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Ontario

Report
on
Spatiotemporal Geochemical Hydrocarbon (SGH) Survey

Porphyry Lake Gold Project
Tyrrell Township
Larder Lake Mining District
Northeastern Ontario

UTM Grid Zone 17, NAD 83
NTS Map Sheet
41P10/11

October 31, 2016

Jamieson S. Walker
Jamieson Geological Inc.

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ATTACHMENT 1: SGH SURVEY REPORT

"A SPATIOTEMPORAL GEOCHEMICAL HYDROCARBON INTERPRETATION", for JAMIESON GEOLOGICAL INC., PORPHYRY LAKE GOLD PROJECT
Author: Dale Sutherland B.Sc., Activation Laboratories Ltd, Dated: March 18, 2016.
Part I of III: "A SPATIOTEMPORAL GEOCHEMICAL HYDROCARBONS – AN SGH REFERENCE DOCUMENT"
Part II of III: "A SPATIOTEMPORAL GEOCHEMICAL HYDROCARBON INTERPRETATION", for JAMIESON GEOLOGICAL INC., PORPHYRY LAKE GOLD PROJECT
Part III of III: Laboratory results from Hydrocarbon Analysis by Gas Chromatography/Mass Spectrometry, Activation Laboratories Ltd. March 19, 2015: Printed report from Excel spreadsheet of the concentrations (parts per trillion- ppt) of 162 select hydrocarbons species from thermal extraction and capillary column gas chromatography and mass spectrometer analysis of 142 samples submitted from the Porphyry Lake survey. Spreadsheet also contains laboratory repeat and field duplicate analysis for quality control.

ATTACHMENT I1: SGH Field Sample Descriptions

1.0 Summary

In October 2015, a sampling program for Spatiotemporal Geochemical Hydrocarbon (SGH) was conducted over the central section of the 22-unit Porphyry Lake property. The samples were analyzed by Activation Laboratories in late February 2016 and reported in March 2016.

2.0 Location

The property is located in central Tyrrell Township in the Larder Mining Division, District of Sudbury, between UTM NAD 83 coordinates 5276000-5279000 N and 497000-500000E (NTS 41P10/11) approximately 22 km west of Gowganda.

3.0 Access

The property is accessed via Highway 560 west from Gowganda or east from Shining Tree. The property is approximately 22 km west of Gowganda. Highway 560 bisects the property (Map1).

4.0 Property

The property consists of 22 contiguous unpatented claims, located in central Tyrrell Township (Plan #G-3725), Larder Lake District. The claim numbers are: L1220353, L1220354, L1220381, L1220384, L1221601, L1221602, L1221603, L1221604, L1221605, L1221606, L1221607, L1221609, L1221610, L1221611, L1221612, L1221613, L1221614, L1221615, L1221616, L1221617, L1221618, L1221619. The SGH geochemical survey described in this report was performed on the following claim numbers with an approximate coverage over each claim unit as follows:
L1220384, 10%; L1221618, 60%; L1221601, 80%; L1221615, 20%; L1221616, 20%; L1221603, 60%; L1221602; 100%, L1221606, 70%; L1221607, 50%; L1221614, 30%; L1221610, 60%; L1221605, 90%, L1221609, 30%; and L1221611, 70%.

5.0 Physiology and Vegetation

The area consists of low rolling outcrop covered by sandy glacial outwash and thin till sheets. The central section of the property is cut by a prominent esker system. The vegetation consists of jack pine, spruce, pine, tamarack, alder, birch and poplar.

6.0 Regional and Property Geology

The Porphyry Lake property in central Tyrrell Township is underlain by the Archean-aged Shining Tree volcanic belt of the Abitibi Greenstone Belt. The lithostratigraphic section of rocks exposed at Porphyry Lake is part of the Kidd Munro Group. The rocks consist primarily of NW-SE striking intercalated felsic to mafic volcanic rocks locally with thin clastic and chemical sedimentary rocks. Felsic and mafic dikes intrude the volcanic rocks. To the southeast, along the Tyrrell Structural Zone, sedimentary units of the Indian Lake Group overlie sections of the older volcanic rocks. To the northwest, in Natal Township, volcaniclastic rocks of the Natal group, coeval to Indian Lake Group units, which also unconformably overlie volcanic units. Cobalt Group Proterozoic-aged sedimentary rocks cover the eastern third of the township. Proterozoic diabase dikes intrude all units, but are not prominent at the Porphyry Lake property.

The dominant lithologies observed on the Porphyry Lake property fall into two large-scale mappable stratigraphic sequences of Kidd Munro-aged units (Map 2). The lower (older) volcanic sequence, exposed to the north and northeast of Porphyry Lake, consists of intermediate to ultramafic meta-volcanics containing numerous mudstone and graphitic mudstone horizons. This sequence is dominated by dacitic, flow-dome packages interbedded with mudstones, graphitic mudstones and argillites. These intermediate dome sequences are separated by mafic and ultramafic volcanics, mostly basalts and komatiites. The upper (younger Kidd Munro) volcanic sequence exposed at Porphyry Lake and to the south and west of Porphyry Lake, is lithologically less diverse and consists dominantly of rhyolitic to dacitic meta-volcanic flows cut by numerous felsic to intermediate porphyry dikes observed in the numerous outcrops surrounding Porphyry Lake. The sequence contains little mafic rock except scattered exposures of basalt SW of Porphyry Lake and basaltic exposures at the historic Lorenzo and Shanen showing. The sequence is also devoid of mudstones and graphitic horizons but does contain volcanogenic chert horizons well exposed in Trench #1, approximately 200m northwest of Porphyry Lake. These felsic rocks belong to the Breeze Lake Group described by Johns, 1998. The lithologic packages generally strike northwest-southeast with steep dips to the northeast. Topping direction is generally to the southwest, however, topping direction is variable locally with overturned topping indicators. Geochronology has confirmed that the younger felsic rocks are synform with older rocks on northeast and southwest. The Porphyry Lake property lies primarily on the northeast limb of this apparent synform. On the northern limb of the synform, in the central section of the Porphyry Lake property, the contact between the two major Kidd Munro units has been structurally reactivated, forming a broad deformation or shear zone (300-400m wide) from the ESE side of the property trending to the northwest, north of Porphyry Lake, continuing to the west side of the property. Elevated gold values are associated with this shear zone. The location and presence of the shear was tested in the drilling of PL-04-01 (reported in MNDM files number W0480.01629), immediately NE of Porphyry Lake. The southern side of shear zone is exposed in highway rock cuts near Porphyry Lake. The deformation zone has been called the North Porphyry Break. A second similar structural zone, the Breeze Lake Structural Zone, is sub-parallel to the North Porphyry Break and is postulated to strike through the south-end of Porphyry Lake and Breeze Lake. Both structures are sub-parallel to the Tyrell Structural Zone to the south. The North Porphyry Break is also believed to be a splay feature of the Tyrrell Structural Zone.

During the 1997-1998 exploration program, geological, geophysical and geochemical surveys were conducted. Geophysical surveys were conducted by JVX and reported in MNDM files number W9880.00356. In addition to the surveys, 11 diamond drill holes, totaling 1,774 metres, were drilled in 1998 primarily on geophysical targets. This work was not reported for assessment. Two diamond drill holes were completed in 2004 and reported in MNDM files number W0480.01629; a single hole was drilled in 2005 and reported in MNDM files number W0580.01825; a single hole was drilled in 2007 and reported in MNDM files number W0880.00535. Sample re-assay, geostatistical analysis and mineralization description was conducted in 2007 and reported in MNDM file number W0780.00731. Additional detailed magnetic survey was conducted on Porphyry Lake in 2007 and reported in MNDM file number W0780.00743. IP survey was conducted in 2009 over a limited area and reported in MNDM file number W0980.02276. In 2010, airborne geophysics including magnetometer, VLF and radiometric survey was flown by Creso Exploration and reported in MNDM file W1180.02025. In 2011, Creso conducted 382 metres of diamond drilling in two holes in proximity to the historic Pettrigrew showing on claim 1221610 and 1221609. This work was not reported for assessment. Collars and drill hole traces are shown on Map 2.

7.0 Exploration Rationale

The exploration program was designed to prospect for the geochemical signature of buried or hidden gold mineralized rocks using Spatiotemporal Geochemical Hydrocarbon (SGH). The primary target is a shear zone hosted gold mineralization in the North Porphyry Break, buried under thick esker and outwash deposits. The SGH method is capable of detecting and mapping geochemical oxidation-reduction cells potentially associated with geochemically anomalous rocks. The method also detects the decay component of organic processes related to the weathering of potentially altered and mineralized rock. The method analyses soil adsorbed hydrocarbons and characterizes the hydrocarbons into geochemical 'type' or classes developed empirically over known mineral deposits and ore bodies. The classes or suites of hydrocarbons from known deposits create 'pathfinder templates' that allo for comparison of 'blind' exploration samples, such as those from the Porphyry Lake property, against empirically-developed templates from well-studied mineral (ore) deposits. The method analyzed hydrocarbon characteristics from samples collected from the Porphyry Lake property compared against Gold class hydrocarbon templates to assign a relative scalar unit (1 through 6) that represents a significance or geochemical similitude for each individual sample against the empirically-developed gold deposit template.

The survey area covered the recognized North Porphyry Break shear zone that crosses the central section of the property from the southeast trending west-northwest, north of Porphyry Lake. Based primarily on geophysics, the North Porphyry Break or shear zone is a 300-400 metre wide corridor of magnetic "lows" through the magnetic volcanic units of the Kidd Munro group. Additionally, the zone intercepts and dampens the deeper and stronger magnetic high of the Milly Creek Stock that has a magnetic 'halo' along the southern contact of the stock. The southern flank of the North Porphyry Break was identified in the drilling work conducted in 1997-1998, near the highway at Porphyry Lake. The central section and northern boundary (north of Spade Creek) has not been drill tested. This area is predominantly covered by Quaternary esker deposits of sand and gravel up to 30m thick based on overburden drilling conducted in 1997, except near Porphyry Lake where Spade Creek has subsequently eroded the outwash materials and exposed some bedrock. The eskers cover up potential for conventional prospecting using outcrop sampling and strongly mask direct or conventional geochemical sampling such as gold-in-soils geochemistry. The 1997 exploration program included till sampling, overburden drilling and till analysis however provided little definition of the bedrock units beneath the gravel cover nor did it provide any discrete drill targets.

Additionally, to provide some confirmation that the SGH method would detect known mineralization, the survey was expanded to sample the known and drilled Pettigrew zone mineralization to the south of Highway 560, east of Porphyry Lake, and the highway area east of Porphyry Lake where several drill intercepts in the 1998 drilling program were encountered.

8.0 Exploration Program

In late October 2015, the author and an assistant mobilized to Gowganda to conduct the Spatiotemporal Geochemical Hydrocarbon (SGH) survey. A 100 metre x 100 metre grid pattern was determined as a suitable sample density based on research of the method and opinions of target size and depth. SGH method can use a variety of sample media for analysis. A sampling protocol was established for the sampling of the SGH samples at Porphyry Lake. Soil B –horizon material was targeted as the sample media. This sample media is generally available above all underlying materials (bedrock and Quaternary cover) in the survey area (six of 142 samples were not B-horizon media). Additionally due to its depth of burial, it is most likely isolated from anthropomorphic disturbances. The consistency of the B-horizon media, will also enhance the repeatability and precision of the method.

At each sample location, on approximately even 100 m grid based on GPS waypoint method, the soil profile was excavated through the organic cover (A-horizon) and into the B-horizon profile. These excavations were approximately 60 cm diameter and ranged from 10 to 60 cm deep. Using clean methods and a clean stainless steel trowel, the oxidized B-horizon material was extracted and approximately 500-1000 grams of sample placed in 4 mil thick polyethylene samples bags, rolled and closed carefully. Contamination from organics or tools was minimized. Sample bags were pre-labelled with black marker with an assigned sample number based on 100 metre station, using UTM NAD 83/Zone 17 - 490000mE, 5270000mN as an origin. At each location, field data were collected to support the sampling. These field data are summarized here:

- Sample Number with prefix PLH-Station East-Station West (PLH-21-18)
- Sample location from GPS in UTM 83 – Zone 17, Easting and Northing
- Depth of sample
- Munsell Soil Color (a consistent method to describe soil colors)
- Soils description generally following ASTM Unified Soils Methods, identifying each of the major clast components of the sampled material to a group name (example: sandy silt with gravel)
- Sample substrate (generally till, outwash, or esker)
- Notes on the sample geographic location - specifics such as nearby features and general location topographically
- Sample specific notes, such as labelling issues that can be tracked as the sample is handled later by lab personnel.

During the sampling, after exposing the B-horizon, a photo was taken of the sample pit and soil profile, sample bag and GPS with location. These photos are valuable for checking sample locations, sample number and documenting soils for subsequent investigations. The field data were entered into a spreadsheet inr tracking and dissemination to the lab. A 6-day sampling program was needed to collect all 142 samples comprising the survey. Two one-half days were lost to inclement weather. Samples were sorted by each sampling day, checking for completeness. Finally the samples were boxed for shipping to Activations Laboratories.

9.0 Discussion of Results

The report authored by Dale Sutherland, B.Sc. of Activation Laboratories is attached as Appendix 1. This interpretive report is included with the analysis of samples using the SGH method. The SGH author is 'blind' to the samples, in that the interpretation is made without any knowledge of the property or its' characteristics. Thusly, the blind interpretation should be reconciled against the existing geologic, geophysical and geochemical knowledge to integrate the SGH results with known geologic features, known mineralization and that any newly identified anomalies be reconciled against known areas and responses. Sutherland recommends (from page 24):

> 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.

Three maps were produced representing the SGH Interpretation and overlain on the claims texture for reference in this report:

1) Interpretive SGH color contour of the oxidation/reduction map with annotations (Map 3);
2) Interpretive SGH color contour of the "GOLD" map with annotations (Map 4);
3) Interpretive SGH color contour of the shallow "GOLD" map with annotations (Map 5).

Each of the result maps included on pages 17, 19, and 21 in attached report, will be discussed individually.

Map of Redox "Basement" Map

Map 3 is the interpretive map of oxidation-reduction cell (Redox cell or 'basement') mapped with SGH method. The interpretation indicates that an ovoid-shaped redox cell is evident on the property with its main axis striking slightly west of due north (~340º azimuth). The cell is approximately 1000 metre x 600 metre in dimension with its centre 200 metrtes northeast of the northern-most point of Porphyry Lake. The cell (anomaly) symmetry indicates a likely mineralized source, with little horizontal displacement from source, possibly at depths greater than 500 metres.

The anomaly is described by Sutherland on page 16:

> This SGH anomaly is a nested segmented halo anomaly. It has a central apical anomaly surrounded by small anomalies that together form a surrounding segmented halo formation joined by the dotted yellow oval interpretation.

> Further this anomaly illustrates excellent symmetry as the connection of opposing anomaly segment as the blue lines intersect at a common point. This illustrates that the hydrocarbon pathfinder classes have not been deflected and are thus a vertical projection of a target below that has the SGH identification signature associated with gold mineralization. Also, since this anomaly is symmetrical there is a high confidence that they are related and describe a buried feature, thus the anomalies are not due to sporadic signals or noise. This SGH class is particularly good at illustrating features at significant depth and in this case the central apical anomaly is believed to be the source of an intrusion where the gold mineralized fluids have originated. The fact that it is slightly offset from centre may mean that the intrusion is quite deep (perhaps >500 metres deep). This is consistent with a porphyry style deposit.

Map of 'GOLD' Pathfinder Class

Map 4 is the interpretive map of pathfinder "GOLD" mapped with SGH method. The anomaly is an arcuate series of SGH values > 5 and includes SGH=6 that extend from east of Porphyry Lake trending northwesterly, turning north, north of Porphyry Lake, extending 700 metres to the northern survey extent. Two NW trending zones merge with the NS zone near Spade Creek, north of Porphyry Lake. The southern section of the anomaly corresponds with 1998 drilling results including an interval of 36.1 g/T Au over 1.5 metres.

The anomaly is described by Sutherland on page 16:

> This SGH Pathfinder Class for Gold appears to be able to trace the flow of the mineralized fluids through the region of the intrusions as a flow to the north and southeast of the intrusion. The interpretation from page 17 is included for ease of reference. Small anomalous signals also agree and thus support the interpretation of the halo anomaly (dotted yellow oval) adding confidence. This SGH Class appears to illustrate a Gold channel or ridge like feature that joins Gold pods or lenses.

Map of Shallow 'GOLD' Pathfinder Class

Map 5 is the interpretive map of shallow pathfinder "GOLD" mapped with SGH method. The anomaly is defined by several SGH = 6 samples that forms a northeast trending ellipse of approximately 450m by 280m. This covers the swampy area along the east-west section of Spade Creek, north of Porphyry Lake. This anomaly corresponds with an area of 1998 drilling, including an interval of 7.9 g/T Au over 1.5metres. The anomaly is described by Sutherland on page 16:

> This SGH Pathfinder Class for Gold is reliable at depicting the shallowest portion of the Gold mineralization shown within the red oval interpretation to the east of the intrusion. This may perhaps be in the 10 to 30 metre depth range and thus may describe the most economical area to drilling. As the SGH signal drops off, i.e. is weathered, at surface, this area may not agree with outcropping mineralization or results from other inorganic geochemistry's. Another feature noted but not shown is that a smear of shallow Copper mineralization may be to the north, and in the northern half of the red oval Gold zone.

10.0 Observations

The Spatiotemporal Geochemical Hydrocarbon (SGH) method was successful in identifying areas of known mineralization, and identifying targets for further evaluation.

11.0 Recommendations

Follow up diamond drilling is recommended based on the SGH results. Ten 200 metre NQ-sized core holes are recommended to test targets based on the pathfinder "GOLD" maps (Table 1, Map 6). The holes will test for alteration and possible gold mineralization producing the SGH responses in the SGH=5 to SGH= 6 range.

Hole Number	UTM-NAD 83 Easting	UTM-NAD 83 Northing	Azimuth (true)	Dip (degrees)	Length (m)
P-1	498550	5277800	260	-50	200
P-2	498550	5277650	250	-50	200
P-3	498550	5277500	250	-50	200
P-4	498550	5277355	230	-50	200
P-5	498715	5277390	220	-50	200
P-6	498920	5277425	220	-50	200
P-7	498750	5277150	210	-50	200
P-8	498925	5277050	210	-50	200
P-9	499100	5277150	210	-50	200
P-10	499000	5276775	210	-50	200

Table 1: Location, direction, dip and length of diamond drill holes (NQ) recommended based on 2015 SGH Survey.

Finally, SGH sampling should be extended northward concentrating on the 4-claim area on the far northern section of the 22-unit property and southward near the south end of Porphyry Lake.

Statement of Qualifications

I, Jamieson S. Walker, of 4 Private Road, Blue Diamond, Nevada, USA hereby certify that:

1. I am a graduate of:

    University of Minnesota in Duluth, Minnesota with a Master of Science degree, Geology in 1993.

    Lake Superior State College in Sault Ste. Marie, Michigan with a Bachelor of Science degree, Geology in 1985.

    Sault College of Applied Arts and Science in Sault Ste. Marie, Ontario with a Geological Engineering Technician Diploma, 1981.

2. I have been practicing my profession since graduation.

3. The information contained in this report is the result of work I conducted or work that I personally supervised.

4. I have an approximate 60% interest in the property.

Dated at Blue Diamond, Nevada, this 31th day of October, 2016.

Respectfully submitted,

Jamieson S. Walker, M.Sc.
President, Jamieson Geological Inc.
A Nevada Corporation

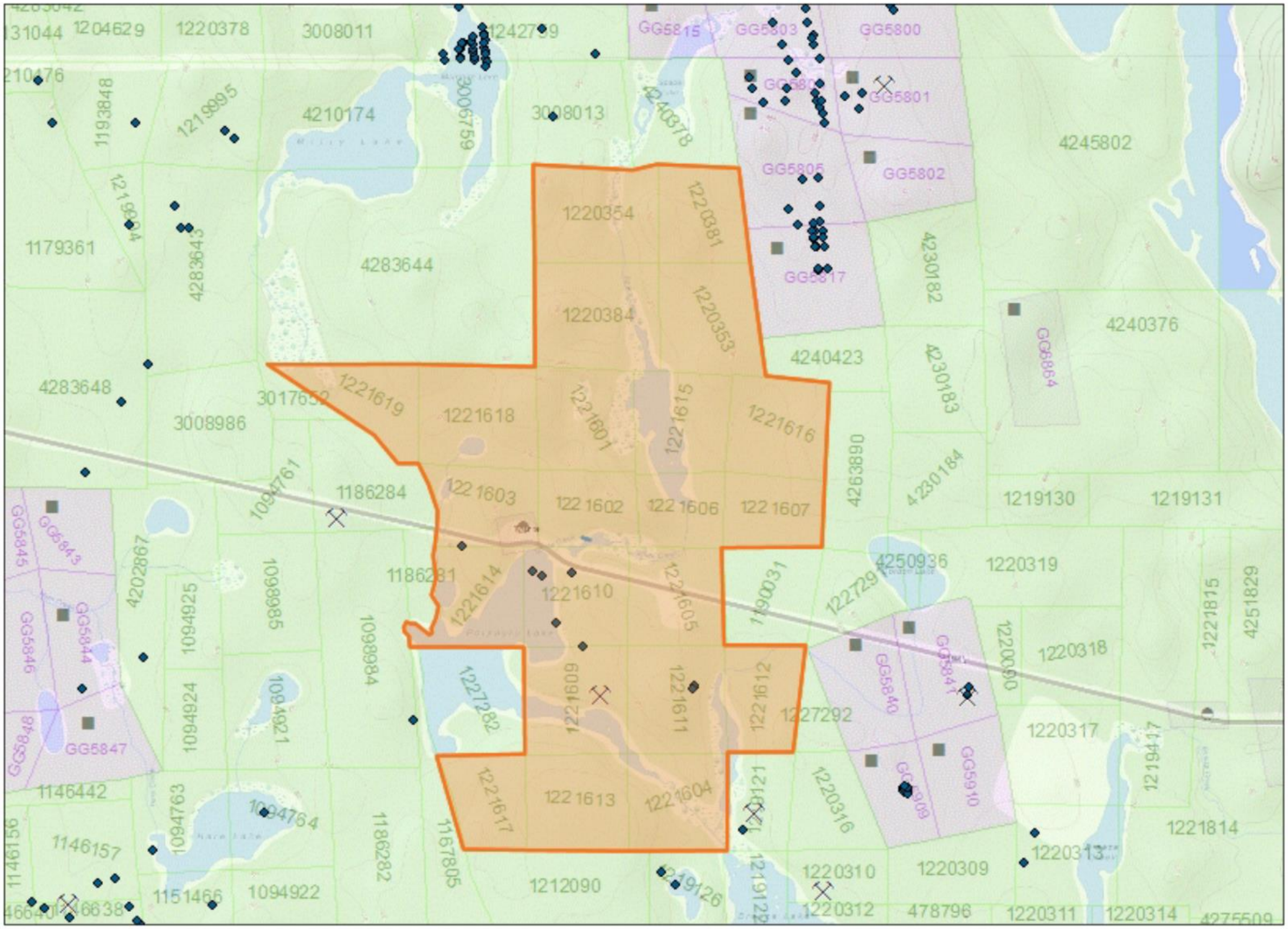
Ontario

MINISTRY OF NORTHERN DEVELOPMENT AND MINES

CLAIMaps

Map 1: Porphyry Lake Property - Tyrrell Township

Notes:
2015 SGH Survey



Legend

Administration Boundaries
- Mining Divisions
- Resident Geologist District
- Townships and Areas
- UTM Grid
- Geographic Lot Fabric
- Other Federal Land

Mineral Tenure Grid
- OMTG Tenure Grid

Alienations
- Withdrawal
- Notice

Unpatented Claim
- Active
- Reconciled
- Pending

Disposition
- Disposition

Disposition Symbols
- Camp
- Disposition Unknown/Pending
- Freehold Patent Mining Rights Only
- Freehold Patent Surface Rights Only
- Freehold Patent Surface and Mining Rights
- Land Use Permit
- Leasehold Patent Mining Rights Only
- Leasehold Patent Surface Rights Only
- Leasehold Patent Surface and Mining Rights
- License of Occupation Mining Use Only
- License of Occupation Surface Use Only
- License of Occupation Surface and Mining Rights
- License of Occupation Uses Not Specified
- Order in Council
- Tower
- WPLA

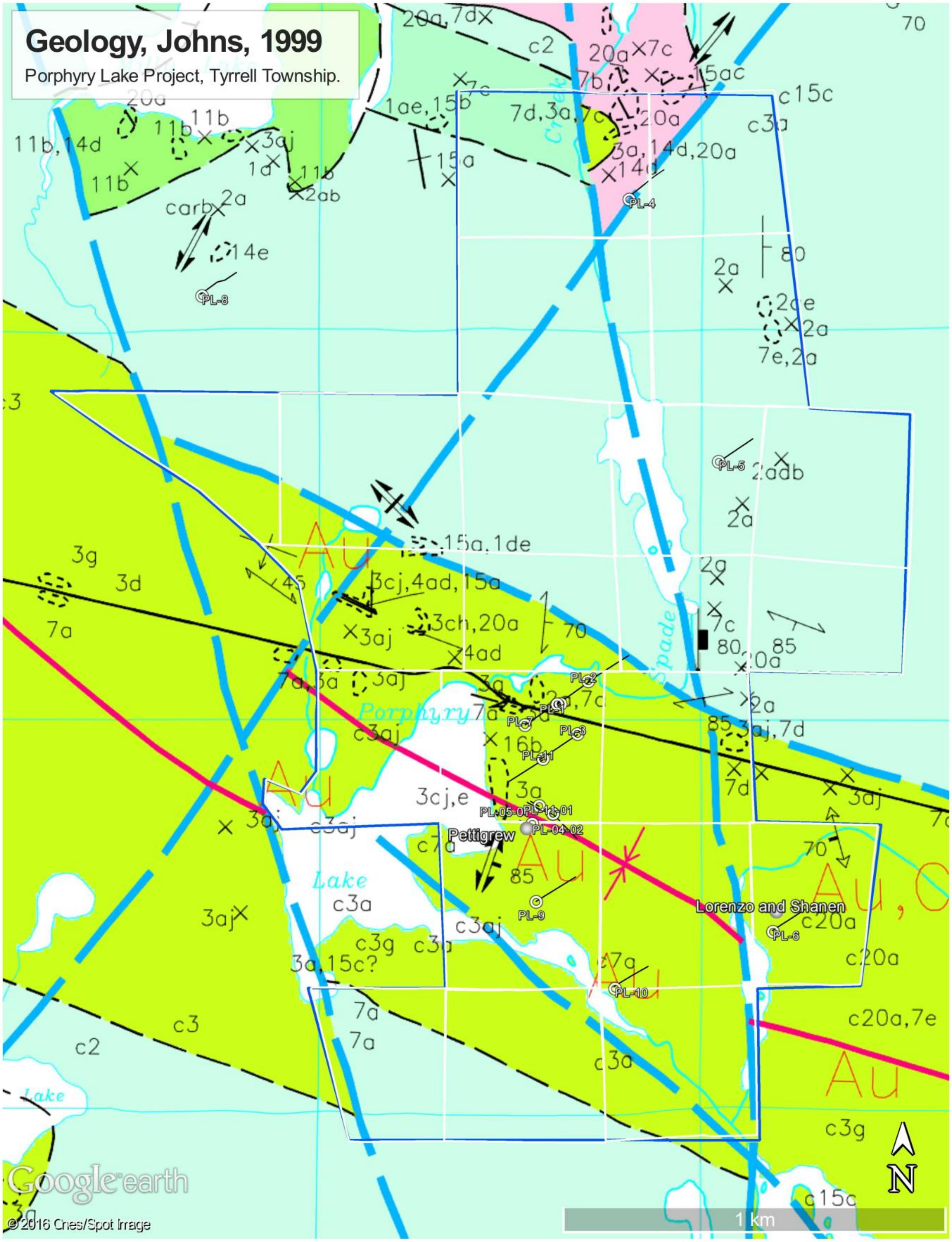
Geology Layers
- AMIS Sites
- AMIS Features
- Drill Holes
- Mineral Occurrences

0 1.2 km

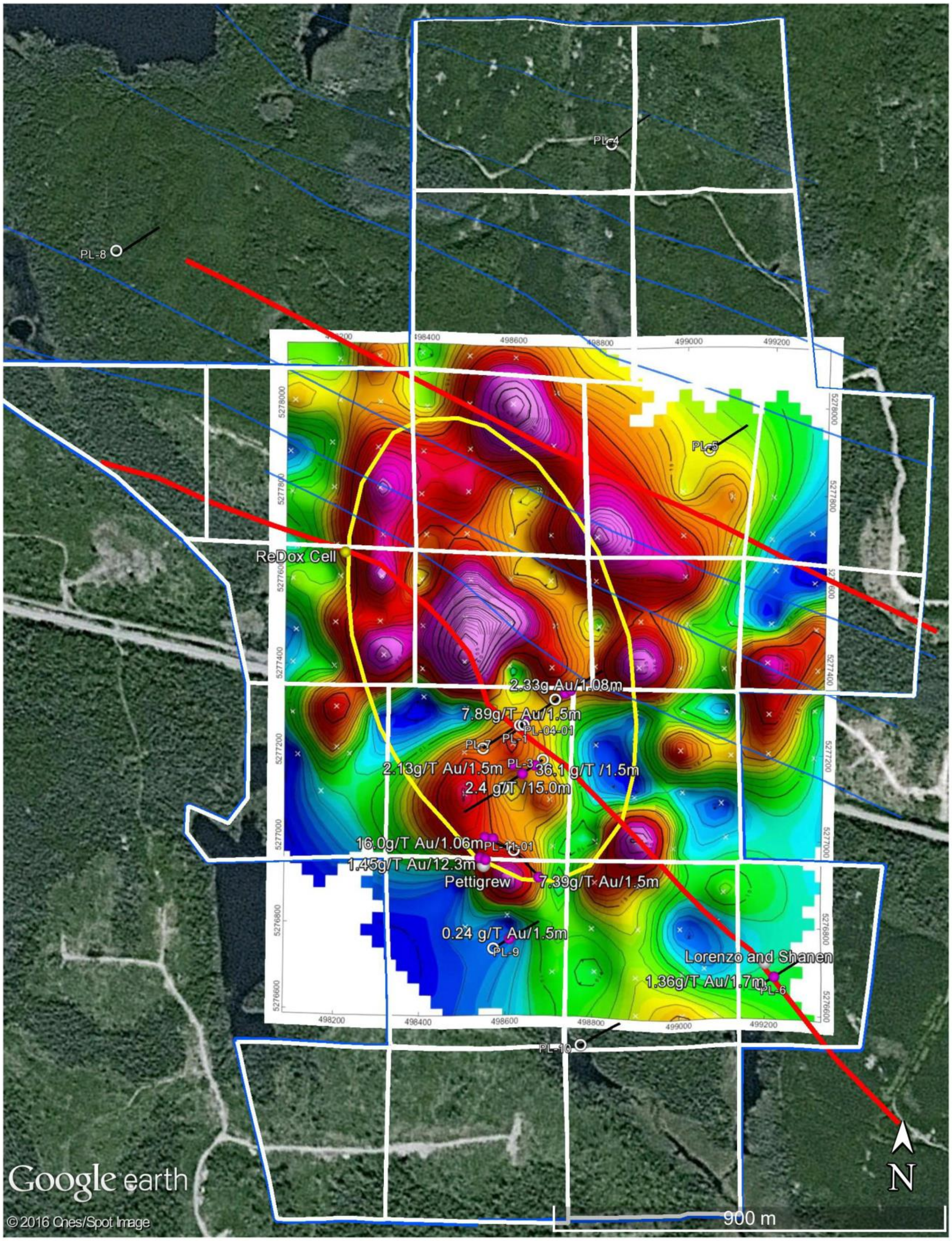
Projection: Web Mercator

N

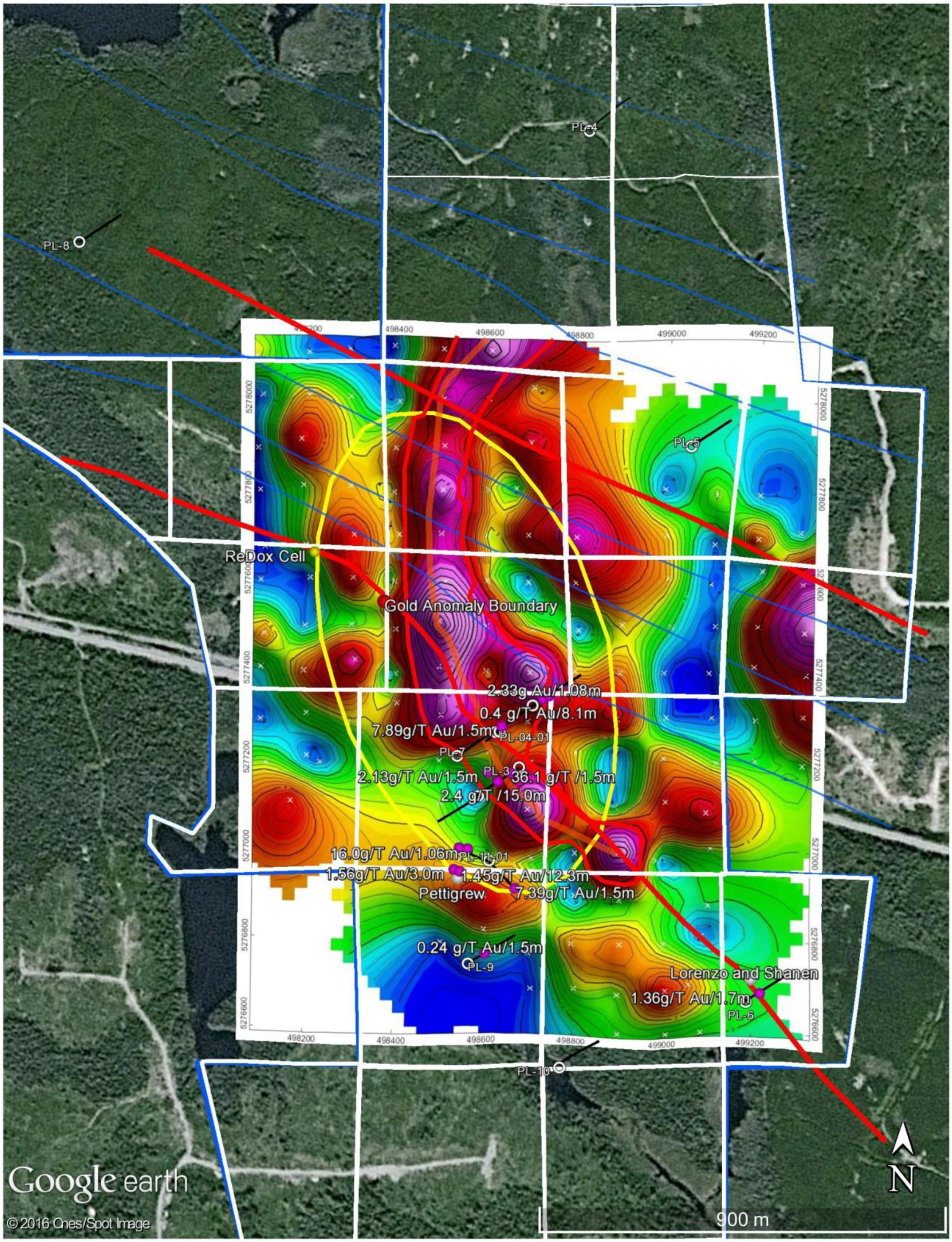
The Ontario Ministry of Northern Development and Mines shall not be liable in any way for the use of, or reliance upon, this map or any information on this map. This map should not be used for: navigation, a plan of survey, routes, nor locations.



