A description of material handling prior to analysis (Sample
Preparation) can be found in the full report produced by Dale Sutherland, dated
December 21, 2010 and forming *Appendix I* of this report.

Photographs showing the collection of samples prior to processing, can be found
in *Appendix III*.

Analysis

Analysis was carried out by Actlabs.
More complete details are contained in the full report produced by Dale
Sutherland, dated December 21, 2010 and forming *Appendix I* of this report.

Results

Raw data for each sample can be found in *Appendix II*.

More complete details, including interpretive maps are contained in the full report
produced by Dale Sutherland, dated December 21, 2010 and forming *Appendix I*
of this report.

Recommendations

The SGH report, which forms *Appendix I* of the current report, was written
by Dale Sutherland of Actlabs. Please note - the comments below are the
opinion of the Author of the current report, not the opinion of Mr.
Sutherland.

The SGH report provided a rating of 3 out of 6 for Gold. The Author
recommends expanding the grid to cover more of the property.

There is a nested apical anomaly, as noted by Mr. Sutherland, within the
current grid area. As an alternative to expanding the grid, the Author
recommends a detailed geophysical survey to cover the anomaly produced
from the current SGH survey.

Appendix I

SGH Report by Dale Sutherland – Actlabs

SGH – SOIL GAS HYDROCARBON
Predictive Geochemistry

for

TRUE NORTH MINERAL LABORATORIES

"THORNELOE PROJECT"

December 21, 2010

* Dale Sutherland, Activation Laboratories Ltd

(* - author, originator)

EVALUATION OF SGH "SOIL SAMPLE" DATA

EXPLORATION FOR: "*GOLD*"FORMATIONS

Workorder: A10-8843

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SOIL GAS HYDROCARBON (SGH) GEOCHEMISTRY – OVERVIEW

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. SGH has been successful for delineating targets found at over 500 metres in depth. Samples of various media have been successfully analyzed such as soil (any horizon), drill core, rock, peat, lake-bottom sediments and even snow. 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. SGH is also different from soil hydrocarbon tests that thermally extract or desorb all of the hydrocarbons from the whole soil sample. This test is less specific as it does not separate the hydrocarbons and thus does not identify or measure the responses as precisely. These tests also do not use a forensic approach to identification. The hydrocarbons in the SGH extract are separated by high resolution capillary column gas chromatography 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 in two Canadian Mining Industry Research Organization (CAMIRO) projects (97E04 and 01E02).

Over the past 14 years of research, Activation Laboratories Ltd. has developed an in-depth understanding of the unique SGH signatures associated with different commodity targets. Using a forensic approach we have developed target signatures or templates for identification, and the understanding of the expected geochromatography that is exhibited by each class of SGH compounds. In 2004 we began to include an SGH interpretation report delivered with the data to enable our clients to realize the complete value and understanding of the SGH results in the shortest time frame and provide the benefit from past research sponsored by Actlabs, CAMIRO, OMET and other projects.

SGH has attracted the attention of a large number of Exploration companies. In the above mentioned research projects the sponsors have included (in no order): Western Mining Corporation, BHP-Billiton, Inco, Noranda, Outokumpu, Xstrata, Cameco, Cominco, Rio Algom, Alberta Geological Survey, Ontario Geological Survey, Manitoba Geological Survey and OMET. Further, beyond this research, Activation Laboratories Ltd. has interpreted the SGH data for over 400 targets from clients since January of 2004. In both CAMIRO research projects over known mineralization and in exploration projects over unknown targets, SGH has performed exceptionally well. As an example, in the first CAMIRO research project that commenced in 1997 (Project 97E04), there were 10 study areas that were submitted blindly to Actlabs. These study sites were selected since other inorganic geochemistries were unsuccessful at illustrating anomalies related to the target.

SOIL GAS HYDROCARBONS (SGH) GEOCHEMISTRY – OVERVIEW

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. SGH has recently been very successful in exploration and discovery of unknown targets e.g. Golden Band Resources drilled an SGH anomaly and discovered a significant vein containing "visible" gold. (www.goldenbandresources.com)

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 <u>small</u> suspected targets (wet gas plays, Kimberlite pipes, Uranium Breccia pipes, veins, etc.). SGH is not interpreted in the same way as inorganic based geochemistries. 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 <u>evenly spaced</u> 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.

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SOIL GAS HYDROCARBONS (SGH) GEOCHEMISTRY – OVERVIEW

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

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 inorganic geochemistries from surveys over copper, gold, lead, nickel, etc. type targets.

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SOIL GAS HYDROCARBONS (SGH) GEOCHEMISTRY — OVERVIEW

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 RATING SYSTEM - DESCRIPTION

To date SGH has been found to be successful in the depiction of buried mineralization for Gold, Nickel, VMS, SEDEX, Uranium, Polymetallic, and Copper, as well as for Kimberlites. 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.

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SGH RATING SYSTEM - DESCRIPTION (continued)

- 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 <u>will automatically receive a lower rating no matter how impressive an SGH anomaly might be</u>. 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 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.

SGH RATING SYSTEM – HISTORY & UNDERSTANDING

The subjective SGH rating system has been used since 2004 when Activation Laboratories started providing an SGH Interpretation Report with ever submission for SGH analysis to aid our clients in understanding this organic geochemistry and ensuring that they obtain the best results for their surveys. As explained in the previous section, the SGH rating is not just a rating of how definitive an SGH anomaly is, and is not based just on the map(s) provided in this report. It is a rating of "confidence in the interpreted anomaly" from the combination of (i) are the expected SGH Pathfinder Classes of compounds present from the template for this target type (one Pathfinder Class map is shown in the report, at least three must be present to adequately describe the correct signature for a particular target), (ii) how well do these SGH Pathfinder Classes agree in describing an particular area, (iii) how well does this agreement compare to SGH case studies over known targets of that type, (iv) how well is the interpreted anomaly defined by the survey (i.e. a single

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SGH RATING SYSTEM – HISTORY & UNDERSTANDING (cont.)

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

SGH Ratings vs Number of Samples per Target for ≥ 50 Samples

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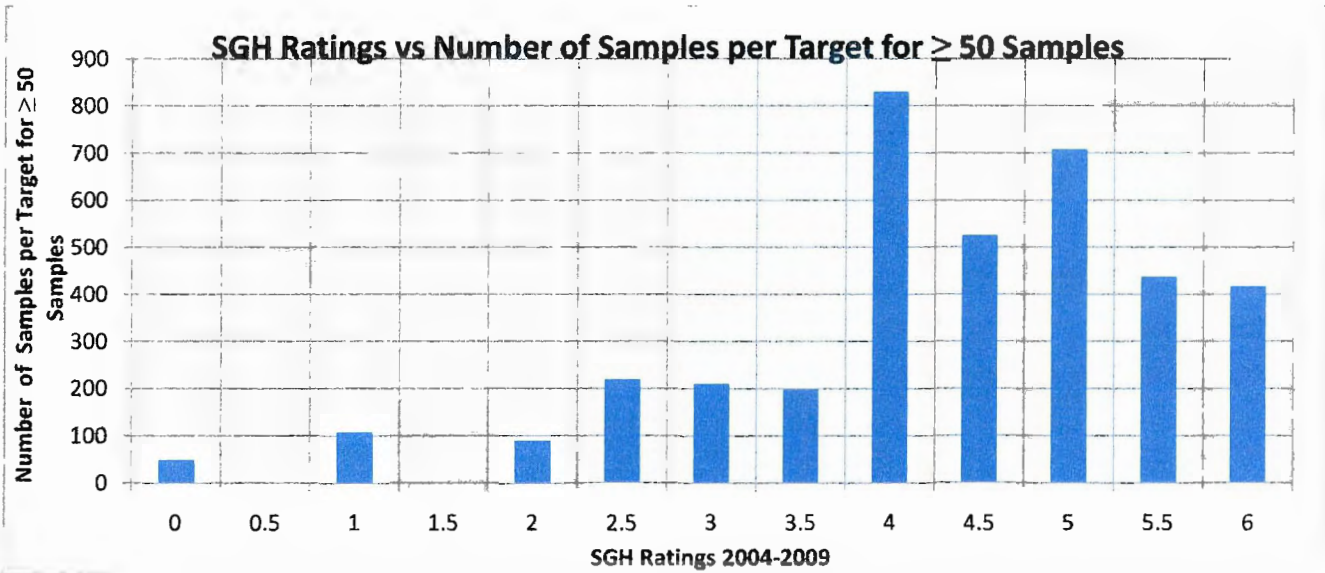
SGH RATING SYSTEM – HISTORY & UNDERSTANDING (cont.)

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 is submitted as indicated by the following chart. This chart also illustrates that there is no interpretation bias to a particular rating value.
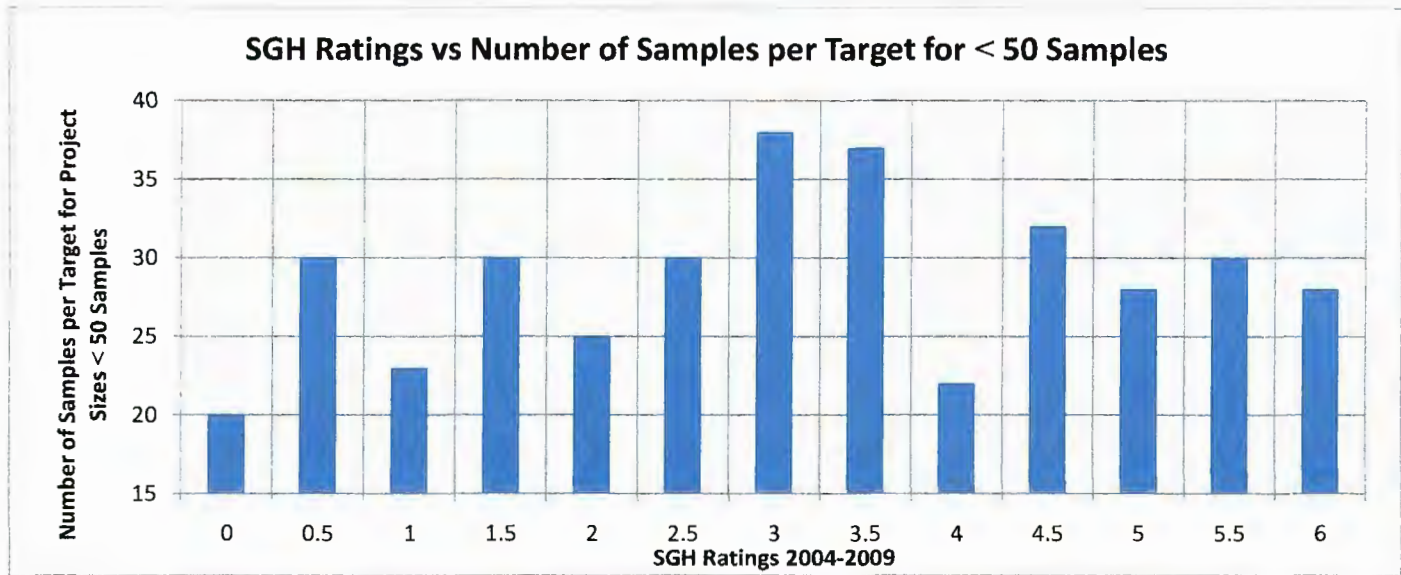
The overall rating frequency for over 400 targets from January 2004 to December 2009 is shown in the chart below illustrating that surveys over more promising targets are most often submitted for best use of research or exploration dollars. It also indicates that the 0.5 increments were less frequent as they started in 2007.

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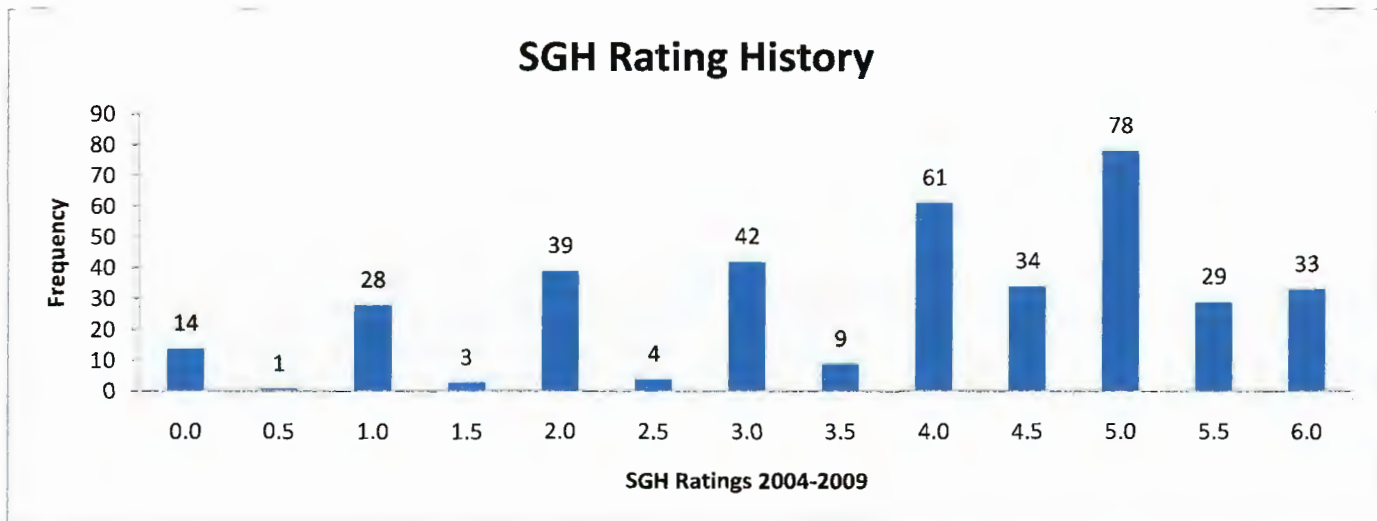
SGH RATING SYSTEM – HISTORY & UNDERSTANDING (cont.)

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.

Total Gold
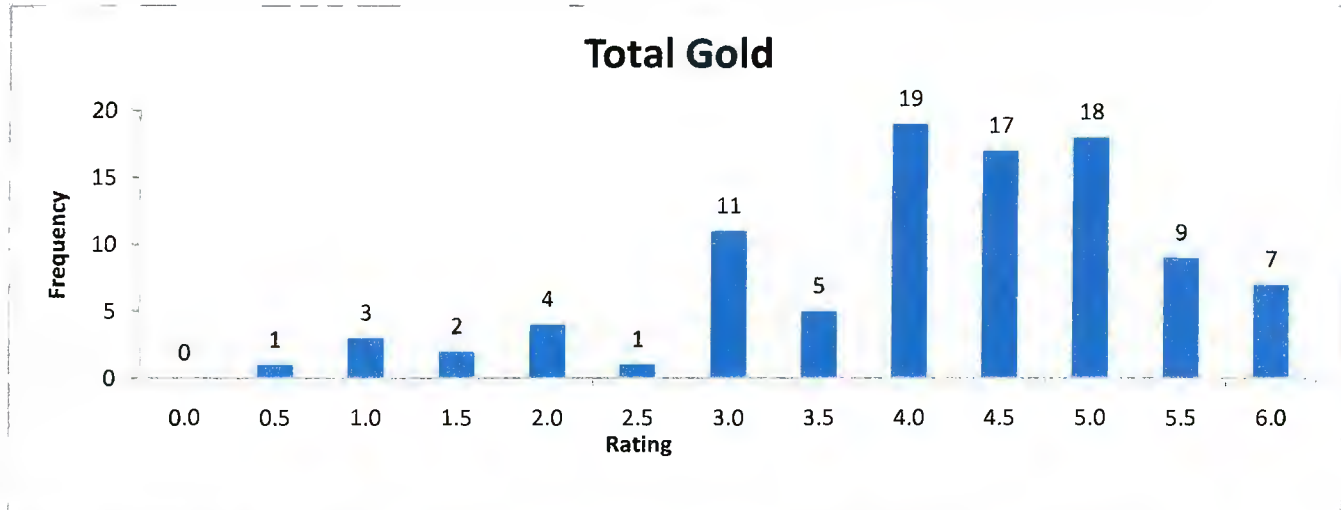
SGH DATA QUALITY

- **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

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SGH DATA QUALITY (continued)

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 <u>1 part-per-trillion</u>. Further, <u>SGH is a semi-quantitative technique</u> 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 %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 <u>**"fit for purpose"**</u> 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

SGH DATA QUALITY (continued)

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 has a range having 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 vigourous leaching of the laboratory materials which do not experience this buffering effect. Thus the level of the LMB-QA reported is 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

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SGH DATA QUALITY (continued)

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. <u>Thus all SGH values greater than or equal to 1 or 2 ppt should be used as reliable values for interpretations.</u>

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. <u>Do not subtract the LMB-QA values from SGH sample data.</u>

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. Nevertheless, peat samples have only required leveling in less than five surveys in the last 800 SGH project interpretations.

In only the last year it has been observed that SGH data may require leveling when different field sampling events have had significantly different soil temperatures. It has been documented that when "soil" samples are taken from "frozen" ground that data leveling may be required as the hydrocarbon flux is slowed and thus samples may collect a higher concentration of hydrocarbon compounds in these conditions.

Our standard approach to data adjustment to combine two data sets is to level the data using quartiles. In the process of leveling both data sets are reviewed in terms of maximum, minimum and average values for each SGH Pathfinder Class intended for use in the interpretation. Data in sectioned into quartiles and each section is assigned specific leveling factors that are applied to one of the data sets. It should be noted that any type of data leveling is an approximation. The author has taken introductory training in the leveling of geochemical data.

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SGH DATA 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 on page 10, 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. <u>To thus calculate an additional Threshold Value is a loss of real and valuable data</u>. 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 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. <u>Do not calculate another Threshold value</u>. <u>FACT:</u> It has been proven many times that important chemical anomalies can exist even at 5 ppt.

- ## SGH PATHFINDER CLASS MAGNITUDE:

  The magnitude of any individual concentration or that of a hydrocarbon class <u>does not imply</u> 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.

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SGH – FORENSIC GEOCHEMICAL SIGNATURES

- 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 Volcanic Massive Sulphide 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 top two profiles were obtained from two samples of the modern day "black smokers". The third and fourth chromatograms in the above image were obtained from the Pre-Cambrian Zn-Cu Kidd Creek and Mattabi deposits. 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.

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SGH – FORENSIC GEOCHEMICAL SIGNATURES (cont.)

The next question in our early objectives was to see if this SGH signature could also be observed in surficial soil samples that had been taken over VMS deposits. Through our research projects, soil samples were obtained from over the Ruttan Cu-Zn VMS deposit near Leaf Rapids, Manitoba and located in the Paleoproterozoic Rusty Lake greenstone belt. The profile obtained, as observed in the raw GC/MS chromatogram, is shown in this next image below:
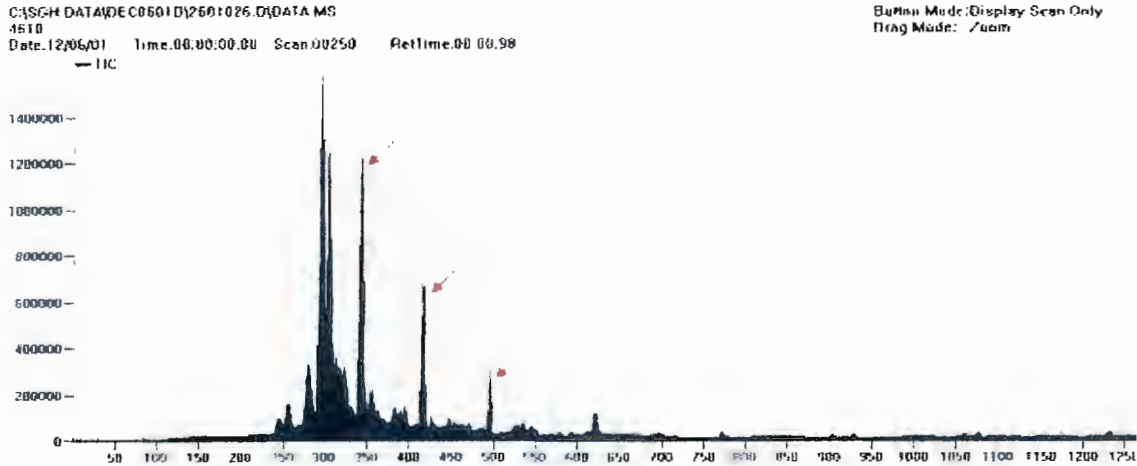
The three compounds indicated by the red arrows represent the same visible portion of the VMS signature observed from the modern day black smoker samples and the ore samples taken from the Mattabi and Kidd Creek, even though this soil was taken from over a different VMS deposit in a geographically different area. Is this coincidence? Another soil sample was obtained from Noranda's Gilmour South base-metal occurrence in the Bathurst Mining camp in northern New Brunswick. As shown below, this sample contained a very complex SGH signature, however the visible portion of the VMS signature as indicated by the red arrows is still observed as in the black smoker, Mattabi and Kidd Creek ore samples.

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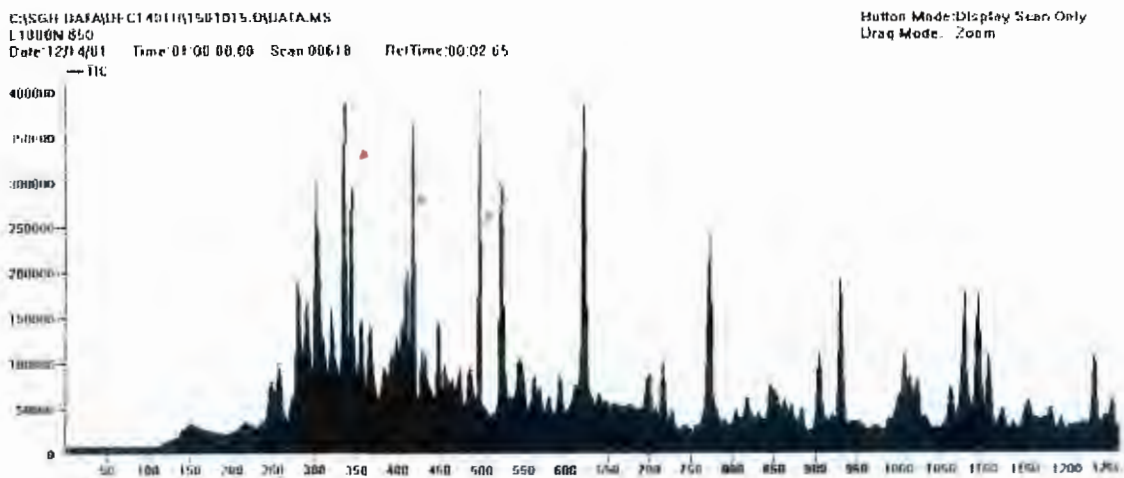
SGH – FORENSIC GEOCHEMICAL SIGNATURES (cont.)

