KEYSTONE ASSOCIATES INC.

REPORT OF

SOIL GAS HYDROCARBON PREDICTIVE GEOCHEMISTRY (SGH)

ON THE

CUNNINGHAM PROJECT

CUNNINGHAM TOWNSHIP NTS 41 0/10

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SGH Reports for Gold and Copper

1. Summary & Introduction

In early October 2011 Keystone Associates Inc. (KA) retained Dan Patrie Exploration Ltd. To complete a Soil Gas Hydrocarbon Predictive Geochemistry (SGH) sampling program over their Cunningham Property. A total of 275 subsoil samples were collected from a regular grid with samples spaced at approximately 100 metres apart. The project area covers approximately 1.6 km by 2.0 km. Sample coordinates were provided for mapping of the SGH results for these soil samples as UTM coordinates based in NAD83 Zone 17.

The property has historically been explored for VMS style copper, zinc and lead deposits. The recent exploration focus using SGH to further evaluate the properties potential for VMS and gold was used because of its relatively new introduction into exploration. The work program will provide a confidence prediction for SGH as a useful exploration tool in the west Swayze Greenstone belt.

The SGH results for gold and copper are summarized:

A review of the SGH Pathfinder Classes related to Copper has resulted in identification of a prominent apical trend in the SGH Copper Pathfinder Class. As this trend is also identified by many SGH Classes with very little dispersion even for higher molecular weight classes the SGH results predict that this mineralization if present is relatively shallow in depth, in the neighbourhood of <100 metres. After review of all of the combined interpretations using the SGH Copper signature template, the SGH results from this survey grid suggests a "rating of 5.0" for the anomalous zone within the blue dashed outline on the appendices herein. This is a rating of confidence, relative to the performance of past SGH case studies over known Copper mineralization, which is predicted to indicate that Copper mineralization is potentially located directly below this apical anomalous trend at the Cunningham Project survey. This rating is based on a scale of 6.0, in 0.5 increments, with a value of 6.0 being the best. The SGH template for Copper was initially developed from surveys over Paleochannel Copper mineralization in Western Australia, and the Spence deposit in the Atacama Desert in Chile. The general SGH template used for Copper has been developed primarily from these study areas. It has since been enhanced and has been proven effective from the interpretation over many other surveys in many different geographical regions and for a wide variety of lithologies for Gold. The degree of confidence in the rating only starts to be "good" at a level of 4.0.

A review of the SGH Pathfinder Classes related to Gold has resulted in identification of a prominent apical trend in the SGH Gold Pathfinder Class map on page 29. As this trend is also identified by nearly all SGH Classes with very little dispersion even for higher molecular weight classes the SGH results predict that this mineralization if present is relatively shallow in depth, in the neighbourhood of <100 metres. After review of all of the combined interpretations using the SGH Gold signature template, the SGH results from this survey grid suggests a "rating of 6.0" within the yellow dashed outline on page 29. This is a rating of confidence, relative to the performance of past SGH case

studies over known Gold mineralization, which is predicted to indicate that Gold mineralization is potentially located directly below this apical anomalous trend at the Cunningham Project survey. This rating is based on a scale of 6.0, in 0.5 increments, with a value of 6.0 being the best. This rating represents the similarity of these SGH results, and the associated Pathfinder Class maps, primarily to case studies for a Gold case study in Nunavut, shear hosted as well as sediment hosted deposits in Nevada, and Paleochannel Gold deposits in Australia. The general SGH template used for Gold has been developed primarily from these study areas. It has since been enhanced and has been proven effective from the interpretation over many other surveys in many different geographical regions and for a wide variety of lithologies for Gold. The degree of confidence in the rating only starts to be "good" at a level of 4.0.

The results of the property are inconclusive for copper. The SGH survey did not indicate a copper Redox zone over the existing zinc (copper) and (lead) reserves on the east central part of the property. The best drill holes in this deposit intersected 3 meters of 0.7 % Zn, 0.1 % Cu/ hosted by 1.73m section of bedded massive pyrrhotite in Upper Cherts.

The gold results for gold Redox align very well over a previously mapped north-south shear. After all available historical exploration work reports were reviewed, it was concluded that this fault has not been thoroughly tested as an exploration target. In addition, the gold Redox zone extends to the north, outside the claims project area. Based on the SGH results two additional claims, 4268180 and 4268178 were staked to acquire the gold Redox halo north of the property.

2. Location and Access

The property is located in central Cunningham Township approximately 130km southwest of Timmins, Ontario and 15km northeast of Sultan, Ontario. Access to the southern and western portions of the property is by means of the gravel forestry roads. Additional access to northern and northwestern portions of the claims is provided by old bush trails of 1940 vintage. The property currently consists of the four (4) unpatented mining claims. The village of Sultan is located on the Canadian Pacific Rail main line and has a population small population and limited services such as gasoline, groceries, propane, and telephone are available but a more complete set of services are available in Chapleau, approximately 55km to the northwest.

PORCUPINE Mining Division - 409108 - KEYSTONE ASSOCIATES INC.

Township/Area	Claim Number	Recording Date	Claim Due Date		Percent Option	Work Required	Total Applied		Claim Bank
CUNNINGHAM	<u>4260746</u>	2011-Feb-01	2013-Feb- 01	A	100 %	\$ 1,600	\$ 0	\$ 0	\$ 0
CUNNINGHAM	4260803	2010-Dec-07	2012-Dec- 07	A	100 %	\$ 5,200	\$ 0	\$ 0	\$ 0
CUNNINGHAM	<u>4268178</u>	2012-Mar-26	2014-Mar- 26	A	100 %	\$ 1,600	\$ 0	\$ 0	\$ 0
CUNNINGHAM	<u>4268180</u>	2012-Mar-26	2014-Mar- 26	A	100 %	\$ 1,600	\$ 0	\$ 0	\$ 0

Table 1: Claim Schedule

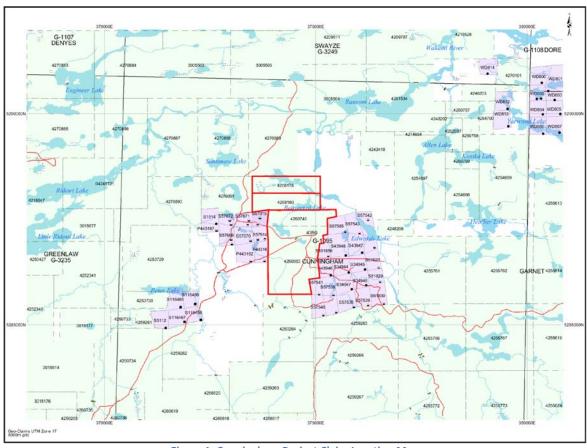


Figure 1: Cunningham Project Claim Location Map

3. Topography and Vegetation

The topography in the vicinity of the property is fairly rugged, with local relief being up to 50m in height. The area as a whole is very hilly with abundant rock outcroppings creating ledges and cliffs anywhere up to a few 10's of meters in height. This rugged terrain poses some restrictions on the movement of heavy equipment in the area, however only a few areas exist which are not accessible. The vegetation in the area consists of a mixture of mature forest and cedar swamps. The dominant tree types consist of Jack pine, black spruce and poplar. Occasional birch and rare I amounts of maple trees are also present in the area. Both Cunningham and Blamey Townships have undergone forestry operations over the years. These operations have removed many of the larger stands of jack pine and black spruce by clear cutting. Operations have largely ceased in recent years, however, some of the smaller stands of conifers were harvested in Cunningham Township. Forestry operations have extended into the southern sections of the property, where the clear cutting has provided outcrop exposure along with good road access.

4. Previous Work

Initial exploration activity in the area dates back to the early 1900's when the Rideout Mining Company prospected the area for iron. During that time, the Iron formations' of Cunningham Township were located but were found to be of too low a grade for Iron production. During 1927 lead-zinc bearing veins hosted by these "iron formations' were discovered on what is now the Kirkton Resources, Shunsby property. Since then exploration in the area continued in a sporadic fashion. The earliest record of work on the present claim group dates back to 1953.

A list of AFRI work report numbers of exploration activity on the property is given below. Current to 2008

Drilling

41010NE0045

41010NE0076

41010NE9109

41010NE0075

41010NE0070

41010NE0079

Geochemical

41010NE0051

41010NE0031

41010NE0053

41010NE0016

41010NE0017

41010NE9211

41010NE9202

Geology

41010NE 0060

41010NE 0017

41010NE 9211

41010NE 9202

41010NE 9101

41010NE 0053

41010NE 0055

Ground Geophysics

41010NE 0018

41010NE 0016

41010NE 9101

Physical

41010NE 0017

41010NE 9202

41010NE 0060

Other

41010NE 0075

41010NE 9101

41010NE 0017

41010NE 0070

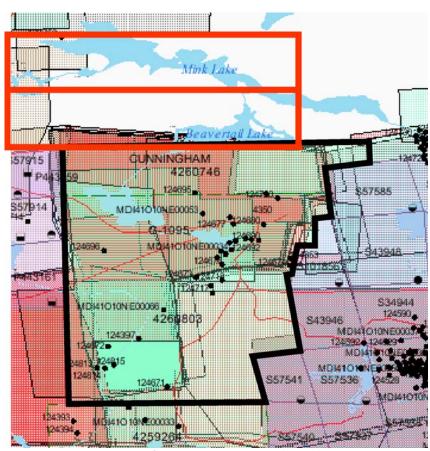


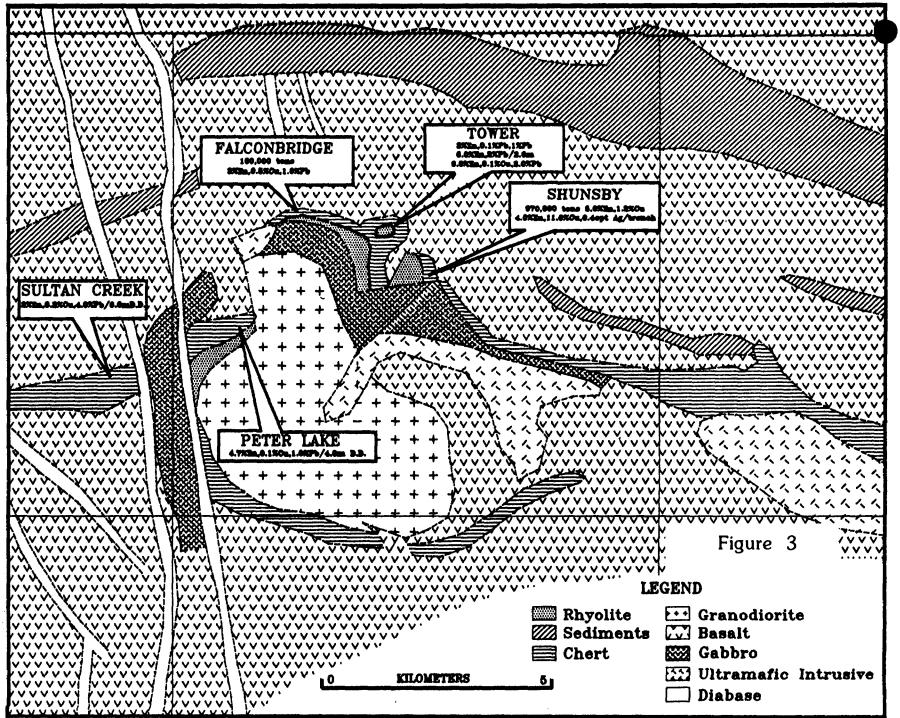
Figure 2: Map of Historic Assessment Work Listed Herein

5. Geology

5.1 Regional Geology

While insufficient information exists to allow a thorough, detailed comprehension of the regional geology of the area, enough information exists to allow an overview of the geological/structural setting. Figure 3 below illustrates our perception of the regional setting, and was constructed by integration of airborne geophysical signatures (AEM, AMAG) with all available ground geological information. Much of the area consists of variably textured mafic metavolcanics which vary in strike from north easterly in the western sectors, through easterly in the central sectors, and southwesterly in the eastern sectors of the region. A number of bands or belts of dominantly clastic and chemical sediments (an assemblage of chert-argillite-magnetite-Fe sulphides) largely mimic the regional structural trends and are intercalated with the mafic metavolcanics on a gross scale. Felsic metavolcanics underlie the chemical sediments In the vicinity of the Tower Lake claim group. Figure 3 below shows that these felsic metavolcanics are of only local area extent in the area, however this is largely a function of the level of information, as additional areas of felsic metavolcanic/pyroclastic rocks are continually being discovered with further work. An intrusive suite ranging in composition from peridotite through gabbro to granodiorite is centred in the southwestern sector of Cunningham Township. The mafic and ultramafic Intrusives are interpreted to be grossly strataform by their magnetic signatures and are believed to be older than the felsic pluton. Granodiorite intrusives occur mostly as one large pluton, known as the Isaiah Creek Pluton, and as numerous dikes and sills throughout the area. While no absolute age dates are available for the area, tt is likely that the Isaiah Creek Pluton Is roughly 2675 Ma in age, similar to many other late-stage felsic intrusions throughout the Archean sub-province. Younger diabase dikes cross-cut all stratigraphic units with roughly north and northwesterly orientations. From the level of information available todate, the area Is most structurally complex in central and southern Cunningham Township, with the stratigraphic trends becoming simpler and more well-behaved as one moves eastward into Garnet Township and westwards Into Greenlaw-Tooms-Eisenhower Townships. In Cunningham Township, the structural setting can be determined by the distribution of the cherts or "iron formations". A broadly ellipsoidal structure centred on the Isaiah Creek Pluton is interpreted to account for the map pattern of the chert units and likely affects the remaining units in this area. Elsewhere to the east and west, the entire stratigraphic package consists of a broadly homoclinal, southerly dipping assemblage of lithologies. While the cause of the structural complexity in Cunningham Township is not known, it is felt to be caused by or related to emplacement of the younger Isaiah Creek Pluton. (See Assessment Report 2.15106).

Figure 3.



5.2 Local Geology

On a property scale, the dalm group is underlain by a complexly folded package of lithologies composed of felsic metavolcanic flows and pyroclastics, a chert-argillttemagnettte-Fe sulphide assemblage, a variolitic basalt unit and mafic massive to pillowed mafic metavolcanics. Intruding into all lithologies are dikes, sills and stocks of gabbro and granodiorite. Larger bodies of these intrusives are located in the western extremes of the property for the most part. The oldest units on the property (stratigraphic footwall) are the felsic metavolcanics which consist of rhyolltic flows, felsic ash to lapilli tuffs, and a heterogenous unit which is currently interpreted to represent some type of turbiditic sediment or debris flow. Stratlgraphically overlying, but structurally below these felsic units is the chemical sediment assemblage. These chemical sediments are volumetrically dominated by variably textured cherts, but also contain significant amounts of fine clastic sediments (argillite, graphitic argillite, greywacke), minor amounts of interbedded magnetite, massive, bedded pyrite and pyrrhotite and rare amounts of a tuffaceous component (both felsic and chloritic-mafic). The chemical sediments are hosts to a variolitic basalt unit which is the most important stratigraphic marker horizon in central Cunningham Township. This variolitic basalt has already been traced almost continuously for a strike length of at least 5km. In keeping with terminology applied to the type sections located on the Shunsby property immediately to the southeast, those cherts stratigraphically below the variolitic basalt marker are known as the Upper Cherts. Those cherts located stratigraphically above the marker unit are known as the Lower Cherts. The unit stratigraphically above the Lower Cherts consists of a basalt, which forms the ultimate hangingwall to the succession in the area. This lithologic assemblage is illustrated in the stratigraphic column shown in Figure 4 below. Structurally speaking, current interpretations suggests that the Ilthologles are part of an overturned, doubly folded, broadly synformal structure which is roughly a dome-and-basin pattern as described by Ramsey (1967). The northeastern quadrant of the property is basically upside-down and is now a flat-lying to gently plunging synform. This synform plunges gently to the southwest, and gradually broadens out westwards into a moderately dipping monoclonal attitude. (See Assessment Report 2.15106).

5.3 Economic Geology

Base metal mineralization had been known in the area since 1927. For the most part, these occurrences consist of stringer-type sphalerite with associated pyrite-galena-chalcopyrite-(pyrrhotite). These occurrences are usually hosted within the chemical sediment assemblage. On the Tower Lake Group, a number of localities have been discovered containing elevated zinc-(lead)-(copper) values. (See Assessment Report 2.15106).

Figure 4.

CUNNINGHAM AREA GENERALIZED STRATIGRAPHIC COLUMN

Pertinent Similarities to Maltabi—Type Environments (Kldd Creek, Horne, Louven)

- 1) Mixed thoislitic footwall felsic flows & fragmentals
- 2) Thick, impermeable basaltic cap rock
- 3) Clastic sediments mark proximity to subareal sediment source
 —shallow water environment
 —graphitic sediments act as metal scavengers in
 reducing environments
- 4) Widespread CO2 alteration of host lithologies
 —Fe chlorite dominated pipes host strong Cu—Fe—Zn sulphide stringers
 —sericite—chlorite alteration of relevant lithologies (variolitic basalt)
- 5) Multiple levels of bedded sulphide occurrences
- 6) Na₂O-CaO-SiO₂ depletion
 MgO-FeTot-K₂O enrichments

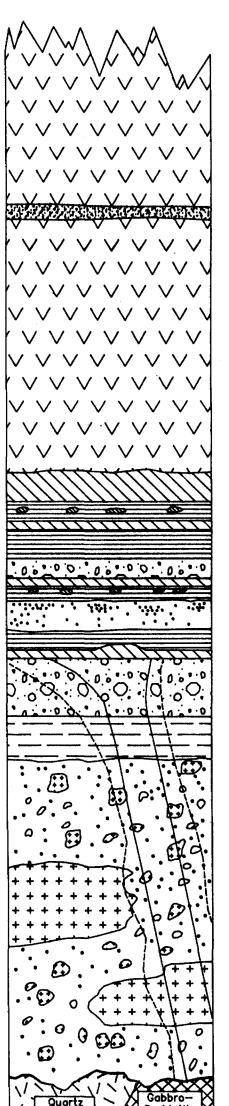
Strong HEM Conductor (mineralized hi—grade Cu float) Argilite with banded sulphide fragments Sulphides (Cu—Zn—Fe) Argilite / Siltstone

Fragmental Chert / Volcaniciasitc Sediment Banded Sulphides (Cu—Zn—Fe) Argillite with Sulphide Clasts

Argillite
Sulphides (Fe-Zn-Cu)

Chert / Fragmental Chert

Massive bedded chert



Monzonite

HANGINGWALL BASALT

LOWER

CHERT

VARIOLITIC BASALT

UPPER

CHERT

FOOTWALL FELSICS

Chlorite—Carbonate Alteration Zones—strong Cu—Fe—Zn sulphide stringers—sub—ore grade in places—minimum 300m strike length

INTRUSIVE SUITE

Figure 4

6. SGH Reports

The SGH sampling and analysis program was successful in delineating new areas for copper and gold exploration on the property. The grid below shows the sample grid layout aligned to the UTM grid.

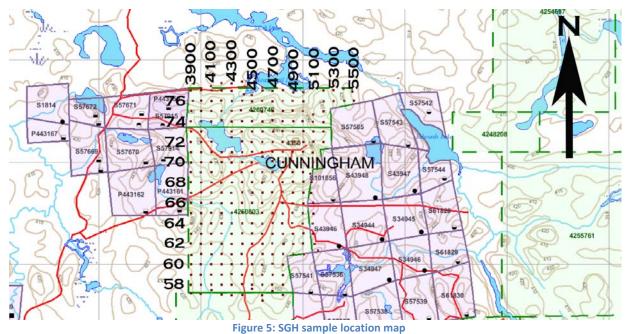


Figure 5: 5GH sample location map

The SGH was also included into compilations for the purpose of highlighting relationships with geology. A number of associations with existing geology, drilling, geophysics and mineral deposit including trenching and sampling have been identified.

- 1. On the copper SGH, the rhyolite to the west and chert to the east have a line of separation near the contact. Why SGH did not highlight the Zn, Pb and Cu drilled deposit reserves in the chert is unexplained. The copper SGH does have existing showings within the Redox zone for copper on the west. An assumption can be made that SGH is better interpreted in the volcanic.
- 2. The gold SGH report has identified a gold Redox zone, very apparent to a mapped fault/shear zone in a north-south direction near the contact of the rhyolite and chert. All previous drilling has not fully tested this fault/shear zone. Historically only one hole has been identified in the log to cut the fault/shear zone however was not mineralized, therefore not sampled.
- 3. A significant quartz vein has been discovered in close proximity to the gold redox zone and fault/shear in the southwest part of the claim block. This vein was historically sampled and assayed for gold but returned very low values (see Figure 7). The vein has not been exposed over the fault/shear zone.
- 4. The gold SGH Redox zone widens to the north part of the survey. A site visit was not planned in 2012 to ground truth however additional claims were added to

- capture this anomalous area. No previous work has been filed within the gold Redox zone to the north.
- 5. If the gold SGH sampling grid was expanded to capture the north part of the survey area, and covered the magnetic anomaly (halo) over the property is would be of interest if there is a relationship here which terminates at the lake.

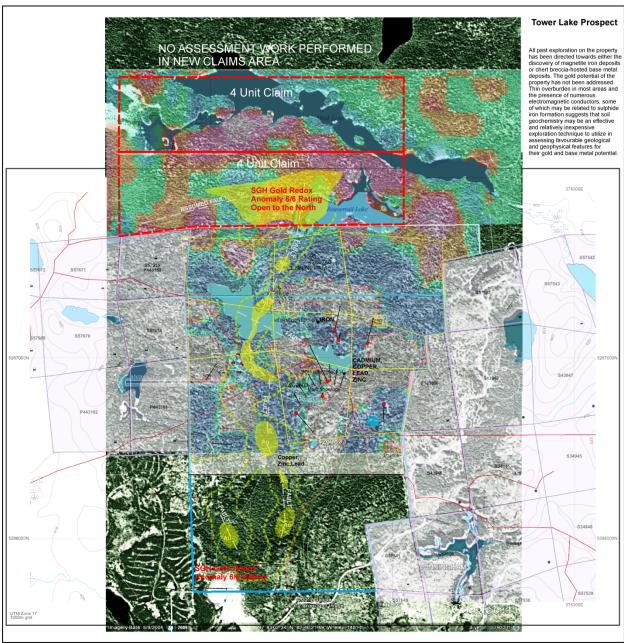


Figure 6: Compilation maps showing SGH Redox zones

Image shows gold SGH strongest Redox in relation to magnetic.

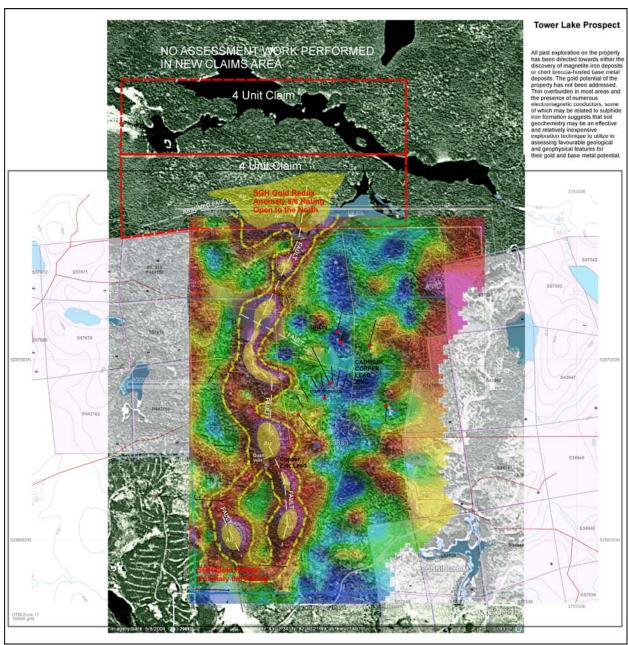


Figure 7: Compilation maps showing SGH Redox zones

Image shows gold SGH image over existing assessment work drilling, geology and mineral occurrences.

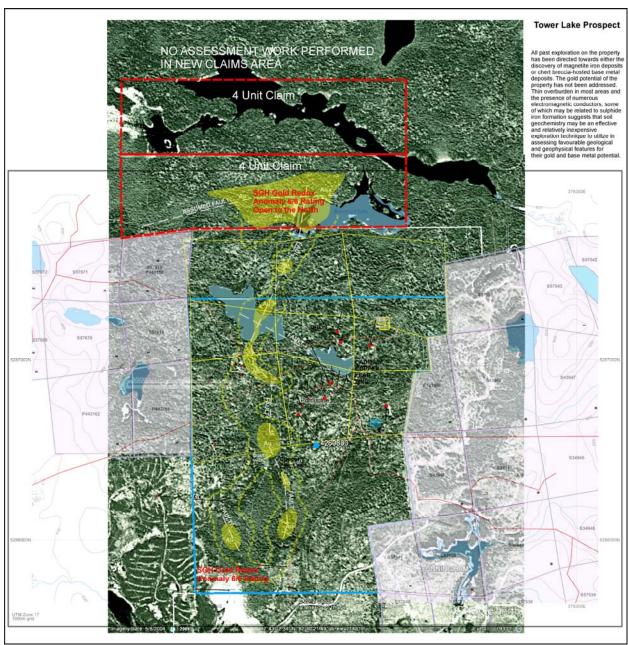


Figure 8: Compilation maps showing SGH Redox zones

Image highlights strongest gold SGH Redox zone in relation to other work, magnetics and SGH data removed.

Sample #	Easting	Northing	Soil	Terrain	Bush
3900-77	373900	5287702	peat	hill	spruce
3900-76	373921	5287601	silt	hill	mixed
3900-75	373904	5287502	peat	hill	mixed
3900-74	373899	5287401	loam	hill	mixed
3900-73	373902	5287302	sand	hill	mixed
3900-72	373898	5287198	sand	hill	mixed
3900-71	373901	5287100	silt	hill	mixed
3900-70	373902	5286998	loam	hill	mixed
3900-69	373899	5286900	peat	flat	mixed
3900-68	373899	5286802	sand	hill	mixed
3900-67	373902	5286698	silt	hill	mixed
3900-66	373901	5286602	peat	flat	mixed
3900-65	373902	5286500	silt	hill	mixed
3900-64	373904	5286399	loam	hill	mixed
3900-63	373902	5286300	sand	hill	mixed
3900-62	373898	5286203	sand	hill	mixed
3900-61	373905	5286091	sand	hill	mixed
3900-60	373903	5286000	peat	flat	mixed
3900-59	373901	5285899	sand	hill	mixed
3900-58	373900	5285801	peat	hill	mixed
3900-57	373901		silt	flat	jack pine
4000-78	374000		silt	hill	mixed
4000-77	374001		peat	hill	mixed
4000-76	374000		peat	hill	mixed
4000-75	374001		sand	hill	mixed
4000-74	374001		peat	hill	mixed
4000-73	374000		loam	hill	mixed
4000-72	374002		silt	hill	mixed
4000-71	374000		silt	hill	mixed
4000-70	374001		silt	hill	mixed
4000-69	373997		silt	hill	mixed
4000-68	374000		silt	hill	mixed
4000-67	374000		silt	hill	mixed
4000-66	374002		silt	hill	mixed
4000-65	374002		silt	flat	mixed
4000-64	374001		silt	flat	mixed
4000-63	374001		silt	flat	alders
4000-62	373997		peat	flat	mixed
4000-61	374001		peat	flat	mixed
4000-60	373997		peat	flat	spruce
4000-59	373998		peat	flat	mixed
4000-58	373999		peat	flat	cedar
4000-57	373997		silt	hill	mixed
4100-57	374102		peat	flat	swamp
4100-58	374101	5285799	peat	flat	swamp

4100-59	374099	5285900	peat	flat	cedar
4100-60	374100	5286000	peat	flat	cedar
4100-61	374102	5286100	peat	flat	cedar
4100-62	374100	5286200	silt	hill	mixed
4100-63	374100	5286300	silt	flat	mixed
4100-64	374100	5286402	loam	hill	mixed
4100-65	374098	5286502	clay	flat	mixed
4100-66	374099	5286601	sand	hill	mixed
4100-67	374101	5286700	peat	hill	mixed
4100-68	374101	5286800	silt	hill	alders
4100-69		5286900	silt	hill	
	374103		silt	hill	spruce
4100-70	374100	5287000			mixed
4100-71	374102	5287101	loam	flat	mixed
4100-72	374102	5287201	peat	hill	mixed
4100-74	374100	5287400	loam	hill	mixed
4100-75	374101	5287502	sand	hill	mixed
4100-76	374102	5287598	silt	hill	mixed
4100-77	374102	5287703	peat	flat	mixed
4100-78	374097	5287746	loam	hill	mixed
4200-78	374199	5287774	peat	hill	mixed
4200-77	374201	5287701	peat	hill	mixed
4200-76	374197	5287603	loam	hill	mixed
4200-75	374199	5287501	loam	hill	mixed
4200-74	374201	5287411	sand	hill	cedar
4200-71	374201	5287101	peat	hill	mixed
4200-70	374200	5287002	peat	hill	mixed
4200-69	374199	5286898	peat	hill	mixed
4200-68	374198	5286799	silt	hill	mixed
4200-67	374200	5286700	sand	hill	mixed
4200-66	374201	5286599	peat	hill	mixed
4200-65	374201	5286499	silt	hill	mixed
4200-64	374202	5286400	loam	hill	mixed
4200-63	374199	5286301	sand	flat	mixed
4200-62	374201	5286200	peat	flat	cedar
4200-61	374200	5286101	peat	flat	cedar
4200-60	374201	5286000	peat	flat	cedar
4200-59	374200	5285900	peat	flat	cedar
4200-58	374200	5285800	peat	flat	cedar
4200-57	374201	5285704	peat	flat	cedar
4300-57	374300	5285699	peat	flat	cedar
4300-58			-	flat	
	374298	5285799	silt silt		mixed
4300-59	374300	5285905	silt	hill	mixed
4300-60	374300	5285999	peat	flat	mixed
4300-61	374300	5286099	peat	flat	cedar
4300-62	374300	5286199	peat	flat	cedar
4300-63	374299	5286298	peat	flat	cedar
4300-64	374301	5286401	peat	flat	cedar

4300-65		374301	5286502	peat	flat	mixed
4300-66		374300	5286599	peat	hill	spruce
4300-67		374297	5286698	peat	flat	alders
4300-68		374302	5286800	peat	flat	mixed
4300-69		374298	5286901	peat	hill	mixed
4300-70		374300	5286999	silt	hill	mixed
4300-71		374304	5287101	sand	hill	mixed
4300-72		374298	5287244	peat	hill	mixed
4300-73		374300	5287300	peat	hill	mixed
4300-74		374300	5287400	silt	hill	mixed
4300-75		374300	5287503	loam	hill	mixed
4300-76		374301	5287598	silt	hill	mixed
4400-57		374404	5285703	loam	hill	spruce
4400-58		374401	5285807	loam	hill	mixed
4400-59		374400	5285899	silt	hill	mixed
4400-60		374399	5286002	sand	hill	spruce
4400-60		374399	5286102	silt	hill	mixed
		374404			flat	
4400-62			5286202	loam		cedar
4400-63		374403	5286303	peat	hill	mixed
4400-64		374403	5286401	sand	hill	mixed
4400-65		374403	5286508	silt	hill	mixed
4400-66		374402	5286602	loam	hill	mixed
4400-67		374403	5286703	sand	hill	mixed
4400-68		374402	5286803	loam	hill	mixed
4400-69		374398	5286901	peat	hill	mixed
4400-70		374401	5287003	loam	hill	mixed
4400-71		374403	5287101	peat	flat	mixed
4400-72		374402	5287206	silt	hill	mixed
4400-73		374398	5287300	peat	hill	mixed
4400-74		374402	5287404	sand	flat	mixed
4400-75		374391	5287507	silt	hill	mixed
4400-76		374403	5287603	loam	hill	mixed
4400-77		374421	5287666	sand	hill	mixed
4400-78	???	374402	5287789	loam	flat	mixed
4300-77		374299	5287698	peat	flat	mixed
4300-78		374300	5287771	peat	flat	mixed
4500-57		374501	5285759	peat	flat	cedar
4500-58		374499	5285799	loam	hill	mixed
4500-59		374501	5285902	sand	hill	mixed
4500-60		374500	5286000	sand	hill	mixed
4500-61		374500	5286099	peat	flat	mixed
4500-62		374500	5286200	peat	flat	cedar
4500-63		374501	5286303	loam	hill	mixed
4500-64		374500	5286400	loam	hill	alders
4500-65		374501	5286501	silt	hill	mixed
4500-66		374500	5286600	loam	hill	mixed
4500-67		374502	5286701	silt	hill	mixed

4500-68	374501	5286803	silt	hill	mixed
4500-69	374499	5286900	loam	hill	mixed
4500-70	374497	5286999	loam	hill	alders
4500-71	374499	5287104	peat	flat	mixed
4500-72	374497	5287198	silt	hill	mixed
4500-73	374501	5287301	silt	hill	mixed
4500-74	374499	5287402	loam	hill	mixed
4500-75	374499	5287501	loam	hill	mixed
4500-76	374501	5287595	peat	hill	mixed
4500-77	374497	5287656	peat	hill	cedar
4600-56	374602	5285646	sand	hill	mixed
4600-57	374598	5285699	silt	hill	mixed
4600-58	374600	5285799	sand	hill	mixed
4600-59	374600	5285899	peat	hill	mixed
4600-60	374599	5285998	peat	hill	spruce
4600-61	374601	5286102	loam	hill	mixed
4600-62	374602	5286200	loam	hill	mixed
4600-63	374597	5286300	peat	hill	mixed
4600-64	374600	5286398	silt	hill	mixed
4600-65	374599	5286502	peat	hill	mixed
4600-66	374597	5286602	loam	hill	mixed
4600-67	374602	5286701	peat	hill	mixed
4600-68	374599	5286798	silt	hill	mixed
4600-69	374600	5286900	peat	hill	mixed
4600-70	374603	5287057	peat	flat	mixed
4600-71	374599	5287100	silt	hill	mixed
4600-72	374600	5287198	peat	hill	mixed
4600-73	374601	5287300	silt	hill	mixed
4600-74	374601	5287398	loam	hill	mixed
4600-75	374597	5287498	loam	hill	mixed
4600-76	374598	5287601	loam	hill	mixed
4600-77	374602	5287702	peat	hill	spruce
4600-78	374600	5287730	peat	hill hill	mixed
4700-57	374700	5285737	loam	hill hill	mixed
4700-58 4700-59	374695 374702	5285801 5285898	silt Ioam		mixed mixed
4700-59	374699	5286006	silt	hill hill	mixed
4700-61	374700	5286099	loam	hill	mixed
4700-62	374698	5286203	loam	flat	mixed
4700-63	374701	5286299	silt	hill	mixed
4700-64	374701	5286404	peat	flat	mixed
4700-65	374702	5286500	loam	hill	mixed
4700-66	374701	5286599	loam	hill	mixed
4700-67	374697	5286703	loam	hill	mixed
4700-68	374702	5286802	loam	hill	mixed
4700-69	374701	5286901	loam	hill	mixed
4700-70	374700	5287013	loam	hill	mixed
,			. =		