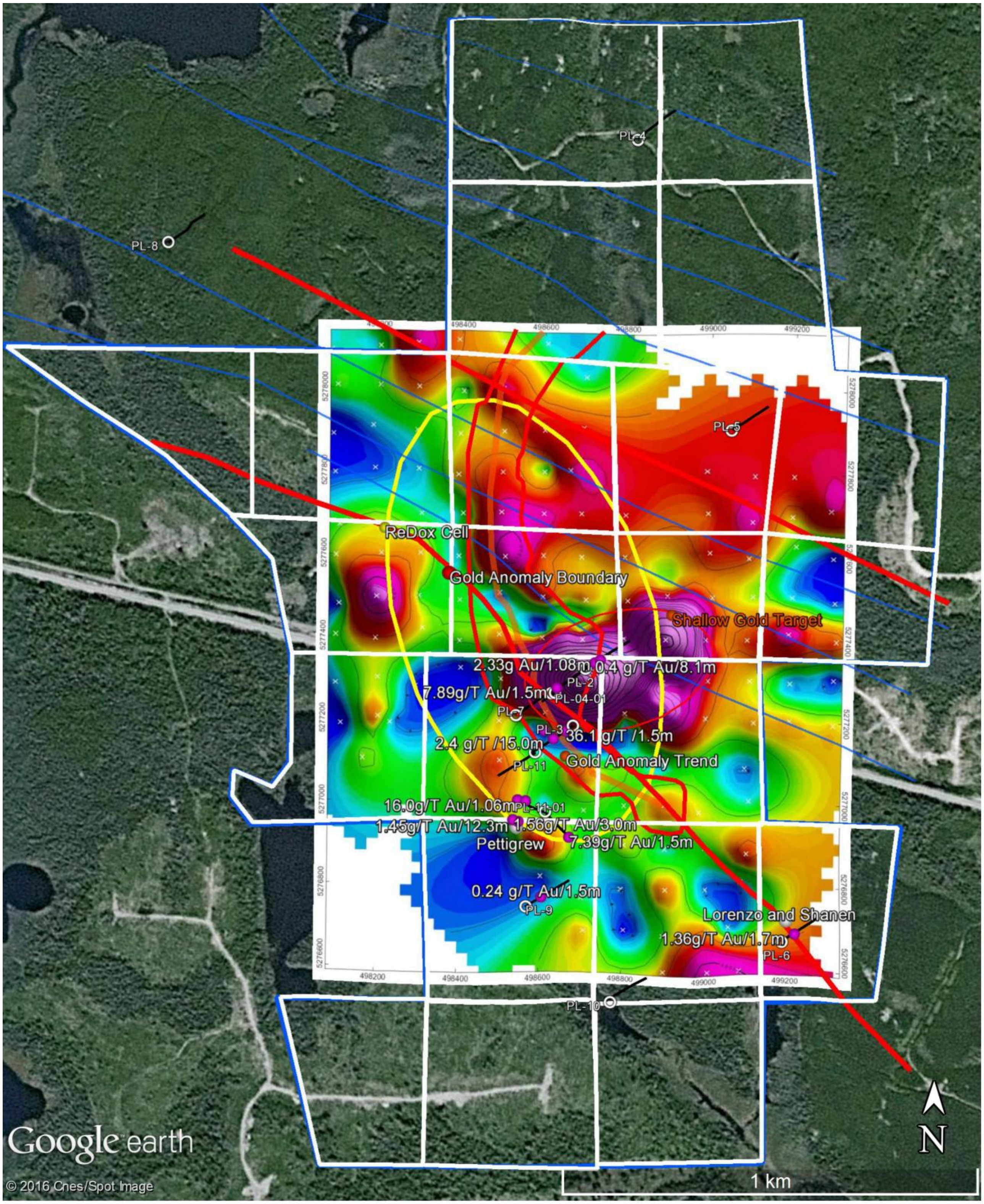
Map 2. Geology of the Porphyry Lake property after Johns-OGS P3389, 1999. Map includes the perimeter of the 22-unit claim block (blue), the internal claim boundaries from CLAIMaps(white) and collars and traces of diamond drill holes since 1998.



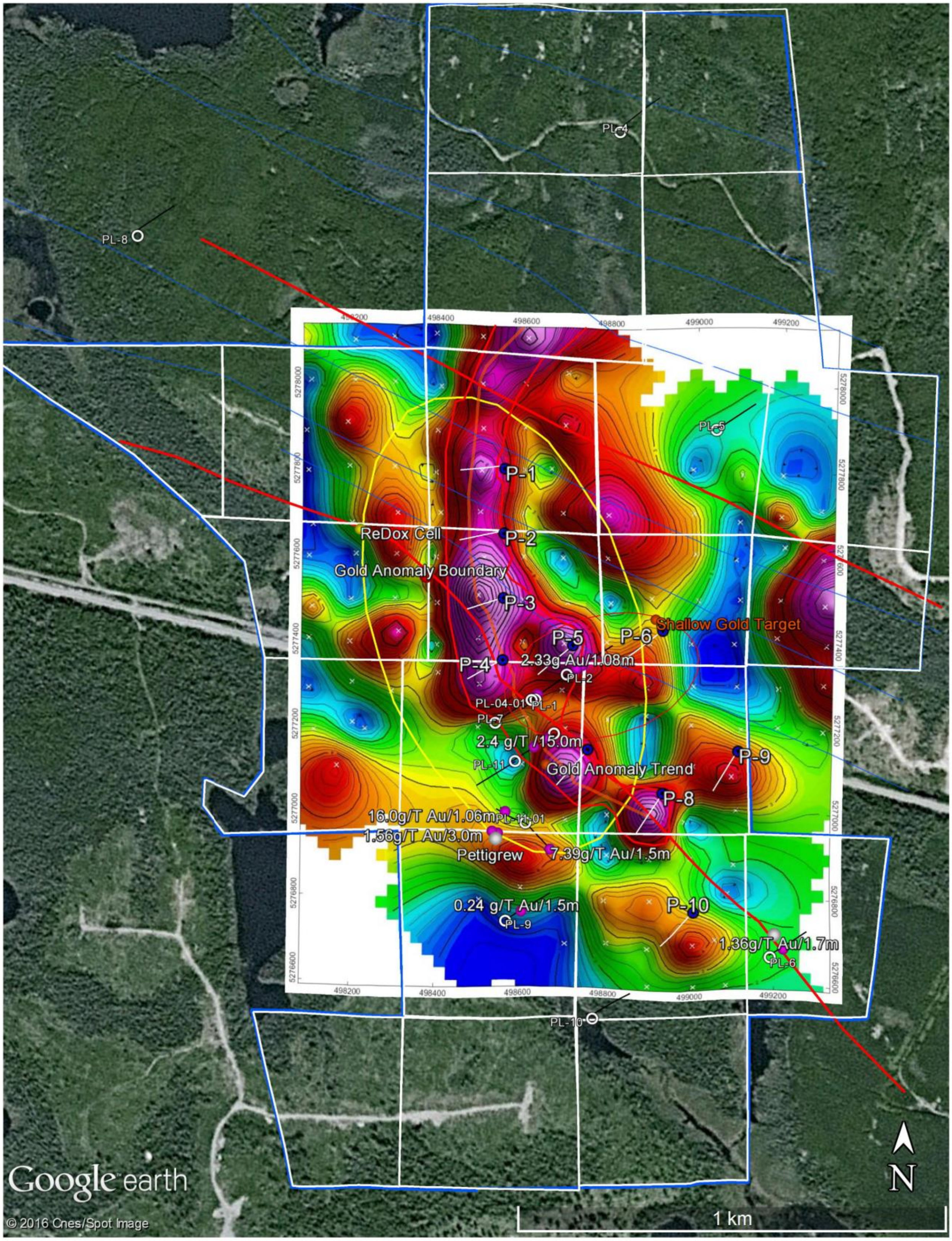
Map 3: Interpretive SGH colour contour of the oxidation/reduction map overlain on a Google Earth satellite image showing the outlines of the claims from Map 1 (blue and white lines). Distribution of samples with SGH rating >5 form an ellipse outlining a redox cell (yellow) that is approximately 1000m x 600m in dimension. White circles are diamond drill hole collars and hole trace (black lines). Drill hole gold grade intercepts (magenta balls) listing grade and width (in-hole). Red lines represent the boundary of North Porphyry Break – shear zone. Blue line are magnetic lineaments associated with North Porphyry Break. The historic Pettigrew showing is located on the southwest flank of the cell.



Map 4: Interpretive SGH colour contour of the pathfinder 'GOLD' map overlain on a Google Earth satellite image showing the outlines of the claims (blue and white lines). Distribution of samples with SGH rating >5 form an elongate zone outlined in light red polygon with dark red axis that is approximately 1300m in length and 60 to 260m wide. White circles are diamond drill hole collars and hole trace (black lines). Select drill hole gold grade intercepts (magenta balls) listing grade and width (in-hole). Red lines represent the boundary of North Porphyry Break – shear zone. Blue line are magnetic lineaments associated with North Porphyry Break.



Map 5: Interpretive SGH colour contour of the shallow pathfinder 'GOLD' map overlain on a Google Earth satellite image showing the outlines of the claims (blue and white lines). Distribution of samples with SGH rating = 6 form an oblong roughly triangular zone outlined in bright red ellipse. Depth to potential mineralization is interpreted to be less than 50m. White circles are diamond drill hole collars and hole trace (black lines). Drill hole gold grade intercepts (magenta balls) listing grade and width (in-hole). Red lines represent the boundary of North Porphyry Break – shear zone. Blue lines are magnetic lineaments associated with North Porphyry Break.



Map 6: Interpretive SGH pathfinder 'GOLD' map and proposed diamond drill hole locations and trace, overlain on a Google Earth satellite image showing the outlines of the claims (blue and white lines). Blue circles are collars of proposed drill holes with trace of hole in white line. White circles are diamond drill hole collars and hole trace (black lines). Drill hole gold grade intercepts (magenta balls) listing grade and width (in-hole). Red lines represent the boundary of North Porphyry Break – shear zone. Blue lines are magnetic lineaments associated with North Porphyry Break.

Appendix I: “A SPATIOTEMPORAL GEOCHEMICAL HYDROCARBON INTERPRETATION”, for JAMIESON GEOLOGICAL INC., PORPHYRY LAKE GOLD PROJECT
Author: Dale Sutherland B.Sc., Activation Laboratories Ltd, Dated: March 18, 2016.

3D - SGH

"A SPATIOTEMPORAL GEOCHEMICAL HYDROCARBONS – AN SGH REFERENCE DOCUMENT"

"PART I of III"

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

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

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

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

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

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

PREFACE

THIS SGH INTERPRETATION REPORT REFERENCE DOCUMENT:

The purpose of the accompanying Spatiotemporal Geochemical Hydrocarbon (SGH) interpretation report (formally termed as "Soil Gas Hydrocarbons" is to provide the latest developments and insight into this geochemistry and enhance the knowledge that clients and other potential reviewers of the results have with regard to SGH, an organic, deep penetrating Nano-geochemistry. As SGH provides such a large data set and is not interpreted in the same way as inorganic geochemical methods, this interpretation and report enables the user to realize the results in a timely fashion and capitalizes on years of research and development since the inception of SGH in 1976 combined with the knowledge obtained by Activation Laboratories through the interpretation of SGH data from over one thousand 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. This provision of this report is compulsory as it is the only known organic geochemistry that, in spite of the former name, uses non-gaseous semi-volatile organic compounds interpreted using a forensic signature approach. The interpretation is conducted blindly and is based solely on SGH data and does not include the consideration or interpretation from any other geochemistry (inorganic), geology, or geophysics that may exist related to this survey area(s). This report can also provide evidence of project maintenance. To keep the price to a minimum and to provide as short a turnaround time as practically possible, usually only one SGH Pathfinder Class map is illustrated in a "Standard Report" with an applied interpretation although several other SGH Pathfinder Class maps are used and referenced. Definitions of certain terms or phrases used in this report can be found in Appendix A. A GIS package of georeferenced images is also available. (See Appendix H of the project report (Part II of III).

The enhanced 3D-SGH interpretation in this report has used the results from recent research which has focused on the potential that SGH data might be able to further dissect and understand the relationships between the chemical Redox conditions in the overburden, the development of an electrochemical cell, and its affect in shaping geochemical anomalies. This research has resulted in the development by Activation Laboratories of a new enhanced model of the Electrochemical/ Redox Cell theory originated by Govett (1976) that was further developed to the model by Hamilton (2004, 2009). The new enhanced model developed by Sutherland (2011) takes the general anomalies expected by the Hamilton model to a higher level of detail and specificity. This has resulted in a more confident level of interpretation referenced as 3D-SGH or **3D-"Spatiotemporal Geochemical Hydrocarbons**. This model was first introduced at the International Applied Geochemistry Symposium (IAGS) of 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 confidence in the interpretation process as the symmetry of SGH anomalies can assure the interpreter that anomalies are truly as a result of a buried target. With the enhanced 3D-SGH interpretation, 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.

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

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

DISCLAIMER

The "SGH Interpretation Report" has been prepared to assist the user in understanding the development and capabilities of this Organic based Geochemistry.

THE SGH REPORT CONSISTS OF THREE PARTS/FILES (I, II, AND III) THAT MUST BE PROVIDED TOGETHER FOR ANY REVIEW BY THE CLIENT COMPANY, INTERESTED INVESTORS, OR GOVERNMENT ASSESSORS.

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

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

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

Cautionary Note Regarding Assumptions and Forward Looking Statements

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

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

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

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

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

Readers of this interpretive report are cautioned not to place undue reliance on forward-looking information. Forward looking statements are made based on scientific beliefs, estimates and opinions on the date the statements are made and the interpretive report issued. The Company undertakes

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

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

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

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

SOIL GAS HYDROCARBON (SGH) GEOCHEMISTRY – OVERVIEW

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

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

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

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

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

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

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

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

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

SPATIOTEMPORAL GEOCHEMICAL HYDROCARBONS SURVEY DESIGN AND SAMPLING

Summary: See Appendix C for more details

In summary, the best conditions (except for Snow surveys) for the sample type and survey design include:

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

SNOW SURVEYS

- Wide mouth 120 mL Nalgene jars with screw caps are the ideal sampling vessel for snow samples.
- Snow samples should be collected at a depth that roughly equates to a layer that is at least 3 weeks old. In open areas all samples should be taken at a similar depth. It is imperative that only snow be taken, i.e. exclusive of all soil particulate matter. The wide mouth jar can be used as a collection tool i.e. a scoop. Fill the jar completely. It is not necessary to pack the snow as a full jar provides at least 50 mL of water once samples are received at the lab.
- 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). Note ambient river or lake samples cannot be taken.

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

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

- A minimum of 50 sample "locations" is recommended with one-third over the target and one-third on each side of the target into background if this can be predicted. This provides the opportunity of optimal data contrast.

- Note, it is not anticipated that snow samples taken from above a frozen lake will provide geochemical information. Although not specifically investigated to date and thus unproven, it is expected that any water existing below the ice cover of a lake will dissipate any geochemical signal from migration through underlying overburden. It may be possible, but again unproven, that a geochemical signal may migrate through the porous ice to impregnate overlying snow if a shallow lake or shallow portions of the lake are frozen to the bottom thus intersecting the sediment surface.

- Snow sample jars are able to be shipped without any special preparation. Screw cap Nalgene jars appear to provide secure closure. A band of laboratory "Parafilm" can be used to provide additional security if the client wishes. Sample identifications can be written directly onto Nalgene sample jars using permanent markers such as "Sharpies" without concern for any contamination.

SAMPLE PREPARATION AND SGH ANALYSIS

Summary: See Appendix D for more details

Upon receipt at Activation Laboratories:

- The solid material samples are air-dried at a relatively low temperature of 40°C.

- The samples are then sieved and the -60 mesh sieve fraction (<250 microns, although different mesh sizes can be used at the preference of the exploration geologist) is collected.

- The collected "pulp" is packaged in a Kraft paper envelope and transported from our sample preparation department to our analytical building also located in the industrial park in Ancaster Ontario.

- Each sample is then extracted, compounds separated by gas chromatography and detected by mass spectrometry at a *Reporting Limit* of one part-per-trillion (ppt).

- The results of the SGH analysis is reported in raw data form in an Excel spreadsheet as "semi-quantitative" concentrations without any additional statistical modification.

SNOW SURVEYS

- Snow surveys do not require special preparation in the laboratory. Filled Wide mouth 120 mL Nalgene jars with screw caps provide approx. 50 mL of water from thaw during

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

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

shipment. Approx. 8 mL of particulate free sample is removed. An aliquot of this material is used for analysis and the rest is stored at a refrigerated 4°C for 60 days from delivery of the SGH Interpretation report to the client.

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

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

SGH DATA QUALITY

Summary: See Appendix E for more details

Reporting Limit:

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

SNOW SURVEYS:

- 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/litre (ng/L or ppt). Due to the much lower SGH signal obtained from the analysis of Snow samples, the reporting limit is reduced to 0.1 ppt. This represents a tenfold higher level of sensitivity and thus a potential greater amount of variability might be expected in comparison to a survey using solid based samples i.e. soil, sediment, humus, etc. However, as there is essentially no background values for snow surveys the variability of laboratory and field duplicates that have been reported are slightly lower than surveys using solid samples. It has been similarly observed that all data reported in should be used in geochemical mapping.

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

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

Laboratory Replicate Analysis:

- An equal aliquot of a random sample (solid or water from snow samples) is analyzed as a laboratory replicate.
- Due to the large amount of data, the estimate of method variability is reported, for any compound that have values from both samples that is ≥ 2.0 ppt (0.2 ppt for Snow surveys), 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 is similarly reported if identified.

Historical SGH Precision:

- Although the SGH analysis reports results at such trace ppt concentration levels, the average %CV for laboratory replicates is 8% within a range of ±4%. Snow surveys have a similar level of performance and can be more precise by 1 or 2 % as there are no detectable background levels.
- Field duplicates have historically been 5% higher than laboratory replicates for solid sample based surveys. Snow surveys have a similar level of performance and again can have values that are more precise by 1 or 2 % as there are no detectable background levels.

Laboratory Materials Blank (LMB-QA):

- The LMB-QA values are only an early warning as a quality assurance procedure to indicate the relative cleanliness of laboratory glassware, vials, caps, and the laboratory water supply at the ppt concentration level.
- The LMB-QA values should not be subtracted from any SGH data as any background or noise characteristics have already been removed through the use of a Reporting Limit. No background levels or interferences from the use of Nalgene jars for snow samples have been identified.

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

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

SGH DATA INTERPRETATION

Summary: See Appendix F for more details

SGH Interpretation and Report:

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

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

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

SGH CHARACTERISTICS

Summary: See Appendix G for more details

SGH Characteristics:

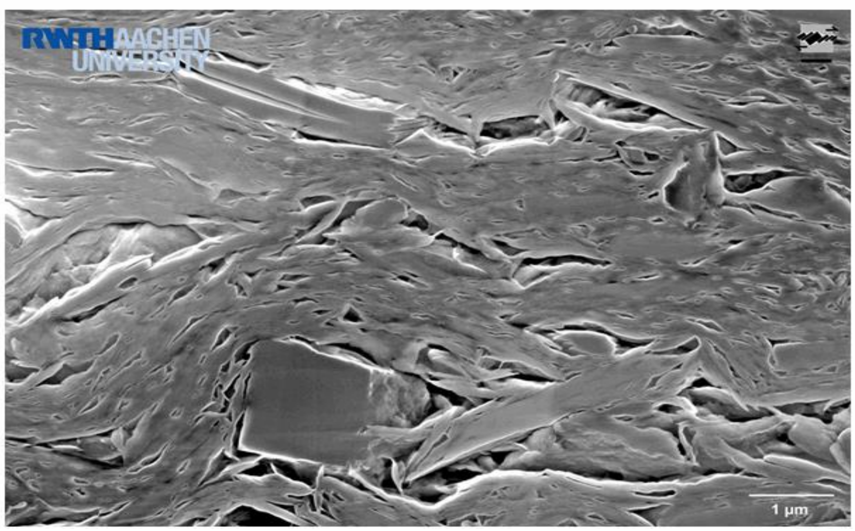
- The pattern of SGH anomalies are usually of high contrast and easily observed. Snow survey data is processed and interpreted in the same manner as for solid sample based surveys however lower contrast anomalies are observed and expected.
- SGH is able to illustrate exceptionally symmetrical anomalies in spite of exotic overburden and barriers such as permafrost, shale and basalt caps, previously thought to be impenetrable.
- Inorganic geochemistry can illustrate anomalies of metals that have been mobilized by surficial physical processes. As SGH is essentially "blind" to the inorganic content of a sample, SGH anomalies illustrate the true source of mineralization.
- AS SGH hydrocarbons are essentially non-polar, highly symmetrical anomalies are observed. As such symmetry is rare this provides a quality control to the interpretation resulting in higher confidence that is reflected by a higher SGH Rating Score in comparison to known case studies.
- SGH can be analyzed on samples collected in different seasons or adjacent years. The combined data rarely require any data leveling. The successful amalgamation of Snow survey data from different surveys or from different seasons has not been determined to date.

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

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

SGH INTERPRETATION – LATEST ENHANCEMENTS

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



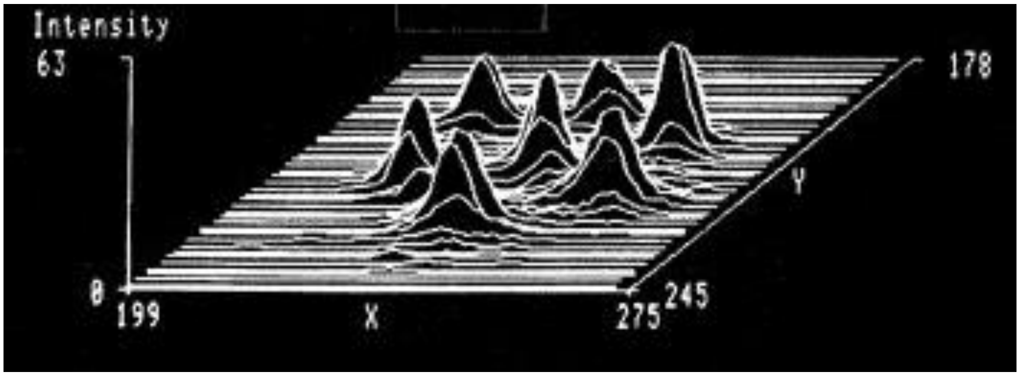
This new understanding of the rationale of why SGH anomalies are so reliable in their vertical projection of the location of mineralization and in the ability to so accurately delineate shallow and deep mineralization has further lead to the ability to use SGH to review different layers of the overburden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

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

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

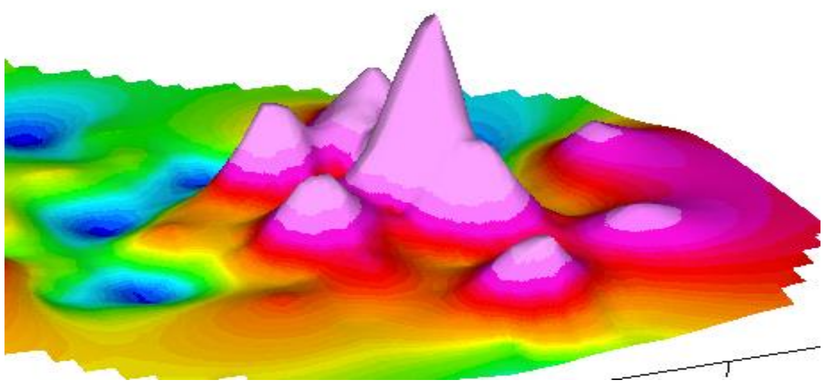
SGH INTERPRETATION – LATEST ENHANCEMENTS

The 3D symmetry that is exhibited in many SGH anomalies was first realized in 2004. Since then, a review of relatively recent physics experiments has provided additional insight and confirmation of the possible migration pathways of the hydrocarbon flux from deposits at depth. One publication in particular was of great interest. A Nobel Prize paper in Physics published in 1989 by Wolfgang Paul was entitled, "*Electromagnetic traps for charged and neutral particles*". In the described physics experiment, nano-sized particles of Tungsten as neutral particles were placed in an Electrochemical cell. Once a potential was applied to the cell, the particles were observed to self-organize. As illustrated below, the self-organization developed a symmetrically dispersed pattern.



Self-Organized Symmetrical Pattern of Neutral Particle in an Electromagnetic Field.

The pattern shown in Wolfgang Paul's paper was strikingly similar to the "segmented-nested-halo" anomaly shown below that was detected using SGH and reported using an SGH Nickel signature from over a survey in the Timmins area of Ontario. It is further proof that the electrochemical cell produced in a Redox Zone is an important mechanism in the migration of these hydrocarbons to surface. This anomaly was subsequently drilled and intersected Nickel mineralization. The similarity of this and other SGH anomalies to the pattern shown by Wolfgang Paul's experiment in the physics laboratory was presented at the IAGS conference in Tucson, Arizona in 2015.



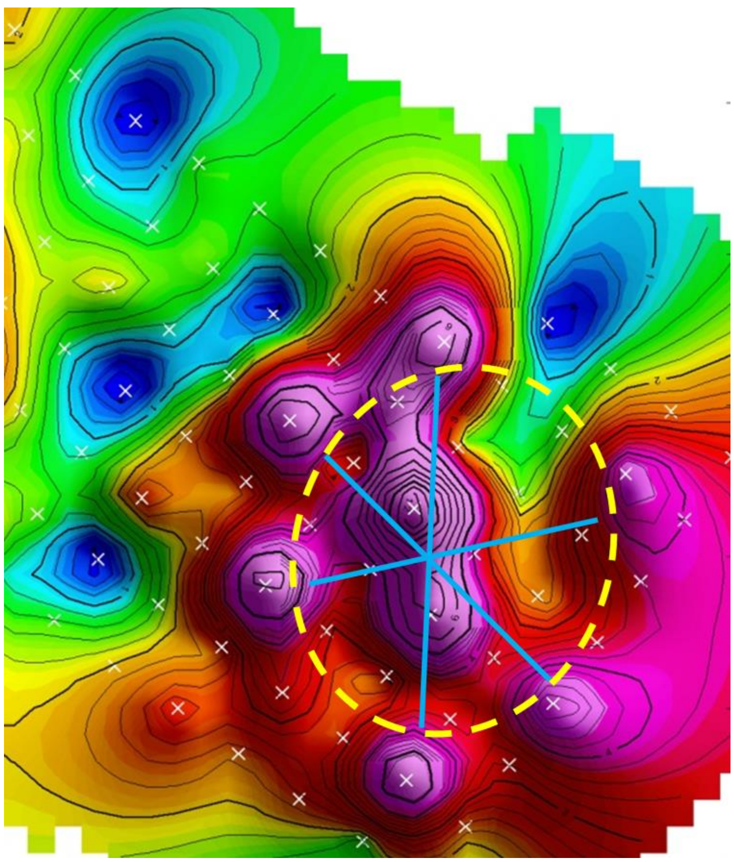
Self-Organized Symmetrical Pattern of the Hydrocarbon Signature for Nickel – 3D-SGH

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

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

SGH INTERPRETATION – LATEST ENHANCEMENTS

Today SGH anomalies are routinely reviewed from a 3D-SGH perspective to potentially observe the presence of symmetrical dispersed anomalies as shown in the plan view of the SGH Nickel anomaly below. The observation of the presence of symmetrical SGH anomalies adds confidence to the result and interpretation as it provides and excellent degree of vectoring and proves that the anomalies are not random. The geometrical centre of the segmented halo is coincident with the nested apical response of the anomaly almost without exception.



Geometrical Symmetry of the SGH Hydrocarbon Signature for Nickel – 3D-SGH

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

SGH INTERPRETATION – LATEST ENHANCEMENTS

Note that any concentration value in the accompanying Excel spreadsheet greater than the "Reporting Limit" of 1 ppt (0.1 ppt for Snow surveys) is important data and has been able to depict mineralization at depth. The majority of the variability or noise has already been eliminated; additional filtering will adversely affect any interpretation. Note that a Kriging trending algorithm has been applied to the mapping routine in the Geosoft Oasis Montaj software in the development of the SGH Class maps. SGH concentrations are in some way probably related to the amount of mineralization present and the grade of mineralization, which probably defines the characteristics of the biofilm(s) in contact with the deposit, as well as being related to the depth to mineralization. SGH results have also been shown to correlate well with geophysical anomalies such as magnetic anomalies and those of CSAMT.

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

One of the less known characteristics of this SGH geochemistry is that the anomalies have been shown several times to be unaffected by physical processes that usually cause drift to anomalies or sometimes called transported anomalies. As the SGH hydrocarbons are relatively neutral in charge or polarity, and are heavier in molecular weight (i.e. as they are not gases), they are unaffected by the slope of the terrain, effects of water table, etc. Only the lightest molecular weight SGH classes have shown any sign of deflection from illustrating a vertical projection when there is a major fault present. Although this may deflect the bulls-eye effect of these classes, the high amount of symmetry of heavier and thus none deflected classes can geometrically find the bulls-eye vertical projection of mineralization that can aid in decisions of drill targeting. Most importantly, in northern climates like that found in Canada, SGH has been shown to be completely resistant to transport by glacial drift.

Note, under no circumstances should SGH results be confused with assays. SGH is an excellent geochemistry to vector to, locate and identify the presence of blind mineralization. However, it is logical that the better identified and delineated a mineralized area is, the higher the possibly of finding some significant quantity of mineralization. Also, it is expected that well defined and identified mineralization is most likely to be at a relatively shallow depth. This varies with the SGH mineralization template used.

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

SGH INTERPRETATION – LATEST ENHANCEMENTS

In 2015, SGH was also described as being able to essentially make the overburden "transparent", no matter how complex. The premise behind this claim is based on the difference in size between elemental oxides and sulphides typically measured by inorganic geochemistry's and reported as the detection of inorganic elements, and the significantly smaller molecules of the specific hydrocarbons detected by SGH in this organic based geochemistry.

In locations of particularly dense overburden (clays, bedrock, permafrost, basalt caps, depicted as a "sieve" in the diagram on the next page) or for particularly deep targets (perhaps >100 metres) larger elemental oxides and sulphides will migrate to surface preferentially along faults or shear zones. These faults or shear zones may thus deflect the detected elements as inorganic anomalies to some distance laterally away from the buried target or source mineralization which may ultimately lead to the determination of drill targets that have a low probability of intersecting the mineralization. The migration of the very small SGH hydrocarbons are able to flow directly through the dense overburden ("sieve") without deflection, are thus able to show a vertical projection to the target often resulting in a suggested drill target of high confidence.

The ability of SGH to illustrate the true characteristics of the effects of the electrochemical cell as symmetrical anomalies (as on pages 17 and 18) provides the evidence that the SGH molecules do not experience any deflection in the migration through the overburden.

With the knowledge that the SGH flux of hydrocarbon are not deflected, the lateral dispersion halos detected by different SGH classes are also able to be observed and in highly rated projects an estimation of the depth of the target can be made based on the distance of symmetrical lateral dispersion. SGH is the only geochemistry at this time that is able to estimate the depth to the target. This ability, as all of the stated capabilities of SGH, has been proven through the observations and client discussions of real world surveys. These capabilities are not based on predicted theories or theoretical models.

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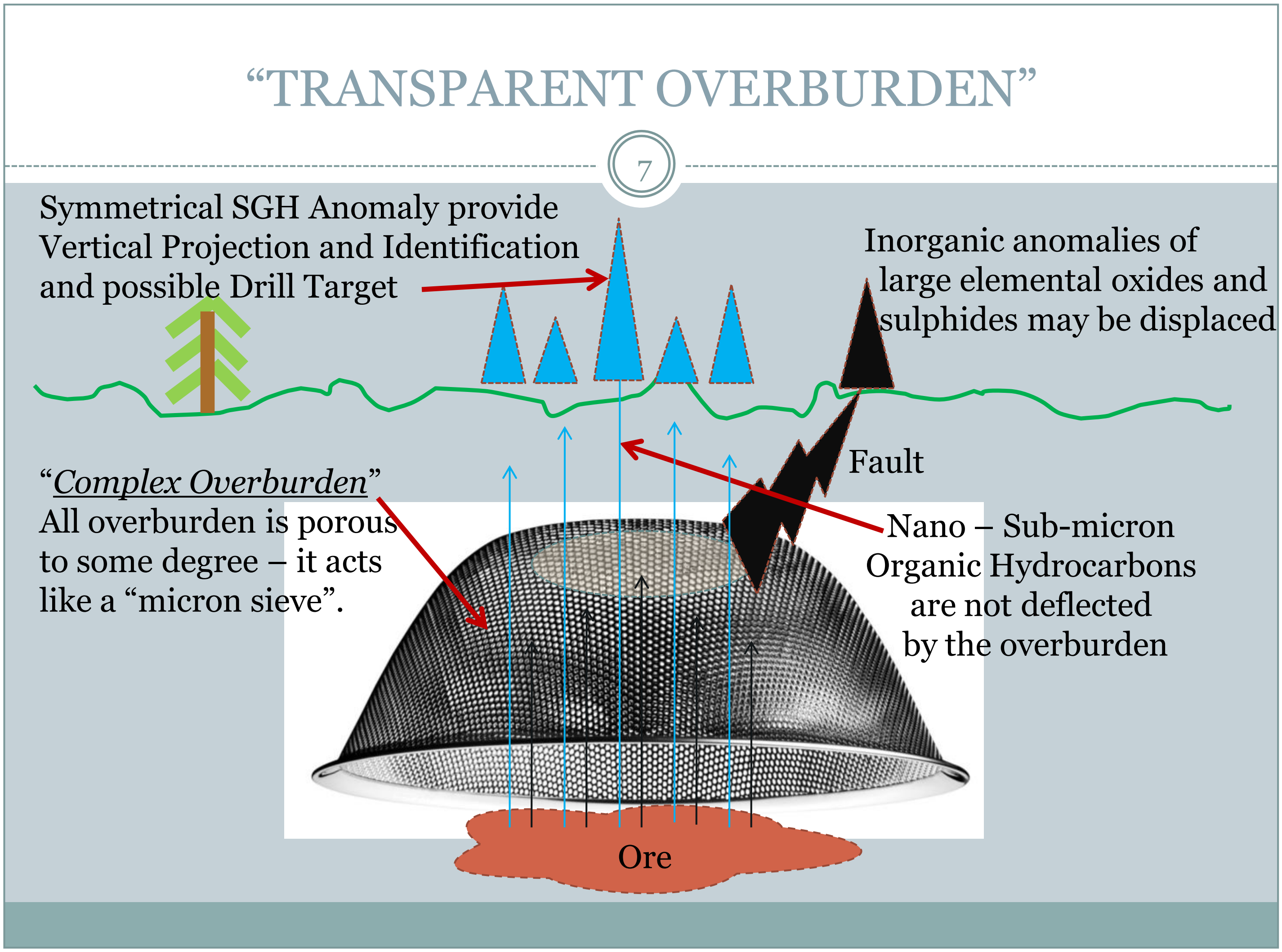
SGH INTERPRETATION – THE TRANSPARENT OBERBURDEN



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APPENDIX "A"

List of terms

1. **SGH** – "SOIL GAS HYDROCARBON" GEOCHEMISTRY – a Predictive Geochemistry, used for delineate buried inorganic mineral deposits and organic petroleum plays. This is the original name used to describe this geochemistry since inception in 1996. Code SGH is still used when submitting samples.
2. **3D-SGH**- "3D- SPATIOTEMPORAL 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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E-mail: dalesutherland@actlabst.com ● Web Site: www.actlabs.com

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

    Target signature: the unique characteristics that identify the target.