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.

MGS - A03-1758 - Ruttan 550m level
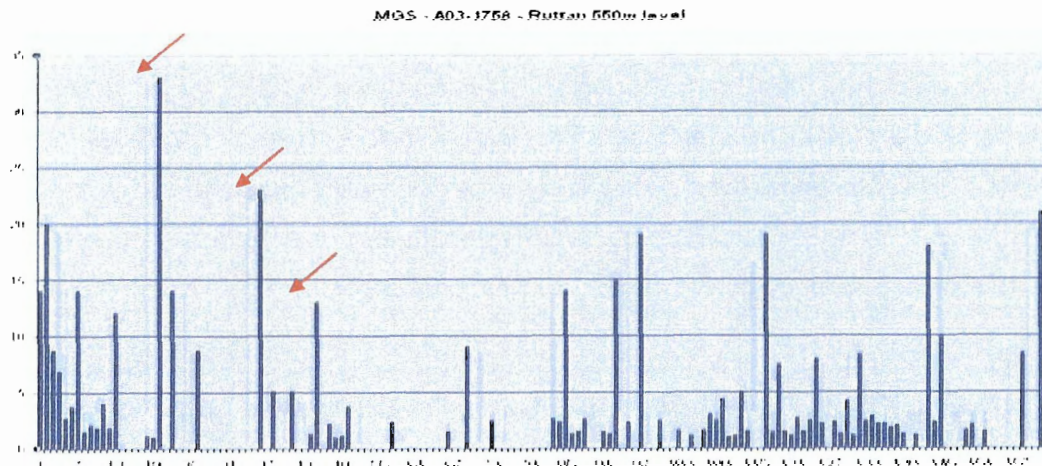
Through the work done in the SGH CAMIRO research projects, it was observed that the hydrocarbon signature produced by the SGH technique appeared to also be able to be used to differentiate barren from ore-bearing conductors. This was explored further through the submission and analysis of specific specimen samples that represented a barren pyritic conductor and a barren graphitic conductor.

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SGH – FORENSIC GEOCHEMICAL SIGNATURES (cont.)

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.

Pre-Cambrian -Zn-Cu Deposit "Kidd-Creek"

Barren Graphitic Conductor

Barren Pyritic Conductor

- 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 SGH Pathfinder Class map(s) shown in this report is usually the most diagnostic for the presence of Volcanic Massive Sulphide based mineralization.

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DISCLAIMER

This "SGH Interpretation Report" has been prepared to assist the user in understanding the development and capabilities of this Organic based Geochemistry. The interpretation of the Soil Gas Hydrocarbon (SGH) data is in reference to a template or group of SGH classes of compounds specific to a type of mineralization or target that is chosen by the client (i.e. the template for gold, copper, VMS, uranium, etc.). Although the template of SGH Pathfinder Classes that has been developed through research and review of case studies has proven to be able to address many lithologies, Activation Laboratories Ltd. cannot guarantee that the template is 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 and interpretation. 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 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 over 800 surveys, he is the best qualified to prepare this interpretation as assistance to clients who wish to use SGH. Also, any mention of a "drill target" is to help the reader focus on the specific anomaly or specific area of the survey where the SGH geochemical data vectors to, and implies, the best spatial location as a vertical projection over the centre of the mineralization if present. The author and/or Activation Laboratories has no professional expertise in drilling techniques to explore and drill any of the targets or anomalies mentioned. Activation Laboratories Ltd. can offer assistance in general suggestions for sampling protocols and in initial sample grid location 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, does 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 form using any information or material contained in this report.

INTERPRETION OF SGH RESULTS – A10-8843
TRUE NORTH MINERAL LABORATORIES – THORNELOE GRID SGH SURVEY

- This report is based on the SGH results from the analysis of a total of 71 samples from the Thorneloe Grid project area. The project area covered by these soil samples was defined by five parallel northwest trending transects approximately 100 metres apart. The spacing between samples was 25 metres as in the sample location map shown below provided by the client. UTM coordinates were provided for mapping of the SGH results.

- The number of samples submitted for this project is adequate to use SGH as an exploration tool. Note that the SGH data is only reviewed for the particular target deposit type requested, in this case for the presence of a Gold deposit. It is also assumed that there is only one potential target in the survey area. To obtain the best interpretation the client should indicate if there are possible multiple targets, say from geophysical data. The possibility of multiple targets should be known due to potential overlap and thus increased complexity of the resulting geochromatographic anomalies which could alter the interpretation.
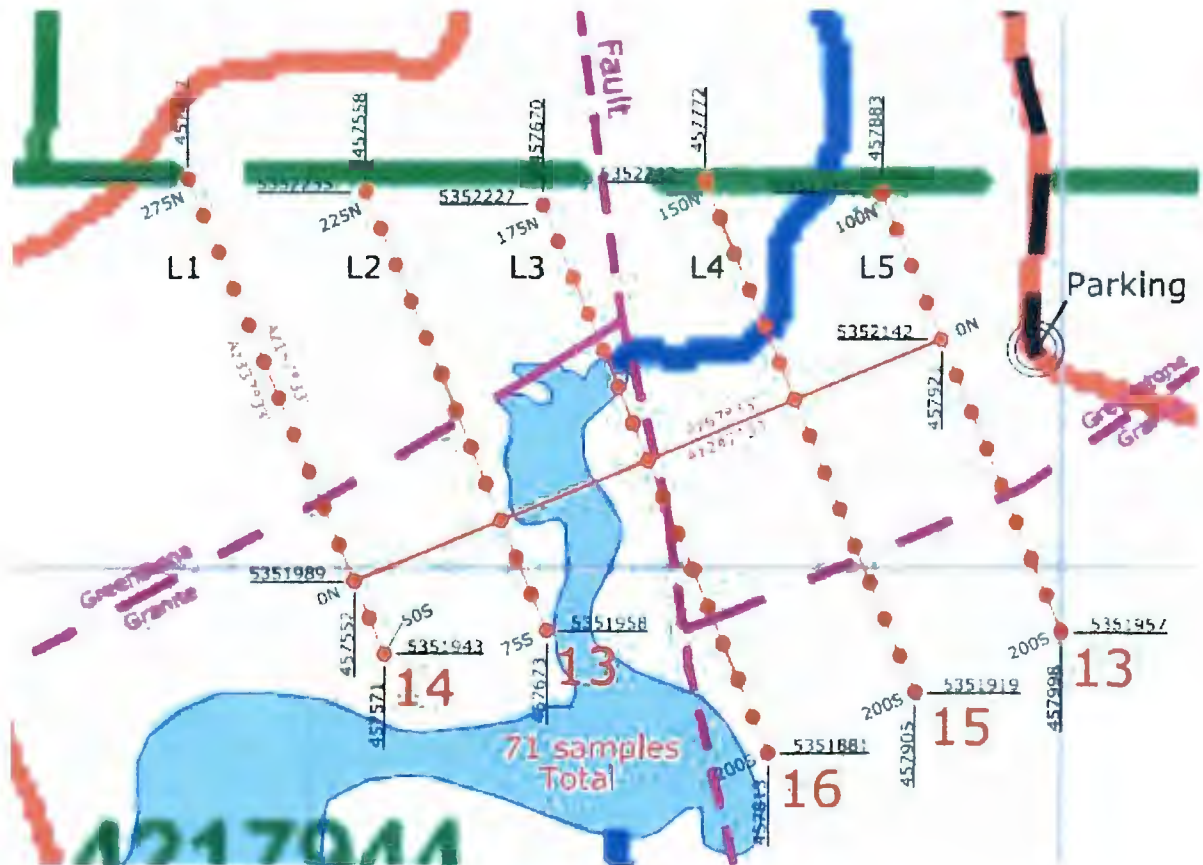
INTERPRETION OF SGH RESULTS – A10-8843
TRUE NORTH MINERAL LABORATORIES – THORNELOE GRID SGH SURVEY

- **The overall precision of the SGH analysis for this survey was excellent** as demonstrated by 5 different soil samples taken directly from this survey, each used for laboratory replicate analysis. The average Coefficient of Variation (%CV) of these replicate results for this project was 9.8 % which represents an excellent level of analytical performance especially at the low "parts-per-trillion (ppt)" concentrations measured.

- Note that the associated SGH results are presented in a separate Excel spreadsheet. This raw 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. It should be noted that the SGH technique has been successful at comparing and melding data over a period of years using the standard soil samples for which SGH was originally designed. Clients have taken large grids of orientation samples in one year and successfully added new data from infill samples in areas of interest in a subsequent year. Thus, although SGH is only semi-quantitative, it is effective enough that the data from several samplings and their analysis a year or more apart has been successful. Through the years of SGH research we have found that this geochemistry is not only applicable to soil samples but is robust and can be extended to a wide variety of sample types.

- This interpretation has been conducted without any additional knowledge about this survey except for sample coordinates. No other geochemical or geophysical information that the client may have was reviewed for these soil samples. The client should use a combination of these SGH results and its report with additional geochemical, geophysical, and geological information to possibly obtain a more confident and precise target location.

- 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. Thus "Apical", "Nested-Halo", and "Rabbit-Ear" or "Halo" type anomalies are all typically observed with SGH, even within the same set of SGH data, from the effect of REDOX cells that have developed in the overburden above mineralization. REDOX cell conditions have been shown to also be related to the presence of bacteriological activity.

- As SGH is an organic geochemistry it is "blind" to any concentration of inorganic elements in samples. SGH has been shown to not detect false or mobilized inorganic anomalies due to this fact. SGH is thus also able to depict the vertical projection of mineralization at depth.

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INTERPRETION OF SGH RESULTS – A10-8843
TRUE NORTH MINERAL LABORATORIES – THORNELOE GRID SGH SURVEY

- All of the maps shown in this report represent the SGH results as SGH "Pathfinder Class maps" for targeting Gold based mineralization. The colour contoured SGH Pathfinder Class Maps shown in this report represent the sum of the concentrations from the Excel spreadsheet of results of from 4 to 14 individual compounds unless otherwise specified. These compound grouping are from the same chemical "class" of hydrocarbons. The chemical characteristics and properties are very similar within a class and thus the dispersion or geochromatography of each compound within a class is similar. A legend of the compound classes appears at the bottom of the SGH data spreadsheet. The spatial dispersion between the various SGH Hydrocarbon "Classes" is expected to be different. The hot colours of purple and reds represent higher concentrations in parts-per-trillion (ppt) for the sum of the SGH hydrocarbon class mapped. Conversely the cooler greens and blue colours represent lower concentrations of the sum for that class. The data is mapped with only a Kriging trending algorithm set in the GeoSoft Oasis Montaj software. An "x" sign is used to identify a sample location. The top of the page is in the North direction unless otherwise.

- SGH Pathfinder Class maps have been shown to be robust as they are each described using from 4 to 14 (unless otherwise stated) chemically related SGH compounds which are simply summed to create each class map. Thus each map has a higher level of confidence as it is not illustrating just one compound response. A legend of the compound classes appears at the bottom of the SGH data spreadsheet.

- The <u>overall</u> SGH interpretation Rating has even a higher level of confidence as it further relies on the consensus between at least two additional pathfinder classes that together make the signature of the target at depth.

- The plan and 3D view maps on pages 24 and 25 were developed from the raw SGH concentration data also provided in an Excel spreadsheet. These maps illustrate the most important SGH pathfinder class signatures specific for a Gold target on page 24 and a confirmatory map on page 27. The Gold template was developed using SGH data from study sites over a Gold deposit in Nunavut, shear hosted as well as sediment hosted deposits in Nevada, Paleochannel Gold mineralization in Western Australia and others. This general template for Gold has worked very well in very diverse geological and geographical areas. The template is then slightly more finely focused for the results observed specific to this project area. The data is mapped with a Kriging trending algorithm set in the GeoSoft Oasis Montaj software in the creation of the maps on pages 24 and 25.

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INTERPRETION OF SGH RESULTS – A10-8843
TRUE NORTH MINERAL LABORATORIES – THORNELOE GRID SGH SURVEY

- It was requested by the client to interpret the SGH data for the presence of gold mineralization at the Thorneloe Grid. We examined the data for consensus between each of the SGH pathfinder classes which will confirm the presence of a blind target often associated with REDOX cells. SGH class maps are robust as they are the summation of from 4 to 14 chemically related SGH compounds. <u>Thus each map is not relying on just one compound response.</u> The SGH interpretation obtains further confidence from the agreement between at least three of the pathfinder classes.

SGH SURVEY INTERPRETATION FOR GOLD – THORNELOE GRID SURVEY

- The Gold template of SGH Pathfinder Classes uses a variety of low and medium weight groups as classes of hydrocarbon compounds. At least three Pathfinder Class maps associated with the SGH signature for Gold must be present to begin to be considered for assignment of a good rating. The standard deliverable for reporting SGH data is the reporting of one SGH Pathfinder Class map to represent the mineralization to keep the SGH price as reasonable as possible. The Pathfinder Class anomalies must also concur and support a consistent interpretation, in relation to the expected geochromatographic characteristics of the Pathfinder Class, for a specific area. This general Gold template has been shown to be applicable to epithermal, porphyry, vein hosted, RIRGD, and other types of gold deposits. The SGH results shown on page 24 is the primary pathfinder class map expected for a gold deposit.

- The anomalies for the SGH Pathfinder Classes on page 24 are expected to be apical over Gold deposition relative to other Pathfinder Classes. At Thorneloe this does not seem to be the case. All SGH Pathfinder Class maps for Gold illustrate the presence of a large REDOX cell. This is shown very well by the nested halo anomaly shown by the medium molecular weight supporting SGH Pathfinder Class for Gold on page 25. The dashed black oval represents the outer boundary of REDOX conditions in the overburden often created by mineralized targets at depth. The small dotted black oval is the nested apical anomaly pinpointing the centre of the REDOX cell. The map on page 25 mimics this pattern instead of showing a large apical anomaly in the centre of the REDOX cell usually seen over Gold mineralization. This does not conclusively mean that Gold mineralization is not present. As this signature does not follow the typical results for Gold the confidence in the results is less, which is reflected by a lower rating. However, an alternate interpretation may be that other sulphide based mineralization may be present, as the existence of a REDOX cell is undeniable, or that Gold mineralization is present but may be very deep perhaps in comparison to other Gold mineralization in the region.

INTERPRETION OF SGH RESULTS – A10-8843
TRUE NORTH MINERAL LABORATORIES – THORNELOE GRID SGH SURVEY

SGH "GOLD" PATHFINDER CLASS MAP
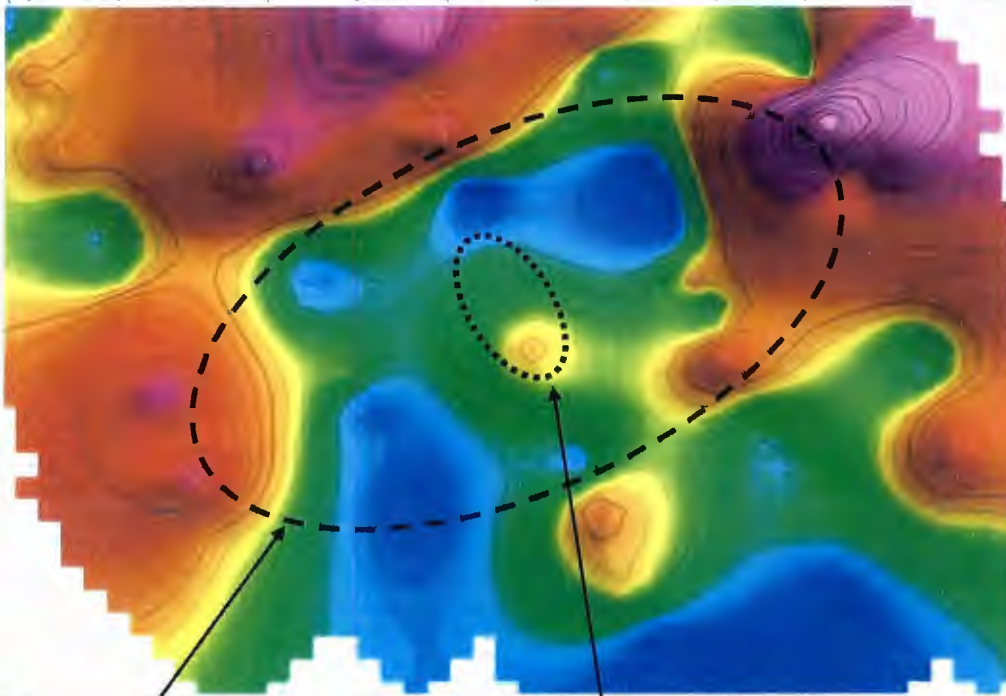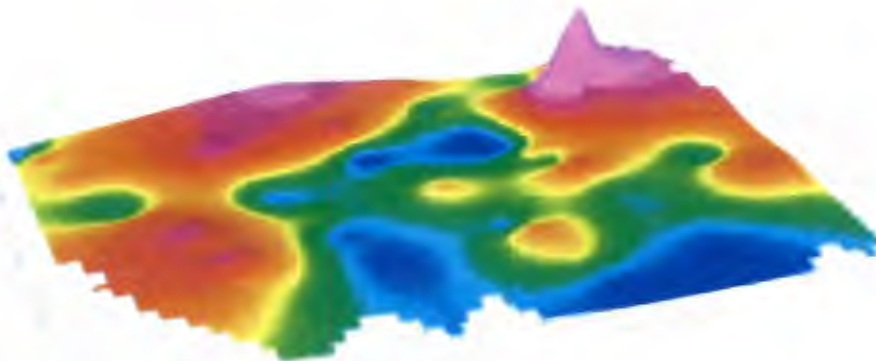
REDOX CELL BOUNDARY   NESTED APICAL ANOMALY

GEOSOFT

INTERPRETION OF SGH RESULTS – A10-8843
TRUE NORTH MINERAL LABORATORIES – THORNELOE GRID SGH SURVEY
SGH "GOLD" CONFIRMATORY PATHFINDER CLASS MAP
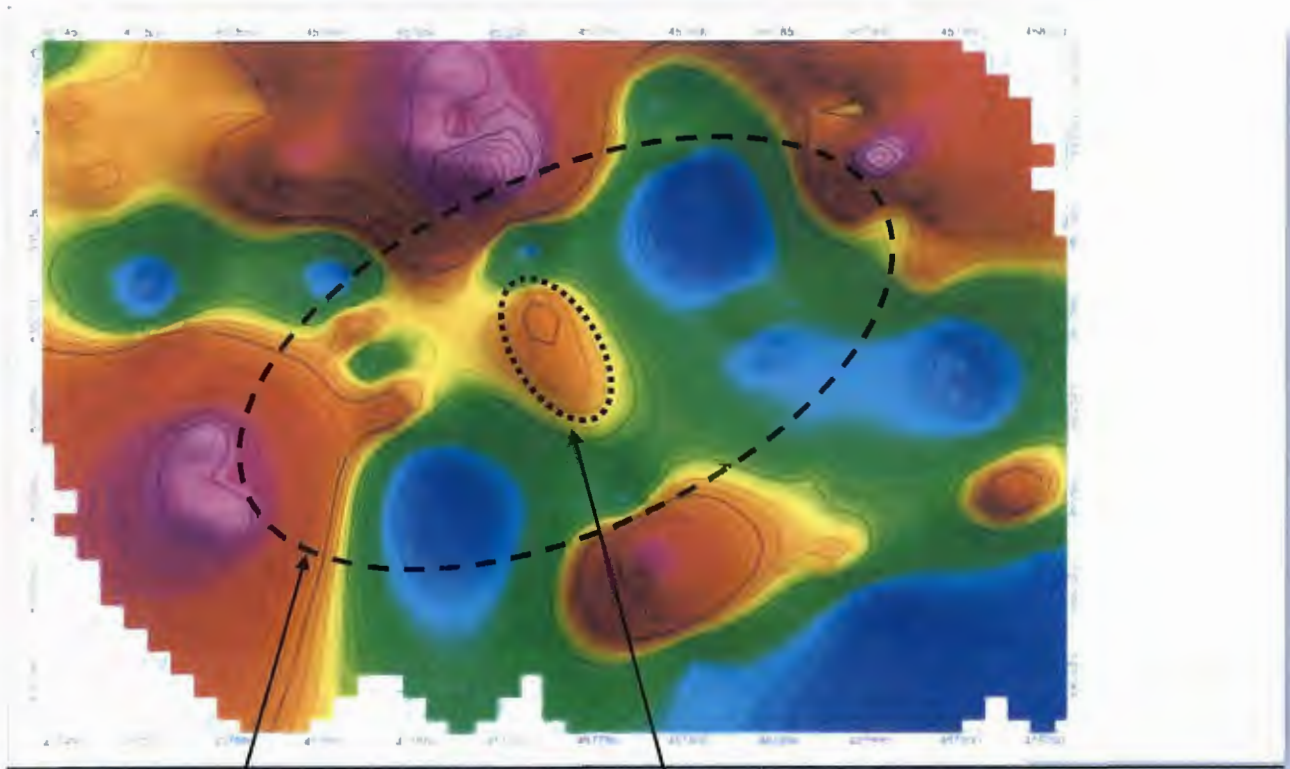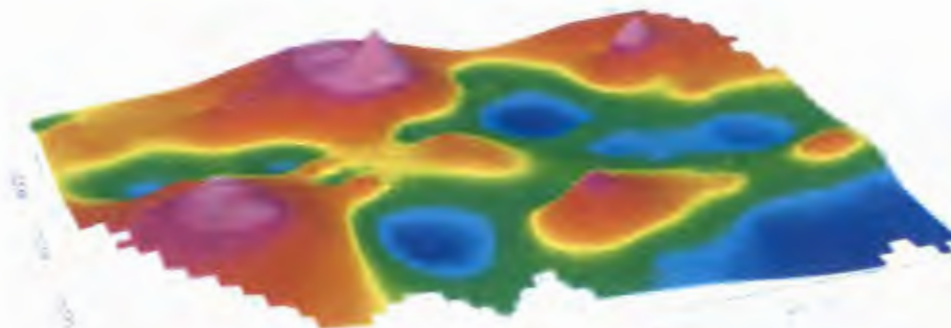
REDOX CELL BOUNDARY   NESTED APICAL ANOMALY

INTERPRETION OF SGH RESULTS – A10-8843
TRUE NORTH MINERAL LABORATORIES – THORNELOE GRID SGH SURVEY

SGH SURVEY INTERPRETATION RATING FOR GOLD – THORNELOE GRID SURVEY

- After review of all of the SGH Pathfinder Class maps, the SGH results from these samples suggest a **"rating of 3.0"** for the anomalous areas within the small black dotted oval on pages 24 and 25 at the Thorneloe Grid in relation to the presence of a Gold based target. This rating is based on a scale of 6.0, in increments of 0.5, with a value of 6.0 being the best. The rating represents the similarity of these SGH results, and the developed SGH Pathfinder Class maps, primarily to case studies for vein hosted Gold in Nunavut, Northern Saskatchewan, and the interior of British Columbia; shear hosted as well as sediment hosted deposits in Nevada; and Paleochannel Gold deposits in Australia. The degree of confidence in the rating only starts to be "good" at a level of 4.0.