4700-71	374700	5287103	loam	hill	mixed
4700-72	374702	5287198	loam	hill	mixed
4700-73	374707	5287301	loam	hill	mixed
4700-74	374700	5287411	loam	flat	mixed
4700-75	374703	5287501	loam	hill	mixed
4700-76	374699	5287596	loam	hill	mixed
4700-77	374701	5287698	peat	hill	mixed
4800-57	374801	5285703	silt	hill	mixed
4800-58	374802	5285799	loam	flat	mixed
4800-59	374803	5285895	peat	flat	mixed
4800-60	374802	5285997	loam	hill	mixed
4800-61	374802	5286101	silt	flat	jack pine
4800-62	374804	5286201	loam	flat	mixed
4800-63	374808	5286297	silt	hill	mixed
4800-64	374796	5286400	peat	flat	mixed
4800-65	374800	5286495	loam	hill	mixed
4800-66	374797	5286602	peat	hill	mixed
4800-67	374798	5286709	sand	hill	mixed
4800-68	374797	5286803	loam	flat	mixed
4800-69	374798	5286900	silt	flat	mixed
4800-70	374803	5287001	loam	hill	mixed
4800-71	374800	5287105	silt	hill	mixed
4800-72	374797	5287198	silt	hill	mixed
4800-73	374798	5287304	loam	hill	mixed
4800-74	374799	5287402	silt	hill	mixed
4800-75	374801	5287502	peat	hill	mixed
4800-76	374800	5287601	silt	flat	mixed
4800-77	374802	5287704	loam	hill	mixed
4900-61	374902	5286104	silt	hill	mixed
4900-62	374903	5286199	sand	hill	mixed
4900-63	374899	5286300	sand	hill	mixed
4900-64	374894	5286403	sand	hill	mixed
4900-65	374895	5286503	silt	hill	mixed
4900-66	374898	5286596	silt	flat	mixed
4900-67	374900	5286700	silt	hill	mixed
4900-68	374901	5286804	silt	hill	mixed
4900-69	374898	5286901	loam	hill	cedar
4900-70	374899	5287008	silt	hill	mixed
4900-71	374898	5287103	loam	hill	mixed
4900-72	374902	5287204	loam	hill	mixed
4900-73	374902	5287301	silt	hill	mixed
4900-73	374902	5287404	peat	hill	mixed
4900-74	374903	5287506	silt	hill	mixed
4900-76	374897	5287601	peat	flat	cedar
4900-77	374903	5287682	peat	flat	cedar
5000-77	375002	5287685	peat	flat	cedar
5000-76	375003	5287597	peat	flat	cedar

5000-75	374997	5287499	silt	hill	mixed
5000-74	374995	5287403	loam	hill	mixed
5000-73	375002	5287304	loam	hill	mixed
5000-72	375001	5287200	loam	flat	mixed
5000-71	375000	5287103	loam	flat	mixed
5000-70	375006	5287002	peat	flat	mixed
5000-69	374998	5286899	sand	hill	mixed
5000-68	375002	5286804	sand	hill	mixed
5000-67	375001	5286701	peat	flat	cedar
5000-66	375002	5286595	sand	flat	mixed
5000-65	374997	5286499	sand	hill	mixed
5000-64	374995	5286399	peat	flat	cedar
5000-63	375002	5286303	sand	hill	mixed
5000-62	375000	5286204	clay	flat	cedar
5000-61	375008	5286099	loam	flat	mixed
5100-75	375099	5287469	peat	flat	mixed
5100-74	375095	5287395	silt	hill	mixed
5100-73	375100	5287301	sand	hill	mixed
5100-72	375101	5287203	peat	hill	mixed
5100-71	375093	5287097	sand	hill	mixed
5100-70	375095	5287002	loam	hill	mixed
5100-69	375070	5286886	loam	hill	mixed
5100-68	375083	5286801	loam	hill	mixed
5100-67	375080	5286697	peat	flat	cedar
5100-66	375099	5286600	silt	flat	mixed
5100-65	375102	5286497	S	hill	mixed
5100-64	375094	5286399	sand	flat	mixed
5100-63	375096	5286298	loam	flat	mixed
5100-62	375112	5286199	sand	flat	mixed
5100-61	375146	5286134	sand	flat	mixed
5200-77	375199	5287701	clay	flat	mixed
5200-76	375201	5287596	sand	flat	mixed
5200-75	375198	5287496	silt	hill	mixed
5200-74	375199	5287393	loam	hill	mixed
5200-73	375200	5287300	peat	hill	mixed
5200-72	375199	5287199	loam	flat	mixed
5300-76	375299	5287600	clay	flat	mixed
5300-77	375298	5287704	peat	flat	mixed
5400-77	375397	5287718	loam	hill	mixed
5400-76	375404	5287601	loam	flat	mixed
5500-56	375499	5287604	silt	hill	mixed
5500-57	375484	5287689	loam	flat	mixed

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

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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
3900-77	64	136												-1
3900-76	40	83						4	 		 		 	-1
3900-75	70	191					15	3			3	-1		-1
3900-74	16	111						6			3	-1	3	-1
3900-73	48	93						7	-1	1	4	-1	2	-1
3900-73-R	46	90				4		7	-1	1	4	-1	5	-1
3900-72	48	104	. 19	22	6	8	7	2	-1	1	2	-1	-1	-1
3900-71	39	86	20	18	5	6	7	1	-1	-1	2	-1	2	-1
3900-70	33	99				9	7	6	-1	-1	2	-1	2	-1
3900-69	63	90				9	11	2	-1	-1	2	-1	-1	-1
3900-68	36	77						7	-1		<u> </u>	-1	· ·	-1
3900-67	30	93				<u> </u>	8	6		<u> </u>	3	-1		-1
3900-66	70	155					6	2	· 		2	-1		-1
3900-65	40	81					7	7	-1		3	-1		-1
3900-64	38	94						5			2	-1		-1
3900-63	35	77									3	-1	·	-1
3900-62	12	70						4			_	-1 -1	<u> </u>	-1 -1
3900-61 3900-60	37 28	84 71							-1 -1			-1 -1		-1 -1
3900-59	30	67						8			2	-1		-1
3900-58	26	59									1	-1		
3900-58-R	24	27						1	_1		1	_1		-1
3900-57	20	75						3	-1	-1	1	-1	-1	-1
4000-78	29	62	13	13			5	3	-1	-1	2	-1	3	-1
4000-77	49	132				11	11	10	-1	1	3	-1	3	1
4000-76	31	59	14	13	4	4	1	-1	-1	-1	1	-1	-1	-1 ¹
4000-75	27	63	14			3	6	4	-1	-1	2	-1	-1	-1
4000-74	43	88				7	6	3	-1	-1	2	-1	1	-1
4000-73	16	93					7	6			3	-1		-1
4000-72	13	84						8			4	-1		
4000-71	38	72					7	7	-1		3	-1		-1
4000-70	38	89					7	2				-1		-1)
4000-69 4000-68	32 28	67 65					6				3	-1 -1		-1
4000-67	33	64									2	-1	· · · · · · · · · · · · · · · · · · ·	-1
4000-66	30	69					5		-1		2	-1	<u> </u>	-1
4000-65	22	77					7	6			3	-1		-1
4000-65-R	25	65					6	5				-1		-1
4000-64	31	68					6	14				-1		1
4000-63	27	63				5			-1	-1	2	-1	2	-1
4000-62	29	95	18	20	7	8	7	9	-1	-1	4	-1	2	-1
4000-61	73	83	16	26	7	8	8	7	-1	-1	1	-1	2	2
4000-60	11	61	11			. 4	3	3	-1	-1	-1	-1	-1	-1
4000-59	56	103		 		7	7	8	-1	-1	1	-1	1	-1
4000-58	61	66									_	-1		
4000-57	11	82						4				-1		-1
4100-57	53	69						4				-1		
4100-58	24	69						5				-1		-1
4100-59	45	119						8				-1	3	1 2
4100-60 4100-61	58 84	118 127	45 22						-1 -1		8	-1	5	4
4100-61	84 21	75									3			2 -1
4100-62	∠ı 27	63						8			3	-1	2	-1
4100-63 4100-63-R	30	64					6	7	-1 		3	-1	2	-1 -1
7100-00-K	ა∪	04	4	1 14	· 1	<u> </u>	O.	1	<u> </u>	oponomico de la composición dela composición de la composición de la composición dela composición dela composición dela composición de la composición dela composici	<u>ე</u>	η	1 4	1

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

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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
4100-64	32	61	17	14	7	8	6	3	-1	1	2	-1	2	-1
4100-65	6	55	13	9	4	4	5	5	-1	-1	1	-1	-1	-1
4100-66	25	58	16	12	5	5	6	4	-1	-1	2	-1	-1	-1
4100-67	46	73	18	22	7	8	7	2	-1	1	2	-1	-1	3
4100-68	28	74	. 17	18	8	9	7	8	-1	-1	4	-1	3	-1
4100-69	23	76	19	17	7	9	6	6	-1	-1	3	-1	2	-1
4100-70	10	73	16	17	6	6	5	1	-1	-1	2	-1	1	-1
4100-71	9	70		11		5	6	1	-1	-1	2	-1	1	-1
4100-72	27	63		14				-1	<u></u>		1	-1	-1	-1
4100-74	9	69		16			6	5	-1	•	2	-1	1	-1
4100-75	8	74		13				7	-1	<u> </u>	3	-1	4	-1
4100-76	13	76		14				2	-1		3	-1	3	-1
4100-77	50	73		8		8	4	1	-1	-1	1	-1	1	-1
4100-78	11	72		17			7	3	1	1	2	-1	10	-1
4200-78	45	112		39				9		<u> </u>	1	-1		-1
4200-78-R 4200-77	43 34	110 72		36 20			8 5	8 9			۷ ک	-1 -1	10	-1 -1
4200-77	10	71					_	9	-1 -1		2	-1 -1) 1	-1 -1
4200-76	10	65		15				9	-1		2	-1	-1	-1 -1
4200-74	20	51		9				4	-1				-1	
4200-71	39	79		26		- -		11	-1			-1	2	-1
4200-70	51	119		30				4	1	2	2	-1	2	-1
4200-69	24	71		14				9	-1	2	2	-1	-1	-1
4200-68	8	68		14				1	-1	-1	2	-1	4	-1
4200-67	22	75	24	15	10	11	7	3	-1	-1	5	-1	6	-1
4200-66	37	79	19	16	6	6	6	5	-1	-1	1	-1	-1	2
4200-65	24	73		21	8		8	6	-1	-1	4	-1	3	-1
4200-64	25	71		11	9		8	2	-1		4	-1	6	-1
4200-63	12	82		17				9		<u> </u>	4	-1	6	-1
4200-62	95	127		19				2	-1		-1	-1	2	3
4200-61	41	104		15				2	-1			-1	1	2
4200-61-R	42	107	21	15			6	3	-1		***************************************	-1	-1	2
4200-60 4200-59	79 41	133 78		17 14			6	10 8	3 -1	-	1	-1 -1		3
4200-59	48	93		14				0 11	-1		1	-ı -1	-1	1
4200-56	32	88		6			6	11	-1		1	-1 -1	-1	1
4300-57	23	70		15				-1	-1		1	-1	-1	2
4300-58	21	86		23				. 5				-1	-1	-1
4300-59	22	77		18		7	7	2	-1	-1	2	-1	2	-1
4300-60	26	60		12		6	4	6	-1	-1	-1	-1	1	-1
4300-61	30	82	17	14	5	5	5	6	-1	-1	-1	-1	1	-1
4300-62	24	75	15	13	5	6	5	1	-1	-1	1	-1	1	1
4300-63	122	130		18		6	6	-1	-1	-1	1	-1	-1	1
4300-64	17	98		23				9			1	-1	-1	1
4300-65	58	107		46				3	-1	<u> </u>		-1	3	7
4300-66	84	268		100				3	1	3	Ψ	-1	3	1
4300-67	26	73		35			,	4	-1	<u> </u>		-1	9	-1
4300-67-R	44	77						2	-1			-1	-1	-1
4300-68	41	39		30				3	1	_		-1	-1	2
4300-69	29 24	88		32 11			/	14	-1 -1	2	1	-1 1	-1	+1 -
4300-70 4300-71	28	58 68		11			8	∠ 6	-1 -1		2	-1 -1	-1	-1 -1
4300-71	26 46	179		40				7	-1		Ψ	-ı -1	ි ර	- I
4300-72	40	119		50				7	2	1	3	-1 -1	10	ა _1
7300-73	40	147	1 20	30	1 12	1 10	Э	(<u> </u>	.լ ა	۷	7.1	10	7.11

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

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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
4300-74	10	70	15	18	6	7	7	5	-1	-1	3	-1	5	-1
4300-75	8	62	14	12	5	5	6	4	-1	-1	2	-1	-1	-1
4300-76	23	58	18	12	7	7	5	2	-1	-1	-1	-1	1	-1
4400-57	32	75	15			***************************************			-1		3	-1	-1	-1
4400-58	11	66	17			-					2	-1	2	-1
4400-59	31	60	18						-1		2	-1	· · · · · · · · · · · · · · · · · · ·	-1
4400-60	19	55	18								4	-1	6	-1
4400-61 4400-62	20 68	59 121	25 21			18 8		9	-1 -1		4	-1 -1	5	-1
4400-62 4400-62-R	71	134	21					1	-1		2	-1	 	3
4400-63	25	68	26				7	11			3	-1	2	-1
4400-64	30	67	18				7	3	-1		3	_1	3	-1
4400-65	25	78	20				7	8	-1	-1	3	-1	3	-1
4400-66	13	57	19	13	10	12	7	8	-1	1	2	-1	2	-1
4400-67	19	70	13	16	6	7	9	6	-1	-1	3	-1	3	-1
4400-68	30	66	14					4	-1		2	-1	3	-1
4400-69	65	125	23					7	-1		3	-1		-1
4400-70	21	10	9					3	-1		-1	-1	3	-1
4400-71	29	39	15					9	3 -1	_	1	-1 -1	2	-1
4400-72 4400-73	28 29	62 63	15 17				6 7	7	-) -1			-1	-1 -1	-1
4400-73	27	63	17					7	- I		9	-1 -1	-1	- I -1
4400-75	19	62	33		*****************			7	-1		2	-1	1	-1
4400-76	25	59	13					4	-1		1	-1		-1
4400-77	28	66	18					3	-1		-1	-1	-1	-1
4400-77-R	30	73	19	19	5	7	4	3	-1	-1	-1	-1	-1	-1
4300-77	65	159	25			9		7	-1	-1	3	-1	3	3
4300-78	37	93	71					17		2	2	-1	2	3
4500-57	35	57	10					2	-1		<u> </u>	-1		-1
4500-58	21	47	14					5				-1		-1
4500-59 4500-60	21 26	51 55	13 16					5 6	-1 -1			-1 -1		-1
4500-60	91	144	22	 					-1			-1	1	-1
4500-62	73	7	19					6	· ·	9	<u> </u>	-1	-1	3
4500-63	33	63	18					5		-1	2	-1		-1
4500-64	30	59	18				6	4	-1	-1	1	-1	-1	-1
4500-65	21	66	18	15	6	8	5	5	-1	-1	2	-1	2	-1
4500-66	25	57	18				5	5	-1		1	-1	-1	-1
4500-67	26	59	16					2	-1		2	-1	1	-1
4500-68	25	48	16				7	5			2	-1	***************************************	-1
4500-68-R 4500-69	27 21	56 52	17 13				7	2	-1 -1		2	-1 -1	2	-1 -1
4500-69 4500-70	21 25	52 53	13					3	-1 -1		1 1	-1 -1	-1	-1
4500-70 4500-71	26	53	16				4	3	-1		1	-1	7	-1
4500-72	5	27	10				3	-1	-1		-1	-1	-1	-1
4500-73	21	48	14					4	-1			-1		-1
4500-74	24	58	17			7	6	1	-1	-1	2	-1	1	-1
4500-75	21	59	16		· · · · · · · · · · · · · · · · · · ·		7	5	-1	-1	2	-1	1	-1
4500-76	37	78	24						-1		1	-1	2	-1
4500-77	12	10	21			8		11				-1	2	2
4600-56	16	42	10				4	3	-1		1 1	-1		-1
4600-57	23	55 53	14					-1	-1		1 1	-1	-1	-1
4600-58	22	52 54	14				5 4	3	-1 -1		1 1	-1 -1	2	-1 -1
4600-59	16	51	12	4	2] 3	4	3] -1	-1	1 1	_1	1 1] -1

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

Activation Laboratories Ltd.
Date: November 23, 2011
R=Replicate Sample

	001 - LA	002 - LA	003 - LB	004 - LA	005 - LB	006 - LB	007 - LA	008 - LB	009 - LB	010 - LB	011 - LA	012 - LB	013 - LBA	014 - LB
4600-60	20	49	16	13	5	6	4	1	-1	-1	-1	-1	-1	-1
4600-61	20	59	15	14	5	5	4	4	-1	-1	-1	-1	1	-1
4600-61-R	20	62			3 4	5	5	3	-1	-1	-1	-1	2	-1
4600-62	24	59			· · · · · · · · · · · · · · · · · · ·						2	-1	2	-1
4600-63	65	188								_		-1	3	-1
4600-64	20	48						3	-1			-1		-1
4600-65	47	125									2	-1	3	-1
4600-66 4600-67	20 15	64 56						7	-1 -1		-1	-1 -1	2	-1 -1
4600-67	6	47						3				-1 -1	 	-1 -1
4600-69	22	10						2	-1		-1	-1	1	-1
4600-70	8	50			, ,			1	-1		-1		1	-1
4600-71	15	55				4	5	4	-1	-1	-1	-1	-1	-1
4600-72	23	81	20	25	8	9	5	8	1	-1	2	-1	5	-1
4600-73	18	45	14	8	6	7	6	1	-1	-1	2	-1	1	-1
4600-74	14	45					5	4	-1		1	-1	1	-1
4600-75	22	54						3	-1		1	-1		-1
4600-76	6	46						3				-1	-1	-1
4600-76-R	18	12						2	-1	-1	-1	-1 -1	1	-1
4600-77 4600-78	13 18	75 65						4 11	-1	<u>~</u>	-	-1 -1	-1 -1	-1 -1
4700-76	19	44							-1		. 2	-1	- I	-1
4700-58	18	47						2	-1		1	-1	1	-1
4700-59	21	51					_	- 8			3	-1	<u> </u>	-1
4700-60	17	11						4	-1	-1	1	-1	-1	-1
4700-61	7	57	13	13	5	5	6	6	-1	-1	2	-1	2	-1
4700-62	18	48				3	4	5			1	-1	-1	-1
4700-63	18	44					5	6			2	-1	2	-1
4700-64	12	23				•		2			<u> </u>	-1		-1
4700-65 4700-66	23 20	52 49						4				-1 -1	=	-1
4700-66	20 16	49 55					_	5	-1 -1			-1 -1		-1
4700-68	19	48						4	-1			-1	***************************************	-1
4700-69	22	47					6	3	· ·			-1	1	-1
4700-69-R	22	45					6	3	-1		1	-1	-1	-1
4700-70	7	49	12	7	4	4	5	4	-1	-1	1	-1	-1	-1
4700-71	17	45			U	3	4	-1	-1	-1	1	-1	-1	-1
4700-72	23	45						2	-1		-1	-1		-1
4700-73	14	53						2	-1		-1	-1	-1	-1
4700-74	7	55 50						4	-1		1	-1	***************************************	-1
4700-75 4700-76	22	50 56					5 5		-1 -1] 1	-1 -1	<u>2</u>	-1 -1
4700-76	14	50 54						3	-1		-1	-1 -1		-1 -1
4800-57	6	52					5	-1	-1	·	1	-1	2	
4800-58	7	50					6	5	-1		2	-1	1	-1
4800-59	22	64										-1		-1
4800-60	17	44) 4	4	6	4	-1	-1	2	-1	1	-1
4800-61	6	37			· · · · · · · · · · · · · · · · · · ·	5	4	12	-1	-1	1	1	1	3
4800-62	14	53					5	5				-1		-1
4800-63	15	39		7	=		2	-1	-1			-1	-1	-1
4800-63-R	15	5	10		U		2	-1		<u> </u>		-1	<u> </u>	-1
4800-64	30	31 11						5	-1		-1	-1	1 1	2
4800-65	19 27	11 81			-		_	7	-1 -1			-1 -1	1 -4	-1 -1
4800-66	27	81	14		<u> </u>	1 3	, 5	3	-1	-1	1 -1	-1		÷1

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

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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
4800-67	9	53	13	4	6	7	5	5	-1	-1	2	-1	2	-1
4800-68	19	53	11	12	-1	2	5	3	-1	-1	1	-1	1	-1
4800-69	20	62	14			5	6	3	-1	-1	1	-1	2	-1
4800-70	17	54	13					3	-1		2	-1	4	-1
4800-71	15	52	17	12				2	-1	·	-1	-1	1	-1
4800-72	7	48	12					7	-1			-1		-1
4800-73	23	53	12					4	-1		-1	-1	1	-1
4800-74 4800-75	18 20	60 30	12 16	13 8				/ 	-1 -1			-1 -1	2	-1 -1
4800-75	19	47	12		5 4			6				-1 -1		-1 -1
4800-77	8	56	13					-1	-1		1	-1	-1	-1
4900-61	20	45	12					4	-1		1	-1		-1
4900-61-R	20	43	11	7	3		4	5	-1	-1	1	-1	1	-1
4900-62	7	50	13	8	6	6	6	5	-1	-1	2	-1	-1	-1
4900-63	18	45	13	9	6	7	6	6	-1	-1	2	-1	-1	-1
4900-64	9	12	18	10				7	-1		2	-1	2	-1
4900-65	20	51	12				6	2	-1			-1		-1
4900-66	6	47	15				4	3	-1			-1		-1
4900-67	6	44	13	6 8	6		5	1	-1 -1			-1 -1	-1	-1
4900-68 4900-69	18 18	46 40	12 12		5 4		5 4	-1 3	-) -1	***************************************		-1 -1	-1 -1	-1 -1
4900-70	17	9	15		6		4	6				-1	-1	-1
4900-71	18	41	16	4	6			3				-1		-1
4900-72	19	46		4	6		4	5	-1			-1		-1
4900-73	18	45	14	6	5	6	4	1	-1	-1	-1	-1	-1	-1
4900-74	18	47	17	7	8	8	4	5	-1	-1	-1	-1	1	-1
4900-75	5	43	12		4		4	1	-1		1	-1		-1
4900-76	5	43	13		4			4	-1		-1	-1	-1	-1
4900-76-R	5	39	13	7	5			3	-1			-1 -1	<u> </u>	-1
4900-77 5000-77	28 11	41 20	14 15	6 6				4	-1 -1			-1 -1		-1
5000-77	17	20 40	11					2	-1			-1		
5000-75	6	44	14		6	<u> </u>		4	-1			-1	*	-1
5000-74	6	43	16		6			4	-1			-1	-1	-1
5000-73	16	10	11	6	4	5	4	4	-1	-1	-1	-1	-1	-1
5000-72	18	27	16		8	9	5	5	-1	-1	1	-1	-1	-1
5000-71	21	48	16		7			5			2	-1	<u> </u>	-1
5000-70	19	48	13		4			5	-1			-1	-1	-1
5000-69	17	10	13		4			4			-1	-1	1 1	-1
5000-68 5000-67	20 16	45 42	16 13	3 7	9			7	-1		_1	-1 -1		-1 -1
5000-67	16	42 45	13		6		3 6		-1 -1		-1	-1 -1	-1 -1	-1 -1
5000-65	7	10	16					8			2	-1		-1
5000-64	26	65	15	11	4		2	3	-1	·	-1	-1	1	-1
5000-64-R	27	67	15				3	4	-1	-1	-1	-1	1	-1
5000-63	20	47	20	5	9	10	5	7	1	-1	2	-1	2	-1
5000-62	21	49	14					3	-1			-1	1	-1
5000-61	6	46	14					-1	-1			-1	•	-1
5100-75	18	49	16					2	-1			-1	 	-1
5100-74	4	36	8		2			1	-1			-1	-1	-1
5100-73	16	9	12		5		3	4	-1	<u> </u>		-1 -1		-1
5100-72 5100-71	18 6	24 42	11 15				2 3	1 6	-1 -1		-1	-1 -1	-1	-1 -1
5100-71	21	42 47						6				- I - 1	<u> </u>	-1 -1
J 100-70	Z1]	41	10	ا <u>ع</u>	1 0		၂	U	<u> </u>	1	1	1 7	<u>, </u>	1

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

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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
5100-69	6	47	14	5	6	8	5	7	-1	-1	2	-1	1	-1
5100-68	4	8	16	8	5	6	4	5	-1	1	1	-1	2	-1
5100-67	26	59		10	3	3	3	7	-1	-1	1	-1	-1	2
5100-66	6	44	13	7	8	8	4	6	-1	-1	2	-1	1	-1
5100-65	12	42		7	7	9	5	6	-1	-1	2	-1	1	-1
5100-64	16	23		5	5	5	4	2	-1	-1	1	-1	-1	-1
5100-64-R	3	17		2	<u> </u>	5	3	4	-1	-1	-1	-1	-1	-1
5100-63	6	6		3	7	7	5	5	-1	-1	1	-1	-1	-1
5100-62	10	10		3	7	8	6	7	-1	-1	4	-1	4	-1
5100-61	12	11		7	6		5	5	-1	-1	2	-1	1	-1
5200-77	5	48		10			5	3	-1	-1	1	-1	1	-1
5200-76	12			7	8	· · · · · · · · · · · · · · · · · · ·	4	2	-1	-1	1	-1	1	-1
5200-75	13	51		12			7	5	-1	-1	3	-1	2	-1
5200-74	15			12			7	10		2	5	-1	4	-1
5200-73	18	59		11			5	3	-1	-1	-1	·	1	-1
5200-72	14			12		11	6	5	-1	-1	2	-1	-1	-1
5300-76	17	8		9		9	7	1	-1	1	3	-1	2	-1
5300-77	18			8		8	3	4	-1	-1	-1		-1	-1
5400-77	12	15		6			/	2	1	1	3	-1	2	-1
5400-76	6	48		10			6	5	2	2	3	-1	2	-1
5500-76	4	48		10		8 a	/	8		1	3	-1	2	-1
5500-77	14	54	19	15	8	9	8	10	-1	7	4	-1	2	-1
LMB-QA	30	69	17	13	5	E	[-	2	-1	-1	-1	-1	-1	4
LIVIB-QA LMB-QA	90	61		23) 5) 1		-1	-1 -1	- I	-1	ر 1	*1
LMB-QA	17	11				3	9	3	-1					-1
LMB-QA	17	41		6	*********************** **	1	1	-1	-1	-1	-1 -1		-1 -1	-1
LMB-QA	14						_1	1	-1	-1 -1	-1 -1	<u> </u>	-1	-1
LMB-QA	14	23		3		-1 _1	1	_1	-1	-1 -1	-1		-1 -1	-1
LMB-QA	13	7		3		_1))	-1	-1				-1	
LMB-QA	3	1		5	_1	_1	1	-1	-1	-1 -1	-1	-1	-1	-1
LIVID-QA	3	4	,		' <u>'</u>	-1	! !	-1	-1	- '	-1	-1	-1	-1
					1	1		I				1	1	

SOIL GAS HYDROCARBONS (SGH) by GC/MS

A11-12846 - Date: November 15, 2011 - Activation Laboratories Ltd.

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

China Metallurgical Exploration - Marc Gaudreau Cunningham Project Site

R=Replicate Sample

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

LMB-QA = Laboratory Materials Blank - Quality Assurance

LEGEND FOR COLUMN HEADINGS - SGH COMPOUND CLASSES

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

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	015 - LAR	016 - LB	017 - LB	018 - LB	019 - LB	020 - LA	021 - LPH	022 - LBA	023 - LAR	024 - LB	025 - LAR	026 - LBA	027 - LB	028 - ALK
3900-77	-1	-1					-1	4	-1			7	-1	1
3900-76	-1	-1	· · · · · · · · · · · · · · · · · · ·				-1	2	-1	· · · · · · · · · · · · · · · · · · ·	-1		-1	-1
3900-75	-1	-1		-1			-1	4	-1		-1	6		1
3900-74	-1	-1	-1	-1	-1	4	-1	2	-1	-1	-1	4	-1	1
3900-73	-1	1	-1	-1	-1	6	-1	4	-1	-1	-1	7	-1	2
3900-73-R	-1	1	-1	1	-1	8	-1	11	-1	-1	-1	6	-1	2
3900-72	-1	-1	-1	-1			-1	2	-1	-1	-1	3	-1	1
3900-71	-1	-1						6			-1	4	-1	2
3900-70	-1	-1						6				4		1
3900-69	-1	-1					-1	4	-1		-1	7	-1	2
3900-68	-1	-1		-1				2	-1		-1	4	-1	1
3900-67 3900-66	-1 -1	-1 -1	***************************************		***************************************			7	-1 -1		-1 -1	4	•	- 1
3900-65	-1 -1	-1 -1					-1 -1	2	-1		-1	- I	-1 -1	-1 4
3900-64	-1	-1						1	-1			3		-1
3900-63	-1	-1					-1	. 8	-1		-1	5		1
3900-62	-1	-1	***************************************		```	*		2	-1		-1	3		-1
3900-61	-1	-1						2	 			3		1
3900-60	-1	1	2	2	-1	2	-1	2	-1	-1	-1	1	-1	-1
3900-59	-1	-1					-1	2	-1	-1	-1	5	-1	2
3900-58	-1	-1						3	-1			2		-1
3900-58-R	-1	-1		-1				3	-1		-1	-1		-1
3900-57	-1	-1						1	-1	·		2	'	-1
4000-78	-1	-1 1						2	-1		-1	3		-1
4000-77 4000-76	-1 -1	1 -1	-					5 2	-1 -1		-1 -1	8		
4000-75	-1	-1						7	-1		-1 -1	2	-1	-1
4000-74	-1	-1						3	-1			9	-1	
4000-73	-1	-1		-1				2	-1			4		1
4000-72	-1	1	1	1	1			10	-1	-1	-1	5	-1	1
4000-71	-1	-1	-1	-1	-1	6	-1	7	-1	-1	-1	4	-1	1
4000-70	-1	-1						1	-1		-1	3	-1	-1
4000-69	-1	1			-1		-1	9			-1	5		1
4000-68	-1	-1						1	-1			-1		1
4000-67	-1	-1 -1						2	-1 -1		-1 -1	3	-1	1
4000-66 4000-65	-1 -1	-1						6		•		4	-1 -1	-1
4000-65-R		- I	-1				-1	7	-1		-1			
4000-64	-1	1				·		3				4		2
4000-63	-1	-1						4	-1			3	-1	<u>-</u> -1
4000-62	-1	2	1	1	1	7	-1	2	-1		-1	4		1
4000-61	-1	-1	-1	-1	-1	2	-1	2	-1	-1	-1	1	-1	-1
4000-60	-1	-1		-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
4000-59	-1	-1		-1				1	-1		-1	1	-1	-1
4000-58	-1	-1				_		2	-1	<u> </u>		1	-1	-1
4000-57	-1	-1						-1	-1		-1	-1	***************************************	-1
4100-57	-1	-1						70				-1	·	-1
4100-58	-1 -1	-1 1		-1	-1 1	7		2 9	-1 -1		-1 -1	-1	-1 -1	÷1:
4100-59 4100-60	-1 -1	1		5				9	-1 2			4	<u> </u>] //
4100-60	-1	-1	ე 1	1	-1		-1 -1	2	-1		-1 -1	-1	ى -1	-1
4100-62	-1	-1	1	1	2		-1	8	-1	<u> </u>	-1	3		2
4100-63	-1	1		-1	-			8			-1	5	***************************************	2
4100-63-R	-1	1	-1		1	8		8			-1	9		2
			<u> </u>	<u></u>	· <u>····································</u>	<u></u>				•	·	•	·	

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	015 - LAR	016 - LB	017 - LB	018 - LB	019 - LB	020 - LA	021 - LPH	022 - LBA	023 - LAR	024 - LB	025 - LAR	026 - LBA	027 - LB	028 - ALK
4100-64	-1	-1	-1	-1	-1	5	-1	7	-1	-1	-1	3	-1	1
4100-65	-1	-1	-1	-1	-1	2	-1	3	-1	-1	-1	2	-1	-1
4100-66	-1	-1	-1	-1	-1		-1	5	-1	-1	-1	3	-1	-1
4100-67	-1	2	1	1	-1			3				Ę		1
4100-68	-1	1	-1	-1	-1	<u> </u>	-1	8		·	-1	5	<u> </u>	2
4100-69	-1	-1	-1					6				2	2 -1	-1
4100-70	-1	-1	-1	-1				4	-1			2		-1
4100-71	-1 -1	-1 -1	-1 -1	-1 -1		······	-1 -1	-1	-1 -1		-1 -1	2	2 -1	-1
4100-72 4100-74	-1 -1	-1 -1	-1 -1	-1 -1				- I	-1 -1			2	· · · · · · · · · · · · · · · · · · ·	-1
4100-74	-1	-1	-1	-1	-1		-1	8			-1	9	3 -1	1
4100-76	-1	-1	-1					3						2
4100-77	-1	-1	-1	-1	-1			2	-1		-1	1	-1	-1
4100-78	-1	-1	-1	-1	3	4	-1	4	-1	-1	-1	3	3 -1	1
4200-78	-1	-1	-1	-1	-1	2	-1	5	-1	-1	-1	8	-1	1
4200-78-R	- 1	-1	-1	-1	-1		-1	5			-1	ę	-1	2
4200-77	-1	-1	-1					3				5	•	1
4200-76	-1	-1	-1	-1				2				Ę		2
4200-75	-1	-1	-1	-1	-1		,	1	-1			3	3 -1	1
4200-74	-1	-1	-1	-1	-1		-1	-1	-1	***************************************	-1	1	-1	-1
4200-71	-1	-1 -1	-1	-1	-1 -1			2	-1 -1			3	<u> </u>	-1
4200-70 4200-69	-1 -1	-1	-1 -1	-1 -1				4					·1 ·1	1
4200-69	-1 -1	-1 -1	-1 -1	-1	-1			8			-1		i -1	1
4200-67	-1	1	1	1	1	11		2	-1			7	· ·	2
4200-66	-1	1		-1				-1				,	-1	
4200-65	-1	1	-1		-1			4	-1	-1	-1	7	· -1	2
4200-64	-1	1	-1	-1	-1	8	-1	10	-1	-1	-1	5	-1	2
4200-63	-1	1	1	1	-1	7	-1	3	-1	-1	-1	6	-1	2
4200-62	-1	-1	-1				-1	2	-1	-1	-1	1	-1	-1
4200-61	-1	2	-1	-1	-1			-1	-1			-1		-1
4200-61-R	-1	2	-1	-1				2	-1					-1
4200-60	-1	-1	-1	-1				2	-1			1	-1	-1 -1
4200-59 4200-58	-1 -1	-1 2	-1 -1	-1 -1	-1 -1			2	-1 -1			-1	-1 -1	-1
4200-56	-1 -1	1					-1 -1	-1				-1		-1
4300-57	-1	-1	-1		-1		-1	2	-1			-1	· · · · · · · · · · · · · · · · · · ·	-1
4300-58	-1	-1	-1	-1			-1	4	-1			2		-1
4300-59	-1	-1	-1	-1				6	-1	-1	-1	3	-1	1
4300-60	-1	-1	-1	-1	-1	1	-1	-1	-1	-1	-1	-1	-1	-1
4300-61	-1	-1	-1	-1			-1	1	-1		-1	-1	-1	-1
4300-62	-1	1	-1	-1	-1		-1	1	-1		-1	-1		-1
4300-63	-1	1	,					1	-1			-1		
4300-64	-1	-1	-1	-1	-1	2	-1	-1	-1		-1	-1		-1
4300-65	-1	7	-1	-1		1	-1	1	-1			1 2	2 -1	-1
4300-66 4300-67	-1 -1	-1	2 -1	-1	-1		-1 -1	4	-1 -1			14	·	-1
4300-67 4300-67-R	-1 -1	-1 -1	-1 -1	-1 -1		_	,	7	- I -1		<u> </u>	12		2
4300-67-1	-1 -1	1	-1 -1	-1	4			5			***************************************			2
4300-69	-1	-1	-1	-1	-1	<u> </u>		2	-1					-1
4300-70	-1	-1	-1	-1		······	-1	4	-1			2	*,	1
4300-71	-1	-1	-1	-1				2	-1	-1	-1	4	-1	1
4300-72	-1	3	1	-1	-1	12	-1	12	-1	-1	-1	4	-1	1
4300-73	-1	-1	-1	1	-1	1	-1	4	-1	-1	-1	8	-1	1

