SUMMARY REPORT

ON

SGH SOIL SAMPLING REPORT

On

CLAIM 3001363

In

COOK TOWNSHIP (Larder Lake Mining Division)

FOR

ST ANDREW GOLDFIELDS LTD.

Report prepared by: John McKenzie For: St Andrew Goldfields Ltd.

2015

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INTRODUCTION:

Claim 3001363 is 100% owned by St. Andrew Goldfields Ltd. (SAS), being staked on July, 04, 2002. The block consists of 2 unpatented mining units in the N 1/2 of the N 1/2, Lot10, Con5, in the north western part of COOK Township, Larder Lake Mining Division, ON, centred at UTM NAD27 555,645 5,364,618. See **FIG 1** for property location within Ontario. The property lies about 5 km east of Raymore and 3 km south of Holtyre.

LOCATION & ACCESS:

Access to the property is generally good as two gravel/paved roads stop within 600 meters of the northwest and southwest corners of the claim. A low lying swampy trail then leads to the northwest part of the property. See **FIG2** for Property Location within COOK Township.

PREVIOUS WORK:

In July 2004, SAS carried out a geology and prospecting program on claim 3001363 in COOK Township.

The property was mapped at 1:5000 scale. The mapping outlined three mafic outcrops in the east and southern boundaries of the claim block. Two outcrops were mapped as mafic volcanic flows and the third as gabbro. Because of a thick mossy cover over the remaining two thirds of the property, neither float nor outcrop was discovered. No samples were taken during this mapping/prospecting program.

In March 2006, SAS carried out a line gridding program and a ground magnetic survey on claim 3001363. A total of 9.1 km of line gridding was completed. The grid lines were hip chained, compassed and flagged every 25m and ranged in length from 450 to 650m. The grid lines were spaced 50m apart. The ground magnetic survey was completed using a GSM19 Magnetometer. Readings were taken every 5m. A total of 6.2 km was of survey were carried out within the boundaries of claim 3001363.

The north half of the property showed linear E-W trending moderate to strong magnetic signatures which most likely represents magnetic and non magnetic Kinojevis Group mafic volcanic flows. The south half of the property showed a magnetic depression which may represent metasediment interflows within the mafic group of rocks. The south west and south east parts of the property showed narrow linear E-W trending magnetic highs which most likely represent gabbroic rock types as seen in the 2004 mapping program.

In June, 2007, SAS carried out a Sampling Program on claim 3001363. A total of 9 rock/chip samples were taken from the sparse outcrop exposure in the SE corner of the property. Samples were sent for gold assays. Samples were generally massive mafic flows, pillowed flows, and flow top breccias.

Returned gold assay values were disappointing but not unexpected for the apparently unaltered mafic volcanic. Samples returned no greater than .02 gpt. The samples showed minor sulphides, weak silicification and flow top brecciation.

In April, 2011, SAS carried out a program to Re-establish Claim Boundaries.

REGIONAL GEOLOGY:

Claim 3001363 is located within the Abitibi-Sub-Province of the Superior Province of the Canadian Precambrian Shield. The volcanic, sedimentary and intrusive rocks in the Sub-Province are all Archean age except the late diabase dikes.

Keewatin type volcanic flows are the oldest rocks in the region. Their composition varies from basaltic to ryolitic. They are intercalated with pyroclastic and sedimentary units. Timiskaming type sediments are found locally within the volcanic pile. Rocks of the region are metamorphosed to greenschist facies and are affected by a steeply dipping, east-west striking foliation. They form bodies of various shapes and sizes, with compositions that vary from ultrabasic to granitic.

PROPERTY GEOLOGY:

Over two thirds of the west and central parts of the property are underlain by variable depths of sand and clay overburden. No known drilling has been carried out in this or other parts of the property. Therefore bedrock geology is not known in this area.

However, sparse outcrops in the east and south east parts of the property show mafic volcanic flows and gabbro from the SAS 2004 recon mapping and prospecting program.

Regionally, the property is located within a group metavolcanics termed the Kinojevis Group (Jenson & Langford, 1985). This group of volcanic rocks consist primarily of iron rich to magnesium rich tholeitic basalts, most of which are pillowed to massive flows. The iron rich components of the volcanic pile commonly have elevated magnetic signatures. Therefore, they are readily distinguished on magnetic surveys as are the inferred Fe rich volcanic outlined in the 2006 ground magnetic survey carried out in the property by SAS.

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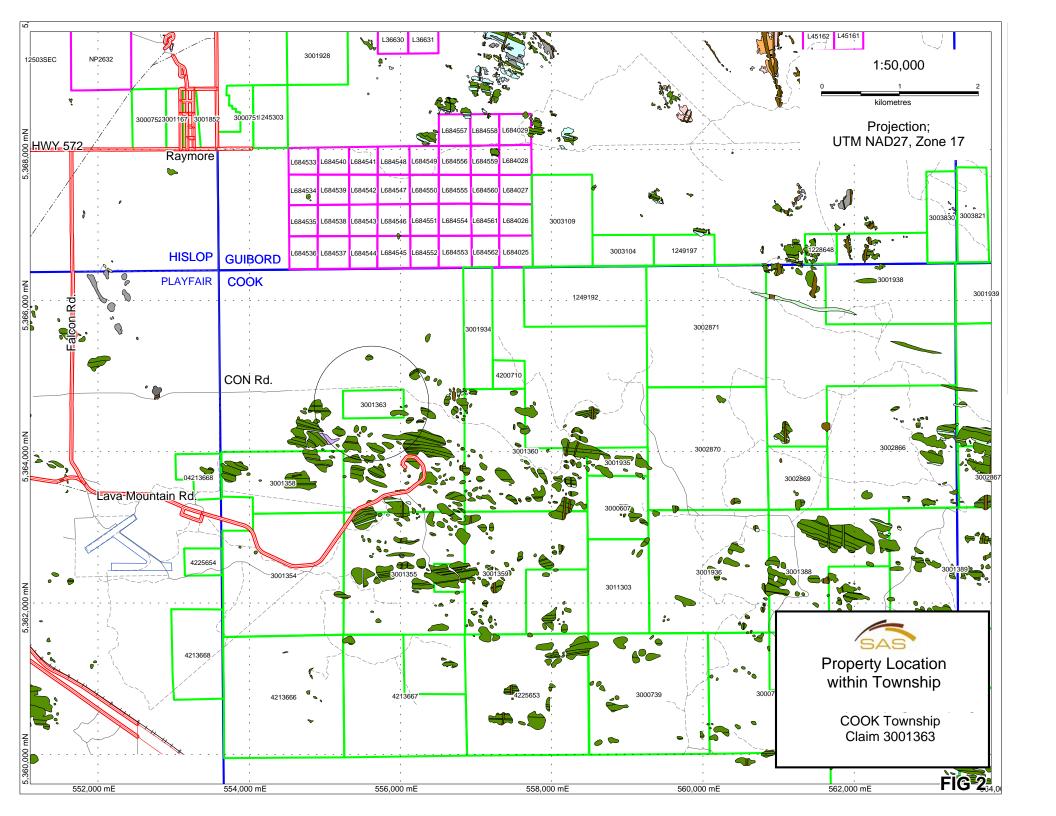
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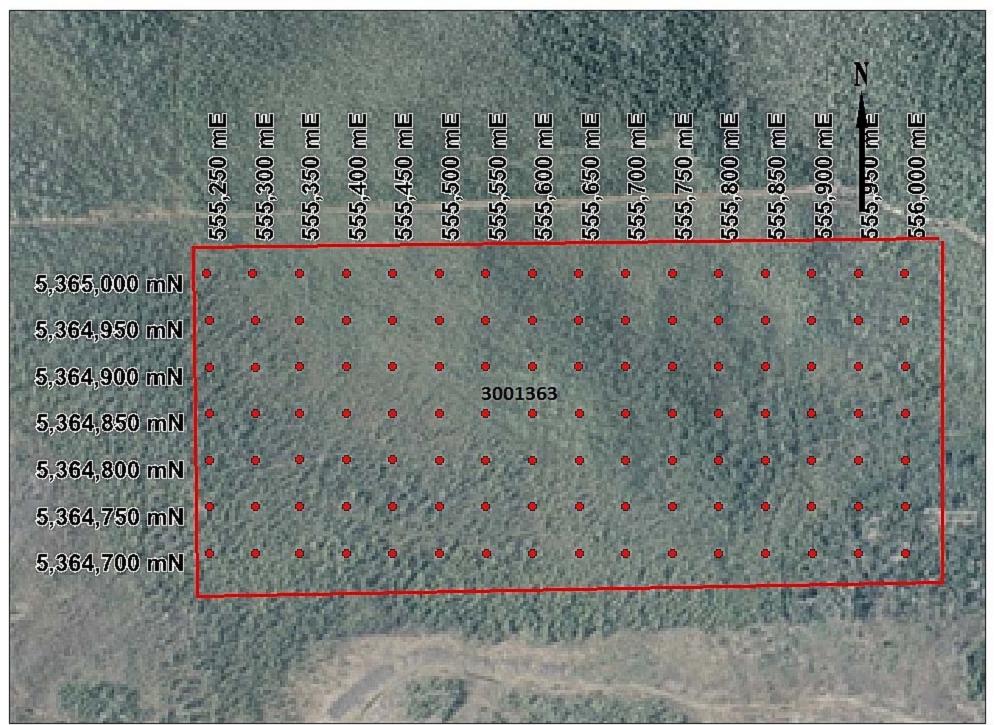
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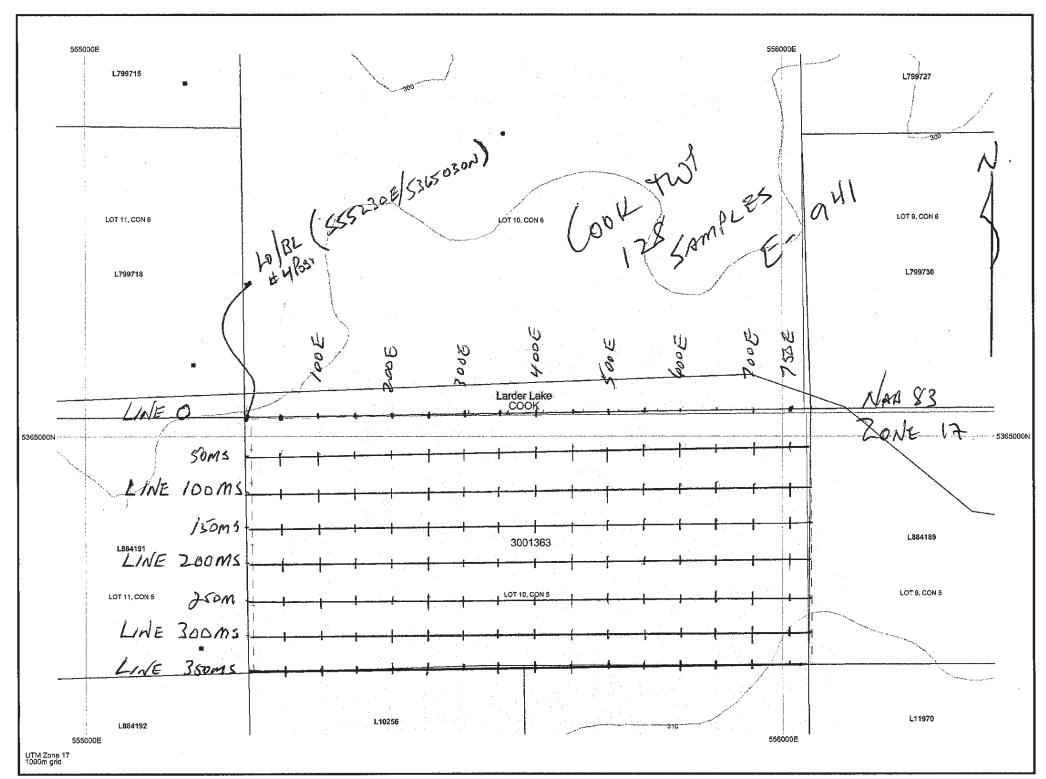
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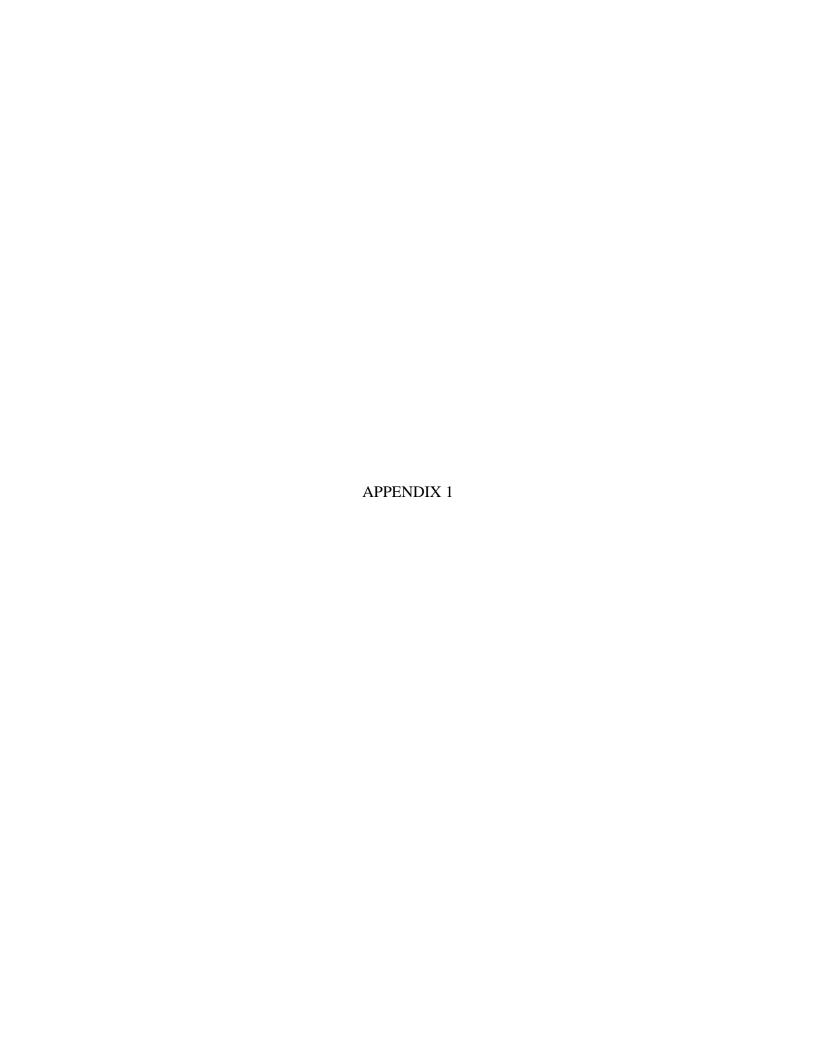
• Report on the Stock Mine, Taylor Mine, Hislop Mine, Fenn-Gib Project and other properties in the Timmins are, Northeastern Ontario, prepared for St Andrew Goldfields Ltd. Roscoe Postle Inc., p1-107.









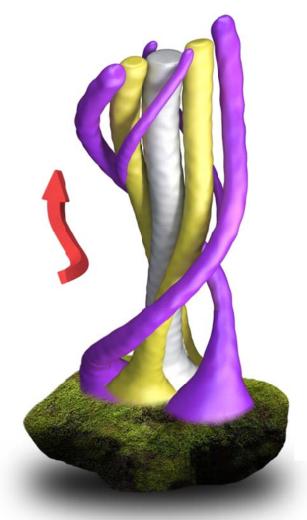




3D - SGH

"A SPATIOTEMPORAL GEOCHEMICAL HYDROCARBON INTERPRETATION"

ST. ANDREWS GOLDFIELDS LTD. COOK TOWNSHIP SGH SOIL SURVEY



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SGH – SOIL GAS HYDROCARBON Predictive Geochemistry

for

ST. ANDREWS GOLDFIELDS LTD. COOK TOWNSHIP - SGH SOIL SURVEY

July 7, 2015

* Dale Sutherland,

Activation Laboratories Ltd

(* - author, originator)

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

THE SGH GOLD INTERPRETATION TEMPLATES
ARE USED FOR THIS REPORT

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Executive Summary

It is important to read the Report Preface on the next page as an introduction to the report. For more detail the Overview section on page 11 could also be read.

The customized section for the COOK TOWNSHIP Survey starts on page 18. In the author's opinion, SGH performed very well in spite of the very wet conditions and use of Humus samples. Even though the signal was quite low, and we lowered the reporting limit by a factor of ten, SGH is perhaps the only geochemistry that is able to illustrate geochemical results in these conditions. An East-West trend was observed at the COOK TOWNSHIP survey that may represent the presence of Gold mineralization. In particular three pods of mineralization, that are considered to be the most important areas in this trend, were able to be identified.

Note that some exploration companies submit this report intact to government assessors as proof of work on their claim. Be aware that the SGH data is not attached to this report as it is supplied separately as an Excel spreadsheet. Government assessors will also have to be supplied with this data.



PREFACE

THIS "STANDARD" SGH INTERPRETATION REPORT:

The purpose of this Soil Gas Hydrocarbon (SGH) interpretation "Standard Report" is to ensure that clients and other potential reviewers of the results have a good understanding of this organic, deep penetrating geochemistry. As SGH provides such a large data set and is not interpreted in the same way as an inorganic geochemical method, the provision of this interpretation and report enables the user to realize the results in a timely fashion and capitalizes on years of research and development since the inception of SGH in 1996 combined with the knowledge obtained by Activation Laboratories through the interpretation of SGH data from over 1,000 surveys for a wide variety of target types in various lithologies from many geographical locations. Although referenced today as a "nano-technology", the analysis of SGH has not changed since inception. The report is compulsory as it is the only known organic geochemistry that, in spite of the name, uses "non-gaseous" semi-volatile organic compounds interpreted using a forensic signature approach. Many different sample types can be used in the same survey. Interpretation is based solely on SGH data and does not include the consideration from any other geochemistry (inorganic), geology, or geophysics that may exist related to the survey area(s). This report can also provide evidence of project maintenance. To keep the price to a minimum and to provide as short a turnaround time as practically possible, usually only one SGH Pathfinder Class map is illustrated in a "Standard Report" with an applied interpretation although several other SGH Pathfinder Class maps are used and referenced. Definitions of certain terms or phrases used in this report can be found in Appendix A. Options include, a Supplemental Report and/or interpretations for other target types and/or a GIS package. (See Appendix H)

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

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DISCLAIMER

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

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Cautionary Note Regarding Assumptions and Forward Looking Statements

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

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

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

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

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

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

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SOIL GAS HYDROCARBON (SGH) GEOCHEMISTRY – OVERVIEW

In the search for minerals and elements, geologists require tools to assess the location and potential quantity of minerals and ores. In the past people looked at the landscape to find the deposit. Similar landscapes indicate similar mineral and metal deposits. This is searching on a macro level, while geochemistry is searching on a micro level. Surficial materials requires many minerals and elements, so surficial materials can contain indications of the presence of minerals and elements.

SGH is a deep penetrating geochemistry that involves the analysis of surficial samples from over potential mineral or petroleum targets. The analysis involves the testing for 162 hydrocarbon compounds in the C5-C17 carbon series range applicable to a wide variety of sample types. These hydrocarbons have been shown to be residues from the decomposition of bacteria and microbes that feed on the target commodity as they require inorganic elements to catalyze the reactions necessary to develop hydrocarbons and grow cells in their life cycle. Specific classes of hydrocarbons (SGH) have been successful for delineating mineral targets found at over 950 metres in depth. Samples of various media have been successfully analyzed i.e., soil (any horizon), sand, till, drill core, rock, peat, humus, lake-bottom sediments and even snow. After preparation in the laboratory, the SGH analysis incorporates a very weak leach, essentially aqueous, that only extracts the surficial bound hydrocarbon compounds and those compounds in interstitial spaces around the sample particles. These are the hydrocarbons that have been mobilized from the target depth. SGH is unique and should not be confused with other hydrocarbon tests or traditional analyses that measure C1 (Methane) to C5 (Pentane) or other gases. Thus, in spite of the name, SGH does not analyze for any hydrocarbons that are actually gaseous at room temperature and SGH can also be used to analyze for hydrocarbons in sample types other than soil. SGH is also different from other soil hydrocarbon tests that thermally extracts or desorbs all of the hydrocarbons from the whole soil sample. This test is less specific as it does not separate the hydrocarbons and thus does not identify or measure the responses as precisely. These tests also do not use a forensic approach for identification. In SGH, the hydrocarbons in the sample extract are separated by high resolution capillary column gas chromatography and then detected by mass spectrometry to isolate, confirm, and measure the presence of only the individual hydrocarbons that have been found to be of interest from initial research and development and from performance testing especially from two Canadian Mining Industry Research Organization (CAMIRO) projects (97E04 and 01E02).

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

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SGH has attracted the attention of a large number of Exploration companies. In the above mentioned initial research projects the sponsors have included (in no order): Western Mining Corporation, BHP-Billiton, Inco, Noranda, Outokumpu, Xstrata, Cameco, Cominco, Rio Algom, Alberta Geological Survey, Ontario Geological Survey, Manitoba Geological Survey and OMET. Further, beyond this research, Activation Laboratories Ltd. has interpreted the SGH data for over 1,000 targets from clients since January of 2004. In both CAMIRO research projects over known mineralization, client orientation studies, and in exploration projects over unknown targets, SGH has performed exceptionally well. As an example, in the first CAMIRO research project that commenced in 1997 (Project 97E04), there were 10 study areas that were submitted blindly to Actlabs. These study sites were specifically selected since other inorganic geochemical methods were unsuccessful at illustrating anomalies related to the target. Although Actlabs was only provided with the samples and their coordinates, SGH was able to locate the blind mineralization with exceptional accuracy in 9 of the 10 surveys. In 2007, shortly after providing SGH interpretation reports, SGH was credited in helping locate previously unknown mineralization, e.g. Golden Band Resources drilled an SGH anomaly and discovered a significant vein containing "visible" gold. (www.goldenbandresources.com) SGH has been very successful and mining companies have repeatedly used SGH on several reports. Of those clients that try this SGH Geochemistry, over 90+% have continued to use this technique as repeat clients. SGH has helped discover a large number of new deposits, however many clients have kept this to themselves as a competitive strategy.

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SOIL GAS HYDROCARBON SURVEY DESIGN AND SAMPLING

Summary: See Appendix C for more details

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

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

SAMPLE PREPARATION AND SGH ANALYSIS

Summary: See Appendix D for more details

Upon receipt at Activation Laboratories:

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

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SGH DATA QUALITY

Summary: See Appendix E for more details

Reporting Limit:

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

Laboratory Replicate Analysis:

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

Historical SGH Precision:

- Although the SGH analysis reports results at such trace ppt concentration levels, the average %CV for laboratory replicates is excellent at an average of 8% within a range of ±4%.
- Field duplicates have historically been 3 to 5% higher than laboratory replicates.

Laboratory Materials Blank (LMB-QA):

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

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SGH DATA INTERPRETATION

Summary: See Appendix F for more details SGH Interpretation and Report:

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

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SGH CHARACTERISTICS

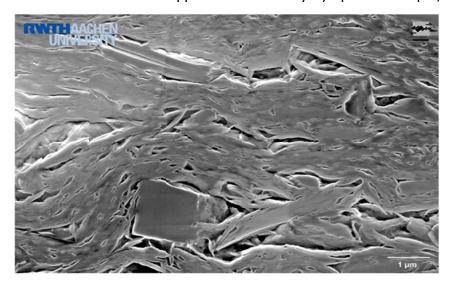
Summary: See Appendix G for more details **SGH Characteristics:**

- The pattern of SGH anomalies are usually of high contrast and easily observed.
- SGH is able to illustrate exceptionally symmetrical anomalies in spite of exotic overburden and barriers such as permafrost, shale and basalt caps, previously thought to be impenetrable.
- Inorganic geochemistry can illustrate anomalies of metals that have been mobilized by surficial physical processes. As SGH is essentially "blind" to the inorganic content of a sample, SGH anomalies illustrate the true source of mineralization as it is not affected by the effects of terrain or from mobilized cover such as from glacial transport.
- As SGH hydrocarbons are essentially non-polar, highly symmetrical anomalies are observed. As such symmetry is rare in geochemistry this provides a higher level of confidence to the interpretation that is reflected by a higher SGH Rating Score in comparison to known case studies.
- SGH can be analyzed on samples collected in different seasons or adjacent years. The combined data most often does not require any data leveling.



SGH INTERPRETATION – LATEST ENHANCEMENTS

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



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

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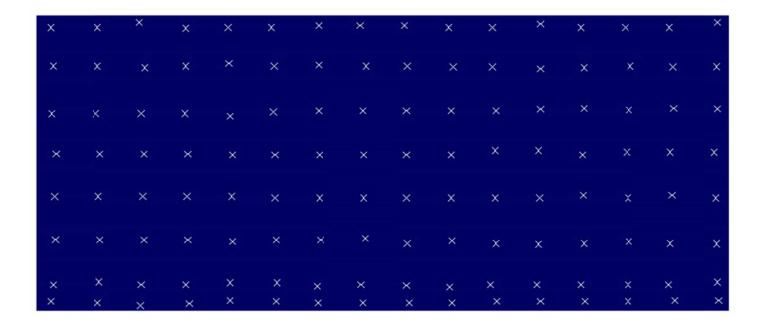
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INTERPRETATION OF SGH RESULTS - A15-04575 ST. ANDREWS GOLDFIELDS LTD. - COOK TOWNSHIP - SGH SURVEY

This report is based on the SGH results from the analysis of a total of 128 very wet humus samples from areas of spruce, tag alders, and moss in an area of semi-swamp and swamp environment. The COOK TOWNSHIP SGH Soil Survey Area is described by a rectangular regular grid of samples taken at 50 metre intervals over an area of 750 metres by 350 metres. The samples were collected in June 2015. Being able to use humus samples or a mix of sample types is one of the strengths in using the SGH geochemistry. Sample coordinates were provided for mapping of the SGH results for these samples as relative coordinates that were taken off a GPS coordinate based on NAD83-Zone 17. The regular grid spacing of this survey provides the best opportunity at discovering mineralization under cover using the SGH Nano-geochemistry. A sample location map is shown below.

COOK TOWNSHIP - SGH SOIL SURVEY - SAMPLE LOCATION MAP



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SGH SURVEY INTERPRETATION A15-04575 – ST. ANDREWS GOLDFIELDS LTD. QUALITY ASSURANCE - COOK TOWNSHIP SGH SOIL SURVEY

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

The overall precision of the SGH analysis for the samples at the COOK TOWNSHIP SGH Soil Survey was excellent as demonstrated by 9 different samples taken from this survey which were used for laboratory replicate analysis and were randomized within the analytical run list. The average Coefficient of Variation (%CV) of the replicate results for the survey samples in this submission was 4.9% which represents a very good level of analytical performance especially at such low parts-per-trillion concentrations.

The location of **Field Duplicate samples was not identified from the COOK TOWNSHIP SGH Soil Survey**. It is typically observed that the variability of field duplicates are 5% to 8% CV higher than for laboratory duplicates of random samples taken from the survey. The fact that the %CV for field duplicates is so low is also due to the very high specificity of the SGH geochemical method that only targets relatively rare hydrocarbons that have been proven to be associated with the decomposition of bacterial that have been in proximity to the target mineralization at depth. Note that the SGH geochemistry does not detect all organic hydrocarbons present in the samples.

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No other statistics were used on the data for this report for mapping or interpretation purposes aside from the use of a Kriging trending algorithm in the GeoSoft Oasis Montaj mapping software. This interpretation is based only on the analytical results provided by the SGH Nano-Geochemistry from this submission of samples for the COOK TOWNSHIP SGH Soil Survey. A template or group of SGH Pathfinder Classes that have been found to be associated with buried Gold targets was used as the basis for the interpretation of the COOK TOWNSHIP SGH Soil Survey. The final interpretation is customized and conducted by the author. Although the term "template" or "signature" appears in this SGH Report, a computerized interpretation is not used.

SGH INTERPRETATION - SGH TARGET PATHFINDER CLASS MAPS

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

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

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

The SGH Class maps are the plot of the sums of the particular hydrocarbon class in parts-pertrillion concentration. The dark blue represents very low or non-detect values. For plotting purposes the values at the Reporting Limit are plotted as one-half of this filtering, or one-half of 1.0 ppt. The hotter colours represent higher concentrations of the sum of the class with the highest values being purple in colour. The lowest concentrations that may be at 0.5 ppt, are shown in blue.

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

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

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

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

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A15-04575 – ST. ANDREWS GOLDFIELDS LTD. COOK TOWNSHIP SGH SOIL SURVEY SGH INTERPRETATION RATING AND CLARIFICATION

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

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

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A15-04575 – ST. ANDREWS GOLDFIELDS LTD. - COOK TOWNSHIP SGH SOIL SURVEY - SGH "REDOX" INTERPRETATION

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

One of the first steps in the interpretation of SGH data is to locate potential Redox conditions in the overburden. Redox conditions have been well known to be related to blind mineral targets; however, Redox conditions can also be attributed to other geological bodies that are of no particular interest. SGH signatures have been shown to be able to differentiate between these targets. SGH has been described by the Ontario Geological Survey of Canada (OGS) as a "Redox Cell locator". Redox Cells can be related to the presence of bacteriological activity related to mineralization but also may be related to the presence of geological bodies such as Granite Gneiss, Dunite, etc. Recently SGH has been shown to be far more sensitive to depicting Redox conditions than even measurements using pH or ORP tests. It is important to understand that; not only is SGH a Redox cell locator, but due to the SGH forensic signature of mineralization used in the interpretation process, SGH can discriminate mineral targets and other target types from geological bodies, other magnetically detected targets, mineralized versus non-mineralized conductors, cultural effects, etc. even in surveys over highly difficult or exotic terrain that often requires the collection of multiple sample types. In the interpretation it is not necessary to detect a Redox cell if mineralization is within approximately 30 metres of the surface as this would be insufficient depth to develop a dispersion halo anomaly.

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

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In this COOK TOWNSHIP survey area there was observed an East-West SGH response in the grid that has a similar SGH signature that has been found over Gold deposits. It is not believed that a Redox zone was detected by SGH to complement this signature, however this is not a requirement to depict Gold mineralization if the top of the mineralized zone is quite shallow (< about 30 metres deep) i.e. in this potential Gold zone there appears to be insufficient time in the migration through the overburden to developed a disperse halo anomaly for some SGH Pathfinder Classes that are characteristic of a Redox Zone. Note that the SGH Class map to depict Redox conditions in the overburden is not shown in this report.

A15-04575 – ST. ANDREWS GOLDFIELDS LTD. - COOK TOWNSHIP SGH SOIL SURVEY - SGH "GOLD" INTERPRETATION

This report illustrates an SGH Gold Pathfinder Class map on page 25 in plan view and on page 26 in 3D view that has been very reliable in its association with the presence of Gold mineralization. This SGH Class map is only a portion of the SGH Gold signature used in the interpretation. There is not any one SGH Class map that can, as a single map, be reliably used to interpret the presence of Gold or any other type of mineralization. It should also be noted that some SGH Classes can be used as a portion of other SGH mineral signatures, i.e. some portions of SGH signatures overlap in their use.

The SGH Gold Pathfinder Class shown on the next page is often expected to illustrate an apical response as a vertical projection over mineralization, at the shallowest part of the structure, especially if it is within approximately 30 to 50 metres from surface. This SGH Class map was chosen to be shown in this report as the response was the most definitive one in the SGH Signature associated with Gold Mineralization. SGH is able to analyze humus sample from areas of wet, swampy and otherwise difficult terrain. The trade off with the collection of humus samples is that with the reduced surface area of this material the intensity of the SGH signal is reduced. To best ensure that SGH is able to depict any mineralization, if present, the data filter is changed. Instead of using the Reporting Limit of 1.0 parts-per-trillion (ppt), which represents a limit approximately 5 times the standard deviation of the variability which is where all data is considered as real and not due to any analytical variability, this limit is reduced to 0.1 ppt. The effect of this at the COOK TOWNSHIP survey is that the SGH signature associated with Gold mineralization is not as definitive. This is reflected in the SGH Confidence Rating. Nevertheless, SGH was able to determine a trend (within the dotted yellow outline) associated with an SGH Gold signature and identify possible Gold pods of mineralization that have a higher level of confidence in this trend. Other SGH Classes at the COOK TOWNSHIP survey agree with the interpretation of this trend that may be indicative of Gold mineralization. Note that features at the edge of the survey, and thus having less associated data for interpretation, have not been interpreted.

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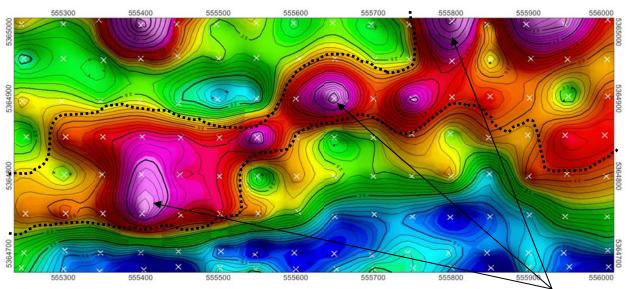
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E GOLD ZONE POSSIBLE SHALLOW GOLD PODS OF MINERALIZATION

SGH SIGNATURE RATING RELATIVE TO "GOLD" = 3.5 OF 6.0



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SGH ANOMALIES PREDICT POSSIBLE GOLD ZONE

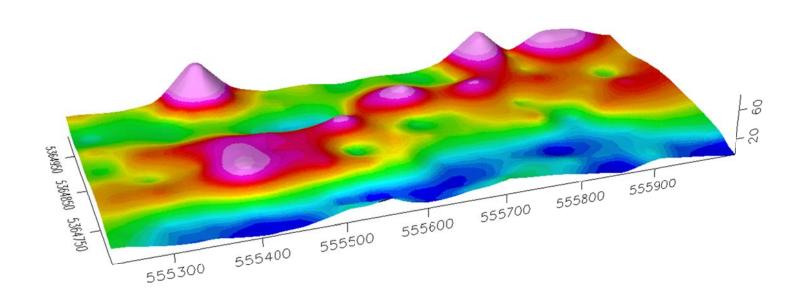
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A15-04575 – ST. ANDREWS GOLDFIELDS LTD. COOK TOWNSHIP SURVEY - SGH "GOLD" PATHFINDER CLASS





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A15-04575 - ST. ANDREWS GOLDFIELDS LTD. - COOK TOWNSHIP SGH SOIL SURVEY - SGH INTERPRETATION FOR "GOLD" MINERALIZATION

The interpretation of the SGH data on page 25 relative to the presence of Gold at the St. Andrews Goldfields Ltd. COOK TOWNSHIP SGH Soil Survey is described by what appears to be the presence of an east-west trending Gold zone having three more distinct pods of possible Gold mineralization. This interpretation is supported by other SGH Classes as part of the SGH signature associated with Gold mineralization. The three more distinct and potentially more important apical anomalies have been identified on page 25. It is logical that this response of the hydrocarbons from the decomposition bacteria and microbe indicates more activity and thus a higher probability of more Gold mineralization at these 3 areas. In areas predicted to have shallower mineralization, such as at these three pods, the SGH anomalies are very reliable at showing vertical projections of mineralization and thus directly illustrating the location of possible drill targets. Note, at this time no geochemistry can predict the thickness of mineralization. The subjective SGH confidence Rating for the apical anomalies on page 25 is 3.5 on a scale of 6.0.

As these multiple SGH Class maps, each made up from multiple responses, agree and were responsible for the development of the interpretation shown. The lower SGH rating shown as 3.5 is a result of the low response for these signals probably from the use of the humus material. These lower intensity responses should not be automatically viewed as a low quantity or low grade of mineralization. The author believes that this is just a difficult area for SGH. He also believes that had a regular grid of samples not been used or had another geochemistry been used instead of SGH, that this potential mineralization would not have been observed at all. Note that SGH is known to be very sensitive for Gold mineralization, i.e. SGH is known to be able to detect narrow gold veins and gold mineralization at less than one gram per tonne. From client feedback in recent years, a few grass roots exploration surveys that have been interpreted with an SGH Confidence Rating of 4.0 (±0.5) have been drill tested and have had successful Gold intersections. However the frequency of success is much more prevalent for those targets that have associated SGH Rating Scores of ≥ 5.0 .

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

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A15-04575 – ST. ANDREWS GOLDFIELDS LTD. - COOK TOWNSHIP SGH SOIL SURVEY - SGH INTERPRETATION FOR "GOLD" MINERALIZATION

The SGH Ratings shown on pages 25 in this and all SGH reports are based on a scale of 6.0, in 0.5 increments, with a value of 6.0 being the best. The SGH Ratings discussed in relation to Gold represents the similarity of these SGH results with other SGH case studies and orientation studies over known mineralization. The SGH Ratings discussed in relation to Gold represents the similarity of these SGH results with other SGH case studies and orientation studies over known Gold mineralization. Theses SGH signatures or templates have been constantly refined and enhanced since inception and has been proven to be effective and reliable. The SGH templates are based on the interpretation from over 1,000 interpretations of surveys in many different geographical regions and from a wide variety of lithologies. The degree of "confidence" in the SGH Rating only starts to be "good" at a level of 4.0. A Rating of 4.0 or more is an indication that this SGH Nano-Geochemistry predicts that the zone(s) described may warrant more work or more consideration.

The identification of a drill target is not an explicit recommendation by Activation Laboratories Ltd. to drill test the associated location or SGH anomaly. A drill target is implied to ensure that the reader is aware of the location having the highest confidence of being the location of the vertical projection of possibly the shallowest mineralization, based only on SGH data. This is also not a recommendation for vertical drilling. Vertical drilling may not be the best approach to test the SGH anomaly in this area. Activation Laboratories Ltd. has no experience in actual exploration drilling techniques. Other geological, geochemical and/or geophysical information should also be considered.

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

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The sample survey design using a 1:1 ratio of sample spacing: transect spacing is known to be the best survey design for the SGH Nano-geochemistry. It has been found that a regular grid as at the Cook Township survey can provide the best results as the spatial aspects of SGH can be visualized and compared to the 3D-SGH theory. The results from this survey design probably contributed significantly to the ability to observe the location of possible Gold pods at the Cook Township survey. Although the optimum confidence was not achieved due to the low intensity of these anomalies it is perhaps the best that can be expected by any geochemistry today as all samples were humus material. The humus samples are expected to be of a lower intensity than for soil samples due to the lower amount of surface area per unit volume for this material. An added benefit to this Cook Township survey is that a single type of sample, i.e. humus material was used which is more important when the results have low values. For future considerations, additional narrowly spaced infill samples could be used to obtain more accuracy for specific drill targets, however this is not recommended at this time. Although 25 metre spacing could be done and may provide a more definitive outline for these pods, other geochemical of geophysical tests should be explored first. Only then, with this other knowledge, should additional 25 metre spaced samples be considered for SGH. Additional infill samples can be easily added to the current data set without any data leveling 90% of the time. When infill sampling is used it is suggested, as cheap insurance, to resample at least 1 of the current locations to provide a set of reference points that can aid in data leveling on the remote chance that it would have to be used. This is also discussed below.