- This Rating has been reduced by a value of 3.0 as the primary SGH Pathfinder Class for Gold does not follow the expected signature. The presence of a REDOX cell is very well supported.

- Drill targets have not been specified due to the lower rating, however if other geochemical or geophysical information imply that drill testing is warranted, the SGH results illustrate that the strongest location of the REDOX cell, often the best vertical projection of the target is at the central nested apical anomaly within the dotted black oval. The identification of a drill target is not an explicit recommendation to drill test the associated SGH anomaly. A drill target is indicated to ensure that the reader is aware of the location having the highest confidence of being the centre of the vertical projection of the position of the target. We believe that, as a vertical projection, it is the location of the highest confidence in intersecting the target mineralization. This location is identified only through the use of SGH data. Other geological, geochemical and/or geophysical information should always be considered. 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.

- Note we do not currently have sufficient research to comment further on the predicted depth to the deposit at latitudes lower than 60°. We also cannot comment on the expected grade of a deposit if present.

- SGH results have also been shown to correlate well with geophysical anomalies such as magnetic anomalies and those of CSAMT.

- The client should use a combination of these SGH results and its report with additional geochemical, geophysical, and geological information to possibly obtain more confident and precise target locations.

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INTERPRETION OF SGH RESULTS – A10-8843
TRUE NORTH MINERAL LABORATORIES – THORNELOE GRID SGH SURVEY

SGH SURVEY – RECOMMENDATIONS – THORNELOE GRID PROJECT

• An interpretation against the SGH VMS or Nickel templates may yield additional information relative to the source target responsible for creating the REDOX cell. The grid design appears to be very good for the study of this area. Additional in-fill sampling is not recommended as additional resolution is not expected to provide any more information. If any additional samples are considered it should be to make the grid bigger. Please see the section below for recommendations for taking additional samples.

IN-FILL SAMPLING RECOMMENDATIONS FOR SGH ANALYSIS

• Based on the results of this report and/or other information, the client may decide that infill sampling may be warranted. To obtain the best results from additional sampling for SGH it is recommended that some sample locations from this current survey that are within, or bordering, the area of interest be re-sampled for reference rather than combining just new samples 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, or if the survey is located north of a latitude of 60°. The process of data leveling adds a minimum of 3 to 5 days of work to conduct the additional data evaluation, develop additional plots of the results, conduct new interpretations, and in additional report descriptions. Results from data leveling is also always considered "an approximation" thus having a lower level of confidence that newly re-sampled locations would have. As of September 2010, 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. In summary, re-sampling a few locations will provide better data leveling and potentially a faster turnaround time for results. These re-sampled reference points will provide more accurate and confident surveys for evaluation, improve the SGH Rating, and aid in deciding specific drill targets.

December 21, 2010   **Activation Laboratories Ltd.**   Page 27 of 29
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E-mail: dalesutherland@actlabsint.com • Web Site: www.actlabs.com

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Cautionary Note Regarding Assumptions and Forward Looking Statements

The statements and target rating made in the Soil Gas Hydrocarbon (SGH) interpretive report or in other communications may contain certain forward-looking information related to 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 other geochemistries, 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 geochemistries, the implied rating and anticipated target characteristics may be different than that actually encountered if the target is drilled or the property developed.

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

Unless stated, Activation Laboratories Ltd. has not physically observed the exploration site and has no prior knowledge of any site description or details. 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, season, 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. Although the Company 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 not to be as 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".

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

Date Submitted: November 26, 2010

Date Analyzed: November 1-9, 2010

Interpretation Report: December 21, 2010

TRUE NORTH MINERAL LABORATORIES

190 Quartz Ave.
Timmins, Ontario
Canada

Attention: Mr. Kevin Cool

RE: Your Reference: Thorneloe Property

CERTIFICATE OF ANALYSIS

71 Samples were submitted for SGH analysis and an interpretation relative to Gold and VMS mineralization.

The following sample preparation was completed: Code S4 – Drying at 40°C, Sieving -60 mesh

The following analytical package was requested: Code SGH – Soil Gas Hydrocarbon Geochemistry

REPORT/WORKORDER: A10-8843

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 organic geochemistry. He is a Chartered Chemist (C.Chem.) and Forensic Scientist specializing in organic chemistry. He is not a professional geologist or geochemist.

CERTIFIED BY:

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

December 21, 2010   **Activation Laboratories Ltd.**   Page 29 of 29
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Appendix II

Raw Data for 71 SGH Samples - Actlabs

True North Minerals
Kevin Cool
-1=Reporting Limit of 1pg/g (ppt=parts per trillion)

SOIL GAS HYDROCARBONS
(SGH) by GC/MS
THORNELOE PROPERTY PROJECT SITE

Activation Laboratories Ltd.
Date: December 10, 2010
R=Replicate Sample

	001 - LA	002 - LA	003 - LB	004 - LA	005 - LB	006 - LB	007 - LA	008 - LB	009 - LB	010 - LB	011 - LA	012 - LB	013 - LBA	014 - LB
L1-50S	6	66	23	23	17	20	7	14	1	2	6	-1	-1	2
L1-25S	24	70	29	24	18	23	8	18	2	2	-1	-1	3	2
L1-0	32	79	55	28	37	49	13	37	3	4	-1	1	7	3
L1-25N	24	73	33	24	24	25	8	24	2	3	-1	-1	2	-1
L1-50N	33	74	59	28	33	38	12	45	3	5	-1	2	7	-1
L1-50N-R	31	75	53	28	40	48	14	44	4	5	-1	1	5	-1
L1-75N	28	87	36	27	25	31	9	28	2	3	2	1	3	3
L1-100N	5	68	37	24	27	34	11	27	2	3	-1	1	4	-1
L1-125N	17	43	27	11	10	13	3	5	-1	-1	-1	-1	-1	-1
L1-150N	3	51	19	15	8	9	5	5	-1	-1	-1	-1	-1	-1
L1-175N	22	71	27	14	10	12	5	22	1	2	-1	-1	2	1
L1-200N	6	78	31	21	23	25	10	24	2	2	-1	-1	4	-1
L1-225N	25	85	21	20	14	16	9	18	1	3	-1	-1	3	-1
L1-250N	19	79	31	18	20	23	9	22	2	3	-1	-1	4	2
L1-275N	9	46	11	2	8	10	2	3	-1	1	2	-1	1	-1
L2-75S	29	58	13	16	3	3	5	2	-1	-1	-1	-1	1	-1
L2-50S	25	55	13	15	2	3	4	-1	-1	-1	-1	-1	-1	-1
L2-25S	15	45	19	8	6	7	4	2	-1	-1	-1	-1	-1	1
L2-0	12	34	10	3	4	4	4	4	-1	-1	-1	-1	-1	1
L2-25N	21	59	25	15	11	15	4	14	3	-1	-1	-1	3	2
L2-50N	6	63	25	15	15	18	6	13	-1	1	2	-1	-1	1
L2-50N-R	17	44	15	8	7	8	5	6	-1	-1	-1	-1	-1	-1
L2-75N	13	37	10	8	4	5	5	6	-1	-1	-1	-1	1	2
L2-100N	21	56	22	16	10	12	7	8	-1	-1	1	-1	2	-1
L2-125N	15	67	29	21	22	26	8	26	2	3	3	-1	2	4
L2-150N	19	81	96	28	28	32	13	41	3	4	4	3	4	3
L2-175N	17	73	42	25	23	29	14	35	3	4	3	3	5	3
L2-200N	21	73	38	22	26	31	11	30	2	3	3	3	4	3
L2-225N	22	103	40	29	25	32	11	27	2	3	9	-1	2	5
L3-200S	13	3	8	4	2	2	1	1	-1	-1	-1	-1	-1	-1
L3-175S	16	43	16	7	5	6	4	3	-1	-1	-1	-1	-1	-1
L3-150S	18	75	26	23	17	19	8	15	1	1	6	-1	2	4
L3-125S	19	63	25	21	18	22	6	14	-1	1	8	-1	2	4
L3-100S	19	71	30	32	21	27	12	20	2	3	2	-1	3	4
L3-75S	21	58	15	15	5	5	5	5	-1	-1	2	-1	1	-1
L3-50S	17	57	19	21	11	13	6	11	-1	1	9	-1	2	1
L3-25S	26	67	20	20	13	16	9	13	-1	1	2	-1	1	1
L3-25S-R	20	70	26	23	16	20	10	15	1	2	2	-1	2	4
L3-0	22	57	22	21	16	21	10	19	2	2	3	-1	2	6
L3-25N	22	70	16	23	8	10	10	13	-1	2	14	-1	2	5
L3-50N	22	48	19	17	10	13	7	11	-1	1	8	-1	-1	3
L3-75N	20	48	11	11	2	3	4	4	-1	-1	2	-1	1	-1
L3-100N	20	47	12	11	3	4	4	4	-1	-1	-1	-1	-1	-1
L3-125N	34	62	44	36	33	40	17	44	3	4	6	1	6	5
L3-150N	26	81	29	30	21	25	9	23	2	2	10	-1	2	2
L3-175N	30	86	59	40	46	60	15	44	3	5	4	1	3	6
L4-200S	25	56	10	13	2	2	5	5	-1	-1	-1	-1	1	-1
L4-175S	32	73	16	14	5	6	7	6	-1	-1	-1	-1	-1	-1
L4-150S	18	64	13	7	10	12	8	13	2	1	2	-1	2	-1
L4-125S	21	66	15	24	8	10	7	8	-1	-1	7	-1	1	-1
L4-100S	20	58	15	24	7	10	7	9	-1	-1	2	-1	1	2
L4-75S	26	70	30	18	12	15	7	12	-1	1	-1	-1	1	1
L4-50S	30	79	52	26	27	35	16	31	2	3	-1	-1	2	7
L4-50S-R	30	70	46	22	23	32	14	28	2	3	-1	-1	4	3

	001 - LA	002 - LA	003 - LB	004 - LA	005 - LB	006 - LB	007 - LA	008 - LB	009 - LB	010 - LB	011 - LA	012 - LB	013 - LBA	014 - LB
L4-25S	21	56	15	20	8	10	17	9	-1	-1	4	-1	3	2
L4-0	27	74	29	23	18	23	15	21	1	2	9	-1	3	2
L4-25N	17	46	12	11	3	4	5	3	-1	-1	1	-1	1	-1
L4-50N	14	37	10	10	3	3	5	1	-1	-1	2	-1	-1	-1
L4-75N	16	41	13	12	4	5	7	5	-1	-1	-1	-1	-1	1
L4-100N	23	59	26	26	15	21	8	15	-1	2	5	-1	1	3
L4-125N	19	59	17	18	-1	8	6	2	-1	1	6	-1	2	-1
L4-150N	28	94	34	27	21	31	14	30	2	4	-1	-1	5	8
L5-200S	22	50	28	14	12	16	6	11	-1	1	3	-1	-1	3
L5-175S	21	58	25	17	19	24	10	17	-1	2	4	-1	2	3
L5-150S	24	67	34	20	21	31	18	30	2	3	-1	1	6	6
L5-125S	26	75	40	21	21	24	10	20	2	3	-1	-1	2	4
L5-100S	19	50	18	13	8	9	5	5	-1	-1	2	-1	-1	-1
L5-75S	22	59	24	17	15	16	7	10	-1	1	3	-1	-1	-1
L5-50S	24	70	30	21	22	30	10	16	1	2	4	-1	2	2
L5-50S-R	23	73	32	20	22	29	10	18	1	2	8	-1	1	3
L5-25S	30	95	41	28	30	36	16	25	2	3	-1	-1	5	3
L5-0	36	73	53	25	30	35	19	33	3	4	-1	-1	4	4
L5-25N	26	70	40	23	26	34	11	19	1	2	7	-1	2	4
L5-50N	25	79	58	23	25	34	12	108	35	40	6	2	17	103
L5-75N	17	49	19	12	8	11	7	11	-1	1	8	-1	2	3
L5-100N	9	12	16	10	10	13	7	10	-1	1	3	-1	4	2
LMB-QA	11	28	7	2	-1	-1	1	-1	-1	-1	-1	-1	-1	-1
LMB-QA	3	35	2	5	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
LMB-QA	9	38	6	1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1

SOIL GAS HYDROCARBONS (SGH) by GC/MS

A10-8843 - Date: December 9, 2010 - Activation Laboratories Ltd.
Results represent only the material tested. Actlabs is not liable for any claim/damage from use of this report in excess of the test cost. Unless requested samples are discarded in 90 days.
This report is only to be reproduced in full.

True North Minerals - Kevin Cool
Thorneloe Property Project Site

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

LEGEND FOR COLUMN HEADINGS - SGH COMPOUND CLASSES

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

True North Minerals
Kevin Cool
-1=Reporting Limit of 1pg/g (ppt=parts per trillion)

SOIL GAS HYDROCARBONS
(SGH) by GC/MS
THORNELOE PROPERTY PROJECT SITE

Activation Laboratories Ltd.
Date: December 10, 2010
R=Replicate Sample

	015 - LAR	016 - LB	017 - LB	018 - LB	019 - LB	020 - LA	021 - LPH	022 - LBA	023 - LAR	024 - LB	025 - LAR	026 - LBA	027 - LB	028 - ALK
L1-50S	-1	1	2	2	1	5	-1	1	-1	-1	-1	3	-1	2
L1-25S	-1	1	2	2	1	7	-1	2	-1	-1	-1	8	1	2
L1-0	-1	3	3	4	1	7	-1	4	-1	-1	-1	7	1	2
L1-25N	-1	2	3	3	2	6	-1	1	-1	-1	-1	4	-1	2
L1-50N	1	4	4	4	3	9	-1	4	-1	-1	-1	7	2	3
L1-50N-R	-1	3	3	4	2	6	-1	3	-1	-1	-1	6	2	3
L1-75N	-1	2	3	3	2	4	-1	2	-1	-1	-1	5	2	2
L1-100N	-1	2	3	3	2	6	-1	4	-1	-1	-1	5	1	2
L1-125N	-1	-1	-1	-1	-1	2	-1	-1	-1	-1	-1	-1	-1	-1
L1-150N	-1	-1	-1	-1	-1	2	-1	-1	-1	-1	-1	4	-1	-1
L1-175N	-1	1	2	2	1	3	-1	1	-1	-1	-1	3	-1	1
L1-200N	-1	2	2	2	2	7	-1	2	-1	-1	-1	4	1	2
L1-225N	-1	2	2	2	2	7	-1	2	-1	-1	-1	3	1	2
L1-250N	-1	2	2	2	2	5	-1	2	-1	-1	-1	4	1	2
L1-275N	-1	-1	1	1	-1	1	-1	-1	-1	-1	-1	1	-1	1
L2-75S	-1	-1	-1	-1	-1	2	-1	1	-1	-1	-1	2	-1	-1
L2-50S	-1	-1	-1	-1	-1	1	-1	-1	-1	-1	-1	1	-1	-1
L2-25S	-1	-1	-1	-1	-1	1	-1	-1	-1	-1	-1	-1	-1	-1
L2-0	-1	-1	-1	-1	-1	1	-1	-1	-1	-1	-1	-1	-1	-1
L2-25N	-1	2	1	2	1	3	-1	2	-1	-1	-1	2	1	2
L2-50N	-1	1	1	2	1	4	-1	-1	-1	-1	-1	2	-1	1
L2-50N-R	-1	-1	1	1	-1	1	-1	-1	-1	-1	-1	-1	-1	1
L2-75N	-1	-1	1	1	-1	5	-1	4	-1	-1	-1	2	1	2
L2-100N	-1	-1	-1	-1	-1	2	-1	1	-1	-1	-1	1	-1	-1
L2-125N	-1	2	3	3	2	7	-1	1	-1	-1	-1	3	2	3
L2-150N	1	4	3	4	2	7	-1	2	1	-1	-1	3	4	3
L2-175N	-1	3	4	4	2	8	-1	3	1	-1	-1	4	5	3
L2-200N	-1	3	3	3	2	5	-1	2	-1	-1	-1	2	3	2
L2-225N	-1	2	3	3	2	7	-1	-1	-1	-1	-1	3	2	2
L3-200S	-1	-1	-1	-1	-1	1	-1	-1	-1	-1	-1	-1	-1	-1
L3-175S	-1	-1	-1	-1	-1	1	-1	-1	-1	-1	-1	1	1	-1
L3-150S	-1	1	2	2	1	6	-1	1	-1	-1	-1	3	2	2
L3-125S	-1	1	2	2	1	6	-1	1	-1	-1	-1	4	2	3
L3-100S	-1	2	3	3	2	12	-1	2	-1	-1	-1	5	2	3
L3-75S	-1	-1	-1	-1	-1	3	-1	-1	-1	-1	-1	2	-1	1
L3-50S	-1	1	1	2	-1	7	-1	-1	-1	-1	-1	2	-1	1
L3-25S	-1	1	2	2	-1	6	-1	1	-1	-1	-1	3	1	2
L3-25S-R	-1	1	2	2	1	9	-1	2	-1	-1	-1	4	1	2
L3-0	-1	2	2	2	2	7	-1	2	-1	-1	-1	4	2	2
L3-25N	-1	1	2	2	1	9	-1	1	-1	-1	-1	3	2	2
L3-50N	-1	1	2	2	-1	6	-1	7	-1	-1	-1	3	2	2
L3-75N	-1	-1	-1	-1	-1	1	-1	-1	-1	-1	-1	1	-1	-1
L3-100N	-1	-1	-1	-1	-1	2	-1	-1	-1	-1	-1	3	1	1
L3-125N	1	5	5	6	4	13	-1	4	1	-1	-1	9	4	5
L3-150N	-1	2	3	3	2	7	-1	2	-1	-1	-1	4	2	3
L3-175N	-1	5	5	6	4	14	-1	3	-1	-1	-1	6	3	4
L4-200S	-1	-1	-1	-1	-1	1	-1	-1	-1	-1	-1	1	-1	-1
L4-175S	-1	-1	-1	-1	-1	3	-1	1	-1	-1	-1	2	-1	-1
L4-150S	-1	2	3	2	-1	7	-1	2	-1	-1	-1	3	-1	2
L4-125S	-1	-1	-1	-1	-1	7	-1	7	-1	-1	-1	2	-1	2
L4-100S	-1	1	2	-1	-1	6	-1	1	-1	-1	-1	2	-1	2
L4-75S	-1	-1	-1	1	-1	3	-1	1	-1	-1	-1	2	1	1
L4-50S	-1	4	2	3	2	6	-1	3	-1	-1	-1	6	2	2
L4-50S-R	-1	2	2	3	2	6	-1	2	-1	-1	-1	4	2	2

A10-8843

True North Minerals
Kevin Cool
-1=Reporting Limit of 1pg/g (ppt=parts per trillion)

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	015 - LAR	016 - LB	017 - LB	018 - LB	019 - LB	020 - LA	021 - LPH	022 - LBA	023 - LAR	024 - LB	025 - LAR	026 - LBA	027 - LB	028 - ALK
L4-25S	-1	-1	-1	-1	-1	11	-1	10	-1	-1	-1	4	-1	1
L4-0	-1	2	2	2	1	9	-1	2	-1	-1	-1	3	1	2
L4-25N	-1	-1	-1	-1	-1	1	-1	1	-1	-1	-1	-1	-1	-1
L4-50N	-1	-1	-1	-1	-1	1	-1	1	-1	-1	-1	-1	-1	-1
L4-75N	-1	-1	-1	-1	-1	2	-1	2	-1	-1	-1	-1	-1	-1
L4-100N	-1	1	2	2	1	4	-1	5	-1	-1	-1	2	-1	1
L4-125N	-1	-1	-1	-1	-1	4	-1	-1	-1	-1	-1	-1	-1	1
L4-150N	-1	3	3	3	2	14	-1	2	-1	-1	-1	5	2	2
L5-200S	-1	-1	1	1	-1	2	-1	-1	-1	-1	-1	2	1	-1
L5-175S	-1	1	2	2	1	6	-1	-1	-1	-1	-1	2	1	1
L5-150S	1	2	3	3	3	11	-1	3	-1	-1	-1	7	3	3
L5-125S	-1	1	2	2	1	4	-1	1	-1	-1	-1	2	2	2
L5-100S	-1	-1	-1	-1	-1	2	-1	-1	-1	-1	-1	1	-1	-1
L5-75S	-1	-1	1	1	-1	2	-1	-1	-1	-1	-1	1	-1	1
L5-50S	-1	1	1	2	1	5	-1	-1	-1	-1	-1	2	1	1
L5-50S-R	-1	2	2	2	2	6	-1	-1	-1	-1	-1	3	1	1
L5-25S	-1	4	2	3	2	13	-1	2	-1	-1	-1	5	2	2
L5-0	1	5	3	3	2	7	-1	3	-1	-1	-1	3	2	2
L5-25N	-1	2	2	2	1	5	-1	5	-1	-1	-1	-1	1	1
L5-50N	1	105	67	85	82	6	-1	-1	10	-1	5	2	57	8
L5-75N	-1	-1	1	1	-1	6	-1	-1	-1	-1	-1	2	1	1
L5-100N	-1	1	2	2	1	2	-1	1	-1	-1	-1	2	2	2
LMB-QA	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
LMB-QA	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
LMB-QA	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1