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

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	015 - LAR	016 - LB	017 - LB	018 - LB	019 - LB	020 - LA	021 - LPH	022 - LBA	023 - LAR	024 - LB	025 - LAR	026 - LBA	027 - LB	028 - ALK
4300-74	-1	-1	-1	-1	-1	4	-1	2	-1	-1	-1	3	-1	1
4300-75	-1	-1	-1	-1	-1	3	-1	2	-1	-1	-1	3	-1	-1
4300-76	-1	-1	-1	-1	-1		-1	2	-1	-1	-1	2	-1	-1
4400-57	-1	-1	7	-1	4			4	-1		-1	6	-1	2
4400-58	-1	-1	-1	-1	-1			8			-1	4	-1	1
4400-59	-1	-1		-1	-1			5	-1			4		1
4400-60	-1	1	1	1	1			11	-1			6		2
4400-61 4400-62	-1 -1	2	-1	-1	1	9	-1 -1	-1 2	-1 -1		-1 -1	-1		2
4400-62 4400-62-R	-1 -1	3 2	-1 -1	-1	·			2	-1		-1	-1 -1		-1 -1
4400-63	-1	ے 1-1	-1	-1	-1		-1	8			-1	5	-1	1
4400-64	-1	-1						6			-1	4		1
4400-65	-1	-1	-1	-1	-1			1	-1	-1	-1	3	-1	1
4400-66	-1	1	-1	1	-1	6	-1	7	-1	-1	-1	4	-1	1
4400-67	-1	-1	-1	-1	-1	7	-1	8	-1	-1	-1	3	-1	1
4400-68	-1	-1	-1	-1	-1		-1	6			-1	4	-1	1
4400-69	-1	-1	-1	1	-1		-1	7	-1		-1	10		2
4400-70	-1	-1	-1	-1	-1			-1	-1			1	-1	-1
4400-71	-1	-1 -1	-1	-1 -1	-1 -1		-1 -1	2	-1 -1		-1 -1	2	-1	-1
4400-72 4400-73	-1 -1	-1 1	-1 -1	-1 1	-1 -1			5	-) -1	***************************************			-1 1	2
4400-74	-1 -1		-1	<u> </u>	-1			6			-1	4	4	1
4400-75	-1	-1		-1				2			• • • • • • • • • • • • • • • • • • • •	3		-1
4400-76	-1	-1	-1	-1	-1		-1	4	-1		-1	2		-1
4400-77	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
4400-77-R	-1	-1			-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
4300-77	-1	3	-1		1	1	-1	1	-1		-1	2	-1	-1
4300-78	-1	3	-1	-1	1	2	-1	-1	-1		-1	2	-1	-1
4500-57	-1	-1 -1	-1	-1 -1				-1	-1 -1		-1 -1	-1 -1	<u> </u>	-1
4500-58 4500-59	-1 -1	-1 -1	-1 -1	-1	-1		-1 -1	-1	-1		-1 -1	-1	-1 -1	-1 -1
4500-59 4500-60	- 1 -1	-1 -1	-1 -1	-1 -1	-1		-1 -1	-1	-1	1		2		- I 1
4500-61	-1	1	1	1	1	1	-1	1	-1		-1	-1		-1
4500-62	-1	2	1	1	-1	-1	-1	1	-1		-1	-1	-1	-1
4500-63	-1	-1	-1	-1	-1	3	-1	4	-1	-1	-1	2	-1	-1
4500-64	-1	-1	-1	-1	-1		-1	2	-1	-1	-1	1	-1	-1
4500-65	-1	-1			-1		-1	1	-1		-1	1	-1	-1
4500-66	-1	-1	-1	-1			-1	-1	-1		-1	1	-1	-1
4500-67	-1	-1	-1	-1		-	-1	-1	-1		-1	2	-1	-1
4500-68	-1	-1						-1 -1	-1			2	•	-1
4500-68-R 4500-69	-1 -1	-1 -1	-1 -1	-1 -1	-1 -1		-1 -1	- l	-1 -1		-1 -1	1	-1 -1	-1 -1
4500-09	-1 -1	-1						-1				1	-1	-1
4500-71	-1	· -1	-1	- 4	-1		-1	2	-1		-1	1	-1	-1
4500-72	-1	-1	-1	-1				-1	-1		-1	-1		-1
4500-73	-1	-1	-1	-1	-1	2	-1	2	-1	-1	-1	2	-1	-1
4500-74	-1	-1	-1	-1	-1	_	-1	3	-1		-1	2	-1	-1
4500-75	-1	-1	-1		4		-1	3	-1			2	-1	-1
4500-76	-1	1				1	-1	2				1	<u>'</u>	-1
4500-77	-1	2	2	2	1	1 1	-1	-1	-1		-1	-1	-1	-1
4600-56	-1	-1	-1	-1			-1	3 -1	-1		-1	-1 -1		-1
4600-57 4600-58	-1 -1	-1 -1	-1 -1	-1 -1	-1 -1		-1 -1	-1 -1	-1 -1		-1 -1	1	-1 -1	-1 -1
4600-58	-1 -1	-1 -1					-1 -1	-1 -1					-1 -1	-1 -1
4000-03	- 1	- I)		-1	1	<u> </u>	- t-l	-1:	<u> </u>		<u>, -1</u>	<u> </u>	<u>, -1</u>	j

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

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4600-60	-1	-1	-1		1	1	-1	-1	-1			-1		-1
4600-61	-1	-1	-1	_1	-1		'	-1	-1		_1	1	-1	-1
4600-61-R	-1	-1	-1	-1			-1	2	-1		-1	1	-1	-1
4600-62	-1	-1	-1	-1	-1	3	-1	3	-1	-1	-1	2	-1	-1
4600-63	-1	1	2	2	1	3	-1	4	-1	-1	-1	3	-1	-1
4600-64	-1	-1	-1	-1	-1	2	-1	2	-1	-1	-1	2	-1	-1
4600-65	-1	-1	1	1	-1		-1	2	-1		-1	2	-1	-1
4600-66	-1	-1	-1		•			1	-1			2	· · · · · · · · · · · · · · · · · · ·	1
4600-67	-1	-1	-1					-1	-1			-1		-1
4600-68	-1	-1	-1		**********			4	-1		-1] 1	-1	2
4600-69 4600-70	-1 -1	-1 -1	-1 -1	-1 -1			-1 -1	1	-1 -1		-1 -1	-1 -1	-1 -1	-1 -1
4600-70	-1 -1	-1	-1 -1				-1	-1	-1			-1		-1
4600-71	-1	-1 -1	-1					3	- 1			6		1
4600-73	-1	-1	-1				-1	4	-1			3	-1	1
4600-74	-1	1	2				-1	1	-1			1	-1	-1
4600-75	-1	-1	-1		-1	2	-1	2	-1	-1	-1	2	-1	-1
4600-76	-1	-1	1	1	-1		-1	-1	-1		-1	-1	-1	-1
4600-76-R	-1	-1					-1	-1			-1	-1	-1	-1
4600-77	-1	1	2	2		2	-1	3	-1	•	-1	2	-1	-1
4600-78	-1	2	2	2		2		2	-1			1 1	-1	-1
4700-57	-1	-1	-1		**********			-1	-1		-1 -1	4		1
4700-58 4700-59	-1 -1	-1 1	-1 1	-1	-1 1	4	-1 -1	-1 5	-1 -2			2	-1 -1	-1
4700-60	-1 -1	-1	-1	-1	•			2	-1			3		-1
4700-60	-1	-1 -1	- 4				-1	2	- 1		-1	9	-1	
4700-62	-1	-1		-1				3	-1		-1	3		1
4700-63	-1	-1	-1		-1	3	-1	3	-1	-1	-1	3	-1	-1
4700-64	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
4700-65	-1	-1	-1		-1	2	-1	3	-1	-1	-1	2	-1	-1
4700-66	-1	-1	-1				-1	2	-1		-1	2	-1	-1
4700-67	-1	-1	-1				-1	-1	-1		-1	2	-1	-1
4700-68	-1	-1	-1					2	-1		-1 -1	2	<u> </u>	-1
4700-69 4700-69-R	-1 -1	-1 -1	-1 -1	-1 -1			-1 -1	_1	-1 -1		•		-1 -1	-1
4700-69-K	-1 -1	-1 -1	-1 -1					-1	-1			2		-1 -1
4700-70	-1	-1	-1	-1				-1	-1			2	-1	-1
4700-72	-1	-1						1	-1			1	-1	-1
4700-73	-1	-1	-1			*****************	-1	2	-1	-1	-1	-1	-1	-1
4700-74	-1	-1	-1	-1			-1	3	-1	-1	-1	3	-1	-1
4700-75	-1	-1	-1				'	3	-1			2	·	-1
4700-76	-1	-1	-1					4	-1		***************************************	1 1	-1	-1
4700-77	-1	-1	-1					-1				-1	 	-1
4800-57	-1	-1	-1					3	-1			2	•	-1
4800-58 4800-59	-1 -1	-1 -1	-1 -1	-1 -1				3 -1	-1 -1		-1 -1		-1	1
4800-59	-1 -1	-1 -1	-1 -1	-1			-1 -1	-1	-1		-1	- 1	-1	_1 _1
4800-60	-1 -1	-1	2	2			-1 -1				-1	1 1	3	-1
4800-62	-1	-1	-1					-1	-1			1	-1	-1
4800-63	-1	-1	-1	-1				-1	-1		-1	1 1	-1	-1
4800-63-R	-1	-1	-1	-1	-1	1	-1	-1	-1	-1	-1	1	-1	-1
4800-64	-1	2	-1	-1			-1	-1	-1	-1	-1	-1	-1	-1
4800-65	-1	-1	1	1	-1		-1	1	-1			2	2	2
4800-66	-1	-1	-1	-1	-1	-1	-1	1	-1	-1	-1	-1	-1	-1

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4800-67	-1	-1	-1	-1	-1	3	-1	3	-1	-1	-1	2	-1	-1
4800-68	-1	-1	-1	-1	-1	2	-1	2	-1	-1	-1	2	-1	-1
4800-69	-1	-1	-1	-1	-1		-1	2	-1	-1	-1	2	-1	-1
4800-70	-1	-1	-1	-1	4			2	-1		-1	3	•	-1
4800-71	-1	-1	-1	-1	-1		-1	-1	-1		-1	-1	-1	-1
4800-72	-1	-1						2	-1			3		1
4800-73	-1	-1	-1	-1				-1	-1			1	-1	-1
4800-74 4800-75	-1 -1	-1 -1		-1	-1 -1	· · · · · · · · · · · · · · · · · · ·	-1 -1	-1	-1 -1		-1 -1	2	-1 -1	-1 -1
4800-75	-1 -1	-1 -1	-1	-1	 			-1 -1	-1		-1	1	-1	-1 -1
4800-77	-1	-1	-1	-1	-1		-1	-1	-1		-1	-1	-1	-1
4900-61	-1	-1						-1	-1		-1	1	-1	-1
4900-61-R	-1	-1	-1	-1	-1		-1	-1	-1	-1	-1	1	-1	-1
4900-62	-1	-1	-1	-1	-1	2	-1	1	-1	-1	-1	1	-1	-1
4900-63	-1	-1	-1	-1	-1	3	-1	-1	-1	-1	-1	1	1	1
4900-64	-1	-1	-1	-1	-1		-1	3	-1		-1	2	-1	1
4900-65	-1	-1	-1				-1	-1	-1		-1	-1	-1	-1
4900-66	-1	-1	-1	-1			-1	1	-1			-1		-1
4900-67	-1	-1	-1	-1	-1			2	-1 -1		-1	-1	-1	-1
4900-68 4900-69	-1 -1	-1 -1	-1 -1	-1 -1	-1 -1		-1 -1	-1 -1	-1 -1	***************************************	-1 -1	-1	-1 -1	-1 -1
4900-69	-1 -1	-1 -1	-1 -1	-1 -1	-1		-1 -1	-1 -1	-1 -1		-1	-1	-1	-1 -1
4900-70	-1	-1					-1	-1				-1		-1
4900-72	-1	-1	-1	-1			-1	-1	-1		-1	-1	-1	-1
4900-73	-1	-1	-1	-1	-1			-1	-1		-1	-1	-1	-1
4900-74	-1	-1	-1	-1	-1	1	-1	-1	-1	-1	-1	1	-1	-1
4900-75	-1	-1	-1	-1	-1	1	-1	-1	-1	-1	-1	-1	-1	-1
4900-76	-1	-1	-1	-1	-1		-1	1	-1	-1	-1	1	-1	-1
4900-76-R	-1	-1		-1			-1	1	-1			1	-1	-1
4900-77	-1	-1		-1				-1			-1	-1		-1
5000-77	-1	-1		1	2	-1		1	-1	1	-1	-1		-1
5000-76 5000-75	-1 -1	√1 -1	-1 -1	-1 -1	-1 4		-1 -1	-1 -1	-1 -1		-1 -1	-1 -1		-1 -1
5000-75	-1 -1	-1 -1	-1 -1	-1 -1	2	1	-1 -1	- I	-1 -1		-1 -1	-1	-1	-1 -1
5000-74	-1	-1	-1	-1		1	-1	-1	-1			-1		-1
5000-72	-1	-1	-1	-1	-1		-1	-1	-1		-1	-1	-1	-1
5000-71	-1	-1		1	-1	2		2	-1	-1	-1	2	-1	-1
5000-70	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
5000-69	-1	-1	-1	-1	-1	1	-1	-1	-1		-1	-1	-1	-1
5000-68	-1	-1				***************************************	-1	-1	-1		-1	1	-1	-1
5000-67	-1	-1	-1	-1	-1		-1	-1	-1		-1	-1	-1	-1
5000-66	-1	-1	-1	-1	-1		-1	-1	-1		-1	-1	-1	-1
5000-65	-1 -1	-1 -1	-1 -1	-1 2	2	2		2	-1 -1		-1 -1	1 .1	-1 -1	-1 -1
5000-64 5000-64-R	-1 -1	-1	-1	-1		1 1	-1 -1	-1 -1	-1		-1 -1	-1 -1		-1 -1
5000-64-K	-1 -1	-1 -1		-1	2	2		-1	-1 -1			-1		-1 -1
5000-62	-1	-1	-1	-1	-1		-1	-1	-1		-1	-1	-1	-1
5000-61	-1	-1	-1		-1			-1	-1		-1	-1	-1	-1
5100-75	-1	-1	-1	-1	4		-1	-1	-1	-1	-1	-1	-1	-1
5100-74	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
5100-73	-1	-1		-1			-1	-1	-1	-1	-1	-1	-1	-1
5100-72	-1	-1	-1	-1				-1	-1		-1	-1	-1	-1
5100-71	-1	-1	-1	-1	-1			2	-1		-1	-1	-1	-1
5100-70	-1	-1	-1	-1	-1] 1	-1	-1	-1	-1	-1	-1	-1	-1

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5100-69	-1	-1	-1	-1	-1	2	-1	-1	-1	-1	-1	1	1	1
5100-68	-1	-1	-1	-1	2	2	-1	-1	-1	-1	-1	1	-1	-1
5100-67	-1	-1	-1	-1	2	1	-1	1	-1	-1	-1	-1	-1	-1
5100-66	-1	-1	-1	-1	-1	1	-1	-1	-1	-1	-1	-1	-1	-1
5100-65	-1	-1	-1	-1	-1	2	-1	-1	-1	-1	-1	-1	-1	-1
5100-64	-1	-1	-1	-1	-1	1	-1	1	-1	-1	-1	-1	-1	-1
5100-64-R	-1	-1		-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
5100-63	-1	-1		-1		1	-1	-1	-1	-1		-1		-1
5100-62	-1	-1		-1		4	- 1	-1	-1	-1		2	-1	-1
5100-61	-1			-1		2	· · · · · · · · · · · · · · · · · · ·	-1	-1	-1		1	-1	-1
5200-77	-1	-1	<u> </u>	-1		2	-1	2	-1	-1		1	-1	-1
5200-76	-1			-1		1	-1	-1	-1	-1	-1	2		-1
5200-75	-1	-1	·	-1		2	·	-1	-1	-1	-1	2		-1
5200-74	-1	-1		1	1	5		1	-1	-1	•	3		1
5200-73	-1	-1		-1		-1		-1	-1	-1	-1	-1		-1
5200-72	-1	-1		-1	·	2		1	-1	-1	-1	2	-1	-1
5300-76	-1	-1	<u> </u>	-1		3		-1	-1	-1	-1	-1	-1	-1
5300-77	-1	-1	•	-1		-1		-1	-1	-1		-1	-1	-1
5400-77	-1	-1	<u> </u>	-1	<u> </u>	2		-1	-1	-1	-1	-1	-1	-1
5400-76	-1	-1		-1		3		-1	-1	-1		2		-1
5500-76	-1	-1	<u> </u>	-1	<u> </u>	3			-1	-1	-1	3		-1
5500-77	-1	1	-1	-1	-1	3	-1	-1	-1	-1	-1	-1	-1	-1
LMD OA	-1	4	1	.1	1	-1		7	4	-1	4	_1	4	<u> </u>
LMB-QA LMB-QA	-1 -1	-1 -1	-1 -1	-1		-1	-1 -1	-1	-1 -1	-1	-1 -1	*1	-1	*1
LMB-QA	-1 -1	-1 -1	<u> </u>	-1 -1	<u> </u>		-1	-1 -1	-1 -1	-1 -1	-1 -1		-1	- I
LMB-QA	-1 -1	-ı -1		-1 -1	• • • • • • • • • • • • • • • • • • • •	-1	-1	-1 -1	-1 -1	-ı -1		-1	-1 -1	-1
LMB-QA	-1 -1	-1 -1	<u> </u>	-1 -1		-1		-1	-1 -1	-1 -1		-1 -1		- I 4
LMB-QA	-1 -1	-ı -1	***************************************	-1		-1 -1	-1	-1 -1	-1 -1	-ı -1	-1	-1 -1		-1 -1
LMB-QA	-1 -1	-1 -1	-1	-1 -1		-1	-1	-1 -1	-1 -1	-1 -1	-1 -1	-1 -1	<u> </u>	-1 4
LMB-QA	-1 -1	-1		-1		-1	-1	-1	-1	-1	-1	-1 -1	-1 -1	-1
LIVID-QA	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
			I											

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

Activation Laboratories Ltd.
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	029 - HB	030 - HB	031 - HB	032 - HB	033 - HB	034 - HB	035 - LAR	036 - LBA	037 - HB	038 - LBA	039 - LAR	040 - LPB	041 - LBA	042 - LPB
3900-77	-1	-1	-1	-1	-1	-1	-1	5	-1	6	-1	-1	7	-1
3900-76	-1	-1	-1	-1	-1	-1	-1	4	-1	4	-1	-1	4	-1
3900-75	-1	-1	-1	-1	-1	-1	-1	4	-1	7	-1	-1	7	-1
3900-74	-1	-1	-1	-1	-1	-1	-1	2	-1	5	-1	-1	5	-1
3900-73	-1	-1	-1	-1	-1	-1	-1	9	-1	11	-1	-1	10	-1
3900-73-R	-1	-1	-1	-1	-1	-1	-1	9	-1	9	-1	-1	9	-1
3900-72	-1	-1	-1				-1	4	-1		-1	-1	4	-1
3900-71	-1	-1	-1				-1	4	-1		***************************************	-1	5	-1
3900-70	-1	-1						5				-1	5	-1
3900-69	-1	-1	-1				-1	3	-1		-1	-1	7	-1
3900-68	-1	-1	-1 -1					4	-1		<u> </u>	-1 -1		-1
3900-67	-1 -1	-1 -1	-1 -1				-1 -1	4	-1 -1			-1 -1	3	-1
3900-66 3900-65	-1 -1	-1 -1	<u>-1</u>					2	-1		•	-1 -1		-1
3900-63	-1	-1 -1	-1					3	-1			-1		-1
3900-63	- 1 -1		-1					6				-1 -1	6	
3900-62	-1	-1			· · · · · · · · · · · · · · · · · · ·			2				-1	4	-1
3900-61	-1	-1	-1					4	-1			-1		-1
3900-60	-1	-1	-1				-1	2	-1	3	-1	-1	3	-1
3900-59	-1	-1	-1	-1	-1	-1	-1	5	-1	7	-1	-1	7	-1
3900-58	-1	-1	-1				-1	2	-1	3	-1	-1	3	-1
3900-58-R	-1	-1	7		· · · · · · · · · · · · · · · · · · ·		-1	2	-1		•	-1	2	-1
3900-57	-1	-1				1		-1	<u> </u>	<u> </u>		-1		-1
4000-78	-1	÷1	-1					1	-1	1	-1	-1		-1
4000-77	-1	-1	-1				-1	4	-1		<u> </u>	-1		-1
4000-76	-1 -1	-1 -1	-1					1	-1 -1		-1 -1	-1	2	-1
4000-75 4000-74	-1 -1	-1 -1	-1 -1				-1 -1	5 3	- I -1			-1 -1) o	-1
4000-74	-1 -1	-1 -1	-1					5			•	-1		-1
4000-72	1	-1	-1					6			<u> </u>	-1	4	
4000-71	-1	-1					· · · · · · · · · · · · · · · · · · ·	4	-1		-1	-1	6	-1
4000-70	-1	-1	-1	-1	-1	-1	-1	3	-1	4	-1	-1	4	-1
4000-69	-1	-1	-1	-1	-1	-1	-1	6	-1	7	-1	-1	7	-1
4000-68	-1	-1	-1	-1	-1	-1	-1	2	-1	4	-1	-1	4	-1
4000-67	-1	-1	-1				-1	3	-1		-1	-1	3	-1
4000-66	-1	-1	-1				-1	1	-1			-1		-1
4000-65	-1	-1			1		-	2		·	<u> </u>	-1		-1
4000-65-R	-1	-1	-1 1					2	-1 -1			-1		=1
4000-64 4000-63	-1 -1	-1 -1	1 -1					3				-1 -1		-1
4000-63	-1	-1	-1				-1	5 5	-1		•	-1	6	-1
4000-62	-1 -1	-1 -1	-1 -1					2	-1		· ·	-1	1	
4000-60	-1	-1	-1					1	-1			-1		-1
4000-59	-1	-1	4				-1	2	-1			-1	2	-1
4000-58	-1	-1	-1	-1	-1	-1	-1	-1	-1	2	-1	-1	2	-1
4000-57	-1	-1	-1	-1	-1	-1	-1	2	-1	2	-1	-1	2	-1
4100-57	-1	-1	-1	-1	-1	-1	-1	1	-1	-1	-1	-1	-1	-1
4100-58	-1	-1					-1	1	-1	2	-1	-1	· · · · · · · · · · · · · · · · · · ·	-1
4100-59	-1	-1	-1				-1	5	-1			-1	10	
4100-60	1	-1	7	-1			-1	6			-1	-1	4	-1
4100-61	-1	-1						2			 	-1	-1	-1
4100-62	-1	-1	-1				-1	7	-1		-1	-1	7	-1
4100-63	-1	-1	-1				-1	3	-1 -1		-1	-1 -1		-1 -1
4100-63-R	-1	-1	-1	-1	-1	-1	-1	4] -1	1 /	<u>.</u>	-1	1	-1

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

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	029 - HB	030 - HB	031 - HB	032 - HB	033 - HB	034 - HB	035 - LAR	036 - LBA	037 - HB	038 - LBA	039 - LAR	040 - LPB	041 - LBA	042 - LPB
4100-64	-1	-1	-1	-1	-1	-1	-1	4	-1	5	-1	-1	6	-1
4100-65	-1	-1	-1	-1	-1	-1	-1	1	-1	3	-1	-1	3	-1
4100-66	-1	-1	-1	-1	-1	-1	-1	2	-1	4	-1	-1	4	-1
4100-67	-1	-1	-1				-1	2	-1	• • • • • • • • • • • • • • • • • • • •		-1	6	-1
4100-68	-1	-1						6	-1			-1	6	-1
4100-69	-1	-1	-1					4	-1			-1	4	-1
4100-70	-1	-1	-1					2	-1		-1	-1	3	-1
4100-71	-1 -1	-1 -1	-1 -1					3	-1		-1 -1	-1	3	-1
4100-72 4100-74	- I -1	-1 -1	-1 -1					2	-1 -1			-1 -1	l E	-1 4
4100-74	-1	-1					-1	3	-1			-1	6	-1
4100-76	-1	-1	-1					4	-1	<u> </u>		-1	7	_1
4100-77	-1	-1	-1					-1	-1		-1	-1	2	-1
4100-78	-1	-1	-1	-1	-1	-1	-1	3	-1	2	-1	-1	2	-1
4200-78	-1	-1	-1	-1	-1	-1	-1	4	-1	8	-1	-1	8	-1
4200-78-R	-1	-1	-1				-1	4	-1		• • • • • • • • • • • • • • • • • • • •	-1	8	-1
4200-77	-1	-1						4	-1			-1	2	-1
4200-76	-1	-1						2	-1			-1	8	-1
4200-75	-1	-1 -1	-1	-1 -1		•	-1	1	-1 -1			-1 -1	3	-1
4200-74 4200-71	-1 -1	-1 -1	-1 -1					1	-1 -1	· · · · · · · · · · · · · · · · · · ·		-1 -1	2	-1
4200-71	- 1 -1	-1 -1	-1 -1	-1 -1			-1 -1	2	-1			-1 -1	4 Q	- I _1
4200-70	-1	-1						2			· · · · · · · · · · · · · · · · · · ·	-1	4	-1
4200-68	-1	-1	-1					5				-1	6	-1
4200-67	-1	-1	-1	-1			-1	3	-1	11	-1	-1	11	-1
4200-66	-1	-1	-1	-1	-1	-1	-1	2	-1	1	-1	-1	1	-1
4200-65	-1	-1	-1		-1	-1	-1	9	-1	11	-1	-1	10	-1
4200-64	-1	-1	-1				-1	6	-1	8	-1	-1	8	-1
4200-63	-1	-1				•		4	· ·			-1	8	-1
4200-62	-1	-1	-1					1	-1		-1	-1	-1	-1
4200-61	-1	-1					-1	1	-1		-1	-1	-1	-1
4200-61-R 4200-60	-1 -1	-1 -1	-1 -1				-1 -1	1	-1 -1		-1 -1	-1 -1	-1	-1
4200-60	- I -1:	-1 -1	-1 -1	-1 -1			-1 -1		-1		-1 -1	-1 -1		-1 -1
4200-58	-1	-1						2	-1			-1	-1	-1
4200-57	-1	-1	-1					1	-1		-1	-1	-1	-1
4300-57	-1	-1	-1				-1	1	-1	1	-1	-1	-1	-1
4300-58	-1	-1	-1	-1	-1	-1	-1	1	-1	3	-1	-1	3	-1
4300-59	-1	-1					-1	4	-1			-1	5	-1
4300-60	-1	-1	-1				-1	1	-1			-1	2	-1
4300-61	-1	-1	-1					-1	-1		-1	-1	2	-1
4300-62 4300-63	-1 -1	-1 -1	-1					-1	-1 -1		-1	-1 -1	-1	-1
4300-63	- I -1	- 1 -1	-1 -1				-1 -1	1	-1 -1		-1 -1	-1 -1		-1
4300-65	-1	-1				*****************		1	-1		-1	-1	-1	-1
4300-66	-1 -1						-1	3	-1		-1 -1		3	-1
4300-67	-1	-1	-1					5	-1			-1	16	-1
4300-67-R	-1	-1	-1					4	-1			-1	13	-1
4300-68	-1	-1	-1	-1	-1	-1	-1	4	-1	8	-1	-1	9	-1
4300-69	-1	-1	-1				-1	2	-1		-1	-1	5	-1
4300-70	-1	-1	-1	-1			-1	3	-1			-1	4	-1
4300-71	-1	-1					-1	3	-1		-1	-1	7	-1
4300-72	-1	-1	-1				-1	3	-1	_	-1	-1	3	-1
4300-73	-1	-1	-1	-1	-1	-1	-1	3	-1	1 /	1 -1	-1	/	-1

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

Activation Laboratories Ltd.
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900.74	042 - LPB
### ### ### ### ### ### ### ### ### ##	3 -
400-57 - 4	4 -
4400-58	2 -
490.59	9 -
4400-60	7 -
### 4400-61	6 -
4400622	9 -
400-68	0 -
4400-63 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -	1 -
4400-68	2 - 7 -
4400-65	6 -
4400-66	5 -
4400-88	7 -
4400-70	7 -
4400-77	7 -
4400-77	2 -
4400-72	1 -
4400-73	
4400-74 -1 <t< th=""><th>5 -</th></t<>	5 -
4400-75 -1 <t< th=""><th>2 -</th></t<>	2 -
4400-76 -1 <t< th=""><th>6 - 2 -</th></t<>	6 - 2 -
4400-77 -1 <t< th=""><th>2 -</th></t<>	2 -
4400-77-R -1	1 -
4300-77 -1 <t< th=""><th>}}</th></t<>	}}
4300-78 -1 <t< th=""><th>1 -</th></t<>	1 -
4500-58 -1 <t< th=""><th>1 -</th></t<>	1 -
4500-69	-1
4500-60	3 -
4500-61	1 -
4500-62 -1 <t< th=""><th>4 -</th></t<>	4 -
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4500-64 -1 <t< th=""><th>-1 -</th></t<>	-1 -
4500-65 -1 <t< th=""><th><u> -</u> 1 -</th></t<>	<u> -</u> 1 -
4500-66 -1 <t< th=""><th>1 -</th></t<>	1 -
4500-67 -1 <t< th=""><th>il -</th></t<>	il -
4500-68 -1 <t< th=""><th>3 -</th></t<>	3 -
4500-69 -1 <t< th=""><th>2 -</th></t<>	2 -
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4500-71 -1 <t< th=""><th>2 -</th></t<>	2 -
4500-72 -1 <t< th=""><th>2 -</th></t<>	2 -
4500-73 -1 <t< th=""><th>2 -</th></t<>	2 -
4500-74 -1	-1 -
4500-75 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1	2 -
	이 <u>-</u> 1
	-1 -
4500-77 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1	1 -
4600-56 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1	2 -
4600-57 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1	1 -
4600-58 -1 -1 -1 -1 -1 -1 -1 -1 -1 2 -1 -1	2 -
4600-59 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1	-1

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

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	029 - HB	030 - HB	031 - HB	032 - HB	033 - HB	034 - HB	035 - LAR	036 - LBA	037 - HB	038 - LBA	039 - LAR	040 - LPB	041 - LBA	042 - LPB
4600-60	-1	-1	-1				-1	-1	-1		-1	-1	1	-1
4600-61	-1	-1	-1				-1	1	-1			-1		-1
4600-61-R	-1	-1	-1				-1	1	-1		-1	-1	1	-1
4600-62	-1	-1	-1	-1	-1	-1	-1	3	-1	2	-1	-1	1	-1
4600-63	-1	-1	-1	-1	-1	-1	-1	2	-1	3	-1	-1	3	-1
4600-64	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	1	-1
4600-65	-1	-1	-1	-1	-1	-1	-1	-1	-1	2	-1	-1	2	-1
4600-66	-1	-1	-1	-1	-1	-1	-1	2	-1	2	-1	-1	3	-1
4600-67	-1	-1	-1	-1			-1	-1	-1			-1	-1	-1
4600-68	-1	-1					-1	6				-1	3	-1
4600-69	-1	-1	-1				-1	-1	-1		-1	-1	-1	-1
4600-70	-1	-1	-1				-1	1	-1		-1	-1	-1	-1
4600-71	-1	-1	-1				-1	2	-1		·	-1	2	-1
4600-72	-1	-1	-1				-1	2	-1			-1	5	-1
4600-73 4600-74	-1 -1	-1 -1	-1 -1		·		-1 4	2	-1 4	<u> </u>	-1 -1	-1 1	 	-1 -1
4600-74	-1 -1	-1	-1 -1	-1 -1			-1 -1	∠	-1 -1		-1 -1	-1 -1	-1	-1 -1
4600-75	- 1 -1	-1 -1					-1 -1		-1 -1			-1 -1	-1	-1 -1
4600-76-R	-1	-1	-1	-1			-1	1	-1		-1	-1	1	-1
4600-77	-1	-1	-1				-1	. 2	-1		-1	-1	1	-1
4600-78	-1	-1	-1				-1	2	-1	2	-1	-1	1	-1
4700-57	-1	-1	-1	-1	-1	-1	-1	-1	-1	4	-1	-1	2	-1
4700-58	-1	-1	-1	-1	-1	-1	-1	1	-1	2	-1	-1		-1
4700-59	-1	-1	-1	-1	-1	-1	-1	4	-1	5	-1	-1	5	-1
4700-60	-1	-1	-1	-1	-1	-1	-1	1	-1	2	-1	-1	2	-1
4700-61	-1	-1					-1	2	-1	3	-1	-1	3	-1
4700-62	-1	-1	-1				-1	2	-1		-1	-1	2	-1
4700-63	-1	-1	-1	-1			-1	2	-1		-1	-1	3	-1
4700-64	-1	-1 -1	-1				-1	-1	-1 -1		-1	-1 -1	-1	-1
4700-65 4700-66	-1	-1 -1	-1 -1				-1	2	-1 -1		-1		3	-1
4700-66	-1 -1	-1 -1	- 1 -1				-1 -1		-1 -1		-1 -1	-1 -1		- I
4700-68	-1	-1	-1 -1	-1			-1	-1	-1		-1	-1	2	-1
4700-69	-1	-1					-1	2	-1	-		-1	2	-1
4700-69-R	-1	-1	-1				-1	2	-1	· · · · · · · · · · · · · · · · · · ·	-1	-1		-1
4700-70	-1	-1	-1				-1	2	-1	1	-1	-1	2	-1
4700-71	-1	-1	-1	-1	-1	-1	-1	3	-1	3	-1	-1	3	-1
4700-72	-1	-1	-1	-1	-1	-1	-1	1	-1	2	-1	-1	2	-1
4700-73	-1	-1	-1				-1	1	-1	2	-1	-1	2	-1
4700-74	-1	-1					-1	1	-1			-1	2	-1
4700-75	-1	-1	-1	-1			-1	2	-1	· ·	-1	-1	3	-1
4700-76	-1	-1	-1				-1	3	-1			-1	<u> </u>	-1
4700-77	-1	-1	-1 -1				-1	-1	-1		-1	-1	1	-1
4800-57	-1 -1	-1 -1		-1 -1			-1 -1	2	-1 -1		-1 -1	-1 -1	1 3	-1 -1
4800-58 4800-59	-1 -1	-1 -1	-1 -1		1		-1 -1		-1 -1		-1 -1	-1 -1	<u> </u>	-1
4800-59	-1	-1	-1	-1			-1	2	-1	*	-1 -1	-1	2	-1
4800-60	-1							-1	-1			-1 -1	2	
4800-62	-1	-1	-1				-1	2	-1	·	-1	-1		-1
4800-63	-1	-1	<u>.</u> 1				-1	1	-1	_	-1	-1	_	-1
4800-63-R	-1	-1	-1	-1			-1	1	-1	2	-1	-1		-1
4800-64	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
4800-65	-1	-1	1	-1	-1	-1	-1	1	-1	3	-1	-1	3	-1
4800-66	-1	-1	-1	-1	-1	-1	-1	-1	-1	1	-1	-1	1	-1
		• • • • • • • • • • • • • • • • • • • •							• • • • • • • • • • • • • • • • • • • •	•		•		