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

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

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Date Submitted for SGH at Actlabs, Timmins ON: May 26, 2015

Date Analyzed at Actlabs Global Headquarters, Ancaster ON: July 4 to 6, 2015

SGH Interpretation Report: July 7, 2015

ST. ANDREWS GOLDFIELDS LTD.

489 McDougall St., Box 609

Matheson, Ontario, Canada P0K1N0

Attention: Mr. John McKenzie

RE: Your Reference: COOK TOWNSHIP - SGH SOIL SURVEY

Activation Laboratories Workorder: A15-04575

CERTIFICATE OF ANALYSIS

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

128 Samples were analyzed for this submission.

Sample preparation –Actlabs Ancaster - S4: Drying at 60°C and Sieving with -80 mesh collected Interpretation relative to Gold targets was requested.

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

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

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REPORT/WORKORDER: A15-04575

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

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

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

CERTIFIED BY:

Dale Sutherland, B.Sc., B.Sc., B.Ed., C.Chem., MCIC

Forensic Scientist, Organics Manager,

Director of Research

Activation Laboratories Ltd.





APPENDIX "A"

List of terms

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

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

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

Target signature: the unique characteristics that identify the target. Target type:

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



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

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

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

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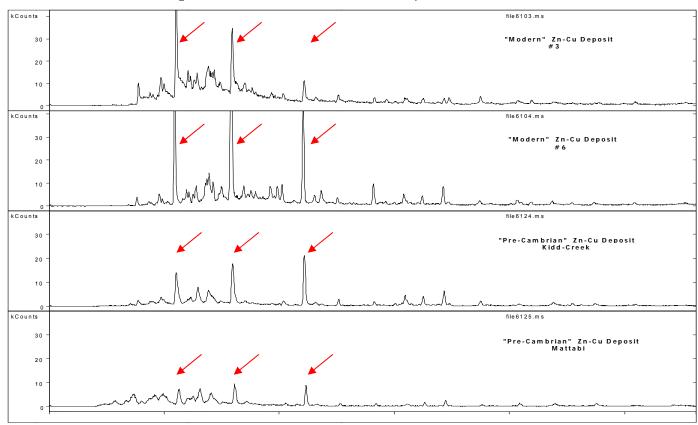
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signature obtained from the SGH analysis.



The above profiles are:

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

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

The next question in our early objectives was to see if this SGH signature could also be observed in *surficial soil samples* that had been taken over VMS deposits. Through our research projects, soil samples were obtained from over the Ruttan Cu-Zn VMS deposit near Leaf Rapids, Manitoba and

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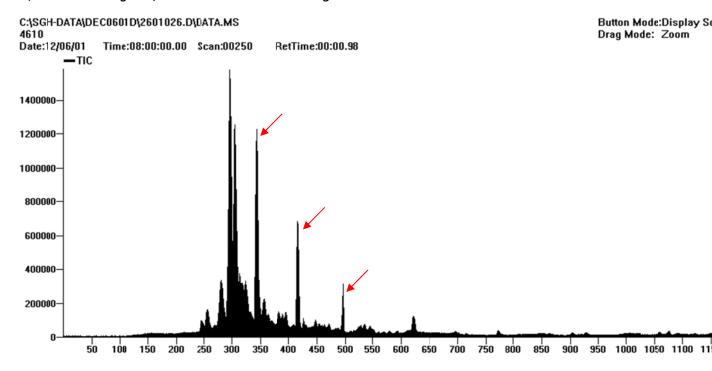
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located in the Paleoproterozoic Rusty Lake greenstone belt. The profile obtained, as observed in the raw GC/MS chromatogram, is shown in this next image below:



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

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

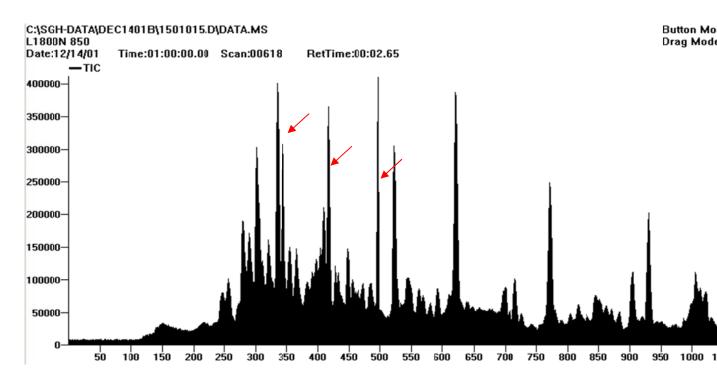
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In research conducted by the Ontario Geological Survey, this same portion of the SGH signature was also observed over the VMS deposit at Cross Lake in Ontario. **Note that the visible signature shown as the three compounds indicated by the red arrows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

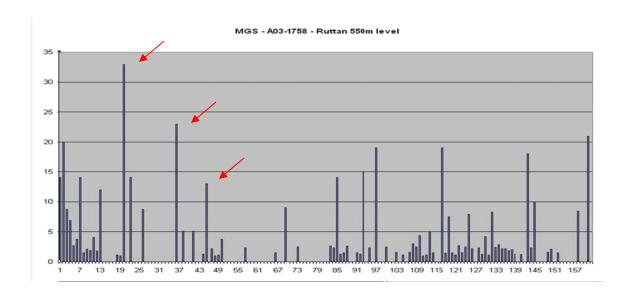
The chromatograms shown on the preceding page from the GC/MS analysis are not used directly in the interpretation of SGH data. As we are only interested in a specific list of 162 hydrocarbons, the mass spectrometer and associated software programs specifically identifies the hydrocarbons of interest,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

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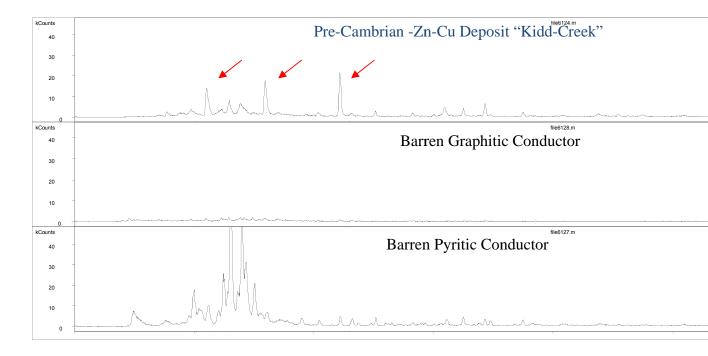
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Through the work done in the SGH CAMIRO research projects, it was observed that the hydrocarbon signature produced by the SGH technique appeared to also be able to be used to differentiate barren from ore-bearing conductors. This was explored further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

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





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

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

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

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APPENDIX "C" SOIL GAS HYDROCARBON SURVEY DESIGN AND SAMPLING

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

SGH has been shown to be very robust to the use of different sample types even "within" the same survey or transect. Research has illustrated that it is far more important to the ultimate interpretation of the results to take a complete sample transect or grid than to skip samples due to different sample media. The most ideal natural sample is still believed to be soil from the "Upper B-Horizon", however excellent results can also be obtained from other soil horizons, humus, peat, lakebottom 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 twothirds of the samples into anticipated background areas. This will allow the proper assessment of the SGH geochromatographic vectoring and background site signature levels with minimal bias. Individual samples taken at significant distances from the main survey area to represent background are not of value in the SGH interpretation as SGH results are not background subtracted. Samples can be drip dried in the field and do not need special preservation for shipping and has been specifically designed to avoid common contaminants from sample handling and shipping. SGH has also been shown to be robust to cultural activities even to the point that successful results and interpretation has been obtained from roadside right-of-ways. In conclusion, the conditions for the sample type and survey design include:

- Fist sized samples are usually retrieved from a shallow dug hole in the 15 to 40 cm range of depth.
- Different sample types can be taken even "within" the same survey or transect, data leveling is rarely ever required. SGH is highly effective is areas of very difficult terrain. The Golden Rule is to always take a sample.

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- Samples should be evenly spaced in a grid or a series of transects with sample lines spaced at a ratio of up to 4:1 (line spacing: sample spacing).
- A minimum of 50 sample "locations" is recommended with one-third over the target and onethird on each side of the target into background if this can be predicted. This provides the opportunity of optimal data contrast.
- If very wet, samples can be drip dried in the field.
- No special preservation is required for shipping.

APPENDIX "D" SAMPLE PREPARATION AND ANALYSIS

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

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APPENDIX "E" SGH DATA QUALITY Reporting Limit

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

Laboratory Replicate Analysis

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

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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 subsampling from the prepared samples, and any instrumental variability, in the SGH data set for the survey. Actlabs' has successfully addressed the analytical challenge to minimize analytical variability for such a large list of compounds. Thus as SGH is also interpreted as a signature and is solely used for exploration and not assay measurement, the data from SGH is "fit for purpose" as a geochemical exploration tool.

Historical SGH Precision

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

Laboratory Materials Blank – Quality Assurance (LMB-QA)

The Laboratory Materials Blank Quality Assurance measurements (LMB-QA) shown in the SGH spreadsheet of results are matrix free blanks analyzed for SGH. These blanks are not standard laboratory blanks as they do not accurately reflect an amount expected to be from laboratory handling or laboratory conditions that may be present and affect the sample analysis result. The LMB-QA measurements are a pre-warning system to only detect any contamination originating from laboratory glassware, vials or caps. As there is no substrate to emulate the sample matrix, the full solvating power of the SGH leaching solution, effectively a water leach, is fully directed at the small surface area

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of the glassware, vials or caps. In a sample analysis the solvating power of the SGH leaching solution is distributed between the large sample surface area (from soil, humus, sediments, peat, till, etc.) and the relatively small contribution from the laboratory materials surfaces. The sample matrix also buffers the solvating or leaching effect in the sample versus the more vigorous leaching of the laboratory materials which do not experience this buffering effect. Thus the level of the LMB-QA reported is biased high relative to the sample concentration and the actual contribution of the laboratory reagents, equipment, handling, etc. to the values in samples is significantly lower. This situation in organic laboratory analysis only occurs at such extremely low part-per-trillion (ppt) measurement levels. This is one of the reasons that SGH uses a reporting limit and not a detection limit. The 1 ppt reporting limit used in the SGH spreadsheet of raw concentration data is 3 to 5 times greater than a detection limit. The reporting limit automatically filters out analytical noise, the actual LMB-QA, and most of the sample survey site background. This has been proven as SGH values of 1 to 3 parts-per-trillion (ppt) have very often illustrated the outline of anomalies directly related to mineral targets. Thus all SGH values greater than or equal to 1 or 2 ppt should be used as reliable values for interpretations.

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

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APPENDIX "F" SGH DATA INTERPRETATION

SGH Interpretation Report

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

SGH PATHFINDER CLASS MAGNITUDE

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

GEOCHEMICAL ANOMALY THRESHOLD VALUE

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

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

Mobilized Inorganic Geochemical Anomalies

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

The Nugget Effect

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

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SGH DATA LEVELING

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

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

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



APPENDIX "G" SGH RATING SYSTEM DESCRIPTION

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

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

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

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

HISTORY & UNDERSTANDING

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

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

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

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

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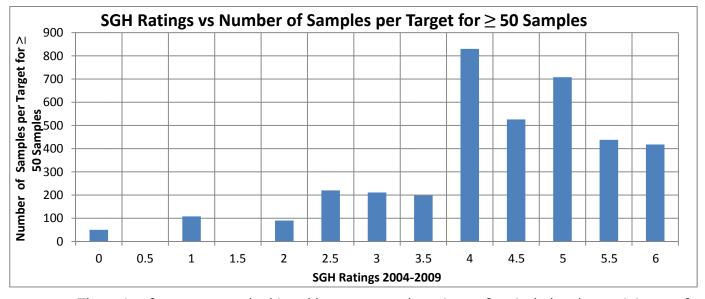
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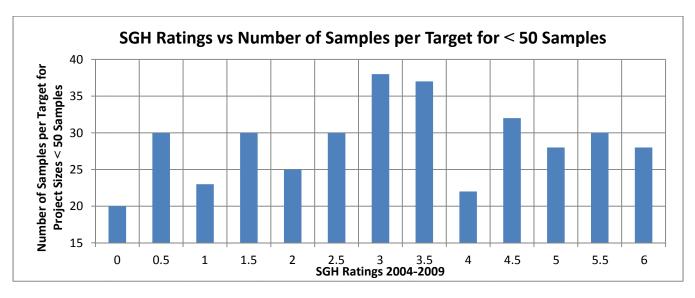
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geochromatography of the SGH Pathfinder Classes of compounds can be more completely observed and reviewed.



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

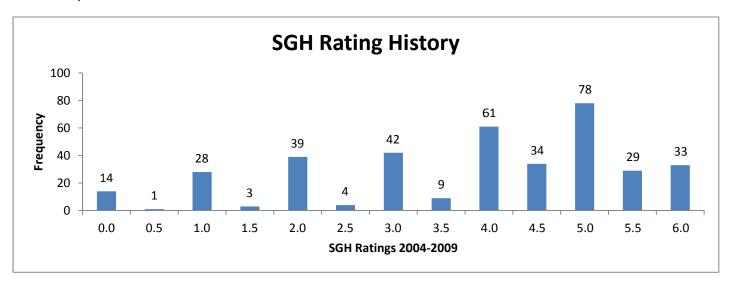


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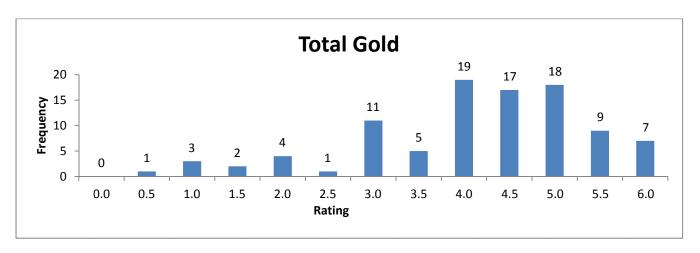
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The overall rating frequency for over 400 targets from January 2004 to December 2009 is shown in the chart below illustrating that surveys over more promising targets are most often submitted for best use of research or exploration dollars. It also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



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



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APPENDIX "H"

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

SAMPLE PREPARATION: CODE S4 - \$4.20 CDN per sample

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

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

"SUPPLEMENTAL REPORT": (\$ 1,200.00)

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

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

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

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

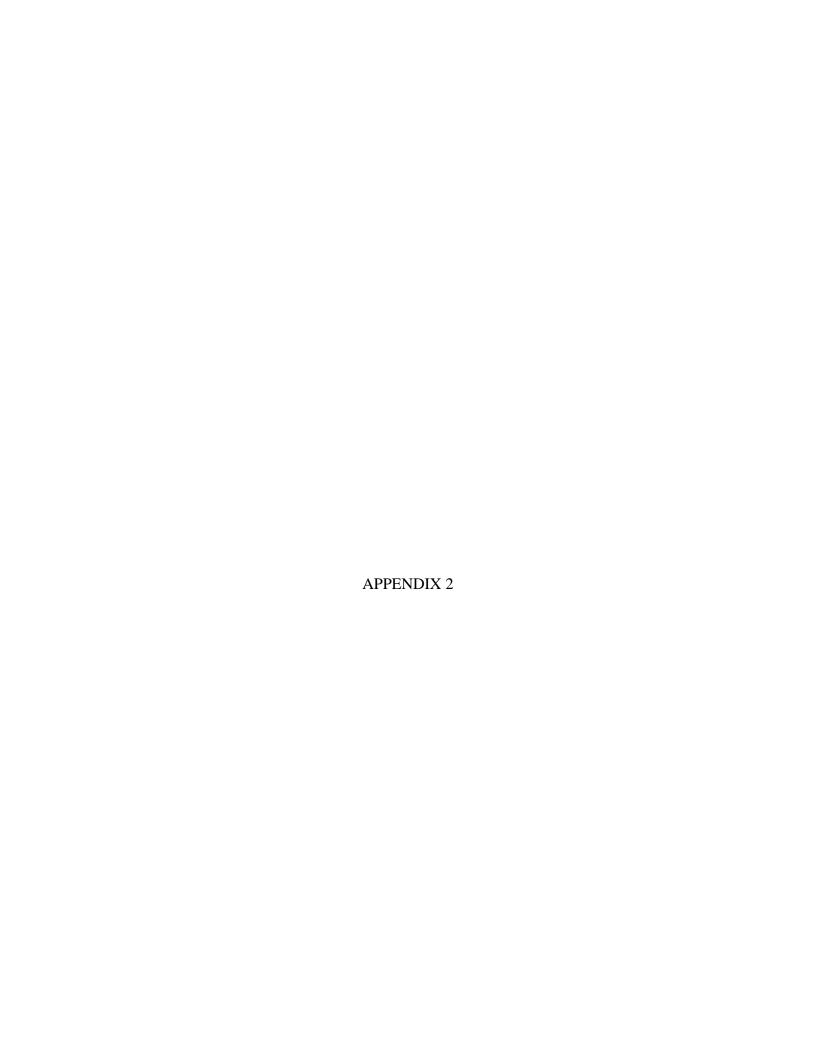
Those clients that wish to import the SGH results into their GIS software can request a "GIS Package", which will include the geo-referenced image files that reflect the mapped SGH Pathfinder Class or Classes contained in the Standard or Supplemental Report and an Excel CSV file(s) containing the associated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

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SPATIOTEMPORAL GEOCHEMICAL HYDROCARBONS (SGH) by GC/MS

Activation Laboratories Ltd. Date: July 6, 2015 COOK TOWNSHIP PROJECT SITE R=Replicate Sample

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

	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
LINE 0/0	107.0	555.0	27.4	1.5	7.5	4.7	0.5	4.2	1.6	0.3	1.2	-0.1	0.4	0.5
LINE 0/50	96.0	534.0	24.1	1.7	7.7	5.0	0.5	4.4	2.0	0.3	0.2	-0.1	0.5	0.4
LINE 0/100	94.8	525.0	28.9	1.5	7.4	4.6	-0.1	3.3	1.5	0.2	0.1	-0.1	0.5	0.4
LINE 0/150	94.2	501.0	72.0	8.9	18.6	12.5	1.5	8.5	0.9	3.1	0.5	-0.1	0.5	0.4
LINE 0/200	110.0	549.0	28.9	9.8	7.6	4.9	0.8	3.6	1.4	0.3	0.7	-0.1	0.1	0.4
LINE 0/200-R	110.0	552.0	35.7	9.8	7.4	4.7	1.0	2.7	1.5	0.3	0.4	-0.1	0.1	0.4
LINE 0/250	129.0	552.0	23.9	9.6	6.5	4.1	0.7	3.3	1.3	0.2	0.4	-0.1	0.5	0.3
LINE 0/300	103.0	531.0	26.2	9.2	6.4	1.7	0.7	2.7	1.1	-0.1	0.3	-0.1	0.5	0.4
LINE 0/350	99.0	510.0	21.2	8.6	6.8	1.7	0.6	3.3	1.3	0.2	0.3	-0.1	0.5	0.4
LINE 0/400	99.3	513.0	24.4	8.8	5.6	1.3	0.6	3.0	1.3	0.2	0.1	-0.1	0.3	0.3
LINE 0/400 LINE 0/450	97.2	525.0	21.5	8.7	5.6	1.4	0.6		1.1	0.3	0.3	-0.1	0.4	0.3
	113.0		27.3			5.5		2.8	1.7	0.3				
LINE 0/500		540.0		9.5	8.4		0.6	3.6		0.2	0.2	-0.1	0.4	0.4 0.5
LINE 0/550	138.0	351.0	60.0	10.2	11.5	7.5	0.6	5.5	2.2		1.2	-0.1	0.5	
LINE 0/600	110.0	561.0	26.4	9.9	7.8	5.1	1.5	3.0	1.4	0.1	0.1	-0.1	0.8	0.4
LINE 0/650	103.0	525.0	48.3	9.7	13.7	8.6	0.9	6.5	2.6	0.4	0.1	-0.1	0.5	0.4
LINE 0/700	103.0	519.0	45.6	9.2	10.9	7.3	-0.1	4.9	2.2	0.4	1.1	-0.1	0.6	0.3
LINE 0/750	143.0	597.0	32.7	11.8	6.2	1.8	1.0	3.4	1.5	0.2	1.2	-0.1	0.5	0.4
LINE 50MS/0	96.9	522.0	18.7	8.7	5.4	1.5	1.2	3.5	1.4	0.2	1.1	-0.1	0.5	0.4
LINE 50MS/50	107.0	576.0	22.6	9.8	5.5	1.6	0.5	3.2	1.5	0.2	1.3	-0.1	0.6	0.6
LINE 50MS/100	99.3	516.0	21.8	8.8	5.2	1.3	1.4	2.9	1.2	0.2	1.1	-0.1	0.5	0.4
LINE 50MS/150	187.0	615.0	28.2	11.6	5.1	1.8	1.1	3.7	1.5	0.3	1.2	-0.1	0.5	0.4
LINE 50MS/150-R	179.0	603.0	28.0	11.5	4.7	1.7	0.9	3.5	0.3	0.2	1.1	-0.1	0.5	0.4
LINE 50MS/200	203.0	420.0	28.3	11.0	5.1	1.8	0.7	2.8	0.3	1.0	0.2	-0.1	0.5	0.4
LINE 50MS/250	103.0	531.0	25.9	8.6	5.3	1.4	1.2	2.8	1.1	0.2	0.1	-0.1	0.5	0.4
LINE 50MS/300	225.0	438.0	24.5	11.2	5.2	2.3	0.8	3.0		0.2	1.2	-0.1	0.5	0.3
LINE 50MS/350	128.0	573.0	26.0	10.7	5.1	1.6	0.8	3.2	1.3	0.2	1.1	-0.1	0.5	0.4
LINE 50MS/400	115.0	546.0	29.7	9.5	6.0	2.0	0.5	3.5	1.0	1.0	1.2	-0.1	0.8	0.4
LINE 50MS/450	113.0	576.0	24.7	9.6	5.2	1.4	1.6	3.0	0.6	0.4	1.2	-0.1	0.9	0.4
LINE 50MS/500	110.0	558.0	25.0	9.1	5.4	0.5	1.2	5.2	1.8	1.8	0.5	-0.1	0.5	0.5
LINE 50MS/550	176.0	591.0	36.6	9.9	6.7	4.1	0.8	4.1	0.5	0.4	1.1	-0.1	0.5	0.3
LINE 50MS/600	142.0	615.0	25.7	11.1	5.3	1.5	1.0	4.8	1.0	0.2	1.3	-0.1	0.5	0.3
LINE 50MS/650	109.0	543.0	34.5	9.5	6.8	4.3	1.2	2.9	1.2	0.1	1.2	-0.1	1.0	0.4
LINE 50MS/700	324.0	507.0	31.5	14.8	5.3	3.0	1.4	3.1	1.2	0.2	0.4	-0.1	0.4	0.5
LINE 50MS/750	175.0	732.0	27.8	14.3	5.4	2.2	2,3	2.5	1.3	0.2	0.6	-0.1	0.5	0.4
LINE 100MS/0	111.0	555.0	27.9	9.8	7.3	4.8	1.4	4.8	1.9	0.3	1.2	-0.1	0.5	0.4
LINE 100MS/50	115.0	579.0	26.5	9.1	5.3	1.5	0.3	3.2	1.3	0.2	1.2	-0.1	0.5	0.4
LINE 100MS/100	95.4	501.0	22.1	8.6	5.1	1.4	1.3	3.3	1.3	0.1	0.2	-0.1	0.6	0.3
LINE 100MS/100-R	118.0	573.0	25.4	9.9	5.2	1.3	1.3	3.1	1.2	-0.1	0.1	-0.1	0.5	0.3
LINE 100MS/150	113.0	570.0	26.0	9.3	5.1	1.9	0.3	2.6	1.0	0.2	1.1	-0.1	0.5	0.3
LINE 100MS/200	109.0	534.0	20.0	9.8	4.9	1.4	0.7	2.7	1.1	0.3	0.7	-0.1	0.5	0.3
LINE 100MS/250	126.0	564.0	15.2	10.3	5.5	1.3	1.2	2.8	1.1	0.1	1.2	-0.1	0.5	0.3
LINE 100MS/300	111.0	534.0	16.1	9.1	6.1	1.5	0.7	3.7	0.3	0.2	1.1	-0.1	0.5	0.3
LINE 100MS/350	114.0	549.0	36.9	9.2	4.8	1.1	-0.1	2.7	1.1	0.3	0.9	-0.1	0.3	0.3
LINE 100MS/400	144.0	597.0	48.3	10.4	5.2	1.5	0.9	2.2	1.0	0.2	1.1	-0.1	0.5	0.3
LINE 100MS/450	178.0	501.0	31.8	10.3	4.7	1.6	0.9	2.4	0.2	0.8	1.1	-0.1	0.4	0.3
LINE 100MS/500	109.0	570.0	42.0	9.8	5.4	1.4	0.9	2.7	1.1	0.2	-0.1	-0.1	0.5	0.3
LINE 100MS/550	114.0	576.0	32.7	9.8	4.7	1.2	1.1	2.4	0.9	0.8	0.1	-0.1	0.6	0.4
LINE 100MS/600	212.0	609.0	33.6	10.6	4.1	1.2	1.0	2.2	0.9	0.6	0.2	-0.1	0.5	0.3
LINE 100MS/650	142.0	-0.1	30.9	10.1	4.6	1.1	0.8	2.2	0.9	0.7	0.2	-0.1	0.5	0.3
LINE 100MS/700	140.0	495.0	22.5	8.8	3.9	0.9	0.7	1.9	0.8	0.6	0.2	-0.1	0.4	0.3
LINE 100MS/750	163.0	603.0	32.4	11.5	4.4	1.7	1.0	2.3	0.9	0.8	1.1	-0.1	0.5	0.4
LINE 150MS/0	99.0	528.0	22.4	8.9	4.4	1.2	0.7	4.9	1.0	0.1	1.1	-0.1	0.4	0.5
LINE 150MS/50	106.0	537.0	32.1	9.2	5.3	1.3	0.7	2.7	1.0	-0.1	1.1	-0.1	0.5	0.4
LINE 150MS/50-R	106.0	543.0	33.0	9.4	5.6	1.5	8.0	6.5	0.9	1.6	1.1	-0.1	0.5	0.6

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SPATIOTEMPORAL GEOCHEMICAL HYDROCARBONS (SGH) by GC/MS

COOK TOWNSHIP PROJECT SITE

Activation Laboratories Ltd.
Date: July 6, 2015
R=Replicate Sample

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

	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
LINE 150MS/100	102.0	522.0	34.8	9.2	5.2	1.6	0.6	3.2	1.5	0.2	1.1	-0.1	0.5 0.5
LINE 150MS/150	138.0	531.0	37.2	9.9	4.6	1.3	0.8	2.8	1.1	0.8	1.1	-0.1	0.5 0.4
LINE 150MS/200	116.0	558.0	36.9	9.5	5.0	1.2	0.8	2.3	1.1	0.2	0.3	-0.1	0.4 0.4
LINE 150MS/250	106.0	552.0	34.2	9.4	4.7	1.2	0,7	2.8	1,1	0.2	1.0	-0.1	0.5 0.4
LINE 150MS/300	125.0	525.0	44.7	9.2	5.9	1.4	0.5	2.7	1.1	0.2	-0.1	-0.1	0.4 0.4
LINE 150MS/350	238.0	333.0	28.1	12.1	4.5	2.1	1.0	2.5	0.3	0.9	1.1	-0.1	0.5 0.4
LINE 150MS/400	92.1	489.0	20.4	8.4	4.3	0.8	-0.1	2.5	0.3	0.9	1.1	-0.1	0.5 0.3
LINE 150MS/450	109.0	528.0	24.9	9.1	4.5	1,2	1.0	2.2	0.9	-0.1	0.5	-0.1	0.4 0.5
LINE 150MS/500	109.0	537.0	30.6	9.2	3.8	1.2	0.7	2.9	1.1	0.3	1.1	-0.1	0.5 0.3
LINE 150MS/550	111.0	537.0	24.4	9.2	4.6	1.2	1.1	2.5	0.7	0.5	1.1	-0.1	0.8 0.4
LINE 150MS/600	115.0	573.0	29.6	10.1	4.5	1.3	1.2	2.2	0.9	0.2	0.2	-0.1	0.5 0.3
LINE 150MS/650	112.0	567.0	27.9	10.3	4.6	1.3	1.3	1.9	0.9	0.2	1.3	-0.1	0.5 0.3
LINE 150MS/700	124.0	630.0	35.1	10.8	4.5	1.2	1.5	2.8	1.1	0.2	0.1	-0.1	0.5 0.3
LINE 150MS/750	101.0	525.0	34.2	10.2	4.7	0.9	0.9	2.6	1.0	0.8	0.1	-0.1	0.5 0.3
LINE 200MS/0	109.0	543.0	28.4	9.4	4.4	1.2	1.3	2.4	1.1	0.2	1.2	-0.1	0.5 0.4
LINE 200MS/0-R	111.0	546.0	27.5	9.7	4.3	1.1	-0.1	2.7	1.1	0.3	1.1	-0.1	0.5 0.5
LINE 200MS/50	98.4	495.0	24.3	8.7	3.5	0.6	0.6	2.2	0.9	0.6	0.2	-0.1	0.4 0.4
LINE 200MS/100	109.0	564.0	28.9	9.8	4.0	1.0	1.4	2.0	0.8	0.7	1.1	-0.1	0.8 0.4
LINE 200MS/150	113.0	564.0	42.0	8.3	5.2	1.4	-0.1	2.7	0.2	0.8	1.1	-0.1	0.5 -0.1
LINE 200MS/200	102.0	81.9	35.4	7.9	4.8	1,1	0.4	2.5	1.0	0.3	1,1	-0.1	0.5 0.4
LINE 200MS/250	118.0	531.0	34.8	9.4	4.1	1.3	0.7	2.6	0.2	0.6	1.1	-0.1	0.4 0.3
LINE 200MS/300	121.0	558.0	18.8	8.5	4.4	1.1	0.9	3.0	1.2	0.7	-0.1	-0.1	0.6 0.4
LINE 200MS/350	126.0	573.0	28.9	10.3	4.3	1.3	1.0	1.9	0.8	0.8	1.2	-0.1	0.9 0.3
LINE 200MS/400	134.0	543.0	26.7	9.0	4.7	1.2	0.8	3.1	1.2	0.2	1.0	-0.1	0.5 0.4
LINE 200MS/450	132.0	597.0	25.0	11.5	4.0	1.5	1.4	2.5	1.0	0.8	1.2	-0.1	0.5 0.3
LINE 200MS/500	155.0	567.0	26.0	9.6	4.4	1.2	1.0	3.9	1.6	0.8	1.0		0.5 0.4
LINE 200MS/550	114.0 132.0	546.0 594.0	29.0	9.9	4.2 3.7	1.0	0.8	2.5	1.0	0.6	1.1	-0.1	0.6 0.3 0.5 0.3
LINE 200MS/600 LINE 200MS/650	132.0	594.0 597.0	16.8 31.5	18.8 11.3	3. <i>1</i> 4.7	0.9 1.5	0.8 1.4	1.9 3.0	0.7 1.2	0.8 0.2	0.7 1.1	-0.1 -0.1	0.5 0.5
LINE 200MS/700	146.0	636.0	31.3	12.3	4.7	1.5	1.4	2.3	0.9	0.2	1.4	-0.1	0.5 0.5
LINE 200MS/750	140.0	666.0	28.8	11.3	4.0	1.3	1.0	2.3	1.1	0.8	1.4	-0.1	0.5 0.5
LINE 200MS/750-R	150.0	669.0	30.6	11.5	4.4	1.5	1.1	2.9	1.2	0.7	1.2	-0.1	0.4 0.4
LINE 250MS/0	135.0	603.0	30.0	11.0	4.1	1.1	1.0	2.1	0.9	0.6	0.1	-0.1	0.5 0.4
LINE 250MS/50	137.0	576.0	32.4	10.3	4.3	1.4	1.0	2.4	1.1	0.7	1.2	-0.1	0.5 0.3
LINE 250MS/100	116.0	534.0	30.9	9.4	4.4	1.2	0.7	3.0	1.2	0.3	0.3	-0.1	0.5 0.3
LINE 250MS/150	141.0	540.0	46.2	8.9	5.6	1.6	0.7	3.6	1.4	0.2	1.0	-0.1	0.5 0.3
LINE 250MS/200	104.0	561.0	34.8	8.4	5.0	1.2	0.6	2.9	1.2	0.2	1.1	-0.1	0.5 0.2
LINE 250MS/250	117.0	573.0	36.0	10.5	5.0	1.2	-0.1	2.6	1.0	0.3	1.2	-0.1	0.5 0.3
LINE 250MS/300	119.0	546.0	30.6	9.3	4.6	1.5	0.8	2.7	1.2	0.2	1.1	-0.1	0.4 0.4
LINE 250MS/350	126.0	570.0	26.1	9.9	4.2	1.0	0.9	2.3	0.2	0.6	0.1	-0.1	0.5 0.3
LINE 250MS/400	118.0	543.0	14.2	9.1	4.1	1.1	0.4	2.2	0.9	0.1	0.3	-0.1	1.6 0.3
LINE 250MS/450	148.0	594.0	15.2	9.8	4.2	1.2	0.8	3.6	1.5	0.3	1.0	-0.1	0.4 0.3
LINE 250MS/500	166.0	594.0	14.1	10.0	5.0	1.5	0.9	2.7	1.3	0.3	-0.1	-0.1	0.4 0.3
LINE 250MS/550	103.0	531.0	8.8	9.8	3.4	0.9	1.4	2.3	0.9	0.7	0.3	-0.1	0.5 0.3
LINE 250MS/600	116.0	558.0	13.7	10.1	5.5	0.5	0.9	4.6	2.3	0.5	0.2	-0.1	0.5 0.3
LINE 250MS/650	259.0	888.0	16.5	11.4	4.1	1.4	1.1	4.4	1.8	0.3	1.0	-0.1	1.3 0.4
LINE 250MS/700	143.0	648.0	23.4	10.5	4.4	1.2	1.5	2.5	1.0	0.3	1.1	-0.1	0.5 0.4
LINE 250MS/700-R	138.0	651.0	23.4	10.7	4.4	1.4	0.9	2.4	1.0	0.3	1.1	-0.1	0.5 0.4
LINE 250MS/750	540.0	2060.0	23.7	19.2	4.6	1.8	2.0	3.1	1.2	0.2	1.4	-0.1	1.7 0.4
LINE 300MS/0	103.0	543.0	22.2	7.9	4.7	1.2	-0.1	2.9	1.2	0.3	1.1	-0.1	0.5 0.3
LINE 300MS/50	126.0	597.0	15.1	8.8	4.6	1.5	0.7	2.9	1.2	0.3	1.0		0.5 -0.1
LINE 300MS/100	154.0	594.0	14.2	9.2	4.8	1.5	0.9	3.2	1.3	0.2	1.0	-0.1	0.5 0.4
LINE 300MS/150	198.0	306.0	14.1	9.5	3.9	1.8	0.7	2.5	1.0	0.8	1.1	-0.1	0.5 0.3
LINE 300MS/200	115.0	585.0	18.1	10.0	3.0	1.0	1.0	2.1	0.9	0.6	1.2	-0.1	0.5 0.2

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 A15-04575 samples are discarded in 90 days. This report is only to be reproduced in full.

St. Andrew Goldfields Ltd. John McKenzie SPATIOTEMPORAL GEOCHEMICAL HYDROCARBONS (SGH) by GC/MS

COOK TOWNSHIP PROJECT SITE

Activation Laboratories Ltd.
Date: July 6, 2015
R=Replicate Sample

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

	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
LINE 300MS/250	108.0	546.0	11.3	8.3	5.1	1.6	0.7	2.3	1.2	0.2	0.9	-0.1	0.4	0.4
LINE 300MS/300	106.0	-0.1	6.6	-0.1	2.8	0.5	-0.1	2.0	0.8	0.7	1.0	-0.1	0.4	0.2
LINE 300MS/350	117.0	531.0	11.2	7.7	4.4	1.4	0.5	3.2	1.3	0.2	0.9	-0.1	0.4	0.3
LINE 300MS/400	141.0	447.0	11.1	9.0	4.3	1.2	0.9	2.6	0.2	0.9	0.3	-0.1	0.4	-0.1
LINE 300MS/450	143.0	618.0	14.3	11.3	3.7	1.2	1.4	1.9	0.8	0.6	1.1	-0.1	0.9	0.5
LINE 300MS/500	123.0	570.0	19.3	9.6	5.3	1.6	0.9	3.6	1.4	0.3	1.0	-0.1	0.4	0.5
LINE 300MS/550	108.0	537.0	18.2	9.0	3.4	0.8	0.8	1.9	0.2	0.6	0.2	-0.1	0.5	0.3
LINE 300MS/600	213.0	666.0	15.2	9.8	4.5	1.3	1.0	2.8	1.3	0.2	1.1	-0.1	0.4	0.3
LINE 300MS/650	170.0		17.5	12.0	5.6	3.3	1.2	4.7	1.8	0.3	1.1	-0.1	0.5	0.5
LINE 300MS/650-R	143.0	594.0	16.7	10.1	5.3	2.8	1,1	4.1	1.6	0.1	1.2	-0.1	0.4	0.5
LINE 300MS/700	145.0		13.1	10.3	4.4	2.2	0.9	2.8		0.2	0.3		0.5	0.3
LINE 300MS/750	414.0		17.9		5.4	2.7	1.4	3.5			1.1		0.5	0.6
LINE 350MS/0	139.0		21.9		3.5	1.3	0.7	3.2		0.5	1.1	• • • • • • • • • • • • • • • • • • • •	0.4	0.3
LINE 350MS/50	126.0		14.7		3.9	1.1	0.9	2.3			1.1	×	0.5	0.3
LINE 350MS/100	114.0		14.2		3.8	1.0	0.8	2.2	0.9	0.6	1.1	-0.1	0.4	0.2
LINE 350MS/150	92.1	483.0	9.8		3.0	0.9	-0.1	1.6		0.5	1.0	-0.1	1.5	-0.1
LINE 350MS/200	114.0		11.7		3.3	1.1	1.2	2.4	1.0	0.5	1.0	-0.1	0.4	-0.1
LINE 350MS/250	167.0		19.4		4.6	1.5		····· ·			1.1		0.5	0.4
LINE 350MS/300	414.0		22.1		3.9	3.9	1.3	4.2	2.2	0.5	1.0	-0.1	0.5	0.4
LINE 350MS/350	227.0		11.7		4.4	1.4	1.4	2.3		8.0	1.1	-0.1	0.5	0.3
LINE 350MS/400	219.0		16.0		5.3	2.0	0.8	3.5	1.4	0.8	0.9	-0.1	1.2	0.4
LINE 350MS/450	143.0		21.4		4.3	1.2	1.5	2.3	0.9		1.0	-0.1	0.5	0.3
LINE 350MS/500	185.0		19.0		3.8	1.2	1.0	2.7	1.1	0.7	0.9		0.5	0.4
LINE 350MS/550	143.0		14.5		4.6	1.3		3.0			0.9		0.4	0.3
LINE 350MS/600	125.0		11.3		4.2	1.1	0.4	2.4	0.2	0.9	1.0	• • • • • • • • • • • • • • • • • • • •	0.5	0.2
LINE 350MS/600-R	92.1	453.0	5.4		2.5	0.8	-0.1	2.0			0.9		0.4	0.2
LINE 350MS/650	163.0	774.0	18.1	12.4	5.3	1.4	2.0	2.9		0.9	1.2	-0.1	0.6	0.3
LINE 350MS/700	171.0		12.9		4.8	1.5	0.9	2.8		0.2	0.2	-0.1	0.5	0.3
LINE 350MS/750	101.0	540.0	7.7	7.8	3.5	0.7	-0.1	2.2	0.9	0.6	-0.1	-0.1	-0.1	0.3
LMB-QA	81.9		10.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1		0.4	0.3
LMB-QA	82.2	447.0	10.0		-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	0.3	1.0
LMB-QA	78.3	438.0	-0.1		-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1		0.3	0.4
LMB-QA	79.2	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	0.3	-0.1

SPATIOTEMPORAL GEOCHEMICAL HYDROCARBONS (SGH) by GC/MS

A15-04575 - Date: July 3, 2015 - 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.