SOIL GAS HYDROCARBONS
(SGH) by GC/MS
THORNELOE PROPERTY PROJECT SITE

	029-HB	030-HB	031-HB	032-HB	033-HB	034-HB	035-LAR	036-LBA	037-HB	038-LBA	039-LAR	040-LPB	041-LBA	042-LPB
L1-50S	-1	1	-1	-1	-1	-1	-1	3	-1	5	-1	-1	4	-1
L1-25S	-1	1	-1	-1	-1	-1	-1	6	1	3	-1	-1	6	-1
L1-0	-1	2	-1	1	1	1	-1	6	-1	5	-1	-1	10	1
L1-25N	1	1	-1	1	-1	-1	-1	4	-1	7	-1	-1	6	1
L1-50N	-1	2	-1	2	2	1	-1	6	-1	6	-1	-1	9	2
L1-50N-R	-1	2	-1	2	2	1	-1	5	-1	6	-1	-1	9	2
L1-75N	1	2	1	1	-1	1	-1	3	1	3	-1	-1	5	1
L1-100N	-1	1	1	1	1	1	-1	3	-1	5	-1	-1	8	1
L1-125N	-1	-1	-1	-1	-1	-1	-1	1	-1	1	-1	-1	2	-1
L1-150N	-1	-1	-1	-1	-1	-1	-1	2	-1	2	-1	-1	3	-1
L1-175N	-1	-1	-1	-1	-1	-1	-1	3	-1	2	-1	-1	4	-1
L1-200N	-1	-1	1	-1	1	-1	-1	3	-1	4	-1	-1	7	1
L1-225N	-1	-1	1	-1	-1	-1	-1	3	-1	2	-1	-1	5	1
L1-250N	-1	1	1	1	1	1	-1	3	-1	4	-1	-1	7	1
L1-275N	-1	-1	-1	-1	-1	-1	-1	-1	-1	1	-1	-1	1	-1
L2-75S	-1	-1	-1	-1	-1	-1	-1	2	-1	2	-1	-1	4	-1
L2-50S	-1	-1	-1	-1	-1	-1	-1	2	-1	3	-1	-1	2	-1
L2-25S	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	1	-1
L2-0	-1	-1	-1	-1	-1	-1	-1	1	-1	-1	-1	-1	1	-1
L2-25N	-1	1	1	-1	-1	-1	-1	2	-1	2	-1	-1	1	-1
L2-50N	-1	1	1	-1	-1	-1	-1	1	-1	2	-1	-1	3	-1
L2-50N-R	-1	-1	1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
L2-75N	-1	-1	1	-1	-1	-1	-1	3	1	2	-1	-1	3	-1
L2-100N	-1	-1	-1	-1	-1	-1	-1	1	-1	1	-1	-1	2	-1
L2-125N	1	1	2	-1	-1	1	-1	1	1	2	-1	-1	3	1
L2-150N	2	2	3	-1	-1	1	-1	4	2	3	-1	-1	4	1
L2-175N	3	2	3	-1	-1	-1	-1	3	3	5	-1	-1	6	1
L2-200N	2	1	2	-1	-1	-1	-1	2	2	2	-1	-1	3	-1
L2-225N	1	1	-1	-1	-1	-1	-1	2	1	3	-1	-1	-1	1
L3-200S	-1	-1	-1	-1	-1	-1	-1	-1	-1	2	-1	-1	2	-1
L3-175S	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
L3-150S	-1	-1	1	-1	-1	-1	-1	2	2	3	-1	-1	3	-1
L3-125S	1	1	1	-1	-1	1	-1	3	2	4	-1	-1	6	-1
L3-100S	-1	1	1	-1	-1	1	-1	5	2	6	-1	-1	9	1
L3-75S	-1	-1	-1	-1	-1	-1	-1	-1	-1	2	-1	-1	3	-1
L3-50S	-1	-1	-1	-1	-1	-1	-1	3	1	3	-1	-1	4	-1
L3-25S	-1	-1	-1	-1	-1	-1	-1	2	1	2	-1	-1	3	-1
L3-25S-R	-1	-1	1	-1	-1	-1	-1	3	1	4	-1	-1	5	-1
L3-0	-1	1	1	-1	-1	-1	-1	2	2	3	-1	-1	5	-1
L3-25N	-1	-1	1	-1	-1	-1	-1	3	1	2	-1	-1	2	-1
L3-50N	-1	-1	1	-1	-1	-1	-1	3	2	3	-1	-1	3	-1
L3-75N	-1	-1	-1	-1	-1	-1	-1	1	-1	-1	-1	-1	-1	-1
L3-100N	1	-1	1	-1	-1	-1	-1	2	-1	1	-1	-1	2	-1
L3-125N	1	2	1	-1	-1	2	-1	9	3	8	-1	-1	10	1
L3-150N	1	1	1	-1	-1	1	-1	5	1	3	-1	-1	3	1
L3-175N	-1	2	-1	-1	-1	2	-1	7	2	6	-1	-1	7	2
L4-200S	-1	-1	-1	-1	-1	-1	-1	1	-1	1	-1	-1	2	-1
L4-175S	-1	-1	-1	-1	-1	-1	-1	3	-1	3	-1	-1	4	-1
L4-150S	-1	-1	-1	-1	-1	-1	-1	3	-1	3	-1	-1	4	-1
L4-125S	-1	-1	-1	-1	-1	-1	-1	3	-1	2	-1	-1	5	-1
L4-100S	-1	-1	-1	-1	-1	-1	-1	3	-1	3	-1	-1	4	-1
L4-75S	-1	-1	-1	-1	-1	-1	-1	3	-1	3	-1	-1	4	-1
L4-50S	1	1	2	-1	-1	-1	-1	4	2	4	-1	-1	5	1
L4-50S-R	-1	1	2	-1	-1	-1	-1	3	1	4	-1	-1	6	-1

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SOIL GAS HYDROCARBONS
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Activation Laboratories Ltd.
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	029 - HB	030 - HB	031 - HB	032 - HB	033 - HB	034 - HB	035 - LAR	036 - LBA	037 - HB	038 - LBA	039 - LAR	040 - LPB	041 - LBA	042 - LPB
L4-25S	-1	-1	-1	-1	-1	-1	-1	4	-1	6	-1	-1	6	-1
L4-0	-1	1	-1	-1	-1	-1	-1	4	-1	4	-1	-1	7	-1
L4-25N	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
L4-50N	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
L4-75N	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
L4-100N	-1	1	-1	-1	-1	-1	-1	2	-1	2	-1	-1	2	-1
L4-125N	-1	-1	-1	-1	-1	-1	-1	2	-1	2	-1	-1	3	-1
L4-150N	1	1	1	-1	-1	-1	-1	4	2	3	-1	-1	8	1
L5-200S	-1	-1	-1	-1	-1	-1	-1	2	-1	3	-1	-1	2	-1
L5-175S	-1	1	1	-1	-1	-1	-1	2	-1	2	-1	-1	3	-1
L5-150S	2	2	2	-1	-1	-1	-1	6	2	4	-1	-1	11	1
L5-125S	1	1	2	-1	-1	-1	-1	3	1	2	-1	-1	4	-1
L5-100S	-1	-1	-1	-1	-1	-1	-1	1	-1	-1	-1	-1	-1	-1
L5-75S	-1	-1	-1	-1	-1	-1	-1	2	-1	1	-1	-1	2	-1
L5-50S	-1	-1	-1	-1	-1	-1	-1	2	1	2	-1	-1	3	-1
L5-50S-R	-1	1	-1	1	-1	-1	-1	3	1	5	-1	-1	4	-1
L5-25S	1	1	2	-1	-1	-1	-1	5	2	10	-1	-1	9	-1
L5-0	1	1	2	-1	-1	-1	-1	6	2	10	-1	-1	9	1
L5-25N	-1	1	-1	-1	-1	-1	-1	3	1	3	-1	-1	5	-1
L5-50N	17	-1	11	-1	-1	-1	-1	-1	-1	5	1	-1	5	2
L5-75N	-1	-1	-1	-1	-1	-1	-1	2	-1	4	-1	-1	4	-1
L5-100N	-1	-1	-1	-1	-1	-1	-1	2	1	2	-1	-1	3	-1
LMB-QA	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
LMB-QA	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
LMB-QA	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1

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Activation Laboratories Ltd.
Date: December 10, 2010
R=Replicate Sample

	043 - HB	044 - HB	045 - LA	046 - LPH	047 - LBA	048 - HB	049 - HB	050 - LBA	051 - LBI	052 - LPB	053 - LPB	054 - HB	055 - LPB	056 - LBI
L1-50S	-1	-1	13	-1	3	-1	-1	2	-1	-1	-1	-1	-1	-1
L1-25S	-1	-1	15	-1	4	-1	-1	3	-1	-1	-1	-1	-1	-1
L1-0	-1	-1	13	-1	4	-1	-1	4	-1	-1	1	-1	-1	-1
L1-25N	-1	-1	15	-1	3	-1	-1	3	-1	-1	1	-1	-1	-1
L1-50N	-1	-1	16	-1	4	1	1	4	-1	-1	2	-1	-1	-1
L1-50N-R	-1	-1	14	-1	4	1	1	4	-1	-1	2	-1	-1	-1
L1-75N	-1	-1	8	-1	2	1	1	2	-1	-1	1	-1	-1	-1
L1-100N	-1	-1	15	-1	4	-1	-1	3	-1	-1	1	-1	-1	-1
L1-125N	-1	-1	3	-1	1	-1	-1	-1	-1	-1	-1	-1	-1	-1
L1-150N	-1	-1	4	-1	1	-1	-1	1	-1	-1	-1	-1	-1	-1
L1-175N	-1	-1	7	-1	2	-1	-1	2	-1	-1	-1	-1	-1	-1
L1-200N	-1	-1	12	-1	3	-1	-1	3	-1	-1	1	-1	-1	-1
L1-225N	-1	-1	13	-1	3	-1	-1	2	-1	-1	-1	-1	-1	-1
L1-250N	-1	-1	9	-1	3	1	1	3	-1	-1	1	1	-1	-1
L1-275N	-1	-1	4	-1	1	-1	-1	1	-1	-1	-1	-1	-1	-1
L2-75S	-1	-1	5	-1	2	-1	-1	2	-1	-1	-1	-1	-1	-1
L2-50S	-1	-1	3	-1	1	-1	-1	1	-1	-1	-1	-1	-1	-1
L2-25S	-1	-1	3	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
L2-0	-1	-1	3	-1	1	-1	-1	1	-1	-1	-1	-1	-1	-1
L2-25N	-1	-1	7	-1	4	-1	-1	2	-1	-1	-1	-1	-1	-1
L2-50N	-1	-1	10	-1	1	-1	-1	2	-1	-1	-1	-1	-1	-1
L2-50N-R	-1	-1	5	-1	-1	-1	-1	1	-1	-1	-1	-1	-1	-1
L2-75N	-1	-1	18	-1	3	-1	-1	2	-1	-1	-1	-1	-1	-1
L2-100N	-1	-1	4	-1	1	-1	-1	1	-1	-1	-1	-1	-1	-1
L2-125N	-1	-1	15	-1	-1	1	1	2	-1	-1	1	1	-1	-1
L2-150N	-1	-1	16	-1	2	1	1	3	-1	-1	1	-1	-1	-1
L2-175N	-1	-1	22	-1	6	2	2	5	-1	-1	1	2	-1	-1
L2-200N	-1	-1	12	-1	3	1	1	3	-1	-1	1	1	-1	-1
L2-225N	-1	-1	18	-1	3	1	1	2	-1	-1	1	1	-1	-1
L3-200S	-1	-1	2	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
L3-175S	-1	-1	2	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
L3-150S	-1	-1	15	-1	3	1	1	3	-1	-1	1	-1	-1	-1
L3-125S	-1	-1	19	-1	4	1	1	3	-1	-1	1	-1	-1	-1
L3-100S	-1	-1	39	-1	6	2	1	5	-1	-1	1	1	-1	-1
L3-75S	-1	-1	8	-1	2	-1	-1	1	-1	-1	-1	-1	-1	-1
L3-50S	-1	-1	21	-1	3	-1	-1	2	-1	-1	-1	-1	-1	-1
L3-25S	-1	-1	14	-1	3	-1	-1	2	-1	-1	-1	-1	-1	-1
L3-25S-R	-1	-1	26	-1	4	1	1	3	-1	-1	1	-1	-1	-1
L3-0	-1	-1	13	-1	3	1	1	3	-1	-1	1	-1	-1	-1
L3-25N	-1	-1	23	-1	3	1	1	3	-1	-1	1	-1	-1	-1
L3-50N	-1	-1	16	-1	3	-1	-1	3	-1	-1	-1	-1	-1	-1
L3-75N	-1	-1	2	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
L3-100N	-1	-1	5	-1	2	-1	-1	2	-1	-1	-1	-1	-1	-1
L3-125N	-1	-1	32	-1	7	2	2	7	-1	-1	1	2	-1	-1
L3-150N	-1	-1	17	-1	3	1	1	3	-1	-1	1	-1	-1	-1
L3-175N	-1	-1	32	-1	6	2	2	5	-1	-1	2	2	-1	-1
L4-200S	-1	-1	3	-1	1	-1	-1	1	-1	-1	-1	-1	-1	-1
L4-175S	-1	-1	6	-1	2	-1	-1	2	-1	-1	-1	-1	-1	-1
L4-150S	-1	-1	20	-1	4	-1	-1	3	-1	-1	-1	-1	-1	-1
L4-125S	-1	-1	22	-1	3	-1	-1	2	-1	-1	-1	-1	-1	-1
L4-100S	-1	-1	16	-1	3	-1	-1	2	-1	-1	-1	-1	-1	-1
L4-75S	-1	-1	8	-1	1	-1	-1	2	-1	-1	-1	-1	-1	-1
L4-50S	-1	-1	12	-1	2	1	1	3	-1	-1	1	-1	-1	-1
L4-50S-R	-1	-1	9	-1	3	1	1	2	-1	-1	1	-1	-1	-1

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	043 - HB	044 - HB	045 - LA	046 - LPH	047 - LBA	048 - HB	049 -HB	050 - LBA	051 - LBI	052 - LPB	053 - LPB	054 - HB	055 - LPB	056 - LBI
L4-25S	-1	-1	23	-1	4	-1	-1	3	-1	-1	-1	-1	-1	-1
L4-0	-1	-1	23	-1	4	-1	-1	3	-1	-1	-1	-1	-1	-1
L4-25N	-1	-1	2	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
L4-50N	-1	-1	2	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
L4-75N	-1	-1	3	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
L4-100N	-1	-1	7	-1	2	-1	-1	2	-1	-1	-1	-1	-1	-1
L4-125N	-1	-1	13	-1	3	-1	-1	2	-1	-1	-1	-1	-1	-1
L4-150N	-1	-1	21	-1	5	2	2	3	-1	-1	1	2	-1	-1
L5-200S	-1	-1	3	-1	1	-1	-1	1	-1	-1	-1	-1	-1	-1
L5-175S	-1	-1	13	-1	3	-1	-1	2	-1	-1	-1	-1	-1	-1
L5-150S	-1	-1	22	-1	2	1	1	4	-1	-1	1	-1	-1	-1
L5-125S	-1	-1	6	-1	1	-1	-1	2	-1	-1	-1	-1	-1	-1
L5-100S	-1	-1	5	-1	1	-1	-1	1	-1	-1	-1	-1	-1	-1
L5-75S	-1	-1	4	-1	-1	-1	-1	1	-1	-1	-1	-1	-1	-1
L5-50S	-1	-1	7	-1	2	-1	-1	1	-1	-1	-1	-1	-1	-1
L5-50S-R	-1	-1	10	-1	3	-1	-1	2	-1	-1	-1	-1	-1	-1
L5-25S	-1	-1	22	-1	3	1	1	4	-1	-1	-1	1	-1	-1
L5-0	-1	-1	12	-1	4	1	1	3	-1	-1	1	1	-1	-1
L5-25N	-1	-1	11	-1	2	-1	-1	2	-1	-1	-1	-1	-1	-1
L5-50N	-1	-1	16	-1	3	7	7	4	-1	-1	1	10	-1	-1
L5-75N	-1	-1	16	-1	3	-1	-1	2	-1	-1	-1	-1	-1	-1
L5-100N	-1	-1	9	-1	3	1	1	2	-1	-1	-1	1	-1	-1
LMB-QA	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
LMB-QA	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
LMB-QA	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1

True North Minerals
Kevin Cool
-1=Reporting Limit of 1pg/g (ppt=parts per trillion)

SOIL GAS HYDROCARBONS
(SGH) by GC/MS
THORNELOE PROPERTY PROJECT SITE

Activation Laboratories Ltd.
Date: December 10, 2010
R=Replicate Sample

	057 - ALK	058 - LPB	059 - LPB	060 - LPH	061 - LBI	062 - LBA	063 - LPH	064 - LBA	065 - HPB	066 - LBA	067 - LBI	068 - HPB	069 - LA	070 - HPB
L1-50S	-1	-1	-1	-1	-1	4	3	5	1	2	-1	-1	25	3
L1-25S	-1	-1	-1	-1	1	5	3	8	-1	4	1	1	28	4
L1-0	-1	1	-1	-1	1	6	5	7	-1	11	1	2	18	5
L1-25N	-1	1	-1	-1	1	4	4	5	-1	7	-1	2	36	5
L1-50N	-1	1	1	-1	1	6	5	11	1	8	1	2	26	6
L1-50N-R	-1	1	-1	-1	1	6	5	10	1	8	1	2	23	5
L1-75N	-1	-1	-1	-1	-1	3	3	8	1	3	-1	1	13	3
L1-100N	-1	1	1	-1	1	5	3	6	-1	5	1	1	34	3
L1-125N	-1	-1	-1	-1	-1	2	-1	2	-1	1	-1	-1	6	-1
L1-150N	-1	-1	-1	-1	-1	2	-1	2	-1	-1	-1	-1	4	-1
L1-175N	-1	-1	-1	-1	-1	3	1	3	-1	2	-1	-1	17	2
L1-200N	-1	1	-1	-1	-1	5	2	5	-1	5	-1	1	27	3
L1-225N	-1	-1	-1	-1	-1	4	2	4	-1	-1	-1	1	35	3
L1-250N	-1	1	1	-1	-1	4	3	4	-1	6	-1	-1	15	3
L1-275N	-1	-1	-1	-1	-1	2	2	3	-1	3	-1	-1	9	3
L2-75S	-1	-1	-1	-1	-1	3	-1	3	-1	3	-1	-1	5	-1
L2-50S	-1	-1	-1	-1	-1	2	-1	2	-1	2	-1	-1	3	-1
L2-25S	-1	-1	-1	-1	-1	2	-1	2	-1	1	-1	-1	6	-1
L2-0	-1	-1	-1	-1	-1	2	1	2	-1	3	-1	-1	3	-1
L2-25N	-1	-1	-1	-1	-1	3	2	3	-1	5	-1	-1	13	2
L2-50N	-1	-1	-1	-1	-1	4	2	3	-1	4	-1	-1	31	2
L2-50N-R	-1	-1	-1	-1	-1	2	1	2	-1	1	-1	-1	21	2
L2-75N	-1	-1	-1	-1	1	5	2	5	-1	7	1	1	30	3
L2-100N	-1	-1	-1	-1	-1	2	1	2	-1	3	-1	-1	8	-1
L2-125N	-1	-1	1	-1	-1	4	4	4	-1	6	-1	1	27	3
L2-150N	-1	1	-1	-1	1	6	5	6	-1	8	1	1	25	4
L2-175N	-1	1	-1	-1	2	9	6	9	-1	10	2	2	43	5
L2-200N	-1	-1	-1	-1	1	5	3	5	1	4	-1	1	21	3
L2-225N	-1	-1	1	-1	-1	4	4	5	1	5	1	1	36	4
L3-200S	-1	-1	-1	-1	-1	1	-1	1	-1	2	-1	-1	4	-1
L3-175S	-1	-1	-1	-1	-1	2	-1	2	-1	2	-1	-1	4	-1
L3-150S	-1	-1	-1	-1	-1	5	4	5	1	5	-1	-1	31	3
L3-125S	-1	-1	-1	-1	1	5	4	6	-1	7	-1	-1	34	3
63-100S	-1	-1	1	-1	1	9	5	10	-1	11	1	1	63	4
L3-75S	-1	-1	-1	-1	-1	3	-1	3	-1	4	-1	-1	24	-1
L3-50S	-1	-1	-1	-1	-1	4	2	5	-1	5	-1	-1	38	2
L3-25S	-1	-1	-1	-1	-1	4	1	4	-1	6	-1	-1	25	2
L3-25S-R	-1	-1	-1	-1	1	6	2	6	-1	8	1	-1	54	2
L3-0	-1	-1	-1	-1	-1	4	3	4	-1	7	-1	-1	24	2
L3-25N	-1	-1	-1	-1	-1	5	3	5	-1	3	-1	-1	35	2
L3-50N	-1	-1	-1	-1	-1	4	3	4	1	3	-1	-1	27	3
L3-75N	-1	-1	-1	-1	-1	2	-1	2	-1	2	-1	-1	2	-1
L3-100N	-1	-1	-1	-1	-1	3	-1	3	-1	3	-1	-1	9	-1
L3-125N	-1	1	2	-1	2	12	10	14	1	13	2	2	47	6
L3-150N	-1	-1	1	-1	-1	5	5	5	-1	3	-1	1	29	3
L3-175N	-1	1	2	-1	1	8	9	8	-1	7	1	2	47	6
L4-200S	-1	-1	-1	-1	-1	2	-1	2	-1	2	-1	-1	4	-1
L4-175S	-1	-1	-1	-1	-1	3	-1	3	-1	-1	-1	-1	9	-1
L4-150S	-1	-1	-1	-1	-1	6	2	7	-1	4	1	-1	37	2
L4-125S	-1	-1	-1	-1	-1	4	1	4	-1	5	-1	-1	55	1
L4-100S	-1	-1	-1	-1	-1	4	1	5	-1	3	-1	-1	44	1
L4-75S	-1	-1	-1	-1	-1	3	1	3	-1	5	-1	-1	21	1
L4-50S	-1	-1	-1	-1	1	5	2	5	-1	5	1	1	25	2
L4-50S-R	-1	-1	-1	-1	-1	4	2	4	-1	5	-1	-1	18	2