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

Activation Laboratories Ltd.
Date: November 23, 2011
R=Replicate Sample

	029 - HB	030 - HB	031 - HB	032 - HB	033 - HB	034 - HB	035 - LAR	036 - LBA	037 - HB	038 - LBA	039 - LAR	040 - LPB	041 - LBA	042 - LPB
4800-67	-1	-1						3				-1	4	-1
4800-68		-1 -1			1						· ·		9	_1
4800-69	-1	-1	-1					2	-1		-1	-1	3	-1
4800-70	-1	-1						2		-		-1	4	
4800-71	-1	-1			********			-1		` <u>`</u> ````		-1	-1	-1
4800-72	-1	-1	-1	-1			-1	4	-1		-1	-1	2	-1
4800-73	-1	-1		-1	-1	-1	-1	-1	-1	1	-1	-1	-1	-1
4800-74	-1	-1						-1	-1		-1	-1	1	-1
4800-75	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
4800-76	-1	-1	-1	-1	-1	-1	-1	1	-1	-1	-1	-1	1	-1
4800-77	-1	-1	-1	-1	-1	-1	-1	1	-1	-1	-1	-1	-1	-1
4900-61	-1	-1	-1	-1	-1	-1	-1	2	-1	2	-1	-1	2	-1
4900-61-R	-1	-1	-1	-1	-1	-1	-1	2	-1	2	-1	-1	-1	-1
4900-62	-1	-1	-1	-1	-1	-1	-1	-1	-1	2	-1	-1	1	-1
4900-63	-1	-1	-1	-1	-1	-1	-1	2	-1	-1	-1	-1	2	-1
4900-64	-1	-1						2			-1	-1	-1	-1
4900-65	-1	-1						2	-1		-1	-1	2	-1
4900-66	-1	-1					-1	1	-1		-1	-1	-1	-1
4900-67	-1	-1						2			-1	-1	2	-1
4900-68	-1	-1						2	-1	······································	-1	-1	2	-1
4900-69	-1	-1						-1		<u> </u>		-1	-1	-1
4900-70	-1	-1						1	-1		-1	-1	-1	-1
4900-71	-1	-1		-1			-1	1	-1		-1	-1	1	-1
4900-72	-1	-1						1	-1	· · · · · · · · · · · · · · · · · · ·		-1	-1	-1
4900-73	-1	-1	-1				-1	-1	-1		-1	-1	-1	-1
4900-74	-1	-1	-1	-1			-1	1	-1		-1	-1	1	-1
4900-75 4900-76	-1 -1	-1 -1	<u> </u>		 		-1 -1	1	-1 -1		-1 -1	-1 -1		-1
4900-76 4900-76-R	-1	-1	-1 -1					-1	-1	· · · · · · · · · · · · · · · · · ·	-1	-1	-1	
4900-76-10	-1 -1	-1 -1						-1	-1		-1	-1	- I	
5000-77	-1	-1					-1	1	-1		-1	-1	-1	-1
5000-76	-1	-1							-1		-1	-1	÷1	
5000-75	-1	-1						-1				-1	-1	-1
5000-74	-1	-1	-1			<u> </u>	-1	1	-1		-1	-1	<u>.</u> -1	-1
5000-73	-1	-1			-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
5000-72	-1	-1			-1	-1	-1	1	-1	-1	-1	-1	-1	-1
5000-71	-1	-1	-1	-1	-1	-1	-1	2	-1	2	-1	-1	2	-1
5000-70	-1	-1	-1	-1	-1	-1	-1	-1	-1	1	-1	-1	1	-1
5000-69	-1	-1		-1	-1	-1	-1	1	-1	1	-1	-1	-1	-1
5000-68	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
5000-67	-1	-1					-1	-1			-1	-1	-1	-1
5000-66	-1	-1					-1	1	-1	`	-1	-1	1	-1
5000-65	-1	-1	-1	-1			-1	1	-1		-1	-1	2	-1
5000-64	-1	-1						-1	-1			-1	-1	-1
5000-64-R	-1	-1					-	-1			-1	-1	-1	-1
5000-63	-1	-1					-1	2	-1		-1	-1	2	-1
5000-62	-1	-1						-1				-1	1	-1
5000-61	-1	-1						-1			-1	-1	-1	-1
5100-75	-1	-1					-1	-1	<u> </u>			-1	1	-1
5100-74	-1	-1				*****************		1	-1		-1	-1 -1	-1	-1
5100-73	-1 -1	-1 -1		-1 4	<u> </u>		-1 4	-1 -1	-1 -1		-1 -1	-1 -1	1	-1 -1
5100-72							-1	-1					-1	
5100-71 5100-70	-1 -1	-1 -1	-1 -1	-1 -1			-1 -1		-1 -1		-1	-1 -1		-1
5100-70	÷ [:	=1	-1	- 1	-1	1 -1	-1	-1	-1]	-1	÷1		+1

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

Activation Laboratories Ltd.
Date: November 23, 2011
R=Replicate Sample

	029 - HB	030 - HB	031 - HB	032 - HB	033 - HB	034 - HB	035 - LAR	036 - LBA	037 - HB	038 - LBA	039 - LAR	040 - LPB	041 - LBA	042 - LPB
5100-69	-1	-1	-1	-1	-1	-1	-1	2	-1	-1	-1	-1	1	-1
5100-68	-1	-1	-1	-1	-1	-1	-1	1	-1	-1	-1	-1	-1	-1
5100-67	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
5100-66	-1	-1	-1	-1	-1	-1	-1	1	-1	2	-1	-1	-1	-1
5100-65	-1	-1	-1	-1	-1	-1	-1	2	-1	2	-1	-1	2	-1
5100-64	-1	-1	-1	-1	-1	-1	-1	1	-1	-1	-1	-1	-1	-1
5100-64-R	-1	-1	-1	-1	-1	-1	-1	1	-1	1	-1	-1	-1	-1
5100-63	-1	-1	-1	-1	-1	-1	-1	1	-1	1	-1	-1	1	-1
5100-62	-1	-1	-1	-1	-1	-1	-1	3	-1	3	-1	-1	3	-1
5100-61	-1	-1	-1	-1	-1	-1	-1	1	-1	2	-1	-1	2	-1
5200-77	-1	-1	-1	-1		-1		1	-1	2	-1	-1	-1	-1
5200-76	-1	-1	-1	-1		-1		2		-1	-1	-1	2	-1
5200-75	-1	-1		-1		-1		2	·	-1	-1	-1	-1	-1
5200-74	-1	-1	-1	-1		-1		3	-1	2	-1	-1	4	-1
5200-73	-1	-1		-1		-1		1	-1	1	-1	-1	1	-1
5200-72	-1	-1				-1		2		-1	-1	-1	2	-1
5300-76	-1	-1		-1		-1		2		2	-1	-1	2	-1
5300-77	-1		•	-1		-1		-1		-1	-1	-1	-1	-1
5400-77	-1	-1		-1	· .	-1		2	1	2	-1	-1	-1	-1
5400-76	-1	-1		-1		-1		2		3	-1	-1	-1	-1
5500-76	-1	-1		-1		-1		3	1	1	-1	-1	1	-1
5500-77	-1	-1	<u>-1</u>	-1	-1	-1	-1	3	-1	1	-1 	-1	1	-1
LMB-QA	-1	-1	-1	-1		-1		2	-1	2	-1	-1	2	-1
LMB-QA	-1	-1	-1	-1		-1		-1	-1	2	-1	-1	2	-1
LMB-QA	-1	-1	• • • • • • • • • • • • • • • • • • • •	-1		-1		-1	-1	1	-1	-1	-1	-1
LMB-QA	-1	-1		-1		-1		-1		1	-1	-1	-1	-1
LMB-QA	-1	-1		-1		-1		-1	-1	-1	-1	-1	-1	-1
LMB-QA	-1	-1	-1	-1		-1		-1	-1	-1	-1	-1	-1	-1
LMB-QA	-1	-1	-1	-1	-1	-1		-1	-1	-1	-1	-1	-1	-1
LMB-QA	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1

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

Activation Laboratories Ltd.
Date: November 23, 2011
R=Replicate Sample

	043 - HB	044 - HB	045 - LA	046 - LPH	047 - LBA	048 - HB	049 -HB	050 - LBA	051 - LBI	052 - LPB	053 - LPB	054 - HB	055 - LPB	056 - LBI
3900-77	-1	-1	5	-1	5	-1	-1	4	-1	-1	-1	-1	-1	-1
3900-76	-1	-1	6	-1	-1	-1	-1	3	-1	-1	-1	-1	-1	-1
3900-75	-1	-1	7	-1	2	-1	-1	4	-1	-1	-1	-1	-1	-1
3900-74	-1	-1	11	-1			-1	6			-1	-1	-1	-1
3900-73	-1	-1	20				-1	6			-1	-1	-1	-1
3900-73-R	-1	-1			- -		-1	9				-1		-1
3900-72	-1	-1	8	-1		-1	-1	3	-1		-1	-1		-1
3900-71 3900-70	-1 -1	-1 -1	12 9		*****************		-1	5	***************************************		-1 -1	-1	-1	+1
3900-70	- I -1	-1 -1	5	-1 -1			-1 -1	5 4				-1 -1	-1 -1	-1 -1
3900-68	-1	-1	11	-1			-1	5	• • • • • • • • • • • • • • • • • • • •			-1		-1
3900-67		-1	8				-1	4	<u>'</u>			-1		
3900-66	-1	-1	3	-1	-	-1	-1	2	-1		-1	-1	-1	-1
3900-65	-1	-1	7	-1	3	-1	-1	4	-1	-1	-1	-1	-1	-1
3900-64	-1	-1	5	-1	3	-1	-1	2	-1	-1	-1	-1	-1	-1
3900-63	-1	-1	11	-1	5	-1	-1	6	-1	-1	-1	-1	-1	-1
3900-62	-1	-1	5			-1	-1	3	<u> </u>		-1	-1	-1	-1
3900-61	-1	-1	7				-1	4				-1		-1
3900-60	-1	-1	3	-1		-1	-1	2	-1			-1	-1	-1
3900-59	-1	-1	11	-1	· · · · · · · · · · · · · · · · · · ·		-1	6			*	-1	*	-1
3900-58 3900-58-R	-1	-1 -1	5	-1 -1		-1 -1	-1	3	-1 -1			-1 -1	<u> </u>	-1 -1
3900-58-R 3900-57	-1 -1	-1 -1	4			-1 -1	-1 -1	4			-1 -1	-1 -1	-1 -1	-1 -1
4000-78	- I -1	-1 -1	6			-1	-1 -1	4	-1 -1		-1 -1	-1	<u> </u>	
4000-70	-1	-1	6	-1	· · · · · · · · · · · · · · · · · · ·	-1	-1	5				-1		-1
4000-76	-1	-1	2				-1	2			-1	-1		-1
4000-75	-1	-1	11			-1	-1	6			-1	-1	-1	-1
4000-74	-1	-1	2	-1	2	-1	-1	2	-1	-1	-1	-1	-1	-1
4000-73	-1	-1	9	-1	4	-1	-1	5	-1	-1	-1	-1	-1	-1
4000-72	-1	-1	13				-1	9				-1	-1	-1
4000-71	-1	-1	10	-1		-1	-1	4	-1			-1		-1
4000-70	-1	-1	7	-1		-1	-1	3	-1		-1	-1		-1
4000-69	-1 -1	-1 -1	13 7			-1 -1	-1 -1	8 4				-1 -1	-1 -1	-1 -1
4000-68 4000-67	-1 -1	-1 -1	8	-1		-1	-1 -1	4	-1		-1 -1	-1	-1 -1	-1 -1
4000-66	-1	-1	6			-1	-1	3	-1		-1	-1	-1	
4000-65	-1	-1	7				-1	5				-1		-1
4000-65-R	-1	-1	9	-1		-1	-1	7	-1	-1	-1	-1	-1	-1
4000-64	-1	-1	8	-1	3	-1	-1	4	-1	-1	-1	-1		
4000-63	-1	-1	6	-1	2	-1	-1	4	-1	-1	-1	-1	-1	-1
4000-62	-1	-1	9	-1		-1	-1	4	-1		-1	-1	-1	-1
4000-61	-1	-1	3	-1			-1	2	-1			-1	-1	-1
4000-60	-1	-1	1				-1	-1	· ·			-1		-1
4000-59	-1	-1	3	-1		-1	-1	2	-1		-1	-1	-1	-1
4000-58	-1	-1	3			-1	-1 a	2	-1 -1		4	-1 -1		-1 -1
4000-57 4100-57	-1 -1	-1 -1	2 73				-1 -1	2 2	-1 -1			-1 -1	-1 -1	-1 -1
4100-57	-1 -1	-1 -1	73 4				-1 -1	2	-1 -1		<u> </u>	-1 -1		-1 -1
4100-59	-1	-1	21	-1			-1	7	-1		•	-1		-1
4100-60	-1	-1	18	-1			1	. 5	-1		-1	1	-1	-1
4100-61	-1	-1	4		- -		-1	1	-1			-1	***************************************	-1
4100-62	-1	-1	15	-1	6	-1	-1	11	-1	-1	-1	-1	-1	-1
4100-63	-1	-1	11	-1	4	-1	-1	9	-1	-1	-1	-1	-1	-1
4100-63-R	-1	-1	13	-1	5	-1	-1	9	-1	-1	-1	-1	-1	-1

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

Activation Laboratories Ltd.
Date: November 23, 2011
R=Replicate Sample

	043 - HB	044 - HB	045 - LA	046 - LPH	047 - LBA	048 - HB	049 -HB	050 - LBA	051 - LBI	052 - LPB	053 - LPB	054 - HB	055 - LPB	056 - LBI
4100-64	-1	-1		-1			-1	4				-1		-1
4100-65	-1	-1				1		4				-1		-1
4100-66	-1	-1	11				-1	6			-1	-1	-1	-1
4100-67	-1	-1						4		-1	-1	-1	-1	-1
4100-68	-1	-1					-1	7	-1	-1	-1	-1	-1	-1
4100-69	-1	-1	9	-1	4	-1	-1	5	-1	-1	-1	-1	-1	-1
4100-70	-1	-1	7	-1	5	-1	-1	3	-1	-1	-1	-1	-1	-1
4100-71	-1	-1	7	-1	4	-1	-1	3	-1	-1	-1	-1	-1	-1
4100-72	-1	-1	4	-1	2	-1	-1	2	-1	-1	-1	-1	-1	-1
4100-74	-1	-1						4	•		-1	-1	-1	-1
4100-75	-1	-1		-1				10			-1	-1	-1	-1
4100-76	-1	-1					-1	6			-1	-1	-1	-1
4100-77	-1	-1						2				-1		-1
4100-78	-1	-1	***************************************	-1				3	-1		-1	-1	-1	-1
4200-78	-1	-1	<u> </u>	-1				4	-1	<u> </u>	 	-1	 	-1
4200-78-R 4200-77	-1 -1	-1 -1	7	-1 -1	*****************		-1 -1	4	-1 -1		-1 -1	-1 -1	-1 -1	÷1 -1
4200-77 4200-76	-1 -1	-1 -1				<u> </u>	-1 -1	6	•			-1 -1		-1 -1
4200-75	-1	-1	7	-1		-1	-1	2	-1		-1	-1	-1	-1
4200-74	-1	-1	<u> </u>	-1		-1	-1	1	-1		-1	-1	-1	-1
4200-71	-1	-1				***************************************		3	***************************************		-1	-1		-1
4200-70	-1	-1		-1	7	-1	-1	5	-1	-1	-1	-1	-1	-1
4200-69	-1	-1	7	-1	-1	-1	-1	3	-1	-1	-1	-1	-1	-1
4200-68	-1	-1			6	-1	-1	5	-1	-1	-1	-1	-1	-1
4200-67	-1	-1	26	-1	9	-1	-1	10	-1	-1	-1	-1	-1	-1
4200-66	-1	-1	• • • • • • • • • • • • • • • • • • • •		· · · · · · · · · · · · · · · · · · ·		-1	2	-1	-1	-1	-1	-1	-1
4200-65	-1	-1		-1			-1	8			-1	-1	-1	-1
4200-64	-1	-1		-1		-1	-1	8			-1	-1	-1	-1
4200-63	-1	-1 -1		-1 -1			-1 -1	7	-1 -1			-1 -1		-1 -1
4200-62 4200-61	-1 -1	-1		-1		-1	-1 -1	2	-1		-1 -1	-1	-1 -1	-1 -1
4200-61 4200-61-R	-1	-1 -1						2	-1		-1 -1	- 1 -1		-1 -1
4200-60	-1	-1	3	-1		-1	-1	1	-1		-1	-1	-1	-1
4200-59	-1	-1		-1			-1	2			-1	-1		-1
4200-58	-1	-1	5	-1	2	-1	-1	2	-1	-1	-1	-1		-1
4200-57	-1	-1	3	-1	1	-1	-1	1	-1	-1	-1	-1	-1	-1
4300-57	-1	-1	3	-1	2	-1	-1	1	-1	-1	-1	-1	-1	-1
4300-58	-1	-1	8	-1			-1	3	-1		-1	-1	-1	-1
4300-59	-1	-1		-1		1	-1	5			-1	-1		-1
4300-60	-1	-1						1	-1			-1		-1
4300-61	-1	-1	2	-1		-1	-1	1	-1		-1	-1	-1	-1
4300-62	-1 1	-1		-1	<u> </u>	-1	-1	1	-1		-1	-1 -1	•	-1 -1
4300-63 4300-64	-1 -1	-1 -1		-1 -1		-1 -1	-1 -1	1 	-1 -1		-1 -1	-1 -1	-1 -1	-1 -1
4300-64	-1	-1			· · · · · · · · · · · · · · · · · · ·			ر 1	-1			-1		-1 -1
4300-66		-1 -1	5	-1			-1	4	_1		-1	-1	-1 -1	-1 -1
4300-67	-1	-1	9	-1			-, -1	6			-1	-1	-1	-1
4300-67-R	-1	-1						5				-1		-1
4300-68	-1	-1		-1			-1	4	-1	-1	-1	-1	-1	-1
4300-69	-1	-1	4	-1	2	-1	-1	3	-1	-1	-1	-1	-1	-1
4300-70	-1	-1	6	-1	3	-1	-1	4	-1	-1	-1	-1	-1	-1
4300-71	-1	-1			** · · · · · · · · · · · · · · · · · ·		-1	5		•	-1	-1	-1	-1
4300-72	-1	-1		-1		1		2			-1	-1	<u> </u>	-1
4300-73	-1	-1	5	-1	5	-1	-1	3	-1	-1	<u>-1</u>	-1	-1	-1

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

Activation Laboratories Ltd.
Date: November 23, 2011
R=Replicate Sample

500772 1 1 1 1 6 1 3 4 1 1 4 4 4 5 4 4 5 4 5 5		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
400957	4300-74	-1	-1	11	-1	6	-1	-1	4	-1	-1	-1	-1	-1	-1
### 1400-55 1	4300-75	-1	-1	8	-1	4	-1	-1	3	-1	-1	-1	-1	-1	-1
## 490.58	4300-76	-1	-1	4	-1	3	-1	-1	2	-1	-1	-1	-1	-1	-1
### Mode		- 1	-1		-1	4		-1	6	-1	-1	-1	-1	-1	-1
400-950												·		<u> </u>	-1
## 400028									Ψ.						-1
### 400-622 1															-1
### ### ### ### ### ### ### ### ### ##									10					***************************************	-1
4400-68									1					 	-1
4400-64 -1 -1 -1 -1 -1 -1 -1 -									***************************************						÷1 -1
4400-66															! _1
4400-66															-1
4400-70			-						5			-1	-1	-1	-1
4400-68									6			-1	-1		-1
4400-70		-1	-1	14	-1	9	-1	-1	5	-1	-1	-1	-1	-1	-1
4400-71		-1			-1			-1	4	-1	-1	-1	-1	-1	-1
4400-72									1						-1
4400-73			-						1						-1
4400-76						• • • • • • • • • • • • • • • • • • • •			3		***************************************		•		-1
4400-75															-1
440-77															-1 -1
4400-777									ŭ					<u> </u>	- I -1
4400-77-R									1						-1
\$300.77									4			·			
\$300.78									2					***************************************	-1
4500-58 -1 <t< th=""><th></th><th>-1</th><th>-1</th><th>3</th><th>-1</th><th>2</th><th>-1</th><th></th><th>2</th><th>-1</th><th>-1</th><th>-1</th><th>-1</th><th>-1</th><th>-1</th></t<>		-1	-1	3	-1	2	-1		2	-1	-1	-1	-1	-1	-1
4500-59 -1 -1 -1 -3 -1 <t< th=""><th>4500-57</th><th>-1</th><th>-1</th><th>1</th><th>-1</th><th>-1</th><th>-1</th><th>-1</th><th>-1</th><th>-1</th><th>-1</th><th>-1</th><th>-1</th><th>-1</th><th>-1</th></t<>	4500-57	-1	-1	1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
4500-60 -1 -1 -1 5 -1 3 -1	4500-58	-1	-1	4	-1	2	-1	-1	4	-1	-1	-1	-1	-1	-1
4500-61 -1 <t< th=""><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th>3</th><th></th><th>1</th><th></th><th></th><th></th><th>-1</th></t<>									3		1				-1
4500-62 -1 <t< th=""><th></th><th></th><th></th><th>· · · · · · · · · · · · · · · · · · ·</th><th></th><th></th><th></th><th></th><th>5</th><th></th><th></th><th></th><th></th><th>***************************************</th><th>-1</th></t<>				· · · · · · · · · · · · · · · · · · ·					5					***************************************	-1
4500-63 -1 <t< th=""><th></th><th></th><th></th><th>2</th><th></th><th></th><th></th><th></th><th>1</th><th></th><th></th><th>· ·</th><th></th><th></th><th>-1</th></t<>				2					1			· ·			-1
4500-64 -1 <t< th=""><th></th><th></th><th></th><th>1</th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th>-1 -1</th></t<>				1											-1 -1
4500-66 -1 <t< th=""><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th>4</th><th></th><th></th><th></th><th></th><th></th><th>- I -1</th></t<>									4						- I -1
4500-66 -1 -1 2 -1 1 -1						1			1			***************************************			-1
4500-67 -1 <t< th=""><th></th><th></th><th></th><th></th><th></th><th>1</th><th></th><th></th><th>2</th><th></th><th></th><th></th><th></th><th></th><th>-1</th></t<>						1			2						-1
4500-68 -1 -1 3 -1 2 -1				· · · · · · · · · · · · · · · · · · ·					2						-1
4500-69 -1 <t< th=""><th></th><th>-1</th><th>-1</th><th>3</th><th>-1</th><th>2</th><th>-1</th><th>-1</th><th>2</th><th>-1</th><th>-1</th><th>-1</th><th>-1</th><th>-1</th><th>-1</th></t<>		-1	-1	3	-1	2	-1	-1	2	-1	-1	-1	-1	-1	-1
4500-70 -1 -1 2 -1 1 -1						2		-1	2			-1	-1	-1	-1
4500-71 -1 <t< th=""><th></th><th></th><th></th><th></th><th></th><th>1</th><th></th><th></th><th>-1</th><th></th><th></th><th>-1</th><th></th><th></th><th>-1</th></t<>						1			-1			-1			-1
4500-72 -1 -1 1 -1 <td< th=""><th></th><th></th><th></th><th>2</th><th></th><th>1</th><th></th><th></th><th>1</th><th></th><th></th><th></th><th></th><th>,, , , , , , , , , , , , , , , , , , ,</th><th>-1</th></td<>				2		1			1					, , , , , , , , , , , , , , , , , , , ,	-1
4500-73 -1 <t< th=""><th></th><th></th><th></th><th>1</th><th></th><th>1</th><th></th><th></th><th>-1</th><th></th><th></th><th></th><th></th><th></th><th>-1</th></t<>				1		1			-1						-1
4500-74 -1 -1 4 -1 <td< th=""><th></th><th></th><th></th><th>1</th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th>-1</th></td<>				1											-1
4500-75 -1 <t< th=""><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th>***************************************</th><th></th><th></th><th></th><th></th><th></th><th>-1 -1</th></t<>									***************************************						-1 -1
4500-76 -1 <t< th=""><th></th><th></th><th>-</th><th></th><th></th><th></th><th></th><th>,</th><th>4</th><th></th><th></th><th></th><th></th><th><u> </u></th><th> -1 </th></t<>			-					,	4					<u> </u>	-1
4500-77 -1 <t< th=""><th></th><th></th><th></th><th>· · · · · · · · · · · · · · · · · · ·</th><th></th><th>4</th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th>-1</th></t<>				· · · · · · · · · · · · · · · · · · ·		4									-1
4600-56 -1 -1 2 -1 3 -1 -1 5 -1 -															-1
4600-57 -1															-1
4600-58 -1 -1 2 -1 2 -1 -1 2 -1 -1 -1 -1 -1			· ·						2	•		-1	-		-1
									2			-1	-1		-1
 40∪∪-39 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1	4600-59	-1	-1	1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1

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

Activation Laboratories Ltd.
Date: November 23, 2011
R=Replicate Sample

	043 - HB	044 - HB	045 - LA	046 - LPH	047 - LBA	048 - HB	049 -HB	050 - LBA	051 - LBI	052 - LPB	053 - LPB	054 - HB	055 - LPB	056 - LBI
4600-60	-1	-1	2		•	-1		1	-1			-1	-1	-1
4600-61	-1	-1						,	-1			-1	-1	-1
4600-61-R	-1	-1	2	-1		-1		1	-1		-1	-1	-1	-1
4600-62	-1	-1		-1				4	-1		-1	-1	-1	-1
4600-63	-1	-1		-1				2			-1	-1	-1	-1
4600-64	-1	-1	2	-1	3	-1	-1	3	-1	-1	-1	-1	-1	-1
4600-65	-1	-1	2	-1	-1	-1	-1	1	-1	-1	-1	-1	-1	-1
4600-66	-1	-1	3	-1	1	-1	-1	3	-1	-1	-1	-1	-1	-1
4600-67	-1	-1	1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
4600-68	-1	-1	6	-1	3	-1	-1	8	-1	-1	-1	-1	-1	-1
4600-69	-1	-1		-1			-1	1	-1		-1	-1	-1	-1
4600-70	-1	-1	2	-1				1	-1		-1	-1	-1	-1
4600-71	-1	-1						2			-1	-1	-1	-1
4600-72	-1	-1	5	-1	· · · · · · · · · · · · · · · · · · ·			3	-1		-1	-1	-1	-1
4600-73	-1	-1	5	-1		·		8			-1	-1	-1	-1
4600-74	-1	-1 -1		-1				3	-1 -1		-1 -1	-1 -1	-1	-1
4600-75 4600-76	-1 -1	-1 -1		-1 -1	_	-1 -1		2	-1 -1		-1 -1	-1 -1	-1 -1	-1 -1
4600-76 4600-76-R	-1	-1		-1				2			-1	-1	-1	-1 -1
4600-77	-1	 -1		-1		-1		3	-1		! _1		-1 -1	
4600-78	-1	-1		-1	T	-1		1	-1			-1	-1	-1
4700-57	-1	-1						10	-1		-1	-1	-1	-1
4700-58	-1	-1		-1				3	-1		-1	-1	-1	-1
4700-59	-1	-1	10	-1	4	-1	-1	7	-1	-1	-1	-1	-1	-1
4700-60	-1	-1	4	-1	4	-1	-1	4	-1	-1	-1	-1	-1	-1
4700-61	-1	-1	4	-1	2	-1	-1	3	-1	-1	-1	-1	-1	-1
4700-62	-1	-1	4	-1	2	-1	-1	6	-1	-1	-1	-1	-1	-1
4700-63	-1	-1	5	-1		-1		7	-1	•	-1	-1	-1	-1
4700-64	-1	-1		-1		-1		1	-1		-1	-1	-1	-1
4700-65	-1	-1						3				-1	-1	-1
4700-66	-1	-1		-1	_	-1		3	-1		-1	-1	-1	-1
4700-67 4700-68	-1 -1	-1 -1		-1 -1		-1 -1		3	-1 -1		-1 -1	-1 -1	-1 -1	-1 -1
4700-68	-1 -1	-1 _1	3	-1 _1		-1		4	-1 -1	<u> </u>	-1 _1	-1 -1	-1 -1	-1 -1
4700-69-R	-1	-1		-1	1	-1		2	-1		-1	-1	-1	-1
4700-70	-1	-1						2				-1	-1	-1
4700-71	-1	-1		-1	**************************************			4	-1		-1	-1	-1	-1
4700-72	-1	-1		-1		-1		2	-1	-1	-1	-1	-1	-1
4700-73	-1	-1	3	-1	1	-1	-1	2	-1	-1	-1	-1	-1	-1
4700-74	-1	-1	6	-1	3	-1	-1	3	-1	-1	-1	-1	-1	-1
4700-75	-1	-1	-				-1	3	-1	-1	-1	-1	-1	-1
4700-76	-1	-1						3	• • • • • • • • • • • • • • • • • • • •		-1	-1	-1	-1
4700-77	-1	-1	2	-1		-1		-1	-1		-1	-1	-1	-1
4800-57	-1	-1						3				-1	-1	-1
4800-58	-1	-1		-1			-	5	· ·	<u> </u>	-1	-1	-1	-1
4800-59	-1	-1		-1		-1		1	-1		-1	-1	-1	-1
4800-60	-1 -1	-1 -1		-1 -1			-1 -1	1 2	-1 -1		-1 -1	-1 -1	-1	-1 -1
4800-61 4800-62	-1 -1	-1 -1		-1		-1	-1	3	• • • • • • • • • • • • • • • • • • • •		<u> </u>	-1 -1	-1 -1	-1: -1
4800-62	- 1 -1	-1 -1	2	- I -1			·	ر د	-1		-1 -1	-1 -1	-1 -1	-1 -1
4800-63-R	-1	-1		-1		-1		2	-1		-1	-1	-1	-1
4800-64	-1	-1		-1				-1	-1	<u> </u>	-1	-1	-1	-1
4800-65	-1	-1	4	-1				4	-1		-1	-1	-1	-1
4800-66	-1	-1	1	-1				-1	-1		-1	-1	-1	-1
				T	<u> </u>	<u> </u>	· · · · · · · · · · · · · · · · · · ·	· · · · · · · · · · · · · · · · · · ·	· · · · · · · · · · · · · · · · · · ·		**************************************		T	

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

Activation Laboratories Ltd.
Date: November 23, 2011
R=Replicate Sample

	043 - HB	044 - HB	045 - LA	046 - LPH	047 - LBA	048 - HB	049 -HB	050 - LBA	051 - LBI	052 - LPB	053 - LPB	054 - HB	055 - LPB	056 - LBI
4800-67	-1	-1	8	-1	6	-1	-1	3	-1	-1	-1	-1	-1	-1
4800-68	-1					-1						-1	-1	
4800-69	-1	-1	6	-1	3	-1	-1	3	-1	-1	-1	-1	-1	-1
4800-70	-1	-1	7	7 -1	2	-1	-1	4	-1	-1	-1	-1	-1	-1
4800-71	-1	-1	2	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
4800-72	-1	-1	6	-1	5	-1	-1	8	-1	-1	-1	-1	-1	-1
4800-73	-1	-1	2	-1	2	-1	-1	1	-1	-1	-1	-1	-1	-1
4800-74	-1	-1	3	3 -1	3	-1	-1	3	-1	-1	-1	-1	-1	-1
4800-75	-1			-1		-1	-1					-1	-1	,
4800-76	-1				*	-1					-1	-1	-1	-1
4800-77	-1					-1	-1					-1	-1	
4900-61	-1			3 -1		-1	-1	3			-1	-1	-1	
4900-61-R	-1			<u>'</u>		-1						-1		
4900-62	-1					-1	-1					-1	-1	
4900-63	-1					-1 -1	-1 -1	8				-1 -1	-1 -1	
4900-64 4900-65	-1 -1					-1 -1	-1 -1					-1 -1	-1 -1	
4900-65	-1 -1					-1						-1 -1	-1 -1	
4900-67	-1			-		-1						-1	-1	
4900-68	-1			-1		-1						-1	-1	
4900-69	-1			-1		-1			-1			-1	-1	-1
4900-70	-1	-1	2	-1	3	-1	-1	4	-1	-1	-1	-1	-1	-1
4900-71	-1	-1	2	-1	2	-1	-1	2	-1	-1	-1	-1	-1	-1
4900-72	-1	-1	2	2 -1	2	-1	-1	2	-1	-1	-1	-1	-1	-1
4900-73	-1		1	-1	1	-1	-1	1	-1		-1	-1	-1	-1
4900-74	-1			2 -1		-1	-1	1	-1			-1	-1	***************************************
4900-75	-1			·		-1						-1	-1	-1
4900-76	-1					-1	-1		-1		-1	-1	-1	-1
4900-76-R 4900-77	-1 -1			2 -1 1 -1		-1 -1	-1 -1		-1 -1			-1	-1	
5000-77	-1			-1		-1 -1	-1					-1 -1	-1 -1	
5000-77	-1			-1		-1						-1 -1		
5000-75	-1					-1						-1	-1	
5000-74	-1	· ·				-1	-1					-1	-1	
5000-73	-1					-1			-1	-1	-1	-1	-1	-1
5000-72	-1	-1	2	2 -1	2	-1	-1	2	-1	-1	-1	-1	-1	-1
5000-71	-1	-1	2	-1	2	-1	-1	3	-1	-1	-1	-1	-1	-1
5000-70	-1		1	-1	1	-1			-1		-1	-1	-1	-1
5000-69	-1			-1		-1	-1					-1	-1	
5000-68	-1			2 -1		-1	-1	2			-1	-1	-1	
5000-67	-1			-1		-1						-1	-1	<u> </u>
5000-66 5000-65	-1 -1					-1 -1	-1 -1	1 2	-1 -1			-1 1	-1	
5000-65	-1 -1			 		-1 -1		_				-1 -1	-1 -1	
5000-64 5000-64-R	-1			<u>-1</u>		-1 -1						-1	-1	
5000-64-1	-1 -1			2 -1							-	-1	-1	<u> </u>
5000-62	-1			-1		-1						-1	-1	
5000-61	-1			-1		-1						-1	-1	.
5100-75	-1		1	-1		-1						-1	-1	-1
5100-74	-1	-1	1	-1	1	-1	-1	2	-1	-1	-1	-1	-1	-1
5100-73	-1	· ·		-1		-1	-1					-1	-1	
5100-72	-1			-1		-1						-1	-1	
5100-71	-1					-1	-1					-1	-1	
5100-70	-1	-1] 2	2] -1] 2	-1	-1	2	-1	-1	-1	-1	-1	