St. Andrew Goldfields LTD - John McKenzie Cook Township 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

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 A15-04575 samples are discarded in 90 days. This report is only to be reproduced in full. 3/48

St. Andrew Goldfields Ltd. John McKenzie

SPATIOTEMPORAL GEOCHEMICAL HYDROCARBONS (SGH) by GC/MS -1=Reporting Limit of 1pg/g (ppt=parts per trillion) COOK TOWNSHIP PROJECT SITE

Activation Laboratories Ltd. Date: July 6, 2015 R=Replicate Sample

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 001 - LA

LBI, MBI, HBI, LPH, MPH, HPH = ALKYL-POLYAROMATICS THI = ALKYL-DIVINYLENE SULPHIDES ALK = ALKYL-ALKENES

St. Andrew Goldfields Ltd. John McKenzie

SPATIOTEMPORAL GEOCHEMICAL HYDROCARBONS (SGH) by GC/MS

COOK TOWNSHIP PROJECT SITE

Activation Laboratories Ltd.
Date: July 6, 2015
R=Replicate Sample

-1=Reporting Limit of	1pg/g	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
LINE 0/0	-0.1	0.5	0.5	1.1	1.2	0.8	-0.1	1.0						0.3
LINE 0/50	-0.1	0.4	0.4	1.1	1.1	0.8	-0.1	1.0						0.3
LINE 0/100	-0.1	0.4	0.4	1.0	1.1	0.9	-0.1	1.0		1.4				0.3
LINE 0/150	-0.1	0.4	0.9	1.9	2.0	1.2	-0.1	1.3						0.8
LINE 0/200	-0.1	0.4	0.4	1.0	1.1	0.7	-0.1	0.9	-0.1			1.3		0.3
LINE 0/200-R	-0.1	0.4	0.4	1.0	1.1	0.8	-0.1	0.9	-0.1	1.3				0.3
LINE 0/250	-0.1	0.3	0.3	0.9	1.1	0.3	-0.1	0.3	-0.1	1.2				0.3
LINE 0/300	-0.1	0.4	0.4	0.9	1.0	0.4	-0.1	0.6	-0.1	0.4				0.3
LINE 0/350	-0.1	0.3	0.3	0.9	1.0	0.4	-0.1	0.5	-0.1	0.4				0.3
LINE 0/400	-0.1	0.3	0.3	0.8	0.8	0.4	-0.1	0.5	-0.1	0.4				0.3
LINE 0/450	-0.1	0.3	0.3	0.8	0.8	0.3	-0.1	0.5	-0.1	0.4				0.3
LINE 0/500	-0.1	0.4	0.4	1.1	1.2	0.2	-0.1	0.3	-0.1			1.2		0.3
LINE 0/550	-0.1	0.5	0.5	1.3	1.4	0.4	-0.1	0.4	-0.1	0.2				0.4
LINE 0/600	-0.1	0.4	0.4	1.1	1.3	0.9	-0.1	1.2	-0.1	1.4				0.4
LINE 0/650	-0.1	0.4	0.4	1.6	1.7	0.8	-0.1	1.0		1.4				0.8
LINE 0/700	-0.1	0.3	0.3	1.2	1.4	0.4	-0.1	0.7	-0.1	0.5				0.9
LINE 0/750	-0.1	0.4	0.4	0.9	1.1	0.4	-0.1	0.5	-0.1	0.4				0.3
LINE 50MS/0	-0.1	0.4	0.4	1.0	1.1	0.7	-0.1	1.0				1.5		0.4
LINE 50MS/50	-0.1	0.6	0.6	1.2	1.4	1.1	-0.1	1.3	-0.1	1.4		2.3		0.8
LINE 50MS/100	-0.1	0.4	0.4		1.2	0.7	-0.1	1.0		0.4				0.4
LINE 50MS/150	-0.1	0.4	0.4	0.9	1.0	0.4	-0.1	0.5	-0.1	0.4		1.4		0.3
LINE 50MS/150-R	-0.1	0.4	0.4	0.8	0.9	0.4	-0.1	0.5	-0.1	0.4	1.1	1.4		0.4
LINE 50MS/200	-0.1	0.4	0.4	0.9	0.9	0.2	-0.1	0.2	-0.1	0.4				0.3
LINE 50MS/250	-0.1	0.4	0.4	0.9	1.0	0.3	-0.1	0.5	-0.1	1.2		1.4		0.3
LINE 50MS/300	-0.1	0.3	0.3	0.9	0.9	1.3	-0.1	0.3	-0.1	0.4				1.5
LINE 50MS/350	-0.1	0.4	0.4	1.0	1.2	0.4	-0.1	0.5	-0.1	0.4	1.1	1.6	0.6	0.3
LINE 50MS/400	-0.1	0.4	0.4	1.0	1.1	0.4	-0.1	0.4	-0.1	0.5	1.1	1.4	0.6	0.3
LINE 50MS/450	-0.1	0.4	0.4	1.0	1.2	0.6	-0.1	0.9	-0.1	0.5	1.2	1.5		0.4
LINE 50MS/500	-0.1	0.5	0.5	1.0	1.1	0.6	-0.1	0.8	-0.1	0.5	1.2	1.4	0.6	0.3
LINE 50MS/550	-0.1	0.3	0.3	0.9	1.1	1.3	-0.1	0.5	-0.1	0.4	1.1	1.4	0.5	0.3
LINE 50MS/600	-0.1	0.3	0.3	1.0	1.0	0.5	-0.1	0.5	-0.1	1.3	1.2	1.3	0.7	0.3
LINE 50MS/650	-0.1	0.4	0.4	1.0	1.0	0.7	-0.1	0.8	-0.1	1.3	1.2	1.6	0.6	0.5
LINE 50MS/700	-0.1	0.5	0.5	0.9	0.9	0.4	-0.1	0.5	-0.1	0.4	1.1	1.3	0.6	0.3
LINE 50MS/750	-0.1	0.4	0.4	0.9	1.1	0.6	-0.1	0.8	-0.1	0.4	1.2	1.5	0.7	0.4
LINE 100MS/0	-0.1	0.4	0.4	1.2	1.3	0.7	-0.1	1.0	-0.1	0.5	1.2	1.5	0.8	0.4
LINE 100MS/50	-0.1	0.4	0.4	1.0	1.1	0.9	-0.1	1.0	-0.1	0.4	1.1	1.4	0.5	0.3
LINE 100MS/100	-0.1	0.3	0.3	1.0	1.1	0.7	-0.1	0.9	-0.1	0.4	1.2	1.4	0.8	0.3
LINE 100MS/100-R	-0.1	0.3	0.3	0.8	1.0	0.6	-0.1	0.8	-0.1	0.4	1,1	1.3	0.5	0.3
LINE 100MS/150	-0.1	0.3	0.3	0.9	1.0	0.6	-0.1	0.8	-0.1	0.4	1.1	1.4	0.9	0.3
LINE 100MS/200	-0.1	0.3	0.3	0.8	0.9	0.2	-0.1	0.3	-0.1	0.4	1.1	1.3	0.4	0.3
LINE 100MS/250	-0.1	0.3	0.3	1.0	1.0	0.7	-0.1	0.8	-0.1	0.4	1.2	1.3	0.7	0.3
LINE 100MS/300	-0.1	0.3	0.3	1.0	1.1	0.2	-0.1	0.4	-0.1	0.4	1.2	1.2	0.5	0.3
LINE 100MS/350	-0.1	0.3	0.3	0.8	0.8	0.2	-0.1	0.4	-0.1	0.4	1.1	1.4	0.6	0.4
LINE 100MS/400	-0.1	0.3	0.3	0.7	0.8	0.2	-0.1	0.3	-0.1	1.2	1,1	1.2	0.4	0.3
LINE 100MS/450	-0.1	0.3	0.3	0.8	0.8	0.2	-0.1	0.2	-0.1	1.2	1.1	1.2	0.4	0.3
LINE 100MS/500	-0.1	0.3	0.3	0.8	0.8	0.3	-0.1	0.5	-0.1	1.2	1.1	1.5	0.6	0.4
LINE 100MS/550	-0.1	0.4	0.4	0.9	0.9	0.3	-0.1	0.5	-0.1	1.2	1.1	1.4	0.5	0.3
LINE 100MS/600	-0.1	0.3	0.3	0.7	0.7	0.2	-0.1	0.3	-0.1	1.2	1.1	1.3	0.5	0.3
LINE 100MS/650	-0.1	0.3	0.3	0.6	0.7	1.2	-0.1	0.2	-0.1	0.4	1.1	1.2	0.5	0.3
LINE 100MS/700	-0.1	0.3	0.3	0.7	0.8	0.3	-0.1	0.3	-0.1	1.2	1,1	1.2	0.4	0.3
LINE 100MS/750	-0.1	0.4	0.4	0.7	0.8	0.2	-0.1	0.3	-0.1	0.4	1.1			0.3
LINE 150MS/0	-0.1	0.5	0.5	1.1	1.2	0.3	-0.1	0.4	-0.1	0.5	1.3	1.3	1.0	0.3
LINE 150MS/50	-0.1	0.4	0.4	1.3	1.5	0.4	-0.1	0.5	-0.1	0.1	1.5	1.3	2.3	0.3
LINE 150MS/50-R	0.2	0.6	0.6	1.5	1.7	0.5	-0.1	0.5	-0.1	0.2	1.6	1.4	2.2	0.4

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 A15-04575 samples are discarded in 90 days. This report is only to be reproduced in full. 5/48

St. Andrew Goldfields Ltd. John McKenzie

-0.1

-0.1

-0.1

0.3

-0.1

-0.1

-0.1

-0.1

-0.1

-0.1

-0.1

-0.1

-0.1

LINE 250MS/450

LINE 250MS/500

LINE 250MS/550

LINE 250MS/600

LINE 250MS/650

LINE 250MS/700

LINE 250MS/750

LINE 300MS/0

LINE 300MS/50

LINE 300MS/100

LINE 300MS/150

LINE 300MS/200

LINE 250MS/700-R

0.3

0.3

0.3

0.3

0.5

0.4

0.3

0.4

0.3

-0.1

0.4

0.3

0.3

0.3

0.3

0.3

0.4

0.4

0.4

0.4

0.3

-0.1

0.4

0.3

0.8

0.9

0.8

1.0

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0.8

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0.8

1.0

0.9

1.0

8.0

0.8

0.8

0.8

1.0

0.8

8.0

0.8

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

SPATIOTEMPORAL GEOCHEMICAL HYDROCARBONS

(SGH) by GC/MS **COOK TOWNSHIP PROJECT SITE** Activation Laboratories Ltd. Date: July 6, 2015 R=Replicate Sample

0.5

0.6

0.6

0.6

1.1

0.6

0.5

0.2

0.5

0.4

0.6

0.6

0.4

0.3

0.3

0.3

0.3

0.3

1.5

0.3

0.3

0.3

0.3

	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
LINE 150MS/100	1.0	0.5	0.5	1.2	1.3	0.5	-0.1	0.7	-0.1	0.4	1.3	1.4	1.3	0.3
LINE 150MS/150	-0.1	0.4	0.4	0.8	0.9	1.2	-0.1	0.2	-0.1	0.4	1.1	1.2	0.6	0.3
LINE 150MS/200	-0.1	0.4	0.4		1.1	0.2	-0.1	0.3	-0.1	0.4	1.2	1.2	0.9	0.3
LINE 150MS/250	-0.1	0.4	0.4	1.0	1.1	0.4	-0.1	0.4	-0.1	0.4	1.2	1.2	0.8	0.3
LINE 150MS/300	-0.1	0.4	0.4	1.1	1.2	1.1	-0.1	0.2	-0.1	0.5	1.2	1.2	0.8	0.3
LINE 150MS/350	-0.1	0.4	0.4	0.9	1.0	0.4	-0.1	0.4	-0.1	1.3	1.1	1.2	0.7	0.3
LINE 150MS/400	-0.1	0.3	0.4	0.8	0.9	0.3	-0.1	0.4	-0.1	0.4	1.1	1.3	0.7	0.3
LINE 150MS/450	-0.1	0.5	0.5	0.9	1.1	0.2	-0.1	0.2	-0.1	1.3	1,1	1.3	0.8	0.3
LINE 150MS/500	-0.1	0.3	0.3	0.7	0.8	0.1	-0.1	0.3	-0.1	0.4	1.1	1.2	0.5	0.3
LINE 150MS/550	0.3	0.4	0.4	0.8	0.9	0.4	-0.1	0.5	-0.1	0.4	1.1	1.3	0.6	0.3
LINE 150MS/600	0.2	0.3	0.3	0.8	0.9	0.3	-0.1	0.4	-0.1	0.4	1.1	1.3	0.2	0.3
LINE 150MS/650	-0.1	0.3	0.3	0.9	1.0	0.7	-0.1	0.8	-0.1	1.3	1.1	1.6	0.6	0.3
LINE 150MS/700	-0.1	0.3	0.3	0.8	0.8	0.8	-0.1	0.9	-0.1	1.2	1.1	1.4	0.5	0.3
LINE 150MS/750	-0.1	0.3	0.3		0.9	0.2	-0.1	0.3	-0.1	1.2	1.1	1.3	0.5	0.3
LINE 200MS/0	-0.1	0.4	0.4	0.9	0.9	0.6	-0.1	1.0	-0.1	0.4	1.1	1.5	0.6	0.3
LINE 200MS/0-R	-0.1	0.5	0.4	0.8	1.0	0.2	-0.1	0.5	-0.1	0.4	1.1	1.6	0.6	0.4
LINE 200MS/50	-0.1	0.4	0.3	0.6	0.6	0.3	-0.1	0.4	-0.1	1.2	1.1	1.3	0.3	0.3
LINE 200MS/100	-0.1	0.4	0.4		0.8	8.0	-0.1	0.9	-0.1	0.4	1.1	1.5	0.3	0.3
LINE 200MS/150	-0.1	-0.1	-0.1	0.8	0.9	0.2	-0.1	0.3	-0.1	1.2	1.1	1.3	0.5	0.4
LINE 200MS/200	-0.1	0.4	0.4		0.9	0.4	-0.1	0.5	-0.1	1.2	1.1	1.4	0.5	0.4
LINE 200MS/250	-0.1	0.3	0.3	0.7	0.8	0.2	-0.1	0.3	-0.1	1.2	1.1	1.2	0.4	0.3
LINE 200MS/300	-0.1	0.4	0.4	0.8	0.8	0.4	-0.1	0.4	-0.1	1.3	1.1	1.3	0.5	0.4
LINE 200MS/350	-0.1	0.3	0.3	0.7	0.7	0.4	-0.1	0.5	-0.1	1.2	1.1	1.3	0.5	0.4
LINE 200MS/400	-0.1	0.4	0.4		0.9	0.4	-0.1	0.5	-0.1	1.3	1.1	1.4	0.6	0.4
LINE 200MS/450	1.0	0.3	0.3	0.7	0.8	0.2	-0.1	0.3	-0.1	1.3	1.1	1.2	0.1	0.3
LINE 200MS/500	-0.1	0.4	0.3		8.0	0.2	-0.1	0.2	-0.1	1.3	1,1	1.2	0.5	0.3
LINE 200MS/550	-0.1	0.3	0.3	0.6	0.6	1.2	-0.1	0.2	-0.1	1.2	1.1	1.2	0.4	0.4
LINE 200MS/600	-0.1	0.3	0.3	0.7	8.0	0.3	-0.1	0.4	-0.1	1.2	1.1	1.2	0.5	0.3
LINE 200MS/650	-0.1	0.5	0.5	0.8	1.0	0.2	-0.1	0.3	-0.1	1.3	1.1	1.2	0.6	0.3
LINE 200MS/700	-0.1	0.5	0.5		0.9	1.5	-0.1	0.5	-0.1	1.3	1.1	1.7	0.6	0.2
LINE 200MS/750	0.2	0.4	0.4	0.9	0.8	1.3	-0.1	0.2	-0.1	1.3	1.1	1.2	0.5	0.3
LINE 200MS/750-R	0.2	0.4	0.3	0.8	0.9	1.3	-0.1	0.5	-0.1	1.3	1.1	1.2	0.5	0.3
LINE 250MS/0	-0.1	0.4	0.4		0.6	0.2	-0.1	0.2	-0.1	1.2	1.1	1.2	0.4	0.4
LINE 250MS/50	-0.1	0.3	0.3	0.8	0.8	0.4	-0.1	0.4	-0.1	1.2	1.1	1.2	0.4	0.3
LINE 250MS/100	-0.1	0.3	0.3	0.8	0.9	1.2	-0.1	0.2	-0.1	1.2	1.1	1.2	0.4	0.3
LINE 250MS/150	-0.1	0.3	0.3	0.8	0.8	1.2	-0.1	0.2	-0.1	1.2	1.1	1.2	0.4	0.4
LINE 250MS/200	-0.1	0.2	0.2	0.8	0.8	0.4	-0.1	0.5	-0.1	1.2	1.1	1.3	0.5	0.4
LINE 250MS/250	-0.1	0.3	0.3	0.8	0.9	0.4	-0.1	0.5	-0.1	1.3	1.1	1.3	0.5	0.4
LINE 250MS/300	-0.1	0.4	0.4	0.9	1.0	1.2	-0.1	0.2	-0.1	0.4	1.1	1.1	0.5	0.3
LINE 250MS/350	-0.1	0.3	0.3	0.7	0.8	1.2	-0.1	0.2	-0.1	1.1	1.1	1.1	0.3	0.3
LINE 250MS/400	-0.1	0.3	0.3	0.7	0.7	1.1	-0.1	0.2	-0.1	1.2	1.1	1.1	0.3	0.3

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. A15-04575 6/48

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St. Andrew Goldfields Ltd. John McKenzie

SPATIOTEMPORAL GEOCHEMICAL HYDROCARBONS
(SGH) by GC/MS
rillion) COOK TOWNSHIP PROJECT SITE

Activation Laboratories Ltd.
Date: July 6, 2015
R=Replicate Sample

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

	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
LINE 300MS/250	-0.1	0.4	0.4	1.0	1.1	1.2	-0.1	0.2	-0.1	1.3	1.1	1.1	0.6	0.3
LINE 300MS/300	-0.1	0.2	0.2	0.7	0.7	1.1	-0.1	0.2	-0.1	1.2	1.1	1.1	0.5	0.3
LINE 300MS/350	0.3	0.3	0.3	0.9	1.1	1.1	-0.1	0.2	-0.1	1.3	1.1	1.1	0.6	0.3
LINE 300MS/400	-0.1	-0.1	-0.1	0.8	0.9	1.2	-0.1	0.4	-0.1	0.4	1.1	1.1	0.5	0.3
LINE 300MS/450	-0.1	0.5	0.6	0.6	0.9	1.4	-0.1	0.6	-0.1	1.5	1.1	1.2	0.1	0.3
LINE 300MS/500	-0.1	0.5	0.8	0.7	1.2	1.2	-0.1	0.2	-0.1	1.8	1.1	1.2	1.9	1.5
LINE 300MS/550	-0.1	0.3	0.3	0.6	0.6		-0.1	0.2	-0.1	1.2	1.0	1.1	0.3	0.3
LINE 300MS/600	-0.1	0.3	0.3	0.8	0.8		-0.1	1.4	-0.1	1.3	1,1	1.1	0.2	0.4
LINE 300MS/650	-0.1	0.5	0.4		1.2		-0.1	0.4	-0.1	1.4	1.2	1.2		1.5
LINE 300MS/650-R	-0.1	0.5	0.5		1.0		-0.1	0.4	-0.1	1.3	1.2	1,1	0.6	1.4
LINE 300MS/700	-0.1	0.3	0.3	_	0.7		-0.1	0.2	-0.1	1.2	1.1	1.1	0.4	0.3
LINE 300MS/750	0.2		0.3		1.2		-0.1	0.5	-0.1	1.4	1.2	1.1	0.7	0.4
LINE 350MS/0	-0.1	0.3	0.3	_	0.8		-0.1	0.2	-0.1	1.4	1.1		0.2	1.3
LINE 350MS/50	-0.1	0.3	0.3		0.7		-0.1	0.2	-0.1	1.2	1.1		0.4	0.3
LINE 350MS/100	-0.1	0.2	0.2		0.8		-0.1	0.2	-0.1	1.2	1.1		0.5	0.3
LINE 350MS/150	-0.1	-0.1	-0.1		0.6		-0.1	0.2	-0.1	1.2	1.1		0.4	0.3
LINE 350MS/200	-0.1	-0.1	-0.1		0.7	1.3	-0.1	0.5	-0.1	1.2	1.1	1.2	0.4	0.4
LINE 350MS/250	-0.1	0.4	0.4		1.0		-0.1	1.4	-0.1	0.5	1.1			0.3
LINE 350MS/300	-0.1	0.4	0.3		1.2		-0.1	0.5	-0.1	1.3	1.1			0.4
LINE 350MS/350	-0.1		0.3		8.0			1.4		1.2	1.1		0.4	1.3
LINE 350MS/400	0.3	0.4	0.4		0.9		-0.1	1.2	-0.1	1.3	1.1		0.7	0.3
LINE 350MS/450	-0.1	0.3	0.3		0.8			0.4	-0.1	1.2	1.1		0.5	1.3
LINE 350MS/500	-0.1	0.4	0.4	_	0.7	1.0	-0.1	0.2	-0.1	1.3	1.1		0.4	0.3
LINE 350MS/550	-0.1	0.3	0.3		1.0		-0.1	1.2	-0.1	1.2	1.1		0.5	1.3
LINE 350MS/600	-0.1	0.2	0.2		0.8		-0.1	0.2	-0.1	1.2	1.1	1.2		0.3
LINE 350MS/600-R	-0.1	0.2	0.2		0.6		-0.1	0.2	-0.1	1.2	1.1	1.1	0.4	0.3
LINE 350MS/650	-0.1	0.3	0.3		1.1	1.3	-0.1	0.5	-0.1	1.3	1.1		0.6	0.3
LINE 350MS/700	-0.1				0.9		-0.1	0.2	-0.1	1.2	1.1		0.4	0.3
LINE 350MS/750	-0.1	0.3	0.3	0.7	0.7	0.9	-0.1	0.2	-0.1	1.2	1.1	1.0	0.3	0.3
LMB-QA	-0.1	0.3	-0.1		-0.1	0.2	-0.1	0.2	-0.1	1.1	-0.1			0.3
LMB-QA	-0.1	1.0	-0.1	-0.1	-0.1	0.2	-0.1	0.2	-0.1	0.2	-0.1			0.3
LMB-QA	-0.1	0.4	-0.1		-0.1	1.0	-0.1	0.2	-0.1	0.2	-0.1			0.3
LMB-QA	-0.1	-0.1	-0.1	-0.1	-0.1	0.2	-0.1	0.2	-0.1	0.2	-0.1	0.2	-0.1	0.3
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St. Andrew Goldfields Ltd. SPATIOTEI
John McKenzie
-1=Reporting Limit of 1pg/g (ppt=parts per trillion)

SPATIOTEMPORAL GEOCHEMICAL HYDROCARBONS
(SGH) by GC/MS
lion) COOK TOWNSHIP PROJECT SITE

Activation Laboratories Ltd.
Date: July 6, 2015
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

SPATIOTEMPORAL GEOCHEMICAL HYDROCARBONS (SGH) by GC/MS

COOK TOWNSHIP PROJECT SITE

Activation Laboratories Ltd.
Date: July 6, 2015
R=Replicate Sample

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

	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
LINE 0/0	0.9	1.5				1.3	-0.1	1.1	1.0		0.7	0.8		-0.1
LINE 0/50	0.9	1.5		1.5	1.5	1.3	-0.1	0.9	1.0		0.7	0.8		-0.1
LINE 0/100	0.9	1.4				1.3	-0.1	0.9	1.0		0.7	0.8		-0.1
LINE 0/150	1.3	1.0		1.4	0.4	1.5	1.1	1.1	1.1	1.1	0.7	0.9		-0.1
LINE 0/130 LINE 0/200	0.8	1.4		1.4		1.3	-0.1	1.0	1.0		0.7	0.8		-0.1
LINE 0/200 LINE 0/200-R	0.8	1.4				1.3	-0.1	0.9	1.0	1.0	0.7			-0.1
LINE 0/200-K	-0.1							0.9		0.9	0.7	0.8 0.8		-0.1 -0.1
		1.3		1.3		1.2	-0.1		1.0					
LINE 0/300	-0.1	1.3		1.3		1.2	-0.1	1.0		0.9	0.6	8.0		-0.1
LINE 0/350	-0.1	1.4		1.3		1.2	-0.1	1.0	1.0	0.9	0.7	0.8		-0.1
LINE 0/400	-0.1	1.3		1.3	1.2	1.2	-0.1	1.0	0.2	0.9	0.6	0.8		-0.1
LINE 0/450	0.6	1.3		1.3		1.2	-0.1	0.9	1.0		0.7	0.8		-0.1
LINE 0/500	0.7	1.4				1.3	-0.1	0.1	0.9	0.9	0.7	0.8		-0.1
LINE 0/550	0.9	1.5		1.4		1.3	-0.1	0.4	1.0	0.1	0.7	0.8		-0.1
LINE 0/600	0.9	1.5		1.4		1.3	-0.1	1.2	1.1	1.1	0.7	0.8		-0.1
LINE 0/650	1.0	1.6			1.4	1.3	-0.1	1.0		1.1	0.7	0.8		-0.1
LINE 0/700	0.9	1.5		1.4		1.3	-0.1	1.1	1.0	1.0	0.7	0.8		-0.1
LINE 0/750	-0.1	1.4		1.3		1.3	-0.1	1.1	1.0	1.0	0.7	0.8		-0.1
LINE 50MS/0	0.8	1.5	0.6			1.3	-0.1	1.0		1.1	0.7	0.8		-0.1
LINE 50MS/50	1.0	1.6			1.6	1.6	-0.1	1.6		1.5	0.7	0.9		0.9
LINE 50MS/100	0.8	1.5				1.3	-0.1	1.1	1.1	1.2	0.7	0.9		0.8
LINE 50MS/150	0.7	1.4				1.2	-0.1	0.3	1.0	1.1	0.7	0.1		-0.1
LINE 50MS/150-R	0.7	1.3			1.2	1.2	-0.1	0.2	1.0	1.0	0.7	0.8		-0.1
LINE 50MS/200	0.7	1.3		1.3		1.2	-0.1	0.4	0.9	0.9	0.7	0.8		-0.1
LINE 50MS/250	-0.1	1.3		1.3		1.2	-0.1	0.9	0.9	1.0	0.7	8.0		-0.1
LINE 50MS/300	0.5	1.3		1.3	1.2	1.2	-0.1	0.3	1.0	0.2	0.7	8.0		-0.1
LINE 50MS/350	-0.1	1.4		1.4		1.2	-0.1	1.3	1.0	1.2	0.7	8.0		-0.1
LINE 50MS/400	0.5	1.4	0.4	1.4		1.3	-0.1	1.2	1.0	1.1	0.7	8.0		-0.1
LINE 50MS/450	0.8	1.4				1.3	-0.1	1.1	1.0	1.1	0.7	0.8		-0.1
LINE 50MS/500	-0.1	0.5		1.5		1.3	-0.1	1.2	1.1	1.0	0.7	0.8		-0.1
LINE 50MS/550	-0.1	1.3		1.3		1.2	-0.1	1.1	1.0	1.0	0.7	0.1		-0.1
LINE 50MS/600	0.8	1.4		1.4		1.2	-0.1	1.2	1.0	1.0	0.7	8.0		-0.1
LINE 50MS/650	0.8	1.4		1.4		1.3	-0.1	1.1	0.9	1.1	0.7	8.0		-0.1
LINE 50MS/700	-0.1	1.4	0.5	1.3		1.3	-0.1	0.2	1.0	1.0	0.7	0.8		-0.1
LINE 50MS/750	0.8	1.4		1.4		1.3	-0.1	1.1	1.0	1.1	0.7	0.8		-0.1
LINE 100MS/0	0.9	1.5		1.5	1.5	1.3	-0.1	1.2	1.0	1.2	0.7	0.8		-0.1
LINE 100MS/50	0.7	1.4		1.4		1.3	-0.1	1.2	1.0	1.1	0.7	0.1		-0.1
LINE 100MS/100	0.9	1.4	1			1.3	-0.1	1.1	0.2	1.1	0.7	0.8		0.8
LINE 100MS/100-R	0.8	1.4	+			1,2	-0.1	1.1	1.0	1.0	0.7	0.8		-0.1
LINE 100MS/150	0.8	1.4		1.3		1.2	-0.1	1.0			0.7	0.8		-0.1
LINE 100MS/200	-0.1	1.3		1.3		1.2	-0.1	1.0		0.9	0.6	0.8		-0.1
LINE 100MS/250	0.8	1.4		1.3		1.2	-0.1	1.0		1.0	0.7	0.8		-0.1
LINE 100MS/300	-0.1	1.3				1.2	-0.1	1.0		0.9	0.7	0.8		-0.1
LINE 100MS/350	-0.1	1.3		1.3		1.3	-0.1	0.9	1.0	0.9	0.6	0.8		-0.1
LINE 100MS/400	-0.1	1.2		1.3		1.2	-0.1	1,0	1.0	0.9	0.6	0.8		-0.1
LINE 100MS/450	-0.1	1.2		1.3		1.2	-0.1	0.2	0.9	0.9	0.6	0.1		-0.1
LINE 100MS/500	-0.1	1.3		1.4		1.3	-0.1	1.0		1.0	0.7	0.8		-0.1
LINE 100MS/550	-0.1	1.3	1	1.3		1.2	-0.1	0.9	1.0	1.0	0.7	0.8		-0.1
LINE 100MS/600	-0.1	1.3		1.3		1.2	-0.1	0.8	1.0	0.9	0.7	0.2		-0.1
LINE 100MS/650	-0.1	1.2		1.3		1.2	-0.1	0.9	1.0	0.9	0.6	0.8		-0.1
LINE 100MS/700	0.4	1.2		1.2	1.2	1.2	-0.1	0.9	0.9	0.9	0.6	8.0		-0.1
LINE 100MS/750	-0.1	1.3		1.3		1.2	-0.1	0.1	1.0	1.0	0.6	0.8		-0.1
LINE 150MS/0	0.9	1.5		1.4		1.3	-0.1	0.9	1.0	1.0	0.7	0.9		0.8
LINE 150MS/50	1.2	1.7		1.6	1.5	1.4	-0.1	1.0	0.9	1.0	0.8	0.9		0.9
LINE 150MS/50-R	1.5	9.0	0.9	1.7	1.7	1.5	-0.1	1.0	0.9	1.1	0.8	1.0	1.7	0.9

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 A15-04575 samples are discarded in 90 days. This report is only to be reproduced in full. 9/48

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

SPATIOTEMPORAL GEOCHEMICAL HYDROCARBONS

(SGH) by GC/MS COOK TOWNSHIP PROJECT SITE Activation Laboratories Ltd. Date: July 6, 2015 R=Replicate Sample

	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
LINE 150MS/100	1.1	1.6	0.6	1.5	1.5	1.4	-0.1	1.0	0.9	1.1	0.7	0.9	1.7	0.8
LINE 150MS/150	-0.1	1.4	1	1.3	1.3	1.3	-0.1	0.9	0.2	1.0				-0.1
LINE 150MS/200	0.5	1.4	•		1.3	1.3	-0.1	1.0	1.0	0.9	0.7	0.8		-0.1
LINE 150MS/250	0.4	1.4		1.4	1,3	1.3	-0.1	0.9	1.0	1.0	0.7	0.1	1.5	-0.1
LINE 150MS/300	0.4	1.4			1.3	1.3	-0.1	0.9	1.0	0.9				-0.1
LINE 150MS/350	0.4	1.4			1.3	1.2	-0.1	0.2	1.0	1.0		3.0		-0.1
LINE 150MS/400	0.5	1.3			1.2	1.2	-0.1	1.0	1.0	0.9	0.7	3.0	1.3	-0.1
LINE 150MS/450	-0.1	1,4	0.6	1.3	1.3	1,3	-0.1	1,0	1.0	1.0	0.6	0.1	1,4	-0.1
LINE 150MS/500	-0.1	1.3	0.5	1.2	1.2	1.2	-0.1	0.9	1.0	1.0	0.6	0.2	1.3	-0.1
LINE 150MS/550	0.5	1.3	0.5	1.3	1.3	1.3	-0.1	1.1	1.0	1.0	0.7	0.8	1.5	-0.1
LINE 150MS/600	-0.1	1.3	0.4	1.3	1.3	1.2	-0.1	1.0	1.0	1.0	0.7	0.2	1.4	0.8
LINE 150MS/650	-0.1	1.4	0.6	1.4	0.3	1.3	-0.1	1.1	1.0	1.2	0.7	9.0	0.7	0.8
LINE 150MS/700	-0.1	1.3	0.5	1.3	1.3	1.3	-0.1	1.0	1.0	1.1	0.7	0.8	0.7	0.8
LINE 150MS/750	-0.1	1.3	0.4	1.3	1.2	1,2	-0.1	0.9	0.9	1.0		0.2	1.4	-0.1
LINE 200MS/0	0.7	1.4		1.4	1.3	1.3	-0.1	1.2	1.1	1.2		0.1	1.8	0.8
LINE 200MS/0-R	0.7	1.3		1.4	1.3	1.3	-0.1	1.3	1.1	1.2	0.7	0.8	1.8	0.8
LINE 200MS/50	-0.1	1.2		1.3	0.3	1.2	-0.1	1.0	0.2	1.0				-0.1
LINE 200MS/100	-0.1	1.3		1.3	0.3	1.3	-0.1	1.1	1.0	1.1	0.7	0.2	0.6	0.8
LINE 200MS/150	-0.1	1.3		1.3	0.3	1.2	-0.1	1.0	1.0		0.7		1.3	-0.1
LINE 200MS/200	-0.1	1.3			0.3	1.3	-0.1	0.8	1.0	1.2	0.7	0.8		-0.1
LINE 200MS/250	-0.1	1.2		1.3	0.3	1.2	-0.1	0.7	0.9	1.0			1.3	-0.1
LINE 200MS/300	-0.1	1.3		1.3	1.3	1.3	-0.1	1.2	1.0	1.1	0.7	0.2	0.2	0.8
LINE 200MS/350	-0.1	1.3	• • • • • • • • • • • • • • • • • • • •	1.2	0.3	1.2	-0.1	0.6	0.9	1.0	0.6			-0.1
LINE 200MS/400	-0.1	1.3		1.3	0.3	1.3	-0.1	1.2	1.0	1.2	0.7	0.2	0.2	-0.1
LINE 200MS/450 LINE 200MS/500	-0.1 -0.1	1.3 1.3		1.2 1.3	0.3 1.2	1.2 1.2	-0.1 -0.1	0.8 0.7	1.0 0.9	1.0 1.0	0.7 0.7	0.2	1.2 1.2	-0.1 -0.1
LINE 200MS/550	-0.1 -0.1	1.2		1.3	1.2	1.2	-0.1 -0.1	0.7	0.9	0.9	0.7	9.0 9.0	1.2	-0.1 -0.1
LINE 200MS/600	0.4	1.2		1.3	0.3	1.2	-0.1 -0.1	1.0	1.0	0.9				-0.1 -0.1
LINE 200MS/650	0.4	1.3		1.2	1.3	1.2	-0.1	0.9	1.0	1.0	0.0	0.8		-0.1
LINE 200MS/700	0.7	1.4		1.4	0.4	1.4	-0.1	1.3	1.1	1.3	0.7		1.6	-0.1
LINE 200MS/750	0.7	1.3	0.5	1.3	0.3	1.3	-0.1	0.7	1.0					-0.1
LINE 200MS/750-R	-0.1	1.3		1.3	1.3	1.3	-0.1	0.7	1.0	1.0	0.7	0.8	1.2	-0.1
LINE 250MS/0	-0.1	1.2		1.2	1.2	1.2	-0.1	0.7	0.9	0.9	0.6		1.2	-0.1
LINE 250MS/50	-0.1	1.3		1.3	1.2	1.2	-0.1	1.0	1.0	1.0	0.6		1.3	-0.1
LINE 250MS/100	-0.1	1.3		1.3	1.2	1.2	-0.1	0.8	1.0	1.0	0.6	0.8	1.3	-0.1
LINE 250MS/150	-0.1	1.2	0.4	1.2	1.2	1.2	-0.1	-0.1	1.0	0.9	0.6	0.8	1.2	-0.1
LINE 250MS/200	-0.1	1.3	0.5	1.3	0.3	1.3	1.1	0.9	1.1	1.1	0.7	0.8	1.5	-0.1
LINE 250MS/250	-0.1	1.3	0.5	1.3	1.3	1.3	-0.1	0.7	1.0	1.0	0.7	9.0	1.4	-0.1
LINE 250MS/300	-0.1	1.3	0.5	1.3	0.3	1.3	-0.1	0.7	0.2	0.9	0.7	0.8	1.2	-0.1
LINE 250MS/350	-0.1	1.2		1.3	1.2	1.2	-0.1	0.9	0.9	0.9	0.6			-0.1
LINE 250MS/400	-0.1	1.2		1.2	1.2	1.2	-0.1	0.8	1.0	0.9	0.6		1.1	-0.1
LINE 250MS/450	-0.1	1.3			1.3	1.2	-0.1	0.7	1,0	0.9	0.7	0.8		-0.1
LINE 250MS/500	-0.1	1.3	0.5	1.3	1.2	1.2	-0.1	0.7	1.0	0.9	0.7	0.8	1.0	-0.1
LINE 250MS/550	-0.1	1.3		1.3	1.2	1.2	-0.1	1.0	0.9	0.9	0.6		1.2	-0.1
LINE 250MS/600	0.8	1.4			1.3	1.3	-0.1	-0.1	1.0	0.9	0.7	0.8		-0.1
LINE 250MS/650	-0.1	1.3	•	1.3	1.4	1.3	-0.1	0.6	1.0	0.9	0.7	9.0		-0.1
LINE 250MS/700	-0.1	1.3	0.6	1.3	0.3	1.3	-0.1	0.8	1.0	0.9	0.7	0.2	1.2	-0.1
LINE 250MS/700-R	-0.1	1.3			1.2	1.2	-0,1	1.0	0.9	0.9		0.8		-0.1
LINE 250MS/750	-0.1	1.3		1.3	1.3	1.3	-0.1	0.8	1.0	1.1	0.7	0.8	0.2	-0.1
LINE 300MS/0	-0.1	1.3		1.3	1.2	1.2	-0.1	0.7	1.0					-0.1
LINE 300MS/50	-0.1	1.3		1.3	1.2	1.2	-0.1	1.0	0.9	0.9	0.7 0.7	0.8		-0.1
LINE 300MS/100 LINE 300MS/150	-0.1 -0.1	1.3	•	1.3	1.2	1.2	-0.1	0.7	1.0	0.9	0.7	9.0	1.2 0.6	-0.1 -0.1
	-0.1 -0.1	1.3 1.2		1.3	1.3 1.1	1.2 1.1	-0.1 -0.1	1.1 0.9	1.0	1.1 0.9		0.8		-0.1 -0.1
LINE 300MS/200	-0.1	1.2	0.4	1.2	1.1	1.1	-0.1	0.9	0.9	0.9	0.6	0.8	1.2	-0.1