    Target type:

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

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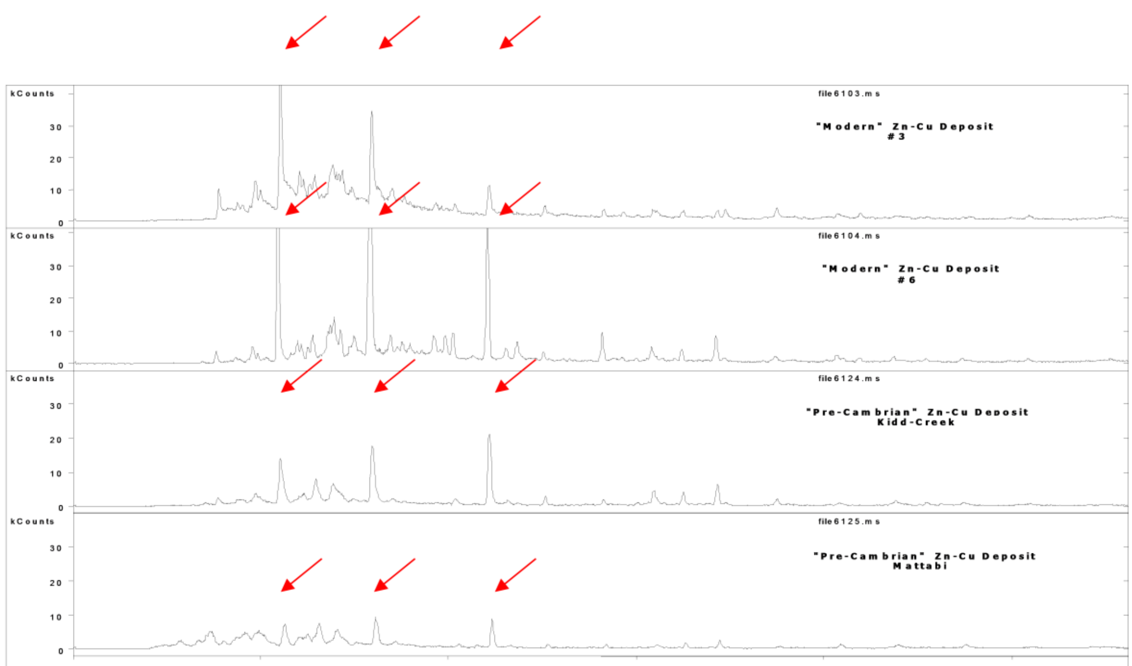
E-mail: dalesutherland@actlabst.com ● Web Site: www.actlabs.com

APPENDIX "B"

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

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

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

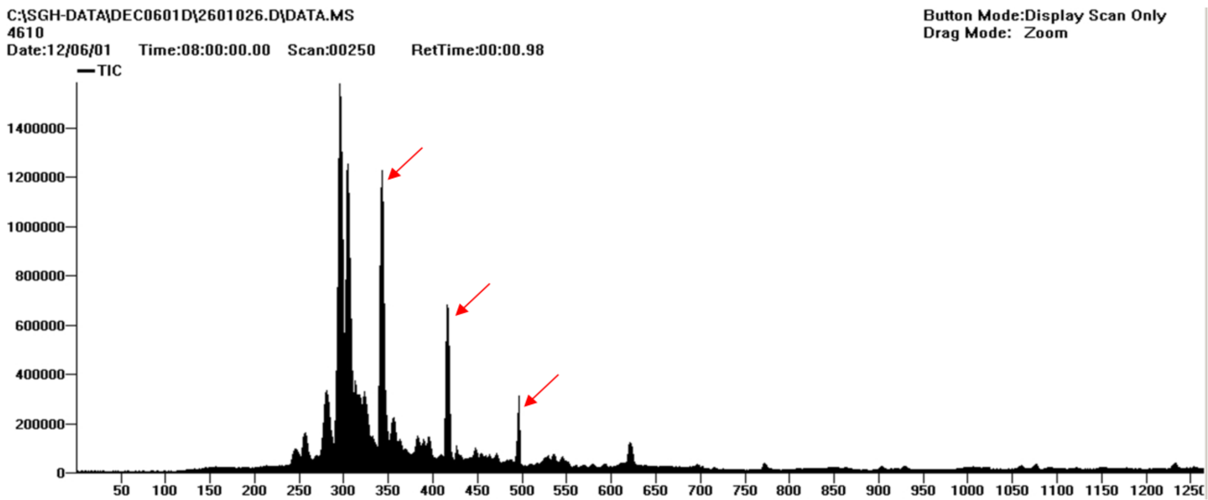


The above profiles are:

- 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 reseGTK-4141005 Surveyss, soil samples were obtained from over the Ruttan Cu-Zn VMS deposit near Leaf Rapids, Manitoba and located in the Paleoproterozoic Rusty Lake greenstone belt. The profile obtained, as observed in the raw GC/MS chromatogram, is shown in this next image below:



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

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

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

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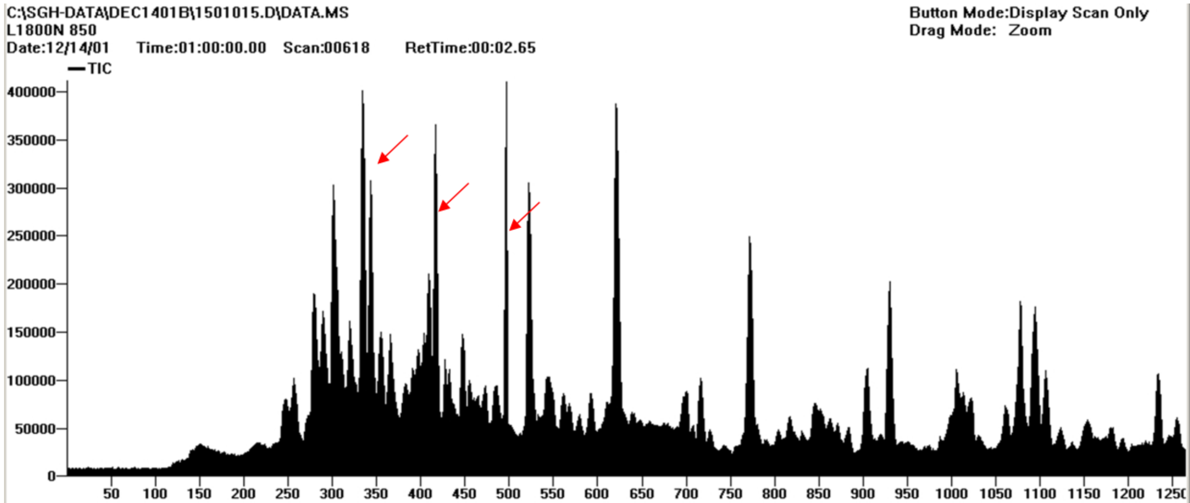

In research conducted by the Ontario Geological Survey, this same portion of the SGH signature was also observed over the VMS deposit at Cross Lake in Ontario. **Note that the visible signature shown as the three compounds indicated by the red arrows is only a small portion of the complete SGH VMS signature**.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

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

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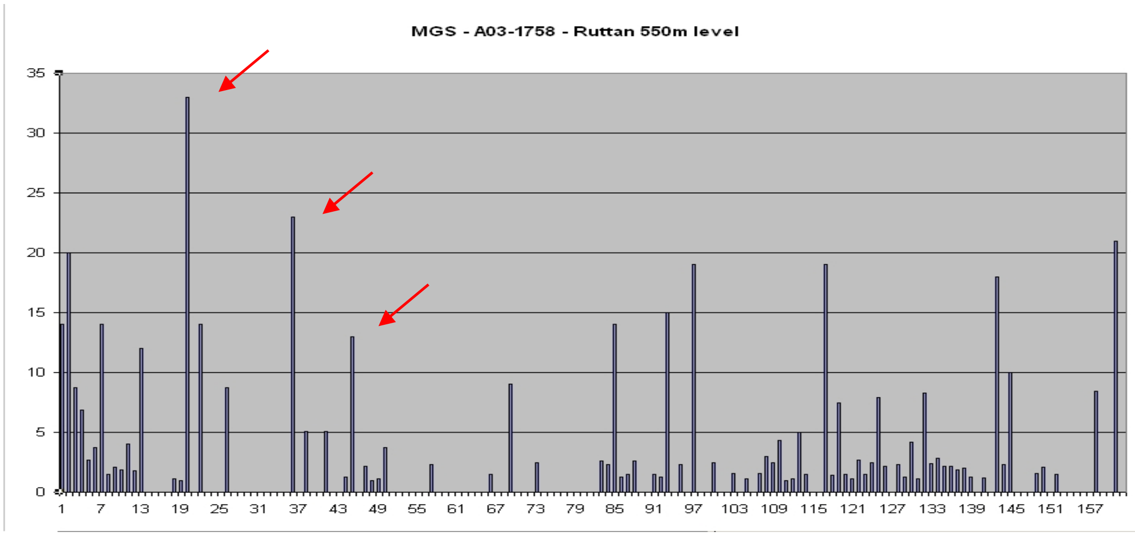

Through the work done in the SGH CAMIRO reseGTK-4141005 Surveyss, it was observed that the hydrocarbon signature produced by the SGH technique appeared to also be able to be used to differentiate barren from ore-bearing conductors. This was explored further through the submission and analysis of specific specimen samples that represented a barren pyritic conductor and a barren graphitic conductor.

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

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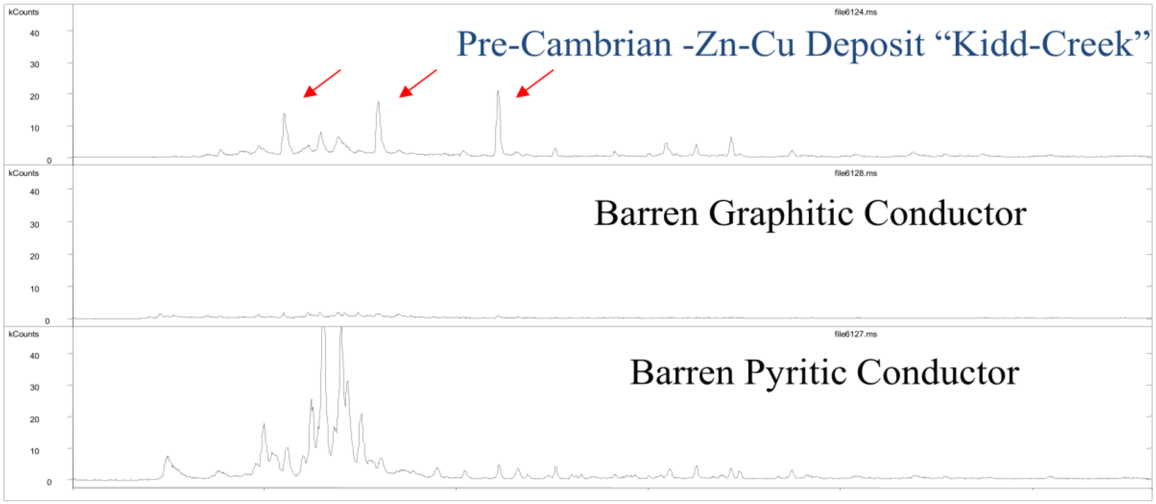

SGH has been described by the Ontario Geological Survey of Canada (OGS) as a "REDOX cell locator". Many SGH surveys for Gold and other mineral targets can result in multiple types of anomalies, depending on the class of SGH compounds, even over the same target and in the same set of samples. Thus "Apical",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

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

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

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

APPENDIX "C"

SPATIOTEMPORAL GEOCHEMICAL HYDROCARBONS 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 geochemistries. SGH must have enough samples over both the target and background areas in order to fully study the dispersion patterns or geochromatography of the SGH classes of compounds. Based on our minimum recommendation of at least 50 sample locations we further suggest that all samples be *evenly spaced* with about one-third of the samples over the target and one-third on each side of the target in order for SGH to be used for exploration. Targets other than gas plays, pipes, dykes or veins usually require additional samples to represent both the target and background areas.

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

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

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

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

APPENDIX "D"

SAMPLE PREPARATION AND ANALYSIS

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

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

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

APPENDIX "E"
SGH DATA QUALITY

Reporting Limit

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

Laboratory Replicate Analysis

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

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

Historical SGH Precision

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

Laboratory Materials Blank – Quality Assurance (LMB-QA)

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

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

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

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

APPENDIX "F"
SGH DATA INTERPRETATION

SGH Interpretation Report

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

SGH PATHFINDER CLASS MAGNITUDE

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

GEOCHEMICAL ANOMALY THRESHOLD VALUE

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

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

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

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area to samples of peat that may be in nearby areas. Even after maceration of the peat and in using the maximum size of sample amenable to this test method, peat samples have a significantly lower surface area. Peat samples have only required leveling in one survey in the last 500 SGH interpretations.

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

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

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

APPENDIX "G"
SGH RATING SYSTEM DESCRIPTION

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

- **A rating of "6"** is the highest or best rating, and means that the SGH classes most important to describing a Gold related hydrocarbon signature are all present and consistently vector to the same location with well defined anomalies. To obtain this rating there also needs to be other SGH classes that when mapped lend support to the predicted location.

- **A rating of "5"** means that the SGH classes most important to describing a Gold signature are all present and consistently describe the same location with well defined anomalies. The SGH signatures may not be strong enough to also develop additional supporting classes.

- **A rating of "4"** means that the SGH classes most important to describing a Gold signature are mostly present describing the location with well defined anomalies. Supporting classes may also be present.

- **A rating of "3"** means that the SGH classes most important to describing a Gold signature are mostly present and describe the same location with fairly well defined anomalies. Some supporting classes may or may not be present.

- **A rating of "2"** means that some of the SGH classes most important to describing a Gold signature are present but a predicted location is difficult to determine. Some supporting classes may be present

- **A rating of "1"** is the lowest rating, and means that one of the SGH classes most important to describing a Gold signature is present but a predicted location is difficult to determine. Supporting classes are also not helpful.

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

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a particular target type; it is a rating of the overall confidence in the SGH results from this particular survey. The interpretation is only based on the SGH results without any information from other geochemical, geological or geophysical information unless otherwise specified.

HISTORY & UNDERSTANDING

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

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

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

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

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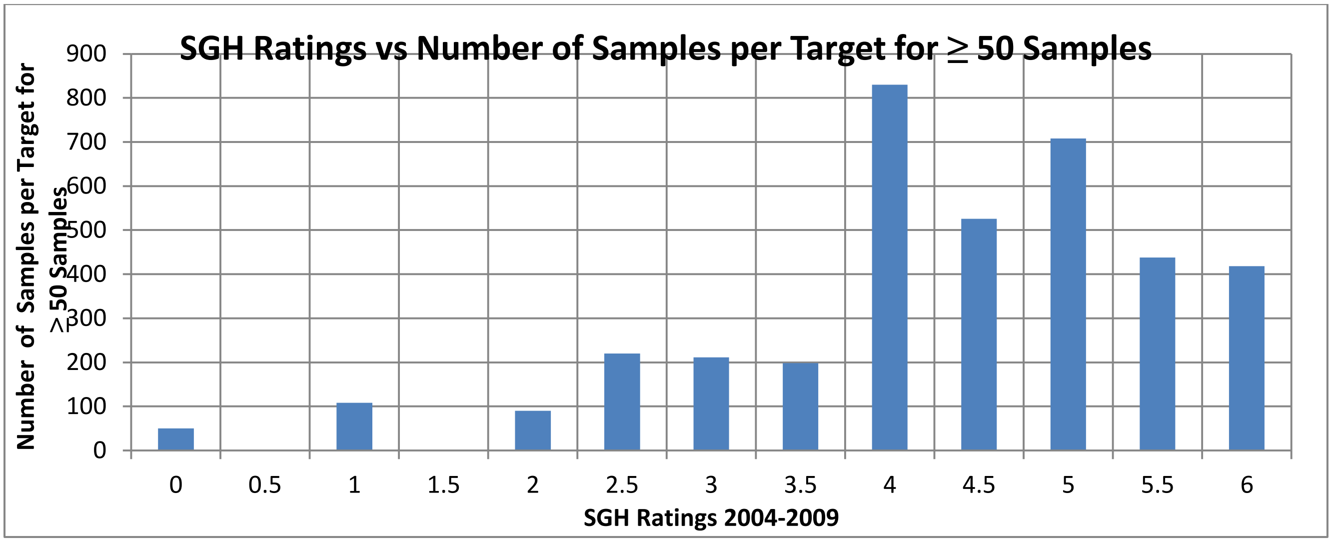
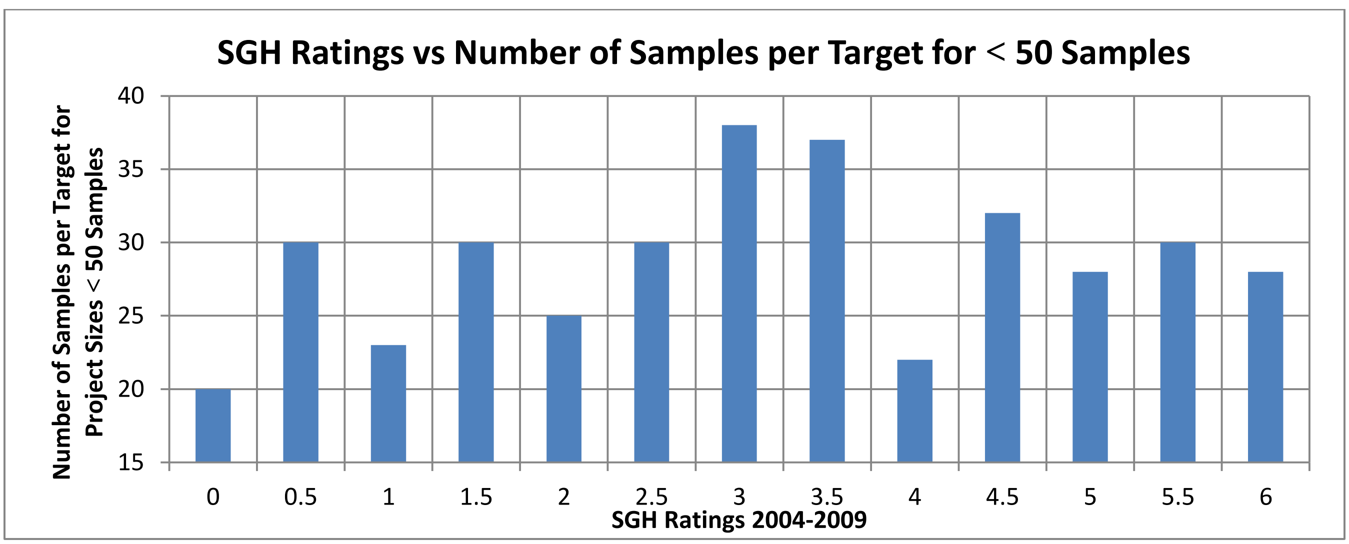
E-mail: dalesutherland@actlabst.com ● Web Site: www.actlabs.com



The rating frequency may be biased low as reseGTK-4141005 Surveyss often include a bare minimum of samples to reduce costs. ReseGTK-4141005 Surveyss 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.



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

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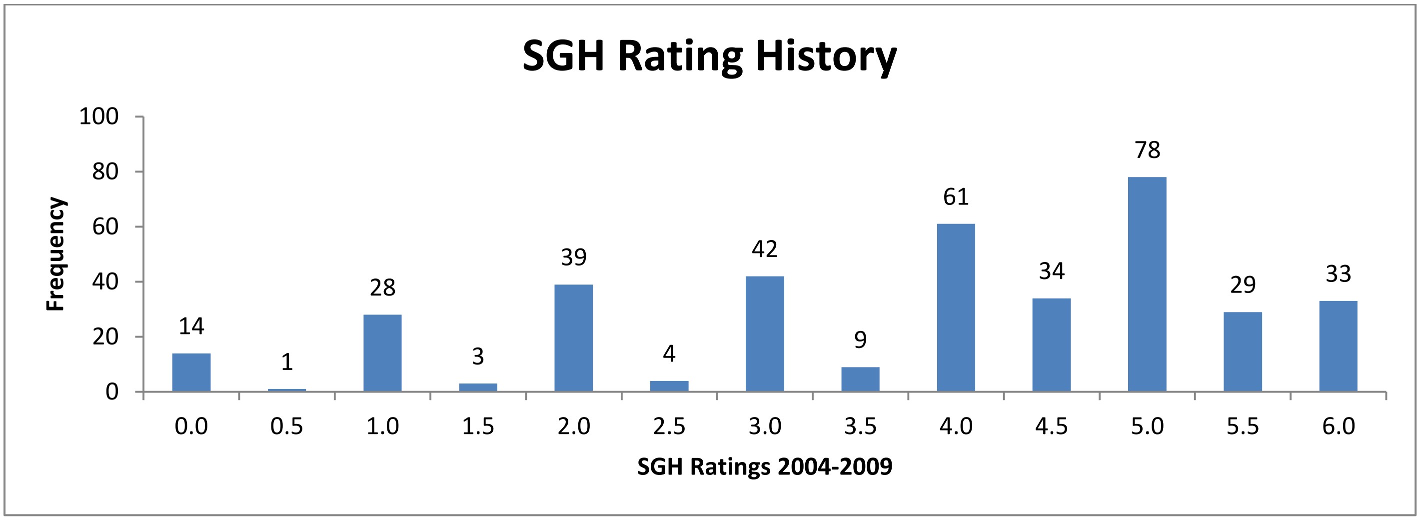
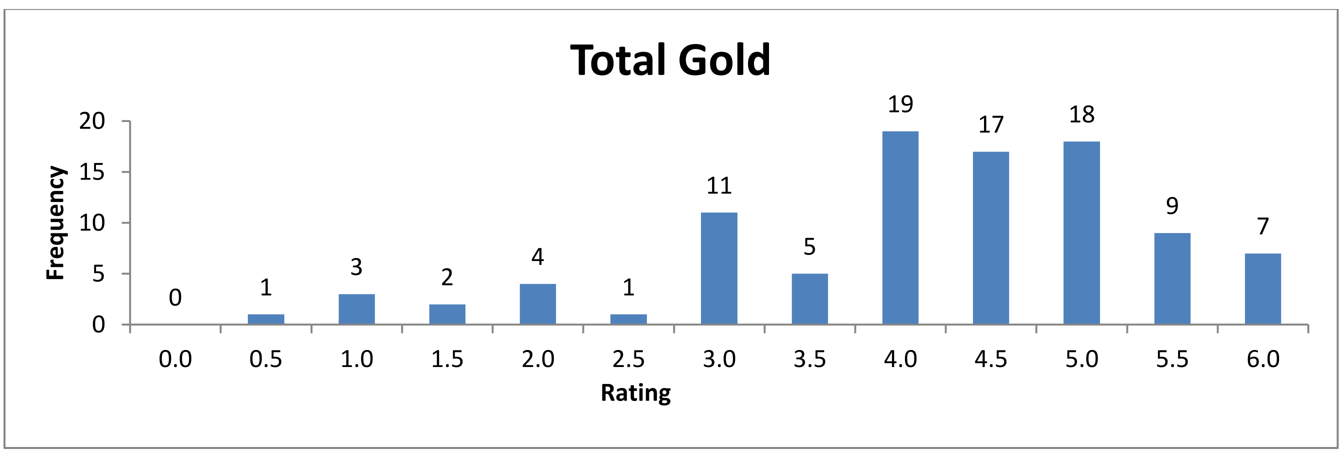
best use of research or exploration dollars. It also indicates that the 0.5 increments were less frequent as they started in 2007.



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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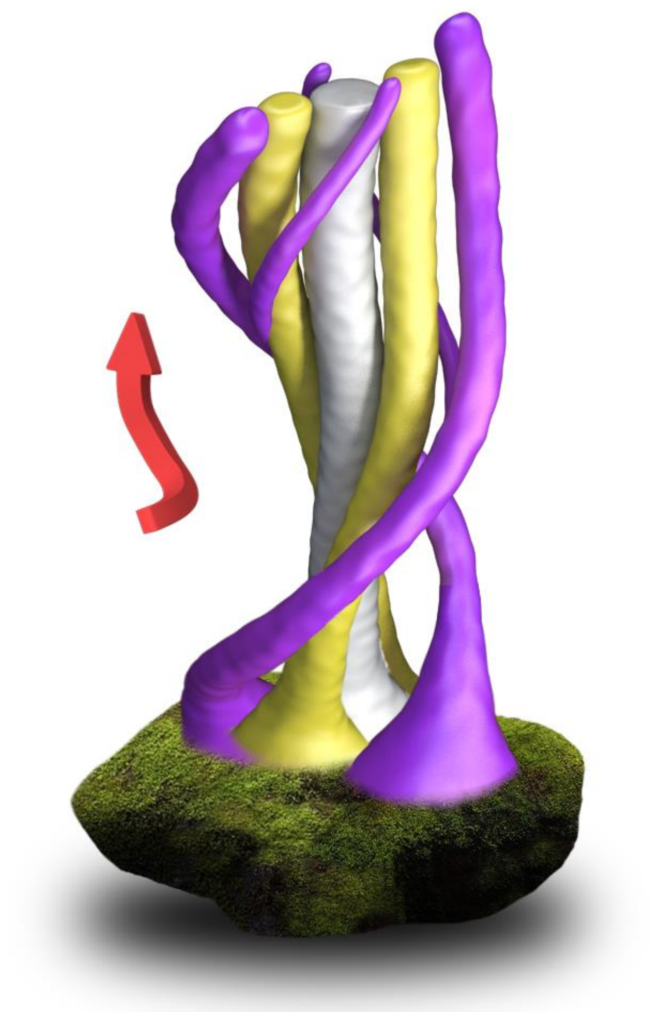
3D - SGH

"A SPATIOTEMPORAL GEOCHEMICAL HYDROCARBON INTERPRETATION"

for JAMIESON GEOLOGICAL INC.

"PORPHYRY LAKE GOLD PROJECT"



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

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

3D - SGH

"A SPATIOTEMPORAL GEOCHEMICAL HYDROCARBON INTERPRETATION"

for JAMIESON GEOLOGICAL INC.

"PORPHYRY LAKE GOLD PROJECT"

"PART II of III"

March 18, 2016

**** Dale Sutherland,***

Activation Laboratories Ltd

(* - author, originator)

EVALUATION OF SURFICIAL SAMPLES

EXPLORATION FOR: "GOLD" TARGETS

SGH GOLD TEMPLATE USED FOR THIS REPORT

Workorder: A16-01575

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

PREFACE

THIS "SUPPLEMENTAL" SGH INTERPRETATION REPORT:

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

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

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

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

DISCLAIMER

THIS REPORT HAS THREE PARTS – PART I – THE SGH REFERENCE DOCUMENT; PART II – THE SGH INTERPRETATION REPORT; PART III – THE EXCEL SPREADSHEET OF THE CONCENTRATIONS OF EACH OF THE 162 HYDROCARBONS DETECTED. ALL THREE PARTS MUST BE PROVIDED FOR REVIEW TO THE CLIENT COMPANY, TO INTERESTED INVESTORS, AND TO GOVERNMENT ASSESSORS.

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

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

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

Cautionary Note Regarding Assumptions and Forward Looking Statements

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

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

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

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

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

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

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

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

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

SPATIOTEMPORAL GEOCHEMICAL HYDROCARBON (SGH) GEOCHEMISTRY – OVERVIEW

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

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

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

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

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

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

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

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

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

SGH INTERPRETATION RATING AND CLARIFICATION

Often the use of 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 geophysical target. Such occurrences are in general expected to change the chemistry of the immediate overburden which in turn is expected to result in a chemical anomaly as detected in surficial samples. The author believes that it is important to convey to the client of an anomaly even if it is only a part of the mineral signature or template requested. The anomaly illustrated in the report may not be representative of the mineralization sought as only a part of the SGH signature is present and thus will have a low rating, but the anomaly may confirm the presence of the geological or geophysical target which may be valuable to the client. 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 the 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 identification Rating.

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 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, Gold, etc.). No one SGH map can represent the complete signature due to the different amounts of spatial dispersion expected for the variety of SGH chemical classes within each signature. Thus the author selects the one SGH Class Map relative to the mineralization requested that best represents an anomaly that estimates the overall signature found in the survey.

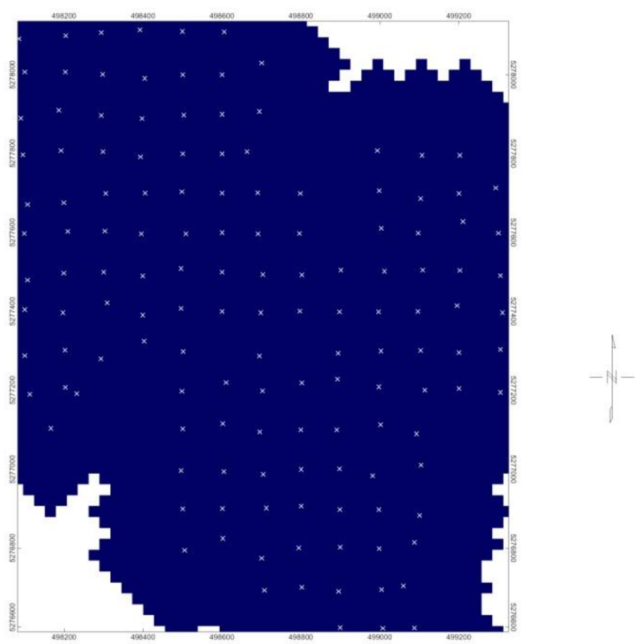
41 Bittern St. ● Ancaster, ON ● L9G 4V5 ● CANADA ● Tel: (905) 648-9611 ● Fax: (905) 648-9613 ● Toll Free: 1-888-ACTLABS

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

INTERPRETATION OF SGH RESULTS - A16-01575 - JAMIESON GEOLOGICAL INC. – PORPHYRY LAKE GOLD PROJECT INTERPRETATIONS

This report is based on the SGH results from the analysis of a total of 142 soil samples from the Porphyry Lake Gold Project. The project area covered by these soil and organic/humus samples was defined by a grid of 100 metre spaced samples covering an area of about 1.2 kilometres by 1.5 kilometres as shown in the map below. UTM coordinates were provided for mapping of the SGH results for these samples that were reported to be fine and silty sand often having pebbles, gravels or clay as well as a few organic based samples from the edges of swamp areas. The number of samples submitted for this project is adequate to use SGH as an exploration tool. Note that SGH data is only reviewed for the specific target deposit type requested, in this case for the presence of a Gold deposit.

This interpretation was conducted under blind conditions as all SGH interpretations are. This means that the author and/or Activation Laboratories Ltd. have no prior knowledge as to where any known mineralization may be in this survey. One or two transect surveys, instead of a grid approach, robs the client of the spatial interpretation and the use of the 3D-SGH approach to interpretation that can result in an exceptionally high level of confidence in the results. Further it has been shown in the development of the 3D-SGH theory and its link to the electrochemical cell theory, that the halo anomalies that can be observed are "segmented-halo" anomalies instead of a even ring or doughnut type anomalies. It has been theorized from the 3D-SGH theory that the use of a single transect, even over known mineralization, has nearly a 10% chance of failure if the transect happens to be oriented through the nodes of the segmented halo anomaly. This would represent a false-negative response.



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

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

SGH SURVEY INTERPRETATION - A16-01575
JAMIESON GEOLOGICAL INC. - PORPHYRY LAKE GOLD PROJECT

Note that the associated SGH results are presented in a separate Excel spreadsheet. This data is designated as Part III of III, and must accompany this report. This data is semi-quantitative and is presented in units of pg/g or *parts-per-trillion* (ppt) as the concentration of specific hydrocarbons in the sample. The number of samples submitted for this survey is adequate to use SGH as an exploration tool. As SGH is an organic geochemistry it is essentially "blind" to the elemental presence of any inorganic species as actual metallic gold, nickel, silver, uranium, etc. content in each sample analyzed. SGH only detect the hydrocarbon decomposition products of the bacteria that has used the mineralized target as a food source. Note that this geochemistry does not detect all organic hydrocarbons in the samples but only targets relatively rare hydrocarbons that have been proven to be associated with mineralization, in this case for Gold.

The overall precision of the SGH analysis for the soil samples at the Porphyry Lake Gold Project was very good as demonstrated by 10 different samples taken from this survey which were used for laboratory replicate analysis. The average Coefficient of Variation (%CV) of the replicate results for the survey samples in this submission was **12.1%** which represents a very good level of analytical performance especially at low level parts-per-trillion (ppt) concentrations. **The overall precision of 2 pairs of field duplicates at the Porphyry Lake Gold Project was excellent.** It is typically observed that the variability of field duplicates is 5% to 8% CV higher than for laboratory duplicates of random samples taken from the survey. The average Coefficient of Variation (%CV) of the field duplicate results for the survey samples in this submission was **13.4%** which represents an excellent level of precision for samples from this survey.

The method of determination of the estimate of error expressed as a coefficient of variation that is used in SGH reports is referenced in Appendix E in Part I of this report. With even a small survey of 50 samples, the analysis of 162 compounds in each sample in the SGH geochemistry represents a possible total of 8,100 measurements. Thus a method for the estimate of error had to be applicable to large data sets. Even the use of 3 pairs of different samples from a survey represents 972 measurements. A method of reporting the performance of sample replicates also has to recognize that values are at ultra-trace concentrations of low parts-per-trillion (ppt) values. Thus the method used is by Stanley and Lawie (Geochemistry: Exploration, Environment, Analysis, Vol. 8 2007, pp. 173-182) which was entitled: "Thompson-Howarth error analysis: unbiased alternative to the large sample method for assessing non-normally distributed measurement error in geochemical samples". No other statistics were used on the data for this report for mapping or interpretation purposes aside from the use of a Kriging trending algorithm in the GeoSoft Oasis Montaj mapping software. **This interpretation is based only on the SGH results from this submission of the samples. No other geographical, geochemical or geophysical data was reviewed.** A template or group of SGH Pathfinder Classes that have been found to be associated with buried Gold targets has been used as the basis for the interpretation of the Porphyry Lake Gold Project. The final interpretation is customized and conducted by the author. Although the term "template" or "signature" often appears in an SGH Interpretation Report, a computerized interpretation is not used.

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

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

A16-01575 – JAMIESON GEOLOGICAL INC. – PORPHYRY LAKE GOLD PROJECT - SGH INTERPRETATION - GOLD PATHFINDER CLASS MAPS

The Gold template of SGH Pathfinder Classes uses primarily low, medium, and high molecular weight classes of hydrocarbon compounds. At least three Pathfinder Class maps, associated with the SGH signature developed for Gold must be present to begin to be considered for assignment of a good rating relative to the SGH performance in case studies over known Gold type mineralization. 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 two additional 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 considered in the interpretation relative to the presence of Gold deposits. Each pathfinder class map shown is still just one of the Pathfinder Class maps used in each of the interpretation templates (other SGH Pathfinder Class maps are usually not shown at this price point and report turnaround time except at the discretion of the Author). Additional interpretation information which may contain additional SGH Pathfinder Class maps is available as a Supplementary Report at an additional price (see Appendix H).

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", "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 or specific target types. Redox cells are also related to the presence of bacteriological activity and 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 any measurements using pH or ORP tests. Thus it is important to understand that; not only is SGH a Redox cell locator, due to the forensic signature of mineralization used in the interpretation process, SGH can discriminate mineral targets and other target types from geological bodies and other magnetically detected targets, mineralized versus non-mineralized conductors, cultural effects, etc. even in surveys over highly difficult or exotic terrain that results in the unavoidable collection of multiple sample types. SGH has been proven to discriminate between false or mobilized soil anomalies and is able to actually locate the source target deposition. SGH is a deep-penetrating geochemistry and has been proven to locate Gold and other types of mineralization at several hundred metres below the surface irrespective of the type of overburden.

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

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

A16-01575 – JAMIESON GEOLOGICAL INC. – PORPHYRY LAKE GOLD PROJECT - SGH GOLD INTERPRETATION

As a general comment in regard to the data from the Porphyry Lake Gold project, the interpretation is quite complex but the results are quite compelling. The SGH signature anomalies detected were of low to medium strength with the portion of the SGH signature that depicted a shallow gold zone being of high strength, however the objective of the SGH geochemistry is not necessarily to obtain values with the highest strength or contrast based on a signal:noise interpretation of any one sample or hydrocarbon number, SGH is a more powerful exploration tool by maximizing the overall spatial contrast of the survey to observe specific hydrocarbon signatures that can vector to and identify buried mineralization. This survey has enough samples for interpretation.

If a survey design of just one or two transects is used with SGH, does not allow for the full capabilities of 3D-SGH and the symmetry it seeks to be fully observed to provide the optimum confidence in predicting the presence of Gold or other mineralization and the pathfinders that describe the SGH signature for "buried or blind" Gold targets. Such is not the case at the Porphyry Lake Gold Project as 142 samples were taken in a grid pattern which provided the optimum arrangement to use the 3D-SGH approach to interpret the symmetry of resultant anomalies that is not possible if only one or two transects is used.

The SGH Gold Pathfinder Class shown and other SGH Pathfinder Classes for Gold are able to illustrate the presence of an SGH hydrocarbon signature that has usually been associated with Gold targets as the detection of those hydrocarbon residues produced by the decomposition of bacteria in the death phase that have been feeding on material containing Gold and that have subsequently migrated to the surface as a flux of different classes of hydrocarbons. During migration to the surface, symmetrical dispersion away from the mineralization is expected and the distance of dispersion is dependent more on the average molecular weight of the class, and/or the depth of the target, than the complexity of the overburden unless a situation is encountered such as that of a major fault or shear zone that may result is a "slight" deflection of the SGH anomalies.

At the Porphyry Lake Gold Project the results were judged by the author to be excellent and were able to be used to more fully describe features at this survey that are beyond the capabilities of typical inorganic geochemistry's. Thus multiple SGH Pathfinder Class maps are included in this report that are shown in plan and in 3D views on page 17 through to 22. The resultant SGH Confidence Rating relative to the possible presence of Gold mineralization at the Porphyry Lake Gold Project of 6.0 out of a possible 6.0 scale represents the highest level of confidence reported using SGH and recognizes that the SGH signature meets the minimum criteria (of three classes) to be comparable to SGH results previously analyzed over known Gold mineralization (more classes are actually supportive for this project), that the SGH Spatial anomalies are complete and distinctive meaning that the spacing between samples and the extent of the survey design was ideal, and that the anomalies observed were symmetrical and thus truly indicative of a buried target which also has the SGH signature descriptive of the presence of Gold mineralization. There were no factors wanting in this projects survey.

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

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

A16-01575 – JAMIESON GEOLOGICAL INC. – PORPHYRY LAKE GOLD PROJECT - SGH GOLD INTERPRETATION

The SGH Pathfinder Class maps associated with Gold mineralization are shown in plan and 3D views on pages 17 through to 22. Note that in the interpretation of the SGH geochemistry, no one Class map can define the complete SGH signature used to identify the type of mineralization that might be present at depth. Although only one SGH Class map usually appears in a standard report, due to the excellent results and story of features believed to be present, three SGH Class maps have been shown in this report. Note that other SGH maps have also been used as support to this interpretation.

The SGH Class maps shown are all required to be observed and are required to be related to the expected anomaly shape based on the chemical properties and expected Geochromatography of each SGH class to identify, predict, and delineate the possible presence of gold mineralization. Thus, from the combination of the SGH Class maps shown in this report along with other SGH Class map information (not shown), the following information and features can be provided:

Page 17/18 – This SGH anomaly illustrates a narrow shear zone having both Copper and Gold mineralization responds well at delineating faults and shear zones. This SGH anomaly is a nested segmented halo anomaly. It has a central apical anomaly surrounded by small anomalies that together form a surrounding segmented halo formation joined by the dotted yellow oval interpretation. Further this anomaly illustrates excellent symmetry as the connection of opposing anomaly segment as the blue lines intersect at a common point. This illustrates that the hydrocarbon pathfinder classes have not been deflected and are thus a vertical projection of a target below that has the SGH identification signature associated with gold mineralization. Also, since this anomaly is symmetrical there is a high confidence that they are related and describe a buried feature, thus the anomalies are not due to sporadic signals or noise. This SGH class is particularly good at illustrating features at significant depth and in this case the central apical anomaly is believed to be the source of an intrusion where the gold mineralized fluids have originated. The fact that it is slightly offset from centre may mean that the intrusion is quite deep (perhaps >500 metres deep). This is consistent with a porphyry style deposit.