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

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	043 - HB	044 - HB	045 - LA	046 - LPH	047 - LBA	048 - HB	049 -HB	050 - LBA	051 - LBI	052 - LPB	053 - LPB	054 - HB	055 - LPB	056 - LBI
5100-69	-1	-1	2	-1	2	-1	-1	4	-1	-1	-1	-1	-1	-1
5100-68	-1	-1	2	-1	2	-1	-1	2	-1	-1	-1	-1	-1	-1
5100-67	-1	-1	2	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
5100-66	-1	-1	2	-1	1	-1	-1	2	-1	-1	-1	-1	-1	-1
5100-65	-1	-1	3	-1	2	-1	-1	3	-1	-1	-1	-1	-1	-1
5100-64	-1	-1	1	-1	2	-1	-1	2	-1	-1	-1	-1	-1	-1
5100-64-R	-1	-1	1	-1	1	-1	-1	2	-1	-1	-1	-1	-1	-1
5100-63	-1	-1	1	-1	2	-1	-1	2	-1	-1	-1	-1	-1	-1
5100-62	-1	-1	5	-1	6	-1	-1	7	-1	-1	-1	-1	-1	-1
5100-61	-1	-1	2	7	2	-1	-1	2	-1	-1	-1	-1	-1	-1
5200-77	-1	-1	2	-1	2	-1	-1	2	-1	-1	-1	-1	-1	-1
5200-76	-1	-1	2	-1	3	-1	-1	4	-1	-1	-1	-1	-1	-1
5200-75	-1	-1	3	-1	2	-1	-1	3	-1	-1	-1	-1	-1	-1
5200-74	-1	-1	5	-1	6	-1	-1	7	-1	-1	-1	-1	-1	-1
5200-73	-1	-1	1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
5200-72	-1	-1	3	-1	3	-1	-1	3	-1	-1	-1	-1	-1	-1
5300-76	-1	-1	3	-1	3	-1	-1	3	-1	-1	-1	-1	-1	-1
5300-77	-1	-1	1	-1	-1	-1	-1	-1	-1	-1	-1	-1		-1
5400-77	-1	-1	3	-1		-1	-1	2	-1	-1	-1	-1		-1
5400-76	-1	-1	3	-1	2		-1	3	-1	-1	-1	-1	-1	-1
5500-76	-1	-1	4	-1	2		-1	3	-1	-1	-1	-1	-1	-1
5500-77	-1	-1	4	-1	2	-1	-1	2	-1	-1	-1	-1	-1	-1
LMB-QA	-1	-1	2	-1	1	-1	-1	1	-1	-1	-1	-1	-1	-1
LMB-QA	-1	-1	4	-1	2	-1	-1	2	-1	-1	-1	-1	-1	-1
LMB-QA	-1	<u>.</u> -1	-1	-1	-1	-1	-4	-1	-1	-1	-1	-1	-1	-1
LMB-QA	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
LMB-QA	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
LMB-QA	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
LMB-QA	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
LMB-QA	-1	-1		-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
				•					1				1	

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

Activation Laboratories Ltd.
Date: November 23, 2011
R=Replicate Sample

	057 - ALK	058 - LPB	059 - LPB	060 - LPH	061 - LBI	062 - LBA	063 - LPH	064 - LBA	065 - HPB	066 - LBA	067 - LBI	068 - HPB	069 - LA	070 - HPB
3900-77	-1	-1	-1	-1	-1	11	-1	10	-1	12	-1	-1	17	-1
3900-76	-1	-1	-1	-1	-1		-1	4	-1			-1	11	-1
3900-75	-1	-1	-1	-1	-1	7	-1	7	-1	9	-1	-1	16	-1
3900-74	-1	-1	-1	-1	-1	4	-1	6	-1	9	-1	-1	19	-1
3900-73	1	-1	-1	-1	1	9	-1	10	-1	14	-1	-1	30	-1
3900-73-R	1	-1	-1	-1	1	10	-1	11	-1	13	-1	-1	· · · · · · · · · · · · · · · · · · ·	-1
3900-72	-1	-1	-1	-1	-1	5	-1	5	-1	-	-1	-1		-1
3900-71	-1	-1	-1	-1		6	-1	6			-1	-1	21	-1
3900-70	-1	-1	-1	-1			-1	6				-1		-1
3900-69	-1	-1	-1	-1	-1	· · · · · · · · · · · · · · · · · · ·	-1	7	-1	· · · · · · · · · · · · · · · · · · ·		-1	14	-1
3900-68 3900-67	-1	-1	-1 -1	-1 -1	-1 -1		-1	6	· ·		· ·	-1 -1		-1
	-1 -1	-1 -1	-1 -1	-1 -1	-1 -1		-1 -1	4	-1 -1			-1 -1	11	-1 -1
3900-66 3900-65	- I -1:	-1 -1	-1 -1	- I -1		_	-1 -1	5				-1 -1	15	-1
3900-63	-1	-1 -1	-1	-1			-1	4	· · · · · · · · · · · · · · · · · · ·			-1		-1
3900-63	-1		-1		1	-1		7					18	-1 -1
3900-62	-1	-1	-1	-1	-1		-1	5			<u> </u>	-1		-1
3900-61	-1	-1	-1	-1			-1	5			-1	-1		
3900-60	-1	-1	-1	-1	-1		-1	3	-1	4	-1	-1	5	-1
3900-59	-1	-1	-1	-1	-1	-1	-1	7	-1	9	-1	-1	19	-1
3900-58	-1	-1	-1	-1			-1	3	-1		-1	-1	7	-1
3900-58-R	-1	-1	-1	-1	-1		-1	3	-1		<u> </u>	-1	7	-1
3900-57	-1	-1	-1			_	-1	3	<u> </u>	·		-1		-1
4000-78	-1	÷1	-1	-1	-1		-1	4	-1	· · · · · · · · · · · · · · · · · · ·		-1		-1
4000-77	-1	-1	-1	-1			-1	12				-1		-1
4000-76	-1	-1 -1	-1	-1 -1	-1 -1		-1	3	-1 -1			-1 -1		
4000-75 4000-74	-1 -1	-1 -1	-1 -1	-1 -1	-1 -1		-1 -1	6 3	- I -1	_		- I - 1	19 6	-1 J1
4000-74	-1	-1 -1	-1 -1	-1		•	-1	5			•	-1 -1		
4000-72	1	· -1	-1	-1				6					15	
4000-71	-1	-1	-1	-1			-1	6		· · · · · · · · · · · · · · · · · · ·	-1	-1		
4000-70	-1	-1	-1	-1	-1	5	-1	4	-1	7	-1	-1	13	-1
4000-69	1	-1	-1	-1	1	9	-1	8	-1	6	-1	-1	19	-1
4000-68	-1	-1	-1	-1	-1	4	-1	4	-1	7	-1	-1	11	-1
4000-67	-1	-1	-1	-1	-1		-1	5			-1	-1	12	-1
4000-66	-1	-1	-1	-1			-1	4	-1		-1	-1	10	-1
4000-65	-1	-1	-1				-1	5				-1		
4000-65-R 4000-64	-1	-1	-1 -1	-1 -1			-1	6 5		· · · · · · · · · · · · · · · · · · ·		-1 -1		-1 -1
4000-64	-1 √1	-1 -1	-1 -1	-1 -1	-1 -1		-1 -1	5	·	· · · · · · · · · · · · · · · · · · ·	-1 -1	-1 -1		-1 -1
4000-63	-1	-1	-1	-1	-1	3	-1	3 4	-1 -1		-1 -1	-1	12	-1
4000-62	- 1 -1	-1 -1	-1 -1			-	- 1 -1	2	-1		-1		1	_1
4000-60	-1	-1	-1	-1			-1	2				-1		-1
4000-59	-1	-1	-1	-1	-1		-1	3	-1			-1	6	-1
4000-58	-1	-1	-1	-1	-1		1	3	-1	4	-1	-1	6	-1
4000-57	-1	-1	-1	-1	-1	2	-1	2	-1	3	-1	-1	4	-1
4100-57	-1	-1	-1	-1	-1	2	-1	2	-1	2	-1	-1	111	-1
4100-58	-1	-1	-1	-1			1	3	-1			-1		-1
4100-59	-1	-1	-1	-1		11	1	12				-1		1
4100-60	-1	-1	-1	-1	-1	8	1	8				-1	31	-1
4100-61	-1	-1	-1		-1		-1	2	<u></u>		-1	-1		-1
4100-62	2	-1	-1	-1	1 1	8	1	8	-1			-1	27	-1
4100-63	2	-1	-1 a	-1	-1 1		1		-1 -1		-1 -1	-1 -1		-1 -1
4100-63-R	3	-1	-1	-1	1	8	1	8] -1	11] -1	-1	1 20	-1

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

Activation Laboratories Ltd.
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	057 - ALK	058 - LPB	059 - LPB	060 - LPH	061 - LBI	062 - LBA	063 - LPH	064 - LBA	065 - HPB	066 - LBA	067 - LBI	068 - HPB	069 - LA	070 - HPB
4100-64	-1	-1	-1	-1	-1	6	-1	6	-1	8	-1	-1	17	-1
4100-65	2	-1	-1	-1	-1	2	-1	3	-1	4	-1	-1	6	-1
4100-66	1	-1	-1	-1	1	6	-1	6	-1	9	-1	-1	21	-1
4100-67	-1	-1	7		4			13				-1		-1
4100-68	2	-1	-1		-1			5			<u> </u>	-1	13	-1
4100-69	-1	-1						5				-1		
4100-70	-1	-1	-1					6			<u> </u>	-1		
4100-71	-1 -1	-1 -1			-1 -1	·····		5 3			-1 -1	-1 -1	13	-1 -1
4100-72 4100-74	-1 -1	-1 -1	-1 -1					ა 5				-1 -1		-1 -1
4100-74	- i	-1	-1		-1			5				-1	13	-1
4100-76	1	-1					·	7				-1		
4100-77	-1	-1	-1		-1			3				-1	8	-1
4100-78	-1	-1	-1	-1	-1	4	-1	4	-1	5	-1	-1	12	-1
4200-78	-1	-1	-1	-1	1	11	-1	10	-1	13	-1	-1	20	-1
4200-78-R	-1	-1	-1		1	11		10				-1	20	-1
4200-77	-1	-1	-1				-	5	· ·			-1		-1
4200-76	-1	-1	-1					8				-1		-1
4200-75	-1	-1	-1		-1			4	-1 -1			-1 -1	10	-1
4200-74 4200-71	-1 -1	-1 -1	-1 -1		-1 -1		-1 -1	2 5		· · · · · · · · · · · · · · · · · · ·		-1 -1	<u> </u>	-1 -1
4200-71	-1 -1	-1 -1	-1 -1		-1	18		17				-1 -1	29	-1 -1
4200-69	-1	-1						7	-1			-1		-1
4200-68	-1	-1	-1			7	-1	. 8				-1		-1
4200-67	1	-1	-1	-1	1	9		10				-1	31	1
4200-66	-1	-1	-1	-1	-1	3	-1	3	-1	4	-1	-1	9	-1
4200-65	-1	-1	-1			9	-1	10	-1			-1		-1
4200-64	1	-1	-1		-1			9	-1			-1	25	-1
4200-63	-1	-1					-	7				-1		-1
4200-62	-1	-1						2	-1			-1		-1
4200-61 4200-61-R	-1 -1	-1 √1	-1 -1		-1 -1			2	-1 -1		<u>'</u>	-1 -1		-1
4200-61-K	-1	-1	-1				• • • • • • • • • • • • • • • • • • • •	ა ?	-1		1	-1	***************************************	-1 -1
4200-59		-1 -1	-1		-1			2	-1		<u>'</u> -1	-1	7	-1
4200-58	-1	-1	-1					2				-1	9	-1
4200-57	-1	-1	-1	-1	-1	2	-1	2	-1	3	-1	-1	5	-1
4300-57	-1	-1	-1	-1	-1	2	1	2	-1	3	-1	-1	5	-1
4300-58	-1	-1	-1				-1	4	-1	· · · · · · · · · · · · · · · · · · ·	-1	-1	11	-1
4300-59	-1	-1	-1		-1	-		6			<u> </u>	-1	18	-1
4300-60	-1	-1						2	-1			-1		-1
4300-61 4300-62	-1 -1	-1 -1	-1 -1		-1 -1			2	-1 -1		-1	-1 -1	4	-1
4300-62	-1 -1	-1						2	-1			-1	5	-1 -1
4300-64	-1	-1 -1	-1		-1			2	-1		-1		5	
4300-65	-1	-1	-1		-1			-1	1	T		-1	1	-1
4300-66	-1	-1						. 8				-1		
4300-67	1	-1	-1		1	19		20	-1	27	-1	-1	33	-1
4300-67-R	-1	-1	-1		4	15		17	-1		-1	-1	11	-1
4300-68	-1	-1	-1			· -		11	 					-1
4300-69	-1	-1	-1		-1	· · · · · · · · · · · · · · · · · · ·		6		· · · · · · · · · · · · · · · · · · ·	•	-1	13	-1
4300-70	-1	-1						4	-1			-1		-1
4300-71	-1	-1	-1					9				-1	26	-1
4300-72	-1 -1	-1 -1	-1	-1 -1	-1			4	·		<u> </u>	-1 -1	18	-1 -1
4300-73	-1	-1	-1		-1	1 -1	-1	6	-1	1 /] -1	1 -1	13	j ÷1

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

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	057 - ALK	058 - LPB	059 - LPB	060 - LPH	061 - LBI	062 - LBA	063 - LPH	064 - LBA	065 - HPB	066 - LBA	067 - LBI	068 - HPB	069 - LA	070 - HPB
4300-74	-1	-1	-1	-1	-1	2	-1	5	-1	7	-1	-1	17	-1
4300-75	-1	-1	-1	-1	-1	2	-1	4	-1	6	-1	-1		
4300-76	-1	-1	-1	-1	-1	3	-1	3	-1	2	-1	-1	11	-1
4400-57	-1	-1	-1	-1	1	8	-1	9	-1	13	-1	-1	29	-1
4400-58	-1	-1	-1	-1	1	7	-1	7	-1			-1	19	
4400-59	-1	-1	-1					6		-		-1		-1
4400-60	1	-1	-1	-1				8				-1		1
4400-61	1	-1	-1	-1		11		12				-1	36	1
4400-62 4400-62-R	-1 -1	-1 -1	-1 -1	-1 -1	-1 -1			3	-1		 	-1		-1
4400-62-R 4400-63	-1 -1	-1	-1	-1 -1	-1			3				-1 -1	27	-1 -1
4400-63	-1 -1	-1 -1	-1 -1					9				-1 _1		-1
4400-65	-1	-1	-1	-1	-1			5				-1	14	
4400-66	-1	-1	-1	-1	1	9		9	-1	-		-1	25	
4400-67	1	-1	-1	-1	-1	6	1	6	-1	9	-1	-1		
4400-68	-1	-1	-1	-1	1	7	-1	7	-1	11	-1	-1	21	-1
4400-69	-1	-1	-1	-1	1	3	-1	9	-1	12	-1	-1	26	-1
4400-70	-1	-1	-1	-1				2				-1	4	***************************************
4400-71	-1	-1	-1	-1	-1			3	-1	_		-1	6	-1
4400-72	-1	-1	-1	-1	-1			5	-1	-		-1	14	-1
4400-73	-1	-1	-1	-1				13				-1		1
4400-74	-1 -1	-1 -1	-1	-1 -1	-1 -1			6	-1 -1			-1 -1	18	-1 -1
4400-75 4400-76	-1 -1	-1 -1	-1 -1	-1 -1				4	-1 -1			-1 -1		-1
4400-70	-1 -1	-1	-1	-1	-1			2	-1			-1	2	-1
4400-77-R	-1	- 1 -1						2	-1			-1	2	-1
4300-77	-1	-1	-1				-1	2	-1			-1	· · · · · · · · · · · · · · · · · · ·	-1
4300-78	-1	-1	-1	-1	-1			2	-1	3	-1	-1	4	-1
4500-57	-1	-1	-1	-1	-1	2	-1	1	-1	2	-1	-1	2	-1
4500-58	2	-1	-1				-1	3	-1	4	-1	-1	5	-1
4500-59	1	-1	-1	-1	-1			2	-1			-1	4	-1
4500-60	1	-1	-1	-1			***************************************	3	-1		•	-1		-1
4500-61	-1	-1	-1	-1				2	-1	_		-1	3	-1
4500-62 4500-63	-1 -1	-1 -1	-1 -1	-1 -1	-1 -1		-1	1	-1 -1			-1 -1	2	-1
4500-63	-1 -1	-1 -1	-1 -1	-1 -1				ა	-1 -1		-1 -1	-1	, d	-1 -1
4500-65	-1	-1	-1		-1			2	-1			-1	3	-1
4500-66	-1	-1	-1	-1				2	-1		,	-1		-1
4500-67	-1	-1	-1	-1	-1			2	-1	· · · · · · · · · · · · · · · · · · ·		-1	6	-1
4500-68	-1	-1	-1	-1	-1	-1	-1	2	-1	-1	-1	-1	5	-1
4500-68-R	-1	-1	-1	-1			-1	3	-1	-	-1	-1	5	-1
4500-69	-1	-1	-1	-1	-1			2	-1		-1	-1	3	-1
4500-70	-1	-1	,					2	-1		<u> </u>	-1	4	-1
4500-71	-1	-1	-1	-1	-1		-1	2	-1		•	-1	3	-1
4500-72	-1	-1	-1	-1				2	-1		1	-1		-1
4500-73 4500-74	1	-1 -1	-1 -1	-1 -1	-1 -1		-1 -1	2	-1 -1		-1 -1	-1 -1	4	-1 -1
4500-74 4500-75	-1	-1 -1	-1 -1			_	-1 -1	ა ა	-1 -1	ŭ		-1 -1) 5 /	1 -1 1 -1
4500-75	-1 -1	-1	-1 -1	-1	4			2	• • • • • • • • • • • • • • • • • • • •			-1	3	-1
4500-77	-1	-1 -1		-1	-1		-1	2	-1		`		2	
4600-56	2	-1	-1	-1		······	-1	2	-1			-1	5	-1
4600-57	-1	-1	-1	-1				2	-1	3	-1	-1	4	-1
4600-58	-1	-1	-1	-1	-1	2	-1	2	-1	-1	-1	-1	4	-1
4600-59	-1	-1	-1	-1	-1	2	-1	2	-1	2	-1	-1	3	-1

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

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	057 - ALK	058 - LPB	059 - LPB	060 - LPH	061 - LBI	062 - LBA	063 - LPH	064 - LBA	065 - HPB	066 - LBA	067 - LBI	068 - HPB	069 - LA	070 - HPB
4600-60	-1	-1	-1	-1	-1	2	-1	2	-1	3	-1	-1	4	-1
4600-61	-1	-1	-1	-1	-1	3	-1	3	-1	3	-1	-1	4	-1
4600-61-R	-1	-1					-1	3	-1	2	-1	-1	4	-1
4600-62	1	-1				T	-1	3	-1			-1	5	-1
4600-63	-1	-1					-1	7	-1		-1	-1	11	-1
4600-64	-1	-1					-1	3	-1			-1	5	-1
4600-65	-1	-1	-1	-1 -1			-1	3	-1		-1	-1	4	-1
4600-66 4600-67	-1 -1	-1 -1			•		-1	ა ე	-1			-1 -1	9	-1
4600-67	- i 7	-1 -1					-1 -1	2	-1 -1			-1 -1	ن و	-1 -1
4600-69	-1	-1				· · · · · · · · · · · · · · · · · · ·	-1	2			· · · · · · · · · · · · · · · · · · ·	-1	٠ 0	-1 -1
4600-70	-1 -1							2	-1		ı	-1 -1	3	_1
4600-71	-1	-1		-1			-1	2	-1		-1	-1	4	-1
4600-72	-1	-1						4	-1			-1	8	-1
4600-73	3	-1	-1	-1	-1	4	-1	5	-1	7	-1	-1	9	-1
4600-74	-1	-1	-1	-1	-1	2	-1	2	-1	3	-1	-1	4	-1
4600-75	-1	-1	-1	-1	-1	2	-1	2	-1	3	-1	-1	5	-1
4600-76	-1	-1					-1	2	-1	· · · · · · · · · · · · · · · · · · ·	-1	-1	4	-1
4600-76-R	-1	-1					-1	2	-1		-1	-1	4	-1
4600-77	-1	-1			•		-1	3	-1			-1	7	-1
4600-78	-1	-1					-1	2	-1			-1	5	-1
4700-57	2	-1				•		5				-1	10	-1
4700-58	-1	-1 -1					-1	3	-1			-1 -1	5	-1
4700-59 4700-60	2	-1 -1					-1 -1	2	-1 -1			-ı -1	9	-1 -1
4700-60		-1 -1	-1 -1				- I -1	2	- I - 1		- I _1	-1 -1	7	-1
4700-61	2	-1 -1					-1	3	-1	• • • • • • • • • • • • • • • • • • • •		-1	7	-1
4700-63	2	 _1						3	-1			-1	7	-1
4700-64	_ -1	-1	-1				-1	1	-1		-1	-1	2	-1
4700-65	-1	-1	-1	-1	-1	3	-1	3	-1	4	-1	-1	6	-1
4700-66	-1	-1	-1	-1	-1	3	-1	3	-1	4	-1	-1	5	-1
4700-67	-1	-1	-1	-1	-1	3	-1	3	-1	5	-1	-1	7	-1
4700-68	1	-1					-1	3	-1	4	-1	-1	5	-1
4700-69	-1	-1		-1			-1	2	-1		-1	-1	4	-1
4700-69-R	-1	-1		-1			-1	2	-1		-1	-1	3	-1
4700-70	-1	-1					-1	2	-1			-1	5	-1
4700-71	-1	-1 -1					-1	3	-1			-1	/	-1
4700-72 4700-73	-1 -1	-1 -1					-1 -1	2	-1 -1	· · · · · · · · · · · · · · · · · · ·	-1 -1	-1 -1	5	-1 -1
4700-73	-1	-1 -1					-1 -1	2	-1 -1	<u> </u>		-1 -1	7	-1 -1
4700-74	-1	-1	-1	-1			-1	3	-1		-1	-1	8	-1
4700-76	-1 -1							4				,	12	-1
4700-77	-1	-1					-1	2	-1		-1	-1	3	-1
4800-57	-1	-1	-1				-1	3	-1	5	-1	-1	7	-1
4800-58	2	-1					-1	3	-1	5	-1	-1	7	-1
4800-59	-1	-1	-1	-1	-1	1	-1	1	-1	2	-1	-1	3	-1
4800-60	-1	-1					-1	3	-1	3	-1	-1	5	-1
4800-61	-1	-1						2	-1		-1	-1	5	-1
4800-62	1	-1						2	-1		-1	-1	4	-1
4800-63	-1	-1						2	-1		-1	-1	3	-1
4800-63-R	-1	-1					-1	2	-1		-1	-1	4	-1
4800-64	-1	-1		-1			-1	2	-1		-1	-1	3	-1
4800-65	-1 -1	-1 -1	-1 -1		-1 -1		-1 -1	3	-1 -4		-1	-1 -1	7	-1
4800-66	i i i II;	;	1	1	1	1 2	[±1]	J.	[<u> </u>	<u> </u>	- 1	<u> </u>	<u> </u>

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

Activation Laboratories Ltd.
Date: November 23, 2011
R=Replicate Sample

	057 - ALK	058 - LPB	059 - LPB	060 - LPH	061 - LBI	062 - LBA	063 - LPH	064 - LBA	065 - HPB	066 - LBA	067 - LBI	068 - HPB	069 - LA	070 - HPB
4800-67	-1	-1	-1	-1	-1	4	-1	5	-1	7	-1	-1	11	-1
4800-68	-1	-1	-1	-1	-1	3	-1	3	-1	4	-1	-1	8	-1
4800-69	-1	-1	-1	-1	-1		-1	3	-1			-1		-1
4800-70	-1	-1	-1	-1	4			4	-1			-1	12	-1
4800-71	-1	-1	-1	-1	-1		-1	2	-1			-1	4	-1
4800-72	3	-1						5	-1			-1		-1
4800-73	-1	-1	-1	-1				2				-1	4	-1
4800-74 4800-75	-1 -1	-1 -1		-1 -1		······	-1 -1	3	-1 -1		· · · · · · · · · · · · · · · · · · ·	-1 -1	7	-1 -1
4800-75	-1 -1	-1 -1	-1 -1	-1				2	-1		-1	-1 -1		-1 -1
4800-77	-1	-1	-1	-1	-1		-1	2	-1		-1	-1	4	-1
4900-61	-1	-1						3	-1		-1	-1	6	-1
4900-61-R	-1	-1	-1	-1	-1			3	-1	3	-1	-1	5	-1
4900-62	-1	-1	-1	-1	-1	3	-1	2	-1	3	-1	-1	5	-1
4900-63	3	-1	-1	-1	-1	4	-1	4	-1	6	-1	-1	13	-1
4900-64	1	-1	-1	-1	-1		-1	3	-1		-1	-1	7	-1
4900-65	-1	-1					-1	3	-1		-1	-1		-1
4900-66	-1	-1	-1	-1				2				-1	3	-1
4900-67	2	-1 -1	-1	-1 -1	-1 -1		-1 -1	2	-1 -1		-1 -1	-1 -1	5	-1
4900-68 4900-69	∠ -1	-1 -1	-1 -1	-1 -1				-1 1	-) -1	· · · · · · · · · · · · · · · · · · ·		-1 -1	<u>3</u>	-1 -1
4900-09	-1	-1	-1	-1	-1			2	-1			-1 -1	3	-1 -1
4900-71	-1	-1						2	-1		• • • • • • • • • • • • • • • • • • • •	-1	4	-1
4900-72	-1	-1	-1	-1				2	-1		-1	-1	3	-1
4900-73	-1	-1	-1	-1	-1	2	-1	2	-1	-1	-1	-1	3	-1
4900-74	-1	-1			-1	2	-1	2	-1	· · · · · · · · · · · · · · · · · · ·	-1	-1	3	-1
4900-75	-1	-1	-1				-1	2	-1		-1	-1	3	-1
4900-76	-1	-1	-1	-1	-1		-1	2	-1		-1	-1	3	-1
4900-76-R	-1	-1		-1			•	2	-1	_	-1	-1		-1
4900-77 5000-77	-1	-1		-1 -1	-1 -1		-1	1	-1		-1	-1 -1	=	-1
5000-77	-1 -1	-1 √1	-1 -1	-1 -1					-1 -1		-1 -1	-1 -1		-1
5000-75	-1	-1	-1	-1				2	-1			-1		-1
5000-74	-1	-1	-1	-1	-1			2	-1	_		-1	3	-1
5000-73	-1	-1	-1	-1				2	-1		-1	-1	3	-1
5000-72	-1	-1	-1	-1	-1	2	-1	2	-1	2	-1	-1	3	-1
5000-71	1	-1		-1	-1	2	-1	2	-1	3	-1	-1	4	-1
5000-70	-1	-1	-1	-1				2	-1	· · · · · · · · · · · · · · · · · · ·	-1	-1	3	-1
5000-69	-1	-1	-1	-1			,	2	-1	_	· ·	-1	3	-1
5000-68	-1	-1						2	-1	· · · · · · · · · · · · · · · · · · ·	*	-1	•	-1
5000-67 5000-66	-1 -1	-1 -1	-1 -1	-1 -1	-1 -1		-1 -1] ກ	-1 -1		-1 -1	-1 -1	2	-1
5000-65	-1 -1	-1						2	-1		-1 -1	-1 -1	ુ ર	-1 -1
5000-64	-1	-1	-1	-1	-1		-1	2	-1	·	-1	-1	3	.1
5000-64-R	-1	-1	-1	-1				2	-1	2	-1	-1	3	-1
5000-63	-1	-1						3	-1			-1		-1
5000-62	-1	-1	-1	-1	-1	_	-1	2	-1	2	-1	-1	2	-1
5000-61	-1	-1	-1		4		-1	2	-1		-1	-1		-1
5100-75	-1	-1	-1	-1				2				-1		-1
5100-74	-1	-1	-1	-1	-1	······	-1	2	-1	· · · · · · · · · · · · · · · · · · ·	-1	-1		-1
5100-73	-1	-1		-1			-1	2	-1	<u> </u>		-1	<u> </u>	-1
5100-72 5100-71	-1 -1	-1 -1	-1 -1	-1 -1	-1 -1			ີ 1	-1 -1		-1	-1 -1	2	-1 -1
5100-71	-1 -1	-1 -1						2	- I -1			- I -1	3	-1 -1
3100-70	÷1:	ΞI	÷1.	=1	1	<u> </u>	-1		-1		1 -1	- I	1 3	† · · · · · · · · · · · · · · · · · · ·

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

Activation Laboratories Ltd.
Date: November 23, 2011
R=Replicate Sample

	057 - ALK	058 - LPB	059 - LPB	060 - LPH	061 - LBI	062 - LBA	063 - LPH	064 - LBA	065 - HPB	066 - LBA	067 - LBI	068 - HPB	069 - LA	070 - HPB
5100-69	-1	-1	-1	-1	-1	2	-1	2	-1	3	-1	-1	4	-1
5100-68	-1	-1	-1	-1	-1	2	-1	2	-1	2	-1	-1	4	-1
5100-67	-1	-1	-1	-1	-1	2	-1	2	-1	2	-1	-1	5	-1
5100-66	-1	-1	-1	-1	-1	2	-1	2	-1	2	-1	-1	3	-1
5100-65	-1	-1	-1	-1	-1	2	-1	2	-1	3	-1	-1	4	-1
5100-64	-1	-1	-1	-1	-1	2	-1	2	-1	2	7	-1	2	-1
5100-64-R	-1	-1	-1	-1	-1	1	-1	2	-1	2	-1	-1	2	-1
5100-63	-1	-1	-1	-1	-1	2	-1	2	-1	2	-1	-1	2	-1
5100-62	-1	-1	-1		1	4	-1	4		5	-1		6	-1
5100-61	-1		-1		-1	2	-1	2		3	-1		3	-1
5200-77	-1	-1	-1	<u> </u>	-1	2	-1	2		1	-1	<u> </u>	4	-1
5200-76	-1	-1	-1		-1	2	-1	2	*************	1	-1		3	-1
5200-75	-1	-1	-1		-1	2	-1	2		2	-1		4	-1
5200-74	-1	-1	-1			4		4		• • • • • • • • • • • • • • • • • • • •	-1		6	-1
5200-73	-1	-1	-1	·	-1	2	-1	2		2	-1		3	-1
5200-72	-1	-1	-1		-1	2	-1	2		3	-1		4	-1
5300-76	-1	-1	-1		-1	2	-1	2	·	3	-1		3	-1
5300-77	-1		-1	•	-1	2	-1	1	-1		-1		2	-1
5400-77	-1	-1	-1	<u> </u>	-1	2	-1	2		·	-1		4	-1
5400-76	-1	-1	-1		-1	2	-1	3			-1		4	-1
5500-76	-1	-1	-1	·	-1	3	-1	3			-1		5	-1
5500-77	-1	-1	-1	-1	-1	3	-1	3	-1	4	-1	-1	5	-1
LMD OA	2						_	0			4	4		4
LMB-QA	-1	-1 -1	-1	***************************************	-1	2	-1	2	<u> </u>	3	-1		4	-1
LMB-QA LMB-QA	-1 -1	-1 24	-1		-1 -1	-1	-		-1	3	-1	<u> </u>	/	-1
LMB-QA	-1 -1	-1	-1 -1	***************************************	-1 -1	2	-1	1 2	-1 -1	∠ -1	-1 -1		∠ 3	-
LMB-QA	-1 -1	-1 -1	-1 -1		-1 -1	2	-1	2		-1	-1 -1		3	-1
LMB-QA	-1 -1	-1 -1	-1 -1	•	-1 -1	2	-1	2		-1	-1		ა ე	-1
LMB-QA	-1 _1	-1 4	-1 -1	<u> </u>	-1 -1		- I - I		-1 -1	- I	-1 -1		2	- I
LMB-QA	-1 -1	-1	-1	-1	-1 -1	2	-1	2	-1	1	-1	-1 -1	2	-1:
LIVID-QA	-1	-1	-1	-1	-1		-1		-1	<u> </u>	-1	-1		-1
				I					I			I		

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

Activation Laboratories Ltd.
Date: November 23, 2011
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	071 - HPB	072 - HPB	073 - HBA	074 - HBA	075 - HPB	076 - LPH	077 - MAR	078 - ALK	079 - LBI	080 - LPH	081 - MAR	082 - LPH	083 - HBA	084 - HBA
3900-77	-1	-1		13			-1	3				1	16	
3900-76	-1	-1		7			-1	2	 		 	1	12	
3900-75	-1	-1	11	10			-1	3	-1	-1	-1	1	9	1
3900-74	-1	-1	10	11	-1	-1	-1	4	-1	-1	1	1	21	1
3900-73	-1	-1					-1	4	-1		-1	2	30	
3900-73-R	-1	-1	14				-1	4	-1		1	1	26	1
3900-72	-1	-1						3			-1	1	9	
3900-71	-1	-1						4	-1		1	1	22	
3900-70	-1	-1		11			-1	3				1	20	1
3900-69 3900-68	-1 -1	-1 -1		12 10				3	-1 -1		-1 -1	1	12	1
3900-67	-1 -1	-1 -1					-1	2	-1			,	12	
3900-66	-1	-1		3				1	-1	***************************************		1	6	
3900-65	-1	-1						. 3	-1		1	1	11	1
3900-64	-1	-1					-1	2	-1	-1	-1	1	11	1
3900-63	-1	-1			-1	-1	-1	3	-1	-1	-1	1	16	1
3900-62	-1	-1					-1	2	-1		1	1	12	1
3900-61	-1	-1						3			2	1	16	1
3900-60	-1	-1		5				1	-1		1	1	8	-
3900-59	-1	-1		10			-1	3	-1		2	1 1	16	1
3900-58	-1 -1	-1 -1	4 5	3				2	-1 -1		-1 -1	1	9	1
3900-58-R 3900-57	-1 -1	-1 -1	4	4			-1 -1	2	-1 -1		-1	1	1 8	1
4000-78	-1	-1 -1					-1	2	,			1	13	-1 -1
4000-77	-1	-1	16	17				3	-1		-1	1	19	
4000-76	-1	-1						2	-1		-1	1	11	1
4000-75	-1	-1				-1	-1	3	-1	-1	1	1		1
4000-74	-1	-1	5	5	-1	-1	-1	2	-1	-1	1	1	8	1
4000-73	-1	-1				-1	-1	3			1	1	15	1
4000-72	-1	1	8					2			1	1	5	1
4000-71	-1	-1		8			-1	2	-1		1	1	6	1
4000-70	-1	-1	· · · · · · · · · · · · · · · · · · ·					3	-1			1	-1	1
4000-69 4000-68	-1 -1	-1 -1	10 6				-1 -1	3	-1 -1		1] 1	20 11	
4000-67	-1	-1 -1						2			-1	1	13	
4000-66	-1	-1		7	-1			2	-1		-1	1	12	
4000-65	-1	-1		6			-1	2	-1		-1	1	8	1
4000-65-R	-1	-1	7	7	-1	-1	-1	2	-1	-1	1	1	14	1
4000-64	-1	-1	7	6	-1	-1	-1	2	-1	-1	1	1	10	-1
4000-63	-1	-1		4			-1	2	-1		-1	1	8	1
4000-62	-1	-1	<u> </u>	2				2		<u> </u>		1	7	1
4000-61	-1	-1	· · · · · · · · · · · · · · · · · · ·	3				1	-1		-1	1	5	1
4000-60 4000-59	-1 -1	-1 -1		2	·		-1 -1	-1	-1 -1		.	1	-1	1
4000-59	-1 -1	-1 -1		3				1	-1		-1	1	-1	1
4000-56	-1 -1	-1 -1						1	-1			<u>'</u>	<u>ა</u>	-1
4100-57	-1	-1						-1	-1			1 1	4	1
4100-58	-1	-1		3				1	-1		-1	1	6	1
4100-59	1	1	14	18	1	-1	-1	4	-1	1	2	2	32	1
4100-60	-1	-1	10	11			-1	3	-1	-1	1	1	22	1
4100-61	-1	-1	2	2	-		-1	1	-1		-1	1	5	1
4100-62	-1	1						4			1	1	11	1
4100-63	-1	1	3	6		-1	-1	3	-1		1	1 1	15	
4100-63-R	-1] 1	3	6	1 1	-1	-1	3	-1	1 1	1 1	1 1	18	1 1