Results represent only the material tested. Actlabs is not liable for any claim/damage from use of this report in excess of the test cost. Unless requested A15-04575 samples are discarded in 90 days. This report is only to be reproduced in full. 10/48

SPATIOTEMPORAL GEOCHEMICAL HYDROCARBONS (SGH) by GC/MS

COOK TOWNSHIP PROJECT SITE

Activation Laboratories Ltd.
Date: July 6, 2015
R=Replicate Sample

	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
LINE 300MS/250	-0.1	1.3	0.5	1.2	1.2	1.2	-0.1	1.0	1.0	0.9	0.6	0.8	1.2	-0.1
LINE 300MS/300	-0.1	1.2	0.4	1.2	1.2	1.2	-0.1	0.9	0.2	0.9	0.6	0.8	1.1	-0.1
LINE 300MS/350	0.7	1.3	0.6	1.3	1.2	1.2	-0.1	1.0	0.9	1.0	0.7	0.8	1.2	-0.1
LINE 300MS/400	-0.1	1.3	0.4	1.2	1.2	1.2	-0.1	1.0	1.0	0.9	0.7	0.8	1.2	-0.1
LINE 300MS/450	-0.1		0.6	1.4	0.3	1.4	-0.1	1.1			0.7			-0.1
LINE 300MS/500	-0.1		0.3	1.4	0.3	1.5	-0.1	0.7	1.1	1.0	0.6		1.1	-0.1
LINE 300MS/550	-0.1		-0.1	1.2	0.3	1.2	-0.1	0.7	0.9		0.6		1.1	-0.1
LINE 300MS/600	-0.1	1.2	0.4	1.2	0.3	1.2	-0.1	0.9	1.0	0.9	0.6	8.0	1.2	-0.1
LINE 300MS/650	0.8	1.4	0.6	1.4	0.4	1.4	-0.1	0.7	1.1	1.0	0.7	0.8	1.3	-0.1
LINE 300MS/650-R	0.8		0.7	1.3	0.3	1.4	-0.1	0.8	1.0		0.7			-0.1
LINE 300MS/700	-0.1		0.3		0.3	1.2	-0.1	0.8	0.9		0.6			-0.1
LINE 300MS/750	0.8		0.6		0.4	1.4	-0.1	0.9			0.7			-0.1
LINE 350MS/0	-0.1		0.5	1.3	1.2	1.2	-0.1	0.7	0.9		0.6			-0.1
LINE 350MS/50	-0.1		0.4		1.2		-0.1	0.7	0.9		0.6			-0.1
LINE 350MS/100	-0.1		0.5	1.2	1.2	1.2	-0.1	0.7	0.9	0.9	0.6			-0.1
LINE 350MS/150	-0.1		0.3	1.2	1.2	1.1	-0.1	0.6	0.9		0.6		1.1	-0.1
LINE 350MS/200	-0.1	1.3	0.4	1.3	1.2	1.2	-0.1	1.1	1.0	1.0	0.6			-0.1
LINE 350MS/250	-0.1		0.6		1.2	1.2	-0.1	1.0			0.7			-0.1
LINE 350MS/300	0.7		0.5	1.3	1.3	1.3	-0.1	0.2	1.0		0.7			-0.1
LINE 350MS/350	-0.1		0.5	1.2	1.2	1.2	-0.1	1.0	1.0		0.6			-0.1
LINE 350MS/400	-0.1		0.6	1.3	1.2	1.2	-0.1	1.0		0.9	0.7			-0.1
LINE 350MS/450	-0.1		0.4		0.3	1.2	-0.1	0.8	1.0		0.6			-0.1
LINE 350MS/500	-0.1		0.3		0.3	1.2	-0.1	0.8	0.9		0.6			-0.1
LINE 350MS/550	-0.1	1.3	0.5		1.2	1.2	-0.1	-0.1	0.9		0.6			-0.1
LINE 350MS/600	-0.1		0.3		1.2	1.2	-0.1	0.9	0.9		0.6			-0.1
LINE 350MS/600-R	-0.1		0.3		1.3		-0.1	0.8			0.7			-0.1
LINE 350MS/650	-0.1		0.4	1.3	1.2	1.2	-0.1	0.7	0.9		0.7			-0.1
LINE 350MS/700	-0.1		0.4		1.2	1.2	-0.1	0.9	0.9		0.7			-0.1
LINE 350MS/750	-0.1	1.2	0.4	1.2	1.2	1.2	-0.1	-0.1	-0.1	0.7	0.6	0.8	-0.1	-0.1
LMB-QA	-0.1		-0.1	1.2	1.1	1.1	-0.1	0.8	0.9		-0.1		1.0	-0.1
LMB-QA	-0.1		-0.1	1.1	1.0	1.1	-0.1	0.9			-0.1		1.0	-0.1
LMB-QA	-0.1	1.0	-0.1	-0.1	1.0	-0.1	-0.1	0.9	-0.1	0.2	-0.1		0.9	-0.1
LMB-QA	-0.1	1.0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1

Activation Laboratories Ltd.
Date: July 6, 2015
R=Replicate Sample

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

SPATIOTEMPORAL GEOCHEMICAL HYDROCARBONS (SGH) by GC/MS

COOK TOWNSHIP PROJECT SITE

Activation Laboratories Ltd.
Date: July 6, 2015
R=Replicate Sample

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

	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
LINE 0/0	0.9	0.8	1.2		0.3	0.8	0.7	1.0	-0.1	-0.1	-0.1		-0.1	-0.1
LINE 0/50	0.8	0.8	1.2		1.1	0.8	0.7	1.0	-0.1	-0.1	-0.1	0.7	-0.1	-0.1
LINE 0/100	0.8	0.8	1.2		0.4	0.8	0.7	1.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LINE 0/150	0.9	0.9	1.7		0.5	0.8	0.7	1.8	-0.1	-0.1	-0.1	0.7	-0.1	-0.1
LINE 0/200	0.8	0.8	1.3	-0.1	0.4	0.7	0.7	1.1	-0.1	-0.1	-0.1	0.7	-0.1	-0.1
LINE 0/200-R	0.8	0.8	1.3	-0.1	0.4	0.8	0.7	1,1	-0.1	-0.1	-0.1	0.7	-0.1	-0.1
LINE 0/250	0.8	0.8	1.1	-0.1	0.3	0.8	0.7	1.0	-0.1	-0.1	-0.1	0.7	-0.1	-0.1
LINE 0/300	8.0	0.8	1.1	-0.1	0.3	0.7	-0.1	1.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LINE 0/350	0.8	0.8	1.2	-0.1	0.3	0.7	-0.1	1.0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LINE 0/400	0.8	0.8	1.1	-0.1	0.3	0.7	-0.1	1.0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LINE 0/450	8.0	0.8	1.1	-0.1	0.3	0.7	-0.1	1.0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LINE 0/500	8.0	0.8	1.2	-0.1	0.3	0.7	-0.1	1.0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LINE 0/550	0.9	0.2	1.2	-0.1	0.3	0.7	0.7	1.3	-0.1	-0.1	-0.1	0.7	-0.1	-0.1
LINE 0/600	8.0	0.8	1.5		0.4	0.8	0.7	1.3	-0.1	-0.1	-0.1	0.7	-0.1	-0.1
LINE 0/650	0.9	0.8	1.3		0.4	0.8	0.7	1.4	-0.1	-0.1	-0.1	0.7	-0.1	-0.1
LINE 0/700	0.9	0.8	1.2		1.2	8.0	0.7	1.3	-0.1	-0.1	-0.1	0.7	-0.1	-0.1
LINE 0/750	0.8	0.8	1.2		0.3	0.8	0.7	1.1	-0.1	-0.1	-0.1	0.7	-0.1	-0.1
LINE 50MS/0	0.8	8.0	1.4		0.4	0.8	0.7	1.3	-0.1	-0.1	-0.1	0.7	-0.1	-0.1
LINE 50MS/50	1.0	0.2	2.0		0.6	0.9	0.8	2.0	-0.1	-0.1	-0.1	0.8	-0.1	-0.1
LINE 50MS/100	0.9	0.8	1.6		0.4	0.7	0.7	1.5	-0.1	-0.1	-0.1	0.7	-0.1	-0.1
LINE 50MS/150	0.8	0.8	1.2		0.4	0.7	0.7	1.3	-0.1	-0.1	-0.1	0.7	-0.1	-0.1
LINE 50MS/150-R	0.8	0.8	1.3		0.4	0.8	0.7	1.3	-0.1	-0.1	-0.1	0.7	-0.1	-0.1
LINE 50MS/200	0.8	0.8	1.2		0.3	0.8	0.7	1.1	-0.1	-0.1	-0.1	0.7	-0.1	-0.1
LINE 50MS/250 LINE 50MS/300	0.8	0.8	1.2		0.3	0.8	0.7	1.1	-0.1	-0.1	-0.1	0.7	-0.1	-0.1 -0.1
LINE 50MS/350	0.8	0.8	1.2 1.4		0.3 0.4	0.8 0.8	0.7 0.7	1.1 1.3	-0.1 -0.1	-0.1 -0.1	-0.1 -0.1	0.7 0.7	-0.1 -0.1	-0.1 -0.1
LINE 50MS/400	0.8	0.8	1.3		0.4	0.8	0.7	1.2	-0.1	-0.1	-0.1	0.7	-0.1	-0.1
LINE 50MS/450	0.8	0.8	1.3		0.4	0.7	0.7	1.5	-0.1	-0.1	-0.1	0.7	-0.1	-0.1
LINE 50MS/500	0.9	0.8	1.3	-0.1	0.4	0.8	0.7	1.2	-0.1	-0.1	-0.1	0.7	-0.1	-0.1
LINE 50MS/550	0.8	0.8	1.3	-0.1	0.4	0.8	0.8	1.2	-0.1	-0.1	-0.1	0.7	-0.1	-0.1
LINE 50MS/600	0.8	0.8	1.3		0.4	0.8	0.7	1.1	-0.1	-0.1	-0.1	0.7	-0.1	-0.1
LINE 50MS/650	0.8	0.8	1.4	-0.1	0.4	0.8	0.7	1.3	-0.1	-0.1	-0.1	0.7	-0.1	-0.1
LINE 50MS/700	0.8	0.8	1.3		0.3	0.8	0.7	1.1	-0.1	-0.1	-0.1	0.7	-0.1	-0.1
LINE 50MS/750	0.8	0.8	1.4	-0.1	0.4	0.7	0.7	1.4	-0.1	-0.1	-0.1	0.7	-0.1	-0.1
LINE 100MS/0	0.9	0.8	1.5	0.7	0.6	0.8	0.7	1.5	-0.1	-0.1	-0.1	0.7	-0.1	-0.1
LINE 100MS/50	0.8	8.0	1.5	-0.1	0.5	0.8	0.7	1.4	-0.1	-0.1	-0.1	0.7	-0.1	-0.1
LINE 100MS/100	0.9	0.8	1.6	0.7	0.5	0.8	0.7	1.4	-0.1	-0.1	-0.1	0.7	-0.1	-0.1
LINE 100MS/100-R	8.0	0.8	1.4	-0.1	0.4	0.8	0.7	1,2	-0.1	-0.1	-0.1	0.7	-0.1	-0.1
LINE 100MS/150	0.8	0.8	1.4		0.4	0.8	0.7	1.3	-0.1	-0.1	-0.1	0.7	-0.1	-0.1
LINE 100MS/200	8.0	0.8	1.2		0.3	0.7	0.7	1.1	-0.1	-0.1	-0.1	0.7	-0.1	-0.1
LINE 100MS/250	0.8	0.8	1.4	-0.1	0.5	0.8	0.7	1.2	-0.1	-0.1	-0.1	0.7	-0.1	-0.1
LINE 100MS/300	0.8	0.8	1.0		1.0	0.8	-0.1	0.9	-0.1	-0.1	-0.1	0.7	-0.1	-0.1
LINE 100MS/350	0.8	0.8	1.2		0.3	0.7	0.7	1.2	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LINE 100MS/400	0.8	0.8	1.0		1.1	0.8	-0.1	0.9	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LINE 100MS/450	0.8	0.8	1.1	-0.1	0.3	0.8	0.6	1.0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LINE 100MS/500	0.8	0.8	1.3		0.4	0.8	0.7	1.3	-0.1	-0.1	-0.1	0.7	-0.1	-0.1
LINE 100MS/550 LINE 100MS/600	0.8 0.8	0.8 0.8	1.3		0.4 0.3	0.8 0.8	0.7 0.7	1.2	-0.1 -0.1	-0.1 -0.1	-0.1 -0.1	0.7 0.7	-0.1 -0.1	-0.1 -0.1
LINE 100MS/600 LINE 100MS/650	0.8	0.8	1.1 1.2	-0.1 -0.1	1.1	0.8	-0.1	1.1 1.1	-0.1 -0.1	-0.1 -0.1	-0.1 -0.1	-0.1	-0.1 -0.1	-0.1 -0.1
LINE 100MS/700	0.8	0.8	1.2	-0.1	1.1	0.7	-0.1 -0.1	1.1	-0.1 -0.1	-0.1	-0.1 -0.1	-0.1	-0.1 -0.1	-0.1 -0.1
LINE 100MS/750	0.8	0.8	1.1	-0.1	1.3	0.7	0.7	1.1	-0.1	-0.1	-0.1	0.7	-0.1	-0.1
LINE 150MS/0	0.8	-0.1	1.3		0.3	0.7	0.7	1.3	-0.1	-0.1	-0.1	0.7	-0.1	-0.1
LINE 150MS/50	0.2	-0.1	1.2		0.4	0.8	0.7	1.3	-0.1	-0.1	0.7	0.7	-0.1	-0.1
LINE 150MS/50-R	0.3	-0.1	1.5		0.5	0.9	0.8	1.4	-0.1	-0.1	0.8			-0.1

Results represent only the material tested. Actlabs is not liable for any claim/damage from use of this report in excess of the test cost. Unless requested A15-04575 samples are discarded in 90 days. This report is only to be reproduced in full.

SPATIOTEMPORAL GEOCHEMICAL HYDROCARBONS

(SGH) by GC/MS COOK TOWNSHIP PROJECT SITE Activation Laboratories Ltd.
Date: July 6, 2015
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
LINE 150MS/100	0.2	-0.1	1.5	0.7	0.5	0.8	0.7	1.5	-0.1	-0.1	-0.1	0.7	-0.1	-0.1
LINE 150MS/150	0.8		1.3		0.4	0.7	0.7	1.2	-0.1	-0.1	-0.1	0.7	-0.1	-0.1
LINE 150MS/200	0.8	0.8	1.1	-0.1	0.3	0.7	0.7	1.1	-0.1	-0.1	-0.1	0.7	-0.1	-0.1
LINE 150MS/250	0.8	-0.1	1.3	-0.1	0.3	0.7	0.7	1.3	-0.1	-0.1	-0.1	0.7	-0.1	-0.1
LINE 150MS/300	0.8	0.8	1.1	-0.1	1.1	0.8	0.7	1.0	-0.1	-0.1	-0.1	0.7	-0.1	-0.1
LINE 150MS/350	8.0	0.8	1.2	-0.1	0.3	0.8	0.7	1.1	-0.1	-0.1	-0.1	0.7	-0.1	-0.1
LINE 150MS/400	0.8	0.8	1.2	-0.1	0.3	0.8	0.7	1.2	-0.1	-0.1	-0.1	0.7	-0.1	-0.1
LINE 150MS/450	0.8	0.8	1.2	-0.1	0.3	0.8	0.7	1.3	-0.1	-0.1	-0.1	0.7	-0.1	-0.1
LINE 150MS/500	0.8	0.8	1.2	-0.1	1.3	0.7	0.7	1.2	-0.1	-0.1	-0.1	0.7	-0.1	-0.1
LINE 150MS/550	8.0	0.8	1.3	-0.1	0.3	0.8	0.7	1.4	-0.1	-0.1	-0.1	0.7	-0.1	-0.1
LINE 150MS/600	0.8		1.1		1.2	0.8	0.7	1.2	-0.1	-0.1	-0.1	0.7	-0.1	-0.1
LINE 150MS/650	0.9	0.8	1.6	-0.1	0.4	8.0	0.7	1.7	-0.1	-0.1	-0.1	0.7	-0.1	-0.1
LINE 150MS/700	0.8		1.5		0.4	0.8	0.7	1.6	-0.1	-0.1	-0.1	0.7	-0.1	-0.1
LINE 150MS/750	0.8		1.3		1.4	0.8	0.7	1.4	-0.1	-0.1	-0.1	0.7	-0.1	-0.1
LINE 200MS/0	0.8	0.2	1.6		0.5	0.8	0.7	1.8	-0.1	-0.1	-0.1	0.7	-0.1	-0.1
LINE 200MS/0-R	0.8		1.6		0.4	0.8	0.7	1.7	-0.1	-0.1	-0.1	0.7	-0.1	-0.1
LINE 200MS/50	0.8	0.8	1.2		0.3	0.8	0.7	1.2	-0.1	-0.1	-0.1	0.7	-0.1	-0.1
LINE 200MS/100	0.8	0.8	1.5		0.4	0.8	0.7	1.6	-0.1	-0.1	-0.1	0.7	-0.1	-0.1
LINE 200MS/150	0.8		1.1		1.2	0.8	0.7	1.3	-0.1	-0.1	-0.1	0.7	-0.1	-0.1
LINE 200MS/200	0.8	0.8	1.3		0.3	0.8	0.7	1.5	-0.1	-0.1	-0.1	0.7	-0.1	-0.1
LINE 200MS/250	0.8	0.8	1.1		1.2	0.8	0.7	1.2	-0.1	-0.1	-0.1	0.7	-0.1	-0.1
LINE 200MS/300	0.8		1.2		0.3	0.8	0.7	1.3	-0.1	-0.1	-0.1	0.7	-0.1	-0.1
LINE 200MS/350	0.8	0.8	1.2		1.2	0.8	0.7	1.2	-0.1	-0.1	-0.1	0.7	-0.1	-0.1
LINE 200MS/400 LINE 200MS/450	0.8	0.8 0.8	1.3		0.4	0.7 0.7	0.7 0.7	1.5	-0.1	-0.1 -0.1	-0.1 -0.1	0.7	-0.1	-0.1 -0.1
LINE 200MS/500	0.8 0.8	0.8	1.1 1.0		1.1 1.1	0.7	0.7	1.1 1,1	-0.1 -0.1	-0.1	-0.1 -0.1	0.7 0.7	-0.1 -0.1	-0.1 -0.1
LINE 200MS/550	0.8		1.0		1.0	0.8	0.7	1.1	-0.1	-0.1 -0.1	-0.1 -0.1	0.7	-0.1 -0.1	-0.1
LINE 200MS/600	0.8	0.8	1.0		1.0	0.7	0.7	1.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LINE 200MS/650	0.8	0.8	1.0		0.3	0.8	0.7	1.0	-0.1	-0.1	-0.1	0.7	-0.1	-0.1
LINE 200MS/700	0.9		1.5		0.4	0.8	0.7	1.4	-0.1	-0.1	-0.1	0.7	-0.1	-0.1
LINE 200MS/750	0.8	0.8	1.0		1.1	0.8	0.7	1.0	-0.1	-0.1	-0.1	0.7	-0.1	-0.1
LINE 200MS/750-R	0.8		1.1		1.2	0.8	0.7	1.0	-0.1	-0.1	-0.1	0.7	-0.1	-0.1
LINE 250MS/0	0.8		1.0		1.1	0.8	-0.1	1.0	-0.1	-0.1	-0.1	0.7	-0.1	-0.1
LINE 250MS/50	0.8	0.2	1.1		0.3	0.8	0.7	1.1	-0.1	-0.1	-0.1	0.7	-0.1	-0.1
LINE 250MS/100	0.8		1.1		0.3	0.8	0.7	1.2	-0.1	-0.1	-0.1	0.7	-0.1	-0.1
LINE 250MS/150	0.8	0.8	1.1	-0.1	0.3	0.7	0.7	1.0	-0,1	-0.1	-0.1	0.7	-0.1	-0.1
LINE 250MS/200	0.8	0.8	1.4	-0.1	0.4	0.7	0.7	1.3	-0.1	-0.1	-0.1	0.7	-0.1	-0.1
LINE 250MS/250	0.8	0.2	1.2	-0.1	0.4	0.8	0.7	1.2	-0.1	-0.1	-0.1	0.7	-0.1	-0.1
LINE 250MS/300	0.8	0.8	1.0	-0.1	1.0	0.7	0.7	0.9	-0.1	-0.1	-0.1	0.7	-0.1	-0.1
LINE 250MS/350	0.8	0.8	1.0	-0.1	1.0	-0.1	-0.1	0.9	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LINE 250MS/400	0.8		0.9		1.0	0.7	-0.1	1.0	-0.1	-0.1	-0.1	0.7	-0.1	-0.1
LINE 250MS/450	8.0	0.2	0.9		0.9	0.8	0.7	0.9	-0.1	-0.1	-0.1	0.7	-0.1	-0.1
LINE 250MS/500	0.8		0.9		0.9	0.8	-0.1	0.8	-0.1	-0.1	-0.1	0.7	-0.1	-0.1
LINE 250MS/550	0.8		1.0		1.1	0.7	-0.1	1.0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LINE 250MS/600	0.8	0.2	1.1		0.3	0.7	0.7	0.9	-0.1	-0.1	-0.1	0.7	-0.1	-0.1
LINE 250MS/650	0.8	0.2	0.9		1.0	0.7	0.7	0.9	-0.1	-0.1	-0.1	0.7	-0.1	-0.1
LINE 250MS/700	0.8	0.8	1.0		1.1	0.8	0.7	0.9	-0.1	-0.1	-0.1	0.7	-0.1	-0.1
LINE 250MS/700-R	0.8	0.8	1.0		1.0	0.8	-0.1	0.9	-0.1	-0.1	-0.1	0.7	-0.1	-0.1
LINE 250MS/750	0.8		1.1		0.3	0.8	0.7	0.9	-0.1	-0.1	-0.1	0.7	-0.1	-0.1
LINE 300MS/0	0.8	0.8	1.1		0.3	0.7	-0.1	1.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LINE 300MS/50	0.8		1.0		1.1	0.8	-0.1	0.9	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LINE 300MS/100	0.8		1.0		0.3	0.8	0.7	0.9	-0.1	-0.1	-0.1	0.7	-0.1	-0.1
LINE 300MS/150	0.8	0.8	1.2		0.4	0.8	0.7	1.1	-0.1	-0.1	-0.1	0.7	-0.1	-0.1
LINE 300MS/200	0.8	0.8	1.1	-0.1	0.3	0.8	0.6	1.0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1

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SPATIOTEMPORAL GEOCHEMICAL HYDROCARBONS (SGH) by GC/MS

COOK TOWNSHIP PROJECT SITE

Activation Laboratories Ltd.
Date: July 6, 2015
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
LINE 300MS/250	0.8	0.8	1.0	-0.1	1.1	0.7	-0.1	1.0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LINE 300MS/300	8.0	0.8	0.9	-0.1	1.0	-0.1	-0.1	8.0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LINE 300MS/350	0.8	0.8	1.0	-0.1	1.0	0.7	0.7	0.9	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LINE 300MS/400	0.8	0.2	1.0	-0.1	0.3	-0.1	-0.1	0.9	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LINE 300MS/450	0.9	0.8	1.2	-0.1	0.3	0.8	0.7	1.1	-0.1	-0.1	-0.1	0.7	-0.1	-0.1
LINE 300MS/500	0.9	8.0	0.9	-0.1	0.9	0.8	0.7	0.9	-0.1	-0.1	-0.1	0.7	-0.1	-0.1
LINE 300MS/550	0.8	0.8	1.0	-0.1	1.0	-0.1	-0.1	0.9	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LINE 300MS/600	8.0	0.8	1.0	-0.1	0.3	0.7	-0.1	0.9	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LINE 300MS/650	0.8	0.8	1.2	-0.1	0.4	0.7	0.7	0.9	-0.1	-0.1	-0.1	0.7	-0.1	-0.1
LINE 300MS/650-R	8.0				1,1	0.7	0.7	0.9	-0.1	-0.1	-0.1	0.7	-0.1	-0.1
LINE 300MS/700	0.8	0.8	0.9	-0.1	0.9	-0.1	-0.1	0.8	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LINE 300MS/750	0.8	0.8	1.1	-0.1	0.3	0.7	0.7	0.9	-0.1	-0.1	-0.1	0.7	-0.1	-0.1
LINE 350MS/0	0.8	0.2	1.0	-0.1	1.0	0.7	-0.1	0.8	-0.1	-0.1	-0.1		-0.1	-0.1
LINE 350MS/50	8.0	0.8	1.0	-0.1	1.0	-0.1	-0.1	0.9	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LINE 350MS/100	0.8	0.2	1.0	-0.1	1.0	-0.1	-0.1	1.0		-0.1	-0.1		-0.1	-0.1
LINE 350MS/150	0.8	0.8	1.0	-0.1	1.0	0.8		0.9	-0.1	-0.1	-0.1	0.7	-0.1	-0.1
LINE 350MS/200	0.8	0.2	1.2	-0.1	0.4	0.7	0.7	1.2	-0.1	-0.1	-0.1	0.7	-0.1	-0.1
LINE 350MS/250	0.8	0.8	1.1	-0.1	0.3	0.8		0.9	-0.1	-0.1	-0.1		-0.1	-0.1
LINE 350MS/300	0.8	0.2	1.0		0.3	0.7	0.7	0.9	-0.1	-0.1	-0.1		-0.1	-0.1
LINE 350MS/350	8.0				1.0	-0.1	-0.1	8.0		-0.1	-0.1		-0.1	-0.1
LINE 350MS/400	0.8	0.8	1.0	-0.1	1.0	-0.1	-0.1	0.8	-0.1	-0.1	-0.1		-0.1	-0.1
LINE 350MS/450	0.8	0.8	0.9		1.0	-0.1	-0.1	0.9	-0.1	-0.1	-0.1		-0.1	-0.1
LINE 350MS/500	0.8	0.8	0.8		0.9	-0.1	-0.1	0.8	-0.1	-0.1	-0.1		-0.1	-0.1
LINE 350MS/550	0.8		0.8		0.8	0.8		0.8		-0.1	-0.1		-0.1	-0.1
LINE 350MS/600	0.8	0.8	1.0	-0.1	1.0	0.8	-0.1	1.0		-0.1	-0.1	-0.1	-0.1	-0.1
LINE 350MS/600-R	8.0	0.8	8.0		0.9	-0.1	-0.1	0.9		-0.1	-0.1		-0.1	-0.1
LINE 350MS/650	0.8	0.8	1.0		1.0	-0.1	0.7	0.9	-0.1	-0.1	-0.1		-0.1	-0.1
LINE 350MS/700	0.8				0.8	-0.1	-0.1	8.0	-0.1	-0.1	-0.1		-0.1	-0.1
LINE 350MS/750	0.8	0.2	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LMB-QA	0.8	0.8	0.8	-0.1	0.8	-0.1	-0.1	0.7	-0.1	-0.1	-0.1		-0.1	-0.1
LMB-QA	0.8	-0.1	0.9		0.8	-0.1	-0.1	0.7	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LMB-QA	-0.1	-0.1	0.8	-0.1	0.7	-0.1	-0.1	0.7	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LMB-QA	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1

Activation Laboratories Ltd.
Date: July 6, 2015
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

SPATIOTEMPORAL GEOCHEMICAL HYDROCARBONS (SGH) by GC/MS

COOK TOWNSHIP PROJECT SITE

Activation Laboratories Ltd.
Date: July 6, 2015
R=Replicate Sample

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

	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
LINE 0/0	-0.1	-0.1			-0.1	1.3	0.2	1.4	-0.1	1.3	-0.1		1.3	-0.1
LINE 0/50	-0.1	-0.1	0.7	-0.1	-0.1	1.3	0.2	1.4	-0.1	1.3	-0.1	-0.1 -0.1	1.3	-0.1 -0.1
LINE 0/30 LINE 0/100	-0.1	-0.1	-0.1	-0.1	-0.1	1.3	0.2	1.4	-0.1	1.2	-0.1	-0.1	1.2	-0.1 -0.1
LINE 0/150	0.8	-0.1	0.7	-0.1	-0.1	1.5	0.2	1.7	-0.1	1.4	-0.1	-0.1	1.5	-0.1
LINE 0/200	-0.1	-0.1	-0.1	-0.1	-0.1	1.3	0.2	1.4	-0.1	1.3	-0.1	-0.1	1.3	-0.1
LINE 0/200-R	-0.1	-0.1	-0.1	-0.1	-0.1	1.3	0.2	1.4	-0.1	1.3	-0.1	-0.1	1.3	-0.1
LINE 0/250	-0.1	-0.1	0.7	-0.1	-0.1	1.3	0.2	1.4	-0.1	1.2	-0.1	-0.1	1.3	-0.1
LINE 0/300	-0.1	-0.1	-0.1	-0.1	-0.1	1.3	1.0	1.4	-0.1	1.2	-0.1	-0.1	1.2	-0.1
LINE 0/350	-0.1	-0.1	-0.1	-0.1	-0.1	1.2	0.2	1.3	-0.1	1.2	-0.1	-0.1	1.2	-0.1
LINE 0/400	-0.1	-0.1		-0.1	-0.1	1.3	0.2	1.4	-0.1	1.2	-0.1	-0.1	1.2	-0.1
LINE 0/450	-0.1	-0.1	-0.1	-0.1	-0.1	1.2	0.2	1.3	-0.1	1.2	-0.1	-0.1	1.2	-0.1
LINE 0/500	-0.1	-0.1	-0.1	-0.1	-0.1	1,2	0.2	1,3	-0.1	1.2	-0.1	-0.1	1.2	-0.1
LINE 0/550	-0.1	-0.1			-0.1	1.5	0.2	1.6	-0.1	1.3	-0.1	-0.1	1.4	-0.1
LINE 0/600	-0.1	-0.1	0.7	-0.1	-0.1	1.4	0.2	0.3	-0.1	1.4	-0.1	-0.1	1.4	-0.1
LINE 0/650	0.4	-0.1	0.7	-0.1	-0.1	1.4	1.1	1.5	-0.1	1.3	-0.1	-0.1	1.4	-0.1
LINE 0/700	0.4	-0.1	-0.1	-0.1	-0.1	1.4	0,2	1.6	-0.1	1.3	-0.1	-0.1	1.3	-0.1
LINE 0/750	-0.1	-0.1	0.7	-0.1	-0.1	1.4	0.2	1.5	-0.1	1.3	-0.1	-0.1	1.3	-0.1
LINE 50MS/0	0.4	-0.1	0.7	-0.1	-0.1	1.5	0.2	1.6	-0.1	1.4	-0.1	-0.1	1.4	-0.1
LINE 50MS/50	0.7	-0.1		0.8	-0.1	2.3	0.3	2.4	-0.1	2.0	-0.1	-0.1	2.0	-0.1
LINE 50MS/100	0.5	-0.1	0.7	-0.1	-0.1	1.7	0.2	1.8	-0.1	1.6	-0.1	-0.1	1.6	-0.1
LINE 50MS/150	-0.1	-0.1	0.7	-0.1	-0.1	1.6	0.2	1.7	-0.1	1.4	-0.1	-0.1	1.4	-0.1
LINE 50MS/150-R	-0.1	-0.1	0.7	-0.1	-0.1	1.6	0.2	1.7	-0.1	1.4	-0.1	-0.1	1.4	-0.1
LINE 50MS/200	-0.1	-0.1	0.7	-0.1	-0.1	1.5	0.2	1.6	-0.1	1.4	-0.1	-0.1	1.4	-0.1
LINE 50MS/250	-0.1	-0.1	0.7	-0.1	-0.1	1.4	0.2	1.5	-0.1	1.3	-0.1	-0.1	1.3	-0.1
LINE 50MS/300	-0.1	-0.1	0.6	-0.1	-0.1	1.3	1.0	1.4	-0.1	1.2	-0.1	-0.1	1.3	-0.1
LINE 50MS/350	-0.1	-0.1	0.7	-0.1	-0.1	1.6	1.2	1.8	-0.1	1.5	-0.1	-0.1	1.5	-0.1
LINE 50MS/400	-0.1	-0.1	0.7	-0.1	-0.1	1.5	1.1	1.5	-0.1	1.3	-0.1	-0.1	1.4	-0.1
LINE 50MS/450	-0.1	-0.1	0.7		-0.1	1.6	1,1	1.7	-0.1	1.5	-0.1	-0.1	1.5	-0.1
LINE 50MS/500	-0.1	-0.1	0.7	-0.1	-0.1	1.5	1.1	1.5	-0.1	1.3	-0.1	-0.1	1.3	-0.1
LINE 50MS/550	-0.1	-0.1	-0.1	-0.1	-0.1	1.4	-0.1	1.6	-0.1	1.3	-0.1	-0.1	1.3	-0.1
LINE 50MS/600	-0.1	-0.1	0.7	-0.1	-0.1	1.4	0.2	1.6	-0.1	1.3	-0.1	-0.1	1.4	-0.1
LINE 50MS/650	-0.1	-0.1		-0.1	-0.1	1.5	0.2	1.6	-0.1	1.4	-0.1	-0.1	1.4	-0.1
LINE 50MS/700	-0.1	-0.1	0.7	-0.1	-0.1	1.5	1.2	1.6	-0.1	1.3	-0.1	-0.1	1.3	-0.1
LINE 50MS/750	-0.1	-0.1	0.7		-0.1	1.6	0.2	0.4	-0.1	1.5	-0.1	-0.1	1.5	-0.1
LINE 100MS/0	-0.1	-0.1	0.7	-0.1	-0.1	1.7	0.2	1.8	-0.1	1.6	-0.1	-0.1	1.7	-0.1
LINE 100MS/50	-0.1	-0.1	0.7	-0.1	-0.1	1.8	0.2	1.9	-0.1	1.6	-0.1	-0.1	1.6	-0.1
LINE 100MS/100	-0.1	-0.1	0.7		-0.1	1.6	1.2	1.7	-0.1	1.5	-0.1	-0.1	1.6	-0.1
LINE 100MS/100-R	-0.1	-0.1	0.7	-0.1	-0.1	1.5	1.1	1.6	-0.1	1.4	-0.1	-0.1	1,4	-0.1
LINE 100MS/150	-0.1	-0.1	-0.1	-0.1	-0.1	1.6	0.2	1.6	-0.1	1.5	-0.1	-0.1	1.5	-0.1
LINE 100MS/200	-0.1	-0.1	-0.1	-0.1	-0.1	1.4 1.5	1.0 0.2	1.5	-0.1	1.2	-0.1 -0.1	-0.1	1.3	-0.1 -0.1
LINE 100MS/250 LINE 100MS/300	-0.1 -0.1	-0.1 -0.1	0.7 0.7	-0.1 -0.1	-0.1 -0.1	1.5	0.2	1.5 1.3	-0.1 -0.1	1.4 1.2	-0.1 -0.1	-0.1 -0.1	1.4 1.2	-0.1 -0.1
LINE 100MS/350	-0.1	-0.1 -0.1	-0.1	-0.1	-0.1	1.4	0.2	0.3	-0.1	1.3	-0.1	-0.1	1.4	-0.1 -0.1
LINE 100MS/400	-0.1	-0.1 -0.1	-0.1 -0.1	-0.1 -0.1	-0.1 -0.1	1.4	0.2	0.3	-0.1 -0.1	1.3	-0.1 -0.1	-0.1 -0.1	1.4	-0.1 -0.1
LINE 100MS/450	-0.1 -0.1	-0.1	-0.1	-0.1	-0.1 -0.1	1.3	1.0	0.3	-0.1	1.3	-0.1	-0.1	1.4	-0.1 -0.1
LINE 100MS/500	-0.1	-0.1	-0.1	-0.1	-0.1	1.6	0.2	0.3	-0.1	1.5	-0.1	-0.1	1.5	-0.1
LINE 100MS/550	-0.1	-0.1	0.7	-0.1	-0.1	1.5	0.2	1.6	-0.1	1.5	-0.1	-0.1	1.6	-0.1
LINE 100MS/600	-0.1	-0.1	0.7	-0.1	-0.1	1.3	0.2	1.6	-0.1	1.3	-0.1	-0.1	1.3	-0.1
LINE 100MS/650	-0.1	-0.1	-0.1	-0.1	-0.1	1.4	1.1	1.5	-0.1	1.3	-0.1	-0.1	1.4	-0.1
LINE 100MS/700	-0.1	-0.1	-0.1	-0.1	-0.1	1.4	1.1	1.5	-0.1	1.3	-0.1	-0.1	1.3	-0.1
LINE 100MS/750	-0.1	-0.1		-0.1	-0.1	1.5	1.1	1.7	-0.1	1.4	-0.1	-0.1	1.4	-0.1
LINE 150MS/0	-0.1	-0.1	0.1	0.7	-0.1	1.6	0.3	1.7	-0.1	1.5	-0.1	-0.1	1.5	-0.1
LINE 150MS/50	-0.1	0.8	0.2	1.4	-0.1	1.7	1.4	1.8	1.1	1.5	-0.1	-0.1	1.5	-0.1
LINE 150MS/50-R	-0.1					1.9	1.7	2.0	1.1	1.7	-0.1	-0.1	1.7	-0.1