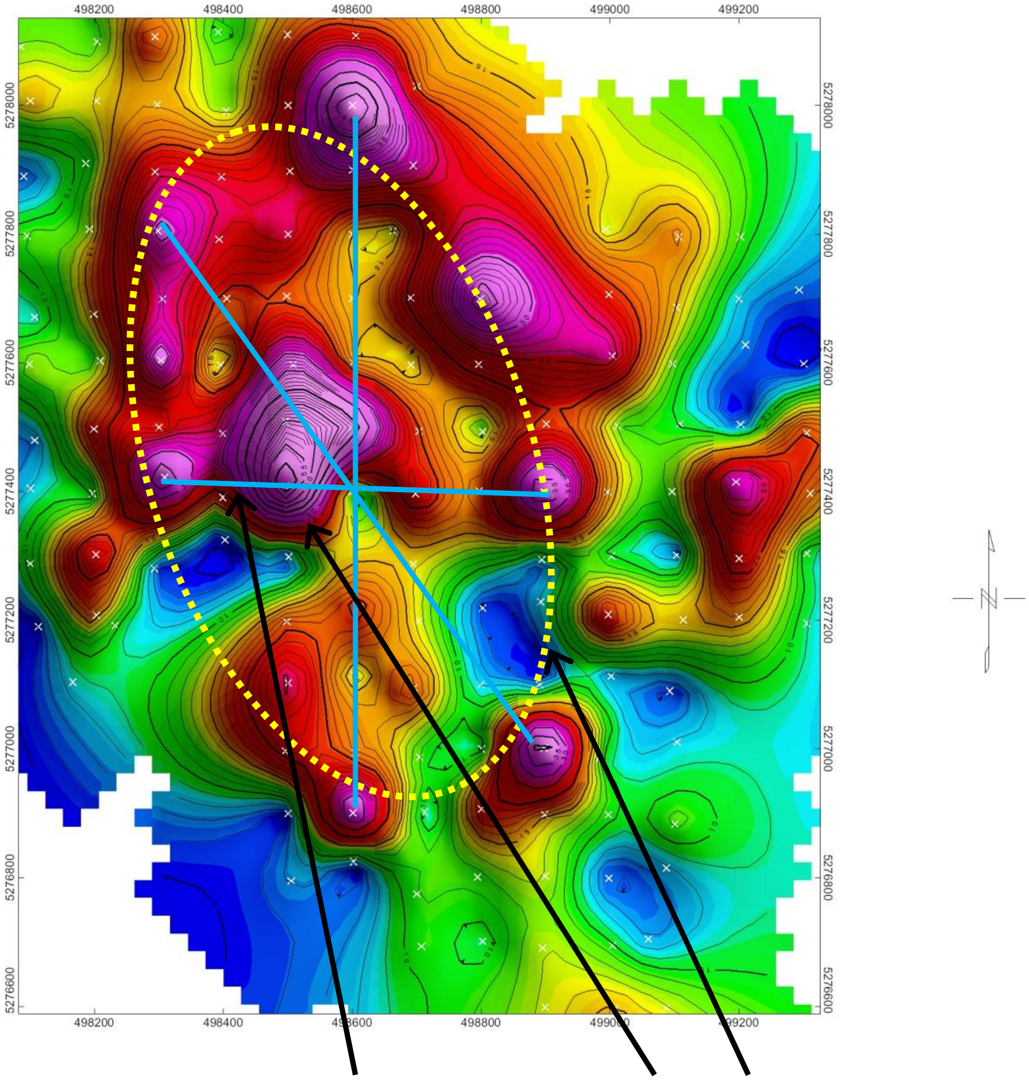
Page 19/20 – This SGH Pathfinder Class for Gold appears to be able to trace the flow of the mineralized fluids through the region of the intrusions as a flow to the north and southeast of the intrusion. The interpretation from page 17 is included for ease of reference. Small anomalous signals also agree and thus support the interpretation of the halo anomaly (dotted yellow oval) adding confidence. This SGH Class appears to illustrate a Gold channel or ridge like feature that joins Gold pods or lenses.

Page 21/22 – This SGH Pathfinder Class for Gold is reliable at depicting the shallowest portion of the Gold mineralization shown within the red oval interpretation to the east of the intrusion. This may perhaps be in the 10 to 30 metre depth range and thus may describe the most economical area to drilling. As the SGH signal drops off, i.e. is weathered, at surface, this area may not agree with outcropping mineralization or results from other inorganic geochemistry's. Another feature noted but not shown is that a smear of shallow Copper mineralization may be to the north, and in the northern half of the red oval Gold zone.

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

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

A16-01575 – JAMIESON GEOLOGICAL INC. – PORPHYRY LAKE GOLD PROJECT - SGH “BASEMENT” PATHFINDER CLASS MAP



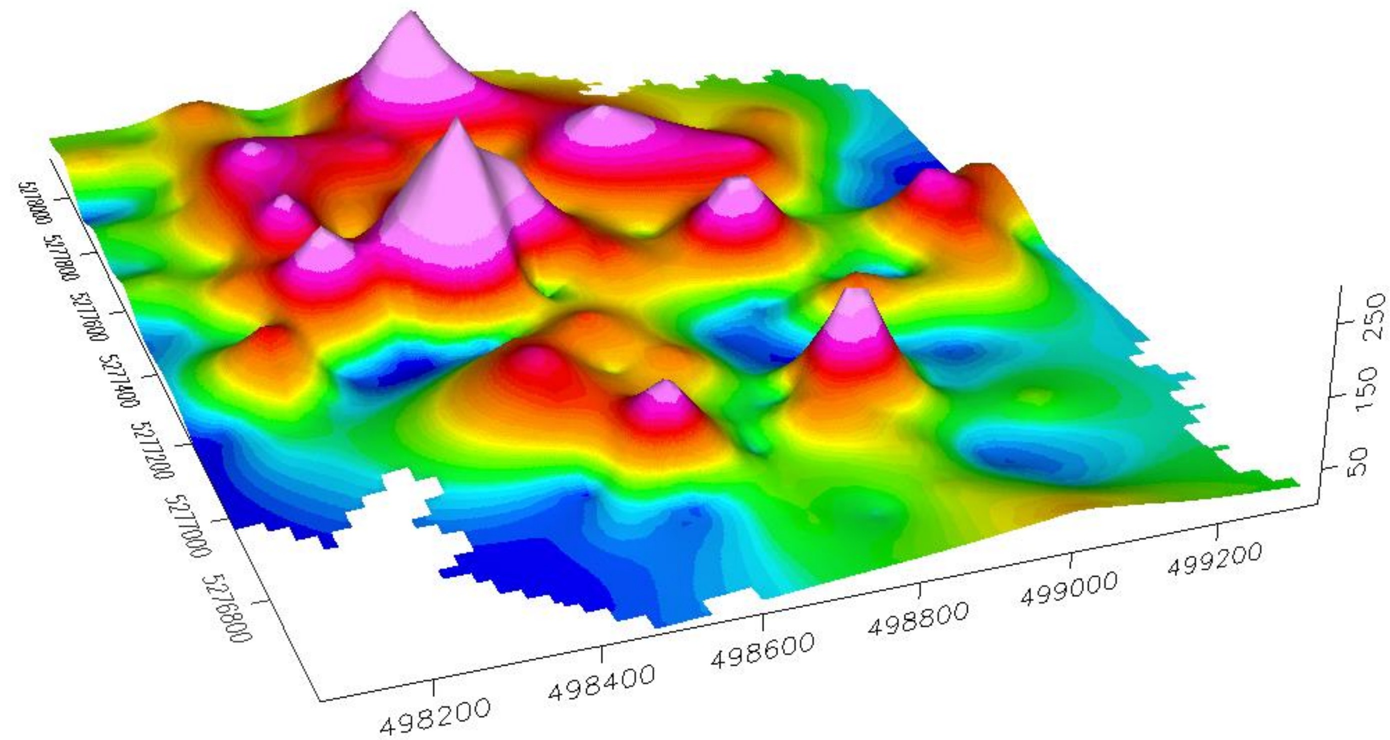
SYMMETRICAL SEGMENTED NESTED-HALO ANOMALY AS EVIDENCE OF REDOX CELL SURROUNDING SLIGHT OFFSET BASEMENT INTRUSION

GEOSOFT

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

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

A16-01575 – JAMIESON GEOLOGICAL INC. – PORPHYRY LAKE GOLD PROJECT - SGH “BASEMENT” PATHFINDER CLASS MAP



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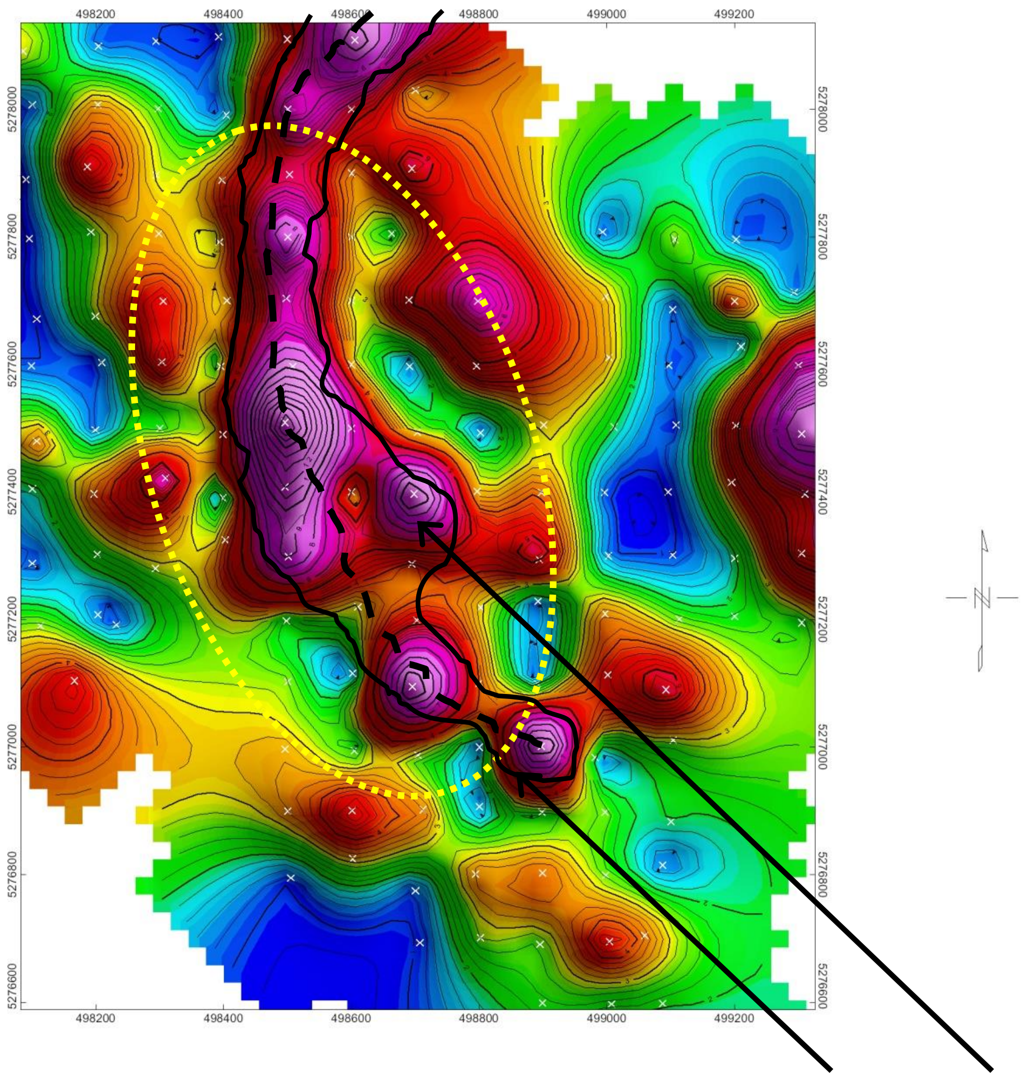
E-mail: dalesutherland@actlabs.com ● Web Site: www.actlabs.com

A16-01575 – JAMIESON GEOLOGICAL INC. – PORPHYRY LAKE GOLD PROJECT - SGH "GOLD" PATHFINDER CLASS MAP



SGH-GOLD SIGNATURE ILLUSTRATES A NORTHERLY TRENDING CURVED RIDGE OF GOLD PODS/LENSES

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

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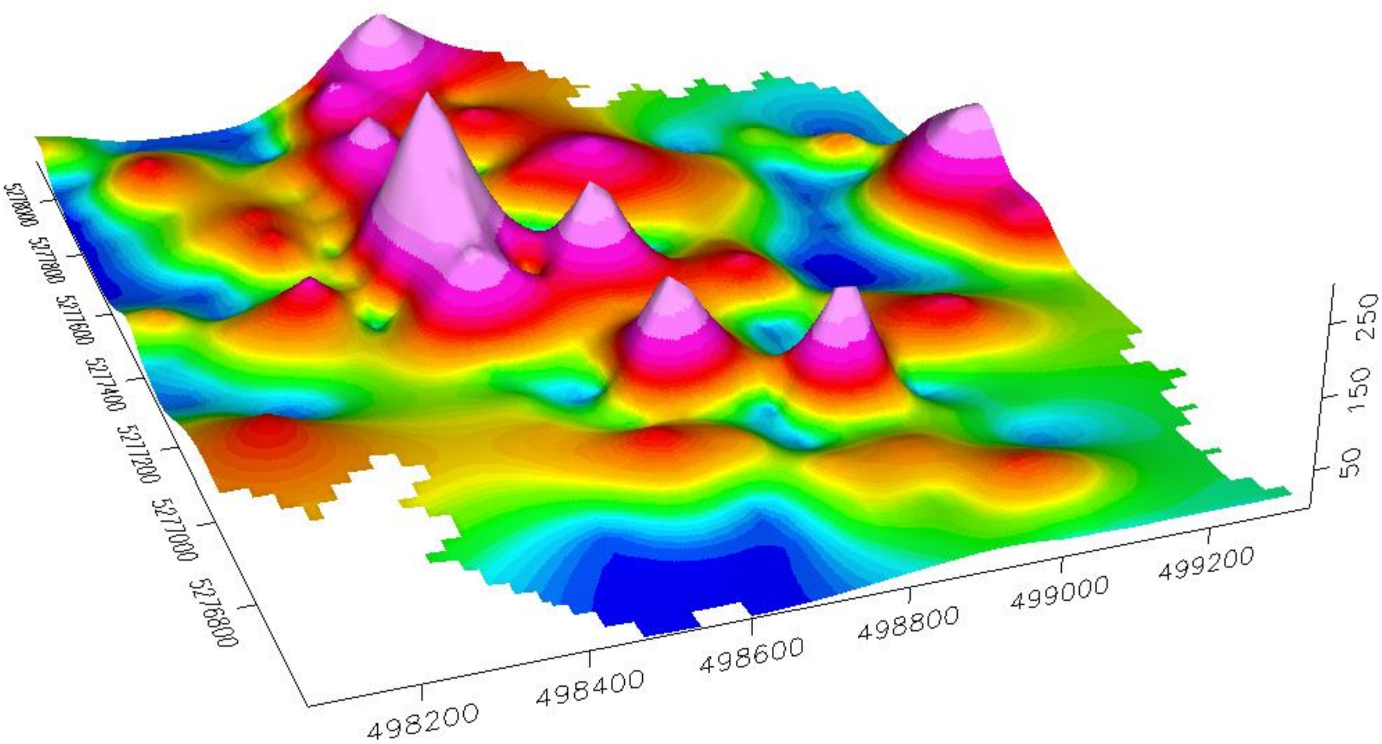
A16-01575 – JAMIESON GEOLOGICAL INC. – PORPHYRY LAKE GOLD PROJECT - SGH "GOLD ZONE" PATHFINDER CLASS MAP



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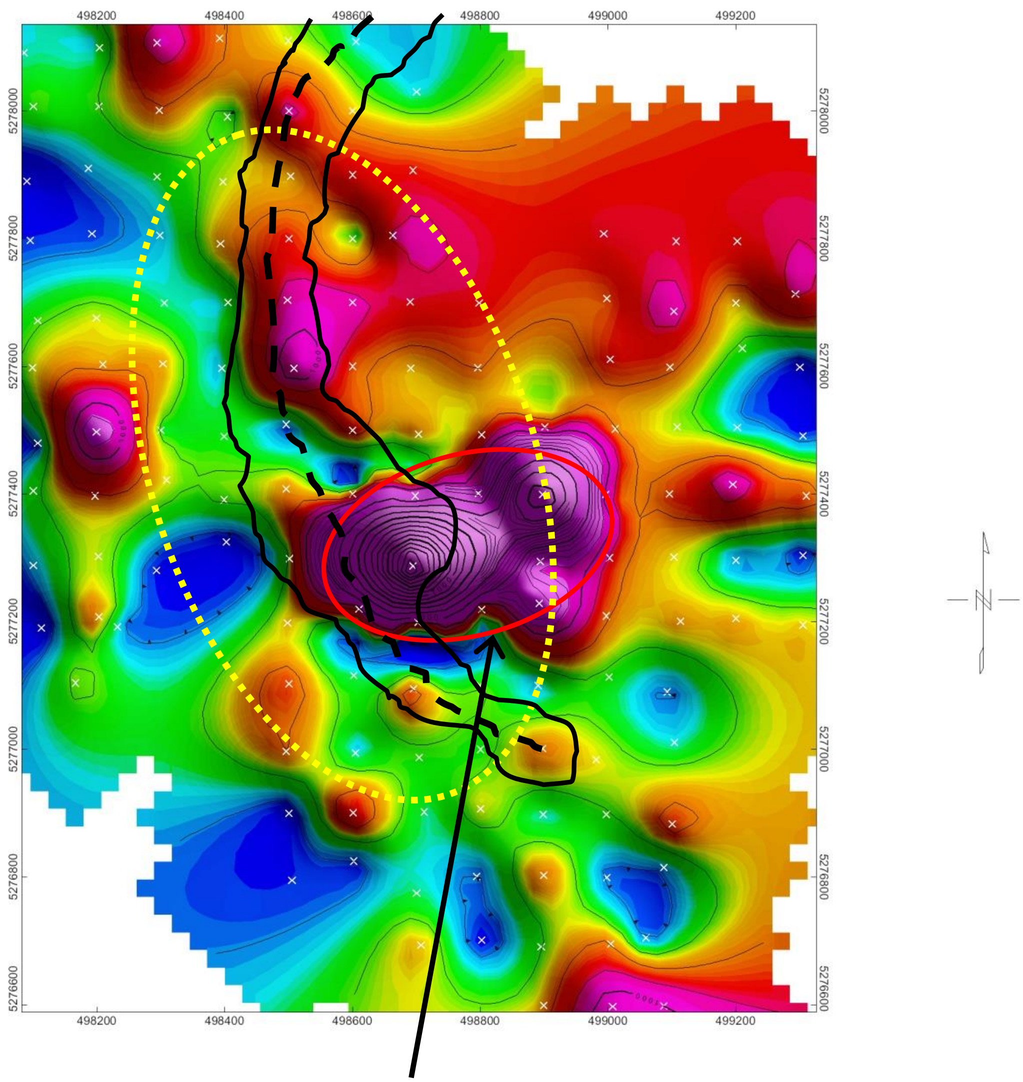
A16-01575 – JAMIESON GEOLOGICAL INC. – PORPHYRY LAKE GOLD PROJECT - SGH “GOLD” PATHFINDER CLASS MAP



SHALLOWEST GOLD ZONE

RED AND BLACK ZONES ARE ASSOCIATED WITH AN SGH-GOLD SIGNATURE

SGH SIGNATURE RATING RELATIVE TO “GOLD TARGET” = 6.0 OF 6.0

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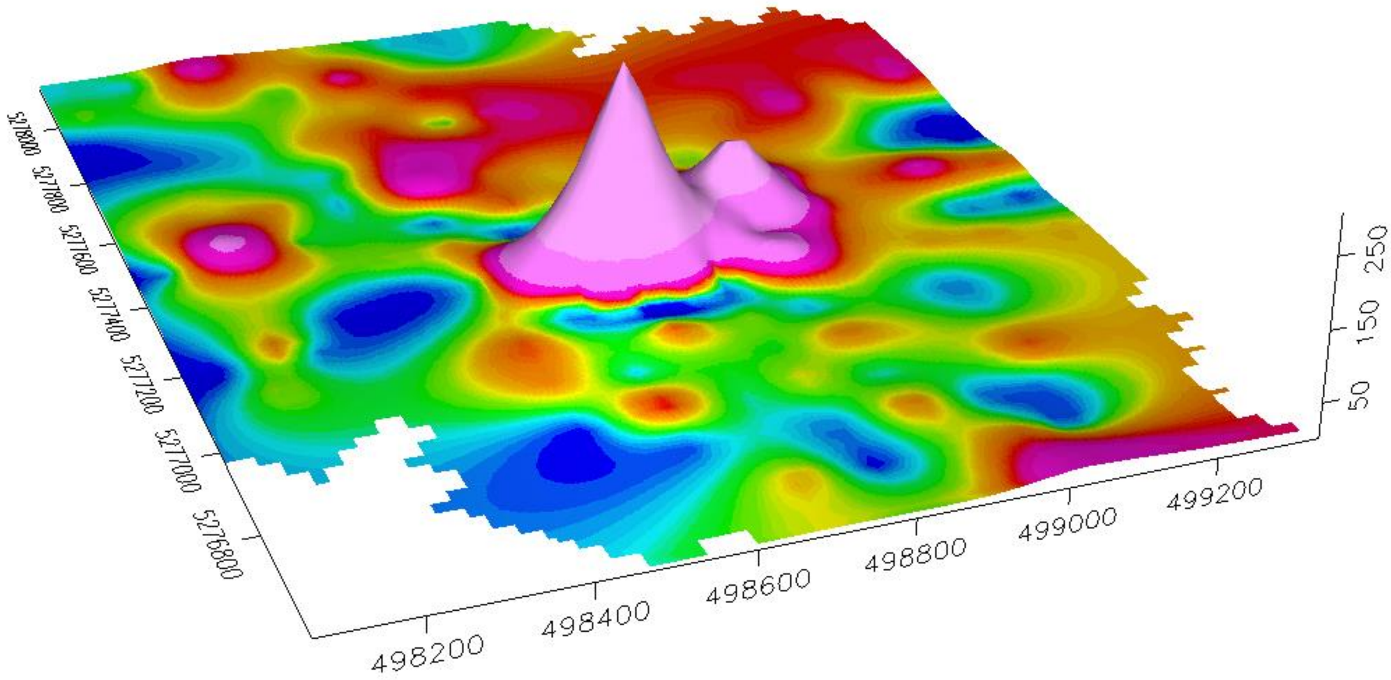
A16-01575 – JAMIESON GEOLOGICAL INC. – PORPHYRY LAKE GOLD PROJECT - SGH “GOLD ZONE” PATHFINDER CLASS MAP



GEOSOFT

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

A16-01575 – JAMIESON GEOLOGICAL INC. – PORPHYRY LAKE GOLD PROJECT - SGH INTERPRETATION FOR GOLD

The interpretation of the SGH data relative to the presence of Gold targets at the Porphyry Lake Gold Project is described by what appears to be a deep intrusion (pages 17/18) as a source of mineral fluids describing a channel or series of pods of gold at moderate depth (pages 19/20) overlain by a shallow Gold zone to the east of the vertical projection of the intrusion. This formation, as well as the possible presence of Copper mineralization, describes the formation consistent with a porphyry type deposit.

After review of all of the SGH Class maps, the SGH results from the Porphyry Lake Gold Project suggests an excellent **"confidence rating of 6.0"** out of a possible 6.0 (6.0 being the best) for these zones as the confidence in predicting that Gold mineralization may be present. The distance between samples used in this survey and use of a grid like design provided the optimal ability for a 3D-SGH interpretation as evidence of the symmetrical anomaly describing the Redox zone as the dotted yellow oval interpretation on page 17. Note that an SGH Rating of 0.5 for a survey is the lowest Rating allowed as we cannot predict that there is "no possibility" that mineralization might be present.

The overall rating shown in this and all SGH reports are based on a scale of 6.0, in 0.5 increments, with a value of 6.0 being the best. The rating discussed in relation to Gold targets represents the similarity of these SGH results with other SGH case studies over known Gold includeing that over porphyry style mineralization. The SGH signature or template has since been further enhanced since inception and has been proven effective from the interpretation over many other surveys in many different geographical regions and for different types of Gold deposits. Again, the degree of confidence in the rating only starts to be "good" at a level of 4.0. A Rating of 4.0 is an indication that the SGH geochemistry predicts that the zones described may warrant more work or more consideration. It must be remembered that there are still many other SGH Class maps not shown in this report due to turnaround time considerations that have been reviewed to support the interpretations shown.

From client feedback in recent years, a few true exploration surveys that have been interpreted with an SGH Confidence Rating of 4.0 (±0.5) have been drill tested with successful target intersections. However the frequency of success is much more prevalent for those targets that have had SGH Rating Scores of ≥5.0.

From very recent client feedback SGH has had very good success at estimation of depth to mineralization with the most notable success in this regard as described in the press release from Aura Silver Resources on November 24, 2015 with regard to their Greyhound project (www.aurasilver.com) .

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A16-01575 – JAMIESON GEOLOGICAL INC. – PORPHYRY LAKE GOLD PROJECT - SGH SURVEY RECOMMENDATIONS

There are no recommendations that might improve the results of this survey. Additional sampling to the north, extending the grid, may provide additional information of the northern extent of the possible Gold channel of mineralization within the black outlines shown on page 19.

The identification of a drill target(s) is not reported for the Porphyry Lake Gold Project as the decision on what depth or angle of inclination might be best to intersect the different levels/zones of the predicted Gold mineralization.

With 3D-SGH, this geochemistry is capable of recommending drill locations and is the only geochemistry known to be able to estimate the depth to mineralization for projects having achieved a high confidence rating. When a drill target is implied it is to ensure that the reader is aware of the location having the highest confidence of being the location of the vertical projection of the mineralization, based only on SGH data. This would not necessarily be a recommendation for vertical drilling. Vertical drilling may not be the best approach to test the SGH anomaly in a project 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 many other SGH Class maps not shown in this report have been reviewed to support the interpretation shown. 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 as blind independent research studies have consistently indicated that SGH is by far the most reliable geochemistry regardless of geographical location, sampling terrain, environmental conditions or lithology. The statement to not rely solely on SGH 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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GENERAL RECOMMENDATIONS FOR ADDITIONAL SAMPLING FOR SGH ANALYSIS

Based on the results of this report and/or other information, the client may decide that additional sampling may be warranted at the Porphyry Lake Gold Project area. To obtain the best results from additional sampling for SGH it is recommended that the client discusses a new sample survey plan with the author. Such recommendations are at no cost to the client.

Additional or infill sampling is able to be plotted and interpreted with the data shown in this report without any data leveling over 95% of the time.

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

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

Date Received at Actlabs: February 25, 2016

Date Analysis Complete: March 1-3, 2016

Interpretation Report: March 18, 2016

JAMIESON GEOLOGICAL INC.

PO Box 127

Blue Diamond, Nevada, USA

89004

Attention: Jamie Walker and Dave Burda

RE: Your Reference: Porphyry Lake Gold Project

Activation Laboratories Workorder: A16-01575

CERTIFICATE OF ANALYSIS

This Certificate applies to the associated Excel Spreadsheet of Hydrocarbon results (Part III of III) combined with the discussion and SGH Pathfinder Class maps of the data shown in this report (Part II) and Part I as the background and reference report pertaining to the SGH Geochemical Method

142 Soil 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 and Copper targets was conducted.

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: A16-01575

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

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

The author of this SGH Interpretation Report, Mr. Dale Sutherland, is the 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.

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

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APPENDIX H

NOTE: THERE IS NEW PRICING FOR THE SGH GEOCHEMISTRIES AS OF 2014
(OSG pricing is the same)

SAMPLE PREPARATION: CODE S4 - $4.50 CDN per sample

INTERPRETATION FOR SINGLE 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.

"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.

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

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.

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

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

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	001 - LA	002 - LA	003 - LB	004 - LA	005 - LB	006 - LB	007 - LA	008 - LB	009 - LB	010 - LB	011 - LA	012 - LB	013 - LBA	014 - LB
20-13 ORG	628	3180	355	106	21	2	19	29	11	12	19	4	9	5
20-14	408	2880	616	52	89	3	28	77	13	23	63	11	49	6
20-15	472	1150	149	34	75	30	26	68	10	12	48	8	42	10
20-16	484	5360	1270	106	138	48	33	107	18	25	90	14	36	5
20-17	392	3530	868	66	103	52	21	56	9	14	38	7	13	2
20-17-R	420	4200	908	77	109	54	21	71	11	24	52	9	23	5
20-18	391	3430	748	59	86	60	23	56	9	19	46	8	12	5
20-19	412	5080	484	88	81	40	31	76	11	17	70	9	25	3
20-20	444	4080	884	54	97	47	22	60	10	18	42	8	22	4
21-20	548	2860	488	84	106	39	40	91	16	16	150	15	105	3
21-19	504	5040	792	82	124	34	32	83	14	16	79	11	26	2
21-18	288	1380	316	31	33	35	14	54	8	11	24	7	12	2
21-17	365	2760	860	38	68	36	13	42	6	21	18	5	12	1
21-16	308	2120	624	28	61	39	13	44	7	23	14	7	13	2
21-15	376	3610	724	65	104	44	28	77	13	21	57	10	19	2
21-15 DUP	460	5160	724	94	133	40	37	125	22	29	124	17	28	5
21-14	358	572	140	16	42	40	8	34	4	13	10	4	57	1
18-14	391	4240	472	81	44	47	35	105	16	25	76	13	26	3
18-15	375	1670	341	46	72	40	21	55	9	11	48	7	21	1
18-16	350	2890	560	46	74	2	21	54	8	15	37	7	15	3
18-17	371	3090	309	73	87	62	43	84	12	20	109	10	47	3
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18-20	420	4040	600	72	71	3	26	45	8	24	59	7	32	1
18-21	464	5040	968	70	122	56	29	68	11	14	60	10	18	-1
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19-21	377	3320	612	62	39	40	22	57	8	13	39	6	16	-1
19-20	245	1580	323	24	52	36	10	36	5	16	20	5	15	-1
19-19	373	1820	452	38	92	34	18	64	11	18	61	9	29	2
19-18	387	3690	544	73	96	43	25	61	9	20	50	8	19	1
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19-16	298	2150	214	35	56	32	14	43	7	8	29	6	21	1
19-15	412	3470	363	56	76	63	24	68	10	21	66	9	36	2
19-14	314	2320	444	37	79	41	14	50	8	21	19	6	17	-1
19-13	206	536	110	11	28	24	6	17	2	6	4	2	6	2
19-13-R	228	480	127	12	28	25	6	19	3	7	4	2	10	2
18-13	261	1490	100	40	23	11	7	14	2	4	5	2	19	1
18-12	203	297	177	9	21	20	5	19	3	11	5	4	6	-1
17-11	256	1730	448	21	47	38	9	24	4	12	8	4	11	3
17-12	440	4840	692	69	65	47	21	46	7	13	44	6	17	-1
17-13	385	3670	460	45	60	42	16	43	7	20	51	6	15	1
24-13 ORG	448	2840	812	34	27	13	8	15	2	4	6	4	7	3
24-14	484	7080	6520	147	134	80	39	83	13	26	143	10	35	2
24-15	452	5680	528	86	72	3	27	57	9	20	45	8	19	2
23-14	472	6160	1010	106	109	40	33	74	12	20	60	10	20	1
23-15	448	4240	616	56	46	27	14	27	4	12	14	4	3	-1
23-16	318	2910	632	62	83	3	27	64	9	27	50	7	15	3
23-17	345	4200	756	94	105	68	42	106	17	19	98	13	91	4
22-18	286	3260	816	46	34	36	14	54	9	11	24	8	12	1
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22-20	293	3820	238	61	62	44	18	46	7	9	30	6	16	1
22-20-R	305	4240	266	65	69	50	19	50	8	9	32	7	16	2
22-17	404	4720	780	70	90	62	22	66	9	30	28	7	9	3
22-16	308	2890	488	46	52	36	10	29	5	14	17	4	10	-1
22-15	300	3450	608	41	76	51	13	41	5	14	39	5	20	1
22-14	327	4000	760	60	81	2	20	52	8	15	36	6	12	6
20-12	241	2230	516	30	51	37	12	34	5	15	23	5	12	1
20-11	285	2940	736	58	89	53	22	54	8	10	46	6	15	1

	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
20-10	321	3870	608	62	74	53	26	66	9	12	58	8	45	2
20-9	151	176	82	5	12	12	-1	10	2	5	2	2	8	2
20-8	175	852	140	8	19	14	-1	12	2	3	3	2	7	-1
21-8	180	268	128	15	18	11	3	13	4	5	5	2	3	2
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25-13	355	3010	736	41	71	33	13	39	5	15	19	4	10	-1
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25-17	351	4880	620	82	90	44	25	62	10	18	46	8	37	2
25-18	416	4600	776	83	33	35	26	52	8	23	46	7	17	-1
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26-17	512	4680	896	79	94	62	23	39	8	20	31	8	16	-1
26-16	464	5680	640	67	66	43	17	33	6	17	28	5	14	-1
26-15	400	4760	424	67	46	-1	18	32	4	8	23	4	9	-1
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26-13	334	1940	480	23	41	29	6	21	3	5	10	3	5	-1
26-12	400	4880	560	81	32	31	25	54	9	21	47	7	41	1
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27-13	184	812	139	37	40	33	12	37	5	7	24	4	9	-1
27-13-R	198	1080	148	51	39	31	15	40	5	9	33	5	11	1
27-14	404	4400	996	103	62	61	27	86	17	26	80	14	27	2
27-15 ORG	488	1440	206	30	21	6	4	14	8	6	4	3	3	2
27-16	394	3180	368	58	40	29	11	23	4	11	15	4	8	-1
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27-18	386	3260	740	43	39	35	10	32	4	13	18	4	15	-1
28-17	416	4120	864	49	58	43	12	37	5	14	19	4	10	-1
28-16 ORG	351	2290	109	57	13	6	4	7	3	2	3	2	2	4
28-15 ORG	972	424	102	130	13	5	5	6	2	6	4	9	3	5
28-14	254	2260	736	38	38	2	13	36	5	9	26	5	11	3
28-13	178	464	104	14	20	17	4	14	2	4	9	2	7	3
28-12	472	4000	508	54	46	33	13	33	5	16	19	4	7	1
22-12	183	1010	189	9	27	16	2	16	3	6	3	3	6	2
22-11	344	4360	748	71	65	58	16	55	9	25	42	7	31	6
22-10	276	2680	361	46	34	24	8	22	3	10	14	3	11	1
22-9	385	2960	398	38	36	25	9	19	4	9	12	3	4	2
22-9-R	188	900	171	7	17	14	1	11	2	6	3	3	6	2
22-8	408	3030	316	35	35	21	10	23	3	10	13	3	5	-1
22-7	480	3330	556	40	44	33	9	23	4	9	13	4	11	-1
23-7	205	1160	88	7	13	9	-1	8	2	5	-1	2	6	1
23-8	236	1580	162	14	18	17	3	13	3	8	6	3	3	2
23-9	440	3520	496	60	56	2	10	34	6	19	26	6	8	-1
23-10	297	1970	344	22	31	16	6	15	3	8	9	3	8	-1
23-11	320	1760	448	24	34	23	7	17	3	8	7	2	6	2
23-12	196	1120	285	12	25	15	3	11	2	5	3	2	2	2
24-11	302	2110	196	30	17	2	5	8	1	4	5	2	4	-1
24-10	464	5360	640	214	113	42	60	136	17	17	144	21	58	7
24-9	238	1400	243	11	35	31	3	28	6	15	8	5	10	1
24-8	412	2700	652	42	54	31	9	29	4	14	12	4	11	2
24-7	203	1160	383	8	27	21	2	20	4	12	4	4	6	1
24-6	354	2470	500	30	32	2	7	19	3	11	16	4	14	1
25-6	552	4880	1300	93	60	49	14	37	8	15	31	6	27	2
25-6-R	448	3340	1080	52	52	43	8	33	6	17	16	5	14	-1
25-7	324	1960	640	35	28	2	7	17	3	9	8	3	7	2
25-8	156	314	148	6	16	8	1	8	1	4	2	2	2	1

	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
25-9	335	2400	386	31	23	14	8	17	3	8	9	2	28	1
25-10	424	2620	492	31	27	12	6	16	2	7	8	2	7	-1
25-11	247	1840	358	21	25	1	4	15	3	7	9	3	5	2
26-11 ORG	468	2920	164	300	14	6	11	15	2	7	7	4	5	3
26-10	279	2400	265	31	24	2	6	17	2	7	15	3	10	1
26-9	264	2590	716	33	30	2	9	22	3	10	11	3	20	1
26-8	174	1270	213	12	21	1	3	16	3	9	4	3	9	-1
26-7	170	904	103	6	15	8	-1	10	2	7	2	3	6	2
26-6	268	1550	1030	29	33	2	8	26	4	7	11	4	10	1
22-13	868	5680	16900	129	99	48	16	43	6	11	18	6	17	2
24-12	428	3440	2100	51	34	18	9	17	3	8	11	3	9	-1
17-14	472	3630	560	39	32	22	9	18	3	7	15	2	11	2
17-15	186	380	800	10	24	1	3	18	3	5	8	4	8	-1
17-15-R	382	2420	2280	43	38	22	11	28	4	12	45	5	23	-1
17-16	301	920	504	22	33	25	7	24	3	12	7	3	11	-1
17-17	404	3320	476	40	58	43	9	37	6	10	10	5	9	1
17-18	366	2150	147	59	33	27	13	39	6	14	22	6	26	1
17-19	284	2820	239	36	40	30	9	37	5	19	12	6	25	3
17-20	370	3560	394	51	50	32	14	37	5	17	22	5	19	2
17-21	416	2850	252	54	30	24	12	16	4	8	11	4	3	-1
16-21	452	2860	287	40	34	19	7	23	4	11	14	4	8	2
16-20	484	3070	416	41	34	22	6	19	3	9	18	3	11	-1
16-19	186	656	27	5	7	3	-1	5	2	2	1	1	-1	-1
16-18	254	1730	149	17	27	21	3	18	4	11	7	4	6	-1
16-17	700	2490	386	59	54	33	11	30	6	15	22	6	14	-1
16-16	464	2920	472	64	52	33	12	34	5	16	24	5	12	-1
16-15	228	1250	138	9	18	1	-1	11	2	6	5	2	4	2
16-14	448	3240	420	42	40	26	8	25	4	11	19	4	8	-1
16-14 DUP	382	3250	520	39	38	20	9	18	3	8	12	3	11	-1
16-14 DUP-R	206	988	186	7	15	13	-1	9	2	5	2	2	2	2
16-13	220	1710	234	22	30	25	4	26	5	15	10	4	5	-1
16-12	187	916	48	10	12	2	-1	8	4	3	2	2	3	1
LMB-QA	184	387	11	7	13	5	4	9	3	2	3	1	2	-1
LMB-QA	165	436	15	7	14	6	3	6	1	1	3	-1	2	-1
LMB-QA	157	416	11	6	10	5	3	6	1	1	3	-1	2	-1
LMB-QA	136	620	18	6	10	4	3	5	1	1	3	-1	1	-1