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

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	071 - HPB	072 - HPB	073 - HBA	074 - HBA	075 - HPB	076 - LPH	077 - MAR	078 - ALK	079 - LBI	080 - LPH	081 - MAR	082 - LPH	083 - HBA	084 - HBA
4100-64	-1	-1						2				1	13	
4100-65	-1	-1						1	-1			1		
4100-66	-1	-1		10							1	1	20	
4100-67	-1	-1	-					3			2	1	16	-1
4100-68	-1	-1					-1	2	-1	-1	1	1	13	1
4100-69	-1	-1	7	7	-1	-1	-1	2	-1	-1	1	1	14	1
4100-70	-1	-1	7	8	-1	-1	-1	2	-1	-1	-1	1	16	1
4100-71	-1	-1	6	8	-1	-1	-1	2	-1	-1	-1	1	7	1
4100-72	-1	-1	6	6	-1	-1	-1	2	-1	-1	-1	1	6	1
4100-74	-1	-1					-1	3	-1	-1	1	1	18	1
4100-75	-1	-1						3	· ·		1	1	13	1
4100-76	-1	-1	12					4	-1		1	2	24	1
4100-77	-1	-1						1			1	1	6	1
4100-78	-1	-1	· · · · · · · · · · · · · · · · · · ·			 		2	-1		1	1	12	-1
4200-78	-1	-1 -1	14	14				3	-1		1 .1	1	17	1
4200-78-R 4200-77	-1 -1	-1 -1		12 7				3	-1 -1		-1 -1] 4	17	1
4200-77	-1 -1	-1 -1						<u> </u>	-1		2		27	- I - 1
4200-76	-1	-1						2			-1	1	11	1
4200-74	-1	-1		3				-1	-1		-1	1	4	-1
4200-71	-1	-1		3		<u> </u>		2	-1	-1	2	1	10	-1
4200-70	-1	-1	23	19	-1	-1	-1	4	-1	-1	-1	1	27	1
4200-69	-1	-1	11	12	-1	-1	-1	3	-1	-1	-1	1	8	1
4200-68	-1	-1	13	15	-1	-1	-1	3	-1	1	1	1	24	1
4200-67	1	2	15	15		-1	1	4	-1		3	2	13	2
4200-66	-1	-1	4	4				1	-1		-1	1	4	1
4200-65	-1	1						4	<u> </u>		2	2		2
4200-64	-1	1	14	13		-1		3	-1		1	1	12	1
4200-63 4200-62	-1 -1	-1 -1		11		-1		3 -1			2	1	19 4	1
4200-62 4200-61	-1	-1 -1		2				-1	-1 -1		1	1	6	-1 -1
4200-61-R	-1 -1	-1	v	3	-1			1	-1		-1	1	5	- I
4200-60	-1	-1		2				-1				1	4	1
4200-59	-1	-1	3	3	-1			1	-1	<u> </u>	1	1	6	-1
4200-58	-1	-1		3	-1	-1	-1	1	-1	-1	-1	1	5	1
4200-57	-1	-1	3	3	-1	-1	-1	-1	-1	-1	-1	1	4	1
4300-57	-1	-1	3	3	-1	-1	-1	1	-1	-1	-1	1	5	1
4300-58	-1	-1		6			-1	2	-1	-1	-1	1	12	1
4300-59	-1	-1						2	•		1	1	17	1
4300-60	-1	-1		3				-1	-1		1	1	4	-1
4300-61	-1	-1						-1		<u> </u>		1	3	1
4300-62 4300-63	-1 -1	-1 -1	2	-1 2				-1 -1	-1 -1		-1 -1	1	2	1
4300-63	-1 -1	-1 -1	_	_				-1 -1				1	3	1 4
4300-65	-1	-1	· · · · · · · · · · · · · · · · · · ·	1	-1			2	-1		?1	1	3	1
4300-65	-1 -1	-1 -1		7	-1			2	-1 -1	<u> </u>	1	1	10	1
4300-67	-1	-1		26				6			-1	1	25	1
4300-67-R	-1	-1						5			1	1	20	1
4300-68	-1	-1						3		-1	-1	1	18	1
4300-69	-1	-1	9	9	-1	-1	-1	2	-1	-1	1	1	12	-1
4300-70	-1	-1	_			-1	-1	2	-1		-1	1	10	1
4300-71	-1	1	11	12		-1	-1	3	-1		1	1	21	1
4300-72	-1	-1	5					2	-1		1	1	7	1
4300-73	-1	-1	10	9	-1	-1	-1	2	-1		1 1	1 1	7	1

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

Activation Laboratories Ltd.
Date: November 23, 2011
R=Replicate Sample

	071 - HPB	072 - HPB	073 - HBA	074 - HBA	075 - HPB	076 - LPH	077 - MAR	078 - ALK	079 - LBI	080 - LPH	081 - MAR	082 - LPH	083 - HBA	084 - HBA
4300-74	-1	-1		8				2			1	1	13	1
4300-75	-1	-1						2			1	1	13	1
4300-76	-1	-1						2	-1		-1	1	10	1
4400-57	-1	-1	-					4	-1		2	1	15	1
4400-58	-1	-1						3			1	1	12	1
4400-59	-1	-1	9	10	-1	-1	-1	2	-1	1	1	1	17	1
4400-60	1	1	13	15	1	-1	-1	4	-1	1	1	2	25	2
4400-61	2	2	17	18	1	-1	1	4	-1	1	2	2	29	2
4400-62	-1	-1	3	3	-1	-1	-1	-1	-1	-1	1	1	5	1
4400-62-R	-1	-1	3	3	-1	-1	-1	-1	-1	-1	-1	1	4	1
4400-63	-1	-1					-1	3	-1	-1	2	1	16	1
4400-64	-1	-1						3	-1		2	1	20	1
4400-65	-1	-1						3			1	1	10	1
4400-66	1	1	11			-1		3	-1		1	2	13	1
4400-67	-1	-1		8				3	-1		1	1	17	1
4400-68	-1	-1						3			1 1	1	20	1
4400-69 4400-70	-1 -1	-1 -1			-1 -1			3	-1 -1		-1 -1	1	14	1
4400-70	-1	-1 -1						1	-1 -1		-1 -1	1		1
4400-71				7	-1			, , ,	-1		1	' 	14	4
4400-73	1	1				-1		4	-1		2	2		2
4400-74	-1	-1						2			1	1	16	1
4400-75	-1	-1			-1			2	-1		1	1	11	1
4400-76	-1	-1	6	5	-1	-1	-1	2	-1	-1	-1	1	9	1
4400-77	-1	-1	2	2	-1	-1	-1	-1	-1	-1	-1	1	3	1
4400-77-R	-1	-1	2	2	-1	-1	-1	-1	-1	-1	1	1	4	-1
4300-77	-1	-1		3	-1		<u> </u>	1	-1		1	1	5	1
4300-78	-1	-1	· · · · · · · · · · · · · · · · · · ·	3	-1			-1	-1		2	1	2	-1
4500-57	-1	-1		2	-1			-1	-1		-1	1	3	-1
4500-58	-1	-1						1	-1			1	6	-1
4500-59 4500-60	-1 -1	-1 -1	_		-1 -1			1	-1 -1		-1 -1	1	5	1
4500-60 4500-61	-1	-1		<u> </u>				-1				1	-1	1
4500-62	-1	-1 -1	_	2	-1				_1	<u> </u>	_1]	- I	-1 4
4500-63	-1	-1	• • • • • • • • • • • • • • • • • • • •		-1			2	-1		***************************************	1	8	-1
4500-64	-1	-1		·	-1			_ 1	-1			1	5	1
4500-65	-1	-1			-1			1	-1		-1	1	6	1
4500-66	-1	-1	3	1	-1	-1	-1	1	-1	-1	-1	1	2	1
4500-67	-1	-1	3	2	-1	-1	-1	1	-1	-1	-1	1	5	1
4500-68	-1	-1		3	-1			1	-1		-1	1	5	-1
4500-68-R	-1	-1	_		-1			-1		<u> </u>	-1	1	2	-1
4500-69	-1	-1	4		-1			-1	-1		1	1	4	-1
4500-70	-1	-1		3	-1			1	-1		-1	1 1	2	-1
4500-71	-1	-1	T		-1			-1				1	4	1
4500-72	-1	-1	_		-1			-1		<u> </u>	-1	1 1	4	1
4500-73 4500-74	-1	-1			-1			1	-1		-1	1 1	4	1
4500-74 4500-75	-1 -1	-1 -1		_	-1 -1			1	-1		1 _1	1] 3 /	1
4500-75	-1 -1	-1 -1	4		-1			.1 -1			•	1	4	1
4500-76	-1	-1	_	·	-1		<u> </u>	-1	-1			1	3	4
4600-56	-1	-1		3	-1			2	-1		-1	1	7	1
4600-57	-1	-1		3	-1			1	-1		1	1	4	-1
4600-58	-1	-1		3	-1	-1	-1	-1	-1	-1	-1	1	4	1
4600-59	-1	-1	3	2	-1	-1	-1	1	-1	-1	-1	1	6	1
			· · · · · · · · · · · · · · · · · · ·			•	•					•	• • • • • • • • • • • • • • • • • • • •	

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

Activation Laboratories Ltd.
Date: November 23, 2011
R=Replicate Sample

	071 - HPB	072 - HPB	073 - HBA	074 - HBA	075 - HPB	076 - LPH	077 - MAR	078 - ALK	079 - LBI	080 - LPH	081 - MAR	082 - LPH	083 - HBA	084 - HBA
4600-60	-1	-1			-1			1	-1			1	4	-1
4600-61	-1	-1			-1			,	-1			1	4	1
4600-61-R	-1	-1	3		-1			1	-1		-1	1	3	1
4600-62	-1	-1			-1			1	-1			1	5	1
4600-63	-1	-1	8	8	 		-1	2	-1	-1	-1	1	9	1
4600-64	-1	-1	3	4	-1	-1	-1	1	-1	-1	-1	1	1	1
4600-65	-1	-1	3	2	-1	-1	-1	-1	-1	-1	-1	1	2	-1
4600-66	-1	-1	3	4	-1	-1	-1	1	-1	-1	1	1	6	-1
4600-67	-1	-1	2	-1	-1	-1	-1	-1	-1	-1	-1	1	2	1
4600-68	-1	-1	1	3	-1	-1	-1	2	-1	-1	1	1	9	1
4600-69	-1	-1					-1	-1	-1		-1	1	2	-1
4600-70	-1	-1	2	· · · · · · · · · · · · · · · · · · ·	-1			-1	-1		-1	1	2	1
4600-71	-1	-1			-1			-1			-1	1	5	1
4600-72	-1	-1	5		-1			1	-1		-1	1	5	1
4600-73	-1	-1	2		1	-1		2	-1		-1	1	<u>9</u>	1
4600-74	-1	-1 -1			-1			1	-1 -1		-1 -1	1	5	+1
4600-75 4600-76	-1 -1	-1 -1		_	-1 -1			1 -1			-1 -1	1	3	1
4600-76 4600-76-R	-1	-1			-1			-1	-1		-1	1	4	-1
4600-76-1				1	-1			-1	-1		-1	1	5	4
4600-78	-1	-1	· · · · · · · · · · · · · · · · · · ·		-1			-1				1	5	1
4700-57	-1	-1			-1			2	-1		1	1	10	1
4700-58	-1	-1	3	-1	-1			1	-1	-1	1	1	-1	1
4700-59	-1	1	2	3	1	-1	-1	2	-1	-1	1	1	8	1
4700-60	-1	-1	1	2	-1	-1	-1	1	-1	-1	-1	1	5	1
4700-61	-1	-1	4	3	-1	-1	-1	1	-1	-1	-1	1	7	1
4700-62	-1	-1			-1		-1	2			1	1	7	-1
4700-63	-1	-1	3		-1			2	-1		1	1	7	1
4700-64	-1	-1			-1			-1	-1		-1	1	2	-1
4700-65	-1	-1			-1			1	-1		1	1	4	-1
4700-66 4700-67	-1 -1	-1	Ŭ	2	-1 -1			1	-1 -1		-1	1	6	1
4700-67 4700-68	-1	-1 -1		2	-1			1	-1		1	1		1
4700-69	-1	-1 -1	3	1	-1			1	-1	<u> </u>	_1	1	1	- I 4
4700-69-R	-1	-1			-1			-1			-1	1	3	-1
4700-70	-1	-1		-	-1			-1	-1			1	5	1
4700-71	-1	-1		3	-1			1	-1		1	1	7	-1
4700-72	-1	-1	3	1	-1	-1	-1	-1	-1	-1	-1	1	2	1
4700-73	-1	-1	2	2	-1	-1	-1	-1	-1	-1	-1	1	4	-1
4700-74	-1	-1	3	2	-1	-1	-1	1	-1	-1	1	1	6	-1
4700-75	-1	-1			-1			1	-1	<u> </u>	-1	1	7	1
4700-76	-1	-1			 			1	-1		1	1	8	1
4700-77	-1	-1	2		-1			-1	-1		1 1	1	3	-1
4800-57	-1	-1						1	-1		1 1	1	7	-1
4800-58	-1	-1		2	-1			1 1	-1	<u> </u>	1 1	1	6] 1
4800-59	-1	-1			-1			-1	-1		-1	1	3	-1
4800-60 4800-61	-1 -1	-1 -1			-1 -1			1 1	-1 -1		1] 1 a	4	1
4800-62	-1 -1	-1 -1			-1			-1	• • • • • • • • • • • • • • • • • • • •		1	1	3	1
4800-63	-1 -1	-1	-1	_	-1		<u> </u>	-1	-1		1	, '	3	1
4800-63-R	-1	-1		*****************	-1			-1	-1		1	1	4	1
4800-64	-1	-1		1	-1			-1	· ·	<u> </u>	-1	1	1	-1
4800-65	-1	-1	4		-1	-1	-1	1	-1	-1	1	1	6	-1
4800-66	-1	-1	1	2	-1	-1	-1	-1	-1	-1	1	1	2	-1
						•	•		• • • • • • • • • • • • • • • • • • • •			•		•

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

Activation Laboratories Ltd.
Date: November 23, 2011
R=Replicate Sample

	071 - HPB	072 - HPB	073 - HBA	074 - HBA	075 - HPB	076 - LPH	077 - MAR	078 - ALK	079 - LBI	080 - LPH	081 - MAR	082 - LPH	083 - HBA	084 - HBA
4800-67	-1	-1	5			-1		2				1	10	1
4800-68	<u>-1</u>	· -1	3					1	-1			1		1
4800-69	-1	-1	3	4				1	-1		2	1	6	1
4800-70	-1	-1	5					2			1	1	10	1
4800-71	-1	-1	2				-1	-1	-1	-1	1	1	3	-1
4800-72	-1	-1	4	4	-1	-1	-1	2	-1	1	1	1	9	1
4800-73	-1	-1	2	3	-1	-1	-1	-1	-1	-1	1	1	5	-1
4800-74	-1	-1	3	3	-1	-1	-1	1	-1	-1	-1	1	6	1
4800-75	-1	-1	2	2	-1	-1	-1	-1	-1	-1	-1	1	3	-1
4800-76	-1	-1		2			-1	-1	-1	-1	-1	1	3	1
4800-77	-1	-1	2	2	•			-1	-1		1	1	3	-1
4900-61	-1	-1	3	3			-1	1	-1		-1	1	4	1
4900-61-R	-1	-1						1	-1		-1	1	5	1
4900-62	-1	-1	2	2				1	-1		-1	1	5	1
4900-63	-1	1 -1	4	4		-1	-1	2	-1		1	1	11	1
4900-64 4900-65	-1 -1	-1 -1	3	2				1	-1 -1		1 1	1 1	5	1
4900-65	-1 -1	-1 -1	2	2			-1 -1	-1	-1 -1		-1	'	4	- I - 1
4900-67	-1 -1	-1	-1					1	-1			1	4	1
4900-68	-1	-1			4			-1	-1		-1	1	2	-1
4900-69	-1	-1						-1	-1	-1	-1	-1	-1	1
4900-70	-1	-1	2		-1	-1	-1	-1	-1	-1	-1	1	4	1
4900-71	-1	-1	2	2	-1	-1	-1	-1	-1	-1	-1	1	3	1
4900-72	-1	-1	2	2	-1	-1	-1	-1	-1	-1	-1	1	3	1
4900-73	-1	-1	2	2	-1	-1	-1	-1	-1	-1	-1	1	3	-1
4900-74	-1	-1	2	2	-1		-1	-1	-1		-1	1	3	-1
4900-75	-1	-1	1	1	-1			-1				1		1
4900-76	-1	-1	1	1	-1		-1	-1	-1		-1	1	-1	-1
4900-76-R	-1	-1	2	2	-1			-1	-1		-1	1	1	-1
4900-77	-1 -1	-1 -1	1	2	-1 -1			-1 -1	-1 -1		-1 -1	1	3	-1
5000-77 5000-76	-1 -1	-1 -1	2	2	-1 -1			-1 -1	-1		-1 -1	_1		1
5000-75	-1	-1	-	1	-1			-1	-1			1		
5000-74	-1	_1	-1	,	-1			-1	_1	<u> </u>	_1	1	9	1
5000-73	-1	-1	2	-1				-1	-1		-1	1	3	-1
5000-72	-1	-1	2					-1	-1			1	2	-1
5000-71	-1	-1	-1	2	-1	-1	-1	-1	-1	-1	-1	1	3	1
5000-70	-1	-1	2	2	-1	-1	-1	-1	-1	-1	1	-1	2	-1
5000-69	-1	-1	1	2			-1	-1	-1		-1	1	2	-1
5000-68	-1	-1	2		-1		-1	-1	-1		-1	1	3	1
5000-67	-1	-1	-		-1			-1		<u> </u>		1	2	1
5000-66	-1	-1	2		```			-1	-1			1 1	3	1
5000-65	-1	-1	2	2			-1	-1	-1		-1	1	4	1
5000-64 5000-64 B	-1	-1 -1	·····					-1 -1	-1 -1		1 1	1	2	-1 -1
5000-64-R 5000-63	-1 -1	-1 -1	3	3			-1 -1	-1 -1	-1 -1	<u> </u>	1 a] 1	2	-1
5000-63	-1 -1	-1 -1	3 2	-1				-1 -1	-1		-1 -1	1 1	3	1
5000-62	-1 -1	-1 -1		-1	-1			-1			-1 -1	1	3	
5100-75	-1	-1		2				-1	-1			1	2	1
5100-74	-1	· -1	2	2				-1	-1			1	3	1
5100-73	-1	-1	2	1	-1		-1	-1	-1		-1	1	2	-1
5100-72	-1	-1	-1	1	-1	-1	-1	-1	-1	-1	-1	1	2	1
5100-71	-1	-1	2	2	-1	-1	-1	-1	-1	-1	-1	1	2	-1
5100-70	-1	-1	2	2	-1	-1	-1	-1	-1	-1	-1	1	4	1

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

Activation Laboratories Ltd.
Date: November 23, 2011
R=Replicate Sample

\$100-89		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
\$100-67	5100-69	-1	-1	2	2	-1	-1	-1	-1	-1	-1	1	1	4	-1
5100-66	5100-68	-1	-1	2	1	-1	-1	-1	-1	-1	-1	-1	1	4	1
5100-65		-1	-1	2	1	-1	-1	-1	-1	-1	-1	-1	1	-1	-1
5100-64		-1	-1	2	2	-1	-1	-1	-1	-1	-1	-1	1	3	-1
5100-64R		-1	-1	2	2	-1	-1	-1	-1	-1	-1	-1	1	2	1
5100-63		-1	-1	1	-1	-1	-1	-1	-1	-1	-1	-1	1	3	1
\$100.62		-1	-1	2	2	-1	-1	-1	-1	-1	-1	-1	1	3	1
5100-61				1	1		***************************************		-1	-1	-1	-1	1	3	-1
5200-77 -1 -1 -1 2 2 -1			·	3	4				1	-1	1	1	1	6	1
5200-76 -1 -1 2 2 -1				2	3				1	-1	-1	-1	1	5	1
\$200-75			·	2					1	-1			1	4	1
5200-74 -1 -1 3 4 -1 -1 -1 2 -1 -1 1 1 7 5200-72 -1					· · · · · · · · · · · · · · · · · · ·				-1			-1	1	3	1
5200-73 -1 -1 2 2 -1				Z					1			1	1	5	1
\$200-72				······•			***************************************		=		•	1	1	7	1
5300-76 -1 -1 2 2 -1 -1 -1 -1 -1 -1 1 1 3 1 1 -1 <th></th> <th>1</th> <th>1</th> <th>4</th> <th>-1</th>												1	1	4	-1
5300-77 -1 <t< th=""><th></th><th></th><th></th><th>2</th><th>4</th><th>71</th><th></th><th>*</th><th></th><th></th><th></th><th>-1</th><th>1</th><th>4</th><th>1</th></t<>				2	4	71		*				-1	1	4	1
5400-77 -1 <t< th=""><th></th><th></th><th>· · · · · · · · · · · · · · · · · · ·</th><th>2</th><th></th><th>-1</th><th></th><th></th><th>· · · · · · · · · · · · · · · · · · ·</th><th>·</th><th></th><th>1</th><th>1</th><th>3</th><th>1</th></t<>			· · · · · · · · · · · · · · · · · · ·	2		-1			· · · · · · · · · · · · · · · · · · ·	·		1	1	3	1
5400-76 -1 <t< th=""><th></th><th></th><th></th><th>1</th><th></th><th>[</th><th></th><th>•</th><th></th><th></th><th></th><th></th><th>1</th><th>2</th><th>1</th></t<>				1		[•					1	2	1
5500-76 -1 <t< th=""><th></th><th></th><th></th><th>2</th><th></th><th>-1</th><th></th><th></th><th></th><th></th><th></th><th></th><th>1</th><th>3</th><th>1</th></t<>				2		-1							1	3	1
5500-77 -1 <t< th=""><th></th><th></th><th></th><th>······································</th><th></th><th></th><th>***************************************</th><th></th><th>-1</th><th>***************************************</th><th></th><th>-1</th><th>1</th><th>4</th><th>1.</th></t<>				······································			***************************************		-1	***************************************		-1	1	4	1.
LMB-QA -1 -1 3 3 -1 -			·	V					1			1	1	4	-1
LMB-QA -1 -1 3 3 -1 -1 -1 1 -1 -1 <	5500-77	-1	-1	2	2	-1	-1	-1	-1	-1	-1	1	1	5	1
LMB-QA -1 -1 3 3 -1 -1 -1 1 -1 -1 <	LMD OA		4						0				-		2
LMB-QA -1 <td< th=""><th></th><th></th><th></th><th>••••••••••••</th><th>~</th><th>[</th><th></th><th></th><th></th><th></th><th></th><th>-1</th><th>1</th><th>5</th><th>1</th></td<>				••••••••••••	~	[-1	1	5	1
LMB-QA -1 -1 1 1 -1 -1 -1 -1 -1 -1 -1 1 1 3 -1 LMB-QA -1 -			·	3					1			1	1	ე ი	-1 4
LMB-QA -1 -1 1 1 -					2				•					_	1
LMB-QA -1 -1 1 1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1				1	'	·			'					ن ۱	- I 4
LMB-QA -1 -1 1 1 1 -1 -1 -1 -1 -1 -1 -1 -1 -1				1	_1									_1 _1	-1
				1	-1	<u></u>			·	<u> </u>		• • • • • • • • • • • • • • • • • • • •		-1	-1
-1 -1 1 1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1				1	1								***************************************	2	-1
	LIVID-QA	-1	-1		<u>'</u>	-1	-1	-1	-1	-1	-1	-1	<u>'</u>		-1

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

Activation Laboratories Ltd.
Date: November 23, 2011
R=Replicate Sample

	085 - LPH	086 - LBI	087 - MAR	088 - HBA	089 - THI	090 - HPB	091 - LBI	092 - LPH	093 - LA	094 - LBI	095 - MAR	096 - LPH	097 - HBA	098 - THI
3900-77	17	-1	1	13	-1		1	-1	18	3 1	1	1		2
3900-76	12	-1	1	9	-1	1	1	-1	21	1	2	1	22	2
3900-75	16	-1	1	13	-1	1	2	-1	31		1	1	31	3
3900-74	22	-1	1	17	-1	1	2	1	52	2	2	1	53	4
3900-73	30	1	1	20	-1	1	2	1	71	2	2	2	76	6
3900-73-R	25	1	1	20	-1	2	2	1	57	7 2	2	1	57	4
3900-72	19	-1	-1	12			1	-1	26		2	. 1	11	2
3900-71	22	-1	1	18			2	1	53		2	1	53	4
3900-70	19	-1	1	16			1	1	37		2	1	37	3
3900-69	16	-1	1	13			1	-1	22		1	1	22	2
3900-68	19	-1 -1	1	14			2	1	44		3	1	44	3
3900-67 3900-66	12	-ı -1	1	8			1	-1	20 10			1	20 10	
3900-65	19	-1 -1	1	14			1	-1	25		-1	1	26	2
3900-64	12	-1 -1	1	8			1	1	14		1	1	15	2
3900-63	16		' '	12			1	-1	33		,	1	32	্ ব
3900-62	12	-1	1	8			1	1	20		2	1	20	2
3900-61	15	-1	1				1	-1	27		2	1	25	2
3900-60	8	-1	2	7	-1	1	1	-1	Ç	1	1	1	9	1
3900-59	16	-1	1	14		1	1	1	33	3 2	2	2	33	3
3900-58	10	-1					1	-1	13		2	1	11	1
3900-58-R	9	-1	1	6			-1	-1	10		1	1	9	1
3900-57	9	-1	-1		·		1	-1	17		1	1	16	2
4000-78	14	-1					1	1	37		2	1		3
4000-77	20	-1	2	16			1	-1 -4	23		1	1	13	2
4000-76 4000-75	9 19	-1 1	-1 1	6 12			1	-1	43		5	1 2	30	1
4000-73	19		3	6				1	13		1 3	1 4	39 15	ა ე
4000-74	17	-1					1	1	25		3	1	25	2
4000-72	14	-1	1				1	1	25		<u> </u>	2		2
4000-71	14	-1	1	11	-1	1	1	1	28		2	1	27	3
4000-70	14	-1	-1	6	-1	1	1	1	18		1	1	17	2
4000-69	20	1	1	14			1	1	36	6 2	2	2	34	3
4000-68	13	-1	1	7	-1		1	-1	17		2	1	17	2
4000-67	13	-1		9			1	1	26		2	1	25	2
4000-66	11	-1	-1				1	-1	16		1	1	15	2
4000-65	9	-1	1	6			1	-1	13		1	1	12	1
4000-65-R 4000-64	12 14	1 -1	1	11 10			3	-1	20 20		2	1	18 20	2
4000-64	14	-1 -1	1	7	-1 -1		1	1	15			1	14	
4000-62	11	-1	1	7			1	-1	16		1	1	15	2
4000-62	5	 -1	2				1	1	11		,	2		2
4000-60	4	-1	1	3			1	-1			1	1	-1	1
4000-59	8	-1	2	7	-1		1	-1	14	1 1	1	1	13	2
4000-58	8	-1	2	6	-1	1	1	1	13		1	1	12	2
4000-57	6	-1	1	5	-1	1	1	-1	7	7 1	1	1	6	1
4100-57	5	-1	-1				1	1	140		1	2	177	16
4100-58	7	-1	1	4			1	1	13		1	2	13	2
4100-59	31	1	3	24				1	52			2	53	4
4100-60	25	1		20			2	1	85		1	2	00	8
4100-61	5	-1	2	4			1	-1	12		1 1	1 1	12	2
4100-62	24	-1	1	21			2	1	69		2	2	· · · · · · · · · · · · · · · · · · ·	6
4100-63	15	1	1	11			1	1	28		_	2		2
4100-63-R	20	1	1	13	-1	1	1	1	36	5 2	3	2	32	3

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

Activation Laboratories Ltd.
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	085 - LPH	086 - LBI	087 - MAR	088 - HBA	089 - THI	090 - HPB	091 - LBI	092 - LPH	093 - LA	094 - LBI	095 - MAR	096 - LPH	097 - HBA	098 - THI
4100-64	14	-1	1	11	-1	1	1	1	30	2	3	2	29	3
4100-65	8	-1	1	5	-1	1	1	-1	1€	1	1	1	14	2
4100-66	21	1	2				2	2	71		16	2	12	6
4100-67	19	-1	3	16			1	1	19		2	2		2
4100-68	13	1	2	9		_	1	1	21		7	2	18	2
4100-69	15	-1		10			1	1	33			1	33	3
4100-70	15	-1 -1	1	12			1	1	31		2	2		3
4100-71 4100-72	14 11	-1 -1	-1	10 7	-1		1	-1	32 24		2	1	33 25	3
4100-72	18	-1 -1	- i 1	14			ා ඉ	-1	61		2	9		6
4100-75	14	-1	1	9			1	1	24		2	1	22	2
4100-76	23	-1	2				2	1	67		7	2		5
4100-77	7	-1	2	5	-1	1	1	1	21		2	1	23	2
4100-78	13	-1	2	10	-1	1	1	1	38	2	4	2	37	4
4200-78	16	-1	_				1	1	26		2	1	27	2
4200-78-R	17	-1	2	13			1	1	24		2	1	25	2
4200-77	9	-1	2	8			1	1	11		2	1	13	1
4200-76	29 10	-1	2	17 7	-1 -1		2	1	92		8	2		8
4200-75 4200-74	10	-1 -1	-1	-			1 -1	_1 _4	25				24	3
4200-74	11	-1	-1				-,	-1	22	• • • • • • • • • • • • • • • • • • • •	2	1	24	2
4200-70	29	-1	2	21	-1		2	1	34		-1	1	34	3
4200-69	19	-1	1	13	-1	1	1	1	40		1	1	42	4
4200-68	25	1	1	17			2	1	72		3	2		6
4200-67	28	2	3	21	-1		2	2	73	1		3	74	6
4200-66	8	-1	1	7			1	1	32		1	2		3
4200-65 4200-64	30	1	2	23 19			2	1	124		3	2	132	11
4200-64	24 17	1	1	13				1	51 39		2	2	52 39	4
4200-62	6	-1	3	3	-1		1	1	14		1	1	14	2
4200-61	6	-1	2	6			1	-1	16		1	1	16	2
4200-61-R	7	-1	2	5	-1	1	1	1	18	2	1	2	18	2
4200-60	6	-1	3	4	-1	2	1	1	12	1	1	2	12	2
4200-59	7	-1	2	6	-1		1	1	18		1	2	18	2
4200-58	6	-1	2	4	-1		1	1	17		1	2		2
4200-57	6	-1	1	4	-1 -1		1	1	11		1	2	11	2
4300-57 4300-58	6 13	-1 -1	1	8			1	1	16 27		2	2	. 10	2
4300-59	17	1	1	12			1	1	48		2	2	47	Δ
4300-60	5	-1	2		-1		1	-1	13		1	1	14	2
4300-61	5	-1	1	3	-1		1	-1	10		1	1	9	2
4300-62	5	-1	1	3	-1	1	1	1	12	1	-1	1	12	2
4300-63	6	-1					1	1	13		1	1	13	2
4300-64	5	-1	3	3	-1		1	1	13		1	1	13	2
4300-65	7	-1	4	6			1	1	12		1	2	12	2
4300-66	10	-1 1	3	9 28			1	1	20		1 1	2		2
4300-67 4300-67-R	43 34	1	1 4	28 25			∠	1	38 23		1]	21 26	
4300-67-1	19	-1	2				1	-):	25		1	1	26	2
4300-69	12	-1	2	9			1	-1	20		2	1	21	2
4300-70	10	-1	1	7	-1		1	1	22		1	2		2
4300-71	25	1	1	16	-1	1	2	1	54	2	2	2	56	5
4300-72	9	-1	2	6			1	1	24		2	2	25	3
4300-73	12	-1	2	9	-1	1	1	-1	17	1	1	1	18	2

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

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	085 - LPH	086 - LBI	087 - MAR	088 - HBA	089 - THI	090 - HPB	091 - LBI	092 - LPH	093 - LA	094 - LBI	095 - MAR	096 - LPH	097 - HBA	098 - THI
4300-74	15	1	1	11	-1	1	2	1	51	2	2 2	2	51	5
4300-75	14	-1	1	10	-1	1	1	1	38		2	1	38	
4300-76	11	-1		7	-1	1	1	1	35			1	36	
4400-57	30	-1 -1		22 16		1	2	1	70 37			2		6
4400-58 4400-59	20 18			12		1		1	39			2	37 42	3
4400-39	24	-1				2			52		· · · · · · · · · · · · · · · · · · ·			
4400-61	33	1		4		2	2	1	88			_	90	
4400-62	4	-1	2			1	1	-1	11		1	1	10	
4400-62-R	5	-1	2			1	1	-1			1	1	9	2
4400-63	27	1	1	20		1	2	1	59		·	2	62	
4400-64	23			19		1	1	1	47			2		4
4400-65 4400-66	16 23	1	1	7 16		1	1 2	1	24 57			2	24 59	2
4400-66	23 17	1	1			1	· · · · · · · · · · · · · · · · · · ·	1	48			2		
4400-68	21	1	1 1	14		1	2	1	50			2	52	
4400-69	24	1	1	18		1	2	1	46			1	48	
4400-70	5					1	-1		9		-1	2		
4400-71	9			-		1	-1	-1	10		1	1	9	1
4400-72	13			9		1	1	1	28			2	28	3
4400-73 4400-74	31 17	1		21 13		2	2	2	54 38				54 39	
4400-74	17			9		1	1	1	14] <u>∠</u> 1	39	
4400-76	9			5		1	1	1	13		2	1	1	2
4400-77	4			2		1	-1	-1	5		-1	1	4	1
4400-77-R	5	-1	1	2	-1	1	1	-1			1	1	5	1
4300-77	6					2	1	1	11		3		14	
4300-78	7	-1		•		2	1	1	12		3		6	
4500-57 4500-58	4 7	-1 1				1 2	1	-1	5 10		2	1	5 6	·
4500-59	6			. 4		1	-1	-1	7	1	2	1	6	
4500-60	7		1	4		1	1	-1	· · · · · · · · · · · · · · · · · · ·	1	2	1	9	
4500-61	4	-1	2	3	-1	2	1	1	6	1	2	1	1	-1
4500-62	4	-1				1	-1				1	1	4	1
4500-63	9					1	1	-1			1	1	9	
4500-64 4500-65	6 5					1	-1 1	-1 -1			-1	1	6 4	1 1
4500-65 4500-66		-1 -1		 		1	-1				1	1 1	6	1
4500-67	5					1	1	-1		•	1	1	7	1
4500-68	6		-1	4		1	-1	-1			-1	1	8	1
4500-68-R	5					1	1	-1			1	1	7	1
4500-69	5					1	-1				1	1	4	1 1
4500-70 4500-71	<u>4</u> 5			<u> </u>		1	-1 1			1	1	1 1	5 4	1
4500-71 4500-72	5	-1 -1				1	-1	-1 -1		1	1 1	1 1	5] 1
4500-72 4500-73	6					1					1	1	7	
4500-74	5			5		1	1	-1				1	7	1
4500-75	6			4		1	1	-1		1	1	1	6	1
4500-76	4			<u> </u>		1	1	-1			1	1	-1	
4500-77	3					2	1	1	5		2	1	6	
4600-56	8			3		1	1	-1			1	1	8	
4600-57 4600-58	6 5					1	-1 -1	-1 -1	6 7	1	1 1	1	5	
4600-58	5 4					1				-1	1 · · · · · · · · · · · · · · · · · · ·	1	о 4	
-000-03	4	-1	<u>,</u>		j	1	-1	<u> </u>	<u>, </u>	<u> </u>	1 1	1	1 4	1 '