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SPATIOTEMPORAL GEOCHEMICAL HYDROCARBONS (SGH) by GC/MS

(SGH) by GC/MS
COOK TOWNSHIP PROJECT SITE

Activation Laboratories Ltd.
Date: July 6, 2015
R=Replicate Sample

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

	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
LINE 150MS/100	-0.1	-0.1		0.9	-0.1	1.9	1.2	2.0	1.1	1.6	-0.1	-0.1	1.7	-0.1
LINE 150MS/150	-0.1	-0.1		0.5	-0.1	1.8	0.3	1.9	-0.1	1.5	-0.1	-0.1	1.6	-0.1
LINE 150MS/200	-0.1	-0.1	0.1	0.4	-0.1	1.5	0.2	1.6	-0.1	1.3	-0.1	-0.1	1.3	-0.1
LINE 150MS/250	-0.1	-0.1	0.7		-0.1	1.6	0.2	1.8	-0.1	1.5	-0.1	-0.1	1.5	-0.1
LINE 150MS/300	-0.1	-0.1	0.2	0.7	-0.1	1.5	0.4	1.6	-0.1	1.3	-0.1	-0.1	1.4	-0.1
LINE 150MS/350	-0.1	-0.1	0.1	-0.1	-0.1	1.6	0.2	1.7	-0.1	1.4	-0.1	-0.1	1.5	-0.1
LINE 150MS/400	-0.1	-0.1	0.7	-0.1	-0.1	1.5	0.2	1.6	-0.1	1.3	-0.1	-0.1	1.3	-0.1
LINE 150MS/450	-0.1	-0.1	0.7	-0.1	-0.1	1.7	0.2	1.8	-0.1	1.4	-0.1	-0.1	1.5	-0.1
LINE 150MS/500	-0.1	-0.1	-0.1	-0.1	-0.1	1.6	1.1	1.7	-0.1	1.3	-0.1	-0.1	1.4	-0.1
LINE 150MS/550	-0.1	-0.1	-0.1	-0.1	-0.1	1.7	0.2	1.8	-0.1	1.4	-0.1	-0.1	1.5	-0.1
LINE 150MS/600	-0.1	-0.1	-0.1	-0.1	-0.1	1.5	0.2	1.7	-0.1	1.4	-0.1	-0.1	1.4	-0.1
LINE 150MS/650	-0.1	-0.1	0.7	-0.1	-0.1	2.0	0.2	2.2	-0.1	1.8	-0.1	-0.1	1.8	-0.1
LINE 150MS/700	-0.1	-0.1	0.7	-0.1	-0.1	1.8	1.1	1.9	-0.1	1.6	-0.1	-0.1	1.7	-0.1
LINE 150MS/750	-0.1	-0.1	-0.1	-0.1	-0.1	1.7	0.2	1.8	-0.1	1.5	-0.1	-0.1	1.5	-0.1
LINE 200MS/0	0.5	-0.1	0.7	-0.1	-0.1	2.1	0.2	2.2	-0.1	1.8	-0.1	-0.1	1.9	-0.1
LINE 200MS/0-R	0.5	-0.1	0.7	-0.1	-0.1	2.0	0.2	2.2	-0.1	1.8	-0.1	-0.1	1.8	-0.1
LINE 200MS/50	-0.1	-0.1	-0.1	-0.1	-0.1	1.7	0.2	1.9	-0.1	1.5	-0.1	-0.1	1.6	-0.1
LINE 200MS/100	0.5	-0.1	0.7	-0.1	-0.1	2.1	0.2	2.2	-0.1	1.8	-0.1	-0.1	1.9	-0.1
LINE 200MS/150	-0.1	-0.1	-0.1	-0.1	-0.1	1.7	0.2	1.8	-0.1	1.5	-0.1	-0.1	1.5	-0.1
LINE 200MS/200	0.5	-0.1	-0.1	-0.1	-0.1	2.2	0.2	2.3	-0.1	1.8	-0.1	-0.1	1.8	-0.1
LINE 200MS/250	-0.1	-0.1	-0.1	-0.1	-0.1	1.7	0.2	1.9	-0.1	1.5	-0.1	-0.1	1.5	-0.1
LINE 200MS/300	0.4	-0.1	-0.1	-0.1	-0.1	1.6	0.2	1.7	-0.1	1.4	-0.1	-0.1	1.5	-0.1
LINE 200MS/350	-0.1	-0.1	-0.1	-0.1	-0.1	1.6	0.2	1.7	-0.1	1.5	-0.1	-0.1	1.5	-0.1
LINE 200MS/400	-0.1	-0.1	0.7	-0.1	-0,1	2.0	0.2	2.1	-0.1	1.7	-0.1	-0.1	1.7	-0.1
LINE 200MS/450	-0.1	-0.1	-0.1	-0.1	-0.1	1.4	0.2	1.5	-0.1	1.3	-0.1	-0.1	1.3	-0.1
LINE 200MS/500	-0.1	-0.1	-0.1	-0.1	-0.1	1.4	0.2	1.5	-0.1	1.3	-0.1	-0.1	1.3	-0.1
LINE 200MS/550	-0.1	-0.1	-0.1	-0.1	-0.1	1.4	0.2	1.5	-0.1	1.2	-0.1	-0.1	1.2	-0.1
LINE 200MS/600	-0.1	-0.1	-0.1	-0.1	-0.1	1.4	0.2	1.5	-0.1	1.3	-0.1	-0.1	1.3	-0.1
LINE 200MS/650	-0.1	-0.1	0.1	-0.1	-0.1	1.5	0.3	1.6	-0.1	1.3	-0.1	-0.1	1.4	-0.1
LINE 200MS/700	-0.1	-0.1	0.1	0.6	-0.1	1.8	0.3	1.9	-0.1	1.6	-0.1	-0.1	1.7	-0.1
LINE 200MS/750	-0.1	-0.1	0.7	-0.1	-0.1	1.4	0.2	1.5	-0.1	1.3	-0.1	-0.1	1.3	-0.1
LINE 200MS/750-R	-0.1	-0.1		-0.1	-0.1	1.5	0.2	1.6	-0.1	1.3	-0.1	-0.1	1.4	-0.1
LINE 250MS/0	-0.1	-0.1	-0.1	-0.1	-0.1	1.5	0.2	1.6	-0.1	1.3	-0.1	-0.1	1.4	-0.1
LINE 250MS/50	-0.1	-0.1	-0.1	-0.1	-0.1	1.6	0.2	1.7	-0.1	1.4	-0.1	-0.1	1.4	-0.1
LINE 250MS/100	-0.1	-0.1	-0.1	-0.1	-0.1	1.6	0.2	1.8	-0.1	1.4	-0.1	-0.1	1.4	-0.1
LINE 250MS/150	-0.1	-0.1	-0.1	-0.1	-0.1	1.4	0.2	1.5	-0.1	1.3	-0.1	-0.1	1.3	-0.1
LINE 250MS/200 LINE 250MS/250	-0.1 -0.1	-0.1 -0.1	0.7 -0.1	-0.1 -0.1	-0.1 -0.1	1.8 1.6	0.2 0.2	2.0 0.4	-0.1 -0.1	1.7 1.5	-0.1 -0.1	-0.1 -0.1	1.7	-0.1 -0.1
LINE 250MS/250	-0.1	-0.1 -0.1		-0.1	-0.1		0.2				-0.1	-0.1	1.5	-0.1 -0.1
LINE 250MS/350	-0.1	-0.1 -0.1	-0.1 -0.1	-0.1 -0.1	-0.1 -0.1	1.3 1.3	0.2	1.4 1.4	-0.1 -0.1	1.3 1.2	-0.1 -0.1	-0.1 -0.1	1.3 1.2	-0.1 -0.1
LINE 250MS/400	-0.1 -0.1	-0.1	-0.1	-0.1 -0.1	-0.1 -0.1	1.3	0.2	1.4	-0.1 -0.1	1.2	-0.1	-0.1	1.2	-0.1 -0.1
LINE 250MS/450	-0.1	-0.1	-0.1 -0.1	-0.1 -0.1	-0.1 -0.1	1.3	0.2	1.4	-0.1	1,1	-0.1	-0.1	1.2	-0.1 -0.1
LINE 250MS/500	-0.1 -0.1	-0.1	0.1	-0.1	-0.1 -0.1	1.3	0.2	1.3	-0.1 -0.1	1.1	-0.1	-0.1	1.1	-0.1 -0.1
LINE 250MS/550	-0.1	-0.1	-0.1	-0.1	-0.1	1.3	0.2	1.3	-0.1	1.2	-0.1	-0.1	1.3	-0.1
LINE 250MS/600	-0.1	-0.1	0.7	-0.1	-0.1	1.3	0.2	1.4	-0.1	1.2	-0.1	-0.1	1.3	-0.1
LINE 250MS/650	-0.1	-0.1	-0.1	-0.1	-0.1	1.4	0.2	1.5	-0.1	1.2	-0.1	-0.1	1.2	-0.1
LINE 250MS/700	-0.1	-0.1	-0.1	-0.1	-0.1	1.4	0.2	1.5	-0.1	1.2	-0.1	-0.1	1.3	-0.1
LINE 250MS/700-R	-0.1	-0.1	-0.1	-0.1	-0.1	1.4	0.2	1.5	-0.1	1.2	-0.1	-0.1	1.2	-0.1
LINE 250MS/750	-0.1	-0.1	0.7	-0.1	-0.1	1.5	0.2	1.5	-0.1	1.2	-0.1	-0.1	1.3	-0.1
LINE 300MS/0	-0.1	-0.1	-0.1	-0.1	-0.1	1.4	0.2	1.6	-0.1	1.3	-0.1	-0.1	1.3	-0.1
LINE 300MS/50	-0.1	-0.1	-0.1	-0.1	-0.1	1.4	0.2	1.4	-0.1	1.2	-0.1	-0.1	1.3	-0.1
LINE 300MS/100	-0.1	-0.1	-0.1	-0.1	-0.1	1.4	0.2	1.4	-0.1	1.2	-0.1	-0.1	1.3	-0.1
LINE 300MS/150	-0.1	-0.1	-0.1	-0.1	-0.1	1.9	0.2	2.0	-0.1	1.5	-0.1	-0.1	1.5	-0.1
LINE 300MS/200	-0.1	-0.1		-0.1	-0.1	1.4	0.2	1.5	-0.1	1.3	-0.1	-0.1	1.3	-0.1

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SPATIOTEMPORAL GEOCHEMICAL HYDROCARBONS (SGH) by GC/MS

COOK TOWNSHIP PROJECT SITE

Activation Laboratories Ltd.
Date: July 6, 2015
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
LINE 300MS/250	-0.1	-0.1	0.1	-0.1	-0.1	1.4	0.2	1.5	-0.1	1.2	-0.1	-0.1	1.3	-0.1
LINE 300MS/300	-0.1	-0.1	-0.1	-0.1	-0.1	1.3	0.2	1.4	-0.1	1.2	-0.1	-0.1	1.2	-0.1
LINE 300MS/350	-0.1	-0.1	-0.1	-0.1	-0.1	1.4	0.2	1.5	-0.1	1.2	-0.1	-0.1	1.3	-0.1
LINE 300MS/400	-0.1	-0.1	-0.1	-0.1	-0.1	1.3	0.2	1.4	-0.1	1.2	-0.1	-0.1	1.2	-0.1
LINE 300MS/450	-0.1	-0.1	-0.1	-0.1	-0.1	1.6	0.2	1.7	-0.1	1.4	-0.1	-0.1	1.4	-0.1
LINE 300MS/500	-0.1	-0.1	-0.1	-0.1	-0.1	1.3	0.2	1.4	-0.1	1.1	-0.1	-0.1	1.1	-0.1
LINE 300MS/550	-0.1	-0.1	-0.1	-0.1	-0.1	1.3	-0.1	1.4	-0.1	1.2	-0.1	-0.1	1.2	-0.1
LINE 300MS/600	-0.1	-0.1	-0.1	-0.1	-0.1	1.3	0.2	1.4	-0.1	1.2	-0.1	-0.1	1.2	-0.1
LINE 300MS/650	-0.1	-0.1	0.7	-0.1	-0.1	1.5	0.2			1.3	-0.1	-0.1	1.3	-0.1
LINE 300MS/650-R	-0.1	-0.1	-0.1	-0.1	-0.1	1.3				1.2	-0.1	-0.1	1.2	-0.1
LINE 300MS/700	-0.1	-0.1	-0.1	-0.1	-0.1	1.2		1.3		1.1	-0.1	-0.1	1.1	-0.1
LINE 300MS/750	-0.1	-0.1	0.7	0.5	-0.1	1.3		1.4	-0.1	1.2	-0.1	-0.1	1.3	-0.1
LINE 350MS/0	-0.1	-0.1	-0.1	-0.1	-0.1	1.3		1.4	-0.1	1.2	-0.1		1.2	-0.1
LINE 350MS/50	-0.1	-0.1	-0.1	-0.1	-0.1	1.3		1.4	-0.1	1.2	-0.1	-0.1	1.2	-0.1
LINE 350MS/100	-0.1	-0.1	-0.1	-0.1	-0.1	1.4		1.5	-0.1	1.2	-0.1		1.3	-0.1
LINE 350MS/150	-0.1	-0.1	-0.1	-0.1	-0.1	1.3	0.2	1.4	-0.1	1.2	-0.1	-0.1	1.2	-0.1
LINE 350MS/200	-0.1	-0.1	-0.1	-0.1	-0.1	1.5		1.6	-0.1	1.4	-0.1	-0.1	1.4	-0.1
LINE 350MS/250	-0.1	-0.1	-0.1	-0.1	-0.1	1.4				1.3	-0.1		1.3	-0.1
LINE 350MS/300	-0.1	-0.1	0.6	-0.1	-0.1	1.4				1.2	-0.1		1.3	-0.1
LINE 350MS/350	-0.1	-0.1	-0.1	-0.1	-0.1	1.3		1.4		1.2	-0.1		1.2	-0.1
LINE 350MS/400	-0.1	-0.1	0.1	-0.1	-0.1	1.3		0.3	-0.1	1.3	-0.1		1.3	-0.1
LINE 350MS/450	-0.1	-0.1	-0.1	-0.1	-0.1	1.2				1.1	-0.1		1.2	-0.1
LINE 350MS/500	-0.1	-0.1	-0.1	-0.1	-0.1	1.2			-0.1	1.1	-0.1		1.1	-0.1
LINE 350MS/550	-0.1	-0.1	-0.1	-0.1	-0.1	1.2				1.0	-0.1		1.1	-0.1
LINE 350MS/600	-0.1	-0.1	-0.1	-0.1	-0.1	1.3		1.4	-0.1	1.2	-0.1	-0.1	1.2	-0.1
LINE 350MS/600-R	-0.1	-0.1	-0.1	-0.1	-0.1	1.3		1.3		1.2	-0.1		1.2	-0.1
LINE 350MS/650	-0.1	-0.1	0.1	-0.1	-0.1	1.2				1.2	-0.1		1.2	-0.1
LINE 350MS/700	-0.1		-0.1	-0.1	-0.1	1.1	0.2			1.0	-0.1		1.1	-0.1
LINE 350MS/750	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	0.2	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LMB-QA	-0.1	-0.1	-0.1	-0.1	-0.1	0.3	-0.1	1.1	-0.1	1.1	-0.1	_	1.1	-0.1
LMB-QA	-0.1	-0.1	-0.1	-0.1	-0.1	0.3	-0.1	1.2	-0.1	1.1	-0.1	-0.1	1.1	-0.1
LMB-QA	-0.1	-0.1	-0.1	-0.1	-0.1	0.3	-0.1	-0.1	-0.1	1.0	-0.1	-0.1	1.0	-0.1
LMB-QA	-0.1	-0.1	-0.1	-0.1	-0.1	1.0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
			<u> </u>											

Activation Laboratories Ltd.
Date: July 6, 2015
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

SPATIOTEMPORAL GEOCHEMICAL HYDROCARBONS (SGH) by GC/MS

COOK TOWNSHIP PROJECT SITE

Activation Laboratories Ltd.

Date: July 6, 2015

R=Replicate Sample

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

	071 - HPB	072 - HPB	1 073 - HBA	074 - HBA	075 - HPB	076 - LPH	077 - MAR	078 - ALK	079 - LBI	080 - LPH	081 - MAR	082 - LPH	083 - HBA	084 - HBA
LINE 0/0	-0.1	-0.1	1.2	1.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	1.3	-0.1
LINE 0/50	-0.1	-0.1		1.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	1.3	-0.1
LINE 0/100	-0.1	-0.1			-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	1.5	-0.1
LINE 0/150	-0.1	1.1		0.3	1.0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	1.7	-0.1
LINE 0/200	-0.1	-0.1	1.2	0.3	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	1.7	-0.1
LINE 0/200-R	-0.1	-0.1	1.3	0.3	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	1.6	-0.1
LINE 0/250	-0.1	-0.1	1.2	0.3	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	1.5	-0.1
LINE 0/300	-0.1	-0.1	1.2	0.3	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	1.6	-0.1
LINE 0/350	-0.1	-0.1	1.1	0.3	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	1.4	-0.1
LINE 0/400	-0.1	-0.1	1.2	0.3	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	1.5	-0.1
LINE 0/450	-0.1	-0.1	1.2	1.2	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	1.4	-0.1
LINE 0/500	-0.1	-0.1	1.1	0.3	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	1.5	-0.1
LINE 0/550	-0.1	-0.1	1.3	0.3	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	1.7	-0.1
LINE 0/600	-0.1	-0.1	1.3	0.3	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	1.0	-0.1	1.5	-0.1
LINE 0/650	-0.1	-0.1	1.3	0.3	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LINE 0/700	-0.1	-0.1		0.3	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	1.0	-0.1	1.7	-0.1
LINE 0/750	-0.1	-0.1			-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	1.0	-0.1	-0.1	-0.1
LINE 50MS/0	-0.1	-0.1		0.3	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	1.8	-0.1
LINE 50MS/50	1.0	1.1			0.2	-0.1	-0.1	-0.1	-0.1	-0.1	1.1	-0.1	3.9	-0.1
LINE 50MS/100	-0.1	1.0			1.0	-0.1	-0.1	-0.1	-0.1	-0.1	1.0	-0.1	2.1	-0.1
LINE 50MS/150	-0.1	-0.1		0.3	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	1.0	-0.1	1.9	-0.1
LINE 50MS/150-R	-0.1	-0.1		0.3	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	1.0	-0.1	1.9	-0.1
LINE 50MS/200	-0.1	-0.1			-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LINE 50MS/250	-0.1	-0.1		0.3	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	1.7	-0.1
LINE 50MS/300	-0.1	-0.1		0.3	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	1.0	-0.1	-0.1	-0.1
LINE 50MS/350	-0.1	-0.1			-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	1.0	-0.1	3.0	-0.1
LINE 50MS/400	-0.1	-0.1		0.3	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	1.0	-0.1	-0.1	-0.1
LINE 50MS/450 LINE 50MS/500	-0.1	-0.1			1.0	-0.1	-0.1	-0.1	-0.1	-0.1	1.0	-0.1 -0.1	1.6	-0.1 -0.1
LINE 50MS/550	-0.1 -0.1	-0.1 -0.1		0.3	-0.1 -0.1	-0.1 -0.1	-0.1 -0.1	-0.1 -0.1	-0.1 -0.1	-0.1 -0.1	1.0 1.0	-0.1	1.5 1.8	-0.1 -0.1
LINE 50MS/600	-0.1 -0.1	-0.1		0.3	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	1.0	-0.1	-0.1	-0.1 -0.1
LINE 50MS/650	-0.1	-0.1		0.3	1.0	-0.1	-0.1	-0.1	-0.1	-0.1	1.1	-0.1	1.9	-0.1
LINE 50MS/700	-0.1	-0.1		0.2	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	1.0	-0.1	-0.1	-0.1
LINE 50MS/750	-0.1	-0.1			1.0	-0.1	-0.1	-0.1	-0.1	-0.1	1.1	-0.1	0.7	-0.1
LINE 100MS/0	-0.1	1.0			0.2	-0.1	-0.1	-0.1	-0.1	-0.1	1.0	-0.1	2.2	-0.1
LINE 100MS/50	-0.1	1.0			0.3	-0.1	-0.1	-0.1	-0.1	-0.1	1.1	-0.1	3.3	-0.1
LINE 100MS/100	-0.1	1.0		0.3	0.3	-0.1	-0.1	-0.1	-0.1	-0.1	1.1	-0.1	-0.1	-0.1
LINE 100MS/100-R	-0.1	-0.1	1.3	0.3	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	1.0	-0.1	-0.1	-0.1
LINE 100MS/150	-0.1	-0.1	+	0.3	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	1.0	-0.1	1.9	-0.1
LINE 100MS/200	-0.1	-0.1	1.2	0.3	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LINE 100MS/250	-0.1	-0.1	1.3	0.3	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LINE 100MS/300	-0.1	-0.1	1.2	0.2	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	2.4	-0.1
LINE 100MS/350	-0.1	1.0	1.4	1.5	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	1.8	-0.1
LINE 100MS/400	-0.1	-0.1	1.4	1.5	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	1,1	-0.1	1.6	-0.1
LINE 100MS/450	-0.1	-0.1	1.3	0.2	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LINE 100MS/500	-0.1	-0.1	1.5		0.2	-0.1	-0.1	-0.1	-0.1	-0.1	1.1	-0.1	-0.1	-0.1
LINE 100MS/550	-0.1	1.0			1.0	-0.1	-0.1	-0.1	-0.1	-0.1	1.0	-0.1	-0.1	-0.1
LINE 100MS/600	-0.1	-0.1		0.2	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	1.0	-0.1	2.8	-0.1
LINE 100MS/650	-0.1	-0.1			-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LINE 100MS/700	-0.1	-0.1			-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	1.0	-0.1	-0.1	-0.1
LINE 100MS/750	-0.1	-0.1		0.2	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	1.1	-0.1	-0.1	-0.1
LINE 150MS/0	-0.1	1.0		0.3	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	1.0	-0.1	3.0	-0.1
LINE 150MS/50	1.1	1.0			0.2	-0.1	-0.1	-0.1	-0.1	-0.1	1.1	-0.1	2.9	-0.1
LINE 150MS/50-R	1.1	1.1	1.6	0.4	0.2	-0.1	-0.1	-0.1	-0.1	-0.1	1.1	-0.1	0.7	-0.1

Results represent only the material tested. Actlabs is not liable for any claim/damage from use of this report in excess of the test cost. Unless requested A15-04575 samples are discarded in 90 days. This report is only to be reproduced in full.

SPATIOTEMPORAL GEOCHEMICAL HYDROCARBONS (SGH) by GC/MS

Activation Laboratories Ltd. Date: July 6, 2015 COOK TOWNSHIP PROJECT SITE R=Replicate Sample

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

	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
LINE 150MS/100	1.1	1.1	1.6	0.3	0.2	-0.1	-0.1	-0.1	-0.1	-0.1	1.1	-0.1	3.5	-0.1
LINE 150MS/150	-0.1	1.0	1.6		-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	1.1		3.1	-0.1
LINE 150MS/200	-0.1	1.0	1.3		0.2	-0.1	-0.1	-0.1	-0.1	-0.1	1.0		1.5	-0.1
LINE 150MS/250	1.0		1.5		0.3	-0.1	-0.1	-0.1	-0.1	-0.1	1.1		-0.1	-0.1
LINE 150MS/300	-0.1	1.0	1.4		-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	1.0	-0.1	-0.1	-0.1
LINE 150MS/350	-0.1	1.0	1.4		-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	1.1		-0.1	-0.1
LINE 150MS/400	-0.1	-0.1	1.4		-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	1.0		-0.1	-0.1
LINE 150MS/450	-0.1	-0.1	1.5		-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	1.1		-0.1	-0.1
LINE 150MS/500	-0.1	-0.1	1.4		-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	1.0		2.0	-0.1
LINE 150MS/550	-0.1	-0.1	1.5		-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	1.0		-0.1	-0.1
LINE 150MS/600	-0.1	-0.1	1.4		-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	1.1		1.5	-0.1
LINE 150MS/650	-0.1	1.0	1.7		1.0	-0.1	-0.1	-0.1	-0.1	-0.1	1.1		3.6	-0.1
LINE 150MS/700	-0.1	1.0	1.6		1.0	-0.1	-0.1	-0.1	-0.1	-0.1	1.1		1.4	-0.1
LINE 150MS/750	-0.1	1.0	1.5		1.0	-0.1	-0.1	-0.1	-0.1	-0.1	1.0	-0.1	2.9	-0.1
LINE 200MS/0	-0.1	1.0	1.7		0.2	-0.1	-0.1	-0.1	-0.1	-0.1	1.1		3.5	-0.1
LINE 200MS/0-R	-0.1	1.0	1.8		1.0	-0.1	-0.1	-0.1	-0.1	-0.1	1.1		3.4	-0.1
LINE 200MS/50	-0.1	-0.1	1.6		-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	1.0	-0.1	3.4	-0.1
LINE 200MS/100	-0.1	1.1	1.7		0.3	-0.1	-0.1	-0.1	-0.1	-0.1	1.0		3.3	-0.1 -0.1
LINE 200MS/150	-0.1	1.0	1.7		1.0	-0.1	-0.1	-0.1	-0.1	-0.1	1.1		3.2	-0.1
LINE 200MS/200	-0.1	1.0	1.9		1.0	-0.1	-0.1	-0.1	-0.1 -0.1	-0.1	1.1		3.8	-0.1
LINE 200MS/250	-0.1	-0.1	1.5		-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	1.1		-0.1	-0.1
LINE 200MS/300	-0.1	1.1	1.3		1.0	-0.1	-0.1	-0.1	-0.1	-0.1	1.1		3.1	-0.1
LINE 200MS/350	-0.1	1.0	1.4		1.0	-0.1	-0.1	-0.1	-0.1	-0.1	1.1		3.0	-0.1
LINE 200MS/400	-0.1	1.0	1.7		1.0	-0.1	-0.1	-0.1	-0.1	-0.1	1.1		3.5	-0.1 -0.1
LINE 200MS/450	-0.1	-0.1	1.3		1.0	-0.1	-0.1	-0.1	-0.1	-0.1	1.1		0.6	-0.1
LINE 200MS/500	-0.1	-0.1	1.3		1.0	-0.1	-0.1	-0.1	-0.1	-0.1	1.0		0.6	-0.1
LINE 200MS/550	-0.1	-0.1	1.3		-0.1	-0.1	-0.1	-0.1 -0.1	-0.1	-0.1	1.0		-0.1	-0.1
LINE 200MS/600	-0.1	-0.1	1.3		-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	1.0		0.6	-0.1
LINE 200MS/650	-0.1	-0.1	1.3		-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	1.0		0.6	-0.1
LINE 200MS/700	-0.1	1.0	1.6		0.3	-0.1	-0.1	-0.1	-0.1	-0.1	1.1	-0.1	0.8	-0.1 -0.1
LINE 200MS/750	-0.1	-0.1	1.3		1.0	-0.1	-0.1	-0.1	-0.1	-0.1	1.1		0.6	-0.1
LINE 200MS/750-R	-0.1	1.0	1.3		1.0	-0.1	-0.1	-0.1	-0.1	-0.1	1.1		0.0	-0.1
LINE 250MS/0	-0.1	-0.1	1.3		-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	1.0		2.9	-0.1
LINE 250MS/50	-0.1	-0.1	1.4		0.3	-0.1	-0.1	-0.1	-0.1	-0.1	1.0		3.1	-0.1
LINE 250MS/100	-0.1	1.0	1.5		0.2	-0.1	-0.1	-0.1	-0.1	-0.1	1.0		3.0	-0.1
LINE 250MS/150	-0.1	-0.1	1.3		-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	1.0		2.8	-0.1
LINE 250MS/200	-0.1	1.0	1.7		0.3	-0.1	-0.1	-0.1	-0.1 -0.1	-0.1	1.0		3.6	-0.1
LINE 250MS/250	-0.1 -0.1	1.0	1.7		-0.1	-0.1	-0.1	-0.1 -0.1	-0.1	-0.1 -0.1	1.0		3.2	-0.1
LINE 250MS/200	-0.1	-0.1	1.3		-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	1.0		2.6	-0.1
LINE 250MS/350	-0.1	-0.1 -0.1	1.3		-0.1	-0.1	-0.1	-0.1	-0.1 -0.1	-0.1	1.0		2.6	-0.1 -0.1
LINE 250MS/400	-0.1	-0.1	1.2		-0.1	-0.1	-0.1	-0.1	-0.1 -0.1	-0.1	1.0		2.6	-0.1
LINE 250MS/450	-0.1	-0.1 -0.1	1.2		-0.1	-0.1	-0.1 -0.1	-0.1	-0.1 -0.1	-0.1	1.0		0.7	-0.1 -0.1
LINE 250MS/500	-0.1	-0.1 -0.1	1.2		-0.1	-0.1	-0.1 -0.1	-0.1 -0.1	-0.1 -0.1	-0.1 -0.1	1.0	-0.1	2.4	-0.1 -0.1
LINE 250MS/550	-0.1	-0.1 -0.1	1.2		-0.1	-0.1	-0.1 -0.1	-0.1 -0.1	-0.1	-0.1 -0.1	-0.1	-0.1	2.4	-0.1
LINE 250MS/600	-0.1	-0.1	1.2		-0.1	-0.1	-0.1	-0.1	-0.1 -0.1	-0.1	-0.1 -0.1	-0.1	2.0	-0.1
LINE 250MS/650	-0.1	-0.1 -0.1	1.2		-0.1	-0.1 -0.1	-0.1 -0.1	-0.1	-0.1	-0.1	-0.1 1.1		2.7	-0.1 -0.1
LINE 250MS/700	-0.1 -0.1	-0.1	1.2		-0.1 -0.1	-0.1 -0.1	-0.1 -0.1	-0.1 -0.1	-0.1 -0.1	-0.1 -0.1	1.1		2.7	-0.1 -0.1
LINE 250MS/700-R	-0.1 -0.1	-0.1 -0.1	1.2		-0.1 -0.1	-0.1	-0.1 -0.1	-0.1 -0.1	-0.1 -0.1	-0.1 -0.1	1.1		2.7	-0.1 -0.1
LINE 250MS/750	-0.1	-0.1 -0.1	1.2		-0.1 -0.1	-0.1 -0.1	-0.1 -0.1	-0.1 -0.1	-0.1 -0.1	-0.1 -0.1	1.1		2.7	-0.1 -0.1
LINE 300MS/0	-0.1 -0.1	-0.1 -0.1	1.2		-0.1	-0.1 -0.1	-0.1 -0.1	-0.1	-0.1 -0.1	-0.1 -0.1	1.1		2.6	-0.1 -0.1
LINE 300MS/50	-0.1	-0.1 -0.1	1.3		-0.1 -0.1	-0.1 -0.1	-0.1 -0.1	-0.1 -0.1	-0.1 -0.1	-0.1	1.0		2.0	-0.1 -0.1
LINE 300MS/100	-0.1 -0.1	-0.1 -0.1	1.2		-0.1 -0.1	-0.1 -0.1	-0.1 -0.1	-0.1 -0.1	-0.1 -0.1	-0.1 -0.1	1.0 -0.1		2.7 0.6	-0.1 -0.1
LINE 300MS/100 LINE 300MS/150	-0.1 -0.1	-0.1 -0.1	1.2		-0.1 -0.1	-0.1 -0.1	-0.1 -0.1	-0.1 -0.1	-0.1 -0.1	-0.1 -0.1	-0.1 1.0		3.3	-0.1 -0.1
LINE 300MS/200	-0.1	-0.1	1.3	0.3	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	1.0	-0.1	2.8	-0.1

Results represent only the material tested. Actlabs is not liable for any claim/damage from use of this report in excess of the test cost. Unless requested A15-04575 samples are discarded in 90 days. This report is only to be reproduced in full. 22/48

SPATIOTEMPORAL GEOCHEMICAL HYDROCARBONS (SGH) by GC/MS

COOK TOWNSHIP PROJECT SITE

Activation Laboratories Ltd.
Date: July 6, 2015
R=Replicate Sample

	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
LINE 300MS/250	-0.1	-0.1	1.3	0.3	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	2.7	
LINE 300MS/300	-0.1	-0.1	1.2	0.3	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	1.0	-0.1	2.6	-0.1
LINE 300MS/350	-0.1	-0.1	1.2	0.3	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	2.7	-0.1
LINE 300MS/400	-0.1	-0.1	1.2	0.3	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	0.5	-0.1
LINE 300MS/450	-0.1	-0.1	1.3	0.3	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	1.1	-0.1	0.6	-0.1
LINE 300MS/500	-0.1	-0.1	1.2	0.3	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	1.0	-0.1	2.5	-0.1
LINE 300MS/550	-0.1	-0.1	1.2	0.3	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	2.6	-0.1
LINE 300MS/600	-0.1	-0.1	1.2	0.3	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	0.7	-0.1
LINE 300MS/650	-0.1	-0.1	1.3	0.3	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	1.1	-0.1	0.5	-0.1
LINE 300MS/650-R	-0.1	-0.1	1.2	1.2	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	1.1	-0.1	0.4	-0.1
LINE 300MS/700	-0.1	-0.1	1.1	0.3	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	0.5	-0.1
LINE 300MS/750	-0.1	-0.1	1.2	0.3	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	1.1	-0.1	2.7	
LINE 350MS/0	-0.1	-0.1	1.2	0.3	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	2.6	
LINE 350MS/50	-0.1	-0.1	1.2	1.2	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LINE 350MS/100	-0.1	-0.1	1.3	0.3	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	2.7	-0.1
LINE 350MS/150	-0.1		1.2		-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1		2.6	
LINE 350MS/200	-0.1	-0.1	1.4	0.3	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	3.0	
LINE 350MS/250	-0.1	-0.1	1.3	0.3	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	1.0	-0.1	2.8	
LINE 350MS/300	-0.1	-0.1	1.2	0.3	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	1.0		0.7	-0.1
LINE 350MS/350	-0.1	-0.1	1.2	0.3	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	1.0	-0.1	0.5	-0.1
LINE 350MS/400	-0.1	-0.1	1.2	0.3	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	1.0	•	2.6	-0.1
LINE 350MS/450	-0.1	-0.1	1.1	0.3	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1		0.5	
LINE 350MS/500	-0.1	-0.1	1.1	0.3	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1			-0.1
LINE 350MS/550	-0.1	-0.1	1.1	0.2	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	1.0		2.4	
LINE 350MS/600	-0.1	-0.1	1.2	1.2	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1		2.6	
LINE 350MS/600-R	-0.1	-0.1	1.2		-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1			-0.1
LINE 350MS/650	-0.1	-0.1	1.1	0.3	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	1.0	•	2.6	
LINE 350MS/700	-0.1	-0.1	1.1	0.3	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	1.0		2.4	-0.1
LINE 350MS/750	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	2.2	-0.1
LMB-QA	-0.1	-0.1	1.0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1		1.4	-0.1
LMB-QA	-0.1	-0.1	1.0		-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1		-0.1	-0.1
LMB-QA	-0.1	-0.1	1.0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1		-0.1	-0.1
LMB-QA	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
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Activation Laboratories Ltd.
Date: July 6, 2015
R=Replicate Sample