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SOIL GAS HYDROCARBONS
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	057 - ALK	058 - LPB	059 - LPB	060 - LPH	061 - LBI	062 - LBA	063 - LPH	064 - LBA	065 - HPB	066 - LBA	067 - LBI	068 - HPB	069 - LA	070 - HPB
L4-25S	-1	-1	-1	-1	-1	5	-1	5	-1	6	-1	-1	52	1
L4-0	-1	-1	-1	-1	1	5	2	6	-1	8	1	-1	44	2
L4-25N	-1	-1	-1	-1	-1	1	-1	1	-1	-1	-1	-1	3	-1
L4-50N	-1	-1	-1	-1	-1	1	-1	1	-1	2	-1	-1	3	-1
L4-75N	-1	-1	-1	-1	-1	2	-1	2	-1	-1	-1	-1	5	-1
L4-100N	-1	-1	-1	-1	-1	3	2	3	-1	4	-1	-1	14	2
L4-125N	-1	-1	-1	-1	-1	4	-1	4	-1	5	-1	-1	49	1
L4-150N	-1	-1	-1	-1	1	6	3	6	-1	8	1	1	53	3
L5-200S	-1	-1	-1	-1	-1	2	-1	2	-1	1	-1	-1	6	-1
L5-175S	-1	-1	-1	-1	-1	3	2	3	-1	4	-1	-1	32	2
L5-150S	-1	-1	-1	-1	2	8	2	8	-1	2	2	1	52	3
L5-125S	-1	-1	-1	-1	-1	3	2	3	-1	-1	-1	-1	12	2
L5-100S	-1	-1	-1	-1	-1	2	-1	2	-1	2	-1	-1	13	-1
L5-75S	-1	-1	-1	-1	-1	2	1	2	-1	-1	-1	-1	11	1
L5-50S	-1	-1	-1	-1	-1	2	1	2	-1	3	-1	-1	15	1
L5-50S-R	-1	-1	-1	-1	-1	3	2	3	-1	4	-1	-1	22	2
L5-25S	-1	-1	-1	-1	1	7	2	6	-1	6	1	-1	48	3
L5-0	-1	-1	-1	-1	1	5	2	5	-1	4	-1	-1	14	2
L5-25N	-1	-1	-1	-1	-1	4	2	4	-1	5	-1	-1	15	2
L5-50N	1	1	1	-1	1	8	5	8	-1	6	2	2	29	4
L5-75N	-1	-1	-1	-1	-1	4	1	4	-1	6	-1	-1	28	2
L5-100N	-1	-1	-1	-1	-1	4	4	4	-1	6	-1	-1	33	3
LMB-QA	-1	-1	-1	-1	-1	1	-1	1	-1	1	-1	-1	2	-1
LMB-QA	-1	-1	-1	-1	-1	1	-1	1	-1	1	-1	-1	1	-1
LMB-QA	-1	-1	-1	-1	-1	1	-1	1	-1	1	-1	-1	1	-1

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SOIL GAS HYDROCARBONS
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Activation Laboratories Ltd.
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	071 - HPB	072 - HPB	073 - HBA	074 - HBA	075 - HPB	076 - LPH	077 - MAR	078 - ALK	079 - LBI	080 - LPH	081 - MAR	082 - LPH	083 - HBA	084 - HBA
L1-50S	3	3	4	4	-1	-1	-1	2	-1	1	3	1	8	1
L1-25S	4	4	3	3	2	1	1	2	-1	1	4	2	11	2
L1-0	5	5	6	7	-1	2	2	2	-1	2	4	2	13	2
L1-25N	5	5	5	5	-1	1	1	2	-1	2	4	2	11	2
L1-50N	6	5	7	8	-1	1	2	2	-1	2	5	2	14	3
L1-50N-R	6	5	6	7	1	-1	2	2	-1	2	4	2	11	2
L1-75N	4	3	3	4	1	-1	1	1	-1	1	3	2	8	2
L1-100N	4	3	7	8	-1	1	1	1	-1	1	3	2	14	2
L1-125N	-1	-1	2	2	-1	-1	-1	-1	-1	-1	-1	-1	3	-1
L1-150N	1	-1	2	2	-1	-1	-1	-1	-1	-1	1	-1	2	-1
L1-175N	2	2	4	5	1	-1	-1	-1	-1	-1	2	1	2	-1
L1-200N	3	3	6	7	-1	1	1	2	-1	1	3	2	13	2
L1-225N	3	3	5	5	1	-1	-1	1	-1	1	2	1	11	1
L1-250N	3	2	5	5	-1	-1	-1	2	-1	1	3	1	10	1
L1-275N	3	2	3	3	-1	-1	-1	1	-1	-1	2	1	6	1
L2-75S	-1	-1	3	3	-1	-1	-1	2	-1	-1	-1	-1	-1	-1
L2-50S	-1	-1	2	2	-1	-1	-1	1	-1	-1	-1	-1	2	-1
L2-25S	-1	-1	2	3	-1	-1	-1	-1	-1	-1	1	-1	5	-1
L2-0	-1	-1	2	2	-1	-1	-1	-1	-1	-1	1	-1	4	-1
L2-25N	2	2	4	4	1	-1	-1	1	-1	-1	1	1	8	1
L2-50N	2	2	4	4	1	-1	-1	1	-1	-1	2	1	3	1
L2-50N-R	2	1	3	3	-1	-1	-1	1	-1	-1	2	-1	6	-1
L2-75N	3	3	6	7	1	1	1	-1	-1	1	3	1	4	1
L2-100N	1	-1	3	3	-1	-1	-1	-1	-1	-1	1	-1	2	-1
L2-125N	3	3	4	5	-1	-1	-1	2	-1	1	2	1	8	1
L2-150N	4	3	6	6	-1	1	1	2	-1	1	3	2	5	2
L2-175N	6	5	11	13	-1	2	2	3	-1	2	5	2	11	3
L2-200N	3	3	5	6	-1	1	1	2	-1	1	2	1	11	2
L2-225N	4	3	5	6	-1	1	-1	2	-1	1	3	2	5	2
L3-200S	-1	-1	2	2	-1	-1	-1	-1	-1	-1	-1	-1	3	-1
L3-175S	-1	-1	2	2	-1	-1	-1	-1	-1	-1	-1	-1	5	-1
L3-150S	3	3	5	6	-1	-1	-1	2	-1	1	2	1	11	1
L3-125S	3	3	4	5	2	-1	-1	-1	-1	1	3	1	12	1
L3-100S	4	3	11	12	-1	1	1	-1	-1	2	2	2	7	2
L3-75S	-1	-1	4	4	-1	-1	-1	1	-1	-1	-1	1	7	-1
L3-50S	2	2	6	7	1	-1	-1	-1	-1	-1	2	1	3	1
L3-25S	2	2	5	6	-1	-1	-1	2	-1	1	1	1	4	1
L3-25S-R	2	2	8	9	-1	1	1	2	-1	1	2	2	9	2
L3-0	3	2	6	7	-1	-1	-1	-1	-1	1	2	1	3	1
L3-25N	3	2	6	6	-1	-1	-1	-1	-1	-1	2	1	4	1
L3-50N	3	3	5	6	2	1	1	2	-1	1	2	1	11	2
L3-75N	-1	-1	2	2	-1	-1	-1	-1	-1	-1	-1	-1	4	-1
L3-100N	-1	-1	4	4	-1	-1	-1	2	-1	-1	-1	-1	8	1
L3-125N	7	6	13	15	-1	2	3	-1	-1	3	5	3	17	3
L3-150N	3	3	5	6	-1	1	-1	2	-1	1	2	2	10	2
L3-175N	6	5	8	9	-1	2	2	3	-1	2	4	2	18	3
L4-200S	-1	-1	2	2	-1	-1	-1	-1	-1	-1	-1	-1	4	-1
L4-175S	-1	-1	3	3	-1	-1	-1	1	-1	-1	-1	-1	7	-1
L4-150S	2	2	6	7	-1	1	1	2	-1	1	3	2	15	1
L4-125S	1	1	5	6	-1	-1	-1	2	-1	-1	1	1	6	1
L4-100S	1	1	5	6	-1	-1	-1	2	-1	1	2	1	6	1
L4-75S	1	1	4	4	-1	-1	-1	-1	-1	-1	2	1	4	1
L4-50S	3	3	5	5	2	-1	1	2	-1	2	2	2	12	2
L4-50S-R	2	2	4	4	1	-1	1	1	-1	1	2	2	4	2

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SOIL GAS HYDROCARBONS
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Activation Laboratories Ltd.
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	071 - HPB	072 - HPB	073 - HBA	074 - HBA	075 - HPB	076 - LPH	077 - MAR	078 - ALK	079 - LBI	080 - LPH	081 - MAR	082 - LPH	083 - HBA	084 - HBA
L4-25S	1	1	5	5	-1	-1	-1	-1	-1	1	2	1	11	1
L4-0	3	2	6	7	1	1	1	2	-1	1	2	2	13	1
L4-25N	-1	-1	1	2	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
L4-50N	-1	-1	2	2	-1	-1	-1	-1	-1	-1	-1	-1	3	-1
L4-75N	-1	-1	2	2	-1	-1	-1	-1	-1	-1	-1	-1	3	-1
L4-100N	2	2	3	4	1	-1	-1	-1	-1	-1	2	1	6	1
L4-125N	1	1	5	5	-1	-1	-1	-1	-1	-1	1	1	6	1
L4-150N	3	3	6	7	2	-1	1	-1	-1	2	5	2	6	2
L5-200S	1	1	2	-1	-1	-1	-1	-1	-1	-1	1	-1	3	-1
L5-175S	2	2	4	4	1	-1	-1	1	-1	1	2	1	8	1
L5-150S	3	4	10	10	2	1	2	3	-1	3	4	2	18	2
L5-125S	2	2	3	4	-1	-1	-1	-1	-1	1	1	1	5	1
L5-100S	-1	-1	2	2	-1	-1	-1	-1	-1	-1	-1	-1	4	-1
L5-75S	1	1	3	3	-1	-1	-1	-1	-1	-1	2	-1	2	1
L5-50S	1	1	2	3	-1	-1	-1	-1	-1	-1	1	1	5	-1
L5-50S-R	2	2	3	3	1	-1	-1	-1	-1	1	2	1	6	1
L5-25S	3	3	7	8	1	-1	2	2	-1	2	3	2	15	2
L5-0	2	2	5	6	1	-1	1	-1	-1	2	3	2	11	2
L5-25N	2	2	8	6	1	-1	1	1	-1	1	2	1	-1	1
L5-50N	4	4	8	10	2	2	2	3	-1	2	5	2	18	2
L5-75N	2	2	5	6	-1	-1	-1	2	-1	-1	2	1	6	1
L5-100N	3	3	5	5	1	-1	-1	2	-1	-1	3	1	5	1
LMB-QA	-1	-1	1	1	-1	-1	-1	-1	-1	-1	-1	-1	2	-1
LMB-QA	-1	-1	1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
LMB-QA	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	1	-1

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SOIL GAS HYDROCARBONS
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Activation Laboratories Ltd.
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	085 - LPH	086 - LBI	087 - MAR	088 - HBA	089 - THI	090 - HPB	091 - LBI	092 - LPH	093 - LA	094 - LBI	095 - MAR	096 - LPH	097 - HBA	098 - THI
L1-50S	9	-1	2	8	-1	2	1	3	23	2	-1	5	15	2
L1-25S	11	-1	3	10	-1	3	2	3	25	2	-1	5	16	2
L1-0	12	1	4	10	-1	4	2	5	21	2	-1	8	15	1
L1-25N	11	-1	3	9	-1	4	2	4	31	2	-1	7	21	2
L1-50N	14	1	4	12	-1	5	2	5	28	2	1	9	19	2
L1-50N-R	12	1	4	10	-1	4	2	4	22	2	2	8	16	2
L1-75N	7	-1	2	6	-1	3	1	3	14	1	-1	5	10	1
L1-100N	15	1	2	15	-1	3	2	3	32	2	1	5	23	2
L1-125N	5	-1	-1	4	-1	1	-1	-1	14	1	-1	1	10	1
L1-150N	6	-1	1	6	-1	1	-1	1	11	1	-1	2	8	1
L1-175N	10	-1	2	9	-1	2	1	2	19	2	-1	3	13	1
L1-200N	13	1	2	12	-1	3	2	3	30	2	1	5	22	2
L1-225N	10	-1	2	9	-1	2	1	3	26	2	1	5	18	2
L1-250N	10	-1	2	10	-1	2	1	2	17	2	1	4	12	1
L1-275N	8	-1	2	7	-1	2	1	2	23	2	-1	4	16	2
L2-75S	7	-1	1	8	-1	1	1	-1	10	1	-1	1	8	1
L2-50S	5	-1	-1	6	-1	-1	-1	-1	8	1	-1	1	6	-1
L2-25S	6	-1	-1	4	-1	1	-1	1	8	1	-1	2	6	-1
L2-0	5	-1	1	3	-1	1	-1	1	5	-1	-1	2	4	-1
L2-25N	9	-1	1	7	-1	2	1	2	18	2	1	3	18	3
L2-50N	9	-1	2	8	-1	2	1	2	29	2	1	3	21	2
L2-50N-R	8	-1	1	6	-1	1	1	1	22	2	-1	2	16	2
L2-75N	16	1	2	13	-1	3	2	3	43	3	-1	5	31	3
L2-100N	6	-1	1	5	-1	1	-1	1	12	1	-1	2	8	1
L2-125N	10	1	2	9	-1	2	1	3	28	2	1	6	20	2
L2-150N	14	1	3	12	-1	3	2	4	37	3	1	7	26	2
L2-175N	27	2	4	22	-1	4	3	6	64	4	2	10	44	3
L2-200N	12	-1	2	10	-1	2	1	3	25	2	1	5	18	1
L2-225N	12	-1	2	9	-1	2	2	4	41	3	1	7	22	2
L3-200S	4	-1	2	4	-1	1	-1	-1	6	-1	-1	1	1	-1
L3-175S	5	-1	-1	4	-1	1	-1	1	10	1	-1	2	7	1
L3-150S	13	1	2	10	-1	2	2	3	39	3	1	6	23	2
L3-125S	14	1	3	13	-1	2	2	3	60	3	2	6	38	3
L3-100S	28	2	2	26	-1	2	3	4	128	4	-1	6	77	5
L3-75S	7	-1	1	8	-1	1	1	1	35	2	1	2	22	2
L3-50S	14	-1	2	12	-1	2	1	2	44	3	2	3	29	2
L3-25S	13	-1	2	10	-1	1	1	2	38	2	1	3	24	2
L3-25S-R	21	1	3	18	-1	2	2	2	95	4	2	4	62	5
L3-0	12	-1	2	11	-1	2	1	2	30	2	1	4	19	2
L3-25N	15	1	2	15	-1	2	1	3	50	3	1	5	31	2
L3-50N	12	-1	2	10	-1	2	2	3	32	2	1	5	21	2
L3-75N	4	-1	-1	3	-1	1	-1	-1	5	-1	-1	1	4	-1
L3-100N	9	-1	1	9	-1	1	1	1	30	2	-1	2	21	2
L3-125N	29	2	5	26	-1	4	4	7	82	4	-1	12	56	3
L3-150N	11	1	2	10	-1	2	1	4	29	2	1	6	17	1
L3-175N	17	2	4	18	-1	3	2	6	61	3	-1	11	39	3
L4-200S	5	-1	1	4	-1	-1	-1	-1	8	1	-1	1	6	1
L4-175S	7	-1	1	7	-1	1	1	1	20	2	-1	2	14	1
L4-150S	18	1	2	15	-1	2	2	3	65	3	-1	4	38	3
L4-125S	15	1	2	12	-1	1	2	2	74	3	1	3	53	4
L4-100S	15	1	2	12	-1	1	2	2	63	3	1	3	45	4
L4-75S	11	-1	1	9	-1	1	1	2	22	2	-1	3	17	2
L4-50S	12	-1	2	10	-1	2	2	2	23	2	-1	4	16	1
L4-50S-R	9	-1	2	8	-1	2	1	2	16	2	-1	3	12	1

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Kevin Cool
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SOIL GAS HYDROCARBONS
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THORNELOE PROPERTY PROJECT SITE

Activation Laboratories Ltd.
Date: December 10, 2010
R=Replicate Sample

	085 - LPH	086 - LBI	087 - MAR	088 - HBA	089 - THI	090 - HPB	091 - LBI	092 - LPH	093 - LA	094 - LBI	095 - MAR	096 - LPH	097 - HBA	098 - THI
L4-25S	12	-1	1	11	-1	1	1	1	36	2	-1	2	26	2
L4-0	16	1	2	14	-1	2	2	2	53	3	-1	3	40	3
L4-25N	4	-1	-1	2	-1	-1	-1	-1	6	-1	-1	1	4	-1
L4-50N	4	-1	-1	2	-1	-1	-1	-1	5	-1	-1	1	4	-1
L4-75N	5	-1	1	3	-1	1	-1	1	6	-1	-1	2	5	-1
L4-100N	6	-1	2	6	-1	2	1	2	14	2	1	3	11	1
L4-125N	12	-1	1	11	-1	1	1	1	43	3	-1	2	32	3
L4-150N	14	1	3	15	-1	2	2	3	41	3	-1	5	31	3
L5-200S	4	-1	1	3	-1	1	-1	-1	6	-1	-1	2	5	-1
L5-175S	8	-1	2	8	-1	2	1	2	25	2	-1	3	20	2
L5-150S	24	1	3	22	-1	3	3	3	57	4	2	4	44	4
L5-125S	8	-1	1	5	-1	2	1	2	15	2	-1	3	11	1
L5-100S	6	-1	1	5	-1	1	1	1	16	2	-1	1	12	1
L5-75S	6	-1	1	5	-1	1	-1	1	13	1	-1	2	10	1
L5-50S	5	-1	1	5	-1	1	-1	1	10	1	-1	2	8	1
L5-50S-R	7	-1	2	6	-1	1	1	2	15	2	-1	3	12	2
L5-25S	16	1	2	14	-1	2	2	2	44	3	1	4	34	3
L5-0	11	-1	2	9	-1	2	2	2	20	2	-1	3	16	2
L5-25N	9	-1	2	8	-1	1	1	2	24	2	1	3	17	2
L5-50N	18	1	5	14	-1	5	3	5	47	3	3	8	35	4
L5-75N	15	1	2	14	-1	2	2	2	58	3	1	2	46	4
L5-100N	12	1	2	10	-1	2	2	3	45	3	2	6	34	3
LMB-QA	3	-1	-1	2	-1	-1	-1	-1	3	-1	-1	-1	-1	-1
LMB-QA	3	-1	-1	2	-1	-1	-1	-1	3	-1	-1	-1	2	-1
LMB-QA	2	-1	-1	1	-1	-1	-1	-1	3	-1	-1	-1	2	-1

True North Minerals
Kevin Cool
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SOIL GAS HYDROCARBONS
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Activation Laboratories Ltd.
Date: December 10, 2010
R=Replicate Sample