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

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	085 - LPH	086 - LBI	087 - MAR	088 - HBA	089 - THI	090 - HPB	091 - LBI	092 - LPH	093 - LA	094 - LBI	095 - MAR	096 - LPH	097 - HBA	098 - THI
4600-60	6	-1	1	4	-1	1	-1	-1	8	1	1	1	7	1
4600-61	5	-1	1	4	-1	1	-1	-1	6	-1	1	1	5	1
4600-61-R	6				-1	1	-1				-1	1	6	
4600-62	5					1	-1				1	1	7	
4600-63 4600-64	11 7	-1 -1	_	8		1	1 -1	-1	10		1	1	10	
4600-65	4					1	1				1	1	6	
4600-66	7	-1		5		1	1	-1			-1	1	9	
4600-67	3	-1	1	1	-1	-1	-1	-1			1	1	3	3
4600-68	9			8		1	1	1	14		2	1	11	2
4600-69	5					1	-1				1	1	5	1
4600-70	4			-		1	-1				1	-1		
4600-71 4600-72	4 6	-1 -1		2	-1 -1	1	1	-1 -1			1] 1	6	
4600-72	12					1	1				1	2	•	•
4600-74	5					1	1	-1			1	1	6	
4600-75	6			4	-1	1	-1			1	1	1	7	
4600-76	5			<u> </u>		1	-1				1	1	6	
4600-76-R	5			3		1	-1 1				1 -1] 1	6	
4600-77 4600-78	4 5			3		1	1	-1 -1			-1 1	1	11	
4700-78	11	-1		7		1	1	1	23		<u> </u>	2	22	
4700-58	6	-1	1	5		1	1	1	11			1	10	
4700-59	9		1	8	-1	1	1	1	17		2	2	16	1 2
4700-60	6			3		1	-1	-1			1	1	8	1
4700-61	6			3		1	1	1			2	1	13	
4700-62 4700-63	9 6			5 5		1	1	1	13 11		1	1	12 9	
4700-64	3					1	-1	-1			1	1	4	•
4700-65	7	-1	1	5	-1	1	1	1	14		1	1	14	
4700-66	6	-1	1	5	-1	1	1	1	14		1	1	13	3
4700-67	7			4		1	1	1	13		2	1	12	
4700-68	6			5		1	1	1	9		2	1	9	
4700-69 4700-69-R	6 5					1	1	-1	7		1	1	6	
4700-70	6			4		1	1	1	11		2	1	10	
4700-71	7	-1	1	6		1	1	1	15		2	1	15	5 2
4700-72	5			3		1	-1				2	1	9	
4700-73	4					1	1	-1			1	1	10	
4700-74 4700-75	7 8	-1 -1				1	1	1	14 18		2	2	13 18	
4700-75 4700-76	9			6 8		1	1	1	29			ا 2		
4700-70	3					1		-1				1	6	
4800-57	7	-1		7	-1	1	1	-1			1	1	19	
4800-58	7	1		6		1	-1		14		2	1	13	
4800-59	4					1	-1	-1			-1	1	5	
4800-60 4800-61	6 5			5 4		1	1	1 -1	11 13		2	1	10 13	
4800-61	5 4			1		1	1		13		2	1	13	
4800-63	4			3		1	1	1	9		3	1	8	
4800-63-R	4	-1		3		1	1	1	13		4	1	12	
4800-64	3					1	1	1	6		2	1	6	
4800-65	6			5		1	1	1	14		3	2	13	
4800-66	3	-1	1 1] 3	-1	1	-1	-1	6	<u>.</u> 1	2	1	5	i] -'

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

Activation Laboratories Ltd.
Date: November 23, 2011
R=Replicate Sample

	085 - LPH	086 - LBI	087 - MAR	088 - HBA	089 - THI	090 - HPB	091 - LBI	092 - LPH	093 - LA	094 - LBI	095 - MAR	096 - LPH	097 - HBA	098 - THI
4800-67	12	-1					1	1	31			<u> </u>		4
4800-68	7	-1					1	4	24					3
4800-69	7	-1		7	-1		1	2	22				22	4
4800-70	10	-1		7	-1		1	2				2		4
4800-71	4	-1	-1	1	-1		1	-1			1	1		1
4800-72	10	1	1	8	-1	1	1	1	25	5 2	3	2	23	3
4800-73	5	-1	1	4	-1	1	1	-1			1	1		1
4800-74	7	-1	1	5	-1	1	1	1	15	5 1	1	2	14	2
4800-75	4	-1	-1	3	-1	1	-1	-1	6	1	1	1	5	1
4800-76	4	-1	1	3	**********		-1	-1	7	1	1	1	7	1
4800-77	4	-1	1	3			1	-1	g		1	1	8	2
4900-61	6	1	1	4	-1		1	1	11		2	1	10	2
4900-61-R	6	-1	1				1	1	g		2	1	8	2
4900-62	5	1	1	4			-1	1	9		1	1	8	1
4900-63	11	1	2	11			2	1	40		2	2		5
4900-64 4900-65	6 5	-1 -1					1	1	13		2	2	13	+1 o
4900-65	<u>ට</u>	-1 -1					1 4	-1	5		1 1		/	∠ 1
4900-67	5	-1					1	-1	8		2	1	7	1
4900-68	4	-1			·		-1	-1	7	1	1	1	5	1
4900-69	3	-1					-1	-1	5	-1	1	1	1	1
4900-70	5	-1			-1	1	-1	-1	6		1	1	5	1
4900-71	4	-1	-1	2	-1	1	-1	-1	7	1	1	1	6	1
4900-72	4	-1	-1	3	-1	1	-1	-1	6	3 1	1	1	1	1
4900-73	4	-1	1	2	-1	1	-1	-1	5	1	1	1	4	1
4900-74	3	-1		2	-1		-1	-1	6		1	1	6	1
4900-75	4	-1	1		<u> </u>		-1	-1			1	1	7	1
4900-76	3	-1	1	2			-1	-1	6		1	1	5	1
4900-76-R	3	-1		3			-1	-1	6		1	1	5	1
4900-77	3	-1 -1		2			-1	-1			2	1	5	1
5000-77 5000-76	ა ი	-1 -1	_	2			-1	-1	6				ن د	
5000-76	4	-1					-1	1	5		1	1	4	1
5000-74	4	-1		-	1		-1	-1	6		1	1	5	1
5000-73	4	-1		3			-1	-1			1	1	5	1
5000-72	4	-1	-1	2	-1	1	-1	-1			1	1	6	1
5000-71	5	-1	-1	3	-1	1	-1	-1	7	1	1	1	6	1
5000-70	3	-1		2			-1	-1	5	-1	-1	1	5	-1
5000-69	3	-1					-1	-1	5		1	1	5	1
5000-68	3	-1		3			-1	-1	6		1	1	5	1
5000-67	3	-1			-		-1	-1			-1	1	3	-1
5000-66	3	-1		2			-1	1	6		-1	1 1	6	1
5000-65	4	-1	1	3			1	1	6		2	1	5	1
5000-64 5000-64-R	4	-1 -1	· · · · · · · · · · · · · · · · · · ·	3			1	1	6		-1	1 2		-1 -1
5000-64-R 5000-63	5.	-1 -1		5					6		1 1	2	0	ر 1
5000-63	3	-1		2			-1	-1	5		1	1	0	4
5000-62	4			2			1	-1			1	1	4	1
5100-75	4	-1		3			-1	-1			1	1	4	1
5100-74	4	-1		Ĭ	-1		-1	-1	5		1	1	1	1
5100-73	4	-1		2			-1	-1	6		1	1	5	1
5100-72	3	-1	-1	2	-1	1	-1	-1	6	1	1	1	5	1
5100-71	3	-1		3			-1	-1	6	1	1	1	5	1
5100-70	3	-1	-1	1	-1	1	-1	-1	7	1	1	1	4	1

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

Activation Laboratories Ltd.
Date: November 23, 2011
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	085 - LPH	086 - LBI	087 - MAR	088 - HBA	089 - THI	090 - HPB	091 - LBI	092 - LPH	093 - LA	094 - LBI	095 - MAR	096 - LPH	097 - HBA	098 - THI
5100-69	5	-1	1	4	-1	1	-1	-1	7	1	-1	1	6	1
5100-68	4	-1	2	3	-1	2	1	1	8	1	1	2	7	2
5100-67	3	-1	4	2	-1	3	1	1	7	1	1	2	4	3
5100-66	5	-1	-1	4	-1	1	1	-1	7	1	1	1	6	1
5100-65	5	-1	1	3	-1	1	-1	-1	8	1	-1	1	7	1
5100-64	4	-1	1	3	-1	1	-1	-1	5	1	1	1	4	1
5100-64-R	4	-1	-1	3		1	-1	-1	4	1	1	1	3	1
5100-63	4	-1		4	• • • • • • • • • • • • • • • • • • • •	1		-1	•••••••••••••••••••••••••••••••••••••••	1	1	1	5	1
5100-62	8	-1		6	•	2		1	13	1	-1	2	9	1
5100-61	6			4		1	1	1	7	1	1	1	6	1
5200-77	5	-1		3		1	-1	1	8	1	1	1	6	-1
5200-76	5	-1	• • • • • • • • • • • • • • • • • • • •	3		1		1	7	1	1	2	5	1
5200-75	6	-1		4	-1	1	'	1	7	1	1	2	5	1
5200-74	7	-1		6		1	1	1	13	1	1	2	9	1
5200-73	3	-1		3		1		1	6	1	1	1	1	-1
5200-72	5	-1		3		1	-1	1	9	1	1	1	6	1
5300-76	5	-1	·	4		1	-1	1	6	1	-1	1	2	1
5300-77	3		• • • • • • • • • • • • • • • • • • • •	2		1	<u></u>	-1 -1		-1	1	1	3	-1
5400-77	4	-1 -1	-1	3	<u> </u>	1	-1	-1	/	1	1	1	5	-1
5400-76 5500-76	5 5	-1 -1		3 5		1	7.1	1	/	-1	1	1	5	1
5500-76 5500-77	5 5	-1 -1	·	3	•	1		l l	9	1		2	, 8	I
3500-77	3	-1	1	3	-1	1		1	9		-1		0	1.
LMB-QA	6	-1	1	3	-1	1	-1	-1	7	1	1	1	6	4
LMB-QA	7	-1		6		1		1	15	1	1	1	15	2
LMB-QA	3		_	1	<u> </u>	4	-1			4	1	1	3	
LMB-QA	3	-1		2		1	-1	-1	· · · · · · · · · · · · · · · · · · ·	1	1	1	3	1
LMB-QA	3	-1		2		1		-1	4	-1	-1	<u> </u>	4	-1
LMB-QA	3	-1		2		1	-1	-1	4	-1	-1	1	3	-1
LMB-QA	2	-1	· · · · · · · · · · · · · · · · · · ·	1	-1	-1	-1	-1		-1	-1	-1	1	-1
LMB-QA	3	-1	-1	3		1	-1	-1	4	-1	1	1	-1	1
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SOIL GAS HYDROCARBONS (SGH) by GC/MS CUNNINGHAM PROJECT SITE

Activation Laboratories Ltd.
Date: November 23, 2011
R=Replicate Sample

	099 - LPH	100 - LPH	101 - MAR	102 - MBI	103 - LPH	104 - MAR	105 - ALK	106 - MBI	107 - MBI	108 - LPH	109 - MAR	110 - HBA	111 - MAR	112 - MBI
3900-77	1	1	-1		1		3	-1						4
3900-76	1	1	-1	1	1	1	4	-1	1	4	5	17	3	3
3900-75	1	1	-1	1	1	1	5	1	-1	4	6	24	3	4
3900-74	1	1	-1		1	1	5	2	2		7	33		6
3900-73	2	1	-1			2	8	3	2			١٥		5
3900-73-R	1	2	-1			1	7	2	2			• • • • • • • • • • • • • • • • • • • •	3	8
3900-72	1	1	-1		1	1	6	1	2				3	5
3900-71 3900-70	1	1	-1		1	1	7	2	2		**************************************	34		5
3900-70	। श	2	-1 -1		8		5	∠	2		-	29 24) /
3900-68	1	1	-1	1	1	101	6	2	2			30		6
3900-67	1	1	-1	1	1	1	4	1	1		5			4
3900-66	1	1	-1		1	1	3	-1	1	4	5	12		4
3900-65	1	2	-1	1	1	1	5	1	2	2 4	5	22	3	4
3900-64	1	1	-1		1	1	3	-1	1	4	6	10		4
3900-63	1	1	-1	1	1	2	4	1	2		6	· · · · · · · · · · · · · · · · · · ·		6
3900-62	1	1	-1	1	1 1	1	4	1	2		5	18		5
3900-61	1	1	-1		1	1	5	_1 _1	2	2 4	_			5
3900-60 3900-59	1	1	-1 -1		1	1 2	3 5	-1	1 5	-	5	13 24		4
3900-59	1	1	-1 -1		1	1	3 3	-1		•				9 5
3900-58-R	1	1	-1		1	1	3	-1	1	4		12		5
3900-57	1	1	-1		1	1	3	1	1	4	6			4
4000-78	1	1	-1		1	1	4	1	2	2 4	5			8
4000-77	1	1	-1	1	1	1	4	1	1	4	5	19	3	4
4000-76	1	1	-1		1	1	2	-1	1	3	5	13		3
4000-75	2	2	-1		1	2		1	-1					15
4000-74	1	2	-1		2	7	4	1	1	5		15		5
4000-73 4000-72	1	1	-1 -1		1	2	7	1	2		V	19 18		5
4000-72	1	2	-1		1	1	4	1	2					7
4000-70	1	1	-1		1	1	3	1	2					5
4000-69	1	2	-1		1	1	5	1	2	4	6			9
4000-68	1	2	-1	1	1	1	2	-1	1	4	5	12	3	5
4000-67	1	1	-1		1	1	3	1	2	2 4	6	10		5
4000-66	1	1	-1	1	1	2		-1	1					4
4000-65	1	1	-1	1	1	1	2	-1	1		, ,	10		6
4000-65-R 4000-64	1	2	-1 -1		1	1 1	3	1	2	• • • • • • • • • • • • • • • • • • • •		17 16		8
4000-64	1		- 1 -1	1	1	1 4	ა ა			: -I : 3) 5	11) /
4000-62	1	1	-1	1	1	1	2	-1	1	·	5	13		6
4000-61	1	1	-1		i	2		1	2	. 4	5			8
4000-60	1	1	-1	1	1	1	2	-1	1		5	8		4
4000-59	1	1	-1	1	1	2	3	-1	1	4	5	16	3	5
4000-58	1	1	-1	1	1	1	2	-1	1	4	5			6
4000-57	1	1	-1	1	1	1	2	-1	1	3	5	13		4
4100-57	1	1	-1		1	1	2	-1	1		5	8		3
4100-58	2	2	-1		1 1	2	3	1	1	3	4	13		5
4100-59 4100-60	2	2	-1 -1	2	1 1	2	5 6	2	2			38 43		8
4100-60	∠	ک 2	-1 -1		1 1	2	9	∠ -1		4	5	43		10
4100-61	2	2	-1	2	1	2	4	-1	2		6			8
4100-63	2	2	-1	1	1	2		1	2		5	20		12
4100-63-R	2	2	-1		1	1	4	1	2	2 4	5			15

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

Activation Laboratories Ltd.
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	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
4100-64	2	2			1		3		1					5
4100-65	1	1	-1		i									8
4100-66	2	2	-1		1	2			2			33		8
4100-67	1	1	-1		1			1	1		5			5
4100-68	2	2			1			1	1	4	5			8
4100-69	1	1	-1	1	1	1	4	1	2	2 4	5	21	3	9
4100-70	1	1	-1	1	1	1	4	1	2	2 4	5			5
4100-71	1	2	-1	1	1	1	4	1	2	2 4	5	20	3	6
4100-72	1	1	-1	1	1	1	4	1	2	2 4	5	19	3	4
4100-74	1	1			1	1	4	2	2	2 4	5			5
4100-75	1	2		1	1	2		1	2					9
4100-76	2	2	-1	1	1	2		3	. 2		6	35		8
4100-77	1	1			1	_		1			<u> </u>			6
4100-78	1	2	-1	1	1	2		2	2		•	20		6
4200-78	1	2	-1	1	1 1	2		1 1	2		<u> </u>	18		5
4200-78-R 4200-77	1	2	-1 -1		1	3		-1	2	2 4		18 14		5
4200-77		2	-1 -1		1 4	2		-ı 3				36		7
4200-75	1	2	-1		1	1		1	2		· · · · · · · · · · · · · · · · · · ·	18		7
4200-74	1	1	-1		i i	1	2	-1	2			9	1	5
4200-71	1	2	-1		1	2	4	1	2		5	18		4
4200-70	1	1	-1		1	1	4	1	2	2 4	5			5
4200-69	1	2	-1	1	1	1	5	2	2	2 4	5	26	3	5
4200-68	2	2	-1	1	1	1	6	3	2	2 4	6	35	4	7
4200-67	2	2	-1	2	2	3	7	3	-1	4	6	35	4	12
4200-66	1	1	-1	1	1	1	3	1	1	4	4	17	2	6
4200-65	2	2			1			5				54		
4200-64	2	2	-1		1	2	4	2	-1		6			12
4200-63	2	2	-1		1	2		2	2			23 11		10
4200-62 4200-61	1	1	-1 -1		1	1	2	-1	1 2					0
4200-61 4200-61-R	1	2			1))	ა ა	1		<u> </u>	9	16 17		7
4200-61-1	2	2	-1		1		3	1	1			11		9
4200-59	1		-1		1	2		1		4		14		7
4200-58	2	2	-1		1	2		1	1	4	5	13		. 8
4200-57	1	1	-1		1	1	2	-1	1	4	4	11		5
4300-57	2	2	-1	1	1	2	2	-1	1	4	4	11	3	6
4300-58	1	1	-1	1	1	1	3	1	2	2 4	4	17	3	4
4300-59	2	2		1	1	2	4	2	2	2 4	5	23		7
4300-60	1	1	-1	1	1	1	2	1	_ 1	4	***************************************	10		4
4300-61	1	1			1	1	2	-1	1			9	_	5
4300-62	1	1	-1	1	1 1	1 1	2	-1	1	3		10		7
4300-63	1	1	-1 -1	1 1	1	-1		-1 -1	1	· · · · · · · · · · · · · · · · · · ·		11 11		/
4300-64 4300-65	1	1 2	-1 -1		1 4	-1		-1 -1				11		<i>f</i>
4300-65	ا د	2	-1 -1		1 4	2		-1	2			15		7
4300-67	1	1	-1		1	2		2				35		5
4300-67-R	1	1	-1		1							27	5	5
4300-68	1	1	-1		1	2		1	2		5	16	3	4
4300-69	1	-1			1	2		1	1	4	5			4
4300-70	2	2	-1	1	1	2	3	-1	1	4	5	15	2	8
4300-71	2	2	-1	1	2	2	5	2	2	2 4	6	28	3	8
4300-72	2	2	-1		1	3	4	1	2	2 5	5	-		7
4300-73	1	1	-1	1	1	1	3	1	1	4	4	17	3	4

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

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	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
4300-74	2	2	-1	1	1	2	3	2	2	. 4	. 5	24	3	6
4300-75	1	1	-1	1	1	2	4	2	2	. 4	5			4
4300-76	1	1	-1	1	1	1	3	1	2	2 4	. 5	21	3	5
4400-57	2	2	-1		1	2	4	3	2	. 4	6		3	8
4400-58	2	2	-1		1	2		2	2				3	6
4400-59	2	2	-1		1			2				20		8
4400-60	2	2	-1		1	_		2						14
4400-61	2	2	-1		1	3		3	2			43		9
4400-62	1	1	-1 -1		1	2		-1	ļ	·		9	 	6
4400-62-R 4400-63	1	2	-1		1	2		-1 2	1 2			9 31		0
4400-64	2	2	-1 -1		1	2	•	2			J			9
4400-65	2	2	-1		1	2		1	2		· · · · · · · · · · · · · · · · · · ·			8
4400-66	2	2	-1		1	2		2	-1		6			8
4400-67	2	2	-1	1	1	2	5	2	2	4	. 5			11
4400-68	2	2	-1		1	2		2	2	2 4	6			7
4400-69	1	1	-1		1	1	4	2	2	2 4	. 5	29	4	4
4400-70	1	2	-1		1	1	2	-1	<u> </u>					6
4400-71	1	1	-1		1	1	2	-1	1	3		10		3
4400-72	1	2	-1		1	1 1	3	1	2	4		16		5
4400-73	3	-1	-1		2							35		9
4400-74	2	2	-1		1	2		1	2		•	22		11
4400-75 4400-76		2	-1 -1		1	2	ე ა 3		1	3		16 12) J
4400-70	1	1	-1	1	1	2		-1	1			9		Ι Δ
4400-77-R	1	1		1	1	.						10		3
4300-77	2	2	-1		1	3		-1	2	· · · · · · · · · · · · · · · · · · ·				5
4300-78	2	2	-1		2	7	4	1	2	-1	4	14		8
4500-57	1	2	-1	1	1	2	2	-1	1	4	. 5	8	2	5
4500-58	2	2	-1		1	4	3	-1	2	! 4	- 5	12	2	13
4500-59	1	1	-1		1	1	2	-1	1			8	_	8
4500-60	1	1	-1		1	1	2	-1			·······	11	·	11
4500-61	2	2	-1		1	3	2	-1		4		8	2	12
4500-62 4500-63	1	1	-1 -1		1	1	1 2	-1		3		12	2	12 21
4500-63	-1	 	-1 -1		1	·	2	-1 -1		4		9		7
4500-65	-1	1	-1		1 1	1	1	-1				9		5
4500-66	1	1	-1		1	1	2	-1	ļ	4	,	9		9
4500-67	1	1	-1		1	1	2	-1	1	3	4	9		10
4500-68	1	1	-1		1	1	2	-1	1	4	4	10	2	7
4500-68-R	-1	1	-1		1	1	1	-1	1	3	4	9	2	6
4500-69	1	1	-1		1	1	1	-1	1	<u> </u>		8		5
4500-70	1	1	-1		1	1	1	-1	1			8	2	6
4500-71	1	-1	-1		1	1	1	-1	1	4		7	2	5
4500-72	1	1	-1		1	1	1	-1				V	_	6
4500-73	1	1	-1		1	1	2	-1 -1		4				12
4500-74 4500-75	1	1	-1 -1		1	1	2	-1 -1		4	J	11 c		9
4500-75 4500-76	1	1	-1 -1		1	1		-1 -1					-	5
4500-76	9	ا ر	-1 -1		2			-1 -1	2			8		13
4600-56	1	1	-1		1	1	2	-1	· · · · · · · · · · · · · · · · · · ·	•		·		42
4600-57	1	1	-1		1	1	2	-1	1	4	5			8
4600-58	1	1	-1	1	1	1	1	-1	1			8		5
4600-59	-1	1		-1	1	1	1	-1	1	4	5	7	2	4
		<u> </u>		<u> </u>	<u> </u>	•	F		<u> </u>		·····	**************************************		<u> </u>

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

Activation Laboratories Ltd.
Date: November 23, 2011
R=Replicate Sample

	099 - LPH	100 - LPH	101 - MAR	102 - MBI	103 - LPH	104 - MAR	105 - ALK	106 - MBI	107 - MBI	108 - LPH	109 - MAR	110 - HBA	111 - MAR	112 - MBI
4600-60	1	1	-1	1	1	1	1	-1	1	4	. 4	10	3	4
4600-61	1	1	-1	1	1	1	1	-1	1	3	4	7	2	4
4600-61-R	1	1	-1	1	1	1	1	-1	1	4	5	8	2	3
4600-62	1	2	-1		1		2	-1	1	4		9	2	9
4600-63	1	2	-1		1	2	2	-1	1	7	Ŭ	10	2	4
4600-64	1	1	-1		1		2	-1	1	•		9	2	10
4600-65	1	1	-1		1	1	2	-1	1	4	<u>'</u>	8	3	6
4600-66 4600-67	1	1	-1 -1		1	1 1	2	-1	1	4	***************************************	11		5
4600-68	1	1	-1 -1		1	1	ا د	-1 -1	- 1	4	4	6 15		23
4600-69	1	1	-1		1	1	1	-1	1	4	. 4	7	2	3
4600-70	-1	1	-1		<u> </u>	1	1	-1	1	4	4	7	2	5
4600-71	1	1	-1		1	1	2	-1	1	-1	4	9	2	9
4600-72	1	1	-1	1	1	1	2	-1	1	4	5	9	2	5
4600-73	2	1	-1		1	2	3	-1	1	5	6	16	3	35
4600-74	1	1	-1		1		2	-1	1	3	***************************************	9	2	11
4600-75	1	1	-1		1	'	2	-1	1	3	•	8	2	9
4600-76	-1	1	-1 -1		1	1 1	1	-1 -1	1			7	2	8
4600-76-R 4600-77	1	1 4	-1 -1		1	1	1	-1 -1	1		· .	8	_	8
4600-77	1	1	-1 -1		1	1	2	-1 -1	1	7	<u> </u>	8		7
4700-57	. 2	1	-1	1	i	2	3	1		·	<u> </u>	17	3	16
4700-58	1	1	-1	1	1	1	2	-1	2	4	. 5	11	2	8
4700-59	2	1	-1		1	2	3	-1	1	4	5	13	2	12
4700-60	1	1	-1	1	1	1	2	-1	1	4	-1	10	2	7
4700-61	1	1	• • • • • • • • • • • • • • • • • • • •		1	·	2	-1	1	4	5	10	2	6
4700-62	1	2	-1		1	2	2	-1	1	4	9	12		15
4700-63	1	1	-1		1	1	2	-1	1	4	· · · · · · · · · · · · · · · · · · ·	12	2	16
4700-64 4700-65	-1	1	-1 -1		1	1	1 2	-1 -1	1	4	<u> </u>	7 12	2	4
4700-66	1	1	-1		1	1	2	-1	1			11	2	5
4700-67	2	1	-1		1	1	2	-1	1	4		10	2	8
4700-68	1	1	-1		1	1	2	-1	1	4	. 4	10		12
4700-69	1	1	-1	1	1	1	2	-1	1	4	4	9	2	10
4700-69-R	1	1	-1	1	1	1	1	-1	1	3	4	8	2	8
4700-70	2	2	-1		1	2	2	-1	1	4	4	9		8
4700-71	1	2	-1		1	1	2	-1	1			12		8
4700-72	1	1	-1		1	1	1	-1	1		***************************************	8	· · · · · · · · · · · · · · · · · · ·	7
4700-73 4700-74	1	1	-1 -1		1	1	2	-1 -1	1 4	3		9 10	2	5
4700-74 4700-75	1	1	-1 -1		1 1	1	2	-1 -1	1		***************************************	ານ 11	2	8
4700-75	2))	-1 -1		1		2	-1	1	4		13		7
4700-77	1	1	-1			1	1	-1	1			6		3
4800-57	1	1	-1		1	1	2	-1	1	4	4	13		7
4800-58	1	2	-1	1	1	1	2	-1	1	3	4	12	2	14
4800-59	-1	1	-1		1	1	1	-1	1	3		7	2	4
4800-60	1	1	-1		1		2	-1	1			8		5
4800-61	1	1	-1		1		2	-1	1		• • • • • • • • • • • • • • • • • • • •	9	2	5
4800-62	1	1	-1		1	_		-1	1	Ŭ		7	2	7
4800-63 4800-63-R	1	2	-1 -1		1 1	2	2	-1 -1	1	4		9		5
4800-63-R 4800-64			-1 -1		1		2	-1 -1	1	<u> </u>	-	10		7
4800-65	1	1	-1		1	2	2	-1	1	4	*	10	2	10
4800-66	1	1	-1		1 1	2	1	-1	1	4	ŭ	6		3
.000 00	and the second s	<u> </u>	<u> </u>	(4		<u> </u>			1	4	<u> </u>	41	٠,

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

Activation Laboratories Ltd.
Date: November 23, 2011
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	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
4800-67	2	2			1				1	1				8
4800-68	1	2	-1		i				1					8
4800-69	2	2	-1		1	2		1	1			11		7
4800-70	2	2	-1		1			1	2	4	5			7
4800-71	1	1	-1		1			-1	1		5			3
4800-72	2	2	-1	1	1	2	3	1	2	4	6	21	3	24
4800-73	1	1	-1	1	1	1	1	-1	1	3	4	7		4
4800-74	1	2	-1	1	1	2	2	-1	1	4	4	12	3	10
4800-75	1	1	-1	1	1	1	1	-1	1	4	4	8	2	5
4800-76	1	1			1	1	2	-1	1	4	4	8	3	4
4800-77	1	1	-1	1	1	1	1	-1	1		5	9		4
4900-61	1	1	-1	1	1	1	2	-1	1	4	5	10		13
4900-61-R	1	1			1	1	2	-1	1			9		12
4900-62	1	1	-1	1	1	1 1	2	-1	1	4	······································	11		14
4900-63	2	2	-1	1	1 1	3		1	-1 1		6	.0		21
4900-64 4900-65	2	2	-1 -1		1	2	2	-1 -1	1	4	5 5	10 10		11 14
4900-65	<u> </u>	1 4	-1 -1		1 1	1 1	<u></u>	-1 -1] 	3) A	10	2	11
4900-67	1	1	-1		1	1	2	-1	1	Ψ	4	9	2	12
4900-68	· · · · · · · · · · · · · · · · · · ·	· · · · · · · · · · · · · · · · · · ·	-1			1 4	1		1	3	4	8		12
4900-69	1	1	-1		1	1	1	-1	1	4	4	7		6
4900-70	1	1	-1		1	1	1	-1	1	4	4	8	2	8
4900-71	-1	1	-1	-1	1	1	1	-1	1	4	4	8	2	5
4900-72	1	1	-1	-1	1	-1	1	-1	1	3	4	7	2	7
4900-73	1	1	-1	1	1	1	1	-1	1	4	4	7	2	5
4900-74	1	1	-1	1	1	1	1	-1	1	3	4	6	2	6
4900-75	1	1			1	1	2	-1	1	3	4	8		9
4900-76	1	1	-1		1	1	1	-1	1	4	4	6		10
4900-76-R	1	1	-1		1	1	1	-1	1	3	4	6		9
4900-77	1	1	-1					-1 -1	1		4	7		5
5000-77 5000-76		2	-1 -1		2	4		-1 -1	2	4	4	8		р
5000-76	-1	1	-1 -1		1	1	1	-1	1		4	7	2	3
5000-73	1 1	1	-1 -1		-1	<u> </u>	1		1	3	4	7	2	7
5000-73	1	1	-1		1	1	1	-1	1	4	4	9	2	9
5000-72	1	1	-1		1	1	1	-1	1	3	4	7	- 2	7
5000-71	1	1	-1		1	1	1	-1	1	3	4	. 8	· · · · · · · · · · · · · · · · · · ·	10
5000-70	1	1	-1		-1	1	1	-1	1	3	4	6	2	5
5000-69	1	1	-1	1	1	1	1	-1	1	4	4	6	2	9
5000-68	1	1	-1	1	1	1	1	-1	1	4	4	8	2	11
5000-67	-1	1			1	1	1	-1	1	Ŭ		6		5
5000-66	1	1	-1		1	1	1	-1	1	4	4	9	2	11
5000-65	1	1	-1	-1		1 1	1	-1	1	·	4	7	2	5
5000-64	1	2	• • • • • • • • • • • • • • • • • • • •		1			-1	1			7	2	4
5000-64-R	1	2	-1		1 1	2	2	-1 -1	1	4	·	9	2	4
5000-63 5000-62	2	2	-1 -1		1	1	2	-1 -1	1	3		9		- /
5000-62	<u> </u>	<u> </u>	-1 -1				 	-1 -1		3		7	2	/ 5
5100-75	1	1	-1			1	1	-) -1	**		* * * * * * * * * * * * * * * * * * * *	6	2	5
5100-73	1	1	-1		 	1 1	1	-1	1	4	·	8		
5100-73	1	1	-1		1	1	1	-1	1	4		8		7
5100-72	1	1	-1		1	i	1	-1	1	3	4	7		3
5100-71	1	1	-1		1	1	1	-1	1	3	4	8	2	8
5100-70	1	1	-1		1	1	1	-1	1	4	4	9		9
		r			1	T	F		F		F		T	· · · · · · · · · · · · · · · · · · ·

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

Activation Laboratories Ltd.
Date: November 23, 2011
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	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
5100-69	1	1	-1	1	1	1	1	-1	1	3	4	. 8	2	9
5100-68	2	2	-1	1	1	2	2	-1	1	4	4		2	8
5100-67	2	2	-1	1	2	3	2	-1	2	2 4	5	7	2	5
5100-66	1	2	-1	1	1	1	1	-1	1	3	4		2	6
5100-65	1	1	-1	1	1	2	2	-1	1	4	4	. 8	2	9
5100-64	1	1	-1	1	1	1	1	-1	1	3	4	7	2	7
5100-64-R	1	1	-1	1	1	1	1	-1	1	4	4		2	8
5100-63	1	1	-1	1	1	1	1	-1	1	4	5	. 8		8
5100-62	1	2	-1	1	1	2	2	-1	1	4	5	15		10
5100-61	1	1	-1	1	1	1	2	-1	1	3	4	10		14
5200-77	1	1	-1	1	1	1	2	-1	1	3	5	10		14
5200-76	-1	2	-1	1	1	3	2	-1	1	5	5	9		14
5200-75	1	1	-1	1	1	1	2	-1	1	4	5	8		10
5200-74	1	2	-1	1	1	2	2	-1	1	4	5	13		17
5200-73	1	1	-1	1	1	1	1	-1	1	4	5	7		5
5200-72	1	1	-1	1	1	1	2	-1	1	4	4	10		9
5300-76	1	1	-1	1	1	1	1	-1	1	4	5	8		11
5300-77	1	1	-1	-1	1	1	1	-1	1	3	4	7		4
5400-77	1	1	-1	1	1	1	2	-1	1	4	5	11		10
5400-76	1	1	-1	1	1	1 1	1	-1	1	4	4	g		7
5500-76	1	1	-1	1	1	1	1	-1	1	3	5	9		8
5500-77	1	2	-1	1	1	2	2	-1	1	4	5	ę ę	2	6
	_									_				
LMB-QA	1	1	-1	1	1	1	3	-1	1	4	6	14		3
LMB-QA	1	2	-1	1	1	1	3	-1	1	4	5	15	2	5
LMB-QA	-1	1	-1	1	1	1 1	1	-1	1	4	4	. /		3
LMB-QA	1	1	-1	1	1	1	1	-1		4	5	/		3
LMB-QA	-1 -1	1	-1	1	1	1 1	1	-1	1	3	4	Ę g		3
LMB-QA	·	1	-1	-1	-1	1	1	-1	1	3	4	. /		3
LMB-QA	-1	1	-1		-1	1	-1	-1	1	3	3	6		3
LMB-QA	-1	1	-1	-1	1	1	-1	-1	1	4	4	·	2	3
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SOIL GAS HYDROCARBONS (SGH) by GC/MS CUNNINGHAM PROJECT SITE