SPATIOTEMPORAL GEOCHEMICAL HYDROCARBONS (SGH) by GC/MS

A16-01575 - Date: March 1, 2016 - 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.
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Jamie Walker

R=Replicate Sample
-1=Reporting Limit of 1pg/g (ppt=parts per trillion) (semi-quantitative)
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

	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

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

	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
20-13 ORG	-1	5	4	6	7	31	2	34	2	1	1	8	9	8
20-14	2	6	12	22	22	84	4	94	29	7	5	29	30	27
20-15	1	10	13	25	25	64	4	34	17	8	4	26	32	23
20-16	2	5	14	27	28	93	5	94	20	2	7	27	36	61
20-17	1	2	7	14	14	37	2	40	5	4	3	12	20	14
20-17-R	2	5	8	15	15	44	2	45	7	3	3	14	19	17
20-18	1	5	7	14	14	46	3	41	10	4	3	11	17	12
20-19	1	3	9	18	18	71	5	74	7	2	3	16	24	16
20-20	1	4	8	15	16	37	3	39	6	2	4	12	21	15
21-20	2	3	16	32	33	186	13	189	27	5	6	43	34	30
21-19	1	2	10	20	20	91	6	96	15	2	4	20	24	21
21-18	-1	2	8	16	16	33	2	26	8	2	4	10	20	12
21-17	-1	1	5	10	10	14	1	6	4	2	3	9	14	9
21-16	-1	2	6	12	13	25	2	8	9	3	4	12	21	14
21-15	2	2	11	21	21	88	5	94	18	4	5	30	31	68
21-15 DUP	2	5	19	38	39	181	12	183	25	3	9	44	62	94
21-14	-1	1	3	7	7	10	-1	19	3	2	2	8	11	13
18-14	2	3	14	27	28	127	7	134	18	5	5	29	37	37
18-15	1	1	7	13	13	46	3	49	9	2	3	16	15	18
18-16	1	3	6	12	12	48	3	9	15	3	3	20	17	23
18-17	2	3	9	18	19	97	6	94	12	5	3	21	21	17
18-17-R	2	2	9	18	18	103	6	109	12	7	3	21	21	23
18-18	1	2	8	16	17	94	4	101	12	4	4	28	29	31
18-19	1	1	7	14	14	84	5	88	11	3	3	19	21	21
18-20	1	1	6	13	13	93	5	96	9	3	3	26	22	24
18-21	1	-1	6	13	14	82	5	86	9	4	3	19	18	17
21-21	2	6	13	26	27	100	6	97	13	5	4	30	36	32
20-21	1	2	6	13	13	44	3	46	7	5	3	13	17	16
19-21	-1	-1	4	9	9	43	3	43	6	2	2	12	13	26
19-20	-1	-1	4	8	9	27	1	28	4	2	2	10	13	22
19-19	1	2	7	14	15	85	4	88	11	2	3	24	20	22
19-18	1	1	6	13	13	70	4	68	10	5	3	19	19	21
19-17	-1	1	12	25	25	39	2	39	8	2	8	18	39	17
19-16	-1	1	6	14	14	40	2	41	4	2	4	16	24	34
19-15	1	2	9	18	18	85	5	86	10	3	4	25	28	23
19-14	-1	-1	5	11	11	44	1	46	5	4	3	13	15	29
19-13	-1	2	1	3	3	4	-1	3	1	1	-1	2	4	3
19-13-R	-1	2	1	3	3	4	-1	3	1	1	-1	3	4	3
18-13	-1	1	1	3	3	8	-1	4	2	1	-1	4	5	5
18-12	-1	-1	3	5	6	6	-1	2	3	-1	2	3	9	3
17-11	-1	3	2	5	5	10	-1	2	4	1	1	4	8	4
17-12	-1	-1	4	9	9	51	3	53	9	3	2	14	17	14
17-13	1	1	5	10	10	86	4	90	12	3	2	22	18	48
24-13 ORG	-1	3	2	4	5	7	-1	8	1	1	1	3	7	3
24-14	2	2	8	17	18	88	5	92	29	4	2	28	13	19
24-15	1	2	7	14	14	72	3	76	9	3	3	16	25	17
23-14	1	1	8	17	17	70	4	73	10	4	3	17	31	16
23-15	-1	-1	3	6	6	14	1	14	5	1	2	8	10	20
23-16	1	3	6	13	13	56	2	61	10	5	2	16	16	22
23-17	3	4	10	20	21	127	6	138	18	7	4	28	27	68
22-18	-1	1	6	13	14	39	2	42	8	4	3	11	28	13
22-19	1	3	10	20	20	64	3	64	11	3	4	15	24	16
22-20	-1	1	5	11	11	31	1	32	4	2	3	10	23	11
22-20-R	-1	2	7	13	13	37	2	39	8	2	3	11	25	13
22-17	-1	3	7	13	14	37	2	40	8	2	3	10	21	13
22-16	-1	-1	3	7	8	27	1	28	5	1	2	8	15	19
22-15	1	1	4	7	8	54	2	58	9	2	2	17	12	40
22-14	1	6	5	9	10	34	2	37	10	2	3	10	19	14
20-12	-1	1	4	8	8	22	1	20	7	2	2	10	15	13
20-11	1	1	5	9	9	42	2	46	14	3	2	11	15	32

	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
20-10	1	2	6	13	13	66	3	71	7	3	3	15	18	16
20-9	-1	2	2	4	4	3	-1	1	2	-1	1	2	7	2
20-8	-1	-1	2	4	4	3	-1	1	3	1	1	2	7	2
21-8	-1	2	1	3	4	4	-1	5	2	-1	-1	2	6	5
21-9	2	3	6	12	13	74	3	78	19	3	3	19	19	50
21-10	-1	1	6	12	13	62	2	65	7	4	3	17	18	37
21-11	-1	-1	4	8	8	25	1	27	5	2	2	7	11	7
21-12	1	1	5	10	10	58	3	62	11	3	2	15	14	17
25-12	-1	1	8	15	15	31	2	32	7	4	3	7	19	9
25-12-R	1	3	10	21	21	66	4	71	12	3	4	13	29	16
25-13	-1	-1	3	6	7	15	-1	16	4	2	1	4	9	5
25-14	-1	-1	4	7	8	46	2	48	9	2	2	12	10	28
25-15	-1	1	6	12	13	52	3	54	6	3	4	8	41	22
25-16	1	2	8	17	17	80	4	85	10	2	4	17	35	19
25-17	-1	2	7	13	14	55	3	58	8	2	3	13	24	15
25-18	-1	-1	5	10	11	47	3	50	5	1	2	9	18	10
26-18	-1	1	5	10	10	42	2	45	9	3	2	12	14	14
26-17	-1	-1	4	9	9	56	1	59	6	2	2	18	16	38
26-16	-1	-1	4	8	8	28	1	29	4	-1	2	8	20	17
26-15	-1	-1	3	6	7	28	1	31	4	2	1	6	10	17
26-14	-1	-1	4	7	7	30	2	32	6	2	2	7	10	7
26-13	-1	-1	2	4	4	9	-1	10	2	1	-1	2	5	7
26-12	-1	1	5	10	11	67	3	71	7	2	2	13	15	11
27-12	1	1	6	12	12	26	2	28	8	2	2	8	16	9
27-13	-1	-1	5	10	11	47	2	50	9	3	3	9	16	14
27-13-R	-1	1	5	11	11	48	3	51	10	3	3	9	17	14
27-14	2	2	11	22	23	126	6	130	16	4	4	28	31	56
27-15 ORG	-1	2	2	3	3	5	-1	5	1	-1	-1	1	7	1
27-16	-1	-1	3	6	7	14	-1	15	3	1	2	4	14	12
27-17	-1	2	2	4	4	16	-1	17	3	2	1	5	7	12
27-18	-1	-1	3	6	7	23	1	25	5	2	2	5	12	15
28-17	-1	-1	3	6	6	14	-1	14	3	2	2	4	12	6
28-16 ORG	-1	4	4	2	3	4	-1	4	-1	-1	-1	1	4	1
28-15 ORG	17	5	6	3	5	4	-1	5	3	-1	1	1	8	1
28-14	3	3	4	9	9	40	2	43	8	3	2	9	15	10
28-13	-1	3	3	5	6	15	-1	16	3	-1	1	5	10	8
28-12	-1	1	4	8	9	33	2	36	5	2	2	8	17	19
22-12	-1	2	2	5	5	12	-1	12	3	2	2	5	7	13
22-11	1	6	5	11	12	50	3	54	7	4	2	11	13	27
22-10	-1	1	2	5	6	17	1	19	3	2	1	5	7	15
22-9	-1	2	2	5	6	11	2	11	4	3	1	10	8	23
22-9-R	-1	2	2	4	4	4	-1	3	3	2	1	3	6	8
22-8	-1	-1	3	6	7	18	2	18	4	3	2	7	9	8
22-7	-1	-1	2	5	6	17	1	17	3	2	2	6	8	6
23-7	-1	1	2	3	4	3	-1	2	3	2	1	3	6	8
23-8	-1	2	2	5	5	11	1	11	4	3	1	5	7	15
23-9	1	-1	4	9	9	26	3	26	6	4	2	19	11	40
23-10	-1	-1	2	5	6	14	1	14	3	2	1	7	8	4
23-11	-1	2	2	4	5	10	-1	10	3	2	1	6	6	14
23-12	-1	2	1	3	4	5	-1	3	1	2	-1	4	5	3
24-11	-1	-1	1	3	4	5	-1	6	1	-1	-1	3	5	2
24-10	3	7	22	44	44	100	7	104	22	7	8	15	71	21
24-9	-1	1	4	9	9	15	-1	16	6	2	2	7	13	19
24-8	-1	2	3	6	7	15	1	15	5	2	2	7	9	7
24-7	-1	1	3	6	7	7	-1	2	5	2	2	4	9	13
24-6	-1	1	3	7	7	24	2	24	6	3	2	11	11	27
25-6	1	2	4	9	10	26	2	26	10	4	2	12	12	31
25-6-R	-1	-1	3	7	7	18	1	18	7	2	2	8	9	20
25-7	-1	2	2	5	5	8	-1	8	4	2	1	7	8	17
25-8	-1	1	1	3	3	2	-1	2	1	1	-1	3	4	8

	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
25-9	-1	1	2	4	5	12	-1	12	5	2	1	7	7	22
25-10	-1	-1	2	4	5	12	-1	13	5	2	1	5	6	17
25-11	-1	2	2	4	4	13	-1	2	2	1	1	5	6	5
26-11 ORG	-1	3	3	3	4	5	-1	6	1	-1	1	2	7	4
26-10	-1	1	2	5	5	12	-1	13	3	2	1	5	7	7
26-9	-1	1	3	6	7	15	-1	16	5	3	2	9	8	9
26-8	-1	-1	2	4	5	5	-1	2	2	1	1	3	7	4
26-7	-1	2	2	4	5	3	-1	2	1	-1	1	2	7	2
26-6	-1	1	4	8	8	16	-1	16	6	3	2	7	10	12
22-13	-1	2	4	9	10	15	1	13	8	1	2	6	5	21
24-12	-1	-1	2	4	5	9	-1	2	3	1	1	4	7	6
17-14	-1	2	1	3	4	9	-1	7	4	2	1	4	6	5
17-15	-1	-1	3	7	7	15	-1	15	9	2	1	9	7	11
17-15-R	1	-1	4	8	9	1	2	2	15	3	2	15	9	37
17-16	-1	-1	3	7	7	10	-1	4	3	3	2	5	13	7
17-17	1	1	5	11	12	13	-1	5	4	3	4	5	24	6
17-18	-1	1	7	14	14	22	1	25	6	3	4	8	28	11
17-19	-1	3	6	13	13	16	1	9	5	3	4	7	27	10
17-20	-1	2	4	9	9	19	2	5	5	3	3	7	19	9
17-21	-1	-1	2	5	6	9	-1	9	5	2	2	11	10	24
16-21	-1	2	3	6	7	24	1	24	5	2	2	9	10	9
16-20	-1	-1	2	5	5	24	1	2	8	1	2	10	9	11
16-19	-1	-1	-1	2	2	-1	-1	1	2	-1	-1	1	3	5
16-18	-1	-1	3	7	8	10	-1	11	3	2	3	4	16	5
16-17	-1	-1	4	9	10	17	1	18	4	-1	3	5	21	6
16-16	-1	-1	4	8	9	24	1	26	5	2	3	7	18	8
16-15	-1	2	2	4	4	3	-1	2	2	-1	1	2	8	3
16-14	-1	-1	2	5	6	12	1	19	5	2	1	7	8	8
16-14 DUP	-1	-1	2	5	5	14	-1	16	4	2	1	7	7	7
16-14 DUP-R	-1	2	1	3	3	2	-1	1	1	-1	-1	2	4	2
16-13	-1	-1	3	6	7	9	-1	3	4	2	1	4	8	5
16-12	-1	1	1	3	3	3	-1	1	2	-1	-1	2	5	2
LMB-QA	-1	-1	-1	2	2	4	-1	4	-1	-1	-1	1	2	1
LMB-QA	-1	-1	-1	1	2	2	-1	3	-1	-1	-1	1	2	2
LMB-QA	-1	-1	-1	1	1	3	-1	3	-1	-1	-1	1	2	1
LMB-QA	-1	-1	-1	1	2	2	-1	3	-1	-1	-1	-1	2	1

	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

	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
20-13 ORG	4	2	3	-1	-1	-1	-1	31	4	26	-1	2	136	2
20-14	8	3	8	3	2	1	18	104	4	75	18	10	300	8
20-15	1	2	8	4	2	-1	9	80	4	60	20	11	218	10
20-16	9	10	9	3	2	1	6	80	2	84	-1	9	333	7
20-17	6	6	5	2	1	1	2	38	2	19	7	5	123	4
20-17-R	5	6	5	2	1	1	3	40	2	42	7	5	131	4
20-18	5	6	5	2	1	-1	3	43	3	36	8	5	140	4
20-19	6	2	6	2	1	1	4	52	3	53	8	6	248	4
20-20	6	6	6	2	1	1	3	42	2	43	8	6	147	4
21-20	11	3	10	3	2	1	6	137	3	137	13	9	868	8
21-19	7	7	7	2	1	-1	2	60	1	62	8	6	302	5
21-18	6	6	5	2	2	-1	2	31	2	33	-1	6	115	5
21-17	4	1	4	1	1	1	2	37	2	39	6	4	60	4
21-16	7	6	6	2	2	1	2	38	3	40	-1	7	108	5
21-15	9	9	8	3	2	2	7	92	3	93	11	8	292	6
21-15 DUP	16	4	15	4	2	2	8	136	6	138	-1	13	696	10
21-14	5	3	4	1	-1	-1	-1	7	-1	12	-1	3	28	3
18-14	10	3	10	3	2	1	5	90	3	90	13	8	440	6
18-15	5	4	4	1	1	-1	3	42	1	43	5	4	148	3
18-16	5	5	4	2	1	1	6	63	3	62	8	5	173	4
18-17	6	6	6	2	2	1	3	73	2	72	7	5	272	4
18-17-R	6	6	6	2	2	1	3	70	1	70	7	5	264	4
18-18	8	8	8	2	2	1	4	85	2	85	10	7	292	5
18-19	7	5	6	2	1	-1	3	57	2	58	7	5	239	4
18-20	6	5	6	2	1	-1	2	79	2	81	-1	5	282	4
18-21	5	4	5	2	1	-1	1	51	3	52	6	4	246	3
21-21	10	2	9	3	2	1	2	82	3	84	-1	7	312	5
20-21	5	2	5	2	1	1	1	38	4	39	6	4	135	3
19-21	4	1	4	1	-1	1	-1	38	3	39	-1	3	152	3
19-20	4	3	4	1	-1	-1	-1	33	1	34	5	4	92	2
19-19	6	5	5	2	1	1	2	68	1	69	6	4	243	3
19-18	6	5	5	2	1	1	2	58	2	59	7	5	212	4
19-17	11	10	10	3	2	-1	2	49	3	51	-1	11	127	8
19-16	7	6	7	2	1	-1	1	43	2	44	-1	6	90	5
19-15	8	7	7	2	1	-1	2	72	2	73	9	6	304	4
19-14	5	4	4	1	1	1	-1	39	2	40	6	4	79	3
19-13	3	-1	2	-1	-1	-1	-1	3	3	3	-1	2	10	1
19-13-R	3	-1	2	-1	-1	-1	-1	2	-1	5	2	2	12	2
18-13	3	-1	2	-1	-1	-1	-1	3	3	8	2	2	31	2
18-12	3	-1	3	-1	-1	-1	-1	4	3	5	4	3	26	2
17-11	4	-1	3	-1	-1	-1	-1	10	3	5	3	2	34	2
17-12	5	4	4	1	1	-1	2	40	-1	41	5	4	166	3
17-13	5	5	4	1	1	1	4	61	2	62	6	5	250	3
24-13 ORG	3	-1	2	-1	-1	-1	-1	9	1	5	2	2	18	2
24-14	5	5	5	2	1	-1	3	77	2	74	5	3	158	2
24-15	6	5	6	2	1	-1	1	43	2	45	6	4	124	3
23-14	7	7	6	2	1	-1	1	46	2	48	-1	6	184	4
23-15	3	2	3	-1	-1	-1	-1	23	1	24	3	3	50	2
23-16	5	5	5	2	1	-1	3	41	2	40	6	4	102	4
23-17	7	7	7	2	2	-1	5	72	2	73	9	6	284	4
22-18	7	1	7	2	1	-1	1	32	4	34	-1	6	99	4
22-19	7	2	6	2	2	-1	2	46	3	48	9	7	169	5
22-20	5	5	5	1	1	-1	2	30	2	31	6	4	63	3
22-20-R	6	6	5	2	1	1	2	36	3	37	7	5	86	4
22-17	5	5	4	2	1	-1	2	33	2	34	7	5	90	3
22-16	4	3	4	1	-1	-1	-1	25	1	26	4	4	63	3
22-15	4	1	4	1	-1	-1	3	48	1	49	5	3	104	3
22-14	5	4	4	1	1	-1	3	30	2	31	6	4	72	4
20-12	5	4	4	1	1	-1	3	34	2	33	6	4	82	3
20-11	4	1	3	1	1	-1	4	31	2	31	5	4	96	3

	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
20-10	5	5	-1	2	1	1	4	45	2	45	7	4	161	4
20-9	4	-1	3	-1	-1	-1	-1	2	2	7	-1	3	14	2
20-8	4	-1	3	-1	-1	-1	-1	3	1	4	3	2	22	2
21-8	3	-1	2	-1	-1	-1	-1	5	3	3	2	2	12	2
21-9	5	5	4	2	1	1	6	59	2	59	7	5	174	4
21-10	5	5	5	2	1	1	2	46	1	48	6	5	84	3
21-11	4	3	4	1	-1	-1	1	24	1	25	4	3	59	3
21-12	4	4	4	1	1	-1	3	45	2	45	5	3	132	3
25-12	6	5	5	2	1	-1	-1	17	1	21	6	4	66	3
25-12-R	8	5	7	2	2	1	2	39	3	42	9	6	182	5
25-13	3	-1	3	-1	-1	-1	-1	3	1	14	3	2	37	2
25-14	3	2	3	-1	-1	-1	2	33	-1	34	4	3	82	2
25-15	2	1	7	2	1	-1	-1	29	3	31	-1	6	124	4
25-16	7	7	-1	2	2	-1	3	58	3	59	9	7	204	5
25-17	6	5	5	2	1	-1	2	34	2	40	7	5	122	4
25-18	4	4	4	1	-1	-1	-1	32	1	34	5	4	153	3
26-18	4	3	4	1	1	-1	2	37	2	38	5	3	116	2
26-17	4	3	4	1	-1	-1	1	46	2	48	5	3	44	3
26-16	4	3	4	1	-1	-1	-1	25	3	25	4	4	71	3
26-15	3	3	3	-1	-1	-1	-1	20	3	21	3	2	50	2
26-14	3	3	3	1	-1	-1	-1	20	2	21	4	3	68	2
26-13	3	-1	2	-1	-1	-1	-1	6	-1	3	2	2	14	2
26-12	4	3	4	1	-1	-1	-1	36	3	36	5	3	151	3
27-12	5	1	5	1	1	-1	-1	20	3	21	4	3	80	3
27-13	5	5	5	2	2	-1	3	28	3	22	8	5	130	4
27-13-R	5	5	5	2	2	-1	3	27	4	12	8	5	116	4
27-14	8	7	7	2	1	-1	2	77	1	78	8	5	308	4
27-15 ORG	3	-1	2	-1	-1	-1	-1	7	-1	4	2	2	11	1
27-16	3	3	3	1	-1	-1	-1	13	3	14	-1	3	33	2
27-17	3	2	2	-1	-1	-1	-1	16	2	17	3	2	42	2
27-18	3	3	3	1	-1	-1	-1	18	-1	19	4	3	47	2
28-17	4	-1	3	-1	-1	-1	-1	12	1	15	-1	3	36	2
28-16 ORG	2	-1	1	-1	-1	-1	-1	4	3	2	2	1	9	1
28-15 ORG	4	-1	3	-1	-1	-1	-1	2	3	1	-1	2	8	1
28-14	4	4	4	1	-1	-1	1	27	1	28	4	3	119	3
28-13	3	-1	3	-1	-1	-1	-1	12	2	9	3	3	37	2
28-12	4	3	4	2	1	-1	-1	27	5	28	-1	6	69	4
22-12	4	1	3	-1	2	1	1	18	6	14	7	7	26	5
22-11	6	4	5	2	2	1	2	32	7	34	8	6	115	6
22-10	4	-1	3	1	1	-1	-1	16	5	18	4	4	45	4
22-9	4	-1	3	-1	-1	1	-1	28	1	14	-1	3	71	4
22-9-R	3	-1	2	-1	-1	-1	-1	10	2	4	4	3	22	3
22-8	5	3	3	1	1	1	-1	20	1	21	5	4	67	4
22-7	4	1	3	1	1	1	-1	20	-1	21	5	5	69	4
23-7	4	-1	3	1	1	-1	-1	2	1	3	4	3	16	3
23-8	4	-1	3	1	1	1	-1	15	2	6	5	4	45	4
23-9	6	1	4	-1	-1	2	2	50	1	52	8	7	100	7
23-10	4	2	3	1	-1	-1	-1	23	-1	24	3	3	52	3
23-11	2	-1	2	-1	-1	-1	-1	18	-1	18	3	2	46	2
23-12	3	-1	2	-1	-1	-1	-1	12	4	12	3	2	25	2
24-11	3	-1	2	-1	-1	-1	-1	10	3	10	2	2	27	3
24-10	17	3	17	4	3	1	1	9	3	40	13	11	264	9
24-9	4	1	4	1	1	-1	-1	16	3	20	5	3	63	3
24-8	3	-1	3	1	1	1	1	22	7	23	5	4	58	3
24-7	4	2	4	1	1	-1	-1	3	2	15	6	4	36	4
24-6	4	3	4	1	1	-1	-1	30	4	31	4	3	96	2
25-6	4	3	4	1	1	-1	-1	30	1	31	4	3	77	3
25-6-R	3	2	3	-1	-1	-1	-1	20	5	21	3	3	52	2
25-7	3	2	3	-1	-1	-1	-1	20	-1	21	3	3	47	2
25-8	3	-1	2	-1	-1	-1	-1	8	-1	9	2	2	11	1

	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
25-9	3	-1	3	-1	-1	-1	-1	18	-1	19	3	2	42	2
25-10	2	-1	2	-1	-1	-1	-1	15	-1	16	3	2	39	2
25-11	3	1	2	-1	-1	-1	-1	15	2	16	3	2	32	2
26-11 ORG	2	-1	2	-1	-1	-1	-1	1	3	1	2	2	16	2
26-10	4	2	2	-1	-1	-1	-1	14	3	14	3	2	34	2
26-9	3	2	3	-1	-1	-1	1	24	-1	25	4	3	46	2
26-8	3	2	2	-1	-1	-1	-1	8	-1	10	3	3	22	2
26-7	4	2	3	-1	-1	-1	-1	1	-1	3	3	2	13	2
26-6	4	-1	4	1	-1	-1	-1	17	3	17	4	3	37	3
22-13	3	2	3	1	-1	-1	-1	6	4	5	3	2	45	2
24-12	3	2	2	-1	-1	-1	-1	12	2	13	3	2	35	2
17-14	3	-1	2	-1	-1	-1	-1	11	1	12	3	2	26	2
17-15	3	2	3	1	-1	-1	1	33	5	33	3	2	58	2
17-15-R	3	1	3	1	-1	-1	2	44	5	44	4	2	73	2
17-16	5	1	4	1	-1	-1	-1	5	3	5	4	3	33	3
17-17	6	1	5	1	1	-1	-1	15	3	17	6	6	35	4
17-18	7	2	7	2	2	1	1	22	4	23	-1	7	62	5
17-19	7	1	6	2	1	1	-1	6	1	13	-1	6	44	5
17-20	5	3	5	1	-1	-1	-1	19	3	21	5	4	67	3
17-21	3	1	3	-1	-1	-1	-1	26	-1	27	3	3	27	2
16-21	3	3	3	-1	-1	-1	1	25	-1	25	4	3	64	2
16-20	3	2	3	1	-1	-1	2	28	-1	29	4	3	99	3
16-19	1	-1	1	-1	-1	-1	-1	1	3	1	2	2	5	1
16-18	4	3	3	1	-1	-1	-1	13	3	14	5	4	47	3
16-17	5	1	4	1	-1	-1	-1	13	3	15	-1	4	52	3
16-16	4	3	4	1	-1	-1	-1	22	3	23	5	4	72	3
16-15	4	2	2	-1	-1	-1	-1	7	2	7	3	2	16	2
16-14	4	2	3	-1	-1	-1	1	18	4	19	3	2	45	2
16-14 DUP	2	2	2	-1	-1	-1	-1	19	2	8	3	2	46	2
16-14 DUP-R	3	1	2	-1	-1	-1	-1	7	-1	5	2	2	16	2
16-13	4	2	3	-1	-1	-1	-1	11	4	6	4	3	40	2
16-12	2	-1	2	-1	-1	-1	-1	1	3	2	2	2	8	2
LMB-QA	2	-1	-1	-1	-1	-1	-1	5	3	7	-1	1	8	1
LMB-QA	2	-1	-1	-1	-1	-1	-1	5	3	5	1	1	8	1
LMB-QA	1	-1	-1	-1	-1	-1	-1	4	2	4	-1	1	7	1
LMB-QA	1	-1	-1	-1	-1	-1	-1	-1	3	-1	-1	1	7	1

	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

	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
20-13 ORG	1	4	140	9	35	3	3	41	2	1	2	3	1	1
20-14	4	4	319	16	147	3	4	136	11	6	7	2	6	12
20-15	4	5	228	11	113	3	3	101	8	7	10	2	8	7
20-16	8	10	347	21	134	4	-1	90	5	3	6	3	3	4
20-17	5	7	128	7	43	3	3	39	3	2	3	-1	2	2
20-17-R	5	6	137	8	45	3	-1	39	3	2	3	3	2	2
20-18	3	4	146	9	41	4	4	36	3	2	4	-1	2	3
20-19	3	5	264	16	62	-1	3	47	3	2	4	3	3	3
20-20	2	5	155	9	57	4	3	41	3	2	4	3	3	3
21-20	3	8	916	55	201	3	4	130	6	4	6	1	4	6
21-19	5	6	317	20	76	4	-1	58	3	2	4	-1	2	3
21-18	2	6	121	8	41	3	-1	30	2	2	4	3	2	2
21-17	2	3	61	4	32	-1	3	29	2	2	3	3	2	2
21-16	7	9	114	6	44	4	-1	39	3	3	4	-1	3	2
21-15	3	9	305	17	113	3	4	98	6	3	5	-1	3	5
21-15 DUP	6	16	740	41	171	2	3	147	8	5	8	2	6	6
21-14	3	5	28	2	16	4	3	15	2	2	3	3	2	1
18-14	3	6	464	26	100	2	5	86	5	3	5	3	4	5
18-15	3	4	156	9	51	3	3	42	3	2	3	3	2	2
18-16	3	4	181	10	80	5	4	73	5	3	4	4	3	5
18-17	5	6	290	17	72	4	-1	61	3	2	3	3	2	2
18-17-R	5	6	278	17	92	4	3	59	3	2	3	3	2	2
18-18	6	8	306	17	134	-1	4	81	6	3	4	-1	3	3
18-19	5	7	252	15	72	3	-1	63	4	2	3	3	2	2
18-20	5	6	296	17	125	2	4	98	4	2	3	3	2	3
18-21	4	6	259	16	58	3	3	45	2	2	3	3	2	2
21-21	7	8	329	19	99	4	3	78	4	3	4	2	3	2
20-21	4	5	142	8	42	3	3	37	2	2	3	3	2	2
19-21	1	4	160	9	46	3	2	41	2	2	2	3	2	1
19-20	4	4	95	6	45	3	-1	29	3	2	2	2	2	1
19-19	5	5	255	15	96	3	3	54	5	2	3	3	2	2
19-18	4	6	225	13	81	4	4	70	5	2	3	3	2	3
19-17	7	8	132	7	66	4	-1	53	4	4	6	2	4	2
19-16	5	7	91	5	62	3	-1	42	4	3	4	3	3	2
19-15	6	7	321	18	94	4	3	71	4	3	4	-1	3	2
19-14	1	2	82	5	43	-1	3	39	3	2	3	3	2	1
19-13	3	3	9	1	6	2	2	5	1	-1	1	2	-1	1
19-13-R	-1	2	11	1	7	2	2	6	1	1	1	2	1	1
18-13	2	3	33	2	11	2	2	10	1	1	1	2	1	1
18-12	3	4	26	2	10	2	-1	8	1	1	2	2	1	1
17-11	4	4	35	3	12	2	-1	11	1	1	2	2	1	1
17-12	4	5	176	11	48	3	3	40	3	2	2	3	2	2
17-13	5	6	263	15	84	-1	3	74	4	2	3	3	2	3
24-13 ORG	-1	3	18	2	9	2	2	9	1	1	1	2	1	1
24-14	2	5	160	9	66	3	3	59	3	1	2	3	1	3
24-15	5	6	130	7	55	4	3	42	3	2	3	3	2	2
23-14	5	6	193	12	60	3	-1	53	3	2	3	3	2	2
23-15	3	3	51	3	29	3	2	26	2	1	2	2	1	1
23-16	2	5	108	6	50	4	4	45	4	2	3	3	2	3
23-17	6	7	300	17	92	4	4	83	5	2	4	3	3	4
22-18	5	6	104	6	42	3	3	39	2	2	3	3	2	2
22-19	3	5	176	10	58	4	3	52	3	3	4	-1	3	3
22-20	5	7	66	4	35	3	3	31	2	2	3	3	2	1
22-20-R	3	7	89	5	47	4	3	43	3	2	3	3	2	2
22-17	2	5	94	6	41	3	3	37	3	2	3	3	2	2
22-16	4	4	65	4	36	2	-1	24	2	2	2	2	2	1
22-15	3	4	106	6	73	3	3	54	4	2	3	3	2	2
22-14	5	6	74	4	39	4	3	35	3	2	3	3	2	2
20-12	2	3	86	5	44	4	3	41	3	2	3	3	2	3
20-11	2	3	100	6	37	3	3	33	3	2	3	-1	2	3

	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
20-10	2	4	170	10	52	4	3	47	4	2	3	3	2	3
20-9	1	3	14	1	7	2	-1	7	1	1	2	2	1	1
20-8	3	4	22	2	7	2	-1	6	1	1	2	2	1	-1
21-8	2	3	12	1	6	2	2	5	1	1	1	2	1	-1
21-9	2	4	184	10	76	4	4	68	5	2	3	4	3	4
21-10	4	6	85	4	62	3	3	41	4	2	3	3	2	2
21-11	3	4	61	4	33	3	3	29	2	2	2	3	2	1
21-12	2	4	139	8	61	3	3	54	4	2	2	3	2	3
25-12	4	6	68	4	18	3	3	15	2	2	3	3	2	1
25-12-R	7	9	192	11	44	4	3	38	3	3	5	2	3	2
25-13	3	3	38	3	13	2	-1	11	1	1	2	2	1	1
25-14	1	3	86	5	41	3	3	38	2	1	2	3	1	2
25-15	1	2	131	8	33	3	-1	27	2	2	3	3	2	1
25-16	8	10	216	13	73	4	3	62	4	3	4	-1	3	3
25-17	5	7	126	7	46	3	3	42	3	2	3	3	2	2
25-18	4	5	162	10	39	3	-1	34	2	1	2	2	2	2
26-18	2	1	122	7	46	3	3	42	3	2	2	3	2	2
26-17	5	6	42	2	66	3	3	40	4	1	2	3	1	1
26-16	-1	5	74	5	29	2	1	20	2	2	2	2	2	1
26-15	3	4	52	3	21	3	2	19	2	1	2	2	1	1
26-14	3	4	71	5	21	3	3	19	2	1	2	2	1	1
26-13	2	3	14	1	6	2	2	5	1	1	1	2	1	-1
26-12	4	5	158	9	44	3	3	37	2	1	2	3	1	2
27-12	4	4	84	5	21	3	-1	18	1	1	2	2	1	1
27-13	3	5	137	8	35	-1	4	30	2	3	4	-1	3	2
27-13-R	3	7	121	7	31	4	3	26	2	3	4	-1	3	2
27-14	5	6	325	19	98	4	3	70	4	2	3	3	2	2
27-15 ORG	3	3	11	1	6	2	2	5	1	-1	1	2	-1	-1
27-16	1	4	34	3	15	2	-1	13	1	2	2	2	2	1
27-17	2	3	43	3	21	2	2	19	2	1	2	2	1	1
27-18	1	4	49	4	18	2	-1	15	1	1	2	2	1	1
28-17	1	4	38	3	14	3	2	13	1	1	2	2	1	1
28-16 ORG	2	3	9	1	6	2	2	5	1	-1	1	2	-1	-1
28-15 ORG	3	3	7	1	5	2	2	4	-1	-1	1	2	-1	-1
28-14	4	5	126	8	32	3	3	27	2	1	2	3	2	2
28-13	-1	4	38	3	12	3	2	11	1	1	2	2	1	1
28-12	2	7	70	6	33	4	3	26	3	3	4	4	2	2
22-12	7	10	23	3	21	3	3	13	2	2	2	3	2	1
22-11	7	10	118	10	35	6	4	30	5	5	6	6	4	4
22-10	3	5	45	5	21	4	4	19	3	3	3	4	3	3
22-9	4	5	73	6	35	4	4	32	3	2	3	4	2	2
22-9-R	1	5	22	3	13	3	3	12	2	2	3	4	2	2
22-8	2	8	69	7	25	5	5	21	4	3	5	5	3	3
22-7	5	7	70	7	24	4	5	21	4	4	4	5	4	4
23-7	4	5	14	3	9	3	3	9	2	2	3	4	3	2
23-8	4	6	46	5	19	4	4	17	3	3	4	4	3	3
23-9	8	11	98	9	68	6	2	44	7	5	7	7	5	5
23-10	3	4	53	4	24	3	-1	21	2	2	2	3	2	2
23-11	2	3	47	3	25	2	2	22	2	1	2	2	1	1
23-12	2	3	25	2	15	2	2	14	2	1	2	2	1	1
24-11	3	5	26	4	16	3	4	14	3	3	4	4	3	3
24-10	9	11	277	18	42	5	3	31	3	4	8	5	4	3
24-9	3	4	64	4	25	3	3	21	2	2	3	3	2	1
24-8	4	6	60	5	28	4	4	23	3	3	3	4	3	2
24-7	2	4	36	3	19	4	4	17	3	2	3	4	3	2
24-6	1	5	99	7	39	3	3	33	3	2	2	3	2	2
25-6	4	6	80	5	39	3	3	35	2	2	2	3	2	2
25-6-R	3	4	54	4	26	3	3	24	2	1	2	3	1	1
25-7	3	5	48	3	27	3	3	24	2	1	2	3	1	1
25-8	4	4	10	1	11	2	2	10	1	1	1	2	1	1