	099 - LPH	100 - LPH	101 - MAR	102 - MBI	103 - LPH	104 - MAR	105 - ALK	106 - MBI	107 - MBI	108 - LPH	109 - MAR	110 - HBA	111 - MAR	112 - MBI
L1-50S	2	3	-1	1	2	3	2	-1	1	3	5	14	2	6
L1-25S	3	3	-1	2	2	4	3	-1	1	4	8	15	2	8
L1-0	4	4	-1	2	2	6	4	-1	1	4	8	19	3	10
L1-25N	3	3	-1	2	2	5	3	1	1	4	7	17	3	9
L1-50N	4	5	-1	3	2	7	4	-1	1	4	9	18	3	10
L1-50N-R	4	4	-1	2	2	6	3	-1	1	4	8	16	2	9
L1-75N	3	3	-1	1	2	4	2	-1	1	3	5	12	2	6
L1-100N	3	3	-1	2	2	4	3	-1	1	4	8	23	3	8
L1-125N	1	1	-1	1	-1	1	1	-1	1	3	4	13	2	3
L1-150N	1	1	-1	-1	-1	1	1	-1	1	3	4	10	2	4
L1-175N	2	2	-1	1	1	2	2	-1	1	3	5	15	2	5
L1-200N	3	3	-1	2	2	3	3	1	1	4	7	20	3	5
L1-225N	3	3	-1	1	2	3	2	-1	1	3	5	15	2	5
L1-250N	3	3	-1	1	2	3	2	-1	1	3	6	14	2	5
L1-275N	2	2	-1	1	1	3	2	-1	1	3	5	16	2	4
L2-75S	1	1	-1	-1	-1	1	1	-1	1	3	4	11	2	3
L2-50S	-1	1	-1	-1	-1	-1	1	-1	-1	3	3	9	2	2
L2-25S	1	1	-1	-1	-1	1	1	-1	1	3	4	9	2	3
L2-0	1	2	-1	1	1	1	1	-1	1	3	4	10	2	4
L2-25N	2	2	-1	1	1	2	2	-1	-1	3	5	15	2	9
L2-50N	2	2	-1	1	1	2	2	-1	1	3	6	17	2	4
L2-50N-R	1	2	-1	1	1	2	2	-1	1	3	5	15	2	3
L2-75N	2	3	-1	2	2	4	3	1	1	4	8	30	3	6
L2-100N	1	1	-1	1	1	2	1	-1	1	3	4	11	2	3
L2-125N	3	3	-1	1	2	3	2	-1	1	3	5	16	3	4
L2-150N	3	4	-1	2	2	4	3	1	1	4	8	24	3	5
L2-175N	4	5	-1	3	2	7	4	1	2	5	13	46	4	6
L2-200N	2	3	-1	2	2	3	3	-1	1	3	6	16	3	5
L2-225N	3	3	-1	2	2	4	2	-1	1	3	7	20	3	4
L3-200S	1	1	-1	-1	-1	1	1	-1	1	3	4	8	2	4
L3-175S	1	1	-1	-1	-1	1	1	-1	1	3	4	11	2	4
L3-150S	3	3	-1	2	2	3	3	1	1	4	7	26	3	5
L3-125S	3	3	-1	2	2	4	4	-1	1	4	7	34	3	7
L3-100S	3	3	-1	2	2	3	4	1	2	4	10	66	4	7
L3-75S	1	1	-1	1	-1	2	2	-1	1	3	5	20	2	3
L3-50S	2	2	-1	1	1	2	3	-1	1	3	6	22	2	4
L3-25S	2	2	-1	2	1	2	2	-1	1	3	6	24	3	4
L3-25S-R	2	2	-1	2	1	3	4	1	2	4	9	51	4	5
L3-0	2	2	-1	1	1	2	3	-1	1	3	5	20	2	5
L3-25N	2	2	-1	1	1	2	3	-1	1	4	6	26	2	5
L3-50N	3	3	-1	2	2	4	3	1	1	3	6	21	3	5
L3-75N	-1	1	-1	-1	-1	1	1	-1	1	3	4	8	2	3
L3-100N	1	1	-1	1	-1	2	3	-1	1	3	5	39	3	6
L3-125N	4	6	-1	4	3	8	6	2	2	5	19	71	5	14
L3-150N	3	3	-1	2	2	3	3	-1	1	4	8	21	3	8
L3-175N	4	5	-1	3	2	6	4	1	1	4	11	32	3	8
L4-200S	-1	1	-1	-1	-1	1	1	-1	-1	3	3	9	2	2
L4-175S	1	1	-1	1	-1	1	2	-1	1	3	4	16	2	3
L4-150S	2	2	-1	2	1	3	4	1	1	4	9	37	3	5
L4-125S	1	2	-1	2	1	2	3	1	1	3	6	37	3	4
L4-100S	1	2	-1	2	1	2	4	1	1	3	7	36	3	4
L4-75S	2	2	-1	1	1	2	2	-1	1	3	6	17	2	3
L4-50S	2	2	-1	2	1	3	3	-1	1	3	8	16	2	4
L4-50S-R	2	2	-1	2	1	3	2	-1	1	3	7	12	2	3

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SOIL GAS HYDROCARBONS
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Activation Laboratories Ltd.
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R=Replicate Sample

	099 - LPH	100 - LPH	101 - MAR	102 - MBI	103 - LPH	104 - MAR	105 - ALK	106 - MBI	107 - MBI	108 - LPH	109 - MAR	110 - HBA	111 - MAR	112 - MBI
L4-25S	1	1	-1	1	-1	2	3	1	1	3	6	19	2	3
L4-0	2	2	-1	2	1	3	4	1	1	4	9	28	3	5
L4-25N	-1	1	-1	-1	-1	1	-1	-1	-1	3	4	6	2	3
L4-50N	-1	1	-1	-1	-1	1	-1	-1	-1	3	3	6	2	2
L4-75N	1	1	-1	1	-1	1	1	-1	-1	3	3	8	2	2
L4-100N	2	2	-1	1	1	3	2	-1	1	4	7	14	2	5
L4-125N	1	1	-1	1	1	2	3	-1	1	3	6	23	2	4
L4-150N	2	3	-1	2	2	3	3	-1	1	4	8	20	3	5
L5-200S	1	1	-1	1	-1	1	1	-1	-1	3	4	7	2	3
L5-175S	2	2	-1	1	1	2	2	-1	1	3	6	13	2	5
L5-150S	2	3	-1	3	2	4	4	1	2	4	14	39	4	5
L5-125S	2	2	-1	2	1	2	2	-1	1	3	6	13	2	5
L5-100S	1	1	-1	1	-1	1	2	-1	1	3	4	12	2	3
L5-75S	1	2	-1	1	1	1	2	-1	-1	3	4	10	2	3
L5-50S	1	1	-1	-1	1	1	1	-1	-1	3	4	7	2	3
L5-50S-R	2	2	-1	1	1	2	2	-1	1	3	5	9	2	4
L5-25S	2	2	-1	2	1	3	3	1	1	3	8	24	3	6
L5-0	2	2	-1	2	1	3	3	-1	1	3	6	16	2	6
L5-25N	2	2	-1	2	1	2	2	-1	1	3	6	17	2	5
L5-50N	4	4	-1	3	2	6	5	1	2	5	12	29	3	12
L5-75N	1	2	-1	2	1	2	4	1	1	4	8	30	3	4
L5-100N	3	3	-1	2	2	3	3	1	1	4	7	25	3	7
LMB-QA	-1	-1	-1	-1	-1	-1	-1	-1	-1	3	3	6	2	2
LMB-QA	-1	-1	-1	-1	-1	-1	-1	-1	-1	3	4	6	2	2
LMB-QA	-1	-1	-1	-1	-1	-1	-1	-1	-1	3	3	6	2	2

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True North Minerals
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SOIL GAS HYDROCARBONS
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THORNELOE PROPERTY PROJECT SITE

Activation Laboratories Ltd.
Date: December 10, 2010
R=Replicate Sample

	113-HBA	114-MBI	115-MBI	116-MAR	117-HA	118-MPH	119-HBA	120-THI	121-MPH	122-MPH	123-MPH	124-MBI	125-HAR	126-MPH
L1-50S	9	4	5	3	23	6	13	2	5	6	5	4	5	5
L1-25S	10	5	5	2	31	6	16	2	5	7	5	4	5	5
L1-0	12	6	6	3	26	11	14	2	9	6	8	4	5	9
L1-25N	13	5	6	3	28	7	14	2	6	6	5	4	5	6
L1-50N	12	6	6	3	27	10	15	2	9	7	8	5	6	9
L1-50N-R	11	6	6	3	21	10	13	2	8	6	7	5	5	8
L1-75N	9	4	5	3	19	7	11	2	6	5	5	4	4	6
L1-100N	15	5	5	3	34	5	16	2	5	6	5	4	4	5
L1-125N	9	3	3	3	22	3	11	2	3	5	3	3	3	3
L1-150N	7	3	3	2	20	3	10	2	3	5	3	3	3	3
L1-175N	10	4	4	3	30	4	14	2	4	5	4	3	3	3
L1-200N	13	4	4	3	26	5	14	2	4	6	4	4	4	5
L1-225N	11	4	4	3	24	5	11	2	5	5	4	3	4	5
L1-250N	11	4	4	3	24	5	12	2	4	5	4	4	-1	4
L1-275N	12	3	4	3	32	4	14	2	4	6	4	4	4	4
L2-75S	8	3	3	2	23	3	10	2	3	5	3	3	3	3
L2-50S	8	2	3	2	17	2	8	2	2	4	3	3	3	3
L2-25S	7	2	3	2	18	3	9	2	3	5	3	3	3	3
L2-0	9	3	3	2	16	3	10	2	3	5	3	3	3	3
L2-25N	11	4	4	3	27	4	14	2	4	5	3	4	4	4
L2-50N	11	3	4	3	31	4	14	2	3	5	3	3	4	3
L2-50N-R	10	3	3	3	27	3	13	2	3	5	3	3	4	3
L2-75N	16	4	5	4	52	7	23	3	5	6	5	4	5	6
L2-100N	8	2	3	2	19	3	10	2	3	5	3	3	3	3
L2-125N	11	3	4	3	28	5	13	2	4	5	4	3	4	5
L2-150N	15	4	5	4	39	6	16	2	6	6	5	4	5	6
L2-175N	26	5	6	5	65	9	27	2	8	7	7	5	6	8
L2-200N	11	3	4	3	25	5	12	2	4	5	4	4	4	5
L2-225N	12	4	5	4	37	7	14	2	6	5	6	4	5	6
L3-200S	7	3	4	2	20	3	9	2	3	5	3	3	3	3
L3-175S	8	3	3	3	20	4	9	2	3	4	4	3	3	4
L3-150S	15	4	5	4	44	5	17	2	5	6	4	3	4	5
L3-125S	18	5	7	5	100	6	30	2	5	8	5	4	6	5
L3-100S	32	5	8	8	140	5	41	3	5	8	5	5	6	5
L3-75S	14	3	4	4	51	3	18	2	3	5	3	4	4	3
L3-50S	14	3	4	4	43	4	17	2	3	6	4	4	4	4
L3-25S	14	3	4	4	48	4	18	2	3	5	3	4	4	3
L3-25S-R	26	4	6	7	100	4	32	3	4	7	4	4	5	4
L3-0	13	4	5	3	40	4	18	2	4	6	4	4	4	4
L3-25N	14	4	5	4	51	5	19	2	4	5	4	4	4	4
L3-50N	14	4	5	3	40	7	17	3	6	6	6	4	5	7
L3-75N	7	3	3	2	12	3	7	2	3	4	3	3	3	3
L3-100N	22	4	6	5	103	4	37	2	4	6	4	4	5	4
L3-125N	39	8	11	7	106	12	44	3	9	9	9	6	10	10
L3-150N	13	5	5	3	33	7	16	2	6	6	5	4	5	6
L3-175N	18	6	7	5	54	9	22	3	7	8	7	4	8	8
L4-200S	7	2	3	2	15	2	8	2	2	4	2	3	3	3
L4-175S	10	3	3	3	29	3	12	2	3	4	3	3	3	4
L4-150S	19	4	5	5	63	5	22	2	4	8	4	4	5	4
L4-125S	19	3	5	5	78	4	26	2	4	6	4	4	5	4
L4-100S	21	3	5	5	68	4	25	2	4	6	3	4	6	4
L4-75S	11	3	4	3	29	5	13	2	5	5	5	3	4	5
L4-50S	12	3	4	3	34	5	15	2	4	6	4	4	5	5
L4-50S-R	8	3	3	2	18	4	9	2	3	5	3	3	4	4

True North Minerals
Kevin Cool
-1=Reporting Limit of 1pg/g (ppt=parts per trillion)

SOIL GAS HYDROCARBONS
(SGH) by GC/MS
THORNELOE PROPERTY PROJECT SITE

Activation Laboratories Ltd.
Date: December 10, 2010
R=Replicate Sample

	113-HBA	114-MBI	115-MBI	116-MAR	117-HA	118-MPH	119-HBA	120-THI	121-MPH	122-MPH	123-MPH	124-MBI	125-HAR	126-MPH
L4-25S	11	3	3	3	44	4	19	2	3	5	3	3	4	3
L4-0	15	3	4	4	42	4	18	2	3	6	3	4	4	4
L4-25N	6	2	3	2	11	3	7	2	3	4	3	3	3	3
L4-50N	6	2	3	2	11	3	7	2	2	4	2	3	3	3
L4-75N	6	2	3	2	14	3	8	2	3	4	3	-1	3	3
L4-100N	11	4	4	3	20	4	11	3	4	6	4	4	5	4
L4-125N	14	3	3	4	37	3	16	2	3	5	3	3	4	3
L4-150N	13	4	4	3	33	5	15	2	4	6	4	4	5	4
L5-200S	6	3	3	2	12	3	7	2	3	5	3	3	3	3
L5-175S	9	3	4	3	23	3	10	2	3	5	3	3	4	3
L5-150S	23	4	6	5	61	6	28	3	5	8	5	5	6	5
L5-125S	9	3	4	3	21	4	12	2	4	5	3	3	4	4
L5-100S	8	3	3	2	24	3	11	2	3	4	3	3	3	3
L5-75S	7	2	3	2	17	3	9	2	3	5	3	3	3	3
L5-50S	6	3	3	2	13	3	7	2	3	4	3	3	3	3
L5-50S-R	8	3	3	2	17	4	9	2	3	5	3	3	4	4
L5-25S	13	4	4	4	42	4	18	2	4	6	4	4	5	4
L5-0	11	4	4	3	24	4	12	2	4	5	4	3	4	4
L5-25N	11	3	4	3	34	4	15	2	3	5	3	4	4	3
L5-50N	19	7	7	4	49	10	22	3	9	7	7	6	7	8
L5-75N	17	3	4	5	58	4	22	3	3	6	3	4	5	3
L5-100N	15	5	5	4	50	5	20	2	4	5	4	4	5	5
LMB-QA	6	2	2	2	10	2	6	2	2	4	2	3	3	3
LMB-QA	7	2	3	2	12	2	7	2	2	6	2	3	3	3
LMB-QA	6	2	2	2	11	2	7	2	2	5	2	3	3	2

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A10-8843

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True North Minerals
Kevin Cool
-1=Reporting Limit of 1pg/g (ppt=parts per trillion)

SOIL GAS HYDROCARBONS
(SGH) by GC/MS
THORNELOE PROPERTY PROJECT SITE

Activation Laboratories Ltd.
Date: December 10, 2010
R=Replicate Sample

	127-MPH	128-MPH	129-HAR	130-HAR	131-MPH	132-ALK	133-HAR	134-HAR	135-MPH	136-MPH	137-HBI	138-HBI	139-HPH	140-HPH
L1-50S	4	2	2	3	4	10	7	11	7	6	4	5	6	5
L1-25S	4	3	3	3	4	13	7	12	7	6	4	5	-1	5
L1-0	6	2	3	4	6	15	7	14	9	7	4	6	9	5
L1-25N	4	3	2	3	4	13	7	12	8	6	4	6	7	5
L1-50N	6	3	3	3	6	14	7	14	9	6	4	6	1	5
L1-50N-R	5	2	3	3	5	11	7	12	8	7	4	5	1	5
L1-75N	4	2	2	3	4	10	6	10	7	6	4	5	6	5
L1-100N	3	2	2	3	4	15	8	13	7	5	4	5	6	5
L1-125N	2	2	2	3	3	9	7	9	6	4	3	4	5	4
L1-150N	2	2	2	2	3	8	6	8	6	5	3	4	5	4
L1-175N	3	2	2	3	3	12	7	10	6	5	4	5	6	4
L1-200N	3	2	2	3	3	11	7	11	7	5	3	5	6	5
L1-225N	3	2	2	3	4	9	6	10	7	5	3	5	-1	4
L1-250N	3	2	2	3	4	10	7	10	6	6	3	4	-1	5
L1-275N	3	2	2	3	3	12	7	11	6	5	3	5	6	5
L2-75S	2	2	2	3	3	9	6	8	6	5	3	4	5	4
L2-50S	2	2	2	3	3	7	6	8	5	5	3	4	5	4
L2-25S	2	2	2	3	3	8	6	8	5	5	3	4	-1	4
L2-0	2	2	2	3	3	9	6	9	6	5	3	5	5	4
L2-25N	2	2	2	3	3	11	7	11	6	5	3	5	6	4
L2-50N	2	2	2	3	3	11	7	10	6	5	3	5	-1	4
L2-50N-R	2	2	2	3	3	12	8	10	5	5	3	5	6	4
L2-75N	4	2	2	3	4	19	9	13	8	6	4	5	-1	5
L2-100N	2	2	2	3	3	9	6	8	6	6	3	4	5	4
L2-125N	3	2	2	3	4	12	7	10	7	5	3	5	6	5
L2-150N	4	2	2	3	4	15	8	14	8	6	3	5	1	5
L2-175N	5	3	3	4	5	18	10	18	9	6	4	6	1	5
L2-200N	3	2	3	3	4	11	7	11	6	5	3	5	6	4
L2-225N	5	2	2	3	4	13	7	13	7	6	4	5	-1	5
L3-200S	2	2	2	3	3	7	6	8	5	5	3	4	5	5
L3-175S	3	2	2	3	3	8	7	8	6	5	3	5	5	4
L3-150S	3	2	2	3	4	16	8	12	7	6	4	5	7	5
L3-125S	4	3	3	3	4	17	9	15	8	6	4	6	1	5
L3-100S	3	3	3	4	5	24	14	19	8	7	5	7	7	5
L3-75S	2	2	2	3	3	15	8	10	6	5	4	5	6	4
L3-50S	3	2	2	3	3	14	7	11	6	5	3	5	-1	5
L3-25S	3	2	2	3	3	16	8	12	6	6	4	5	6	4
L3-25S-R	3	2	3	3	3	19	11	17	7	6	4	6	6	5
L3-0	3	2	2	3	3	15	7	10	7	5	3	5	1	5
L3-25N	3	2	2	3	4	16	8	11	7	6	4	6	6	5
L3-50N	5	3	3	3	5	15	7	13	8	6	5	6	1	5
L3-75N	2	2	2	3	3	7	5	8	5	5	3	4	5	5
L3-100N	3	2	2	3	4	25	9	13	7	6	4	6	6	5
L3-125N	7	4	4	5	6	31	12	28	11	8	7	9	10	6
L3-150N	4	3	3	3	4	15	8	12	7	6	4	5	7	5
L3-175N	5	4	3	4	5	20	9	19	9	7	5	7	1	5
L4-200S	2	2	2	3	3	7	6	7	5	4	3	4	1	4
L4-175S	2	2	2	3	3	11	6	8	6	4	3	4	5	4
L4-150S	3	3	3	3	4	18	10	16	6	6	5	6	7	5
L4-125S	3	3	3	3	3	18	11	16	6	6	4	6	1	5
L4-100S	3	2	3	3	3	17	9	15	6	6	4	6	-1	5
L4-75S	3	2	2	3	4	13	8	12	7	5	3	5	1	4
L4-50S	3	2	2	3	3	11	6	11	6	6	3	5	5	5
L4-50S-R	3	2	2	3	3	9	6	10	5	4	3	4	5	5

True North Minerals
Kevin Cool
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SOIL GAS HYDROCARBONS
(SGH) by GC/MS
THORNELOE PROPERTY PROJECT SITE

Activation Laboratories Ltd.
Date: December 10, 2010
R=Replicate Sample

	127 - MPH	128 - MPH	129 - HAR	130 - HAR	131 - MPH	132 - ALK	133 - HAR	134 - HAR	135 - MPH	136 - MPH	137 - HBI	138 - HBI	139 - HPH	140 - HPH
L4-25S	3	2	2	3	3	10	7	10	6	5	3	5	5	4
L4-0	3	2	2	3	3	16	9	14	6	5	4	6	1	5
L4-25N	2	1	2	3	3	6	5	7	5	4	3	4	5	4
L4-50N	2	2	2	2	3	6	5	7	5	5	3	4	5	4
L4-75N	2	2	2	3	3	8	6	8	5	5	3	4	5	4
L4-100N	3	2	3	3	3	12	7	12	7	6	4	5	6	5
L4-125N	2	2	2	3	3	12	9	11	6	5	3	5	-1	4
L4-150N	3	2	3	3	4	15	8	13	7	5	4	5	6	5
L5-200S	2	2	2	3	3	7	6	8	6	5	3	4	5	4
L5-175S	3	2	2	3	3	11	6	9	6	5	3	5	6	4
L5-150S	4	3	3	4	4	25	11	20	7	7	5	7	7	5
L5-125S	3	2	2	3	3	11	7	10	6	5	3	5	8	4
L5-100S	2	2	2	3	2	9	6	9	5	4	3	4	5	4
L5-75S	2	2	2	3	3	9	6	8	5	5	3	5	5	4
L5-50S	2	2	2	3	3	7	5	8	5	5	2	4	5	4
L5-50S-R	3	2	2	3	3	9	7	10	6	6	3	5	-1	5
L5-25S	3	2	3	3	3	15	8	13	6	5	3	5	5	5
L5-0	3	2	2	3	3	11	7	11	6	5	3	5	5	4
L5-25N	3	2	2	3	3	15	7	11	7	5	3	5	-1	4
L5-50N	5	3	4	4	5	21	10	17	10	8	4	7	8	6
L5-75N	3	2	2	3	3	15	9	14	6	5	3	6	5	4
L5-100N	4	2	2	3	4	15	10	14	7	6	4	6	1	5
LMB-QA	2	1	2	3	2	5	5	7	5	5	3	4	-1	4
LMB-QA	2	2	2	3	2	7	6	8	5	4	3	4	5	4
LMB-QA	2	2	2	2	2	6	5	7	5	5	3	4	5	4