SPATIOTEMPORAL GEOCHEMICAL HYDROCARBONS (SGH) by GC/MS

COOK TOWNSHIP PROJECT SITE

Activation Laboratories Ltd.
Date: July 6, 2015
R=Replicate Sample

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

	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
LINE 0/0	0.5	-0.1	-0.1	2.5		-0.1	-0.1	-0.1	2.6		-0.1	-0.1	2.6	-0.1
LINE 0/50	0.5	-0.1	-0.1	2.5	-0.1	-0.1	-0.1	-0.1	2.7	-0.1	-0.1	-0.1	2.6	-0.1
LINE 0/100	0.5	-0.1	-0.1	0.4		-0.1	-0.1	-0.1	2.6	-0.1	-0.1	-0.1	2.5	-0.1
LINE 0/150	0.5	-0.1	-0.1	0.4	-0.1	1.9	-0.1	-0.1	3.0	-0.1	-0.1	-0.1	2.9	-0.1
LINE 0/200	0.5	-0.1	-0.1	2.4		-0.1	-0.1	-0.1	2.7	-0.1	-0.1	-0.1	2.6	-0.1
LINE 0/200-R	0.5	-0.1	-0.1	2.6		-0.1	-0.1	-0.1	2.8	-0.1	-0.1	-0.1	2.7	-0.1
LINE 0/250	0.5	-0.1	-0.1	2.5	-0.1	-0.1	-0.1	-0.1	2.7	-0.1	-0.1	-0.1	2.6	-0.1
LINE 0/300	0.5	-0.1	-0.1	2.5	-0.1	1.9	-0.1	-0.1	2.5	-0.1	-0.1	-0.1	2.5	-0.1
LINE 0/350	0.5	-0.1	-0.1	2.5	-0.1	-0.1	-0.1	-0.1	2.5	-0.1	-0.1	-0.1	2.5	-0.1
LINE 0/400	2.3	-0.1	-0.1	2.5	-0.1	-0.1	-0.1	-0.1	2.7	-0.1	-0.1	-0.1	2.6	-0.1
LINE 0/450	0.5	-0.1	-0.1	2.5	-0.1	-0.1	-0.1	-0.1	2.7	-0.1	-0.1	-0.1	2.6	-0.1
LINE 0/500	0.5	-0.1	-0.1	0.4		-0.1	-0.1	-0,1	2.6	-0.1	-0.1	-0.1	2.6	-0.1
LINE 0/550	0.5	-0.1	-0.1	2.7	-0.1	1.9	-0.1	-0.1	2.8	-0.1	-0.1	-0.1	2.8	-0.1
LINE 0/600	0.5	-0.1	-0.1	2.4	-0.1	1.9	-0.1	-0.1	3.1	-0.1	-0.1	1.9	3.1	-0.1
LINE 0/650	2.5	-0.1	-0.1	2.7	-0.1	1.9	-0.1	-0.1	3.0	-0.1	-0.1	-0.1	2.9	-0.1
LINE 0/700	0.5	-0.1	-0.1	2.7	-0.1	1.9	-0.1	-0.1	2.9	-0.1	-0.1	-0.1	2.8	-0.1
LINE 0/750	2.4	-0.1	-0.1	2.7	-0.1	1.9	-0.1	-0.1	2.8	-0.1	-0.1	-0.1	2.7	-0.1
LINE 50MS/0	0.5	-0.1	-0.1	2.8	-0.1	1.9	-0.1	-0.1	3.3	-0.1	-0.1	-0.1	3.2	-0.1
LINE 50MS/50	3.4	-0.1	2.5	3.8	-0.1	2.0	-0.1	-0.1	4.8	-0.1	0.4	2.0	4.6	-0.1
LINE 50MS/100	0.6	-0.1	2.3	3.2	-0.1	1.9	-0.1	-0.1	3.8	-0.1	-0.1	-0.1	3.7	-0.1
LINE 50MS/150	0.5	-0.1	-0.1	2.9	-0.1	1.9	-0.1	-0.1	3.1	-0.1	-0.1	-0.1	3.0	-0.1
LINE 50MS/150-R	0.6	-0.1	-0.1	2.9	-0.1	1.9	-0.1	-0.1	3.0	-0.1	-0.1	-0.1	3.0	-0.1
LINE 50MS/200	0.5	-0.1	-0.1	2.6	-0.1	1.9	-0.1	-0.1	3.0	-0.1	-0.1	-0.1	2.9	-0.1
LINE 50MS/250	0.5	-0.1	-0.1	2.5	-0.1	1.9	-0.1	-0.1	3.0	-0.1	-0.1	-0.1	2.9	-0.1
LINE 50MS/300	0.5	-0.1	-0.1	2.7	-0.1	2.0	-0.1	-0.1	3.0	-0.1	-0.1	-0.1	2.9	-0.1
LINE 50MS/350	0.5	-0.1	-0.1	2.7	-0.1	2.0	-0.1	-0.1	3.5	-0.1	0.5	-0.1	3.4	-0.1
LINE 50MS/400	2.5	-0.1	2.2	2.8		2.0	-0.1	-0.1	3.2	-0.1	0.5	2.0	3.1	-0.1
LINE 50MS/450	0.5	-0.1	2.3	3.0		2.0	-0.1	-0.1	3.5	-0.1	-0.1	-0.1	3.5	-0.1
LINE 50MS/500	0.5	-0.1	-0.1	2.5	-0.1	2.0	-0.1	-0.1	2.9	-0.1	0.3	-0.1	2.9	-0.1
LINE 50MS/550	0.5	-0.1	-0.1	2.8		2.1	-0.1	1.4	3.1	-0.1	0.3	-0.1	3.0	2.1
LINE 50MS/600	0.5	-0.1	2.3	2.8		1.9	-0.1	-0.1	3.2	-0.1	-0.1	-0.1	3.1	-0.1
LINE 50MS/650	0.5	-0.1	2.4	2.9		2.0	-0.1	-0.1	3.3	-0.1	0.3	2.0	3.3	-0.1
LINE 50MS/700	0.5	-0.1	-0.1	2.8		2.1	-0.1	-0.1	2.9	-0.1	0.4			-0.1
LINE 50MS/750 LINE 100MS/0	0.6 2.8	-0.1 -0.1	2.4 2.3	3.1 3.2	-0.1 -0.1	2.0 1.9	-0.1 -0.1	-0.1 -0.1	3.6 3.8	-0.1 -0.1	0.3 -0.1	2.0 -0.1	3.4 3.6	-0.1 -0.1
LINE 100MS/50	0.6	-0.1 -0.1		2.9	-0.1 -0.1	1.9	-0.1 -0.1	-0.1		-0.1 -0.1	-0.1 -0.1	-0.1 -0.1		-0.1 -0.1
LINE 100MS/100	2.8	-0.1	2.3 2.3	3.1	-0.1	1.9	-0.1	-0.1	3.8 3.9	-0.1	-0.1	-0.1	3.6 3.7	-0.1
LINE 100MS/100-R	2.5	-0.1 -0.1	-0.1	2.8		1.9	-0.1	-0.1	3.9	-0.1	-0.1 -0.1	-0.1 -0.1	3.0	-0.1 -0.1
LINE 100MS/100-R	2.5	-0.1	-0.1	2.8		1.9	-0.1 -0.1	-0.1	3.2	-0.1	-0.1 -0.1	-0.1	3.0	-0.1 -0.1
LINE 100MS/130	0.6	-0.1		2.6		-0.1	-0.1	-0.1	2.6	-0.1	-0.1	-0.1 -0.1	2.6	-0.1
LINE 100MS/250	2.5	-0.1	-0.1	2.8		-0.1	-0.1	-0.1	3.3	-0.1	-0.1	-0.1	3.2	-0.1
LINE 100MS/300	0.5	-0.1	-0.1	2.5	-0.1	-0.1	-0.1	-0.1	2.6	-0.1	-0.1	-0.1	2.5	-0.1
LINE 100MS/350	0.6	-0.1	-0.1	2.8	-0.1	-0.1	-0.1	-0.1	3.1	-0.1	-0.1	-0.1	3.0	-0.1
LINE 100MS/400	0.6	-0.1	2.2	2.7	-0.1	1.9	-0.1	-0.1	2.8	-0.1	-0.1	-0.1	2.8	-0.1
LINE 100MS/450	0.5	-0.1	-0.1	2.6		1.9	-0.1	-0.1	2.8	-0.1	-0.1	-0.1	2.7	-0.1
LINE 100MS/500	0.6	-0.1	2.4	2.8	-0.1	2.0	-0.1	-0.1	3.4	-0.1	-0.1	-0.1	3.2	-0.1
LINE 100MS/550	0.6	-0.1	2.3	3.0		2.0	-0.1	-0.1	4.1	-0.1	-0.1	-0.1	3.9	-0.1
LINE 100MS/600	0.5	-0.1	-0.1	2.8		2.0	-0.1	-0.1	3.1	-0.1	-0.1	2.0	3.0	-0.1
LINE 100MS/650	0.5	-0.1	-0.1	2.7	-0.1	1.9	-0.1	-0.1	3.1	-0.1	-0.1	-0.1	3.1	-0.1
LINE 100MS/700	0.5	-0.1		2.7	-0.1	1.9	-0.1	-0.1	2.9	-0.1	-0,1	-0.1	2.8	-0.1
LINE 100MS/750	2.5	-0.1	-0.1	2.8		2.0	-0.1	-0.1	3.0	-0.1	-0.1	2.0	3.0	-0.1
LINE 150MS/0	0.6	-0.1	2.3	2.9	-0.1	2.0	-0.1	-0.1	3.5	-0.1	-0.1	2.0	3.4	-0.1
LINE 150MS/50	2.6	-0.1	2.3	3.0	-0.1	2.0	-0.1	1.6	3.6	-0.1	-0.1	2.1	3.4	-0.1
LINE 150MS/50-R	0.6	2.0	2.5	3.2	-0.1	2.1	-0.1	1.7	4.0	-0.1	0.4	2.2	3.9	-0.1

Results represent only the material tested. Actlabs is not liable for any claim/damage from use of this report in excess of the test cost. Unless requested A15-04575 samples are discarded in 90 days. This report is only to be reproduced in full. 25/48

SPATIOTEMPORAL GEOCHEMICAL HYDROCARBONS (SGH) by GC/MS

COOK TOWNSHIP PROJECT SITE

Activation Laboratories Ltd.
Date: July 6, 2015
R=Replicate Sample

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

	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
LINE 150MS/100	3.0	-0.1	2.6	3.4	-0.1	2.0	-0.1	1.5	4.4	-0.1	0.4	2.1	4.2	-0.1
LINE 150MS/150	0.6	-0.1		3.1	-0.1	2.1	-0.1	1.5	3.5	-0.1	-0.1	2.0		-0.1
LINE 150MS/200	0.5	-0.1	2.2	2.4	-0.1	2.0	-0.1	-0.1	3.0	-0.1	-0.1	2.0		-0.1
LINE 150MS/250	2.7	-0.1	2.4		-0.1	2.0	-0.1	-0.1	3.8	-0.1	-0.1	2.0		-0.1
LINE 150MS/300	0.6	-0.1	-0.1	2.7	-0.1	1.9	-0.1	-0.1	2.8	-0.1	-0.1	2.0		-0.1
LINE 150MS/350	0.6	-0.1	-0.1	2.8	-0.1	2.0	-0.1	-0.1	3.3	-0.1	-0.1	2.0		-0.1
LINE 150MS/400	2.5	-0.1	2.2		-0.1	2.0	-0.1	-0.1	3.1	-0.1	-0.1	-0.1		-0.1
LINE 150MS/450	0,6	-0.1	2.4	3.0	-0.1	2.0	-0.1	-0.1	3.2	-0.1	0.3	2.1		-0.1
LINE 150MS/500	2.5	-0.1	2.3	2.9	-0.1	2.0	-0.1	-0.1	3.1	-0.1	0.5			-0.1
LINE 150MS/550	0.5	-0.1	2.4	2.8	-0.1	2.0	-0.1	-0.1	3.2	-0.1	0.3	2.0		-0.1
LINE 150MS/600	0.6	-0.1	2.3	2.5	-0.1	2.0	-0.1	-0.1	3.2	-0.1	0.5	-0.1	3.2	-0.1
LINE 150MS/650	3.1	-0.1	2.5	3.5	-0.1	2.0	-0.1	-0.1	4.4	-0.1	0.3	2.1	4.2	-0.1
LINE 150MS/700	2.9	-0.1	2.4	3.2	-0.1	2.0	-0.1	-0.1	4.0	-0.1	0.3	2.0	3.9	-0.1
LINE 150MS/750	0.5	-0.1	-0.1	3,1	-0.1	2.0	-0.1	-0.1	3.7	-0.1	0.4	2.0	3.7	-0.1
LINE 200MS/0	3.2	0.5	2.6	0.5	-0.1	0.5	-0.1	1.3	4.9	-0.1	0.3	2.0	4.8	-0.1
LINE 200MS/0-R	0.7	-0.1	2.4	0.5	-0.1	2.1	-0.1	1.4	4.6	-0.1	0.3	2.1	4.5	-0.1
LINE 200MS/50	0.5	-0.1	2.2	0.4	-0.1	2.0	-0.1	-0.1	3.6	-0.1	0.3	-0.1	3.6	-0.1
LINE 200MS/100	0.7	-0.1	2.4	3.5	-0.1	2.0	-0.1	-0.1	4.6	-0.1	0.4	2.0	4.4	-0.1
LINE 200MS/150	0.6	-0.1	2.4	2.9	-0.1	2.0	-0.1	-0.1	3.6	-0.1	0.3	-0.1	3.5	-0.1
LINE 200MS/200	3.2	-0.1	2.4	3.6	-0.1	2.0	-0.1	-0.1	4.4	-0.1	0.3	-0.1	4.2	-0.1
LINE 200MS/250	0.6	-0.1	2.5	2.7	-0.1	2.1	-0.1	-0.1	3.5	-0.1	0.5	-0.1	3.4	-0.1
LINE 200MS/300	2.7	-0.1	2.3	0.5	-0.1	2.0	-0.1	-0.1	3.7	-0.1	0.4	2.0	3.5	-0.1
LINE 200MS/350	0.5	-0.1	2.4	3.0	-0.1	2.1	-0.1	-0.1	3.8	-0.1	0.3	2.0	3.7	-0.1
LINE 200MS/400	3.0	-0.1	2.6	0.5	-0.1	2.2	-0.1	1.4	4.5	-0.1	0.4			2.2
LINE 200MS/450	2.5	-0.1	2.5	0.4	-0.1	2.1	-0.1	-0.1	3.4	-0.1	0.3	2.1	3.4	-0.1
LINE 200MS/500	2.5	-0.1	-0.1	0.4	-0.1	2.1	-0.1	-0.1	3.3	-0.1	0.3	2.1	3.3	-0.1
LINE 200MS/550	2.4	-0.1	-0.1	2.7	-0.1	2.0	-0.1	-0.1	2.9	-0.1	0.4	-0.1	2.8	-0.1
LINE 200MS/600	2.5	-0.1	2.2	2.8	-0.1	2.0	-0.1	-0.1	3.1	-0.1	0.5	-0.1		-0.1
LINE 200MS/650	0.6	-0.1	2.6	2.7	-0.1	2.2	-0.1	1.4	3.4	-0.1	0.3	2.0		-0.1
LINE 200MS/700	3.0	-0.1	2.5		-0.1	0.4	-0.1	1.4	4.1	-0.1	0.3	2.1		-0.1
LINE 200MS/750	2.6	-0.1	-0.1	2.8	-0.1	2.1	-0.1	-0.1	3.2	-0.1	0.3	2.0		-0.1
LINE 200MS/750-R	2.7	-0.1		2.7	-0.1	2.1	-0.1	-0.1	3.5	-0.1	0.5	2.0		-0.1
LINE 250MS/0	0.6	-0.1	-0.1	2.8	-0.1	2.0	-0.1	-0.1	3.1	-0.1	-0.1	-0.1		-0.1
LINE 250MS/50	0.6	-0.1	-0.1	3.0	-0.1	2.0	-0.1	-0.1	3.5	-0.1	0.4			-0.1
LINE 250MS/100	0.6	-0.1	-0.1	3.0	-0.1	2.0	-0.1	-0.1	3.2	-0.1	-0.1	-0.1		-0.1
LINE 250MS/150	2.4	-0.1	-0.1	2.8	-0.1	1.9	-0.1	-0.1	2.9	-0.1	-0.1	-0.1		-0.1
LINE 250MS/200	3.1	-0.1	2.3	0.5	-0.1	2.0	-0.1	-0.1	4.3	-0.1	0.5	2.0		-0.1
LINE 250MS/250 LINE 250MS/300	0.6	-0.1	2.1	3.1	-0.1 -0.1	2.0	-0.1	-0.1	3.8	-0.1 -0.1	0.5 -0.1	-0.1 -0.1		-0.1 -0.1
LINE 250MS/300 LINE 250MS/350	2.4 0.5	-0.1 -0.1	-0.1 -0.1	2.7 2.4	-0.1 -0.1	1.9 1.9	-0.1 -0.1	-0.1 -0.1	2.9 2.7	-0.1 -0.1	-0.1 -0.1	-0.1 -0.1	2.8 2.6	-0.1 -0.1
LINE 250MS/350 LINE 250MS/400	0.5 2.4	-0.1 -0.1	-0.1 -0.1	2.4	-0.1 -0.1	1.9	-0.1 -0.1	-0.1 -0.1	3.0	-0.1 -0.1	-0.1 0.5			-0.1 -0.1
LINE 250MS/450	2.4	-0.1 -0.1	-0.1 -0.1	2.4	-0.1 -0.1	2.0	-0.1 -0.1	-0.1 -0.1	3.0 2.5	-0.1 -0.1	0.5	2.0		-0.1 -0.1
LINE 250MS/500	2.3	-0.1 -0.1	-0.1	2.3	-0.1	2.0	-0.1 -0.1	-0.1 -0.1	2.5	-0.1 -0.1	0.3	2.0		-0.1 -0.1
LINE 250MS/550	2.2 0.5	-0.1 -0.1	-0.1 -0.1	2.4	-0.1 -0.1	1.9	-0.1 -0.1	-0.1	2.4	-0.1 -0.1	-0.1	-0.1	2.8	-0.1 -0.1
LINE 250MS/600	0.5 0.5	-0.1 -0.1	-0.1	2.7	-0.1	-0.1	-0.1 -0.1	-0.1 -0.1	2.9 3.1	-0.1	-0.1	-0.1		-0.1 -0.1
LINE 250MS/650	2.4	-0.1 -0.1	-0.1	2.7	-0.1	2.2	-0.1	1.4	2.9	-0.1	-0.1			-0.1
LINE 250MS/700	0.6	-0.1	-0.1	2.3	-0.1	2.1	-0.1	-0.1	2.8	-0.1	0.5	2.0		-0.1
LINE 250MS/700-R	0.6	-0.1	-0.1	2.7	-0.1	2.1	-0.1	-0.1	2.8	-0.1	0.3	2.0		-0.1
LINE 250MS/750	2.5	-0.1	2.6	 	-0.1	0.6	-0.1	1.5	3.1	-0.1 -0.1	0.5			0.5
LINE 300MS/0	2.4	-0.1	-0.1	2.4	-0.1	2.0	-0.1	-0.1	3.0	-0.1	-0.1	-0.1	2.9	-0.1
LINE 300MS/50	2.4	-0.1	-0.1	2.7	-0.1	1.9	-0.1	-0.1	3.0		-0.1	-0.1	2.9	-0.1
LINE 300MS/100	2.4	-0.1	-0.1	2.7	-0.1	1.9	-0.1	-0.1	3.0	-0.1	-0.1	-0.1	2.9	-0.1
LINE 300MS/150	0.6	-0.1	-0.1	3.2	-0.1	1.9	-0.1	-0.1	3.8	-0.1	0.5	-0.1		-0.1
LINE 300MS/200	2.5	-0.1		2.8	-0.1	1.9	-0.1	-0.1	3.1	-0.1	0.5			-0.1
						7.0				<u>.</u>				

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SPATIOTEMPORAL GEOCHEMICAL HYDROCARBONS

(SGH) by GC/MS COOK TOWNSHIP PROJECT SITE Activation Laboratories Ltd.
Date: July 6, 2015
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
LINE 300MS/250	0.5	-0.1	-0.1	2.7	-0.1	-0.1	-0.1	-0.1	2.9	-0.1	-0.1	-0.1	2.8	-0.1
LINE 300MS/300	0.4	-0.1	-0.1	2.6	-0.1	-0.1	-0.1	-0.1	2.7	-0.1	-0.1	-0.1	2.7	-0.1
LINE 300MS/350	2.3	-0.1	-0.1	2.6	-0.1	-0.1	-0.1	-0.1	2.7	-0.1	0.5	-0.1	2.7	-0.1
LINE 300MS/400	0.5	-0.1	-0.1	2.6	-0.1	1.9	-0.1	-0.1	2.7	-0.1	0.5	-0.1	2.8	-0.1
LINE 300MS/450	0.6	-0.1	-0.1	2.8	-0.1	2.0	-0.1	-0.1	3.3	-0.1	0.3	2.0	3.2	-0.1
LINE 300MS/500	2.2	-0.1	-0.1	2.5	-0.1	-0.1	-0.1	-0.1	2.4	-0.1	0.4	2.0	2.4	-0.1
LINE 300MS/550	2.3	-0.1	-0.1	2.6	-0.1	-0.1	-0.1	-0.1	2.7	-0.1	0.5	-0.1	2.6	-0.1
LINE 300MS/600	2.3	-0.1	-0.1	2.6	-0.1	-0.1	-0.1	-0.1	2.6	-0.1	0.5	-0.1	2.6	
LINE 300MS/650	2.6	-0.1	-0.1	3.0	-0.1	2.3	-0.1	1.4	3.6	-0.1	0.4	2.1	3.6	2.1
LINE 300MS/650-R	0.5	-0.1	-0.1	2.7	-0.1	2.1	-0.1	1.4	2.9	-0.1	0.4	2.0	2.9	0.4
LINE 300MS/700	2.2	-0.1	-0.1	2.4	-0.1	-0.1	-0.1	-0.1	2.5	-0.1	0.4	-0.1	2.6	-0.1
LINE 300MS/750	0.6		-0.1	2.7	-0.1	2.1	-0.1	1.4	3.1	-0.1	0.4	2.1	3.2	2.1
LINE 350MS/0	2.3	-0.1	-0.1	2.6	-0.1	1.9	-0.1	-0.1	2.6	-0.1	-0.1	-0.1	2.6	-0.1
LINE 350MS/50	0.5		-0.1	2.5	-0.1	-0.1	-0.1	-0.1	2.7		-0.1	-0.1	2.7	-0.1
LINE 350MS/100	2.4		-0.1	2.7	-0.1	1.9	-0.1	-0.1	2.9		-0.1		2.8	-0.1
LINE 350MS/150	2.3	-0.1	-0.1	2.6	-0.1	1.9	-0.1	-0.1	2.8	-0.1	-0.1	-0.1	2.7	-0.1
LINE 350MS/200	0.6	-0.1	-0.1	2.9	-0.1	1.9	-0.1	-0.1	3.6	-0.1	-0.1	-0.1	3.4	-0.1
LINE 350MS/250	0.5	-0.1	-0.1	2.8	-0.1	1.9	-0.1	-0.1	2.9		-0.1	-0.1	2.8	-0.1
LINE 350MS/300	0.6		-0.1	2.7	-0.1	2.0	-0.1	-0.1	3.0		0.4		3.0	-0.1
LINE 350MS/350	2.4		-0.1	2.7	-0.1	2.0	-0.1	-0.1	3.1	-0.1	0.4	2.0		-0.1
LINE 350MS/400	2.3		2.2	2.6	-0.1	2.1	-0.1	1.4	2.8	-0.1	0.4		2.8	-0.1
LINE 350MS/450	2.2		-0.1	2.3	-0.1	-0.1	-0.1	-0.1	2.5		-0.1		2.4	-0.1
LINE 350MS/500	2.1	-0.1	-0.1	2.4	-0.1	-0.1	-0.1	-0.1	2.2	-0.1	-0.1		2.2	-0.1
LINE 350MS/550	2.1		-0.1	2.4	-0.1	1.9	-0.1	-0.1	2.2		0.5		2.2	-0.1
LINE 350MS/600	2.2		-0.1	2.5	-0.1	-0.1	-0.1	-0.1	2.6		0.5		2.6	-0.1
LINE 350MS/600-R	2.3	-0.1	-0.1	2.5	-0.1	-0.1	-0.1	-0.1	2.7	-0.1	0.5		2.6	-0.1
LINE 350MS/650	2.3		-0.1	2.5	-0.1	1.9	-0.1	-0.1	2.9		0.5		2.8	-0.1
LINE 350MS/700	2.1	-0.1	-0.1	2.4	-0.1	2.0	-0.1	-0.1	2.2	-0.1	0.4			-0.1
LINE 350MS/750	-0.1	-0.1	-0.1	2.2	-0.1	-0.1	-0.1	-0.1	2.0	-0.1	-0.1	-0.1	2.0	-0.1
LMB-QA	2.0		-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	2.1	-0.1	-0.1		2.1	-0.1
LMB-QA	2.0		-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	2.0		-0.1		2.0	-0.1
LMB-QA	2.0		-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1		1.9	-0.1
LMB-QA	1.9	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
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Activation Laboratories Ltd.
Date: July 6, 2015
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

SPATIOTEMPORAL GEOCHEMICAL HYDROCARBONS (SGH) by GC/MS

COOK TOWNSHIP PROJECT SITE

Activation Laboratories Ltd.
Date: July 6, 2015
R=Replicate Sample

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

	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
LINE 0/0	-0.1	-0.1	-0.1	-0.1	-0.1	2.0	-0.1	-0.1	-0.1	-0.1	-0.1			-0.1
LINE 0/50	-0.1	-0.1	-0.1	-0.1	-0.1	0.5	-0.1	-0.1	-0.1	-0.1	-0.1		-0.1	-0.1
LINE 0/100	-0.1	-0.1	-0.1	-0.1	-0.1	2.0	-0.1	-0.1	-0.1	-0.1	-0.1		-0.1	-0.1
LINE 0/150	-0.1	-0.1	-0.1	-0.1	-0.1	2.1	-0.1	-0.1	-0.1	-0.1	-0.1			-0.1
LINE 0/200	-0.1	-0.1	-0.1	-0.1	-0.1	2.0	-0.1	-0.1	-0.1	-0.1	-0.1			-0.1
LINE 0/200-R	-0.1	-0.1	-0.1	-0.1	-0.1	2.0	-0.1	-0.1	-0.1	-0.1	-0.1			-0.1
LINE 0/250	-0.1	-0.1	-0.1	-0.1	-0.1	2.0	-0.1	-0.1	-0.1	-0.1	-0.1			-0.1
LINE 0/300	-0.1	-0.1	-0.1	-0.1	-0.1	2.0	-0.1	-0.1	-0.1	-0.1	-0.1			-0.1
LINE 0/350	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1		-0.1	-0.1
LINE 0/400	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1		-0.1	-0.1
LINE 0/450	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	7.4	-0.1	-0.1
LINE 0/500	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0,1	-0.1	-0.1	-0.1	7.3	-0.1	-0.1
LINE 0/550	-0.1	-0.1	-0.1	-0.1	-0.1	2.0	-0.1	-0.1	-0.1	-0.1	-0.1	7.7	-0.1	-0.1
LINE 0/600	-0.1	-0.1	-0.1	-0.1	-0.1	2.0	-0.1	-0.1	-0.1	-0.1	-0.1	8.0	-0.1	-0.1
LINE 0/650	-0.1	-0.1	-0.1	-0.1	-0.1	2.0	-0.1	-0.1	-0.1	-0.1	-0.1	7.7	-0.1	-0.1
LINE 0/700	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	1		-0.1
LINE 0/750	-0.1	-0.1	-0.1	-0.1	-0.1	2.1	-0.1	-0.1	-0.1	-0.1	-0.1			-0.1
LINE 50MS/0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1			-0.1
LINE 50MS/50	2.0	-0.1	-0.1	-0.1	2.1	0.5	-0.1	-0.1	-0.1	-0.1	-0.1	9.5	-0.1	-0.1
LINE 50MS/100	-0.1	-0.1	-0.1	-0.1	-0.1	0.4	-0.1	-0.1	-0.1	-0.1	-0.1	8.5	-0.1	-0.1
LINE 50MS/150	-0.1	-0.1	-0.1	-0.1	-0.1	0.5	-0.1	-0.1	-0.1	-0.1	-0.1	8.0	-0.1	-0.1
LINE 50MS/150-R	-0.1	-0.1	-0.1	-0.1	-0.1	1.9	-0.1	-0.1	-0.1	-0.1	-0.1	7.8	-0.1	-0.1
LINE 50MS/200	-0.1	-0.1	-0.1	-0.1	-0.1	0.5	-0.1	-0.1	-0.1	-0.1	-0.1	7.8	-0.1	-0.1
LINE 50MS/250	-0.1	-0.1	-0.1	-0.1	-0.1	2.0	-0.1	-0.1	-0.1	-0.1	-0.1	7.6	-0.1	-0.1
LINE 50MS/300	-0.1	-0.1	-0.1	-0.1	-0.1	0.5	-0.1	-0.1	-0.1	-0.1	-0.1	7.7	-0.1	-0.1
LINE 50MS/350	-0.1	-0.1	-0.1	-0.1	-0.1	2.2	-0.1	-0.1	-0.1	-0.1	-0.1	8.5	-0.1	-0.1
LINE 50MS/400	-0.1	-0.1	-0.1	-0.1	2.1	0.7	-0.1	-0.1	-0.1	-0.1	-0.1		-0.1	-0.1
LINE 50MS/450	-0.1	-0.1	-0.1	-0.1	-0.1	0.5	-0.1	-0.1	-0.1	-0.1	-0.1			-0.1
LINE 50MS/500	-0.1	-0.1	-0.1	-0.1	-0.1	0.6	-0.1	-0.1	-0.1	-0.1	-0.1			-0.1
LINE 50MS/550	-0.1	-0.1	-0.1	-0.1	2.1	0.9	-0.1	-0.1	-0.1	-0.1	-0.1		-0.1	-0.1
LINE 50MS/600	2.0		-0.1	-0.1	-0.1	0.6	-0.1	-0.1	-0.1	-0.1	-0.1	1		-0.1
LINE 50MS/650	2.0		-0.1	-0.1	-0.1	2.4	-0.1	-0.1	-0.1	-0.1	-0.1		-0.1	-0.1
LINE 50MS/700	1.9		-0.1	-0.1	2.1	2.5	-0.1	-0.1	-0.1	-0.1	-0.1			-0.1
LINE 50MS/750	-0.1	-0.1	-0.1	-0.1	-0.1	0.5	-0.1	-0.1	-0.1	-0.1	-0.1		-0.1	-0.1
LINE 100MS/0	-0.1	-0.1	-0.1	-0.1	-0.1	0.4	-0.1	-0.1	-0.1	-0.1	-0.1			-0.1
LINE 100MS/50	-0.1	-0.1	-0.1	-0.1	2.0	2.2	-0.1	-0.1	-0.1	-0.1	-0.1		-0.1	-0.1
LINE 100MS/100	-0.1	-0.1	-0.1	-0.1	-0.1	2.0	-0.1	-0.1	-0.1	-0.1	-0.1	1	-0.1	-0.1
LINE 100MS/100-R	-0.1	-0.1	-0.1	-0.1	-0.1	2.0	-0.1	-0.1	-0.1	-0.1	-0.1			-0.1
LINE 100MS/150 LINE 100MS/200	-0.1 -0.1	-0.1	-0.1	-0.1 -0.1	-0.1	2.0 -0.1	-0.1	-0.1	-0.1 -0.1	-0.1	-0.1 -0.1			-0.1 -0.1
		-0.1	-0.1		-0.1		-0.1	-0.1		-0.1				
LINE 100MS/250 LINE 100MS/300	-0.1 -0.1			-0.1 -0.1										
LINE 100MS/350	-0.1 -0.1	-0.1 -0.1	-0.1	-0.1 -0.1	-0.1 -0.1	-0.1 -0.1	-0.1 -0.1	-0.1 -0.1	-0.1	-0.1 -0.1	-0.1 -0.1			-0.1 -0.1
LINE 100MS/400	-0.1	-0.1	-0.1	-0.1 -0.1	-0.1 -0.1	-0.1 2.1	-0.1 -0.1	-0.1 -0,1	-0.1 -0.1	-0.1	-0.1 -0.1			-0.1 -0.1
LINE 100MS/450	-0.1 -0.1	-0.1	-0.1	-0.1 -0.1	-0.1 -0.1	2.0	-0.1 -0.1	-0.1	-0.1	-0.1 -0.1	-0.1 -0.1		-0.1	-0.1 -0.1
LINE 100MS/500	-0.1	-0.1	-0.1	-0.1	-0.1	2.0	-0.1	-0.1	-0.1	-0.1	-0.1		-0.1	-0.1
LINE 100MS/550	-0.1	-0.1	-0.1	-0.1	-0.1	2.1	-0.1	-0.1	-0.1	-0.1	-0.1			-0.1
LINE 100MS/600	2.0	-0.1	-0.1	-0.1	-0.1	2.1	-0.1	-0.1	-0.1	-0.1	-0.1			-0.1
LINE 100MS/650	-0.1	-0.1	-0.1	-0.1	-0.1	1.9	-0.1	-0.1	-0.1	-0.1	-0.1			-0.1
LINE 100MS/700	-0.1	-0.1	-0.1	-0.1	-0.1	2.0	-0.1	-0.1	-0.1	-0.1	-0.1			-0.1
LINE 100MS/750	-0.1	-0.1	-0.1	-0.1	-0.1	2.1	-0.1	-0.1	-0.1	-0.1	-0.1			-0.1
LINE 150MS/0	2.0	-0.1	-0.1	-0.1	-0.1	2.1	-0.1	-0.1	-0.1	-0.1	-0.1		-0.1	-0.1
LINE 150MS/50	2.1	-0.1	-0.1	-0.1	2.1	2.1	-0.1	-0.1	-0.1	-0.1	-0.1			-0.1
LINE 150MS/50-R	0.5		-0.1	-0.1	2.2	2.2	-0.1	-0.1	-0.1	-0.1	-0.1			-0.1

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SPATIOTEMPORAL GEOCHEMICAL HYDROCARBONS (SGH) by GC/MS

COOK TOWNSHIP PROJECT SITE

Activation Laboratories Ltd.
Date: July 6, 2015
R=Replicate Sample

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

	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
LINE 150MS/100	2.0	-0.1	-0.1	-0.1	2.1	0.4	-0.1	-0.1	-0.1	-0.1	-0.1	8.6	-0.1	-0.1
LINE 150MS/150	1.9		-0.1	-0.1	2.1	2.2	-0.1	-0.1	-0.1	-0.1	-0.1	8.2	-0.1	-0.1
LINE 150MS/200	-0.1	-0.1	-0.1	-0.1	-0.1	2.1	-0.1	-0.1	-0.1	-0.1	-0.1	7.8	-0.1	-0.1
LINE 150MS/250	2.0	-0.1	-0.1	-0.1	-0.1	2.1	-0.1	-0.1	-0.1	-0.1	-0.1	8.3	-0.1	-0.1
LINE 150MS/300	-0.1	-0.1	-0.1	-0.1	-0.1	2.1	-0.1	-0.1	-0.1	-0.1	-0.1	7.8	-0.1	-0.1
LINE 150MS/350	2.0	-0.1	-0.1	-0.1	2.0	2.1	-0.1	-0.1	-0.1	-0.1	-0.1	8.0	-0.1	-0.1
LINE 150MS/400	-0.1	-0.1	-0.1	-0.1	-0.1	2.2	-0.1	-0.1	-0.1	-0.1	-0.1	8.0	-0.1	-0.1
LINE 150MS/450	1.9	-0.1	-0.1	-0.1	1.9	0.5	-0.1	-0.1	-0.1	-0.1	-0.1	8.1	-0.1	-0.1
LINE 150MS/500	2.0	-0.1	-0.1	-0.1	2.0	2.2	-0.1	-0.1	-0.1	-0.1	-0.1	7.9	-0.1	-0.1
LINE 150MS/550	1.9	-0.1	-0.1	-0.1	2.0	2.3	-0.1	-0.1	-0.1	-0.1	-0.1	8.0	-0.1	-0.1
LINE 150MS/600	1.9	-0.1	-0.1	-0.1	2.1	2.4	-0.1	-0.1	-0.1	-0.1	-0.1	8.2	-0.1	-0.1
LINE 150MS/650	2.0	-0.1	-0.1	-0.1	-0.1	2.3	-0.1	-0.1	-0.1	-0.1	-0.1	8.8	-0.1	-0.1
LINE 150MS/700	2.0	-0.1	-0.1	-0.1	2.0	2.2	-0.1	-0.1	-0.1	-0.1	-0.1	8.4	-0.1	-0.1
LINE 150MS/750	-0.1	-0.1	-0.1	-0.1	-0.1	0.5	-0.1	-0.1	-0.1	-0.1	-0.1	8.3	-0.1	-0.1
LINE 200MS/0	2.0	2.0	-0.1	-0.1	2.2	2.6	-0.1	-0.1	-0.1	-0.1	-0.1		-0.1	-0.1
LINE 200MS/0-R	2.0	-0.1	-0.1	-0.1	2.1	2.5	-0.1	-0.1	-0.1	-0.1	-0.1			-0.1
LINE 200MS/50	-0.1	-0.1	-0.1	-0.1	2.0	2.3	-0.1	-0.1	-0.1	-0.1	-0.1		-0.1	-0.1
LINE 200MS/100	1.9	-0.1	-0.1	-0.1	-0.1	2.2	-0.1	-0.1	-0.1	-0.1	-0.1	8.8	-0.1	-0.1
LINE 200MS/150	-0.1	-0.1	-0.1	-0.1	-0.1	2.1	-0.1	-0.1	-0.1	-0.1	-0.1	8.3	-0.1	-0.1
LINE 200MS/200	-0.1	-0.1	-0.1	-0.1	2.1	2.2	-0.1	-0.1	-0.1	-0.1	-0.1	8.9	-0.1	-0.1
LINE 200MS/250	-0.1	-0.1	-0.1	-0.1	-0.1	0.5	-0.1	-0.1	-0.1	-0.1	-0.1	8.3	-0.1	-0.1
LINE 200MS/300	2.0		-0.1	-0.1	2.1	2.4	-0.1	-0.1	-0.1	-0.1	-0.1		-0.1	-0.1
LINE 200MS/350	2.0	-0.1	-0.1	-0.1	2.1	2.5	-0.1	-0.1	-0.1	-0.1	-0.1	8.2	-0.1	-0.1
LINE 200MS/400	2.1	2.1	-0.1	-0.1	2.2	2.8	-0.1	-0.1	-0.1	7.2	-0.1	8.9	-0.1	-0.1
LINE 200MS/450	2.1	2.0	-0.1	-0.1	2.1	2.3	-0.1	-0.1	-0.1	-0.1	-0.1		-0.1	-0.1
LINE 200MS/500	2.0	2.0	-0.1	-0.1	2.1	2.5	-0.1	-0.1	-0.1	-0.1	-0.1	8.2	-0.1	-0.1
LINE 200MS/550	-0.1	-0.1	-0.1	-0.1	-0.1	2.0	-0.1	-0.1	-0.1	-0.1	-0.1		-0.1	-0.1
LINE 200MS/600	-0.1	-0.1	-0.1	-0.1	-0.1	2.2	-0.1	-0.1	-0.1	-0.1	-0.1		-0.1	-0.1
LINE 200MS/650	2.0	-0.1	-0.1	-0.1	2.1	2.5	-0.1	-0.1	-0.1	-0.1	-0.1	8.1	-0.1	-0.1
LINE 200MS/700	2.1 2.0	2.0 -0.1	-0.1 -0.1	-0.1	2.1 2.1	2.4 0.6	-0.1 -0.1	-0.1 -0.1	-0.1 -0.1	-0.1 -0.1	-0.1 -0.1	9.1 8.3	-0.1 -0.1	-0.1
LINE 200MS/750		-0.1 -0.1		-0.1		0.6		• • •		***	-0.1 -0.1			-0.1
LINE 200MS/750-R LINE 250MS/0	1.9	-0.1 -0.1	-0.1	-0.1	2.0	0.5 2.1	-0.1 -0.1	-0.1	-0.1	-0.1 -0.1	-0.1 -0.1	8.5 8.0	-0.1	-0.1 -0.1
LINE 250MS/50	-0.1 -0.1	-0.1 -0.1	-0.1 -0.1	-0.1 -0.1	-0.1 -0.1	2.1	-0.1 -0.1	-0.1 -0.1	-0.1 -0.1	-0.1	-0.1 -0.1		-0.1 -0.1	-0.1 -0.1
LINE 250MS/100	-0.1	-0.1	-0.1 -0.1	-0.1	-0.1	0.4	-0.1	-0.1	-0.1	-0.1	-0.1	8.3	-0.1	-0.1
LINE 250MS/150	-0.1	-0.1	-0.1	-0.1	-0.1	2.0	-0.1	-0.1	-0.1	-0.1	-0.1	7.9	-0.1	-0.1
LINE 250MS/200	-0.1	-0.1	-0.1	-0.1	-0.1	2.2	-0.1	-0.1	-0.1	-0.1	-0.1		-0.1	-0.1
LINE 250MS/250	-0.1	-0.1	-0.1	-0.1	-0.1	2.2	-0.1	-0.1	-0.1	-0.1	-0.1	8.7	-0.1	-0.1
LINE 250MS/300	-0.1	-0.1	-0.1	-0.1	-0.1	2.1	-0.1	-0.1	-0.1	-0.1	-0.1	7.8	-0.1	-0.1
LINE 250MS/350	-0.1	-0.1 -0.1	-0.1	-0.1	-0.1	2.1	-0.1	-0.1	-0.1	-0.1	-0.1	7.6	-0.1	-0.1
LINE 250MS/400	2.0	1.9	-0.1	-0.1	-0.1	0.5	-0.1	-0.1	-0.1	-0.1	-0.1		-0.1	-0.1
LINE 250MS/450	2.0	1.9	-0.1	-0.1	2.0	2.3	-0.1	-0.1	-0.1	-0.1	-0.1	8.0	-0.1	-0.1
LINE 250MS/500	-0.1	-0.1	-0.1	-0.1	-0.1	0.5	-0.1	-0.1	-0.1	-0.1	-0.1	7.7	-0.1	-0.1
LINE 250MS/550	-0.1	-0.1	-0.1	-0.1	-0.1	2.1	-0.1	-0.1	-0.1	-0.1	-0.1		-0.1	-0.1
LINE 250MS/600	-0.1	-0.1	-0.1	-0.1	-0.1	2.0	-0.1	-0.1	-0.1	-0.1	-0.1	7.7	-0.1	-0.1
LINE 250MS/650	2.0	-0.1	-0.1	-0.1	2.1	2.8	-0.1	-0.1	-0.1	-0.1	-0.1	8.0	-0.1	-0.1
LINE 250MS/700	-0.1	-0.1	-0.1	-0.1	2.0	0.6	-0.1	-0.1	-0.1	-0.1	-0.1	7.9	-0.1	-0.1
LINE 250MS/700-R	-0.1	-0.1	-0.1	-0.1	-0.1	2.2	-0.1	-0.1	-0.1	-0.1	-0.1	7.7	-0.1	-0.1
LINE 250MS/750	2.2	2.2	-0.1	-0.1	2.2	3.2	-0.1	-0.1	-0.1	-0.1	-0.1	8.3	-0.1	-0.1
LINE 300MS/0	-0.1	-0.1	-0.1	-0.1	-0.1	2.1	-0.1	-0.1	-0.1	-0.1	-0.1		-0.1	-0.1
LINE 300MS/50	-0.1	-0.1	-0.1	-0.1	-0.1	2.0	-0.1	-0.1	-0.1	-0.1	-0.1	7.7	-0.1	-0.1
LINE 300MS/100	-0.1	-0.1	-0.1	-0.1	-0.1	0.5	-0.1	-0.1	-0.1	-0.1	-0.1	7.8	-0.1	-0.1
LINE 300MS/150	-0.1	-0.1	-0.1	-0.1	-0.1	0.5	-0.1	-0.1	-0.1	-0.1	-0.1	8.8	-0.1	-0.1
LINE 300MS/200	-0.1	-0.1	-0.1	-0.1	-0.1	2.1	-0.1	-0.1	-0.1	-0.1	-0.1	7.8	-0.1	-0.1