	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
25-9	3	5	43	3	23	-1	3	21	3	1	2	3	1	1
25-10	3	4	41	3	20	3	3	18	2	1	2	3	1	1
25-11	3	3	32	2	22	2	2	20	2	1	1	2	1	1
26-11 ORG	-1	3	16	2	6	2	2	5	-1	1	1	2	1	-1
26-10	3	3	35	3	17	3	2	14	2	1	2	2	1	1
26-9	3	4	47	3	30	3	3	28	3	1	2	3	2	2
26-8	3	3	22	2	11	3	2	9	1	1	2	2	1	1
26-7	-1	3	13	1	6	2	2	5	1	1	2	2	1	1
26-6	2	3	39	3	18	3	3	16	2	1	2	3	1	2
22-13	4	4	45	3	16	3	2	13	1	1	2	2	1	1
24-12	-1	4	35	3	13	2	2	11	1	1	2	2	1	1
17-14	2	4	26	2	12	2	2	11	1	1	2	2	1	1
17-15	-1	4	56	3	39	3	3	36	2	1	2	3	1	2
17-15-R	2	4	71	4	42	3	3	38	3	1	2	3	1	2
17-16	3	4	33	2	16	3	3	14	2	1	2	3	1	1
17-17	5	5	36	3	16	4	3	14	2	2	3	3	2	1
17-18	6	7	64	4	26	3	-1	23	2	3	4	3	3	2
17-19	5	6	44	3	18	3	-1	15	2	2	4	3	2	1
17-20	1	5	70	5	26	3	3	21	2	2	3	3	2	1
17-21	1	4	25	2	34	2	3	28	3	1	2	3	1	1
16-21	3	4	65	4	39	3	3	27	2	2	2	3	2	1
16-20	3	4	102	6	46	3	3	38	3	2	2	3	2	2
16-19	2	2	5	1	4	2	1	3	-1	-1	1	2	-1	-1
16-18	4	4	48	4	16	3	2	14	1	2	2	3	2	1
16-17	3	5	54	4	17	3	-1	14	2	2	3	3	2	1
16-16	1	6	74	5	18	3	3	22	2	2	2	3	2	1
16-15	-1	3	16	2	8	2	2	7	1	1	2	2	1	1
16-14	3	4	47	3	24	2	2	21	2	1	2	2	1	1
16-14 DUP	3	3	48	3	25	3	2	22	2	1	2	3	1	1
16-14 DUP-R	2	3	15	2	9	2	2	8	1	1	2	2	1	1
16-13	3	4	42	3	12	2	3	10	1	1	2	2	1	1
16-12	-1	3	7	1	4	2	2	4	-1	1	1	2	1	-1
LMB-QA	2	2	8	1	10	1	1	9	-1	-1	1	1	-1	-1
LMB-QA	2	2	7	1	6	1	1	5	-1	-1	1	1	-1	-1
LMB-QA	-1	2	6	1	5	1	1	4	-1	-1	1	1	-1	-1
LMB-QA	2	2	6	1	5	1	1	4	-1	-1	1	1	-1	-1

	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

	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
20-13 ORG	2	2	2	6	4	50	5	59	3	257	7	3	265	4
20-14	52	9	14	26	56	108	24	200	26	720	52	151	752	304
20-15	38	11	18	38	32	353	32	384	35	660	29	218	680	424
20-16	25	7	11	29	11	126	24	146	16	556	13	23	572	38
20-17	19	4	6	13	6	82	10	88	8	248	7	17	252	28
20-17-R	10	4	6	13	6	73	10	79	8	232	7	13	239	21
20-18	11	4	6	15	10	79	12	80	10	270	11	34	276	62
20-19	12	4	6	16	10	90	13	96	8	400	12	23	416	42
20-20	10	4	7	17	10	117	13	134	9	308	11	31	317	63
21-20	23	6	11	34	21	285	28	320	15	1550	25	54	1600	106
21-19	10	4	6	19	7	96	14	101	8	484	10	17	496	29
21-18	18	4	7	15	6	56	12	59	10	220	7	19	227	34
21-17	18	4	6	12	7	90	11	92	7	176	7	25	180	42
21-16	11	6	10	22	8	99	19	107	13	289	9	30	282	54
21-15	23	6	10	20	18	144	18	149	13	516	18	40	528	71
21-15 DUP	32	12	16	37	22	222	31	231	21	1050	22	54	1090	88
21-14	8	3	4	11	3	80	9	90	6	88	3	18	81	31
18-14	22	6	10	29	17	146	22	148	14	796	18	56	824	98
18-15	17	2	3	9	5	91	8	99	4	261	6	7	269	9
18-16	23	4	6	14	19	123	13	119	10	400	18	53	416	96
18-17	14	3	5	14	7	116	13	125	7	476	9	12	492	18
18-17-R	24	3	4	14	5	93	12	108	7	385	8	9	400	14
18-18	19	5	6	20	10	134	18	146	9	532	12	17	552	27
18-19	15	4	5	16	8	74	14	74	7	382	9	13	396	19
18-20	12	3	5	12	13	115	11	123	7	520	16	27	540	52
18-21	15	3	5	13	5	77	11	82	6	354	7	8	366	13
21-21	28	5	7	22	7	124	19	134	10	500	9	13	516	19
20-21	14	3	4	12	4	102	10	113	5	311	6	8	316	11
19-21	12	2	3	8	4	82	7	89	4	305	6	5	313	6
19-20	1	3	3	11	4	58	10	63	5	208	5	7	216	10
19-19	15	3	4	11	6	100	10	109	5	398	7	7	412	11
19-18	17	3	5	11	9	95	10	98	7	377	9	17	389	26
19-17	25	6	10	26	6	112	22	120	12	278	6	21	282	29
19-16	21	5	7	15	5	87	14	95	8	228	5	14	235	21
19-15	15	4	6	17	7	116	15	123	7	528	9	14	544	20
19-14	13	3	4	11	4	52	9	56	5	142	4	7	147	9
19-13	3	1	1	5	2	21	4	23	2	18	2	3	18	4
19-13-R	3	1	2	5	2	29	4	32	3	37	2	7	34	12
18-13	5	1	2	5	3	46	4	51	3	104	4	8	94	12
18-12	4	2	3	9	3	34	8	38	4	78	3	5	79	7
17-11	5	2	2	7	3	33	7	36	3	102	4	4	104	6
17-12	17	3	3	8	5	79	8	85	5	279	7	7	287	10
17-13	15	3	5	10	9	82	9	85	7	420	11	13	432	20
24-13 ORG	4	1	2	4	3	30	4	32	2	60	3	5	61	8
24-14	8	1	2	10	5	71	7	68	3	169	5	4	171	6
24-15	17	3	4	9	4	44	8	45	5	146	5	9	152	14
23-14	18	4	5	11	6	64	10	67	6	306	7	10	316	14
23-15	10	2	2	5	4	60	5	67	4	124	4	8	127	12
23-16	12	3	5	11	9	76	9	75	6	204	9	18	210	30
23-17	18	5	6	15	11	92	14	90	8	468	12	19	488	29
22-18	14	4	5	14	4	53	13	56	6	207	5	8	214	11
22-19	12	5	7	19	10	32	16	64	9	308	10	45	319	75
22-20	16	3	4	9	4	62	8	66	5	138	5	13	141	21
22-20-R	23	4	5	10	7	63	9	64	6	182	7	23	187	38
22-17	22	3	4	11	6	49	9	49	5	154	6	17	160	27
22-16	1	3	3	6	3	44	6	47	5	128	4	6	133	8
22-15	26	3	4	9	6	77	8	82	5	216	7	9	222	13
22-14	11	4	5	9	7	47	8	47	5	129	7	12	134	20
20-12	13	3	4	9	10	76	8	76	6	212	9	23	218	37
20-11	12	3	4	8	8	55	7	54	5	182	8	17	187	28

	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
20-10	13	3	5	11	9	25	9	58	6	276	10	18	286	29
20-9	3	2	3	7	3	26	7	29	4	58	3	13	56	22
20-8	3	2	2	7	3	24	6	27	3	74	3	5	75	8
21-8	3	1	2	4	2	14	4	15	3	25	2	4	26	6
21-9	19	4	5	11	13	80	10	75	6	313	13	24	323	39
21-10	20	3	4	10	5	57	10	60	6	125	5	9	130	12
21-11	11	2	3	7	4	41	7	44	4	118	4	7	122	10
21-12	12	2	3	8	8	58	7	57	5	226	8	10	234	14
25-12	8	4	5	10	3	37	9	40	5	101	4	9	103	13
25-12-R	20	6	9	19	8	64	16	62	10	302	9	29	309	47
25-13	5	2	2	5	3	23	5	24	3	65	3	4	67	5
25-14	16	2	2	5	4	39	5	40	3	120	5	6	125	8
25-15	10	6	7	10	4	34	9	34	7	169	5	7	174	9
25-16	12	7	8	13	8	73	14	70	10	321	9	15	332	22
25-17	9	4	6	12	7	48	11	48	6	186	7	12	192	18
25-18	12	3	4	10	5	57	8	58	4	284	6	7	294	9
26-18	19	2	3	8	6	56	7	58	4	247	7	8	256	10
26-17	20	2	3	6	4	49	8	52	4	77	3	5	81	6
26-16	8	3	4	6	4	36	6	38	4	124	4	5	128	6
26-15	6	2	2	6	3	23	5	23	3	78	3	4	81	5
26-14	8	2	3	8	3	27	7	27	4	110	4	4	112	5
26-13	2	1	2	5	2	11	4	11	2	22	2	3	23	3
26-12	12	2	3	8	4	41	8	42	4	170	5	5	176	7
27-12	7	3	3	9	3	64	8	71	4	182	4	6	186	8
27-13	10	5	8	17	6	16	14	44	10	205	7	36	211	64
27-13-R	20	5	7	15	5	46	13	48	9	173	6	25	178	41
27-14	26	4	4	13	7	95	12	97	6	520	9	10	536	14
27-15 ORG	2	1	1	3	2	7	3	2	2	21	2	2	21	3
27-16	5	3	3	6	3	24	5	24	4	70	3	4	72	5
27-17	6	2	2	5	3	33	5	35	3	95	3	3	97	4
27-18	5	2	3	5	3	23	5	23	4	72	3	4	74	5
28-17	5	2	3	6	3	28	6	30	3	82	3	5	84	7
28-16 ORG	2	1	1	3	3	12	4	10	2	38	4	6	39	10
28-15 ORG	1	1	1	3	2	2	4	6	2	14	2	2	15	3
28-14	11	3	3	9	4	45	8	46	5	260	6	7	268	9
28-13	1	2	2	10	3	31	8	33	4	80	4	6	81	8
28-12	9	4	4	8	6	35	8	36	6	118	6	7	122	8
22-12	7	2	2	5	4	39	6	44	4	68	4	6	70	7
22-11	11	4	5	12	8	41	11	42	8	190	9	9	196	11
22-10	8	3	3	8	6	34	8	36	5	97	7	8	99	10
22-9	10	3	4	10	6	117	8	131	6	232	6	6	192	7
22-9-R	4	3	3	7	5	40	7	46	5	87	6	6	89	8
22-8	8	4	5	11	8	71	11	78	9	163	9	10	152	12
22-7	7	4	5	10	10	62	11	68	8	176	10	10	178	12
23-7	3	3	4	8	6	26	8	28	6	60	6	7	60	8
23-8	6	3	4	9	7	54	9	60	7	142	7	7	140	9
23-9	19	6	7	16	13	135	15	151	11	286	13	14	262	16
23-10	7	2	3	7	4	68	7	75	4	137	4	5	130	6
23-11	7	2	2	7	4	67	6	73	3	167	5	4	170	6
23-12	5	2	2	5	3	50	5	56	3	102	3	4	104	5
24-11	5	3	4	8	6	34	7	37	6	79	6	7	80	8
24-10	14	8	13	30	7	80	22	85	11	386	8	23	390	36
24-9	9	3	3	9	5	54	8	58	4	187	5	10	190	14
24-8	9	3	4	10	5	80	8	90	5	173	6	7	165	9
24-7	9	3	4	13	7	46	12	48	6	132	7	17	134	29
24-6	11	2	3	8	5	79	8	86	4	220	6	6	224	8
25-6	11	2	3	7	4	74	7	82	4	200	5	6	204	8
25-6-R	7	2	2	5	3	63	6	71	3	153	4	4	146	5
25-7	9	2	2	7	4	73	7	82	4	156	4	5	159	7
25-8	4	1	1	4	2	24	4	27	2	7	2	4	24	5

	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
25-9	8	2	2	7	3	68	7	77	4	130	3	4	128	6
25-10	7	1	2	5	3	49	5	55	3	104	4	4	107	6
25-11	8	1	2	4	3	32	4	35	3	72	3	4	74	5
26-11 ORG	1	1	2	4	2	6	4	10	2	35	3	3	35	3
26-10	7	2	2	6	3	33	6	35	3	72	4	5	73	8
26-9	13	2	3	7	5	71	7	78	4	131	5	8	129	12
26-8	5	2	3	7	3	43	7	49	4	82	3	7	82	12
26-7	3	2	2	6	3	30	6	34	3	58	3	5	59	7
26-6	11	2	2	8	4	39	7	41	4	90	4	9	92	15
22-13	4	1	2	6	3	39	5	42	2	92	3	3	93	4
24-12	5	2	3	6	3	38	5	41	3	99	4	5	101	7
17-14	5	2	2	5	3	41	5	46	3	78	3	4	78	4
17-15	5	1	2	9	5	26	7	48	3	106	5	3	108	4
17-15-R	5	2	2	8	4	38	6	54	3	117	4	4	119	5
17-16	8	2	3	8	4	68	8	76	4	119	4	7	106	11
17-17	8	4	5	11	4	52	9	56	5	103	4	11	105	16
17-18	13	6	8	15	4	61	16	66	9	146	4	12	149	17
17-19	8	5	7	14	4	56	12	62	6	105	4	10	99	15
17-20	9	3	4	9	4	80	8	90	5	187	5	7	170	10
17-21	1	2	2	5	3	66	6	76	3	54	3	5	52	6
16-21	12	2	2	6	4	51	6	58	3	149	5	5	154	8
16-20	20	2	3	9	6	68	8	74	5	237	7	8	245	13
16-19	1	1	2	4	2	13	4	14	2	14	2	3	13	4
16-18	6	3	4	9	3	43	11	47	5	144	5	7	147	9
16-17	6	4	4	8	4	62	9	69	5	145	4	7	146	9
16-16	5	3	3	8	3	38	8	54	5	125	5	6	129	8
16-15	3	2	2	5	3	24	6	27	3	53	3	3	55	4
16-14	10	2	2	6	3	37	6	42	3	92	4	4	94	5
16-14 DUP	10	2	2	5	4	55	5	61	3	136	4	5	134	7
16-14 DUP-R	4	2	2	5	3	28	4	31	3	64	3	4	66	6
16-13	5	2	2	8	3	31	7	34	3	99	4	4	97	6
16-12	2	1	2	5	2	15	4	16	2	25	2	5	23	7
LMB-QA	2	1	1	3	2	14	3	15	2	20	2	2	20	2
LMB-QA	-1	-1	-1	3	-1	11	2	13	2	17	-1	-1	17	2
LMB-QA	1	-1	1	3	-1	8	3	9	-1	13	-1	2	13	2
LMB-QA	1	-1	1	3	-1	9	3	10	2	13	2	2	13	2

	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

	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
20-13 ORG	-1	4	36	78	4	5	5	11	3	3	4	4	152	2
20-14	448	220	312	350	270	256	172	313	30	132	41	153	936	104
20-15	580	264	504	102	328	174	144	197	15	96	51	109	560	78
20-16	48	-1	83	204	41	36	26	46	7	16	13	19	164	13
20-17	36	19	84	105	24	17	13	26	4	10	9	11	186	2
20-17-R	26	13	80	99	18	15	11	21	4	8	7	9	143	1
20-18	85	41	92	106	51	37	26	68	6	20	11	23	110	16
20-19	55	28	95	120	38	36	23	38	6	18	8	20	133	14
20-20	86	44	123	106	65	36	27	46	6	18	10	21	262	14
21-20	144	71	408	460	103	67	53	143	14	34	18	40	452	31
21-19	36	18	109	133	24	18	13	29	5	10	8	11	131	8
21-18	43	23	28	84	33	18	13	23	4	9	9	11	94	8
21-17	58	31	89	82	36	20	17	29	4	12	8	13	230	2
21-16	71	39	150	119	50	28	19	34	5	14	13	16	222	11
21-15	96	94	100	204	65	70	46	117	9	33	13	39	242	25
21-15 DUP	120	61	263	313	72	74	51	136	12	39	19	44	724	31
21-14	43	-1	85	3	24	6	5	14	2	4	7	4	9	8
18-14	139	125	123	238	81	64	47	120	11	34	18	39	358	29
18-15	11	2	80	84	8	10	8	18	3	6	4	6	167	1
18-16	139	128	78	179	80	79	56	120	10	45	15	51	492	34
18-17	23	11	171	198	15	15	12	31	5	8	7	10	189	2
18-17-R	16	2	82	187	14	13	10	24	4	7	7	8	143	2
18-18	36	35	182	211	26	35	26	53	6	17	9	19	255	13
18-19	24	12	54	100	15	19	13	46	5	10	7	11	238	8
18-20	68	39	107	224	52	50	37	107	10	27	10	33	323	26
18-21	15	14	83	108	10	8	7	19	4	5	6	6	112	2
21-21	23	2	138	176	16	12	10	32	5	7	9	8	203	1
20-21	13	-1	145	120	9	7	7	21	3	5	5	5	166	10
19-21	7	-1	93	119	5	5	5	17	3	4	4	4	128	7
19-20	12	1	85	101	9	6	6	15	3	4	5	4	110	1
19-19	14	13	133	155	9	12	10	25	4	6	5	7	143	1
19-18	35	31	125	134	21	22	18	35	5	13	7	14	160	11
19-17	39	35	150	144	26	14	13	27	4	8	11	9	142	1
19-16	28	25	138	103	18	12	10	23	3	7	7	7	188	2
19-15	26	23	153	176	16	15	12	31	5	9	7	10	198	1
19-14	10	-1	64	74	7	4	5	10	3	3	5	4	62	-1
19-13	5	5	23	12	4	3	2	3	-1	2	2	2	19	5
19-13-R	16	15	36	16	10	4	4	6	2	3	3	4	2	1
18-13	16	15	69	39	10	5	5	11	3	4	4	5	66	1
18-12	8	2	45	35	6	4	3	7	2	3	4	3	42	7
17-11	7	1	51	43	6	5	4	8	2	3	3	4	72	1
17-12	12	12	86	114	9	11	9	18	4	6	4	7	170	2
17-13	27	25	65	124	18	28	21	65	5	14	6	16	295	12
24-13 ORG	10	-1	42	35	6	5	4	8	3	4	3	4	66	1
24-14	6	6	70	15	4	5	5	12	3	4	3	4	54	7
24-15	18	17	53	56	12	9	8	27	3	6	5	6	123	1
23-14	18	16	58	99	12	9	8	19	4	6	5	6	121	1
23-15	15	14	81	25	10	7	6	13	3	5	4	5	73	9
23-16	41	38	109	120	25	30	23	39	6	16	7	18	127	15
23-17	40	36	67	121	24	34	22	62	6	19	8	21	317	15
22-18	13	-1	80	94	9	7	6	15	3	4	5	5	92	8
22-19	108	95	92	97	60	30	26	60	6	18	11	20	282	15
22-20	30	28	88	73	19	12	10	17	3	7	5	7	123	2
22-20-R	36	51	92	100	35	24	20	30	4	14	7	15	104	11
22-17	38	34	60	66	23	20	15	39	4	11	5	12	78	1
22-16	9	1	67	79	7	5	5	11	3	3	4	4	82	7
22-15	18	16	116	128	12	19	14	25	4	10	5	11	123	1
22-14	27	24	25	67	16	23	15	24	4	12	5	13	63	1
20-12	34	49	112	116	32	34	25	40	5	19	7	21	111	14
20-11	38	19	33	89	22	27	19	29	5	14	6	15	99	12

	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
20-10	40	36	36	87	24	28	21	56	5	15	7	16	226	11
20-9	31	29	40	34	19	5	4	8	2	4	5	4	54	8
20-8	10	9	39	25	7	4	4	7	2	3	3	4	41	7
21-8	8	8	16	19	6	4	3	1	-1	3	3	3	15	7
21-9	56	51	103	111	33	44	31	66	7	22	7	25	288	19
21-10	15	14	73	84	10	10	8	16	3	6	6	6	92	1
21-11	13	13	60	69	9	9	7	12	3	5	5	6	74	10
21-12	19	18	38	76	13	22	16	44	4	11	5	12	185	9
25-12	16	14	49	37	10	5	4	8	3	4	4	4	24	7
25-12-R	64	31	52	92	38	21	16	29	5	12	9	13	103	10
25-13	5	5	33	38	4	3	3	6	2	3	3	3	48	6
25-14	4	11	14	51	8	10	8	13	3	6	4	6	62	1
25-15	-1	2	25	42	7	4	4	8	3	3	5	3	95	-1
25-16	29	26	51	96	19	19	14	47	5	11	7	12	244	2
25-17	25	22	55	62	16	16	12	33	4	9	5	10	77	1
25-18	11	1	56	96	8	6	6	15	3	4	4	4	185	8
26-18	14	12	86	98	9	12	9	19	4	6	4	7	119	2
26-17	-1	7	36	64	6	7	7	26	3	5	4	5	144	1
26-16	7	7	51	59	6	4	4	8	3	3	4	3	55	6
26-15	5	5	26	31	4	4	4	2	2	3	3	3	71	6
26-14	-1	-1	31	36	5	4	4	6	2	3	3	3	41	7
26-13	3	-1	11	12	3	2	2	-1	2	2	3	2	-1	5
26-12	8	8	30	61	7	6	5	12	3	4	4	4	149	7
27-12	10	-1	97	44	7	4	4	13	3	3	4	3	81	6
27-13	86	42	31	65	52	21	14	38	4	11	11	12	81	2
27-13-R	54	28	34	67	34	15	10	16	3	8	9	9	61	2
27-14	17	15	77	141	11	9	9	28	5	6	6	7	348	-1
27-15 ORG	3	-1	8	7	2	2	2	4	-1	2	-1	2	29	5
27-16	6	-1	35	43	5	3	4	6	2	3	4	3	38	6
27-17	4	-1	42	55	3	3	4	8	2	3	3	3	61	6
27-18	6	5	24	32	5	3	3	2	2	3	3	3	38	6
28-17	8	8	46	48	6	4	4	8	2	4	3	4	67	1
28-16 ORG	14	1	22	21	8	7	6	16	3	6	4	7	131	2
28-15 ORG	3	2	6	6	2	2	2	3	-1	2	2	2	20	1
28-14	11	2	42	80	8	8	7	15	3	5	5	5	106	9
28-13	10	-1	34	31	8	6	5	7	4	5	6	6	61	1
28-12	9	9	41	50	8	7	7	2	5	5	6	6	116	1
22-12	3	9	55	57	7	6	6	9	3	5	4	5	44	10
22-11	11	12	50	61	10	10	8	12	7	7	7	8	136	18
22-10	12	11	40	50	9	9	8	11	6	7	6	8	98	15
22-9	-1	7	136	26	7	6	6	16	6	6	6	6	131	11
22-9-R	8	8	55	18	7	6	6	8	6	6	7	7	74	17
22-8	14	13	87	40	12	11	11	12	9	9	9	10	102	20
22-7	13	12	74	53	11	10	10	11	9	9	10	10	103	22
23-7	9	1	40	35	7	6	6	6	5	5	6	6	54	15
23-8	10	1	78	24	8	7	8	10	7	6	6	6	90	14
23-9	18	17	181	32	15	14	15	23	12	13	13	14	168	31
23-10	7	1	86	34	6	4	4	11	3	3	4	4	87	8
23-11	7	-1	84	61	5	5	5	13	3	4	3	4	125	7
23-12	6	6	66	17	5	4	4	9	2	3	3	3	63	6
24-11	8	-1	46	38	7	6	7	7	6	6	7	6	68	14
24-10	42	36	101	85	25	8	6	16	5	6	9	6	156	12
24-9	6	18	81	80	13	8	7	16	3	6	5	6	131	2
24-8	11	11	102	22	9	8	7	14	4	5	5	6	96	11
24-7	41	37	68	39	25	14	12	19	5	10	7	11	126	2
24-6	9	-1	102	103	7	6	6	14	4	5	5	5	155	1
25-6	10	9	111	52	7	6	6	16	3	4	4	5	124	-1
25-6-R	6	-1	85	49	5	4	4	12	3	3	3	3	100	7
25-7	8	1	94	74	6	5	5	13	3	4	4	4	123	1
25-8	6	6	33	35	5	4	4	3	2	3	3	3	19	7

	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
25-9	7	-1	98	68	5	4	4	12	3	3	4	3	88	7
25-10	7	7	72	50	5	5	5	10	3	4	4	4	80	7
25-11	1	6	37	46	5	6	5	8	3	4	3	4	45	1
26-11 ORG	-1	-1	9	11	3	2	2	-1	2	2	3	2	32	5
26-10	10	10	42	50	7	8	6	9	3	5	3	5	32	1
26-9	15	15	99	63	11	12	10	19	4	8	5	9	58	2
26-8	15	15	55	32	12	7	5	10	3	5	4	5	67	1
26-7	9	9	45	17	7	3	3	7	2	3	3	3	42	6
26-6	20	19	56	32	13	9	7	12	3	6	4	7	71	2
22-13	5	-1	44	25	3	3	3	6	2	2	3	3	48	6
24-12	8	1	58	23	6	4	4	9	3	3	3	4	63	7
17-14	5	-1	55	48	4	3	3	7	2	3	3	3	53	6
17-15	4	4	55	53	3	4	4	9	3	4	3	4	95	7
17-15-R	5	-1	69	57	4	4	4	9	3	3	3	3	80	7
17-16	15	3	102	14	10	7	7	17	3	6	4	6	81	10
17-17	22	11	78	57	14	7	6	13	3	5	4	5	79	1
17-18	-1	19	85	90	15	9	6	14	3	5	7	5	118	1
17-19	19	3	82	33	13	7	6	12	3	5	6	5	62	1
17-20	12	2	124	64	9	7	6	15	3	5	4	5	107	-1
17-21	8	8	106	109	6	5	5	12	3	3	4	3	112	7
16-21	10	9	76	92	7	7	7	13	3	5	4	5	65	1
16-20	17	17	106	129	13	17	13	22	4	9	5	10	96	2
16-19	4	4	23	20	3	2	2	3	2	2	2	2	18	5
16-18	12	11	72	70	9	6	5	12	3	4	5	4	104	8
16-17	12	11	96	24	9	5	5	13	3	4	4	4	78	8
16-16	9	3	37	62	10	4	6	9	3	4	4	5	88	9
16-15	5	5	42	33	5	3	3	6	2	3	3	3	44	6
16-14	6	6	53	66	5	6	5	9	3	4	3	4	41	1
16-14 DUP	9	9	87	70	7	7	7	13	3	5	4	5	107	1
16-14 DUP-R	7	7	44	28	5	4	4	8	2	3	3	3	55	7
16-13	6	-1	50	60	5	4	4	7	2	3	3	3	46	6
16-12	9	-1	18	10	6	3	3	4	2	2	3	3	24	6
LMB-QA	2	2	7	10	2	3	2	-1	2	2	2	2	20	5
LMB-QA	2	2	10	8	2	2	-1	-1	-1	2	2	-1	13	-1
LMB-QA	2	2	8	8	-1	-1	-1	-1	-1	2	2	-1	11	-1
LMB-QA	2	2	8	7	2	2	-1	-1	-1	2	2	-1	12	-1

	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
[illegible]														

	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
20-13 ORG	167	11	2	184	-1	8	8	7	287	10	2	1	316	16
20-14	772	37	37	940	7	23	80	29	1160	73	19	21	1380	44
20-15	596	28	42	720	7	24	43	28	616	36	20	21	732	20
20-16	316	18	9	390	5	12	16	18	504	17	-1	2	580	22
20-17	160	11	4	178	-1	8	10	11	224	10	8	10	254	12
20-17-R	156	11	2	172	5	7	9	11	201	10	7	10	220	11
20-18	192	13	4	213	5	9	15	14	277	15	10	11	308	14
20-19	212	12	4	227	-1	8	13	12	332	14	-1	11	368	17
20-20	222	14	5	265	6	11	16	13	304	16	10	11	358	15
21-20	760	29	9	928	6	15	38	22	1340	39	4	4	1490	54
21-19	235	13	3	253	5	8	12	13	390	14	-1	11	432	18
21-18	165	11	4	198	5	9	10	12	264	11	-1	1	294	14
21-17	174	11	3	187	5	8	12	11	212	12	9	9	238	12
21-16	210	13	5	240	5	10	12	21	296	12	10	15	337	14
21-15	374	20	5	428	5	11	21	18	524	21	15	14	580	21
21-15 DUP	656	31	18	756	6	13	29	30	1000	30	16	19	1120	37
21-14	57	7	2	62	5	7	6	10	59	5	-1	8	66	-1
18-14	508	24	17	596	6	12	27	22	800	29	14	3	900	32
18-15	142	9	9	161	-1	7	7	8	189	8	7	1	206	11
18-16	398	20	4	448	6	10	29	14	552	29	-1	12	640	22
18-17	290	16	2	315	5	8	11	15	412	12	9	11	448	17
18-17-R	256	15	3	302	-1	2	10	13	366	11	9	2	424	16
18-18	400	21	4	468	5	9	15	17	508	14	11	12	564	19
18-19	217	13	3	235	5	8	11	13	316	11	8	10	339	15
18-20	500	24	5	616	6	10	27	12	748	29	1	11	880	28
18-21	181	11	2	206	-1	7	9	10	275	11	7	9	309	14
21-21	313	17	3	367	5	2	11	16	412	12	9	12	436	17
20-21	188	12	2	199	-1	7	9	11	258	9	7	9	281	12
19-21	190	12	2	201	5	6	8	9	277	9	-1	8	297	14
19-20	166	11	2	182	-1	6	8	11	207	8	6	9	232	10
19-19	221	13	2	256	-1	9	9	9	281	10	7	8	297	13
19-18	238	15	2	262	6	7	12	9	316	13	9	9	341	15
19-17	221	14	3	246	5	9	9	16	237	9	9	12	256	11
19-16	184	12	2	196	5	7	8	12	198	8	7	10	215	10
19-15	281	15	2	305	5	7	11	13	391	12	-1	10	428	17
19-14	106	9	2	112	-1	6	6	9	122	6	6	7	136	5
19-13	19	5	6	20	-1	5	-1	5	24	4	5	6	24	-1
19-13-R	26	6	1	29	-1	5	5	6	31	5	6	6	32	-1
18-13	74	9	10	78	7	7	8	7	101	8	8	8	114	10
18-12	52	6	1	58	-1	6	6	9	81	6	6	1	90	4
17-11	76	8	1	83	-1	6	6	8	111	6	6	7	123	4
17-12	154	10	2	168	-1	6	8	8	202	9	7	1	214	11
17-13	274	15	3	318	-1	1	14	9	350	14	-1	2	394	14
24-13 ORG	56	7	7	59	-1	6	7	5	76	6	8	6	86	3
24-14	88	8	7	90	-1	5	7	6	111	6	6	6	119	8
24-15	111	9	2	125	-1	6	7	8	120	7	7	8	132	4
23-14	178	11	2	188	-1	9	8	9	222	9	7	9	240	11
23-15	84	8	2	91	5	6	6	5	88	6	6	6	95	7
23-16	202	13	2	216	5	8	14	9	252	14	10	9	276	12
23-17	275	16	2	306	-1	8	15	13	432	16	12	11	460	19
22-18	141	10	2	151	-1	7	8	10	188	8	7	10	205	10
22-19	259	15	4	288	5	12	17	13	342	17	-1	10	388	15
22-20	113	10	2	120	-1	7	7	8	112	7	-1	8	122	8
22-20-R	163	11	2	185	-1	8	11	9	177	9	-1	8	193	9
22-17	121	10	2	131	-1	7	9	8	139	8	7	8	154	9
22-16	130	10	2	149	-1	6	6	7	145	6	6	7	161	4
22-15	185	12	2	200	-1	7	9	8	204	9	7	8	222	10
22-14	99	9	2	107	-1	6	8	7	117	7	8	7	129	8
20-12	179	12	2	194	-1	7	13	8	225	12	9	8	241	12
20-11	152	11	2	163	5	7	11	8	211	11	8	8	231	12

	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
20-10	202	12	15	227	-1	13	12	10	317	14	12	2	350	16
20-9	54	7	2	55	-1	6	6	9	91	6	6	8	99	8
20-8	49	6	1	50	-1	5	6	6	84	6	6	7	87	8
21-8	30	6	1	31	-1	5	5	5	39	5	6	1	41	-1
21-9	261	16	2	280	-1	7	17	10	365	16	9	9	408	16
21-10	144	11	2	165	-1	6	7	9	138	7	7	2	86	3
21-11	118	10	2	132	-1	6	7	8	131	7	8	8	145	3
21-12	167	12	11	182	-1	7	9	8	225	10	-1	8	250	12
25-12	46	7	2	48	-1	6	6	9	59	5	6	7	64	7
25-12-R	158	12	3	177	5	9	11	17	273	12	9	12	297	15
25-13	50	6	7	49	5	5	5	6	63	5	5	6	69	-1
25-14	94	8	8	99	-1	6	7	6	100	6	6	6	106	3
25-15	87	9	2	92	-1	9	6	10	121	6	-1	8	125	9
25-16	215	14	2	219	5	7	10	12	272	10	8	11	290	13
25-17	116	9	1	124	-1	8	8	10	160	8	9	9	172	10
25-18	161	10	1	162	-1	6	8	9	234	9	7	8	257	13
26-18	168	11	1	177	-1	6	9	8	242	10	6	1	260	13
26-17	137	12	9	164	-1	6	6	8	116	5	6	8	124	-1
26-16	83	8	1	86	-1	6	6	7	90	6	6	7	97	3
26-15	64	7	1	67	-1	6	6	6	79	6	6	1	85	3
26-14	64	7	1	68	5	6	6	7	91	6	5	7	99	4
26-13	20	5	6	21	-1	5	5	5	28	4	-1	6	30	-1
26-12	134	10	1	156	-1	6	7	8	140	7	-1	1	154	8
27-12	97	8	2	102	-1	6	7	9	144	7	6	8	152	10
27-13	130	10	5	149	-1	9	9	15	214	10	-1	11	239	12
27-13-R	105	9	3	124	-1	8	7	13	163	8	8	10	179	8
27-14	314	16	2	344	-1	8	11	12	476	13	9	10	512	20
27-15 ORG	25	5	8	28	-1	6	5	5	45	5	9	6	53	7
27-16	62	7	9	68	-1	7	6	6	72	5	8	7	79	7
27-17	91	8	1	103	-1	6	6	7	111	6	-1	7	124	8
27-18	59	7	1	62	-1	6	6	6	71	5	6	7	78	7
28-17	66	7	1	67	-1	6	6	7	85	6	6	7	92	4
28-16 ORG	73	9	9	165	6	7	13	6	278	15	8	7	344	15
28-15 ORG	17	5	8	18	-1	6	-1	5	29	4	7	-1	32	-1
28-14	155	11	1	171	-1	7	8	9	294	10	7	9	305	16
28-13	61	11	2	65	9	10	10	10	97	8	6	14	107	13
28-12	108	14	2	111	10	10	11	9	132	10	11	13	138	13
22-12	80	10	9	89	7	7	7	7	75	7	8	8	82	8
22-11	124	18	17	120	13	13	14	13	187	16	16	16	198	20
22-10	90	14	14	88	12	12	13	10	107	11	12	12	111	14
22-9	132	13	2	138	9	10	10	9	149	10	10	11	164	13
22-9-R	76	18	18	74	2	15	16	13	99	15	17	18	101	19
22-8	107	21	22	108	2	18	19	15	125	16	19	19	131	21
22-7	107	23	4	110	21	21	21	17	141	20	23	23	148	26
23-7	58	15	15	62	14	13	13	11	84	13	14	14	89	16
23-8	94	16	16	100	14	15	16	14	133	15	15	16	139	20
23-9	192	33	4	193	28	27	29	23	214	27	30	30	229	35
23-10	88	9	1	92	6	7	7	7	94	6	7	8	101	8
23-11	116	9	1	126	-1	6	7	7	150	7	6	7	165	10
23-12	68	7	1	72	-1	6	6	6	82	6	6	7	90	4
24-11	69	14	15	72	13	14	14	12	82	13	15	15	87	17
24-10	136	14	3	150	9	11	12	18	242	12	1	14	261	18
24-9	128	10	2	132	5	6	9	9	208	9	7	8	228	12
24-8	105	11	2	113	8	9	10	10	136	9	9	1	150	12
24-7	117	13	3	130	9	11	13	13	190	13	11	2	215	15
24-6	138	12	11	152	7	8	9	9	180	9	9	1	190	12
25-6	132	10	1	141	6	7	8	8	173	8	7	9	190	11
25-6-R	108	9	1	116	6	6	7	7	144	7	6	7	154	9
25-7	124	9	9	135	-1	6	7	9	153	7	8	1	170	9
25-8	39	6	7	43	-1	5	5	6	38	5	6	6	41	6