	141 - HBI	142 - HPH	143 - HA	144 - HBI	145 - HBA	146 - HPH	147 - HBI	148 - HPH	149 - HBI	150 - HPH	151 - HBI	152 - HPH	153 - HPH	154 - HPH
L1-50S	5	1	27	6	23	1	4	5	6	6	5	7	10	2
L1-25S	5	7	27	7	20	2	4	5	6	6	5	4	11	9
L1-0	6	9	29	8	27	14	5	6	7	7	5	8	12	10
L1-25N	7	8	32	8	25	2	5	5	6	6	5	9	12	9
L1-50N	6	9	29	7	26	13	5	6	7	7	5	-1	12	9
L1-50N-R	6	8	26	7	23	13	4	6	6	7	5	8	11	9
L1-75N	5	7	22	7	22	2	4	5	6	6	5	7	9	8
L1-100N	6	-1	34	7	35	1	4	5	6	6	5	7	8	9
L1-125N	4	6	28	6	23	9	4	4	5	5	4	-1	8	8
L1-150N	4	5	25	6	23	2	4	5	5	5	5	6	8	1
L1-175N	5	5	28	6	29	2	4	4	6	5	5	1	8	8
L1-200N	5	1	27	6	26	1	4	5	6	5	5	6	8	1
L1-225N	5	6	24	6	26	2	4	5	6	5	5	6	9	8
L1-250N	5	-1	24	6	20	1	4	4	6	1	-1	6	8	8
L1-275N	5	6	33	6	27	1	4	5	6	5	5	1	9	8
L2-75S	5	5	31	6	21	2	4	4	6	5	5	6	8	2
L2-50S	4	5	24	6	17	8	3	4	5	5	4	6	8	8
L2-25S	4	5	20	6	20	3	4	4	6	-1	5	6	8	8
L2-0	4	5	20	6	22	2	3	4	-1	1	4	1	8	8
L2-25N	5	5	33	7	28	2	4	4	6	5	5	1	9	9
L2-50N	5	1	35	6	28	2	4	5	6	-1	5	1	9	8
L2-50N-R	5	5	36	6	28	-1	4	4	6	5	5	-1	9	8
L2-75N	6	8	58	8	45	1	5	5	6	6	5	7	9	9
L2-100N	5	6	25	6	18	2	4	4	5	-1	5	6	8	8
L2-125N	6	-1	31	7	30	1	4	5	6	5	5	7	9	2
L2-150N	6	7	38	8	33	-1	5	5	6	6	5	7	9	8
L2-175N	6	8	53	8	55	3	5	5	7	6	5	7	9	9
L2-200N	5	1	26	6	27	1	4	5	6	5	5	-1	8	8
L2-225N	6	7	34	7	28	2	4	5	6	6	5	7	10	9
L3-200S	5	6	20	6	15	9	3	4	-1	5	5	6	8	8
L3-175S	5	6	29	6	24	-1	4	5	5	5	5	6	8	8
L3-150S	6	7	44	7	37	1	4	5	6	5	5	7	10	9
L3-125S	8	8	74	9	50	1	5	6	1	6	5	7	11	10
L3-100S	7	7	115	10	68	12	5	5	8	6	5	7	10	10
L3-75S	5	6	57	7	42	1	4	4	6	5	5	1	9	8
L3-50S	6	6	45	7	41	1	4	5	6	-1	5	1	9	9
L3-25S	5	6	47	7	46	3	4	4	6	6	5	7	9	2
L3-25S-R	6	7	99	8	67	11	4	5	7	1	5	1	9	9
L3-0	6	1	39	7	51	2	5	5	6	5	5	1	9	9
L3-25N	6	-1	50	7	47	1	5	5	6	6	5	7	9	9
L3-50N	7	1	44	7	34	2	5	5	7	7	5	8	10	9
L3-75N	5	5	18	5	14	-1	4	5	6	5	5	6	8	8
L3-100N	7	7	151	10	100	12	5	5	7	6	6	-1	9	8
L3-125N	9	1	102	13	95	10	7	7	9	8	6	10	13	11
L3-150N	6	7	33	7	31	11	5	5	7	5	5	7	9	9
L3-175N	7	8	50	9	43	2	5	6	8	7	5	8	10	10
L4-200S	4	6	23	5	17	9	3	4	5	5	5	-1	8	8
L4-175S	4	6	38	6	27	2	4	4	6	-1	5	6	8	8
L4-150S	6	7	66	8	45	11	5	5	7	6	5	-1	10	9
L4-125S	6	6	89	8	58	2	4	5	7	6	5	1	9	9
L4-100S	5	6	75	7	55	10	5	5	7	5	5	7	8	9
L4-75S	5	6	33	6	34	10	4	5	6	6	5	7	8	9
L4-50S	5	6	26	6	28	10	4	5	6	6	4	7	9	8
L4-50S-R	5	6	21	6	17	1	4	4	5	5	4	-1	8	8

True North Minerals
Kevin Cool
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SOIL GAS HYDROCARBONS
(SGH) by GC/MS
THORNELOE PROPERTY PROJECT SITE

Activation Laboratories Ltd.
Date: December 10, 2010
R=Replicate Sample

	141 - HBI	142 - HPH	143 - HA	144 - HBI	145 - HBA	146 - HPH	147 - HBI	148 - HPH	149 - HBI	150 - HPH	151 - HBI	152 - HPH	153 - HPH	154 - HPH
L4-25S	5	6	30	6	27	-1	4	4	6	5	4	-1	8	8
L4-0	5	1	43	7	37	2	4	5	6	6	5	-1	8	2
L4-25N	4	-1	17	5	14	1	3	4	5	5	4	6	7	1
L4-50N	4	6	16	5	12	-1	3	4	5	5	4	1	8	-1
L4-75N	4	5	20	5	20	2	3	4	5	5	4	1	7	8
L4-100N	5	-1	26	7	23	2	4	5	2	-1	5	7	9	9
L4-125N	5	6	42	6	31	2	4	4	-1	5	5	-1	8	8
L4-150N	5	6	35	6	30	1	4	5	6	6	5	1	8	1
L5-200S	4	5	18	5	16	-1	3	4	5	5	4	6	7	8
L5-175S	5	-1	28	6	23	1	4	4	5	5	5	2	8	8
L5-150S	6	7	57	8	56	1	5	5	7	7	5	2	9	2
L5-125S	5	6	27	6	26	9	4	4	6	6	5	6	8	8
L5-100S	4	6	25	6	20	-1	4	4	5	5	5	-1	8	8
L5-75S	4	5	23	5	18	8	3	4	5	1	4	6	8	8
L5-50S	4	5	16	5	14	8	3	4	5	5	4	1	7	8
L5-50S-R	5	6	23	6	17	10	4	5	6	6	5	7	9	1
L5-25S	5	6	32	6	33	9	4	5	6	5	5	1	8	8
L5-0	5	6	23	6	25	2	4	5	6	5	4	6	8	8
L5-25N	4	-1	33	6	35	1	4	4	5	5	4	1	7	8
L5-50N	1	8	44	8	44	13	5	6	7	7	6	1	11	10
L5-75N	5	6	55	7	42	-1	4	5	6	6	5	7	9	8
L5-100N	6	6	54	8	40	2	4	5	6	5	5	7	9	9
LMB-QA	4	-1	18	5	11	1	3	4	1	5	4	1	7	8
LMB-QA	4	5	19	5	14	1	3	4	5	5	5	6	7	1
LMB-QA	4	5	15	5	15	8	3	4	5	-1	4	1	7	7

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True North Minerals
Kevin Cool
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SOIL GAS HYDROCARBONS
(SGH) by GC/MS
THORNELOE PROPERTY PROJECT SITE

Activation Laboratories Ltd.
Date: December 10, 2010
R=Replicate Sample

	155 - HPH	156 - HBI	157 - HAR	158 - HBA	159 - HBA	160 - HBI	161 - HA	162 - HPH
L1-50S	8	7	7	19	8	9	25	8
L1-25S	8	7	7	19	8	9	24	2
L1-0	8	8	7	18	8	9	25	10
L1-25N	8	7	7	20	8	1	24	2
L1-50N	8	7	7	18	8	9	25	9
L1-50N-R	9	7	7	18	8	1	24	1
L1-75N	8	7	7	17	9	9	21	1
L1-100N	8	7	7	19	1	8	25	9
L1-125N	8	7	7	18	8	8	23	9
L1-150N	8	7	7	18	8	9	25	8
L1-175N	8	7	7	18	8	8	22	9
L1-200N	7	-1	7	18	9	9	22	9
L1-225N	9	-1	7	18	8	8	24	1
L1-250N	8	7	7	18	8	9	22	8
L1-275N	8	7	7	18	8	1	25	8
L2-75S	8	7	7	22	9	1	58	9
L2-50S	8	7	7	18	8	8	40	8
L2-25S	8	6	7	17	8	9	20	8
L2-0	8	6	7	18	8	8	14	2
L2-25N	8	7	7	18	9	9	24	1
L2-50N	8	7	7	19	1	2	24	8
L2-50N-R	8	7	7	19	9	1	24	9
L2-75N	8	7	7	20	9	1	29	8
L2-100N	8	7	7	18	8	8	23	8
L2-125N	8	7	7	19	1	8	25	9
L2-150N	8	7	6	20	8	9	27	8
L2-175N	8	8	7	21	9	9	26	9
L2-200N	8	7	7	19	8	9	26	1
L2-225N	8	7	7	19	9	9	26	9
L3-200S	8	6	7	17	2	8	27	1
L3-175S	8	7	7	19	1	8	27	9
L3-150S	8	7	7	19	8	9	24	1
L3-125S	9	7	8	26	10	1	34	9
L3-100S	9	8	8	29	10	10	36	10
L3-75S	8	7	7	23	9	9	28	9
L3-50S	8	7	7	20	8	9	23	9
L3-25S	9	7	7	20	1	9	28	2
L3-25S-R	2	7	8	26	9	10	31	10
L3-0	8	7	7	20	8	9	26	9
L3-25N	9	7	7	22	9	8	28	9
L3-50N	9	7	7	22	9	9	29	9
L3-75N	8	7	7	18	9	8	27	9
L3-100N	8	8	8	44	10	10	74	10
L3-125N	10	9	8	34	1	11	47	10
L3-150N	9	7	8	20	8	1	27	8
L3-175N	9	7	7	23	2	2	28	9
L4-200S	8	7	7	18	8	8	23	9
L4-175S	8	7	7	20	8	8	38	8
L4-150S	8	7	7	23	9	9	34	9
L4-125S	8	7	8	27	9	9	37	9
L4-100S	8	7	7	25	9	9	32	9
L4-75S	8	6	7	19	9	9	26	9
L4-50S	8	7	7	17	8	8	21	8
L4-50S-R	8	7	7	17	8	1	21	8

True North Minerals
Kevin Cool
-1=Reporting Limit of 1pg/g (ppt=parts per trillion)

SOIL GAS HYDROCARBONS
(SGH) by GC/MS
THORNELOE PROPERTY PROJECT SITE

Activation Laboratories Ltd.
Date: December 10, 2010
R=Replicate Sample

	155 - HPH	156 - HBI	157 - HAR	158 - HBA	159 - HBA	160 - HBI	161 - HA	162 - HPH
L4-25S	8	7	6	19	8	8	24	1
L4-0	8	7	7	-1	2	2	24	9
L4-25N	8	7	7	16	8	9	20	9
L4-50N	7	6	7	17	8	8	20	8
L4-75N	8	6	6	16	8	8	22	8
L4-100N	9	7	8	21	10	2	25	1
L4-125N	8	7	7	19	8	2	25	1
L4-150N	8	7	7	20	9	9	25	9
L5-200S	8	7	7	16	8	8	17	8
L5-175S	8	7	7	18	8	8	22	9
L5-150S	9	7	8	25	10	10	34	10
L5-125S	8	7	7	19	1	9	25	1
L5-100S	8	7	7	18	8	1	22	2
L5-75S	8	7	-1	17	8	8	22	8
L5-50S	7	7	6	16	7	8	21	8
L5-50S-R	9	7	7	-1	2	9	25	9
L5-25S	8	7	7	20	8	8	24	1
L5-0	8	7	7	17	8	2	23	8
L5-25N	8	6	6	17	8	8	23	8
L5-50N	9	8	8	22	10	10	30	10
L5-75N	8	7	7	22	8	8	24	9
L5-100N	8	7	7	20	9	9	28	2
LMB-QA	8	7	7	19	8	1	22	1
LMB-QA	8	7	7	20	8	8	25	2
LMB-QA	8	6	6	19	8	8	22	1

A10-8843

24/24

Appendix III
Typical Field Samples – Prior to processing

Appendix IV

Appendix IV is used for kimberlite reports only

Appendix V

Sample Field Logs

Appendix V - Sample Field Logs

Sample # __L3 -200S__

name:____KC____ date: Nov 22, 2010

project:____Larry Gervais - Thornloe SGH____

Location: (Nad 83, UTM, Zone 17)

Northing: _5,351,881_

Easting: _457,813_

Location: (Local grid reference)

__L3/200S__

Sampling method:____Hand Auger____

Depth: __90 cm__

Comments: ORGANIC MATERIAL
     -NEAR LAKE
     - PHOTOS

Sample # __L3 -175S__

name:____KC____ date: Nov 22, 2010

project:____Larry Gervais - Thornloe SGH____

Location: (Nad 83, UTM, Zone 17)

Northing: _5,351,904_

Easting: _457,803_

Location: (Local grid reference)

__L3/175S__

Sampling method:____Hand Auger____

Depth: __75 cm__

Comments: GREY/TAN - MARL
     - NEAR LAKE

Sample # __L3-150S__

name:____KC____ date: Nov 22, 2010

project:____Larry Gervais - Thornloe SGH____

Location: (Nad 83, UTM, Zone 17)

Northing: _5,351,927_

Easting: _457,794_

Location: (Local grid reference)

__L3/150S__

Sampling method:____Hand Auger____

Depth: __20 cm__

Comments: TAN/RED ~~CLAY~~ KC
       SANDY

Sample # __L3-125S__

name:____KC____ date: Nov 22, 2010

project:____Larry Gervais - Thornloe SGH____

Location: (Nad 83, UTM, Zone 17)

Northing: _5,351,950_

Easting: _457,784_

Location: (Local grid reference)

__L3/125S__

Sampling method:____Hand Auger____

Depth: __40 cm__

Comments: TAN/RED ~~CLAY~~ KC
       SANDY.

Appendix V - Sample Field Logs

Sample # __L3-100S__

name:____KC____ date: Nov 22, 2010

project:____Larry Gervais - Thornloe SGH____

Location: (Nad 83, UTM, Zone 17)

Northing: __5,351,973__

Easting: __457,775__

Location: (Local grid reference)

__L3/100S__

Sampling method: ____Hand Auger____

Depth: __25cm__

Comments: TAN/RED ~~CLAY~~ Kea SANDY.

Sample # __L3-75S__

name:____KC____ date: Nov 22, 2010

project:____Larry Gervais - Thornloe SGH____

Location: (Nad 83, UTM, Zone 17)

Northing: __5,351,996__

Easting: __457,765__

Location: (Local grid reference)

__L3/75S__

Sampling method: ____Hand Auger____

Depth: __25cm__

Comments: TAN/BROWN ~~CLAY~~ Kea SANDY.

Sample # __L3-50s__

name:____KC____ date: Nov 22, 2010

project:____Larry Gervais - Thornloe SGH____

Location: (Nad 83, UTM, Zone 17)

Northing: __5,352,019__

Easting: __457,756__

Location: (Local grid reference)

__L3/50S__

Sampling method: ____Hand Auger____

Depth: __25cm__

Comments: TAN/BROWN SAND.

Sample # __L3-25S__

name:____KC____ date: Nov 22, 2010

project:____Larry Gervais - Thornloe SGH____

Location: (Nad 83, UTM, Zone 17)

Northing: __5,352,042__

Easting: __457,746__

Location: (Local grid reference)

__L3/25S__

Sampling method: ____Hand Auger____

Depth: __20 cm__

Comments: TAN/BROWN/RED SAND.

Appendix V - Sample Field Logs

Sample # **L3-0N**

name: KC   date: Nov 22, 2010

project: Larry Gervais - Thornloe SGH

Location: (Nad 83, UTM, Zone 17)

Northing: **5,352,065**

Easting: **457,737**

Location: (Local grid reference)

L3/0N

Sampling method: Hand Auger

Depth: **30 cm**

Comments: **TAN/BROWN SAND.**

Sample # **L3-25N**

name: KC   date: Nov 22, 2010

project: Larry Gervais - Thornloe SGH

Location: (Nad 83, UTM, Zone 17)

Northing: **5,352,089**

Easting: **457,727**

Location: (Local grid reference)

L3/25N

Sampling method: Hand Auger

Depth: **30 cm**

Comments: **TAN, SANDY CLAY.**

Sample # **L3-50N**

name: KC   date: Nov 22, 2010

project: Larry Gervais - Thornloe SGH

Location: (Nad 83, UTM, Zone 17)

Northing: **5,352,112**

Easting: **457,718**

Location: (Local grid reference)

L3/50N

Sampling method: Hand Auger

Depth: **30 cm**

Comments: **WET, BROWN, SANDY CLAY.**

Sample # **L3-75N**

name: KC   date: Nov 22, 2010

project: Larry Gervais - Thornloe SGH

Location: (Nad 83, UTM, Zone 17)

Northing: **5,352,135**

Easting: **457,708**

Location: (Local grid reference)

L3/75N

Sampling method: Hand Auger

Depth: **10 cm**

Comments: **WET, BROWN, SANDY CLAY.**

Appendix V - Sample Field Logs

Sample # __L3-100N__

name: ____KC____ date: Nov 22, 2010

project: ____Larry Gervais - Thornloe SGH____

Location: (Nad 83, UTM, Zone 17)

Northing: __5,352,158__

Easting: __457,698__

Location: (Local grid reference)

__L3/100N__

Sampling method: ____Hand Auger____

Depth: __40 cm__

Comments: __GREY/TAN - MARL__

Sample # __L3-125N__

name: ____KC____ date: Nov 22, 2010

project: ____Larry Gervais - Thornloe SGH____

Location: (Nad 83, UTM, Zone 17)

Northing: __5,352,181__

Easting: __457,689__

Location: (Local grid reference)

__L3/125N__

Sampling method: ____Hand Auger____

Depth: __25cm__

Comments: __BROWN, SANDY CLAY__

Sample # __L3-150N__

name: ____KC____ date: Nov 22, 2010

project: ____Larry Gervais - Thornloe SGH____

Location: (Nad 83, UTM, Zone 17)

Northing: __5,352,204__

Easting: __457,679__

Location: (Local grid reference)

__L3/150N__

Sampling method: ____Hand Auger____

Depth: __20 cm__

Comments: __TAN/ORANGE SAND__

Sample # __L3-175N__

name: ____KC____ date: Nov 22, 2010

project: ____Larry Gervais - Thornloe SGH____

Location: (Nad 83, UTM, Zone 17)

Northing: __5,352,227__

Easting: __457,670__

Location: (Local grid reference)

__L3/175N__

Sampling method: ____Hand Auger____

Depth: __25cm__

Comments: __BROWN/RED SAND__

Appendix V - Sample Field Logs

Sample # L4 - 150N

name: KC date: Nov 22, 2010

project: Larry Gervais - Thornloe SGH

Location: (Nad 83, UTM, Zone 17)

Northing: 5,352,242

Easting: 457,772

Location: (Local grid reference)

L4/150N

Sampling method: Hand Auger

Depth: 15cm

Comments: BROWN/RED SAND.

Sample # L4 - 125N

name: KC date: Nov 22, 2010

project: Larry Gervais - Thornloe SGH

Location: (Nad 83, UTM, Zone 17)

Northing: 5,352,219

Easting: 457,781

Location: (Local grid reference)

L4/125N

Sampling method: Hand Auger

Depth: 20 cm

Comments: TAN SAND.

Sample # L4-100N

name: KC date: Nov 22, 2010

project: Larry Gervais - Thornloe SGH

Location: (Nad 83, UTM, Zone 17)

Northing: 5,352,196

Easting: 457,791

Location: (Local grid reference)

L4/100N

Sampling method: Hand Auger

Depth: 20 cm

Comments: BROWN SAND.

Sample # L4 - 75N

name: KC date: Nov 22, 2010

project: Larry Gervais - Thornloe SGH

Location: (Nad 83, UTM, Zone 17)

Northing: 5,352,173

Easting: 457,800

Location: (Local grid reference)

L4/75N

Sampling method: Hand Auger

Depth: 35cm

Comments: WET, BROWN SAND.

Appendix V - Sample Field Logs

Sample # __L4 - 50N__

name:____KC____ date: Nov 22, 2010

project:____Larry Gervais - Thornloe SGH____

Location: (Nad 83, UTM, Zone 17)

Northing: __5,352,150__

Easting: __457,810__

Location: (Local grid reference)

__L4/50N__

Sampling method: ____Hand Auger____

Depth: __60 cm__

Comments:
__WET, BROWN SAND.__

Sample # __L4 - 25N__

name:____KC____ date: Nov 22, 2010

project:____Larry Gervais - Thornloe SGH____

Location: (Nad 83, UTM, Zone 17)

Northing: __5,352,127__

Easting: __457,820__

Location: (Local grid reference)

__L4/25N__

Sampling method: ____Hand Auger____

Depth: __60 cm__

Comments:
__BROWN SAND.__

Sample # __L4 - 0N__

name:____KC____ date: Nov 22, 2010

project:____Larry Gervais - Thornloe SGH____

Location: (Nad 83, UTM, Zone 17)

Northing: __5,352,104__

Easting: __457,829__

Location: (Local grid reference)

__L4/0N__

Sampling method: ____Hand Auger____

Depth: __20 cm__

Comments:
__TAN/RED SAND.__

Sample # __L4 - 25S__

name:____KC____ date: Nov 22, 2010

project:____Larry Gervais - Thornloe SGH____

Location: (Nad 83, UTM, Zone 17)

Northing: __5,352,081__

Easting: __457,839__

Location: (Local grid reference)

__L4/25S__

Sampling method: ____Hand Auger____

Depth: __15cm__

Comments:
__TAN/BROWN SAND.__

Appendix V - Sample Field Logs

Sample # __L4 - 50 s__

name: __KC__ date: Nov 22, 2010

project: __Larry Gervais - Thornloe SGH__

Location: (Nad 83, UTM, Zone 17)

Northing: __5,352,057__

Easting: __457,848__

Location: (Local grid reference)

__L4 / 50 s__

Sampling method: __Hand Auger__

Depth: __15 cm__

Comments:
__TAN / RED CLAY__

Sample # __L4 - 75 s__

name: __KC__ date: Nov 22, 2010

project: __Larry Gervais - Thornloe SGH__

Location: (Nad 83, UTM, Zone 17)

Northing: __5,352,034__

Easting: __457,858__

Location: (Local grid reference)

__L4 / 75 s__

Sampling method: __Hand Auger__

Depth: __30 cm__

Comments:
__BROWN SAND.__

Sample # __L4 - 100 s__

name: __KC__ date: Nov 22, 2010

project: __Larry Gervais - Thornloe SGH__

Location: (Nad 83, UTM, Zone 17)

Northing: __5,352,011__

Easting: __457,867__

Location: (Local grid reference)

__L4 / 100 s__

Sampling method: __Hand Auger__

Depth: __20 cm__

Comments: __TAN SAND.__

Sample # __L4 - 125 s__

name: __KC__ date: Nov 22, 2010

project: __Larry Gervais - Thornloe SGH__

Location: (Nad 83, UTM, Zone 17)

Northing: __5,351,988__

Easting: __457,877__

Location: (Local grid reference)

__L4 / 125 s__

Sampling method: __Hand Auger__

Depth: __20 cm__

Comments:
__BROWN SAND.__

Appendix V - Sample Field Logs

Sample # __L4 - 150 S__

name: ___KC___ date: Nov 22, 2010

project: ___Larry Gervais - Thornloe SGH___

Location: (Nad 83, UTM, Zone 17)

Northing: __5,351,965__

Easting: __457,886__

Location: (Local grid reference)

__L4 / 150S__

Sampling method: ___Hand Auger___

Depth: __20 cm__

Comments: TAN SAND.