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SPATIOTEMPORAL GEOCHEMICAL HYDROCARBONS (SGH) by GC/MS

COOK TOWNSHIP PROJECT SITE

Activation Laboratories Ltd.
Date: July 6, 2015
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
LINE 300MS/250	-0.1	-0.1	-0.1	-0.1	-0.1	2.1	-0.1	-0.1	-0.1	-0.1	-0.1	7.7	-0.1	-0.1
LINE 300MS/300	-0.1	-0.1	-0.1	-0.1	-0.1	2.2	-0.1	-0.1	-0.1	-0.1	- 0.1	7.6	-0.1	-0.1
LINE 300MS/350	-0.1	-0.1	-0.1	-0.1	-0.1	2.2	-0.1	-0.1	-0.1	-0.1	-0.1	7.7	-0.1	-0.1
LINE 300MS/400	-0.1	-0.1	-0.1	-0.1	-0.1	2.1	-0.1	-0.1	-0.1	-0.1	-0.1	7.6	-0.1	-0.1
LINE 300MS/450	-0.1	-0.1	-0.1	-0.1	-0.1	2.2	-0.1	-0.1	-0.1	-0.1	-0.1	8.0	-0.1	-0.1
LINE 300MS/500	1.9	-0.1	-0.1	-0.1	-0.1	0.5	-0.1	-0.1	-0.1	-0.1	-0.1	7.5	-0.1	-0.1
LINE 300MS/550	-0.1	-0.1	-0.1	-0.1	-0.1	2.2	-0.1	-0.1	-0.1	-0.1	-0.1	7.7	-0.1	-0.1
LINE 300MS/600	-0.1	-0.1	-0.1	-0.1	2.0	2.2	-0.1	-0.1	-0.1	-0.1	-0.1	7.7	-0.1	-0.1
LINE 300MS/650	2.1	2.1	-0.1		2.1	2.9	-0.1	-0.1	-0.1	-0.1	-0.1			-0.1
LINE 300MS/650-R	2.0		-0.1		2.1	2.7	-0.1	-0.1	-0.1	-0.1	-0.1			-0.1
LINE 300MS/700	-0.1	-0.1	-0.1		2.0	2.3	-0.1	-0.1	-0.1	-0.1	-0.1		•	-0.1
LINE 300MS/750	2.1	2.1	-0.1		2.2	0.7	-0.1	-0.1	-0.1	7.2	-0.1	8.1	-0.1	-0.1
LINE 350MS/0	-0.1	-0.1	-0.1		-0.1	0.4	-0.1	-0.1	-0.1	-0.1	-0.1			-0.1
LINE 350MS/50	-0.1	-0.1	-0.1		-0.1	2.0	-0.1	-0.1	-0.1	-0.1	-0.1			-0.1
LINE 350MS/100	-0.1	-0.1	-0.1		-0.1	2.0	-0.1	-0.1	-0.1	-0.1	-0.1		-0.1	-0.1
LINE 350MS/150	-0.1	-0.1	-0.1		-0.1	2.0	-0.1	-0.1	-0.1	-0.1	-0.1			-0.1
LINE 350MS/200	-0.1	-0.1	-0.1		-0.1	2.1	-0.1	-0.1	-0.1	-0.1	-0.1		-0.1	-0.1
LINE 350MS/250	-0.1	-0.1	-0.1		-0.1	0.5	-0.1	-0.1	-0.1	-0.1	-0.1			-0.1
LINE 350MS/300	1.9		-0.1		1.9	2.4	-0.1	-0.1	-0.1	-0.1	-0.1			-0.1
LINE 350MS/350	2.0		-0.1		2.1	2.6		-0.1	-0.1	-0.1	-0.1			-0.1
LINE 350MS/400	2.0		-0.1		2.0	2.4	-0.1	-0.1	-0.1	-0.1	-0.1			-0.1
LINE 350MS/450	-0.1	-0.1	-0.1		-0.1	2.0	-0.1	-0.1	-0.1	-0.1	-0.1			-0.1
LINE 350MS/500	-0.1	-0.1	-0.1		-0.1	2.2	-0.1	-0.1	-0.1	-0.1	-0.1			-0.1
LINE 350MS/550	-0.1	-0.1	-0.1		-0.1	2.2	-0.1	-0.1	-0.1	-0.1	-0.1			-0.1
LINE 350MS/600	-0.1	-0.1	-0.1		-0.1	2.2	-0.1	-0.1	-0.1	-0.1	-0.1			-0.1
LINE 350MS/600-R	-0.1	-0.1	-0.1		-0.1	2.2	-0.1	-0.1	-0.1	-0.1	-0.1			-0.1
LINE 350MS/650	-0.1	-0.1	-0.1		-0.1	2.1	-0.1	-0.1	-0.1	-0.1	-0.1			-0.1
LINE 350MS/700	2.0		-0.1		2.0	2.4	-0.1	-0.1	-0.1	-0.1	-0.1			-0.1
LINE 350MS/750	-0.1	-0.1	-0.1	-0.1	-0.1	2.2	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LMB-QA	-0.1	-0.1	-0.1		-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1		-0.1	-0.1
LMB-QA	-0.1	-0.1	-0.1		-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LMB-QA	-0.1	-0.1	-0.1		-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LMB-QA	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1

Activation Laboratories Ltd.
Date: July 6, 2015
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

SPATIOTEMPORAL GEOCHEMICAL HYDROCARBONS (SGH) by GC/MS

COOK TOWNSHIP PROJECT SITE

Activation Laboratories Ltd.
Date: July 6, 2015
R=Replicate Sample

-1=Reporting Limit of	1pg/g	g (ppt=parts per trillion)
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	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
LINE 0/0	7.7		-0.1	-0.1	9.6	-0.1	9.1	-0.1	-0.1	8.3	-0.1		4.1	-0.1
LINE 0/50	7.7		-0.1	-0.1	8.8	-0.1	8.6	-0.1	-0.1	6.8	-0.1		-0.1	-0.1
LINE 0/100	7.6		-0.1	-0.1	2.8	-0.1	10.0	-0.1	-0.1	17.2	-0.1		5.0	-0.1
LINE 0/150	8.2	-0.1	-0.1	-0.1	14.2	-0.1	9.8	-0.1	7.2	41.1	6.3		7.8	-0.1
LINE 0/200	7.8		-0.1	-0.1	2.5	-0.1	9.9	-0.1	-0.1	12.8	-0.1		4.6	-0.1
LINE 0/200-R	7.8		-0.1	-0.1	2.6	-0.1	10.1	-0.1	-0.1	14.8	-0.1	-0.1	4.9	-0.1
LINE 0/250	7.8		-0.1	-0.1	2.5	-0.1	9.7	-0.1	-0.1	14.4	-0.1		4.9	-0.1
LINE 0/300	7.7	-0.1	-0.1	-0.1	2.7	-0.1	10.2	-0.1	-0.1	21.0	-0.1		5.6	-0.1
LINE 0/350	7.6		-0.1	-0.1	2.3	-0.1	8.9	-0.1	-0.1	7.5	-0.1		4.0	-0.1
LINE 0/400	7.7	-0.1	-0.1	-0.1	2.5	-0.1	9.9	-0.1	-0.1	15.7	-0.1	-0.1	4.9	-0.1
LINE 0/450	7.5		-0.1	-0.1	2.6	-0.1	9.5	-0.1	-0.1	15.4	-0.1	-0.1	4.9	-0.1
LINE 0/500	7.6		-0.1	-0.1	2.4	-0.1	8.9	-0.1	-0.1	8.9	-0.1		3.9	-0.1
LINE 0/550	7.9	-0.1	-0.1	-0.1	2.0	-0.1	9.2	-0.1	-0.1	7.4	-0.1		4.1	-0.1
LINE 0/600	8.3	-0.1	7.6	-0.1	2.2	-0.1	10.6	-0.1	-0.1	17.9	-0.1		5.3	-0.1
LINE 0/650	8.0	-0.1	-0.1	-0.1	2.4	-0.1	9.4	-0.1	-0.1	10.6	-0.1	-0.1	4.6	-0.1
LINE 0/700	7.9		-0.1	-0.1	2.3	-0.1	9.9	-0.1	-0.1	12.1	-0.1	-0.1	4.6	-0.1
LINE 0/750	7.9		-0.1	-0.1	2.4	-0.1	9.9	-0.1	-0.1	11.8	-0.1		4.7	-0.1
LINE 50MS/0	8.2	-0.1	-0.1	-0.1	4.4	-0.1	10.9	-0.1	-0.1	20.0	-0.1		5.6	-0.1
LINE 50MS/50	10.0	-0.1	7.9	-0.1	18.9	-0.1	13.3	-0.1	7.3	26.8	6.6		6.8	-0.1
LINE 50MS/100	8.8	-0.1	7.6	-0.1	3.9	-0.1	11.5	-0.1	-0.1	19.0	-0.1	-0.1	5.6	-0.1
LINE 50MS/150	8.4	-0.1	-0.1	-0.1	2.5	-0.1	10.8	-0.1	-0.1	17.8	-0.1	-0.1	5.3	-0.1
LINE 50MS/150-R	8.3	-0.1	-0.1	-0.1	2.5	-0.1	10.6	-0.1	-0.1	16.7	-0.1	-0.1	5.2	-0.1
LINE 50MS/200	8.0	-0.1	-0.1	-0.1	1.8	-0.1	9.1	-0.1	-0.1	6.8	-0.1	-0.1	4.0	-0.1
LINE 50MS/250	8.0	-0.1	-0.1	-0.1	2.6	-0.1	10.4	-0.1	-0.1	20.8	-0.1	-0.1	5.7	-0.1
LINE 50MS/300	8.0	-0.1	-0.1	-0.1	2.4	-0.1	9.8	-0.1	-0.1	13.2	-0.1	-0.1	4.9	-0.1
LINE 50MS/350	8.8	-0.1	7.8	-0.1	1.5	-0.1	11.0	-0.1	-0.1	18.3	-0.1	-0.1	5.5	-0.1
LINE 50MS/400	8.5	-0.1	-0.1	-0.1	2.1	-0.1	9.5	-0.1	-0.1	8.1	-0.1	-0.1	4.1	-0.1
LINE 50MS/450	8.7	-0.1	7.7	-0.1	5.6	-0.1	11.4	-0.1	-0.1	20.5	-0.1	-0.1	5.7	-0.1
LINE 50MS/500	8.1	-0.1	-0.1	-0.1	2.1	-0.1	9.6	-0.1	-0.1	9.1	-0.1	-0.1	4.3	-0.1
LINE 50MS/550	8.8	-0.1	7.6	-0.1	13.7	-0.1	9.5	-0.1	-0.1	6.5	-0.1	-0.1	4.3	-0.1
LINE 50MS/600	8.3	-0.1	-0.1	-0.1	2.1	-0.1	9.7	-0.1	-0.1	10.1	-0.1		4.5	-0.1
LINE 50MS/650	8.4	-0.1	-0.1	-0.1	2.8	-0.1	11.4	-0.1	7.1	29.0	-0.1		6.8	-0.1
LINE 50MS/700	8.3	-0.1	-0.1	-0.1	2.2	-0.1	9.7	-0.1	-0.1	7.4	-0.1		4.7	-0.1
LINE 50MS/750	8.8	-0.1	8.3	-0.1	17.9	-0.1	10.6	-0.1	7.2	42.0	6.6		8.6	-0.1
LINE 100MS/0	8.9	-0.1	7.6	-0.1	2.1	-0.1	10.7	-0.1	-0.1	11.4	-0.1		4.6	-0.1
LINE 100MS/50	8.8	-0.1	-0.1	-0.1	2.5	-0.1	11.4	-0.1	-0.1	17.4	-0.1		5.4	-0.1
LINE 100MS/100	9.6	-0.1	7.8	-0.1	20.0	-0.1	5.1	-0.1	7.2	42.6	6.5		8.4	-0.1
LINE 100MS/100-R	8.7	-0.1	-0.1	-0.1	3.5	-0.1	10.8	-0.1	-0.1	20.8	-0.1		5.6	-0.1
LINE 100MS/150	8.2		-0.1	-0.1	2.3	-0.1	10.5	-0.1	-0.1	17.0	-0.1		5.3	-0.1
LINE 100MS/200	7.7	-0.1	-0.1	-0.1	2.5	-0.1	9.5	-0.1	-0.1	10.2	-0.1		4.3	-0.1
LINE 100MS/250	8.3	-0.1	-0.1	-0.1	3.8	-0.1	11.0	-0.1	-0.1	22.7	-0.1	-0.1	5.9	-0.1
LINE 100MS/300	7.7	-0.1	-0.1	-0.1	2.3	-0.1	9.5	-0.1	-0.1	10.1	-0.1	-0.1	4.3	-0.1
LINE 100MS/350	8.1	-0.1	-0.1	-0.1	2.6	-0.1	10.7	-0.1	-0.1	25.5	-0.1		5.6	-0.1
LINE 100MS/400	8.0		-0.1	-0.1	8.6	-0.1	8.1	-0.1	-0.1	5.6	-0.1	-0.1	3.9	-0.1
LINE 100MS/450	8.0	-0.1	-0.1	-0.1	2.2	-0.1	9.6	-0.1	-0.1	9.9	-0.1		4.4	-0.1
LINE 100MS/500	8.3	-0.1	-0.1	-0.1	2.5	-0.1	11.2	-0.1	-0.1	21.6	-0.1		6.1	-0.1
LINE 100MS/550	8.5	-0.1	-0.1	-0.1	5.3	-0.1	11.9	-0.1	-0.1	30.3	6.4		6.9	-0.1
LINE 100MS/600	8.1	-0.1	-0.1	-0.1	2.4	-0.1	10.0	-0.1	-0.1	13.1	-0.1	-0.1	4.7	-0.1 -0.1
LINE 100MS/650 LINE 100MS/700	8.0 8.0		-0.1 -0.1	-0.1 -0.1	2.5 2.4	-0.1 -0.1	10.4 10.1	-0.1 -0.1	-0.1 -0.1	15.9 14.6	-0.1 -0.1		5.1	-0.1 -0.1
LINE 100MS/700 LINE 100MS/750	8.0	-0.1 -0.1	-0.1 -0.1	-0.1 -0.1	2.4 1.8	-0.1 -0.1	10.1	-0.1 -0.1	-0.1 -0.1	14.6	-0.1 -0.1		5.0 4.1	-0.1 -0.1
LINE 150MS/0	8.0 8.4	-0.1 -0.1		-0.1 -0.1	1.8	-0.1 -0.1			-0.1 -0.1	18.0	-0.1 -0.1	-0.1 -0.1	4.1 5.5	-0.1 -0.1
LINE 150MS/50	8.4 8.4	-0.1 -0.1	-0.1 -0.1	-0.1 -0.1	2.4	-0.1 -0.1	10.9 11.7	-0.1 -0.1	-0.1 7.2	18.0 30.0	-0.1 -0.1		5.5 7.0	-0.1 -0.1
LINE 150MS/50-R	8.9	-0.1	7.8	-0.1	2.5	6.6	11.8	-0.1	7.4	25.6	6.5	-0.1	6.4	-0.1

Results represent only the material tested. Actlabs is not liable for any claim/damage from use of this report in excess of the test cost. Unless requested A15-04575 samples are discarded in 90 days. This report is only to be reproduced in full. 33/48

SPATIOTEMPORAL GEOCHEMICAL HYDROCARBONS

Activation Laboratories Ltd. (SGH) by GC/MS Date: July 6, 2015 COOK TOWNSHIP PROJECT SITE R=Replicate Sample

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

	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
LINE 150MS/100	9.2	-0.1	7.6	-0.1	18.7	6.5	11.5	-0.1	7.4	36.0	6.7	-0.1	7.9	-0.1
LINE 150MS/150	8.9	-0.1	-0.1	-0.1	2.3	-0.1	10.9	-0.1	-0.1	14.4	-0.1	-0.1	5.1	-0.1
LINE 150MS/200	8.1	-0.1	-0.1	-0.1	2.2	-0.1	10.0	-0.1	-0.1	11.8	-0.1	-0.1	4.6	-0.1
LINE 150MS/250	8.5	-0.1	-0.1	-0.1	2.1	-0.1	10.4	-0.1	-0.1	13.6	-0.1	-0.1	5.0	-0.1
LINE 150MS/300	8.0	-0.1	-0.1	-0.1	2.5	-0.1	9.8	-0.1	-0.1	11.0	-0.1	-0.1	4.4	-0.1
LINE 150MS/350	8.3	-0.1	-0.1	-0.1	2.0	-0.1	9.8	-0.1	-0.1	8.1	-0.1	-0.1	4.3	-0.1
LINE 150MS/400	8.3	-0.1	-0.1	-0.1	6.2	-0.1	11.2	-0.1	-0.1	26.3	-0.1	-0.1	6.4	-0.1
LINE 150MS/450	9.0	-0.1	7.5	-0.1	2.0	-0.1	9.8	-0.1	-0.1	8.1	-0.1	-0.1	4.3	-0.1
LINE 150MS/500	8.2	-0.1	-0.1	-0.1	2.1	-0.1	9.8	-0.1	-0.1	8.7	-0.1	-0.1	4.4	-0.1
LINE 150MS/550	8.4	-0.1	-0.1	-0.1	2.2	-0.1	10.3	-0.1	-0.1	12.2	-0.1	-0.1	4.7	-0.1
LINE 150MS/600	8.2	-0.1	-0.1	-0.1	2.3	-0.1	10.7	-0.1	-0.1	18.9	-0.1	-0.1	5.5	-0.1
LINE 150MS/650	9.2	-0.1	-0.1	-0.1	2.2	-0.1	11.3	-0.1	-0.1	15.4	-0.1	-0.1	5.2	-0.1
LINE 150MS/700	8.8	-0.1	-0.1	-0.1	2.1	-0.1	10.6	-0.1	-0.1	15.7	-0.1	-0.1	4.8	-0.1
LINE 150MS/750	8.6	-0.1	7.4	-0.1	1.4	-0.1	10.9	-0.1	-0.1	19.2	-0.1	-0.1	5.4	-0.1
LINE 200MS/0	9.8	-0.1	8.3	-0.1	2.7	-0.1	12.4	-0.1	7.1	23.6	1.6	7.3	6.3	-0.1
LINE 200MS/0-R	9.5	-0.1	7.7	-0.1	2.3	-0.1	11.7	-0.1	-0.1	16.9	-0.1	-0.1	5.4	-0.1
LINE 200MS/50	8.8	-0.1	-0.1	-0.1	2.0	-0.1	9.9	-0.1	-0.1	7.4	-0.1	-0.1	4.1	-0.1
LINE 200MS/100	9.3	-0.1	7.9	-0.1	4.6	-0.1	12.0	-0.1	-0.1	24.6	-0.1	-0.1	6.2	-0.1
LINE 200MS/150	8.8	-0.1	7.7	-0.1	2.8	-0.1	11.6	-0.1	-0.1	27.9	-0.1	-0.1	6.7	-0.1
LINE 200MS/200	9.4	-0.1	-0.1	-0.1	2.3	-0.1	11.3	-0.1	-0.1	15.7	-0.1	-0.1	5.1	-0.1
LINE 200MS/250	8.6	-0.1	-0.1	-0.1	2.2	-0.1	10.4	-0.1	-0.1	10.2	-0.1	-0.1	4.6	-0.1
LINE 200MS/300	8.7	-0.1	7.6	-0.1	6.3	-0.1	12.0	-0.1	-0.1	30.9	-0.1	-0.1	6.6	-0.1
LINE 200MS/350	8.7	-0.1	7.7	-0.1	3.6	-0.1	10.8	-0.1	-0.1	22.4	-0.1	-0.1	6.1	-0.1
LINE 200MS/400	9.7	-0.1	7.5	-0.1	12.3	-0.1	9.8	-0.1	-0.1	6.4	-0.1	-0.1	4.1	-0.1
LINE 200MS/450	8.5	-0.1	7.6	-0.1	3.0	-0.1	11.5	-0.1	7.3	26.0	6.4	-0.1	6.3	-0.1
LINE 200MS/500	8.5	-0.1	-0.1	-0.1	2.1	-0.1	9.9	-0.1	-0.1	10,1	-0.1	-0.1	4.4	-0.1
LINE 200MS/550	8.4	-0.1	-0.1	-0.1	5.7	-0.1	10.2	-0.1	-0.1	15.5	-0.1	-0.1	5.2	-0.1
LINE 200MS/600	8.2	-0.1	-0.1	-0.1	1.9	-0.1	9.7	-0.1	-0.1	8.0	-0.1	-0.1	4.2	-0.1
LINE 200MS/650	8.5	-0.1	7.7	-0.1	2.1	-0.1	10.3	-0.1	-0.1	11.0	-0.1	-0.1	5.0	-0.1
LINE 200MS/700	9.6	-0.1	8.1	-0.1	2.1	-0.1	11.5	-0.1	-0.1	13.9	-0.1	-0.1	5.3	-0.1
LINE 200MS/750	8.7	-0.1	8.0	-0.1	6.4	-0.1	11.7	-0.1	7.2	29.3	6.3	-0.1	6.6	-0.1
LINE 200MS/750-R	8.9	-0.1	7.8	-0.1	5.0	-0.1	11.6	-0.1	7.1	23.6	-0.1	-0.1	6.1	-0.1
LINE 250MS/0	8.5	-0.1	-0.1	-0.1	2.3	-0.1	10.1	-0.1	-0.1	10.4	-0.1	-0.1	4.5	-0.1
LINE 250MS/50	8.6	-0.1	7.6	-0.1	2.3	-0.1	11.1	-0.1	-0.1	16.6	-0.1	-0.1	5.6	-0.1
LINE 250MS/100	8.6	-0.1	-0.1	-0.1	2.4	-0.1	10.8	-0.1	-0.1	16.4	-0.1	-0.1	5.0	-0.1
LINE 250MS/150	8.2	-0.1	-0.1	-0.1	2.4	-0.1	10.5	-0.1	-0.1	16.8	-0.1	-0.1	5.3	-0.1
LINE 250MS/200	9.3	-0.1	-0.1	-0.1	2.5	-0.1	11.8	-0.1	-0.1	19.4	-0.1	-0.1	5.4	-0.1
LINE 250MS/250	8.9	-0.1	-0.1	-0.1	2.0	-0.1	10.2	-0.1	-0.1	7.5	-0.1	-0.1	4.1	-0.1
LINE 250MS/300	8.1	-0.1	-0.1	-0.1	9.7	-0.1	8.8	-0.1	-0.1	6.0	-0.1	-0.1	4.1	-0.1
LINE 250MS/350	7.9	-0.1	-0.1	-0.1	1.7	-0.1	8.6	-0.1	-0.1	6.2	-0.1	-0.1	4.1	-0.1
LINE 250MS/400	8.4	-0.1	7.7	-0.1	1.7	-0.1	9.9	-0.1	-0.1	12.9	-0.1	-0.1	4.6	-0.1
LINE 250MS/450	8.3	-0.1	-0.1	-0.1	2.4	-0.1	8.6	-0.1	-0,1	6.6	-0.1	-0.1	4.0	-0.1
LINE 250MS/500	7.9	-0.1	-0.1	-0.1	8.8	-0.1	8.1	-0.1	-0.1	5.3	-0.1	-0.1	4.1	-0.1
LINE 250MS/550	8.0	-0.1	-0.1	-0.1	2.0	-0.1	9.3	-0.1	-0.1	7.6	-0.1	-0.1	4.1	-0.1
LINE 250MS/600	8.0	-0.1	-0.1	-0.1	9.9	-0.1	8.6	-0.1	-0.1	6.2	-0.1	-0.1	-0.1	-0.1
LINE 250MS/650	8.3	-0.1	-0.1	-0.1	11.0	-0.1	8.8	-0.1	-0.1	5.8	-0.1	-0.1	4.5	-0.1
LINE 250MS/700	8.0	-0.1	-0.1	-0.1	2.0	-0.1	9.4	-0.1	-0.1	8.1	-0.1	-0.1	4.5	-0.1
LINE 250MS/700-R	7,9	-0.1	-0.1	-0.1	9.2	-0.1	8.3	-0.1	-0.1	5.6	-0.1	-0.1	4.0	-0.1
LINE 250MS/750	8.6	-0.1	-0.1	-0.1	9.1	-0.1	8.2	-0.1	-0.1	-0.1	-0.1	-0.1	4.5	-0.1
LINE 300MS/0	8.1	-0.1	-0.1	-0.1	2.7	-0.1	10.7	-0.1	-0.1	25.5	-0.1	-0.1	5.8	-0.1
LINE 300MS/50	8.0	-0.1	-0.1	-0.1	2.2	-0.1	10.1	-0.1	-0.1	13.7	-0.1	-0.1	4.7	-0.1
LINE 300MS/100	8.1	-0.1	-0.1	-0.1	2.1	-0.1	9.9	-0.1	-0.1	9.8	-0.1	-0.1	4.3	-0.1
LINE 300MS/150	9.0	-0.1	-0.1	-0.1	2.4	-0.1	11.0	-0.1	-0.1	14.1	-0.1	-0.1	4.9	-0.1
LINE 300MS/200	8.1	-0.1	-0.1	-0.1	2.2	-0.1	10.2	-0.1	-0.1	14.5	-0.1	-0.1	4.9	-0.1

Results represent only the material tested. Actlabs is not liable for any claim/damage from use of this report in excess of the test cost. Unless requested A15-04575 samples are discarded in 90 days. This report is only to be reproduced in full. 34/48

SPATIOTEMPORAL GEOCHEMICAL HYDROCARBONS
(SGH) by GC/MS
rillion) COOK TOWNSHIP PROJECT SITE

Activation Laboratories Ltd.
Date: July 6, 2015
R=Replicate Sample

-1=Reporting Limit of	1pg/g	g (ppt=parts per trillion)
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	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
LINE 300MS/250	8.1	-0.1	-0.1	-0.1	1.9	-0.1	9.0	-0.1	-0.1	7.7	-0.1	-0.1	3.8	-0.1
LINE 300MS/300	7.8	-0.1	-0.1	-0.1	9.2	-0.1	8.3	-0.1	-0.1	5.8	-0.1	-0.1	-0.1	-0.1
LINE 300MS/350	7.9	-0.1	-0.1	-0.1	9.6	-0.1	8.3	-0.1	-0.1	5.6	-0.1	-0.1	-0.1	-0.1
LINE 300MS/400	7.8	-0.1	-0.1	-0.1	8.8	-0.1	8.0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LINE 300MS/450	8.6	-0.1	7.8	-0.1	2.2	-0.1	10.3	-0.1	-0.1	9.8	-0.1	-0.1	4.7	-0.1
LINE 300MS/500	7.8	-0.1	-0.1	-0.1	1.7	-0.1	8.1	-0.1	-0.1	5.9	-0.1	-0.1	3.9	-0.1
LINE 300MS/550	7.9	-0.1	-0.1	-0.1	9.2	-0.1	8.3	-0.1	-0.1	5.5	-0.1	-0.1	3.9	-0.1
LINE 300MS/600	7.9	-0.1	-0.1	-0.1	8.4	-0.1	7.9	-0.1	-0.1	-0.1	-0.1	-0.1	3.9	-0.1
LINE 300MS/650	8.8	-0.1	8.0	-0.1	1.9	-0.1	9.8	-0.1	-0.1	7.1	-0.1	7.2	4.9	-0.1
LINE 300MS/650-R	8.2	-0.1	-0.1	-0.1	10.6	-0.1	8.6	-0.1	-0.1	5.7	-0.1	-0.1	4.5	-0.1
LINE 300MS/700	7.7	-0.1	-0.1	-0.1	8.5	-0.1	7.7	-0.1	-0.1	5.3	-0.1	-0.1	3.8	-0.1
LINE 300MS/750	8.6	-0.1	8.3	-0.1	1.8	-0.1	9.4	-0.1	-0.1	7.5	-0.1	7.3	4.4	-0.1
LINE 350MS/0	8.3	-0.1	-0.1	-0.1	2.2	-0.1	9.4	-0.1	-0.1	9.2	-0.1	-0.1	4.2	-0.1
LINE 350MS/50	7.8	-0.1	-0.1	-0.1	2.2	-0.1	9.1	-0.1	-0.1	9.3	-0.1	-0.1	4.1	-0.1
LINE 350MS/100	8.0	-0.1	-0.1	-0.1	2.2	-0.1	9.6	-0.1	-0.1	9.5	-0.1	-0.1	4.2	-0.1
LINE 350MS/150	7.9	-0.1	-0.1	-0.1	2.0	-0.1	8.9	-0.1	-0.1	6.9	-0.1	-0.1	4.0	-0.1
LINE 350MS/200	8.7	-0.1	-0.1	-0.1	6.1	-0.1	10.8	-0.1	-0.1	19.2	-0.1	-0.1	5.3	-0.1
LINE 350MS/250	8.4	-0.1	-0.1	-0.1	11.0	-0.1	8.8	-0.1	-0.1	6.0	-0.1	-0.1	4.1	-0.1
LINE 350MS/300	8.9	-0.1	7.5	-0.1	1.8	-0.1	9.3	-0.1	-0.1	6.8	-0.1	-0.1	4.9	-0.1
LINE 350MS/350	8.4	-0.1	-0.1	-0.1	9.9	-0.1	8.4	-0.1	-0.1	-0.1	-0.1	-0.1	4.1	-0.1
LINE 350MS/400	8.3	-0.1	-0.1	-0.1	10.1	-0.1	8.1	-0.1	-0.1	5.0	-0.1	-0.1	3.8	-0.1
LINE 350MS/450	7.6	-0.1	-0.1	-0.1	2.2	-0.1	8.7	-0.1	-0.1	9.2	-0.1	-0.1	4.1	-0.1
LINE 350MS/500	7.5	-0.1	-0.1	-0.1	8.1	-0.1	7.7	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LINE 350MS/550	7.7	-0.1	-0.1	-0.1	1.8	-0.1	8.0	-0.1	-0.1	6.1	-0.1	-0.1	-0.1	-0.1
LINE 350MS/600	7.7	-0.1	-0.1	-0.1	8.3	-0.1	7.8	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LINE 350MS/600-R	7.7	-0.1	-0.1	-0.1	8.4	-0.1	7.9	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LINE 350MS/650	8.4	-0.1	-0.1	-0.1	2.1	-0.1	9.8	-0.1	-0.1	11.0	-0.1	-0.1	4.6	-0.1
LINE 350MS/700	7.6	-0.1	-0.1	-0.1	1.6	-0.1	7.8	-0.1	-0.1	-0.1	-0.1	-0.1	3.9	-0.1
LINE 350MS/750	-0.1	-0.1	-0.1	-0.1	1.6	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LMB-QA	-0.1	-0.1	-0.1	-0.1	1.7	-0.1	8.8	-0.1	-0.1	-0.1	-0.1	-0.1	4.1	-0.1
LMB-QA	-0.1	-0.1	-0.1	-0.1	7.8	-0.1	7.5	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LMB-QA	-0.1	-0.1	-0.1	-0.1	7.5	-0.1	7.5	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LMB-QA	-0.1	-0.1	-0.1	-0.1	1.8	-0.1	7.8	-0.1	-0.1	-0.1	-0.1	-0.1	3.8	-0.1

Activation Laboratories Ltd.
Date: July 6, 2015
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

SPATIOTEMPORAL GEOCHEMICAL HYDROCARBONS (SGH) by GC/MS

COOK TOWNSHIP PROJECT SITE

Activation Laboratories Ltd.
Date: July 6, 2015
R=Replicate Sample

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

	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
LINE 0/0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LINE 0/50	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LINE 0/100	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LINE 0/150	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LINE 0/200	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LINE 0/200-R	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LINE 0/250	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LINE 0/300	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LINE 0/350	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LINE 0/400	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LINE 0/450	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LINE 0/500	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0,1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LINE 0/550	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LINE 0/600	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LINE 0/650	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LINE 0/700	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LINE 0/750	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LINE 50MS/0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LINE 50MS/50	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	52.2	51.0	-0.1	-0.1
LINE 50MS/100	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LINE 50MS/150	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LINE 50MS/150-R	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0,1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LINE 50MS/200	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LINE 50MS/250	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LINE 50MS/300	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LINE 50MS/350	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LINE 50MS/400	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LINE 50MS/450	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LINE 50MS/500	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LINE 50MS/550	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LINE 50MS/600	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LINE 50MS/650	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LINE 50MS/700	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LINE 50MS/750	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LINE 100MS/0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LINE 100MS/50	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LINE 100MS/100	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LINE 100MS/100-R	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LINE 100MS/150	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LINE 100MS/200	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LINE 100MS/250	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LINE 100MS/300 LINE 100MS/350	-0.1	-0.1	-0.1	-0.1	-0.1 -0.1	-0.1	-0.1	-0.1	-0.1	-0.1 -0.1	-0.1 -0.1	-0.1	-0.1	-0.1 -0.1
	-0.1	-0.1	-0.1	-0.1		-0.1	-0.1	-0.1	-0.1			-0.1	-0.1	
LINE 100MS/400 LINE 100MS/450	-0.1 -0.1													
LINE 100MS/500	-0.1 -0.1													
LINE 100WS/500	-0.1 -0.1	-0.1 -0.1	-0.1	-0.1 -0.1	-0.1	-0.1 -0.1	-0.1	-0.1	-0.1 -0.1	-0.1	-0.1 -0.1	-0.1	-0.1	-0.1 -0.1
LINE 100MS/600	-0.1 -0.1	-0.1	-0.1	-0.1	-0.1	-0.1 -0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1 -0.1	-0.1	-0.1 -0.1
LINE 100MS/650	-0.1	-0.1 -0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1 -0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LINE 100MS/700	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LINE 100MS/750	-0.1 -0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1 -0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LINE 150MS/0	-0.1 -0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LINE 150MS/50	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LINE 150MS/50-R	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
	-U.I	-U.I	, -U. I	1	-U. I	-U.I	-0.1	-U. I	-U-1	-U.I	-U. I	0.1	-U.II	-U. I

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 A15-04575 samples are discarded in 90 days. This report is only to be reproduced in full. 37/48

-0.1

-0.1

-0.1

-0.1

LINE 300MS/50

INE 300MS/100

LINE 300MS/150

LINE 300MS/200

-0.1

-0.1

-0.1

-0.1

-0.1

-0.1

-0.1

-0.1

-0.1

-0.1

-0.1

-0.1

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

SPATIOTEMPORAL GEOCHEMICAL HYDROCARBONS (SGH) by GC/MS

COOK TOWNSHIP PROJECT SITE

Activation Laboratories Ltd. Date: July 6, 2015 R=Replicate Sample

139 - HPH 127 - MPH 128 - MPH 129 - HAR 130 - HAR 131 - MPH 132 - ALK 133 - HAR 134 - HAR 135 - MPH 136 - MPH 137 - HBI 138 - HBI 140 - HPH LINE 150MS/100 -0.1 LINE 150MS/150 -0.1 LINE 150MS/200 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 INE 150MS/250 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 INE 150MS/300 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 INE 150MS/350 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 INE 150MS/400 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 LINE 150MS/450 -0.1 LINE 150MS/500 -0.1 -0.1 LINE 150MS/550 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 LINE 150MS/600 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 LINE 150MS/650 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 INE 150MS/700 -0.1 LINE 150MS/750 -0.1 INE 200MS/0 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 LINE 200MS/0-R -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 INE 200MS/50 -0.1 LINE 200MS/100 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 LINE 200MS/150 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 LINE 200MS/200 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 INE 200MS/250 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 INE 200MS/300 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 INE 200MS/350 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 INE 200MS/400 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 INE 200MS/450 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 LINE 200MS/500 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 LINE 200MS/550 -0.1 LINE 200MS/600 INE 200MS/650 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 INE 200MS/700 -0.1 INE 200MS/750 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 INE 200MS/750-R LINE 250MS/0 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 INE 250MS/50 -0.1 LINE 250MS/100 -0.1-0.1LINE 250MS/150 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 LINE 250MS/200 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 INE 250MS/250 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 INE 250MS/300 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 INE 250MS/350 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 INE 250MS/400 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 INE 250MS/450 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 LINE 250MS/500 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 LINE 250MS/550 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 LINE 250MS/600 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 LINE 250MS/650 -0.1 INE 250MS/700 -0.1 -0.1 -0.1 -0.1 -0.1 INE 250MS/700-R -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 INE 250MS/750 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 INE 300MS/0 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1 -0.1

Results represent only the material tested. Actlabs is not liable for any claim/damage from use of this report in excess of the test cost. Unless requested A15-04575 samples are discarded in 90 days. This report is only to be reproduced in full. 38/48