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25-9	93	9	1	97	5	6	6	7	93	6	6	7	104	3
25-10	83	8	8	91	-1	6	7	6	88	6	7	7	99	8
25-11	71	8	7	75	-1	5	6	6	78	6	6	7	85	7
26-11 ORG	30	6	14	32	-1	6	6	5	71	6	7	6	75	8
26-10	58	7	1	62	-1	5	6	7	76	6	6	1	81	3
26-9	109	10	1	118	5	6	8	8	113	8	8	8	129	7
26-8	61	8	2	66	6	7	7	8	78	6	7	1	86	8
26-7	45	6	1	48	5	6	6	6	58	5	6	7	63	7
26-6	69	7	1	72	-1	7	7	7	91	6	7	7	96	8
22-13	50	6	8	56	-1	12	6	6	81	6	10	7	85	9
24-12	67	7	8	71	5	6	6	7	81	6	6	7	88	8
17-14	61	7	7	64	5	6	6	6	68	5	6	6	73	7
17-15	80	8	7	82	-1	6	7	7	136	7	7	1	146	10
17-15-R	72	7	8	73	5	6	7	8	99	7	7	7	104	9
17-16	87	9	2	90	-1	6	7	8	124	7	8	8	136	9
17-17	80	9	2	84	5	7	7	9	100	7	7	8	114	8
17-18	116	9	2	121	5	7	7	14	142	7	7	11	156	10
17-19	76	9	3	80	6	7	7	10	98	7	7	9	109	9
17-20	116	9	2	116	6	7	8	8	162	8	7	1	174	10
17-21	108	10	8	119	5	6	6	7	86	5	6	7	89	6
16-21	115	10	9	131	5	6	7	6	130	7	6	7	146	8
16-20	190	13	2	222	5	7	10	10	251	11	8	9	280	12
16-19	18	6	-1	21	-1	5	5	6	26	4	-1	6	28	-1
16-18	110	9	2	116	-1	6	7	9	154	7	6	8	168	10
16-17	87	9	2	90	5	6	7	9	107	7	6	8	118	9
16-16	95	9	3	113	5	7	7	7	113	7	1	1	135	9
16-15	47	7	7	48	-1	6	6	6	62	6	6	7	66	6
16-14	76	8	8	85	5	6	6	7	88	6	6	1	94	3
16-14 DUP	93	8	1	100	5	6	7	6	104	7	7	7	114	8
16-14 DUP-R	54	7	7	60	-1	6	6	6	67	6	6	6	73	7
16-13	57	7	1	61	-1	6	6	8	102	6	-1	7	107	9
16-12	28	6	7	32	-1	6	6	6	51	5	6	6	58	7
LMB-QA	4	1	5	21	5	5	-1	5	42	5	5	6	48	-1
LMB-QA	12	5	1	14	-1	-1	-1	4	29	-1	-1	5	32	-1
LMB-QA	11	5	5	12	-1	-1	-1	4	26	-1	-1	-1	26	-1
LMB-QA	2	5	5	13	-1	-1	-1	5	26	4	1	5	28	-1

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20-13 ORG	8	8	7	5	2	8	34	6	6	19	21	228	20	22
20-14	21	20	19	78	8	69	172	37	9	34	350	1190	33	70
20-15	20	19	15	58	7	70	420	16	8	35	203	840	30	12
20-16	14	13	9	11	6	18	94	9	6	24	43	393	25	29
20-17	10	9	7	8	4	14	54	6	5	20	31	218	4	5
20-17-R	9	9	7	7	3	13	44	6	6	19	26	196	20	24
20-18	10	10	8	13	4	18	94	8	6	22	54	267	21	6
20-19	11	10	8	11	2	14	69	7	6	21	39	263	19	25
20-20	11	10	8	13	4	18	101	8	6	22	58	299	22	26
21-20	17	15	14	24	6	31	148	19	9	29	119	968	31	50
21-19	11	11	8	9	2	15	63	7	6	21	35	291	21	25
21-18	10	10	7	7	4	14	54	7	6	20	34	254	19	3
21-17	9	8	7	10	3	14	68	6	6	20	40	249	4	24
21-16	14	14	8	9	6	19	74	7	6	22	36	316	21	7
21-15	14	13	10	17	5	19	135	9	6	24	63	480	26	35
21-15 DUP	19	17	13	21	7	30	212	16	8	26	83	936	34	12
21-14	9	8	6	5	3	11	21	4	5	20	19	97	17	20
18-14	15	13	13	24	5	32	205	15	7	28	103	720	29	8
18-15	8	7	7	5	3	8	30	5	5	20	21	174	19	22
18-16	12	11	11	29	4	25	217	14	7	24	121	588	27	40
18-17	11	10	9	8	4	14	73	7	6	22	33	420	26	6
18-17-R	11	10	8	6	4	13	58	6	6	21	24	381	24	25
18-18	12	11	10	11	5	16	98	8	7	22	42	512	25	30
18-19	10	10	8	8	3	13	57	7	6	21	29	280	22	5
18-20	2	10	13	24	4	20	58	16	8	24	114	768	28	43
18-21	9	9	7	7	3	10	45	6	6	19	24	232	20	4
21-21	12	11	8	7	4	15	68	7	6	22	29	408	24	5
20-21	9	9	7	6	3	11	43	6	6	20	24	265	21	5
19-21	8	8	7	5	3	8	37	6	6	19	21	251	22	24
19-20	9	8	7	6	1	9	36	5	5	19	24	244	20	22
19-19	8	8	7	7	2	10	44	6	6	20	25	264	21	23
19-18	9	8	8	12	1	13	73	8	6	20	43	306	21	26
19-17	12	11	8	8	4	17	53	6	6	22	29	294	24	4
19-16	10	9	7	6	3	11	44	6	6	19	25	238	21	5
19-15	10	9	8	8	3	12	59	6	6	21	28	342	22	5
19-14	7	7	6	5	3	9	22	4	5	18	15	138	19	2
19-13	6	6	-1	3	1	6	7	4	-1	17	14	44	17	-1
19-13-R	6	6	5	4	7	7	10	4	-1	17	15	53	-1	-1
18-13	8	8	7	6	9	9	27	6	7	22	23	128	24	25
18-12	7	7	5	4	3	7	15	4	5	17	18	93	18	4
17-11	7	7	6	4	2	7	20	4	-1	17	16	133	18	19
17-12	8	7	6	6	3	9	32	5	5	18	21	178	19	21
17-13	9	9	8	11	3	12	81	7	6	19	42	355	23	25
24-13 ORG	6	6	5	5	7	-1	19	4	5	17	17	90	18	19
24-14	6	6	6	4	2	7	18	4	5	17	16	104	18	19
24-15	7	7	6	6	2	9	30	4	5	18	20	140	18	4
23-14	9	8	7	6	3	9	37	5	5	18	24	204	20	5
23-15	6	6	6	5	2	8	22	4	-1	18	17	106	18	18
23-16	8	8	8	12	3	12	84	7	6	20	46	281	23	25
23-17	11	11	8	12	4	13	90	8	6	19	48	372	23	27
22-18	9	9	6	5	3	10	31	5	5	19	19	177	19	21
22-19	10	9	9	15	3	17	108	9	6	21	60	344	22	6
22-20	8	7	6	6	2	9	31	5	5	19	22	142	19	4
22-20-R	8	8	7	9	2	11	55	5	5	19	30	207	19	23
22-17	8	7	6	7	2	9	39	5	5	18	22	148	19	4
22-16	7	7	6	5	2	7	27	4	5	17	17	182	21	20
22-15	8	7	7	8	3	9	48	5	5	19	25	241	22	22
22-14	7	7	6	7	2	8	34	5	5	18	21	128	18	19
20-12	8	8	8	13	3	12	76	7	5	19	43	240	21	5
20-11	7	7	8	10	2	11	66	7	5	19	40	222	20	23

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20-10	9	8	8	10	2	12	71	7	6	19	38	263	22	26
20-9	8	8	6	5	-1	9	23	5	5	18	22	121	17	20
20-8	6	6	5	4	2	7	16	4	-1	18	16	86	-1	18
21-8	6	6	5	4	6	6	12	4	-1	17	16	69	-1	17
21-9	9	8	8	14	3	12	101	8	6	20	59	342	22	6
21-10	8	8	7	6	2	10	37	5	5	18	23	217	21	4
21-11	7	7	6	6	2	8	32	5	5	18	21	182	4	22
21-12	8	7	7	7	3	9	44	6	5	19	24	208	20	21
25-12	7	7	5	4	2	8	13	4	-1	19	16	70	17	4
25-12-R	12	11	7	9	4	15	60	7	5	19	33	225	20	24
25-13	6	6	5	4	-1	7	12	4	5	17	16	86	3	17
25-14	6	6	6	6	7	7	24	5	5	18	20	117	19	20
25-15	8	8	6	4	3	9	18	4	5	17	15	112	17	20
25-16	10	10	8	8	1	11	50	6	6	19	27	272	21	24
25-17	9	8	7	6	3	9	32	5	5	18	22	144	18	4
25-18	8	8	7	6	1	8	34	6	5	19	25	204	19	23
26-18	8	7	7	6	2	8	41	6	5	19	23	223	20	4
26-17	8	7	6	6	2	8	30	4	5	18	19	193	20	20
26-16	7	7	6	4	2	7	17	4	-1	17	14	110	19	18
26-15	6	6	6	4	2	7	14	4	-1	17	14	92	18	18
26-14	7	7	6	4	2	7	16	4	-1	17	15	95	18	19
26-13	6	6	5	3	7	6	7	-1	-1	16	13	47	17	4
26-12	7	7	6	5	2	8	28	5	5	18	19	182	20	20
27-12	8	7	6	4	2	8	21	5	-1	18	18	144	18	4
27-13	11	10	7	7	4	14	48	6	6	19	30	218	19	4
27-13-R	10	9	7	5	3	12	35	5	6	19	22	169	19	21
27-14	9	9	9	7	3	11	64	7	6	19	30	396	24	28
27-15 ORG	6	6	6	4	2	1	13	4	5	17	14	68	-1	17
27-16	7	7	6	4	2	7	16	4	-1	18	16	94	18	18
27-17	7	6	6	4	2	7	19	4	-1	18	16	140	19	20
27-18	7	7	5	4	2	7	14	4	5	17	16	84	4	4
28-17	7	7	6	4	2	7	19	4	5	18	19	97	18	3
28-16 ORG	7	7	9	11	2	10	91	10	6	19	63	384	22	32
28-15 ORG	6	6	5	4	6	18	9	-1	5	17	13	49	-1	17
28-14	8	8	7	5	2	9	40	6	5	19	26	233	21	23
28-13	14	8	7	4	2	7	21	7	19	58	31	124	42	47
28-12	14	13	12	8	14	14	23	8	10	33	21	165	40	37
22-12	8	8	7	6	2	8	22	5	6	21	24	126	22	3
22-11	15	15	13	10	1	15	26	11	12	39	33	181	40	42
22-10	12	12	11	9	12	13	23	10	12	39	34	138	38	40
22-9	11	11	11	7	3	12	24	8	10	32	28	183	34	35
22-9-R	18	17	17	11	1	18	18	13	14	44	40	148	49	49
22-8	20	20	19	13	23	21	25	15	21	72	70	178	68	67
22-7	23	23	22	14	5	24	27	18	22	70	45	196	76	75
23-7	14	13	13	8	3	13	17	9	11	36	26	121	40	39
23-8	16	16	15	10	18	17	23	13	18	63	52	177	58	58
23-9	28	23	22	12	8	14	33	10	12	40	33	232	42	43
23-10	8	7	6	5	2	8	19	5	6	19	18	126	21	22
23-11	7	7	6	5	2	7	26	5	5	18	19	160	19	19
23-12	7	6	5	4	2	7	15	4	5	18	16	101	4	18
24-11	15	14	14	9	16	14	16	9	12	38	27	122	40	38
24-10	14	13	9	6	4	16	33	8	8	26	24	193	28	5
24-9	8	7	7	7	1	10	43	6	5	20	30	222	21	4
24-8	10	9	8	6	3	9	23	6	6	24	19	147	24	24
24-7	12	11	10	10	3	14	50	9	8	30	40	210	31	34
24-6	9	9	8	6	3	10	31	6	7	23	27	200	24	3
25-6	9	8	8	6	3	9	28	6	6	23	21	190	23	24
25-6-R	7	7	6	4	2	7	22	5	5	19	17	155	19	20
25-7	8	7	7	5	2	8	29	5	5	18	19	198	21	21
25-8	6	6	5	4	7	7	13	4	-1	18	16	76	18	4

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25-9	7	7	6	4	2	8	20	4	5	18	17	146	20	4
25-10	7	7	6	5	2	8	21	5	5	19	19	122	20	21
25-11	7	6	6	5	2	7	19	5	5	17	16	106	19	19
26-11 ORG	6	6	5	4	1	7	11	4	5	17	15	76	17	18
26-10	7	6	6	5	7	7	20	4	5	18	18	100	-1	19
26-9	7	7	7	7	2	9	40	5	5	19	26	166	20	21
26-8	8	7	6	5	3	8	18	5	5	19	18	98	19	20
26-7	7	6	6	4	2	7	14	4	5	18	16	92	18	19
26-6	7	7	6	6	-1	8	24	5	5	19	21	104	17	4
22-13	7	6	5	4	2	7	12	4	5	19	14	78	18	19
24-12	7	6	6	4	2	7	15	4	5	20	16	104	19	19
17-14	6	6	6	4	-1	6	14	4	-1	17	16	106	18	4
17-15	7	7	6	5	-1	7	18	5	5	18	17	128	3	5
17-15-R	7	7	6	4	2	7	15	5	5	20	16	100	19	21
17-16	8	7	6	5	2	8	28	5	5	19	22	149	18	22
17-17	8	8	6	5	3	9	28	5	6	19	24	143	19	4
17-18	10	10	6	5	4	10	28	5	6	21	19	185	21	4
17-19	9	8	7	5	3	9	24	5	6	20	18	132	20	3
17-20	8	8	7	6	1	9	29	6	6	20	22	176	20	23
17-21	7	7	6	5	8	8	22	4	6	19	19	153	21	21
16-21	7	7	6	5	2	7	26	5	5	19	20	152	21	20
16-20	9	8	8	8	3	10	58	6	6	21	33	305	24	26
16-19	6	6	5	4	2	6	7	4	5	17	13	50	-1	3
16-18	8	8	7	5	3	9	28	5	5	18	19	186	21	4
16-17	8	8	6	4	3	8	22	5	6	20	19	139	4	22
16-16	8	8	6	5	3	9	24	5	5	19	20	135	20	20
16-15	7	7	5	4	1	7	14	5	5	18	18	96	18	19
16-14	7	6	6	4	2	7	18	5	5	18	18	114	18	4
16-14 DUP	7	6	6	5	7	7	23	5	5	18	21	126	18	4
16-14 DUP-R	6	6	5	4	2	7	15	4	-1	19	16	90	18	18
16-13	7	7	5	4	2	7	17	5	5	18	18	105	18	19
16-12	6	6	5	4	2	7	17	5	-1	17	20	78	18	19
LMB-QA	6	6	5	3	7	6	8	-1	5	17	14	61	-1	17
LMB-QA	5	5	-1	3	2	5	-1	-1	-1	-1	11	38	-1	4
LMB-QA	-1	5	-1	3	6	-1	-1	-1	-1	-1	12	34	-1	-1
LMB-QA	5	5	-1	3	2	5	-1	-1	-1	17	13	36	-1	-1

	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

	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
20-13 ORG	217	26	29	13	384	17	309	20	23	18	22	24	12	22
20-14	1160	70	103	56	1740	37	1620	49	53	90	57	57	79	46
20-15	844	82	97	34	1570	39	1320	29	55	72	58	56	85	44
20-16	379	43	50	16	692	25	528	22	37	27	41	4	19	32
20-17	213	33	37	13	404	21	340	20	30	24	31	26	18	26
20-17-R	196	31	34	12	376	21	305	17	29	23	30	27	15	24
20-18	269	38	42	15	436	24	385	19	31	28	32	29	21	26
20-19	248	34	37	14	424	19	342	19	27	22	29	30	14	25
20-20	297	37	42	17	596	20	424	21	30	27	31	30	20	27
21-20	940	55	86	29	1660	28	1310	33	38	44	39	52	33	31
21-19	281	35	41	15	436	22	371	19	30	22	30	4	16	24
21-18	238	34	38	13	404	21	330	18	30	21	31	28	14	25
21-17	261	32	34	13	472	21	404	19	27	24	27	25	17	22
21-16	328	44	54	14	780	28	612	21	42	26	46	35	20	33
21-15	468	46	50	17	708	26	616	22	38	30	42	34	24	32
21-15 DUP	856	70	79	25	1150	31	1010	27	46	38	49	52	31	38
21-14	106	27	31	11	286	18	198	16	24	19	23	23	12	21
18-14	680	66	76	24	980	28	896	27	38	44	40	49	34	33
18-15	170	26	28	12	318	19	276	17	23	20	22	24	12	20
18-16	568	50	54	27	808	24	732	27	31	44	31	35	34	27
18-17	424	36	40	14	740	23	636	21	30	25	31	32	16	24
18-17-R	379	36	40	14	764	4	564	21	30	23	31	30	16	26
18-18	472	41	46	16	696	25	588	21	32	29	32	35	22	27
18-19	264	33	35	13	336	21	316	18	27	22	28	26	18	22
18-20	740	32	55	30	1310	23	1110	35	31	40	32	6	28	26
18-21	218	30	34	12	378	19	306	18	24	21	24	25	16	20
21-21	383	41	46	14	576	23	476	19	30	25	32	35	17	26
20-21	265	31	34	13	524	19	420	19	26	20	26	26	12	22
19-21	245	28	29	12	408	18	349	17	23	20	23	23	11	20
19-20	236	27	29	12	369	18	311	17	25	18	26	24	10	22
19-19	250	27	29	12	385	17	316	17	23	19	23	24	12	21
19-18	276	31	34	16	388	18	328	19	26	24	25	26	17	23
19-17	276	36	40	14	460	26	400	19	35	25	35	31	17	28
19-16	245	28	31	12	536	21	436	18	28	21	28	25	16	23
19-15	317	34	38	13	452	20	404	18	26	22	27	30	15	23
19-14	138	25	28	11	287	19	230	16	23	18	23	22	12	21
19-13	47	-1	19	-1	117	16	96	-1	18	17	17	18	10	17
19-13-R	58	-1	19	-1	139	16	115	-1	18	17	17	19	10	16
18-13	131	29	29	13	292	21	236	20	25	21	24	24	15	21
18-12	98	22	24	11	250	17	188	16	22	17	21	21	10	19
17-11	136	23	23	10	282	17	222	16	21	18	20	21	11	18
17-12	172	24	25	11	276	17	218	16	21	19	20	22	12	18
17-13	318	30	33	16	360	19	314	18	24	23	23	25	16	21
24-13 ORG	95	21	23	11	202	16	174	17	18	17	17	19	11	17
24-14	107	22	24	10	199	17	170	16	20	19	18	22	11	17
24-15	130	26	29	11	165	16	139	16	20	18	19	21	12	19
23-14	191	27	29	13	262	17	222	16	23	18	23	24	12	19
23-15	106	20	21	11	241	17	197	16	20	18	19	19	12	17
23-16	288	32	33	15	452	19	395	18	23	24	23	24	20	19
23-17	341	34	38	16	432	19	386	19	27	22	27	28	17	22
22-18	170	27	29	11	292	19	250	17	24	19	23	4	14	19
22-19	322	38	43	18	361	23	344	19	28	28	28	30	21	25
22-20	150	24	25	11	323	18	269	16	21	19	21	23	13	20
22-20-R	193	27	29	12	266	18	240	17	22	21	21	22	15	19
22-17	141	25	28	12	208	17	188	-1	21	20	21	22	13	19
22-16	175	22	23	11	252	17	220	16	21	18	20	21	12	19
22-15	233	26	28	12	354	18	316	17	22	20	22	3	14	19
22-14	124	22	23	11	200	17	178	16	20	18	20	20	12	18
20-12	243	29	31	14	420	18	362	18	23	24	22	4	17	20
20-11	225	27	28	14	354	18	320	18	22	23	22	22	15	19

	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
20-10	245	31	30	14	316	19	295	19	23	23	23	4	17	20
20-9	123	24	25	11	263	17	219	17	22	17	22	21	10	20
20-8	92	21	22	10	239	16	184	16	19	17	18	20	11	18
21-8	64	19	20	11	111	15	94	-1	19	16	17	18	9	17
21-9	322	31	34	18	396	18	360	19	23	25	23	25	16	20
21-10	202	25	27	12	262	18	230	-1	23	20	22	22	13	20
21-11	178	24	26	11	279	18	231	16	23	17	23	22	11	20
21-12	192	26	27	12	256	18	230	17	22	19	21	23	14	19
25-12	74	23	25	10	158	16	125	16	21	16	20	20	10	19
25-12-R	221	36	41	14	360	22	310	18	28	24	28	27	17	23
25-13	87	20	21	10	157	15	129	15	19	16	19	18	8	18
25-14	111	22	22	11	145	16	132	15	19	18	19	20	11	17
25-15	107	23	24	11	148	18	138	-1	23	18	22	21	11	20
25-16	234	32	35	14	265	19	231	16	27	19	28	24	12	24
25-17	133	25	27	11	191	18	175	16	23	19	23	23	13	20
25-18	200	27	29	12	289	17	250	16	22	18	22	23	11	20
26-18	224	26	28	12	338	18	310	17	23	20	23	22	12	19
26-17	172	25	26	11	161	17	154	-1	21	19	20	23	13	19
26-16	106	20	22	10	182	17	157	16	23	17	22	19	10	19
26-15	85	20	22	10	120	17	110	-1	20	17	19	20	10	18
26-14	88	22	23	10	144	17	124	-1	20	17	19	20	11	18
26-13	45	-1	19	9	79	16	68	-1	18	16	17	19	10	18
26-12	164	25	26	11	175	17	157	15	20	18	20	23	12	19
27-12	154	23	26	10	398	17	281	16	21	18	21	22	11	18
27-13	199	34	39	13	271	19	230	17	25	20	26	27	14	23
27-13-R	164	29	33	13	263	19	215	-1	24	19	23	24	13	21
27-14	354	35	38	14	468	19	424	19	25	22	25	28	15	22
27-15 ORG	65	18	20	10	101	16	94	-1	18	16	16	18	10	16
27-16	95	21	22	10	154	17	129	15	21	16	20	19	10	18
27-17	135	22	23	11	231	16	186	16	20	16	19	19	10	18
27-18	81	20	22	11	126	16	106	-1	20	16	20	19	10	18
28-17	104	24	26	11	232	16	186	16	21	16	20	20	10	18
28-16 ORG	394	39	43	22	772	17	756	38	20	27	19	25	15	18
28-15 ORG	44	18	19	10	68	15	64	-1	18	14	16	18	9	16
28-14	225	29	31	12	343	19	312	19	23	20	23	24	13	20
28-13	145	67	67	33	253	36	203	36	3	33	41	41	23	43
28-12	155	38	36	18	184	24	167	22	28	24	27	28	14	31
22-12	120	26	28	14	252	27	198	24	31	25	26	26	16	21
22-11	166	46	48	25	241	34	207	35	40	31	36	42	22	33
22-10	132	43	43	22	195	33	165	31	38	30	35	42	20	32
22-9	183	38	41	20	394	32	279	33	38	30	36	40	21	33
22-9-R	142	50	50	28	271	49	216	50	4	42	52	54	29	40
22-8	182	73	76	42	334	84	291	78	94	75	86	101	54	65
22-7	188	76	78	42	245	59	217	60	68	52	60	67	38	68
23-7	122	40	40	21	258	32	214	30	35	29	32	38	20	31
23-8	180	65	66	40	352	56	288	59	68	49	64	68	31	62
23-9	236	46	49	25	424	37	356	36	43	36	39	45	25	34
23-10	131	24	25	12	263	19	196	18	23	20	22	23	12	20
23-11	156	23	25	12	312	17	254	17	21	19	20	21	11	18
23-12	110	21	23	11	321	17	212	16	20	18	19	20	12	18
24-11	120	41	44	24	219	36	190	38	42	33	40	39	22	35
24-10	188	43	50	15	424	28	352	24	35	28	33	43	18	29
24-9	223	30	33	14	504	18	362	19	23	22	22	25	14	20
24-8	154	27	30	14	318	21	302	20	25	21	23	25	13	22
24-7	209	41	45	19	496	32	395	31	2	34	35	39	25	43
24-6	199	29	34	16	428	22	322	22	28	22	27	29	14	25
25-6	200	29	31	14	556	24	412	27	31	24	30	26	15	23
25-6-R	160	24	26	12	420	19	296	18	22	20	21	22	12	19
25-7	198	25	28	12	444	20	342	17	24	19	23	23	13	20
25-8	77	20	22	10	157	17	126	-1	20	18	19	3	11	17

	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
25-9	150	24	27	11	364	4	241	17	23	20	23	22	14	21
25-10	124	24	25	11	293	19	230	17	23	20	21	21	14	19
25-11	98	23	26	11	180	17	147	-1	21	18	19	20	12	18
26-11 ORG	74	20	22	11	161	16	142	17	20	16	19	20	13	18
26-10	104	22	23	10	199	17	166	16	20	18	19	19	11	18
26-9	174	25	28	12	396	18	300	16	22	21	21	4	15	20
26-8	102	27	32	11	262	17	175	18	22	17	21	22	11	19
26-7	99	22	24	11	301	18	199	17	21	18	20	21	11	19
26-6	112	26	30	10	274	17	195	16	21	18	20	21	11	18
22-13	83	21	23	11	166	16	134	16	20	17	18	20	10	18
24-12	110	22	24	11	295	17	197	17	21	16	20	21	11	18
17-14	102	22	22	11	236	16	185	16	21	17	20	20	9	18
17-15	130	25	28	12	360	17	274	18	23	20	22	23	11	19
17-15-R	110	24	26	10	234	19	204	17	23	20	22	22	11	19
17-16	164	26	29	13	436	17	374	20	22	19	21	22	12	19
17-17	154	30	35	12	468	18	334	19	24	20	23	25	13	22
17-18	185	29	34	12	428	19	340	18	25	18	25	25	13	21
17-19	142	28	30	12	375	20	298	18	24	22	22	25	15	21
17-20	183	26	29	13	404	18	330	19	24	19	23	23	12	21
17-21	160	23	25	13	312	17	280	17	21	18	20	22	11	19
16-21	158	23	24	12	311	17	234	17	22	18	20	22	11	18
16-20	296	34	39	15	516	19	397	18	24	22	23	26	14	22
16-19	56	19	20	10	200	16	147	16	19	17	18	19	10	17
16-18	187	26	28	12	397	19	322	17	23	19	22	3	12	20
16-17	148	26	29	12	341	19	268	18	22	19	22	25	13	20
16-16	142	23	26	13	375	17	220	18	22	18	21	23	12	20
16-15	102	21	23	11	290	17	192	16	21	17	21	21	10	20
16-14	116	22	24	11	252	16	185	15	21	17	20	20	9	18
16-14 DUP	135	22	24	12	362	17	269	17	22	18	21	21	11	20
16-14 DUP-R	97	20	22	11	290	17	200	16	20	18	20	20	12	18
16-13	104	23	25	10	246	17	208	16	21	18	20	21	12	18
16-12	83	22	24	11	241	17	192	17	19	19	17	20	11	17
LMB-QA	67	18	20	-1	234	15	181	18	19	16	17	19	9	17
LMB-QA	39	-1	18	-1	109	15	94	16	17	16	16	17	9	16
LMB-QA	35	-1	17	-1	90	15	83	-1	18	16	16	-1	9	16
LMB-QA	39	18	18	-1	100	16	86	16	18	16	17	18	10	16

	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

	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
20-13 ORG	25	16	14	20	19	288	41	50	41	37	42	44	41	39
20-14	49	44	52	61	33	1890	97	294	68	53	105	98	57	62
20-15	44	44	46	52	39	1480	70	183	80	57	90	89	61	64
20-16	33	22	18	25	25	536	53	78	54	42	58	56	47	52
20-17	27	20	17	21	20	322	42	60	44	39	48	50	43	42
20-17-R	26	19	16	21	21	320	42	59	44	39	48	48	43	42
20-18	28	21	18	25	22	392	43	73	46	40	50	52	44	42
20-19	27	17	17	21	21	346	46	60	45	37	47	49	41	44
20-20	30	20	19	23	23	464	46	77	49	39	52	51	42	44
21-20	34	30	28	36	31	1360	90	155	64	51	91	88	54	54
21-19	27	18	17	22	22	380	45	64	48	39	50	51	44	44
21-18	28	18	17	20	22	333	45	60	46	38	48	50	43	45
21-17	24	19	18	21	20	390	42	61	43	43	52	52	44	44
21-16	36	21	18	22	28	668	49	70	60	46	59	60	48	50
21-15	35	22	19	24	26	584	50	82	52	44	59	59	48	48
21-15 DUP	41	26	25	29	29	988	72	131	60	46	78	76	50	54
21-14	24	16	15	18	20	236	36	43	42	37	42	42	41	41
18-14	34	27	24	31	26	880	62	126	55	46	68	69	50	51
18-15	20	18	14	18	19	258	40	48	40	36	42	42	39	42
18-16	29	24	25	30	22	748	54	126	49	40	61	62	44	46
18-17	27	20	18	22	23	612	52	64	48	42	54	54	44	47
18-17-R	27	20	15	20	25	620	53	60	54	40	53	55	43	49
18-18	29	21	18	23	23	568	50	75	49	41	55	56	45	47
18-19	24	19	15	20	20	276	41	57	44	38	43	45	41	41
18-20	28	24	24	30	24	1070	73	153	53	42	72	73	46	49
18-21	23	18	15	20	20	289	42	54	43	35	44	44	39	40
21-21	28	20	17	21	22	456	48	62	47	41	51	52	44	45
20-21	25	18	15	19	21	424	47	56	46	38	44	45	41	43
19-21	21	18	14	17	19	297	43	50	42	35	41	42	39	41
19-20	25	16	14	18	20	306	40	51	43	35	43	43	38	39
19-19	23	16	16	19	19	312	40	53	40	35	42	43	38	40
19-18	25	19	19	21	21	310	42	65	45	38	46	46	40	42
19-17	29	22	18	22	24	395	46	59	52	44	52	52	49	49
19-16	24	19	15	18	23	480	43	52	50	39	45	47	41	47
19-15	24	18	15	19	20	378	43	58	43	35	46	46	40	42
19-14	23	15	14	17	19	228	38	41	42	35	39	40	39	39
19-13	18	16	12	15	16	98	33	36	36	33	35	37	37	38
19-13-R	19	15	13	15	17	124	33	37	36	32	33	35	36	37
18-13	22	20	16	21	22	236	44	51	48	43	47	49	46	49
18-12	21	16	14	16	19	204	36	42	41	34	38	39	37	39
17-11	20	16	14	17	18	239	37	42	40	33	39	40	37	37
17-12	20	17	15	17	18	208	38	45	37	34	38	40	37	37
17-13	23	18	17	20	18	341	43	69	41	34	45	46	38	40
24-13 ORG	18	16	13	16	16	163	35	42	36	33	37	38	36	38
24-14	18	16	14	17	17	164	35	42	36	32	36	36	35	38
24-15	22	16	14	17	17	156	34	43	37	34	38	39	38	37
23-14	22	16	15	18	19	226	39	46	40	34	41	42	38	38
23-15	19	16	14	16	17	188	34	42	38	33	37	37	36	37
23-16	20	19	17	21	20	367	40	63	42	35	44	44	39	40
23-17	26	19	18	21	19	361	44	65	40	36	44	46	40	40
22-18	20	18	14	17	20	238	39	46	42	36	40	39	39	39
22-19	25	21	18	22	19	319	42	71	39	38	48	48	41	42
22-20	21	17	14	18	20	273	38	44	42	34	39	40	37	39
22-20-R	20	18	15	19	18	230	37	47	40	34	39	40	38	37
22-17	20	17	15	18	17	182	35	45	38	34	38	39	36	38
22-16	20	17	13	17	17	209	38	44	36	33	38	39	36	37
22-15	22	16	15	18	18	300	40	50	39	35	39	40	38	40
22-14	19	17	14	17	17	167	35	42	38	33	37	38	37	38
20-12	21	18	17	20	19	354	41	55	43	34	40	41	38	40
20-11	20	19	16	19	18	292	40	58	39	35	41	42	38	39

	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
20-10	22	17	15	20	18	259	42	58	39	34	42	43	38	40
20-9	23	16	15	18	18	230	39	46	38	34	39	40	38	38
20-8	19	17	13	16	18	205	37	42	39	33	36	38	36	39
21-8	19	-1	13	16	16	95	33	37	35	32	34	36	35	37
21-9	23	18	17	21	18	329	42	68	40	34	44	45	38	39
21-10	21	17	14	17	18	236	37	52	40	34	40	41	37	37
21-11	22	16	14	17	18	248	36	47	40	34	41	42	38	39
21-12	21	17	14	18	17	194	37	51	37	32	40	41	37	39
25-12	21	15	14	16	17	137	34	38	38	34	37	37	37	37
25-12-R	26	18	16	20	20	305	42	54	44	36	46	46	40	41
25-13	20	15	13	16	16	127	34	39	35	33	36	38	36	38
25-14	19	16	14	16	16	120	35	42	36	33	36	38	37	37
25-15	21	16	13	17	17	129	34	40	38	34	37	38	37	37
25-16	28	16	15	18	19	210	39	47	41	36	42	42	39	38
25-17	22	17	14	18	18	158	36	46	38	34	38	39	39	37
25-18	22	16	14	17	18	257	40	50	40	33	42	43	37	39
26-18	21	18	15	17	19	262	40	50	41	35	41	42	37	37
26-17	20	17	15	17	17	160	34	44	37	33	40	41	38	37
26-16	20	16	13	16	17	171	35	38	37	33	37	38	37	38
26-15	19	16	13	17	16	112	35	39	37	32	35	37	35	37
26-14	19	16	13	16	17	128	35	40	37	32	36	35	36	37
26-13	18	16	12	15	16	74	33	37	35	32	34	36	35	36
26-12	20	17	14	17	17	163	37	46	38	33	38	38	36	38
27-12	20	17	13	17	20	319	39	46	42	34	39	40	37	40
27-13	25	17	16	19	19	230	39	47	41	37	43	44	40	40
27-13-R	24	16	14	17	19	209	37	44	42	34	42	43	37	40
27-14	24	19	16	20	19	386	46	65	42	36	47	49	39	42
27-15 ORG	17	16	12	15	15	76	32	37	33	33	34	34	36	36
27-16	20	-1	14	16	17	138	34	40	36	34	37	36	37	37
27-17	20	15	14	16	17	187	35	41	37	34	37	37	38	38
27-18	20	15	13	16	16	105	34	39	36	33	36	36	36	37
28-17	20	16	14	16	18	202	34	43	39	33	38	39	37	39
28-16 ORG	18	18	16	20	16	436	49	96	38	37	51	53	40	39
28-15 ORG	18	15	13	16	15	54	33	35	34	32	34	35	35	35
28-14	21	18	15	19	19	284	42	54	41	34	43	43	37	40
28-13	35	35	27	35	34	202	75	80	74	46	47	47	42	49
28-12	31	27	22	25	25	144	53	58	54	52	56	59	57	60
22-12	24	21	18	22	23	212	48	54	51	48	52	54	54	55
22-11	37	31	27	33	33	188	72	79	74	70	73	76	76	76
22-10	36	31	27	33	34	155	72	76	72	41	43	46	45	46
22-9	37	35	27	37	37	286	79	84	81	72	77	80	79	82
22-9-R	38	32	28	31	32	189	68	73	68	55	58	58	58	58
22-8	66	65	49	62	63	252	134	139	138	132	135	142	138	141
22-7	67	63	49	53	53	194	114	120	114	112	116	124	126	126
23-7	32	31	24	28	29	224	62	65	65	68	73	77	78	78
23-8	67	56	50	51	52	270	112	120	97	71	77	87	89	89
23-9	36	33	27	32	35	394	72	77	76	63	69	72	70	72
23-10	21	18	14	18	19	260	39	46	42	36	41	42	40	42
23-11	20	17	14	17	18	253	38	47	39	34	41	40	38	38
23-12	19	17	14	16	19	253	37	42	43	34	39	38	37	39
24-11	38	34	29	36	37	196	79	85	82	74	78	82	82	84
24-10	31	25	21	24	27	353	54	62	57	46	53	54	49	53
24-9	22	19	16	19	21	416	47	59	44	38	48	48	40	43
24-8	23	19	16	19	22	392	45	50	48	40	44	43	44	47
24-7	44	40	32	41	41	408	88	104	90	78	85	81	80	81
24-6	30	23	20	24	26	358	54	64	57	49	56	57	53	54
25-6	23	20	16	20	24	444	47	53	52	39	48	46	43	47
25-6-R	21	18	15	18	21	333	41	46	46	38	47	46	42	44
25-7	22	16	15	17	21	369	43	50	44	36	44	45	40	44
25-8	19	17	14	17	17	143	35	40	37	34	37	38	37	37

	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
25-9	21	18	15	18	21	343	42	45	46	37	42	43	40	41
25-10	21	18	15	17	19	256	39	46	42	35	39	40	39	41
25-11	19	17	13	17	17	148	36	41	37	34	38	39	36	39
26-11 ORG	20	15	14	17	16	107	35	39	35	33	37	38	37	37
26-10	19	17	14	16	17	166	36	42	38	33	38	39	36	38
26-9	22	18	16	18	20	332	38	52	44	36	40	41	39	40
26-8	21	16	15	18	19	192	38	42	41	34	38	38	37	39
26-7	21	17	14	18	20	263	38	41	43	34	37	38	38	40
26-6	21	15	14	16	20	245	37	42	44	36	37	39	38	40
22-13	18	17	13	17	17	146	36	40	37	35	39	39	38	39
24-12	21	16	14	17	20	261	37	42	43	34	39	40	38	41
17-14	20	15	14	17	18	206	37	42	41	35	37	39	38	40
17-15	21	16	15	18	20	297	44	48	43	36	39	41	39	40
17-15-R	20	17	14	17	20	270	39	43	44	36	40	42	39	41
17-16	22	16	14	18	22	428	43	48	47	36	44	45	39	43
17-17	24	17	15	18	21	389	40	49	48	38	44	45	41	43
17-18	24	17	15	18	21	314	42	44	46	36	44	44	40	43
17-19	23	19	15	18	21	332	40	49	45	38	41	42	40	45
17-20	23	17	15	18	23	424	44	47	49	37	42	44	42	44
17-21	21	17	15	19	20	336	39	47	44	36	41	42	39	40
16-21	21	17	14	17	19	262	39	46	42	35	40	40	38	41
16-20	24	18	16	19	20	464	46	65	45	37	49	50	41	41
16-19	19	16	13	17	19	204	37	38	42	34	38	37	38	39
16-18	22	18	14	17	20	340	40	50	43	34	41	42	38	41
16-17	23	18	15	17	22	338	44	50	48	36	42	43	40	43
16-16	22	16	15	18	22	325	41	45	49	38	43	44	42	44
16-15	21	16	14	17	19	256	38	42	43	36	39	40	39	41
16-14	20	16	13	16	19	219	39	42	42	34	38	40	37	40
16-14 DUP	22	16	15	17	20	313	39	46	44	35	40	40	38	40
16-14 DUP-R	19	17	14	17	20	244	36	43	42	34	38	39	38	41
16-13	19	17	14	17	19	224	38	45	41	35	39	40	38	40
16-12	19	17	14	18	18	208	37	48	39	34	39	41	37	40
LMB-QA	19	15	13	17	17	102	33	39	36	33	36	37	37	38
LMB-QA	18	-1	12	15	15	58	32	36	34	31	33	34	34	36
LMB-QA	17	16	12	15	15	51	32	35	34	32	32	34	35	35
LMB-QA	18	16	13	15	16	57	32	37	35	31	33	34	35	37