Sample # __L4 - 175 S__

name: ___KC___ date: Nov 22, 2010

project: ___Larry Gervais - Thornloe SGH___

Location: (Nad 83, UTM, Zone 17)

Northing: __5,351,942__

Easting: __457,896__

Location: (Local grid reference)

__L4 / 175S__

Sampling method: ___Hand Auger___

Depth: __90cm__

Comments:
50% TAN / BROWN SAND
50% - ORGANICS

Sample # __L4 - 200S__

name: ___KC___ date: Nov 22, 2010

project: ___Larry Gervais - Thornloe SGH___

Location: (Nad 83, UTM, Zone 17)

Northing: __5,351,919__

Easting: __457,905__

Location: (Local grid reference)

__L4 / 200S__

Sampling method: ___Hand Auger___

Depth: __90 cm__

Comments:
- DARK BROWN - ORGANICS
- SWAMPY AREA.

Sample # __L5 - 200 S__

name: ___KC___ date: Nov 22, 2010

project: ___Larry Gervais - Thornloe SGH___

Location: (Nad 83, UTM, Zone 17)

Northing: __5,351,957__

Easting: __457,998__

Location: (Local grid reference)

__L5 / 200S__

Sampling method: ___Hand Auger___

Depth: __40 cm__

Comments: WET, BROWN SAND.

Appendix V - Sample Field Logs

Sample # **L5 - 175S**

name: KC date: Nov 22, 2010

project: Larry Gervais - Thornloe SGH

Location: (Nad 83, UTM, Zone 17)

Northing: **5,351,980**

Easting: **457,988**

Location: (Local grid reference)

L5/175 S

Sampling method: Hand Auger

Depth: **20 cm**

Comments: **TAN/RED SAND.**

Sample # **L5 - 150 S**

name: KC date: Nov 22, 2010

project: Larry Gervais - Thornloe SGH

Location: (Nad 83, UTM, Zone 17)

Northing: **5,352,003**

Easting: **457,979**

Location: (Local grid reference)

L5/150 S

Sampling method: Hand Auger

Depth: **40cm**

Comments: **TAN/RED SAND.**

Sample # **L5 - 125 S**

name: KC date: Nov 22, 2010

project: Larry Gervais - Thornloe SGH

Location: (Nad 83, UTM, Zone 17)

Northing: **5,352,026**

Easting: **457,969**

Location: (Local grid reference)

L5/125 S

Sampling method: Hand Auger

Depth: **30 cm**

Comments: **TAN/BROWN/RED SAND.**

Sample # **L5 - 100S**

name: KC date: Nov 22, 2010

project: Larry Gervais - Thornloe SGH

Location: (Nad 83, UTM, Zone 17)

Northing: **5,352,049**

Easting: **457,960**

Location: (Local grid reference)

L5/100S

Sampling method: Hand Auger

Depth: **30 cm**

Comments: **BROWN SAND.**

Appendix V - Sample Field Logs

Sample # __L5 - 75 S__

name: __KC__ date: Nov 22, 2010

project: __Larry Gervais - Thornloe SGH__

Location: (Nad 83, UTM, Zone 17)

Northing: __5,352,072__

Easting: __457,950__

Location: (Local grid reference)

__L5 / 75 S__

Sampling method: __Hand Auger__

Depth: __25 cm__

Comments:

__BROWN / RED SAND.__

Sample # __L5 - 50 S__

name: __KC__ date: Nov 22, 2010

project: __Larry Gervais - Thornloe SGH__

Location: (Nad 83, UTM, Zone 17)

Northing: __5,352,096__

Easting: __457,941__

Location: (Local grid reference)

__L5 / 50 S__

Sampling method: __Hand Auger__

Depth: __30 cm__

Comments:

__TAN / RED SAND__

Sample # __L5 - 25 S__

name: __KC__ date: Nov 22, 2010

project: __Larry Gervais - Thornloe SGH__

Location: (Nad 83, UTM, Zone 17)

Northing: __5,352,119__

Easting: __457,931__

Location: (Local grid reference)

__L5 / 25 S__

Sampling method: __Hand Auger__

Depth: __30 cm__

Comments:

__TAN / ORANGE SAND__

Sample # __L5 - ON__

name: __KC__ date: Nov 22, 2010

project: __Larry Gervais - Thornloe SGH__

Location: (Nad 83, UTM, Zone 17)

Northing: __5,352,142__

Easting: __457,921__

Location: (Local grid reference)

__L5 / ON__

Sampling method: __Hand Auger__

Depth: __20 cm__

Comments:

__TAN / RED SAND__

Appendix V - Sample Field Logs

Sample # __L5 - 25 N__

name:____KC____ date: Nov 22, 2010

project:____Larry Gervais - Thornloe SGH____

Location: (Nad 83, UTM, Zone 17)

Northing: __5,352,165__

Easting: __457,912__

Location: (Local grid reference)

__L5/25N__

Sampling method: ____Hand Auger____

Depth: __25 cm__

Comments:

__TAN/RED SAND.__

Sample # __L5 - 50N__

name:____KC____ date: Nov 22, 2010

project:____Larry Gervais - Thornloe SGH____

Location: (Nad 83, UTM, Zone 17)

Northing: __5,352,188__

Easting: __457,902__

Location: (Local grid reference)

__L5/50N__

Sampling method: ____Hand Auger____

Depth: __15 cm__

Comments:

__BROWN SAND.__

Sample # __L5 - 75N__

name:____KC____ date: Nov 22, 2010

project:____Larry Gervais - Thornloe SGH____

Location: (Nad 83, UTM, Zone 17)

Northing: __5,352,211__

Easting: __457,893__

Location: (Local grid reference)

__L5/75N__

Sampling method: ____Hand Auger____

Depth: __20 cm__

Comments:

__TAN/BROWN SAND.__

Sample # __L5 - 100N__

name:____KC____ date: Nov 22, 2010

project:____Larry Gervais - Thornloe SGH____

Location: (Nad 83, UTM, Zone 17)

Northing: __5,352,234__

Easting: __457,883__

Location: (Local grid reference)

__L5/100N__

Sampling method: ____Hand Auger____

Depth: __15 cm__

Comments:

__BROWN SAND.__

Appendix V - Sample Field Logs

Sample #   LI – 50S

name: KC   date: Nov 23, 2010

project: Larry Gervais - Thornloe SGH

Location: (Nad 83, UTM, Zone 17)

Northing: 5,351,943

Easting: 457,571

Location: (Local grid reference)

LI/50S

Sampling method: Hand Auger

Depth: 25 cm

Comments: BROWN/RED SAND.

Sample #   LI – 25S

name: KC   date: Nov 23, 2010

project: Larry Gervais - Thornloe SGH

Location: (Nad 83, UTM, Zone 17)

Northing: 5,351,966

Easting: 457,561

Location: (Local grid reference)

LI/25S

Sampling method: Hand Auger

Depth: 30 cm

Comments: TAN/BROWN/ORANGE SAND.

Sample #   LI/ON

name: KC   date: Nov 23, 2010

project: Larry Gervais - Thornloe SGH

Location: (Nad 83, UTM, Zone 17)

Northing: 5,351,989

Easting: 457,552

Location: (Local grid reference)

LI/ON

Sampling method: Hand Auger

Depth: 20 cm

Comments: TAN/ORANGE SAND.

Sample #   LI – 25N

name: KC   date: Nov 23, 2010

project: Larry Gervais - Thornloe SGH

Location: (Nad 83, UTM, Zone 17)

Northing: 5,352,012

Easting: 457,542

Location: (Local grid reference)

LI/25N

Sampling method: Hand Auger

Depth: 25 cm

Comments: TAN/ORANGE SAND.

Appendix V - Sample Field Logs

Sample # __L1 - 50N__

name: ___KC___ date: Nov 23, 2010

project: __Larry Gervais - Thornloe SGH__

Location: (Nad 83, UTM, Zone 17)

Northing: __5,352,035__

Easting: __457,533__

Location: (Local grid reference)

__L1/50N__

Sampling method: __Hand Auger__

Depth: __25 cm__

Comments:
TAN/ORANGE SAND.

Sample # __L1 - 75N__

name: ___KC___ date: Nov 23, 2010

project: __Larry Gervais - Thornloe SGH__

Location: (Nad 83, UTM, Zone 17)

Northing: __5,352,058__

Easting: __457,523__

Location: (Local grid reference)

__L1/75N__

Sampling method: __Hand Auger__

Depth: __30 cm__

Comments:
TAN/ORANGE SAND.

Sample # __L1/100N__

name: ___KC___ date: Nov 23, 2010

project: __Larry Gervais - Thornloe SGH__

Location: (Nad 83, UTM, Zone 17)

Northing: __5,352,082__

Easting: __457,514__

Location: (Local grid reference)

__L1/100N__

Sampling method: __Hand Auger__

Depth: __30 cm__

Comments:
TAN/ORANGE SAND.

Sample # __L1/125N__

name: ___KC___ date: Nov 23, 2010

project: __Larry Gervais - Thornloe SGH__

Location: (Nad 83, UTM, Zone 17)

Northing: __5,352,105__

Easting: __457,504__

Location: (Local grid reference)

__L1/125N__

Sampling method: __Hand Auger__

Depth: __70 cm__

Comments:
- BROWN SAND.
- WITH ORGANICS.

Appendix V - Sample Field Logs

Sample # __LI - 150N__

name: __KC__ date: Nov 23, 2010

project: __Larry Gervais - Thornloe SGH__

Location: (Nad 83, UTM, Zone 17)
Northing: __5,352,128__
Easting: __457,495__

Location: (Local grid reference)
__LI / 150N__

Sampling method: __Hand Auger__

Depth: __100 cm__

Comments:
- BROWN, SAND/CLAY MIX.
- SOME ORGANICS.

Sample # __LI - 175N__

name: __KC__ date: Nov 23, 2010

project: __Larry Gervais - Thornloe SGH__

Location: (Nad 83, UTM, Zone 17)
Northing: __5,352,151__
Easting: __457,485__

Location: (Local grid reference)
__LI / 175N__

Sampling method: __Hand Auger__

Depth: __30 cm__

Comments:
TAN / ORANGE SAND.

Sample # __LI - 200N__

name: __KC__ date: Nov 23, 2010

project: __Larry Gervais - Thornloe SGH__

Location: (Nad 83, UTM, Zone 17)
Northing: __5,352,174__
Easting: __457,475__

Location: (Local grid reference)
__LI / 200N__

Sampling method: __Hand Auger__

Depth: __20 cm__

Comments:
ORANGE / TAN SAND.

Sample # __LI - 225N__

name: __KC__ date: Nov 23, 2010

project: __Larry Gervais - Thornloe SGH__

Location: (Nad 83, UTM, Zone 17)
Northing: __5,352,197__
Easting: __457,466__

Location: (Local grid reference)
__LI / 225N__

Sampling method: __Hand Auger__

Depth: __25cm__

Comments:
ORANGE SAND.

Appendix V - Sample Field Logs

Sample # __LI - 250 N__

name:_____KC_____ date: Nov 23, 2010

project:___Larry Gervais - Thornloe SGH___

Location: (Nad 83, UTM, Zone 17)

Northing: __5,352,220__

Easting: __457,456__

Location: (Local grid reference)

__LI / 250 N__

Sampling method: ___Hand Auger___

Depth: __25 cm__

Comments:
__ORANGE / TAN SAND.__

Sample # __LI - 275 N__

name:_____KC_____ date: Nov 23, 2010

project:___Larry Gervais - Thornloe SGH___

Location: (Nad 83, UTM, Zone 17)

Northing: __5,352,243__

Easting: __457,447__

Location: (Local grid reference)

__LI / 275 N__

Sampling method: ___Hand Auger___

Depth: __20 cm__

Comments:
__ORANGE / TAN SAND.__

Sample # __L2 - 225 N__

name:_____KC_____ date: Nov 23, 2010

project:___Larry Gervais - Thornloe SGH___

Location: (Nad 83, UTM, Zone 17)

Northing: __5,352,235__

Easting: __457,558__

Location: (Local grid reference)

__L2 / 225 N__

Sampling method: ___Hand Auger___

Depth: __30 cm__

Comments:
__TAN / ORANGE SAND.__

Sample # __L2 - 200 N__

name:_____KC_____ date: Nov 23, 2010

project:___Larry Gervais - Thornloe SGH___

Location: (Nad 83, UTM, Zone 17)

Northing: __5,352,212__

Easting: __457,568__

Location: (Local grid reference)

__L2 / 200 N__

Sampling method: ___Hand Auger___

Depth: __30 cm__

Comments:
__TAN / ORANGE SAND.__

Appendix V - Sample Field Logs

Sample # __L2 - 175N__

name: __KC__   date: Nov 23, 2010

project: __Larry Gervais - Thornloe SGH__

Location: (Nad 83, UTM, Zone 17)
Northing: __5,352,189__
  Easting: __457,577__

Location: (Local grid reference)

__L2 / 175N__

Sampling method: __Hand Auger__

Depth: __15cm__

Comments:
  ORANGE SAND.

Sample # __L2 - 150N__

name: __KC__   date: Nov 23, 2010

project: __Larry Gervais - Thornloe SGH__

Location: (Nad 83, UTM, Zone 17)
Northing: __5,352,166__
  Easting: __457,587__

Location: (Local grid reference)

__L2 / 150N__

Sampling method: __Hand Auger__

Depth: __25cm__

Comments:
  - ORANGE / RED SAND.
  - OLD ROAD NEARBY.

Sample # __L2 - 125N__

name: __KC__   date: Nov 23, 2010

project: __Larry Gervais - Thornloe SGH__

Location: (Nad 83, UTM, Zone 17)
Northing: __5,352,143__
  Easting: __457,596__

Location: (Local grid reference)

__L2 / 125N__

Sampling method: __Hand Auger__

Depth: __20 cm__

Comments:
  TAN / ORANGE / RED SAND.

Sample # __L2 - 100N__

name: __KC__   date: Nov 23, 2010

project: __Larry Gervais - Thornloe SGH__

Location: (Nad 83, UTM, Zone 17)
Northing: __5,352,120__
  Easting: __457,606__

Location: (Local grid reference)

__L2 / 100N__

Sampling method: __Hand Auger__

Depth: __20 cm__

Comments:
  - BROWN SAND
  - SOME ORGANICS

Appendix V - Sample Field Logs

Sample # __L2 - 75N__

name: __KC__ date: Nov 23, 2010

project: __Larry Gervais - Thornloe SGH__

Location: (Nad 83, UTM, Zone 17)

Northing: __5,352,097__

Easting: __457,616__

Location: (Local grid reference)

__L2/75N__

Sampling method: __Hand Auger__

Depth: __40 cm__

Comments:
- BROWN SAND
- 1" LAYER - MARL

Sample # __L2 - 50N__

name: __KC__ date: Nov 23, 2010

project: __Larry Gervais - Thornloe SGH__

Location: (Nad 83, UTM, Zone 17)

Northing: __5,352,073__

Easting: __457,625__

Location: (Local grid reference)

__L2/50N__

Sampling method: __Hand Auger__

Depth: __30 cm__

Comments:
BROWN/ORANGE SAND.

Sample # __L2 - 25N__

name: __KC__ date: Nov 23, 2010

project: __Larry Gervais - Thornloe SGH__

Location: (Nad 83, UTM, Zone 17)

Northing: __5,352,050__

Easting: __457,635__

Location: (Local grid reference)

__L2/25N__

Sampling method: __Hand Auger__

Depth: __30 cm__

Comments:
BROWN/ORANGE SAND.

Sample # __L2 - 0N__

name: __KC__ date: Nov 23, 2010

project: __Larry Gervais - Thornloe SGH__

Location: (Nad 83, UTM, Zone 17)

Northing: __5,352,027__

Easting: __457,644__

Location: (Local grid reference)

__L2/0N__

Sampling method: __Hand Auger__

Depth: __20 cm__

Comments:
- BROWN SAND
- 1" LAYER - MARL
- PHOTOS

Appendix V - Sample Field Logs

Sample # __L2 - 25 S__

name:____KC____ date: Nov 23, 2010

project:___Larry Gervais - Thornloe SGH___

Location: (Nad 83, UTM, Zone 17)

Northing: __5,352,004__

Easting: ___457,654___

Location: (Local grid reference)

___L2 / 25S___

Sampling method:___Hand Auger___

Depth: __40 cm__

Comments:

    BROWN SAND.

Sample # __L2 - 50 S__

name:____KC____ date: Nov 23, 2010

project:___Larry Gervais - Thornloe SGH___

Location: (Nad 83, UTM, Zone 17)

Northing: __5,351,981__

Easting: ___457,663___

Location: (Local grid reference)

___L2 / 50S___

Sampling method:___Hand Auger___

Depth: __100 cm__

Comments:

    — BROWN SAND, WITH ORGANICS

    — (MAINLY ORGANICS)

Sample # __L2 - 75S__

name:____KC____ date: Nov 23, 2010

project:___Larry Gervais - Thornloe SGH___

Location: (Nad 83, UTM, Zone 17)

Northing: __5,351,958__

Easting: ___457,673___

Location: (Local grid reference)

___L2 / 75S___

Sampling method:___Hand Auger___

Depth: __100 cm__

Comments:

    BROWN, ORGANIC MATERIAL

Sample # _____

name:____KC____ date: Nov 23, 2010

project:___Larry Gervais - Thornloe SGH___

Location: (Nad 83, UTM, Zone 17)

Northing: _____

Easting: _____

Location: (Local grid reference)

_____

Sampling method:___Hand Auger___

Depth: _____

Comments:

Qualifications and Experience

1982 Graduated from Timmins High and Vocational School

1983 Studied photography at Humber College, Toronto, Ontario

1984 to 1988 Worked for family owned transportation business in Moosonee, Ontario

1988 to 1990* Studied Survey at Northern College, South Porcupine, Ontario

1990* Graduated with Survey Engineering Technician Diploma

1990* to 2001

Owned and operated General Surveys and Exploration based in Timmins, Ontario. The company provided contract survey, computer and information management services to the exploration and mining industry. Software includes Acad, Gemcom and Surpac, with specialization in using computers for the mining and exploration industry.

Work included volumetric survey of land areas to be used as tailing basins, where computerized 3D models were utilized. Diamond drillhole, underground engineering and mechanical design/construction surveys were common contracts for mining and exploration companies. Significant accomplishments include the design and construction of the 110km winter road from Attawapiskat to the Victor Project.

Clients included;

DeBeers Canada Exploration (Monopros), Southernera Resources, Dome Exploration, Placer Dome Detour Lake, Musselwhite and Dome Mines, Exall Glimmer Mine, Claude Rundle Gold Mine, TVX Mines' projects in Northern Greece, Moneta Porcupine Mines, Black Pearl Minerals, St. Andrew Goldfields, Battle Mountain Gold, Pentland Firth, Kinross Gold, Band-Ore Resources, McKinnon Prospecting and many other companies and individual prospectors.

2000 to 2005

Began collaborative work with Brian K. Polk (Polk Geological Services) and established a private exploration company called Big Red Diamond Company. This small company began to stake property near Attawapiskat and Coral Rapids. Eventually the survey business was put aside to focus full time on diamond exploration.

Big Red Diamond Company entered into a Joint Venture with a private company owned by Dr. Charles Fipke of Kelowona, B.C. on a group of properties near DeBeers' Victor Project in the Attawapiskat region. Dr. Fipke is the renowned geologist who found Canada's first diamond mine, the Ekati Mine in Northwest Territories.

Since 2001 the author has been exposed to all aspects of diamond exploration including;

Claim staking, field work, camp construction, airborne and ground magnetometer survey, planning and management of large scale geophysical programs, planning, management and interpretation of regional and property scale sampling programs.

Exposure to the industry includes training and field work under the discretion of Dr. Fipke. Introduction to kimberlite mineral identification from Dr. Fipke was expanded by personal research and study, which continues to current and lead to the establishment of True North Mineral Laboratories in Timmins, Ontario.

Advanced analysis, beyond the stage of heavy mineral separation, or observation using binocular microscope, is handled by other certified analytical laboratories, such as *CF Minerals*, of Kelowona, B.C.

2002

Big Red Diamond Company became a publicly traded corporation.

The author is one of the co-founders of Big Red Diamond Corporation, which trades on the TSX Venture Exchange under the symbol DIA.

The author continues to actively stake mining claims and process sample material for private and public companies.

2005 to 2009

Established True North Mineral Laboratories, at 475 Railway Street, Timmins, Ontario and added Actlabs-Timmins in early 2006. Lab processes, equipment setup and procedures are now supervised by Actlabs, based in Ancaster, Ontario.

The management and employees of True North Mineral Laboratories / Actlabs-Timmins, receive ongoing support and training directly from Actlabs - Ancaster. The laboratory processes fall under Actlabs certification, providing analysis is carried out by the main facility in Ancaster. In this capacity, True North Mineral Laboratories acts as a preparation facility for Actlabs and is qualified to handle material preparation prior to direct analysis by Actlabs.

2009 to current

Sold prep facility to Cattarello Assayers Inc., who now operate a gold fire assay facility at 475 Railway Street, Timmins. True North Mineral Laboratories maintains 1/3 of the floor space, including sample wash facility, heavy mineral workstation and office/picking room.

True North Mineral Laboratories utilizes the services of Actlabs and CF Mineral Research, for projects where an accredited laboratory is required. True North Mineral Laboratories continues to offer a wide range of field services to the exploration Industry.

TRUE NORTH MINERAL LABORATORIES

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Report Completion Date:

January 7, 2011

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