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SPATIOTEMPORAL GEOCHEMICAL HYDROCARBONS (SGH) by GC/MS

COOK TOWNSHIP PROJECT SITE

Activation Laboratories Ltd.
Date: July 6, 2015
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
LINE 300MS/250	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LINE 300MS/300	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LINE 300MS/350	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LINE 300MS/400	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LINE 300MS/450	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LINE 300MS/500	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LINE 300MS/550	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LINE 300MS/600	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LINE 300MS/650	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LINE 300MS/650-R	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LINE 300MS/700	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LINE 300MS/750	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LINE 350MS/0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LINE 350MS/50	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LINE 350MS/100	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LINE 350MS/150	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LINE 350MS/200	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LINE 350MS/250	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LINE 350MS/300	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LINE 350MS/350	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LINE 350MS/400	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LINE 350MS/450	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LINE 350MS/500	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LINE 350MS/550	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LINE 350MS/600	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LINE 350MS/600-R	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LINE 350MS/650	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LINE 350MS/700	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LINE 350MS/750	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LMB-QA	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LMB-QA	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LMB-QA	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LMB-QA	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1

Activation Laboratories Ltd.
Date: July 6, 2015
R=Replicate Sample

127 MPH 128 MPH 129 HAR 130 HAR 131 MPH 132 ALK 133 HAR 134 HAR 135 MPH 136 MPH 137 HB 138 HB 139 HPH 140 HPH

SPATIOTEMPORAL GEOCHEMICAL HYDROCARBONS (SGH) by GC/MS

COOK TOWNSHIP PROJECT SITE

Activation Laboratories Ltd.
Date: July 6, 2015
R=Replicate Sample

-1=Reporting Limit of	1pg/g	(ppt=parts	per trillion)
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	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
LINE 0/0	-0.1	-0.1	60.3	-0.1	49.2	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LINE 0/50	-0.1		58.5	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LINE 0/100	-0.1	-0.1	59.7	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LINE 0/150	-0.1	-0.1	60.0	-0.1	48.9	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LINE 0/200	-0.1	-0.1	58.8	-0.1	48.9	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LINE 0/200-R	-0.1	-0.1	58.8	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LINE 0/250	-0.1	-0.1	58.8	-0.1	47.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LINE 0/300	-0.1	-0.1	58.2	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LINE 0/350	-0.1	-0.1	57.3	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LINE 0/400	-0.1	-0.1	59.1	-0.1	47.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LINE 0/450	-0.1	-0.1	58.2	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LINE 0/500	-0.1	-0.1	57.9	-0.1	46.8	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LINE 0/550	-0.1	-0.1	60.0	-0.1	48.9	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LINE 0/600	-0.1	-0.1	65.1	-0.1	49.2	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LINE 0/650	-0.1	-0.1	60.0	-0.1	48.6	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LINE 0/700	-0.1	-0.1	61.2	-0.1	48.3	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LINE 0/750	-0.1	-0.1	60.6	-0.1	48.3	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LINE 50MS/0	-0.1	-0.1	62.4	-0.1	48.9	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LINE 50MS/50	-0.1	-0.1	85.2	-0.1	55.8	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LINE 50MS/100	-0.1	-0.1	68.7	-0.1	50.7	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LINE 50MS/150	-0.1	-0.1	67.2	-0.1	50.4	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LINE 50MS/150-R	-0.1	-0.1	63.3	-0.1	48.3	-0.1	-0,1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LINE 50MS/200	-0.1	-0.1	61.8	-0.1	49.2	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LINE 50MS/250	-0.1	-0.1	59.7	-0.1	48.9	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LINE 50MS/300	-0.1	-0.1	61.5	-0.1	48.0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LINE 50MS/350 LINE 50MS/400	-0.1 -0.1	-0.1 -0.1	69.3 61.8	-0.1 -0.1	51.6 48.6	-0.1 -0.1	46.5 -0.1	-0.1 -0.1						
LINE 50MS/450	-0.1 -0.1	-0.1 -0.1	63.6	-0.1 -0.1	49.2	-0.1 -0.1	-0.1 -0.1	-0.1 -0.1	-0.1 -0.1	-0.1	-0.1 -0.1	-0.1 -0.1	-0.1 -0.1	-0.1 -0.1
LINE 50MS/500	-0.1 -0.1	-0.1	61.5	-0.1	49.2 49.2	-0.1 -0.1	-0.1 -0.1	-0.1 -0.1	-0.1 -0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LINE 50MS/550	-0.1	-0.1	63.6	-0.1	51.3	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LINE 50MS/600	-0.1	-0.1	61.8	-0.1	50.4	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LINE 50MS/650	-0.1	-0.1	60.6	-0.1	49.5	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LINE 50MS/700	-0.1	-0.1	63.9	-0.1	49.8	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LINE 50MS/750	-0.1	-0.1	69.3	-0.1	51.0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LINE 100MS/0	-0.1	-0.1	64.5	-0.1	50.7	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LINE 100MS/50	-0.1	-0.1	71.1	-0.1	50.7	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LINE 100MS/100	-0.1	-0.1	67.5	-0.1	51.3	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LINE 100MS/100-R	-0.1	-0.1	64.2	-0.1	50.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LINE 100MS/150	-0.1	-0.1	62.7	-0.1	48.0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LINE 100MS/200	-0.1	-0.1	59.1	-0.1	47.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LINE 100MS/250	-0.1	-0.1	63.6	-0.1	48.0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LINE 100MS/300	-0.1	-0.1	60.0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LINE 100MS/350	-0.1	-0.1	60.6	-0.1	47.7	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LINE 100MS/400	-0.1	-0.1	60.0	-0.1	47.7	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LINE 100MS/450	-0.1	-0.1	60.9	-0.1	48.6	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LINE 100MS/500	-0.1	-0.1	61.8	-0.1	49.2	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LINE 100MS/550	-0.1	-0.1	66.6	-0.1	50.4	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LINE 100MS/600	-0.1	-0.1	61.8	-0.1	48.0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LINE 100MS/650	-0.1	-0.1	61.2	-0.1	47.7	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LINE 100MS/700	-0.1	-0.1	62.7	-0.1	48.9	-0.1	-0.1	-0,1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LINE 100MS/750	-0.1	-0.1	60.9	-0.1	47.7	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LINE 150MS/0	-0.1	-0.1	66.6	-0.1	50.7	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LINE 150MS/50	-0.1	-0.1	66.6	-0.1	51.0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LINE 150MS/50-R	-0.1	-0.1	71.4	-0.1	52.2	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1

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SPATIOTEMPORAL GEOCHEMICAL HYDROCARBONS (SGH) by GC/MS

COOK TOWNSHIP PROJECT SITE

Activation Laboratories Ltd.
Date: July 6, 2015
R=Replicate Sample

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

	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
LINE 150MS/100	-0.1	-0.1	81.9	-0.1	53.4	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LINE 150MS/150	-0.1	-0.1	71.4	-0.1	51.6	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LINE 150MS/200	-0.1	-0.1	65.1	-0.1	49.8	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LINE 150MS/250	-0.1	-0.1	66.6	-0.1	50.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LINE 150MS/300	-0.1	-0.1	63.6	-0.1	49.5	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LINE 150MS/350	-0.1	-0.1	64.2	-0.1	50.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LINE 150MS/400	-0.1	-0.1	66.0	-0.1	49.2	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LINE 150MS/450	-0.1	-0.1	65.7	-0.1	49.2	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LINE 150MS/500	-0.1	-0.1	61.8	-0.1	48.6	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LINE 150MS/550	-0.1	-0.1	62.1	-0.1	48.9	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LINE 150MS/600	-0.1	-0.1	64.5	-0.1	49.5	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LINE 150MS/650	-0.1	-0.1	71.1	-0.1	51.6	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LINE 150MS/700	-0.1	-0.1	67.8	-0.1	49.2	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LINE 150MS/750	-0.1	-0.1	66.9	-0.1	50.4	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LINE 200MS/0	-0.1	-0.1	75.6	-0.1	52.5	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	52.2	168.0	-0.1
LINE 200MS/0-R	-0.1	-0.1	75.9	-0.1	53.4	-0.1	-0.1	-0.1	-0.1	-0.1	- 0.1	-0.1	-0.1	-0.1
LINE 200MS/50	-0.1	-0.1	68.1	-0.1	51.9	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LINE 200MS/100	-0.1	-0.1	80.4	-0.1	54.0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LINE 200MS/150	-0.1	-0.1	67.2	-0.1	51.9	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LINE 200MS/200	-0.1	-0.1	67.5	-0.1	50.7	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LINE 200MS/250	-0.1	-0.1	68.1	-0.1	51.3	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LINE 200MS/300	-0.1	-0.1	67.2	-0.1	51.9	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LINE 200MS/350	-0.1	-0.1	63.3	-0.1	50.7	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LINE 200MS/400	-0.1	-0.1	68.1	-0.1	52.5	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LINE 200MS/450	-0.1	-0.1	62.4	-0.1	49.8	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LINE 200MS/500	-0.1	-0.1	61.5	-0.1	49.5	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LINE 200MS/550	-0.1	-0.1	61.5	-0.1	49.2	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LINE 200MS/600	-0.1	-0.1	63.0	-0.1	49.2	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LINE 200MS/650	-0.1	-0.1	63.6	-0.1	50.4	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LINE 200MS/700	-0.1	-0.1	70.5	-0.1	51.9	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LINE 200MS/750	-0.1	-0.1	62.7	-0.1	51.0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LINE 200MS/750-R	-0.1	-0.1	66.6	-0.1	50.7	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LINE 250MS/0	-0.1	-0.1	63.9	-0.1	50.4	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LINE 250MS/50	-0.1	-0.1	65.7	-0.1	50.7	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LINE 250MS/100	-0.1	-0.1	66.6	-0.1	50.7	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LINE 250MS/150 LINE 250MS/200	-0.1 -0.1	-0.1 -0.1	60.9 75.3	-0.1 -0.1	48.6 52.5	-0.1 -0.1								
						-0.1 -0.1								
LINE 250MS/250 LINE 250MS/300	-0.1 -0.1	-0.1 -0.1	70.8 62.1	-0.1 -0.1	51.3 48.9	-0.1 -0.1								
LINE 250MS/350	-0.1	-0.1 -0.1	60.0	-0.1 -0.1	48.9	-0.1 -0.1	-0.1 -0.1	-0.1 -0.1	-0.1	-0.1	-0.1 -0.1	-0.1 -0.1	-0.1 -0.1	-0.1 -0.1
LINE 250MS/400	-0.1	-0.1	60.3	-0.1	48.6	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LINE 250MS/450	-0.1	-0.1	59.1	-0.1 -0.1	48.6	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LINE 250MS/500	-0.1	-0.1	57.3	-0.1 -0.1	48.3	-0.1 -0.1	-0.1	-0.1	-0.1	-0.1	-0.1 -0.1	-0.1 -0.1	-0.1 -0.1	-0.1
LINE 250MS/550	-0.1	-0.1	63.6	-0.1	48.6	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LINE 250MS/600	-0.1	-0.1	62.1	-0.1	48.3	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LINE 250MS/650	-0.1	-0.1	60.9	-0.1	49.2	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LINE 250MS/700	-0.1	-0.1	61.2	-0.1	48.3	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LINE 250MS/700-R	-0.1	-0.1	59.1	-0.1 -0.1	47.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LINE 250MS/750	-0.1	-0.1	58.8	-0.1	49.2	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LINE 300MS/0	-0.1	-0.1	62.1	-0.1	48.9	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LINE 300MS/50	-0.1	-0.1	61.8	-0.1	47.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LINE 300MS/100	-0.1	-0.1	62.1	-0.1	49.2	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LINE 300MS/150	-0.1	-0.1	69.0	-0.1	50.4	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LINE 300MS/200	-0.1	-0.1	61.8	-0.1	48.6	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1

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SPATIOTEMPORAL GEOCHEMICAL HYDROCARBONS (SGH) by GC/MS

COOK TOWNSHIP PROJECT SITE

Activation Laboratories Ltd.
Date: July 6, 2015
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
LINE 300MS/250	-0.1	-0.1	60.0	-0.1	47.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LINE 300MS/300	-0.1	-0.1	59.7	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LINE 300MS/350	-0.1	-0.1	58.8	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LINE 300MS/400	-0.1	-0.1	58.2	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LINE 300MS/450	-0.1	-0.1	63.6	-0.1	48.3	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LINE 300MS/500	-0.1	-0.1	55.8	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LINE 300MS/550	-0.1	-0.1	58.2	-0.1	48.3	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LINE 300MS/600	-0.1	-0.1	57.6	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LINE 300MS/650	-0.1	-0.1	61.2	-0.1	47.4	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1		-0.1	-0.1
LINE 300MS/650-R	-0.1	-0.1	60.6	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LINE 300MS/700	-0.1	-0.1	57.3	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1		-0.1	-0.1
LINE 300MS/750	-0.1	-0.1	62.1	-0.1	48.0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1		-0.1	-0.1
LINE 350MS/0	-0.1	-0.1	58.8	-0.1	48.9	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1		-0.1	-0.1
LINE 350MS/50	-0.1	-0.1	58.5	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1		-0.1	-0.1
LINE 350MS/100	-0.1	-0.1	63.3	-0.1	48.9	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1		-0.1	-0.1
LINE 350MS/150	-0.1	-0.1	58.5	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1		-0.1	-0.1
LINE 350MS/200	-0.1	-0.1	64.2	-0.1	50.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1		-0.1	-0.1
LINE 350MS/250	-0.1	-0.1	61.5	-0.1	49.2	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1		-0.1	-0.1
LINE 350MS/300	-0.1	-0.1	60.9	-0.1	48.6	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1		-0.1	-0.1
LINE 350MS/350	-0.1	-0.1	59.4	-0.1	46.8	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1		-0.1	-0.1
LINE 350MS/400	-0.1	-0.1	58.2	-0.1	48.9	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1		-0.1	-0.1
LINE 350MS/450	-0.1	-0.1	57.0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1		-0.1	-0.1
LINE 350MS/500	-0.1	-0.1	57.9	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1		-0.1	-0.1
LINE 350MS/550	-0.1		55.2	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1		-0.1	-0.1
LINE 350MS/600	-0.1	-0.1	57.6	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1		-0.1	-0.1
LINE 350MS/600-R	-0.1	-0.1	58.5	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1		-0.1	-0.1
LINE 350MS/650	-0.1	-0.1	62.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1		-0.1	-0.1
LINE 350MS/700	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1		-0.1	-0.1
LINE 350MS/750	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LMB-QA	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1		-0.1	-0.1
LMB-QA	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1		-0.1	-0.1
LMB-QA	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1		-0.1	-0.1
LMB-QA	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1

Activation Laboratories Ltd.
Date: July 6, 2015
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

COOK TOWNSHIP PROJECT SITE

Activation Laboratories Ltd.
Date: July 6, 2015
R=Replicate Sample

	155 - HPH	156 - HBI	157 - HAR	158 - HBA	159 - HBA	160 - HBI	161 - HA	162 - HPH
LINE 0/0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LINE 0/50	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LINE 0/100	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LINE 0/150	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LINE 0/200	-0.1	-0.1	-0.1	161.0	-0.1	-0.1	-0.1	-0.1
LINE 0/200-R	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LINE 0/250	-0.1	-0.1	-0.1	167.0	-0.1	-0.1	-0.1	-0.1
LINE 0/300	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LINE 0/350	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LINE 0/400	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LINE 0/450	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LINE 0/500	-0.1	-0.1	-0,1	-0.1	-0,1	-0.1	-0.1	-0.1
LINE 0/550	-0.1	-0.1	-0.1	161.0	-0.1	-0.1	-0.1	-0.1
LINE 0/600	-0.1	-0.1	-0.1	172.0	-0.1	-0.1	215.0	-0.1
LINE 0/650	-0.1	-0.1	-0.1	168.0	-0.1	-0.1	-0.1	-0.1
LINE 0/700	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LINE 0/750	-0.1	-0.1	-0.1	164.0	-0.1	-0.1	-0.1	-0.1
LINE 50MS/0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LINE 50MS/50	-0.1	-0.1	-0.1	192.0	162.0	-0.1	245.0	-0.1
LINE 50MS/100	-0.1	-0.1	-0.1	192.0	-0.1	-0.1	235.0	159.0
LINE 50MS/150	-0.1	-0.1	-0.1	170.0	-0.1	-0.1	214.0	-0.1
LINE 50MS/150-R	-0.1	-0.1	-0.1	174.0	-0.1	-0.1	213.0	-0,1
LINE 50MS/200	-0.1	-0.1	-0.1	170.0	-0.1	-0.1	208.0	-0.1
LINE 50MS/250	-0.1	-0.1	-0.1	163.0	-0.1	-0.1	-0.1	-0.1
LINE 50MS/300	-0.1	-0.1	-0.1	170.0	-0.1	-0.1	207.0	-0.1
LINE 50MS/350	-0.1	-0.1	-0.1	182.0	168.0	-0.1	227.0	-0.1
LINE 50MS/400	-0.1	-0.1	-0.1	178.0	-0.1	-0.1	216.0	-0.1
LINE 50MS/450	-0.1	-0.1	-0.1	174.0	-0.1	-0.1	212.0	-0.1
LINE 50MS/500	-0.1	-0.1	-0.1	165.0	-0.1	-0.1	208.0	-0.1
LINE 50MS/550	-0.1	-0.1	-0.1	168.0	-0.1	-0.1	211.0	-0.1
LINE 50MS/600	-0.1	-0.1	-0.1	171.0	-0.1	-0.1	209.0	-0.1
LINE 50MS/650	-0.1	-0.1	-0.1	170.0	-0.1	-0.1	207.0	-0.1
LINE 50MS/700	-0.1	-0.1	-0.1	176.0	-0.1	-0.1	220.0	-0.1
LINE 50MS/750	-0.1	-0.1	-0.1	180.0	-0.1	-0.1	224.0	-0.1
LINE 100MS/0	-0.1	-0.1	-0.1	169.0	-0.1	-0.1	213.0	-0.1
LINE 100MS/50	-0.1	-0.1	-0.1	170.0	-0.1	-0.1	213.0	-0.1
LINE 100MS/100	-0.1	-0.1	-0.1	170.0	-0.1	-0.1	213.0	-0.1
LINE 100MS/100-R	-0.1	-0.1	-0.1	173.0	-0.1	-0.1	217.0	-0.1
LINE 100MS/150	-0.1	-0.1	-0.1	171.0	-0.1	-0.1	209.0	-0.1
LINE 100MS/200	-0.1	-0.1	-0.1	170.0	-0.1	-0.1	207.0	-0.1
LINE 100MS/250	-0.1	-0.1	-0.1	173.0	-0.1	-0.1	212.0	-0.1
LINE 100MS/300	-0.1	-0.1	-0.1	162.0	-0.1	-0.1	210.0	-0.1
LINE 100MS/350	-0.1	-0.1	-0.1	170.0	-0.1	-0.1	207.0	-0.1
LINE 100MS/400	-0.1	-0.1	-0.1	171.0	-0.1	-0.1	209.0	-0.1
LINE 100MS/450	-0.1	-0.1	-0.1	163.0	-0.1	-0.1	205.0	-0.1
LINE 100MS/500	-0.1	-0.1	-0.1	169.0	-0.1	-0.1	206.0	-0.1
LINE 100MS/550	-0.1	-0.1	-0.1	168.0	-0.1	-0.1	211.0	-0.1
LINE 100MS/600	-0.1	-0.1	-0.1	172.0	-0.1	-0.1	210.0	-0.1
LINE 100MS/650	-0.1	-0.1	-0.1	170.0	-0.1	-0.1	207.0	-0.1
LINE 100MS/700	-0.1	-0.1	-0.1	164.0	-0.1	-0.1	212.0	-0.1
LINE 100MS/750	-0.1	-0.1	-0.1	169.0	-0.1	-0.1	206.0	-0.1
LINE 150MS/0	-0.1	-0.1	-0.1	169.0	-0.1	-0.1	213.0	-0.1
LINE 150MS/50	-0.1	-0.1	-0.1	176.0	-0.1	-0.1	215.0	-0.1
LINE 150MS/50-R	-0.1	-0.1	-0.1	182.0	-0.1	-0.1	221.0	-0.1

Activation Laboratories Ltd.
Date: July 6, 2015
R=Replicate Sample

·1=Reporting Limit of	f 1pg/g ((ppt=parts per trillion)
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	155 - HPH	156 - HBI	157 - HAR	158 - HBA	159 - HBA	160 - HBI	161 - HA	162 - HPH
LINE 150MS/100	-0.1	-0.1	-0.1	181.0	-0.1	-0.1	227.0	-0.1
LINE 150MS/150	-0.1	-0.1	-0.1	175.0	-0.1	-0.1	226.0	-0.1
LINE 150MS/200	-0.1	-0.1	-0.1	170.0	-0.1	-0.1	220.0	-0.1
LINE 150MS/250	-0.1	-0.1	-0.1	175.0	-0.1	-0.1	213.0	-0.1
LINE 150MS/300	-0.1	-0.1	-0.1	164.0	-0.1	-0.1	213.0	-0.1
LINE 150MS/350	-0.1	-0.1	-0.1	170.0	-0.1	-0.1	213.0	-0.1
LINE 150MS/400	-0.1	-0.1	-0.1	172.0	-0.1	-0.1	215.0	-0.1
LINE 150MS/450	-0.1	-0.1	-0.1	168.0	-0.1	-0.1	211.0	-0.1
LINE 150MS/500	-0.1	-0.1	-0.1	170.0	-0.1	-0.1	-0.1	-0.1
LINE 150MS/550	-0.1	-0.1	-0.1	167.0	-0.1	-0.1	210.0	-0.1
LINE 150MS/600	-0.1	-0.1	-0.1	171.0	-0.1	-0.1	215.0	-0.1
LINE 150MS/650	-0.1	-0.1	173.0	180.0	171.0	-0.1	224.0	-0.1
LINE 150MS/700	-0.1	-0.1	-0.1	178.0	-0.1	-0.1	216.0	-0.1
LINE 150MS/750	-0.1	-0.1	-0.1	175.0	-0.1	-0.1	214.0	-0.1
LINE 200MS/0	-0.1	-0.1	-0.1	187.0	-0.1	-0.1	233.0	-0.1
LINE 200MS/0-R	-0.1	-0.1	-0.1	183.0	160.0	-0.1	235.0	-0.1
LINE 200MS/50	-0.1	-0.1	-0.1	176.0	-0.1	-0.1	221.0	-0.1
LINE 200MS/100	-0.1	-0.1	-0.1	184.0	-0.1	-0.1	230.0	-0.1 -0.1
LINE 200MS/150	-0.1	-0.1	-0.1	181.0	-0.1	-0.1	221.0	-0.1
LINE 200MS/200	-0.1	-0.1	-0.1	177.0	-0.1	-0.1	216.0	-0.1
LINE 200MS/250	-0.1	-0.1	-0.1	170.0	-0.1	-0.1	220.0	-0.1 -0.1
LINE 200MS/300	-0.1	-0.1	-0.1	170.0	-0.1	-0.1	216.0	-0.1
LINE 200MS/350	-0.1	-0.1	-0.1	175.0	-0.1	-0.1	214.0	-0.1
LINE 200MS/400	-0.1	-0.1	-0.1	173.0	-0.1	-0.1	217.0	-0.1
LINE 200MS/450	-0.1	-0.1	-0.1	173.0	-0.1	-0.1	211.0	-0.1
LINE 200MS/500	-0.1	-0.1	-0.1	167.0	-0.1	-0.1	210.0	-0.1
LINE 200MS/550	-0.1	-0.1	-0.1	172.0	-0.1	-0.1	210.0	-0.1
LINE 200MS/600	-0.1	-0.1	-0.1	165.0	-0.1	-0.1	208.0	-0.1
LINE 200MS/650	-0.1	-0.1	-0.1	167.0	-0.1	-0.1	211.0	-0.1
LINE 200MS/700	-0.1	-0.1	182.0	193.0	177.0	-0.1	233.0	-0.1
LINE 200MS/750	-0.1	-0.1	-0.1	177.0	-0.1	-0.1	217.0	-0.1
LINE 200MS/750-R	-0.1	-0.1	-0.1	176.0	-0.1	-0.1	227.0	-0.1
LINE 250MS/0	-0.1	-0.1	-0.1	169.0	-0.1	-0.1	213.0	-0.1
LINE 250MS/50	-0.1	-0.1	-0.1	173.0	-0.1	-0.1	217.0	-0.1
LINE 250MS/100	-0.1	-0.1	-0.1	171.0	-0.1	-0.1	215.0	-0.1
LINE 250MS/150	-0.1	-0.1	-0.1	173.0	-0.1	-0.1	212.0	-0.1
LINE 250MS/200	-0.1	-0.1	-0.1	179.0	-0.1	-0.1	225.0	-0.1
LINE 250MS/250	-0.1	-0.1	-0.1	176.0	-0.1	-0.1	221.0	-0.1
LINE 250MS/300	-0.1	-0.1	-0.1	171.0	-0.1	-0.1	210.0	-0.1
LINE 250MS/350	-0.1	-0.1	-0.1	168.0	-0.1	-0.1	205.0	-0.1
LINE 250MS/400	-0.1	-0.1	-0.1	162.0	-0.1	-0.1	-0.1	-0.1
LINE 250MS/450	-0.1	-0.1	-0.1	167.0	-0.1	-0.1	211.0	-0.1
LINE 250MS/500	-0.1	-0.1	-0.1	168.0	-0.1	-0.1	205.0	-0.1
LINE 250MS/550	-0.1	-0.1	-0.1	163.0	-0.1	-0.1	-0.1	-0.1
LINE 250MS/600	-0.1	-0.1	-0.1	173.0	-0.1	-0.1	211.0	-0.1
LINE 250MS/650	-0.1	-0.1	-0.1	165.0	-0.1	-0.1	209.0	-0.1
LINE 250MS/700	-0.1	-0.1	-0.1	169.0	-0.1	-0.1	-0.1	-0.1
LINE 250MS/700-R	-0.1	-0.1	-0.1	170.0	-0.1	-0.1	208.0	-0.1
LINE 250MS/750	-0.1	-0.1	-0.1	170.0	-0.1	-0.1	207.0	-0.1
LINE 300MS/0	-0.1	-0.1	-0.1	163.0	-0.1	-0.1	211.0	-0.1
LINE 300MS/50	-0.1	-0.1	-0.1	168.0	-0.1	-0.1	-0.1	-0.1
LINE 300MS/100	-0.1	-0.1	-0.1	167.0	-0.1	-0.1	210.0	-0.1
LINE 300MS/150	-0.1	-0.1	-0.1	173.0	-0.1	-0.1	216.0	-0.1
LINE 300MS/200	-0.1	-0.1	-0.1	163.0	-0.1	-0.1	-0.1	-0.1
			J.,		3.1	×	97.1	×x.r

SPATIOTEMPORAL GEOCHEMICAL HYDROCARBONS (SGH) by GC/MS

COOK TOWNSHIP PROJECT SITE

Activation Laboratories Ltd.
Date: July 6, 2015
R=Replicate Sample

	155 - HPH	156 - HBI	157 - HAR	158 - HBA	159 - HBA	160 - HBI	161 - HA	162 - HPH
LINE 300MS/250	-0.1	-0.1	-0.1	167.0	-0.1	-0.1	-0.1	-0.1
LINE 300MS/300	-0.1	-0.1	-0.1	161.0	-0.1	-0.1	-0.1	-0.1
LINE 300MS/350	-0.1	-0.1	-0.1	161.0	-0.1	-0.1	204.0	-0.1
LINE 300MS/400	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LINE 300MS/450	-0.1	-0.1	-0.1	166.0	-0.1	-0.1	209.0	-0.1
LINE 300MS/500	-0.1	-0.1	-0.1	161.0	-0.1	-0.1	204.0	-0.1
LINE 300MS/550	-0.1	-0.1	-0.1	164.0	-0.1	-0.1	206.0	-0.1
LINE 300MS/600	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LINE 300MS/650	-0.1	-0.1	-0.1	170.0	-0.1	-0.1	208.0	-0.1
LINE 300MS/650-R	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LINE 300MS/700	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LINE 300MS/750	-0.1	-0.1	-0.1	178.0	-0.1	-0.1	216.0	-0.1
LINE 350MS/0	-0.1	-0.1	-0.1	164.0	-0.1	-0.1	-0.1	-0.1
LINE 350MS/50	-0.1	-0.1	-0.1	167.0	-0.1	-0.1	-0.1	-0.1
LINE 350MS/100	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LINE 350MS/150	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LINE 350MS/200	-0.1	-0.1	-0.1	169.0	-0.1	-0.1	213.0	-0.1
LINE 350MS/250	-0.1	-0.1	-0.1	167.0	-0.1	-0.1	209.0	-0.1
LINE 350MS/300	-0.1	-0.1	-0.1	163.0	-0.1	-0.1	-0.1	-0.1
LINE 350MS/350	-0.1	-0.1	-0.1	166.0	-0.1	-0.1	-0.1	-0.1
LINE 350MS/400	-0.1	-0.1	-0.1	170.0	-0.1	-0.1	207.0	-0.1
LINE 350MS/450	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LINE 350MS/500	-0.1	-0.1	-0.1	161.0	-0.1	-0.1	-0.1	-0.1
LINE 350MS/550	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LINE 350MS/600	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LINE 350MS/600-R	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LINE 350MS/650	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LINE 350MS/700	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LINE 350MS/750	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LMB-QA	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LMB-QA	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LMB-QA	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LMB-QA	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1

Activation Laboratories Ltd.
Date: July 6, 2015
R=Replicate Sample

155 - HPH	156 - HBI	157 - HAR	158 - HBA	159 - HBA	160 - HBI	161 - HA	162 - HPH
T T							



128 Sample: 59H

COOK TWP.						
line #	station #	easting	northing	wet/dry	soil type	comments
LINE 0	3ιαιιοπ π	casting	HOLUMING	wet/ury	3011 type	commence
	0 0	555247	5364996	wet	humus	spruce, tag alders moss
	50	555300	5364996	wet	humus	spruce, tag alders moss
	100	555347	5365002	wet	humus	spruce, tag alders moss
	150	555400	5364995	wet	humus	spruce, tag alders moss
(200	555447	5364996	wet	humus	spruce, tag alders moss
(250	555497	5364996	wet	humus	spruce, tag alders moss
(300	555550	5364998	wet	humus	spruce, tag alders moss
(350	555597	5364998	wet	humus	spruce, tag alders moss
(O 400	555648	5364998	wet	humus	spruce, tag alders moss
(O 450	555697	5364996	wet	humus	spruce, tag alders moss
(500	555747	5364996	wet	humus	spruce, tag alders moss
	550	555801	5365000	wet	humus	spruce, tag alders moss
	0 600	555847	5364996	wet	humus	spruce, tag alders moss
	650	555897	5364996	wet	humus	spruce, tag alders moss
	700	555947	5364996	wet	humus	spruce, tag alders moss
	750	55 6 002.	5365002	wet	humus	spruce, tag alders moss
line 50MS						
-5(555250	5364952	wet	humus	spruce, tag alders moss
-5(555300	5364952	wet	humus	spruce, tag alders moss
-50		555353	5364950	wet	humus	spruce, tag alders moss
-5(555400	5364952	wet	humus	spruce, tag alders moss
-5(555448	5364955	wet	humus	spruce, tag alders moss
-5(555500	5364952	wet	humus	spruce, tag alders moss
-5(555550	5364953 5364952	wet	humus	spruce, tag alders moss
-5(555604 555651	5364952	wet	humus	spruce, tag alders moss spruce, tag alders moss
-50 -50		555702	5364951	wet wet	humus humus	spruce, tag alders moss
		555747	5364951			spruce, tag alders moss
-5(-5(555801	5364949	wet wet	humus humus	spruce, tag alders moss
-5i -5i		555851	5364950	wet	humus	spruce, tag alders moss
-5i		555903	5364952	wet	humus	spruce, tag alders moss
-50		555951	5364951	wet	humus	spruce, tag alders moss
-50		556001	5364951	wet	humus	spruce, tag alders moss
LINE 100MS	5 750	330001	3304331	,,,,,	Harrido	sprace, tag arasis moss
-10	0 0	555248	5364897	wet	humus	spruce, tag alders moss
-100		555298	5364897	wet	humus	spruce, tag alders moss
-100		555349	5364897	wet	humus	spruce, tag alders moss
-100		555399	5364897	wet	humus	spruce, tag alders moss
-100		555449	5364894	wet	humus	spruce, tag alders moss
-10		555499	5364899	wet	humus	spruce, tag alders moss
-10		555550	5364900	wet	humus	spruce, tag alders moss
-10		555600	5364900	wet	humus	spruce, tag alders moss
-10		555650	5364900	wet	humus	spruce, tag alders moss
-10		555700	5364900	wet	humus	spruce, tag alders moss

-100	500	555751	5364900	wet	humus	spruce, tag alders moss
-100	550	555801	5364902	wet	humus	spruce, tag alders moss
-100	600	555851	5364903	wet	humus	spruce, tag alders moss
-100	650	555901	5364901	wet	humus	spruce, tag alders moss
-100	700	555952	5364903	wet	humus	spruce, tag alders moss
-100	750	556002	5364903	wet	humus	spruce, tag alders moss
LINE 150MS						
-150	0	555253	5364851	wet	humus	spruce, tag alders moss
-150	50	555303	5364851	wet	humus	spruce, tag alders moss
-150	100	555352	5364851	wet	humus	spruce, tag alders moss
-150	150	555402	5364851	wet	humus	spruce, tag alders moss
-150	200	555452	5364850	wet	humus	spruce, tag alders moss
-150	250	555501	5364850	wet	humus	spruce, tag alders moss
-150	300	555551	5364850	wet	humus	spruce, tag alders moss
			5364850			· 12 1/mil
-150	350	555601		wet	humus	spruce, tag alders moss
-150	400	555650	5364850	wet	humus	spruce, tag alders moss
-150	450	555700	5364850	wet	humus	spruce, tag alders moss
-150	500	555750	5364855	wet	humus	spruce, tag alders moss
-150	550	555799	5364855	wet	humus	spruce, tag alders moss
-150	600	555849	5364850	wet	humus	spruce, tag alders moss
-150	650	555899	5364853	wet	humus	spruce, tag alders moss
-150	700	555948	5364853	wet	humus	spruce, tag alders moss
-150	750	555998	5364853	wet	humus	spruce, tag alders moss
	730	222220	3304633	WEL	numus	spruce, tag aluers moss
LINE 200MS				5757576FeFF	■ Paul Property and Appendix and St. Lo.	
-200	0	555251	5364802	wet	humus	spruce, tag alders moss
-200	50	555301	5364802	wet	humus	spruce, tag alders moss
-200	100	555351	5364802	wet	humus	spruce, tag alders moss
-200	150	555401	5364802	wet	humus	spruce, tag alders moss
-200	200	555451	5364802	wet	humus	spruce, tag alders moss
-200	250	555501	5364800	wet	humus	spruce, tag alders moss
-200	300	555551	5364800	wet	humus	spruce, tag alders moss
-200	350	555601	5364800	wet	humus	spruce, tag alders moss
-200	400	555650	5364800	wet	humus	spruce, tag alders moss
						25 25
-200	450	555700	5364800	wet .	humus	spruce, tag alders moss
-200	500	555750	5364800	wet	humus	spruce, tag alders moss
-200	550	555800	5364800	wet	humus	spruce, tag alders moss
-200	600	555850	5364803	wet	humus	spruce, tag alders moss
-200	650	555900	5364800	wet	humus	spruce, tag alders moss
-200	700	555950	5364803	wet	humus	spruce, tag alders moss
-200	750	556000	5364800	wet	humus	spruce, tag alders moss
LINE 250MS						010-010-010-010-01-010-01-01-01-01-01-01
-250	0	555252	5364752	wet	humus	spruce, tag alders moss
-250	50	555303	5364752	wet	humus	spruce, tag alders moss
						NA CONTRACT
-250	100	555352	5364752	wet	humus	spruce, tag alders moss
-250	150	555402	5364752	wet	humus	spruce, tag alders moss
-250	200	555452	5364750	wet	humus	spruce, tag alders moss
-250	250	555502	5364752	wet	humus	spruce, tag alders moss

-250	300	555552	5364752	wet	humus	spruce, tag alders moss
-250	350	555603	5364754	wet	humus	spruce, tag alders moss
-250	400	555651	5364748	wet	humus	spruce, tag alders moss
-250	450	555701	5364751	wet	humus	spruce, tag alders moss
-250	500	555751	5364748	wet	humus	spruce, tag alders moss
-250	550	555799	5364747	wet	humus	spruce, tag alders moss
-250	600	555851	5364748	wet	humus	spruce, tag alders moss
-250	650	555901	5364750	wet	humus	spruce, tag alders moss
-250	700	555948	5364748	wet	humus	spruce, tag alders moss
-250	750	556001	5364748	wet	humus	spruce, tag alders moss
LINE 300MS						
-300	0	555250	5364701	wet	humus	spruce, tag alders moss
-300	50	555302	5364704	wet	humus	spruce, tag alders moss
-300	100	555349	5364701	wet	humus	spruce, tag alders moss
-300	150	555400	5364701	wet	humus	spruce, tag alders moss
-300	200	555449	5364703	wet	humus	spruce, tag alders moss
-300	250	555503	5364703	wet	humus	spruce, tag alders moss
-300	300	555548	5364699	wet	humus	spruce, tag alders moss
-300	350	555598	5364701	wet	humus	spruce, tag alders moss
-300	400	555650	5364700	wet	humus	spruce, tag alders moss
-300	450	555698	5364698	wet	humus	spruce, tag alders moss
-300	500	555745	5364701	wet	humus	spruce, tag alders moss
-300	550	555797	5364701	wet	humus	spruce, tag alders moss
-300	600	555847	5364701	wet	humus	spruce, tag alders moss
-300	650	555900	5364701	wet	humus	spruce, tag alders moss
-300	700	555946	5364701	wet	humus	spruce, tag alders moss
-300	750	55.4002	5364704	wet	humus	spruce, tag alders moss
LINE 350MS		•				300 • PAGE 1999 (AND CONTROL OF THE
-350	0	555247	5364682	wet	humus	spruce, tag alders moss
-350	50	555300	5364680	wet	humus	spruce, tag alders moss
-350	100	555348	5364677	wet	humus	spruce, tag alders moss
-350	150	555404	5364679	wet	humus	spruce, tag alders moss
-350	200	555449	5364683	wet	humus	spruce, tag alders moss
-350	250	555502	5364682	wet	humus	spruce, tag alders moss
-350	300	555549	5364680	wet	humus	spruce, tag alders moss
-350	350	555600	5364680	wet	humus	spruce, tag alders moss
-350	400	555653	5364680	wet	humus	spruce, tag alders moss
-350	450	555701	5364680	wet	humus	spruce, tag alders moss
-350	500	555752	5364682	wet	humus	spruce, tag alders moss
-350	550	555801	5364682	wet	humus	spruce, tag alders moss
-350	600	555852	5364682	wet	humus	spruce, tag alders moss
-350	650	555900	5364682	wet	humus	spruce, tag alders moss
-350	700	555953	5364683	wet	humus	spruce, tag alders moss
-350	750	556003	5364683	wet	humus	spruce, tag alders moss
						E 15