	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

	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
20-13 ORG	53	39	828	51	304	39	41	36	37	37	39	46	70	59
20-14	75	56	1560	71	544	52	51	10	44	45	46	49	74	67
20-15	74	58	1210	68	484	54	51	51	46	50	50	53	76	70
20-16	58	48	908	50	357	42	50	41	38	40	41	43	66	64
20-17	50	41	644	47	266	39	39	37	37	37	38	40	59	56
20-17-R	47	40	604	44	268	38	38	37	36	36	38	40	61	56
20-18	46	40	556	44	242	39	38	39	38	36	38	39	60	56
20-19	46	40	608	44	238	39	39	37	37	36	36	39	59	55
20-20	50	42	632	44	278	38	44	37	37	36	37	39	61	57
21-20	76	51	1970	70	648	46	51	43	44	42	48	46	68	67
21-19	50	41	632	47	253	39	38	38	38	39	38	42	59	57
21-18	48	43	696	48	272	40	38	8	38	38	38	41	60	60
21-17	44	39	604	43	252	38	37	37	8	36	37	39	58	56
21-16	57	46	1010	54	404	44	43	42	40	39	40	43	64	61
21-15	58	44	952	53	400	42	42	9	41	39	41	43	65	61
21-15 DUP	71	50	1510	68	560	47	50	44	44	43	47	47	66	64
21-14	43	38	318	40	178	37	35	36	34	36	36	37	57	58
18-14	61	46	1180	57	420	45	44	42	44	41	42	45	63	62
18-15	42	37	424	39	207	34	37	34	33	35	37	36	57	54
18-16	50	40	824	48	312	39	40	8	38	37	39	41	61	58
18-17	53	42	996	52	394	40	42	38	40	38	40	42	61	57
18-17-R	52	42	1040	50	374	40	42	37	39	37	38	41	60	55
18-18	52	43	916	51	377	41	44	8	40	39	40	42	63	59
18-19	44	40	468	42	217	37	36	36	36	36	38	38	55	54
18-20	58	42	1250	54	436	41	42	37	40	37	40	40	59	59
18-21	44	37	508	42	210	37	36	35	35	35	35	37	56	54
21-21	53	41	792	50	331	40	41	8	7	37	40	40	58	60
20-21	46	40	628	44	264	37	37	35	36	35	35	36	55	55
19-21	44	37	548	41	242	35	37	34	36	34	36	37	54	53
19-20	43	36	528	42	238	36	36	34	36	34	35	37	56	53
19-19	43	37	444	40	199	35	35	35	34	33	36	36	54	53
19-18	43	38	381	40	187	36	36	35	35	35	35	36	56	56
19-17	49	44	500	47	217	42	41	40	40	40	40	42	62	59
19-16	46	39	588	44	241	38	38	8	37	36	36	38	58	57
19-15	46	40	504	42	228	37	40	35	35	35	35	37	54	53
19-14	40	36	400	38	179	36	35	34	34	34	34	36	54	53
19-13	34	32	182	34	107	32	32	32	32	33	33	35	52	52
19-13-R	35	33	186	34	101	33	32	33	32	31	32	33	50	53
18-13	49	45	338	47	163	43	43	44	44	42	43	44	68	68
18-12	38	34	354	37	156	34	33	33	34	33	33	35	54	56
17-11	39	34	391	38	174	33	33	32	32	32	33	34	52	50
17-12	37	35	325	37	160	35	33	34	33	33	33	35	53	52
17-13	42	35	416	41	199	35	36	34	34	34	35	36	54	56
24-13 ORG	36	35	271	33	131	33	32	32	33	32	33	34	52	51
24-14	35	35	251	35	134	33	33	32	33	33	32	35	51	50
24-15	37	34	232	36	129	33	33	33	33	33	32	34	52	52
23-14	38	35	300	38	152	35	34	8	34	33	34	35	53	52
23-15	35	33	239	34	122	33	32	32	32	32	32	34	51	52
23-16	42	38	432	39	196	36	34	34	34	33	34	36	54	52
23-17	42	37	512	41	207	35	37	8	36	34	36	36	54	56
22-18	40	36	338	39	154	35	34	33	33	34	33	36	52	56
22-19	44	38	386	42	184	38	4	35	35	34	34	8	54	54
22-20	39	36	340	37	159	33	33	33	34	33	33	35	54	52
22-20-R	38	35	291	38	148	34	34	34	33	33	32	34	52	55
22-17	38	34	269	37	140	33	33	33	33	33	33	35	52	51
22-16	40	38	346	38	165	34	37	33	34	32	33	34	52	54
22-15	41	35	408	40	196	34	35	33	35	33	34	35	53	52
22-14	37	34	242	36	125	33	33	33	33	32	33	34	52	52
20-12	39	35	392	38	173	33	4	33	33	32	33	34	52	52
20-11	40	35	363	39	164	34	34	34	34	33	34	35	52	54

	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
20-10	40	35	404	38	172	34	35	34	35	34	34	36	53	52
20-9	42	35	444	42	184	35	36	35	8	33	34	34	52	52
20-8	38	35	356	36	158	33	36	33	33	32	33	34	52	51
21-8	35	33	187	34	105	33	32	32	32	32	33	34	51	51
21-9	41	36	424	40	178	35	35	7	35	33	34	35	52	51
21-10	41	36	334	40	180	35	36	34	34	33	34	35	53	52
21-11	39	36	356	38	180	35	34	33	34	33	33	35	53	51
21-12	39	34	348	37	160	34	34	33	34	33	34	35	52	52
25-12	37	35	195	34	112	33	32	32	32	32	32	33	52	51
25-12-R	42	37	408	39	170	35	35	35	7	7	34	36	54	53
25-13	36	33	246	36	122	33	33	33	33	33	33	34	51	52
25-14	36	33	202	36	120	33	32	33	32	32	33	34	51	50
25-15	38	36	242	37	124	34	33	34	33	34	33	35	52	51
25-16	41	38	335	39	167	37	34	35	34	33	34	34	54	58
25-17	40	37	276	37	139	34	36	34	34	33	34	35	53	55
25-18	41	36	389	40	177	35	36	35	35	33	34	36	54	52
26-18	41	36	420	38	183	34	36	34	35	33	35	35	53	52
26-17	37	35	239	36	144	34	34	7	7	33	33	35	53	53
26-16	36	36	246	36	130	34	33	34	32	32	33	34	53	52
26-15	37	34	210	36	116	33	33	33	33	32	33	34	53	52
26-14	37	34	229	37	119	33	33	32	33	32	33	35	52	53
26-13	34	33	163	34	90	33	32	33	32	31	32	33	50	50
26-12	39	34	242	38	143	34	34	33	33	32	33	35	53	51
27-12	39	35	452	36	181	33	35	33	34	34	35	35	53	52
27-13	46	38	420	43	178	37	37	35	35	34	35	37	54	52
27-13-R	42	37	380	41	169	35	36	34	34	34	35	8	54	53
27-14	47	39	664	46	267	37	38	35	37	35	36	38	56	54
27-15 ORG	36	33	202	35	110	33	32	31	31	31	32	34	52	51
27-16	36	34	216	36	119	33	33	31	32	33	32	35	52	53
27-17	40	36	322	37	166	34	34	33	32	33	33	33	51	51
27-18	36	35	198	33	114	34	32	33	32	32	32	33	51	50
28-17	37	33	304	36	134	33	33	33	34	32	33	33	51	51
28-16 ORG	39	34	568	39	202	34	35	33	8	32	34	34	52	51
28-15 ORG	39	35	163	35	97	32	37	31	31	31	32	32	50	53
28-14	42	37	472	40	181	34	35	33	34	34	34	35	52	55
28-13	40	34	361	54	238	71	109	112	151	142	15	146	159	136
28-12	61	58	309	60	172	57	56	56	56	50	51	52	76	74
22-12	154	149	269	184	357	224	238	229	125	125	137	153	288	332
22-11	48	44	331	45	158	43	44	44	46	45	46	47	70	68
22-10	46	43	256	46	139	44	43	44	8	40	40	40	61	62
22-9	73	71	396	71	197	67	65	66	66	64	63	10	100	96
22-9-R	50	48	292	47	146	43	40	39	46	48	46	45	63	63
22-8	109	105	366	94	210	86	101	94	98	92	93	17	131	124
22-7	127	122	348	126	223	122	118	119	118	111	112	121	200	205
23-7	68	63	358	67	182	64	62	62	61	59	56	54	66	60
23-8	86	82	412	84	213	82	81	94	183	194	186	190	310	348
23-9	70	65	508	69	230	64	62	62	63	60	62	64	98	96
23-10	39	37	169	39	146	36	35	35	35	35	36	38	57	58
23-11	37	34	354	37	162	35	34	33	33	32	34	35	52	51
23-12	38	35	325	38	148	34	33	33	32	34	33	36	54	52
24-11	74	72	307	72	182	71	71	76	13	72	72	74	112	109
24-10	54	45	532	50	224	42	44	42	41	42	42	45	65	62
24-9	63	57	588	62	256	54	52	51	68	72	70	70	104	100
24-8	45	39	504	42	202	38	38	36	34	33	35	34	54	54
24-7	52	47	544	50	226	46	44	42	42	42	42	45	67	65
24-6	55	50	504	54	226	49	48	46	46	44	44	46	68	67
25-6	44	38	604	43	244	38	38	37	36	35	36	37	57	55
25-6-R	43	38	528	42	216	39	38	37	36	35	36	36	56	57
25-7	43	37	500	41	211	37	36	35	36	34	35	36	54	52
25-8	37	34	218	36	126	34	34	34	34	32	34	34	53	52

	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
25-9	45	37	420	42	203	36	37	36	36	35	36	37	56	56
25-10	38	36	310	37	151	36	34	35	36	34	34	37	54	53
25-11	38	35	262	37	136	34	34	33	8	32	33	35	54	53
26-11 ORG	40	35	366	38	169	34	35	33	34	34	36	36	53	52
26-10	38	34	278	37	145	34	33	33	34	33	33	36	54	52
26-9	40	35	201	39	170	35	35	35	34	34	34	36	54	52
26-8	41	38	291	37	145	36	35	35	33	33	34	34	54	54
26-7	38	34	211	37	152	34	35	34	34	34	34	36	54	54
26-6	39	35	321	38	147	35	34	34	33	34	34	35	54	53
22-13	38	36	252	36	134	33	35	33	33	33	33	35	55	52
24-12	40	37	344	37	167	35	35	35	34	33	34	35	54	53
17-14	41	35	294	39	152	34	35	34	35	35	34	37	56	54
17-15	43	36	556	41	212	36	35	35	36	33	35	35	53	51
17-15-R	40	37	396	39	183	36	35	35	34	34	35	37	56	55
17-16	42	37	568	40	224	36	36	35	35	34	36	35	56	54
17-17	42	38	472	40	216	37	36	35	35	34	36	35	55	55
17-18	46	38	612	44	263	37	38	35	36	35	36	36	54	53
17-19	43	37	432	41	183	36	36	36	36	36	35	38	56	56
17-20	44	38	524	42	209	37	38	35	36	35	36	37	56	55
17-21	40	35	37	40	179	35	36	36	36	34	35	36	55	55
16-21	40	35	354	36	171	35	34	35	35	34	35	35	54	53
16-20	47	38	656	44	287	37	37	35	36	35	36	36	55	54
16-19	36	35	296	36	135	33	33	32	33	33	33	35	53	54
16-18	42	36	472	40	209	36	36	34	35	34	35	36	53	53
16-17	40	35	251	38	169	36	35	35	35	34	34	35	53	54
16-16	44	40	240	41	188	37	36	36	36	34	36	37	57	56
16-15	39	35	226	38	163	34	34	35	34	34	33	7	53	56
16-14	39	35	213	37	150	34	33	33	34	33	34	7	52	52
16-14 DUP	41	37	365	38	166	35	34	34	34	33	34	36	55	52
16-14 DUP-R	40	36	183	37	154	33	33	33	33	33	33	35	55	53
16-13	40	34	369	39	154	34	34	34	34	34	33	36	54	53
16-12	39	36	337	37	149	34	34	33	33	33	34	36	53	52
LMB-QA	40	35	330	38	167	34	33	33	32	33	33	36	56	54
LMB-QA	34	33	173	34	92	32	32	32	31	32	31	34	50	50
LMB-QA	36	33	151	34	85	31	34	32	31	31	31	33	51	51
LMB-QA	36	34	168	35	92	33	33	32	7	33	32	35	53	53

	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

	155 - HPH	156 - HBI	157 - HAR	158 - HBA	159 - HBA	160 - HBI	161 - HA	162 - HPH
20-13 ORG	61	60	63	572	57	60	704	53
20-14	68	64	73	604	68	73	788	55
20-15	64	72	74	548	67	73	728	59
20-16	60	59	63	436	59	61	560	54
20-17	57	59	61	448	57	60	560	52
20-17-R	58	58	58	364	56	60	476	52
20-18	59	57	60	360	57	60	472	50
20-19	55	57	59	366	56	61	468	50
20-20	57	57	61	364	57	58	472	52
21-20	62	63	73	604	68	69	788	56
21-19	58	58	61	336	57	59	440	51
21-18	55	58	62	344	58	61	464	50
21-17	58	56	59	348	56	58	464	52
21-16	60	61	64	472	60	64	628	52
21-15	59	63	64	472	63	66	624	53
21-15 DUP	63	62	71	600	66	68	800	52
21-14	58	56	58	270	54	56	347	52
18-14	61	61	67	484	63	64	660	52
18-15	55	55	58	284	54	56	369	49
18-16	56	58	11	368	57	60	488	50
18-17	59	59	60	428	58	62	564	54
18-17-R	56	56	61	395	55	60	516	48
18-18	58	58	62	394	58	60	544	52
18-19	57	56	56	276	54	55	363	52
18-20	54	56	61	420	57	60	552	51
18-21	52	53	58	272	54	56	350	50
21-21	56	56	58	356	55	58	472	50
20-21	58	56	59	312	55	57	416	48
19-21	55	52	54	292	54	56	387	49
19-20	56	11	53	284	52	57	376	48
19-19	53	55	54	252	52	55	326	49
19-18	56	53	56	219	52	56	286	51
19-17	58	60	62	260	59	62	349	52
19-16	58	57	59	277	56	58	360	54
19-15	55	52	54	250	51	56	331	49
19-14	55	53	55	252	52	54	329	48
19-13	52	52	52	178	50	54	226	50
19-13-R	52	50	52	163	48	53	212	47
18-13	67	67	66	218	63	69	282	64
18-12	10	51	55	224	52	54	288	48
17-11	53	52	11	215	51	54	278	48
17-12	53	51	50	200	49	54	260	49
17-13	53	53	56	219	52	56	284	47
24-13 ORG	52	52	54	216	50	52	271	48
24-14	53	50	53	194	50	52	246	48
24-15	53	51	55	186	52	54	243	48
23-14	50	53	53	199	50	54	260	49
23-15	52	52	52	194	49	53	242	48
23-16	53	52	54	238	52	54	307	49
23-17	54	53	56	242	52	56	310	47
22-18	55	52	53	208	49	54	268	48
22-19	53	52	55	228	52	55	300	49
22-20	55	52	52	206	50	54	266	51
22-20-R	53	52	54	194	50	52	254	48
22-17	51	52	54	210	50	53	275	46
22-16	52	51	54	216	50	54	282	48
22-15	52	52	54	235	50	54	304	48
22-14	50	51	53	182	48	53	234	48
20-12	54	52	52	214	50	53	277	49
20-11	53	51	51	198	50	53	258	50

	155 - HPH	156 - HBI	157 - HAR	158 - HBA	159 - HBA	160 - HBI	161 - HA	162 - HPH
20-10	52	54	56	206	52	52	268	46
20-9	51	52	55	242	52	55	313	50
20-8	53	50	53	221	51	52	282	49
21-8	50	52	51	179	48	52	229	46
21-9	11	52	56	218	52	55	290	48
21-10	53	54	54	212	52	10	281	46
21-11	54	53	55	233	52	54	302	47
21-12	51	51	54	204	51	54	273	48
25-12	52	50	52	172	50	52	207	49
25-12-R	51	53	55	210	51	55	271	48
25-13	50	51	53	183	49	52	237	48
25-14	51	51	53	168	49	53	217	48
25-15	50	51	53	181	50	52	233	46
25-16	54	52	55	196	51	56	256	47
25-17	52	50	54	193	51	53	252	47
25-18	52	53	54	217	51	54	286	48
26-18	54	52	55	218	52	11	284	49
26-17	53	52	55	184	52	53	239	47
26-16	51	52	53	184	49	54	238	47
26-15	50	52	53	176	50	52	226	48
26-14	53	53	54	175	50	53	230	47
26-13	51	50	52	156	50	52	199	48
26-12	10	51	54	176	50	53	231	46
27-12	52	54	52	202	51	53	266	49
27-13	53	53	57	223	52	55	293	48
27-13-R	53	53	55	204	52	54	263	48
27-14	52	55	57	268	53	58	356	48
27-15 ORG	52	52	54	168	52	52	216	47
27-16	52	52	53	170	48	54	222	48
27-17	52	52	54	201	50	54	263	48
27-18	52	51	53	166	50	52	213	48
28-17	51	52	54	187	51	53	242	48
28-16 ORG	50	52	54	216	51	53	272	46
28-15 ORG	53	52	53	153	50	52	191	49
28-14	54	51	56	215	51	54	280	48
28-13	87	92	94	247	86	94	332	256
28-12	76	76	76	216	74	74	278	73
22-12	222	266	238	342	203	132	448	89
22-11	68	69	69	221	64	70	281	66
22-10	68	66	66	182	64	66	235	64
22-9	102	102	104	247	98	102	318	98
22-9-R	76	76	78	213	73	75	270	74
22-8	149	151	145	277	139	152	352	138
22-7	192	195	197	307	185	194	398	187
23-7	58	60	65	210	61	61	268	55
23-8	355	359	369	504	353	359	640	307
23-9	88	92	93	272	85	96	350	74
23-10	56	58	60	201	56	59	257	52
23-11	54	52	56	203	53	53	269	49
23-12	54	53	55	199	50	55	259	49
24-11	107	110	110	251	102	112	325	104
24-10	60	61	64	281	60	65	370	56
24-9	117	116	119	352	114	117	428	106
24-8	56	54	56	259	51	56	331	50
24-7	68	68	12	311	65	68	400	60
24-6	64	65	68	290	62	67	377	56
25-6	58	56	57	304	54	58	391	50
25-6-R	59	59	60	292	56	60	382	51
25-7	54	54	58	284	54	57	366	49
25-8	54	52	55	217	51	54	284	48

	155 - HPH	156 - HBI	157 - HAR	158 - HBA	159 - HBA	160 - HBI	161 - HA	162 - HPH
25-9	56	58	11	272	55	58	358	53
25-10	53	55	57	234	53	56	302	50
25-11	52	54	55	217	51	54	283	49
26-11 ORG	54	54	55	252	52	55	319	49
26-10	55	53	54	226	52	55	292	52
26-9	51	52	55	224	51	54	292	46
26-8	55	54	56	213	53	55	265	52
26-7	52	54	54	220	52	54	283	50
26-6	53	53	56	230	52	54	298	48
22-13	55	55	54	228	53	55	280	50
24-12	55	55	56	237	52	56	296	52
17-14	54	56	59	234	56	58	304	50
17-15	51	54	58	328	55	56	428	47
17-15-R	58	57	56	273	54	58	356	52
17-16	58	54	57	332	53	56	416	51
17-17	58	56	57	306	54	57	400	52
17-18	56	55	58	354	54	58	468	48
17-19	55	56	58	280	54	58	364	51
17-20	56	55	57	289	53	56	372	51
17-21	55	54	56	247	53	58	322	49
16-21	56	54	56	248	53	55	315	53
16-20	55	55	58	344	55	57	448	50
16-19	54	52	54	237	50	53	302	48
16-18	54	54	56	255	52	56	336	49
16-17	54	54	56	232	52	54	299	51
16-16	54	55	58	245	54	57	318	52
16-15	53	53	11	237	52	54	304	48
16-14	51	52	56	217	53	54	281	49
16-14 DUP	55	54	56	237	53	56	303	48
16-14 DUP-R	56	53	56	215	52	55	271	49
16-13	56	54	53	229	50	55	298	52
16-12	52	54	56	237	53	54	306	49
LMB-QA	56	53	56	432	52	54	520	50
LMB-QA	50	52	52	200	49	54	248	47
LMB-QA	52	50	51	173	49	52	214	49
LMB-QA	51	52	52	203	49	54	253	48

	155 - HPH	156 - HBI	157 - HAR	158 - HBA	159 - HBA	160 - HBI	161 - HA	162 - HPH
[illegible]								

Appendix II: Field Sample Descriptions

2015 Porphyry Lake Property Spaciotemporal Geochemical Hydrocarbon Sampling

Sample # (on bag) - Prefix PLH-	UTM 83 Zone 17 Easting (m)	Northing(m)	Depth (cm)	Munsell Color	Description	Substrate	Other	Sample Comments
October 17, 2015	# of samples	16						
20-13 ORG	498501	5277299	10	5YR2/1	Organic sandy loam	Till?	S. side of Spade Creek; nr otc, creek bed	
20-14	498496	5277408	20	5YR4/4	Fine sand	Till	Low area near Spade Creek	
20-15	498496	5277509	15	10YR6/6	Silty sand	Esker	Hummock slope on esker, low ground	
20-16	498508	5277597	20	10R5/4	Silty sand with pebbles and cobbles	Esker	Hummock slope on esker, low ground	
20-17	498498	5277704	20	10R5/4	Silty sand with pebbles and cobbles	Esker	Hummock slope on esker, low ground	
20-18	498500	5277800	15	10R5/4	Silty sand with pebbles and cobbles	Esker	Near top of esker slope	
20-19	498503	5277898	20	5YR4/4	Fine sand	Esker	Esker flank	
20-20	498500	5278000	20	5YR4/4	Fine sand	Esker	Esker flank	
21-20	498600	5278000	20	5YR4/4	Silty sand with gvl and clay	Esker	Steep face on esker flank	poss. mis-label as 19-20
21-19	498600	5277900	20	5YR4/4	Silty sand with gvl and clay	Esker	Steep face on esker flank	poss. mis-label as 19-19
21-18	498600	5277800	20	5YR4/4	Silty sand	Esker	Top of esker	
21-17	498600	5277700	30	5YR3/4	Cobbles and sand	Esker	Esker flank	
21-16	498600	5277600	20	5YR4/4	Cobbles and sand	Esker	Low area in and btw eskers	
21-15	498600	5277500	20	5YR4/4	Fine sand	Esker	Low area at S. end of esker near Hwy	
21-15 Dup	498600	5277500	20	5YR4/4	Fine sand	Esker	Low area at S. end of esker near Hwy	
21-14	498600	5277400	30	10YR4/2	Fine sand	Esker	low area near Spade Creek	
October 18, 2015	# of samples	24				Esker		
18-14	498309	5277422	30	10YR6/6	Silty fine sand	Till		
18-15	498300	5277500	20	10YR6/6	Silty fine sand	Till		
18-16	498303	5277604	15	10YR6/6	Silty fine sand	Till		
18-17	498305	5277699	10	5YR5/6	Fine sand	Till	Near road	
18-18	498298	5277805	15	5YR5/6	Fine sand	Esker base	West side of esker	
18-19	498294	5277897	20	10YR6/6	Silty fine sand	Esker flank		
18-20	498297	5278001	15	5YR4/4	Med. sand with gvl	Esker flank	~10m N of old logging road	
18-21	498294	5278107	15	5YR4/4	Fine sand, tr. gvl	Esker flank		
21-21	498605	5278109	15	10YR6/6	Fine sand, tr. gvl	Esker flank		
20-21	498499	5278110	10	10YR5/4	Silty fine sand	Esker flank		
19-21	498392	5278114	15	10YR6/6	Silty fine sand	Esker flank		
19-20	498404	5277991	20	10YR6/6	Silty fine sand	Esker flank		
19-19	498397	5277889	20	10YR6/6	Silty fine sand	Esker flank	Btw. eskers	
19-18	498393	5277792	15	10YR6/6	Silty fine sand	Esker flank	Btw. eskers	
19-17	498405	5277700	20	10YR6/6	Fine sand, tr. gvl	Top of esker	Btw. eskers	
19-16	498395	5277597	30	10YR6/6	Fine sand, tr. gvl	Edge of swamp c	Poss. till, disturbed by logging	
19-15	498399	5277490	20	10YR6/6	Fine sand, tr. gvl	Esker flank		
19-14	498399	5277391	20	5YR5/6	Fine sand	Till		
19-13	498402	5277325	40	5YR4/1	Fine sand	Till	30 cm org. nr. PL at Hwy, ?disturbed	
18-13	498293	5277280	50	5YR6/1	Fine sand	Till	@ shore, 40 cm org. cover	
18-12	498232	5277192	20	5YR4/4	Fine sand	Till	Near shore	
17-11	498166	5277104	20	5YR4/4	Fine sand	Till		
17-12	498203	5277208	20	5YR4/4	Fine sand	Till		
17-13	498202	5277302	20	10YR6/6	Fine sand	Till	Near trench at 7290	
October 19, 2015	# of samples	24						
24-13 ORG	498894	5277294	30	N2	Organic	Till?	Near Spade Ck edge of bog	
24-14	498897	5277399	20	5YR4/4	Fine-med. sand	Esker toe	Esker terminus near bog	Field mis-label as 29-14 (photo in seq.)
24-15	498901	5277505	30	5YR4/6	Fine-med. sand	Till?	Near Spade Ck, spruce	
23-14	498797	5277401	30	5YR4/4	Fine-med. sand	Esker flank	Flank of esker nr. S. Creek	
23-15	498802	5277493	30	5YR3/4	Cobbley sand	Top of esker		
23-16	498796	5277598	30	10YR5/4	Silty sand	Esker flank	Low ground in esker	
23-17	498798	5277699	30	10YR5/4	Silty sand	Esker, low area	Near Spade Creek	
22-18	498663	5277805	30	5YR4/4	Pebbly sand	Esker flank	Esker flank large low area	
22-19	498694	5277907	40	10YR6/6	Sand w/ tr. Gvl	Esker flank	Slope of esker	
22-20	498700	5278030	20	10YR6/6	Fine-med. sand	Esker flank	Slope of esker	
22-17	498690	5277701	30	5YR4/4	Fine sand tr. Pebbles	Esker flank		
22-16	498691	5277597	30	5YR4/4	Coarse sand with 30% pebbles	Esker flank		
22-15	498703	5277494	20	10YR5/4	Fine sand with 20% pebbles	Esker flank	Flat area btw eskers	
22-14	498698	5277397	15	5YR5/6	Fine sand	Till	Bank nr. Spade Ck	Possible mis-label as 20-17 sb. 22-14
20-12	498498	5277198	15	10YR6/6	Silty sand	Till	Near Por. Lake	
20-11	498500	5277103	40	10YR5/4	Fine silty sand	Till	Near outcrop	
20-10	498496	5276997	30	5YR4/4	Fine sand	Till	Near Pettrigrew showing	
20-9	498500	5276900	40	10YR6/2	Fine silty sand	Till	Near outcrop	
20-8	498505	5276795	40	5YR4/1	Fine silty sand	Till	Grey less ox., poss lake sediment at shore	
21-8	498602	5276825	40	10YR4/2	Clayey sand with cobbles	Till	Till?, 35 cm of organic	
21-9	498601	5276901	15	5YR4/6	Clayey sand with cobbles	Till	Thin till, good ox.	
21-10	498604	5276994	10	10YR6/6	Sand with pebbles	Till	Weakly ox.	
21-11	498602	5277116	10	10YR6/6	Sand with pebbles	Till		
21-12	498610	5277220	30	10YR6/6	Fine sand	Till		
October 20, 2015	# of samples	27						
25-12	498997	5277209	25	5YR5/6	Fine sand	Till	Boggy cedar, color more orange to station 18	
25-13	499002	5277300	20	5YR3/4	Fine sand	Till	North of bog	
25-14	498996	5277399	15	5YR5/6	Fine sand	Till	Near small creek	
25-15	499011	5277502	20	5YR4/4	Fine sand	Till	Near small creek	
25-16	499003	5277611	30	5YR4/4	Fine sand	Till	Near Spade Lk, N of beaver dam, washed boulders	
25-17	498998	5277706	20	5YR4/4	Fine sand	Till	Above old beach line in balsam	
25-18	498993	5277808	30	5YR4/4	Fine sand	Till		
26-18	499106	5277796	30	5YR4/4	Fine sand	Till	On rise, color more orange to station 14	

2015 Porphyry Lake Property Spaciotemporal Geochemical Hydrocarbon Sampling

Sample # (on bag) - Prefix PLH-	UTM 83 Zone 17 Easting (m)	Northing(m)	Depth (cm)	Munsell Color	Description	Substrate	Other	Sample Comments
26-17	499103	5277686	20	5YR4/4	Sand w/ pebbles, cobbles	Till		
26-16	499097	5277599	15	5YR4/4	Sand w/ pebbles, cobbles	Till		
26-15	499108	5277505	15	5YR4/4	Sand w/ pebbles, cobbles	Till		
26-14	499096	5277400	20	5YR4/4	Sand w/ pebbles, cobbles	Till		
26-13	499103	5277301	25	5YR4/4	Sand w/ pebbles, cobbles	Till		
26-12	499113	5277201	15	10YR6/6	Loamy with fine sand	Till		
27-12	499200	5277205	15	10YR5/4	Sand w/ pebbles, cobbles	Boulder Till	Poor B development, in clear cut	
27-13	499200	5277296	50	5YR5/2	Sand w/ pebbles, cobbles	No "B" - Boulder	Till w/o "B" at 50cm, SW w/ clay, boulders	
27-14	499195	5277415	20	10YR6/6	Sand w/ pebbles, cobbles	Till		
27-15 ORG	499202	5277504	20	5YR2/1	Organic	Till?	In cedar and tamarack swamp	
27-16	499210	5277628	10	10YR6/6	Fine sand	Till	In till at edge of cedar bog	
27-17	499200	5277699	15	10YR6/6	Fine sand	Till	Near outcrop	
27-18	499202	5277796	15	10YR3/4	Fine sand	Till	On rise in low ground	
28-17	499293	5277713	20	5YR4/4	Fine sand	Till	On hump out of bog	
28-16 ORG	499300	5277599	20	5YR2/2	Organic	Till	In Cedar bog	
28-15 ORG	499305	5277491	20	5YR2/2	Organic	Till	In Cedar bog	
28-14	499310	5277397	20	5YR4/4	Fine sand	Till	Near outcrop	
28-13	499305	5277304	40	5YR4/1	Sand w/ pebbles, cobbles	Till	Poor B development	
28-12	499305	5277195	50	5YR3/4	Sand w/ pebbles, cobbles	Till	Poor B development in boulder/cobble till	
October 21, 2015	# of samples	14						
22-12	498702	5277199	15	5YR4/4	Sand with pebbles	Till	Near roadcut at Hwy	
22-11	498695	5277095	30	5YR4/4	Silty sand	Till	Cobble till	
22-10	498704	5276987	15	5YR4/4	Silty sand	Till	Cobble till, near PG road	
22-9	498712	5276902	10	5YR5/6	Sand with pebbles	Till	Hummocky till	
22-8	498700	5337775	15	5YR5/6	Silty sand	Till	Hummocky till, near road to S. PL	
22-7	498707	5276693	15	5YR5/6	Silty sand	Till	Rusty diabase in till	
23-7	498802	5276701	15	5YR5/6	Sand with tr. Pebbles	Till	Hummocky till, ox, orange	
23-8	498794	5276801	10	5YR5/6	Sand with tr. Pebbles	Esker	Toe of esker	
23-9	498800	5276907	10	5YR5/6	Fine sand	Esker	Small off shoot of esker	
23-10	498800	5277000	15	5YR5/6	Fine sand	Esker	Small off shoot of esker	
23-11	498799	5277100	15	5YR5/6	Sand with tr. Pebbles	Till		
23-12	498802	5277219	15	5YR4/4	Sand with pebbles	Till	Near road	
24-11	498890	5277100	30	10YR4/2	Sand w/ pebbles, cobbles	Esker	Coarse material	
24-10	498897	5277001	30	10YR4/2	Sand w/ pebbles, cobbles	Esker	Coarse material	
October 22, 2015	# of samples	18						
24-9	498898	5276898	15	5YR4/4	Sand w/ pebbles	Esker	Esker fringe, low ground	
24-8	498899	5276803	20	5YR4/4	Sand w/ pebbles	Esker	Btw.small eskers	
24-7	498895	5276691	25	5YR4/4	Sand w/ pebbles	Esker	Hummocky esker, good B	
24-6	498899	5276599	20	5YR4/4	Sand w/ pebbles	Esker	Near end of esker	
25-6	499007	5276597	25	5YR4/4	Sand w/ pebbles, cobbles	Esker	Toe of esker	
25-7	499004	5276695	20	10YR4/4	Sand w/ pebbles	Esker	Flank of esker	
25-8	498998	5276799	15	10YR4/4	Sand w/ pebbles	Esker	Flank of esker	
25-9	498997	5276898	15	10YR6/6	Sand w/ pebbles	Esker	Toe of esker	
25-10	498981	5276984	20	10YR6/6	Sand w/ pebbles	Esker	S. side of gvl pit, nr ovsz dumps, undisturbed	
25-11	499001	5277113	25	5YR2/1	Fine sand	Esker	N. side of pit btw Hwy, undisturbed	
26-11 ORG	499092	5277090	60	10YR6/6	Organic	Till	Alder and balsam swamp	
26-10	499104	5277011	30	10YR6/6	Silty sand	Till	Till east of esker at station	
26-9	499100	5276883	20	10YR6/6	Silty sand	Till	Till btw esker on west and swamp on west	
26-8	499087	5276815	25	10YR6/6	Silty sand	Till	Till btw esker on west and swamp on west	
26-7	499059	5276705	45	10YR6/6	Silty sand with pebbles	Till	On slope w/ creek to east, stay W to sample till	
26-6	499087	5276598	45	5YR4/6	Sity sand with cobbles	Till	On slope w/ creek to east, stay W to sample till	
22-13	498694	5277287	10	5YR3/4	Silty sand	Till	On outcrop area, nr Spade Creek, poorly dev'd B	Field mis-label as 24-13
24-12	498892	5277229	20	5YR3/4	Silty sand with pebbles	Till	Btw Spade Ck and Hwy, north of disturbed area	
October 23, 2015	# of samples	19						
17-14	498197	5277397	20	5YR5/6	Sand with cobbles	Till	South of Trench #1	
17-15	498199	5277497	10	5YR5/6	Sand with cobbles	Till	North of Trench #1	Field mis-label as 19-15
17-16	498209	5277603	30	10YR4/2	Silty sand	Till	North of outcrop (not mapped)	
17-17	498199	5277676	30	5YR3/4	Sand with cobbles	Till	Cobble till, north of kettle	
17-18	498192	5277808	30	10YR5/4	Fine to med. sand	Outwash	Outwash sand with poorly developed B	
17-19	498186	5277910	60	10YR5/4	Fine to med. sand	Outwash	Outwash sand with poorly developed B	
17-20	498203	5278007	45	10YR5/4	Fine to med. sand	Outwash	Outwash sand with moderately developed B	
17-21	498204	5278099	15	10YR5/4	Sand with cobbles	Top of esker	Thin cover at top of esker	
16-21	498086	5278091	20	10YR5/4	Sand with cobbles	Esker	Near toe of esker	
16-20	498100	5278007	10	10YR5/4	Sand with cobbles	Outwash	Hummocky outwash, thin cover	
16-19	498090	5277890	15	10YR4/2	Fine sand	Boulder till	Boulder/cobble till w/ poorly dev'd B in mtx sand	
16-18	498095	5277797	15	10YR6/6	Fine to med. sand	Outwash	Sand outwash at edge of circ.	
16-17	498107	5277671	45	10YR6/6	Silty sand with pebbles	Till	Till below thick A, well dev'd B on N slope to bog	
16-16	498099	5277598	30	10YR6/6	Silty sand with pebbles	Till	Till below thick A, well dev'd B on N slope to bog	
16-15	498107	5277480	20	10YR5/4	Fine sand	Till	Sandy well dev'd B, S of trench 1, thin till nr otc	
16-14	498100	5277405	10	10YR5/4	Fine sand	Till	Well dev'd B in area btw trench 1 and old Hwy	
16-14 DUP	498100	5277405	10	10YR5/4	Fine sand	Till	Well dev'd B in area btw trench 1 and old Hwy	
16-13	498100	5277288	60	10YR5/4	Fine sand	Outwash	Mod dev'd B in outwash sand	
16-12	498113	5277190	60	10YR7/4	Fine sand	Outwash	Poorly dev'd greyish B in thick org near otc	
TOTAL SAMPLES:		142						