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	113 -HBA	114 - MBI	115 - MBI	116 - MAR	117 - HA	118 - MPH	119 - HBA	120 - THI	121 - MPH	122 - MPH	123 - MPH	124 - MBI	125 - HAR	126 - MPH
3900-77	14	3	4	3	26	3	18	3		8	3	4	4	4
3900-76	15	3	4	3	35	4	24	3	3	9	3	-1	4	3
3900-75	20	3	4	3	36	4	26	3	4	. 9	4	4	4	4
3900-74	26	4	4	3	83	4	64	3	4	11	4	5	4	4
3900-73	31	4	5	3	94	4	67	3	4	12	4	-1	4	4
3900-73-R	32	5	5	3	119	4	104	3	4	11	3	5	4	4
3900-72	25	4	4	3	59	4	45	3	4	11	4	5	4	4
3900-71	24	4	5	3	75	4	53	3	4		3	-1	4	3
3900-70	25	4	5		73	3	54	3	·	10		5		3
3900-69	17	4	4	3	34	4	27	3		10	3	5		3
3900-68	25	4	5	3	78	4	64	3	4		4	5		3
3900-67	14	3	4		36	3	24	3				-1		4
3900-66	11	4	4	3	26	3	22	3	4	·	· · · · · · · · · · · · · · · · · · ·	4	4	4
3900-65	19	3	4	3	49	4	31	3	3	10		4	4	4
3900-64 3900-63	12 21	<u>3</u>	3	3	34 100	3 4	25 83	3	, , , , , , , , , , , , , , , , , , ,		· ·	4		4
3900-63	14	4	4	2	38	4	83 31	ું વ	4	. 10		4	4	4
3900-62	19	4	4	_	45	-1	37	3	3				i 4	4
3900-60	12	3	4	3	25	3	21	3				4		4
3900-59	21	4	5	3	64	5	46	3	5	10	-1	5	4	4
3900-58	14	4	4	3	70	3	66	3	3	9	3	4	4	3
3900-58-R	12	3	4	3	45	3	40	3	3	8	4	4	4	4
3900-57	15	3	4	3	41	3	33	3	3	8	3	4	4	3
4000-78	22	5	5	3	196	4	159	3	4	9	4	5	4	4
4000-77	15	3	4	3	28	3	21	3	3	8	-	4		4
4000-76	13	3	3	3	34	3	25	3	3	9	· · · · · · · · · · · · · · · · · · ·	-1		4
4000-75	22	6	6	3	153	4	126	3				5		4
4000-74	12	4	4	3	23	4	17	3	4	······································	· · · · · · · · · · · · · · · · · · ·	5		4
4000-73 4000-72	16 17	4	5 5	Ŭ	51 60	4	32 42	3				-1 5		4
4000-72	17	4	5		52	3	38	3				5		4
4000-71	15	4	4	3	50	4	28	3	·	8		_1		4
4000-69	20	5	5	3	75	4	59	3				5		4
4000-68	14	4	4		37	4	25	3	3			4		4
4000-67	14	4	4	3	39	3	26	3	3	8	3	4	4	3
4000-66	15	3	4	3	33	3	22	3	3	8	3	4	4	4
4000-65	12	4	4	3	32	3	24	3	3	8	3	4	4	3
4000-65-R	14	4	4	3	61	3	48	3	4	8	3	-1	-1	4
4000-64	13	4	4	3	37	3	23	3		•	3	4	4	4
4000-63	11	3	4	3	26	3	18	3			3	4	4	3
4000-62	11	4	4	3	43	4	26	3			-1	4		4
4000-61	11	4	4		24	3	18	3			3	5	4	4
4000-60 4000-59	9 13	3	3	2	22	3	17 25	3	4		3	4	4	3
4000-59	13 12	4	4	3	33 33	3 4	25 23	3		· · · · · · · · · · · · · · · · · · ·	4 2			4
4000-58	11	4	4		30	3	23 28	ა ი	4	7	3	4	-1	3
4100-57	8	3	4		114	3	14	3	3	7	?	4		ব
4100-58	11	4	4	3	24	4	18	3			3	-1		4
4100-59	28	5	5	3	65	4	53	3			4	5	4	4
4100-60	27	5				4	71	3	4	. 8	4	5	-	3
4100-61	10	4	4	3	24	4	19	3	4	7	3	4	4	4
4100-62	30	4	5	4	116	5	101	3	4	8	-1	5	6	4
4100-63	17	5	5	3	83	4	78	3	4	. 8	4	4	4	4
4100-63-R	18	5	5	3	119	4	104	3	4	8	4	4	4	4

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

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R=Replicate Sample

	113 -HBA	114 - MBI	115 - MBI	116 - MAR	117 - HA	118 - MPH	119 - HBA	120 - THI	121 - MPH	122 - MPH	123 - MPH	124 - MBI	125 - HAR	126 - MPH
4100-64	14	4	4	3	43	4	35	3	4	1 7	3	4	4	4
4100-65	14	5	4	3	103	3	98	3	3	3 7	4	Z	4	4
4100-66	26	4	5	3	68	4			4	1 8	-1	5	5 4	4
4100-67	12	4	4		29	4					3	4	5	4
4100-68	14	4	4	<u> </u>	69	4			4	·	3	4	·	4
4100-69	18	5	5		92	4			***************************************		•	5		4
4100-70	19	3	4		46	4		_	4	7		5		4
4100-71 4100-72	18 17	4	4		56 39	4			3	S /	-1	4	`	4
4100-72	20	4	4		56	4						-1		4
4100-74	17	5	5		57	4			9	rj	' 3	E	i -1	4
4100-76	29	4	5		85	4			4	1 8	4	5		4
4100-77	13	4	4	3	31	3	23		4		4	4		4
4100-78	15	4	5	3	42	4	27	3	. 4	7	4	5	5 4	4
4200-78	15	3	4	3	32	4	23	3	4	7	4	5	5 4	4
4200-78-R	14	4	4	•	31	4			4	1 6	3	4		3
4200-77	12	5	5		26	4				· · · · · · · · · · · · · · · · · · ·	-1	-1		4
4200-76	25	4	5		89	4					4	6		4
4200-75	14	4	4	O	46	4			4	7	3		II 4	4
4200-74 4200-71	9 14	3	4		16 31	3 4	15 24		4	l /	3	-1	4	3
4200-71	18	4	4		34	4				·		- I		4
4200-70	20	4	4		46	4			•		1 -1			4
4200-68	27	4	5		81	4					4	5	5	4
4200-67	26	6	6		68	5			5	5 8	4	6		4
4200-66	15	4	4	3	33	4			3	3 7	4	5	5 4	4
4200-65	33	5	5	4	95	5	62	3	5	8	-1	-1	5	4
4200-64	20	6	6	3	74	4			4	1 7	4	-1	4	4
4200-63	18	5	5		53	4			·	7	4	5		4
4200-62	11	4	4		22	4				3 7	1 4	-1	4	4
4200-61	14 15	5	5 5		33	3	28		•		•	5	5	4
4200-61-R 4200-60	15 10	5 5	5 5	3 3	33 21	4					· · · · · · · · · · · · · · · · · · ·	-1		4
4200-60	13	5	5	Ü	29	4			<u> </u>	1 6		- [A
4200-58	12	5	5		28	4						1		4
4200-57	10	3	4	3	23	4						4	4	4
4300-57	11	4	4	3	27	4		3	3	3 7	4	4	4	4
4300-58	15	3	4	3	37	4	26	3	4	l 6	3	Z	4	4
4300-59	17	4	4	Ü	53	4			'			5	5 4	4
4300-60	9	4	4		21	3	15		3		3	2	4	4
4300-61	8	3	3	3	18	3	12] 3	4	4	3
4300-62	9	4	4		26		21		3 -1				i 4 i 4	4
4300-63 4300-64	10	4 A	5	3	26 25	4			-1					4
4300-65	11	4	5		20	4						-1		4
4300-66	13	4	5		31	3								3
4300-67	27	4	5		52	4		3	4			5		4
4300-67-R	23	4	4		39	4		3	4	6	4	-1	4	4
4300-68	13	3	4	3	28	3	19	3	3	6	3	5	5 4	4
4300-69	12	4	4		28	4						-1		4
4300-70	14	4	4		46	4				· · · · · · · · · · · · · · · · · · ·		5		4
4300-71	21	4	5		59	5						-1	-1	4
4300-72	16	4	6		36	2						7	1 4	6
4300-73	14	3	4	3	27	4	19	3	4	l∐ 6	4	5) 4	4

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

Activation Laboratories Ltd.
Date: November 23, 2011
R=Replicate Sample

	113 -HBA	114 - MBI	115 - MBI	116 - MAR	117 - HA	118 - MPH	119 - HBA	120 - THI	121 - MPH	122 - MPH	123 - MPH	124 - MBI	125 - HAR	126 - MPH
4300-74	16	4	5	3	54	4	40	3	4	1 7	-1	4	4	4
4300-75	17	3	4	3	43	4	28	3	4	7	4		4	4
4300-76	16	4	4	3	59	4	44	3	4	. 6	4		5 4	4
4400-57	27	4	4	3	77	4	55	3	4	7	-1	-1	4	4
4400-58	17	4	4	3	42	4	27	3	4	7	-1	Ę	4	4
4400-59	18	4	4	3	47	4	34	3	4	1 7	3	Ę	5 -1	4
4400-60	21	6	6	3	81	4	82	3	4	1 7	4		5 4	4
4400-61	26	5	6	4	86	5	64	3	5		-1		5 5	4
4400-62	9	4	4	3	14	3	10				-	4		4
4400-62-R	10	4	4		15	3	11	3		,	4			-1
4400-63	21	5	5	3	67	4	53	3	4	'	4			4
4400-64	19	4	4	3	53	4	37	3	4		-1	ŧ		4
4400-65	15	4	5	3	34	4	29	3	4		4	. 4	•	4
4400-66 4400-67	22 20	5 5	5 5	• • • • • • • • • • • • • • • • • • • •	60 56	4	48 45	3 3			' -1		<u>`</u>	4
4400-67 4400-68	20	ა 4	5 5	ა 3	58	4	45	ა 3		· /				4
4400-69	22	4	5	• • • • • • • • • • • • • • • • • • • •	45	4	36	3		•				3
4400-70	10	4	4	3	25	4	19	3						4
4400-71	10	3	4	3	20	3	13	3	-1				4	3
4400-72	12	4	4	3	30	4	21	3	4	7	3		4	4
4400-73	22	5	5	3	59	5	45	3	4	. 7	-1		5 4	5
4400-74	17	5	5	3	46	4	43	3	2	7	-1	Ę	4	4
4400-75	13	4	4	2	33	4	28	3	4	l 6	3	-1	4	4
4400-76	11	4	4	3	25	3	22	3	3	3 6	3		4	4
4400-77	9	3	4	3	16	3	12	3	3	6		-1	4	4
4400-77-R	8	3	3	3	15	3	13		3	3 6	·		1 4	3
4300-77	10	5	 		17	4	13	3		· ~			5 4	3
4300-78	10 8	9	7	3	27	4	22	3					5	4
4500-57 4500-58	8 11	4 6	4 6	_	13 31	3 4	10 33	3 3		· · · · · ·	· · · ·	, 2 ,	i 4	4
4500-56	9	Δ	4	2	21	3	17	3	3				1 4	4
4500-59 4500-60	10		4	2	36	3	44		2	i 6			1 4	4 4
4500-61	8	6	5	3	12	3	8						5	4
4500-62	7	5	5	3	11	3	9		3	3 6		Ž		4
4500-63	11	8	6	3	56	3	68		3	7	3		5 4	4
4500-64	9	4	4	2	23	3	21	3	3	3 6	3	4	4	3
4500-65	7	3	3	2	19	-1	17	-1	3	6	3	. 4	4	3
4500-66	9	5	4	3	28	3	27	3	3	3 6			4	4
4500-67	10	5	5		37	3	28	3	3	· · · · · ·		. 4	4	4
4500-68	9	4	4	2	26	3	28	3	3	3 6	· · · · · · · · · · · · · · · · · · ·		1 4	4
4500-68-R	9	4	4	2	19	3	18					4	4	4
4500-69 4500-70	7	3	4	2	24	3	18	-1 2	3	3 6 3 6		4	4	3
4500-70 4500-71	9	4	4	3	22 13	3 3	18 10	3	3	ր 6) 3	4	+ 4 4	3
4500-71 4500-72	8	4	4	•••••••••••••••••••••••••••••••••••••••	22	ა 4	20	3	3	3 6	4 i -1		i 4	2
4500-72 4500-73	10	5	5	2	34	3	37	3		s 6			, 3 A	3
4500-73	10	5	4	2	39	4	50	3	3				4	3
4500-75	8	4	4	_	27	4	29	v			3		4	3
4500-76	8	4	4	3	11	3	9	3	3				4	4
4500-77	7	8	8	3	12	4	9	3	4	7	4		5	4
4600-56	16	12	8	3	147	4	178	3	4	7	-1	6	6 4	4
4600-57	7	4	4	2	24	3	22	3	3	3 6	3	Z	4	3
4600-58	7	3	4	3	13	3	11	3	3	6	3		4	4
4600-59	8	3	3	3	15	3	6	3	3	3 6	3		4	3

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

Activation Laboratories Ltd.
Date: November 23, 2011
R=Replicate Sample

	113 -HBA	114 - MBI	115 - MBI	116 - MAR	117 - HA	118 - MPH	119 - HBA	120 - THI	121 - MPH	122 - MPH	123 - MPH	124 - MBI	125 - HAR	126 - MPH
4600-60	8	3	3	3	18	3	16	3	3	8	3	-1	4	3
4600-61	8	3	4	3	14	3	11	3	3	3 7	3	Z	4	3
4600-61-R	9	3	3	3		3	10		3	7	-1	4	4	4
4600-62	9	5	5	- -		4	18				***************************************	Ę		4
4600-63	10	3	4			3	13		3	`	<u> </u>	5		4
4600-64	10	5	5	• · · · · · · · · · · · · · · · · · · ·	Ξ	4	24					5		4
4600-65	8	4	4			3	12		, i		3	4	4	3
4600-66 4600-67	10 6	4	3		-	3	23 5		4		4	4	i 4	4
4600-67	14		6			3	74		ļ				·	4
4600-69	7	3	4			3	11		9				1 3	4
4600-70	7	3	4	_		3	9		-1			4	4	4
4600-71	9	5	4	2		4	37		3			4	4	3
4600-72	9	3	4	2	16	3	11	3	3	3 6	3	3	3 4	3
4600-73	19	10	7	3	183	4	238	3	4	8	-1	5	5	4
4600-74	8	5	4		31	3	35		3	3 7	4	-1	4	3
4600-75	7	4	4	-		4	23			`	<u> </u>	-1		4
4600-76	7	5	5			4	18		3			4		3
4600-76-R	/	4	4	U	20	3	17		3	3 6	-	4	4	3
4600-77 4600-78	9	4	4	······································	18 15	3	14 10		3		· · · · · · · · · · · · · · · · · · ·	2	4	1 4 2
4700-78	18	6	6	-		3 4	138				 			J
4700-58	10	4	4			3	39			·	· · · · · · · · · · · · · · · · · · ·	5		4
4700-59	11	5	5			4	31				4	2		4
4700-60	10	4	4			3	45		3	3 6	4	4	4	4
4700-61	9	4	4	3		3	20		3	3 6	3	4	4	3
4700-62	12	6	6	3	46	4	47		4	7	4	5	5 4	4
4700-63	11	6	5	2		3	52	3	3	3 6	3		4	4
4700-64	7	3	4			-1	9	-	·	,	-	4		3
4700-65	11	3	4			3	21			3 6			4	3
4700-66	10	4	4			3	17			6			4	4
4700-67	10 9	4 6	4			4 3	14 36			•				3
4700-68 4700-69	9	5	4			3	19		·		-		।	J
4700-69-R	8	4	4			3	16						. 4	3
4700-70	9	4	5			4	17					5	4	4
4700-71	10	4	4			3	24		3			4	4	4
4700-72	7	4	4	2	15	4	1	3	4	6	3	2	4	3
4700-73	9	3	4	_		3	17		3	,		4	4	3
4700-74	9	4	4			3	32		3			4	4	3
4700-75	9	4	4	2		4	14		, , , , , , , , , , , , , , , , , , ,	,	-	4	4	3
4700-76	10	4	4	- -		4	14		3			4	4	4
4700-77	7	3	3			3	9		3	3 6 3 6		4	4	3
4800-57 4800-58	11 11	6	5	3	36 61	3 4	34 60		4			2	4	3
4800-58	7	<u>0</u>	3			3	10							4
4800-60	7	3	4			3	14		3	3 5				3
4800-61	9	3	3	U		3	12		3		_	-1	4	3
4800-62	8	4	4	- -		4	23		3	7	3	4	4	3
4800-63	8	4	4	3		4	13		4	l 6	3	5	5 4	4
4800-63-R	10	4	4	3	44	4	39	3	4	7	3	6	6 4	3
4800-64	7	4	4			3	8		3			4	4	3
4800-65	9	5	4			3	19					4	4	4
4800-66	6	3	3	2	10	3	7	3	3	3 6	i j 3	4	4	3

Results represent only the material tested. Actlabs is not liable for any claim/damage from use of this report in excess of the test cost. Unless requested A11-12846 samples are discarded in 90 days. This report is only to be reproduced in full. 52/72

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

Activation Laboratories Ltd.
Date: November 23, 2011
R=Replicate Sample

	113 -HBA	114 - MBI	115 - MBI	116 - MAR	117 - HA	118 - MPH	119 - HBA	120 - THI	121 - MPH	122 - MPH	123 - MPH	124 - MBI	125 - HAR	126 - MPH
4800-67	12	4	. 4		34	4	23	3		6	3	4	4	4
4800-68	11		. 4			4	25			6		4	4	4
4800-69	10	5	5	3	26	4	16		4	6	4	5	4	4
4800-70	12	4	4	3		4	34		4	7	4	4	4	4
4800-71	8	3	4	3		3	11			<u> </u>		4	-1	4
4800-72	21	8		3		4	175			9		• • • • • • • • • • • • • • • • • • • •	5	4
4800-73	8					3							4	
4800-74	10				· · · · · · · · · · · · · · · · · · ·	4	25			6			4	4
4800-75 4800-76	8 7					3	11 16			6			4	3
4800-76	8		***************************************			4	11			6			4	ુ ર
4900-61	9		· F			3	20		<u> </u>	7	4	4	4	4
4900-61-R	9		5	************************	+	3				6	4		4	4
4900-62	10			5 2	69	4	62			6		4	4	3
4900-63	17	7		3	79	5	64		5			6	5	4
4900-64	10		-			4	22		•				4	4
4900-65	10					4	39			6		4	4	4
4900-66	6			· · · · · · · · · · · · · · · · · · ·		3	12			6			4	3
4900-67	9					4	18			5			3	3
4900-68 4900-69	8 6				• • • • • • • • • • • • • • • • • • • •	3	33 11			6		4	3	1 4
4900-09	8			4		3	34			7			9	3
4900-71	8		~	******* =		3	21			6			4	3
4900-72	7		3	2		3	15		3	5		3	3	3
4900-73	6	3	3	2	•	3	11		3	6		4	3	3
4900-74	7	4	. 4	2	13	3	9	3	3	6	-1	4	4	3
4900-75	9		. 4	2		3	40	3	3			4	4	4
4900-76	6		4	·	12	3	8	3	3	6		4	3	3
4900-76-R	6		. 4	_		3	8			6			3	3
4900-77	7	4	3	· · · · · · · · · · · · · · · · · · ·		3	10			6		-1	4	3
5000-77 5000-76	7	4	4	1 2	19 23	3	14 16			6		-1 -1	4	4
5000-76	7	4		3 2		3	15			6			3	3
5000-74	6				24	3	17		3	6		4	4	3
5000-73	8		. 4	2		3	21		3	6		4	3	3
5000-72	8	4	. 4	2	26	3	19	3	3	6	-1	4	-1	3
5000-71	9	4	. 4	2	36	3	26	3	3	6	3	4	4	3
5000-70	5	3	3			3	9			5		4	3	3
5000-69	7	5				3	11						4	3
5000-68	8					3	3	3	· · · · · · · · · · · · · · · · · · ·	6			4	4
5000-67 5000-66	6 8			<u> </u>		3	10 19			6 7		4	4	3
5000-65	7	3 4				-1	19			6			4	4
5000-63	7	4			 	4				6			<u> </u>	4
5000-64-R	7	4	. 4			3	8			6			5	4
5000-63	9	4	4			4	24			6		4	4	4
5000-62	8		. 4	2		3	1			6		4	4	4
5000-61	8		4			3	13			6			4	3
5100-75	6		_			3	8			6		4	4	4
5100-74	7	4		· · · · · · · · · · · · · · · · · · ·		4	16			6			4	4
5100-73	8		. 4			3	14			6		3	4	4
5100-72 5100-71	6 8			<u> </u>		3	9 13			5 6		-1	-1	1 3
5100-71	8		4	3			14			5				3
3100-10	О	l	1	, ા	1 44	,	14	ე ა	<u>၂</u>	<u>.</u>	, s	1 4	1 4	<u>ı</u>

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 A11-12846 samples are discarded in 90 days. This report is only to be reproduced in full. 53/72

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

	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
5100-69	7	5	5	5 2	27	4	17	3	3	6	3	4	4	3
5100-68	9	4	4	3	20	3	12	3	3	6	4	-1	4	4
5100-67	7	5	5	3		4	7	3	4	7	4	6	6	4
5100-66	8	4	4	2	31	3	19	3	3	6	3	4	4	3
5100-65	9	4	4	3	38	3	22	3	3	6	3	4	4	3
5100-64	8	4	4	3	21	3	13	3	3	6	3	4	4	4
5100-64-R	7	4	4	2	. 17		10	3	3	7	3	4	4	4
5100-63	9		4	3	20	3	12	3	3	6	3	4	4	3
5100-62	12	7	7	3		4	54	3	4	8	4	5	5	4
5100-61	9	· · · · · · · · · · · · · · · · · · ·	5	i 3					3	7	4	4	4	4
5200-77	11		5	·			10		<u> </u>	7	3	5	4	4
5200-76	10			,				3		8	4	6	-1	4
5200-75	10		,	3	Ų,		15	3		7	4	5	4	4
5200-74	13									7	4	5	-1	4
5200-73	8		3	<u> </u>						6	4	4	4	4
5200-72	11		5	3						7	3	-1	4	4
5300-76	8		5	2	36		15	3	·	7	3	4	4	4
5300-77	7	3	3	3 2	13			· · · · · · · · · · · · · · · · · · ·		6	3	4	3	3
5400-77	10		4	3	35		14			7	3	4	4	4
5400-76	9		4	3						7.	3	4	4	4
5500-76	8		4	3		3		3		6	3	4	4	4
5500-77	8	4	4	1 2	21	4	11	3	3	6	3	4	4	4
LMD.OA		3					40		_		~		,	
LMB-QA	13		3	3 3	20					11	3	4	4	4
LMB-QA LMB-QA	12			- 2	29			3		/	3	4	4	4
LMB-QA	6 6)						1	3	4	4	4
LMB-QA	5 7	3	,	_	1					/	ა 3	4	3	3
LMB-QA	7	3		•				3		0	ა 3	4	4	3
LMB-QA	6	J		<u> </u>		4		· · · · · · · · · · · · · · · · · · ·	<u>~</u>	6	ა 3	3	4	3
LMB-QA	8			2		3	· · · · · · · · · · · · · · · · · · ·			6	<u>ა</u>	3		3
LIVIB-QA	8	3	3	2	16	3	/	3	3	б	3	4	4	3
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SOIL GAS HYDROCARBONS (SGH) by GC/MS CUNNINGHAM PROJECT SITE

Activation Laboratories Ltd.
Date: November 23, 2011
R=Replicate Sample

	127 - MPH	128 - MPH	129 - HAR	130 - HAR	131 - MPH	132 - ALK	133 - HAR	134 - HAR	135 - MPH	136 - MPH	137 - HBI	138 - HBI	139 - HPH	140 - HPH
3900-77	3	2	3	3	3	16			7			6		5
3900-76	3	2	3	4	4				8	3 7		6		6
3900-75	3	2	3	4	3	25	9	13	8	6	4	6	7	6
3900-74	3	3	3	4	4			16	7	7	5	6	7	6
3900-73	3	2	3	4	4	38	10	16	7	6	4	7	7	7
3900-73-R	3	2	3	4	4	33	10	16	٤	3 6	4	7	7	6
3900-72	3	3	3	4	4	30	9	15	7	6	5	6	7	6
3900-71	3	2	3	3	4	35		16	7	7	5		7	6
3900-70	3	3	3	4	4	32			8		4	6		6
3900-69	3	3	3	4	3				8		•	6	7	6
3900-68	3	2	3	4	3	32				6		1	6	6
3900-67	3	2	3	4	•	22		13 14	7			6		0
3900-66 3900-65	3	2	3	4	4				- 1	, 6		6		6
3900-63	ى د	2	3	4	3	19		13	7	7 6		6		6
3900-63	3	2	3	4	3				7		· ·	6	1	5
3900-62	3	2	3	4	4				7		***************************************	6		6
3900-61	3	2	3	4	4			14	7			7	`	6
3900-60	3	2	3	3	4			12	8	6	4	6	-1	6
3900-59	3	2	3	4	4	23	9	14	8	3	5	6	7	7
3900-58	3	2	3	4	3				7	6	4	5	1	6
3900-58-R	3	2	3	3	4				7	⁷ 6	4	6		5
3900-57	3	2	3	4	3	19		12	7	7	4	5		6
4000-78	3	2	3	4					8			7		6
4000-77	3	2	3	4	3	17			8	6	4	6		6
4000-76 4000-75	ა 3	2	3	3	3	17 25			8	3 7	1 5	6		, b
4000-73	ა ა	2	3	4	3	15			-	7 6	<u> </u>	(6
4000-73	3	2	3	3	4	22		12				6		6
4000-72	3	2	3	4	4						4	é		6
4000-71	3	2	3	4	3	20			7			6		6
4000-70	4	3	3	4	4	27	8	12	ξ	8	5	6	1	6
4000-69	3	2	3	4	4				8	6	4	6	-1	6
4000-68	3	2	3	4	3	18			7			6		6
4000-67	3	2	· · · · · · · · · · · · · · · · · · ·		3				8			6		6
4000-66	3	2	3	4	4	17			8			6	***************************************	6
4000-65	3	2	3	3	4	15			7		-	6		5
4000-65-R 4000-64	3	2	3	3	3 4				7			6		, b
4000-64	ა ა	2		4	3	14				· ·		6		6
4000-62	3	2	3	4	4			11	8			6		6
4000-61	3	2	3	4	4			12	7				1	5
4000-60	3	2	2	3	3	13			8		4	6		5
4000-59	3	2	3	3	3				8	3 7	4	6	7	6
4000-58	2	2	3	4	3	14			7	7	5	6	6	6
4000-57	3	2	3	4	3	12		10	Ī	6	4	6	7	6
4100-57	3	2	_	3	4				6		4	6		6
4100-58	3	2	3	4	4			11	7		3	Ę	4	6
4100-59	3	2	2		3				7	· · ·		7	,	6
4100-60	3	2	3	4	4	30			7	' 6	4	6		6
4100-61	3	2	3	3	4	13			7	<u>'</u>	4	6		6
4100-62 4100-63	3	3	3	4	3			13 11	8	3 7	5			6
	3	2	3	4	3	18 22			/	7	4	6	րլ 1 Մ	6 2
4100-63-R	3		. 3	1 4	1 4	1 22	9	12	,	1 0	1 4	1	1 1	Ö

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

Activation Laboratories Ltd.
Date: November 23, 2011
R=Replicate Sample

	127 - MPH	128 - MPH	129 - HAR	130 - HAR	131 - MPH	132 - ALK	133 - HAR	134 - HAR	135 - MPH	136 - MPH	137 - HBI	138 - HBI	139 - HPH	140 - HPH
4100-64	3	3	3	3	4	15	9	13	7	6	4	6	-1	5
4100-65	3	2	3	3	3	16		11	7	6	4	6	6	6
4100-66	3	2	3	4	4			13	7	7	4	7	7	6
4100-67	3	2	3	4	3	14		11	7	7	4	6	7	6
4100-68	3	2	3	4	4	16			8			7	1	6
4100-69	3	2	3	4	4				8		4	6		6
4100-70	3	2	3	4	4	21	9		8		4	6		6
4100-71 4100-72	3	2	3	3	4	20 20			-			6		b
4100-72	ა	2	3	3	3				7	7	2	6		0
4100-74	3	2	3	3	3				7	6	5	6		5
4100-76	3	2	3	4	4					<u> </u>	5	7	7	6
4100-77	3	2	3	3	3	14			7	7	4	6	1	6
4100-78	3	2	3	3	4	18		11	8	6	4	6	7	6
4200-78	3	2	3	4	3			12	8	3 7	4	6	7	6
4200-78-R	3	2	3	4	4	16	8	12	7	7	3	6	-1	6
4200-77	3	2	3	3	4	14		11	7	7	4	6	7	6
4200-76	3	2	3	4	3				8			6		6
4200-75	3	3	3	3	4	17			6		4	6		5
4200-74	3	2			4	11		10	7	***************************************	4	6		5
4200-71	3	2	3	3	3	16			7	<u> </u>	4	6		6
4200-70	3	2	3	4	4	17			7		4	6		6
4200-69 4200-68	ა ე	2	3	4	4					6	4	6	7	0
4200-68		2	4	5	4	26		13		8 8	5	7	1	6
4200-66	3	2			3							6	1	6
4200-65	3	2	3	4	4	41		14	8		4	7	7	7
4200-64	3	2	3	4	4	24		12	7		5	7	7	6
4200-63	3	3	3	4	4	20	9	12	8	7	4	6	7	6
4200-62	3	2	3	3	4	13	8	10	7	6	4	6	-1	6
4200-61	3	2	3	4	4	16			7	7	5	6	7	6
4200-61-R	3	2	3	4	4			10	7			6		6
4200-60	3	2	3	3	4	13			8	1	4	6		6
4200-59	3	2	3	4	4	14			8		4	6		6
4200-58 4200-57	3	2	3	4	4				3		·	6		6
4300-57	ა ვ	2	3	4	3	12			7			5 6		5
4300-58	3	3	3	4	3				7	,	4	6		. 6
4300-59	3	2	3	4	4				7	6		6		6
4300-60	3	2	3	3	3	11			7	' 6		6		6
4300-61	3	2	3	4	3				7	6	3	6	7	6
4300-62	3	2	3	4	3	11	7	10	7	6	4	5	7	6
4300-63	3	2	3	4	4	11	8	10	7	7	4	6	6	6
4300-64	3	2	3	3	3				7	7	4	6	7	6
4300-65	3	2	3	3	3	13		11	- 6			6	-1	6
4300-66	3	2	3	3	3	15		11	8			6	6	5
4300-67	3	2	v	4	4				7	-		6		6
4300-67-R	3	2	3	-	3	19			7			6		6
4300-68 4300-69	3	2	3	4	3	13 13		10 10	7			6		6
4300-69	3	2	3	3	4	15			7			6		0
4300-70	ა ვ	2	3	4	4							6		6
4300-71	3	2	3	4	4				8		4	6		6
4300-73	3	2	3	3	3	15			7	1 7	4	6		6
.000 1.0	J	4	<u>,</u>		1			141		1	<u> </u>	<u> </u>	1	U

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

Activation Laboratories Ltd.
Date: November 23, 2011
R=Replicate Sample

	127 - MPH	128 - MPH	129 - HAR	130 - HAR	131 - MPH	132 - ALK	133 - HAR	134 - HAR	135 - MPH	136 - MPH	137 - HBI	138 - HBI	139 - HPH	140 - HPH
4300-74	3	3	3	4	4	19	8	11	8	8	4	6	7	6
4300-75	3	2	3	4	3	20		12	7	6	4	6	7	6
4300-76	3	2	3	4	4	21	9	11	8	7	4	7	7	1
4400-57	3	3	3	4	3	29	9	12	8	6	4	6	8	6
4400-58	3	2	3	4	4	19	9	11	7	7	4	6	1	6
4400-59	3	2	3	4	3	19		11	7	6	4	6	7	6
4400-60	3	2	3	4	4	21	9	12	7	7	4	6	7	7
4400-61	3	3	3	4	4	28		13	7	7	5	6	3 2	7
4400-62	3	2	3	4	3	10		10	7	7	4	6	7	5
4400-62-R	3	2	3	3	4			9	7		4	6	7	5
4400-63	3	2	3	4	4	25		12	7		4	7	8	6
4400-64	3	2	3	4	4	23		13	8		4	7	1	6
4400-65	3	2	3	4	4	16		11	7		4	6	7	6
4400-66	3	3	3	3	4			12	8		4	-	/	6
4400-67 4400-68	3	2	3	3	4	21 22	9 8	12 11	8			- 7	6	6
4400-68	3	∠ 2	3	4	4		10	11	, e		4	6		9
4400-69	ু হ	2	3	4	4	13		10	- 6		4	6	` <u> </u>	_1
4400-71	3	2	3	4	3			11	7			6		6
4400-72	3	2	3	4	3	12		11	7	6		6		6
4400-73	4	3	3	4	4			13	g	7	4	7		6
4400-74	3	2	3	4	4			11	8	7	4	6	1	6
4400-75	3	2	3	4	4	16	7	11	7	6	4	6	7	6
4400-76	3	2	3	4	4	12	7	10	7	7	4	€	2	6
4400-77	3	2	3	3	3	10		10	7	6	4	6	1	6
4400-77-R	3	2	3	4	3	11		10	7	7	4	5	7	6
4300-77	2	2	3		3			10	7		4	6		6
4300-78	3	2	3	4	4	12		10	8		4	5		6
4500-57	3	2	3	3	3			10	7	· ·		5	`	6
4500-58	3	2	3	3	3	11 11		10 10	7			6		6
4500-59 4500-60	3		3	<u> </u>	3	11		10	7	Ŭ	1	6		5
4500-60	ુ વ	2	3	4	3			9	c 7			6	•	5
4500-62	3	2	3	4	3	9		10	. 6			6		-1
4500-63	3	2	3	3	4	14		11	7			6		6
4500-64	3	2	3	3	3		-	11	8	7	4	5		6
4500-65	3	2	3	4	3	10	8	11	7	6	4	6	7	6
4500-66	3	2	3	4	3	12	7	11	7	6	3	5	7	6
4500-67	3	2	3	3	4	13	7	10	8	6	4	6	6	6
4500-68	3	2	3	4	3	10		10	7	' 6	4	6		6
4500-68-R	3	2	3	3	3	10		10	7	,		6	7	5
4500-69	3	2	3	4	4			10	7			6		6
4500-70	3	2	3	4	3	11		10	7	6		6		5
4500-71	3	2	3	4	3	10		10	7	6		6		5
4500-72	3	2		3	4			10	7	6	3	6		5
4500-73	3	2	3	4	3	11 11	7 8	10 10	8	/	4	6		6
4500-74 4500-75	3	2			3 4			10	7		4	6		5
4500-75 4500-76	3	2	3	4	3	8		9	7			6		0
4500-76	ু ব	2	3	4	4	9	-	10	7	7	4	6	·	6
4600-56	3	2	3	4	3	15		10	8	7	5	-		6
4600-57	3	2	3	4	4	11		10	7	7	4	6		6
4600-58	3	2		4	4	9		11	7	, 6	3	6		6
4600-59	3	2	3		3	10		10	7	6		5		6
4000-59	3	2	<u> </u>	1 3	j 3	10	1	10	1	<u> </u>	ე პ	1) ₁ /	

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

Activation Laboratories Ltd.
Date: November 23, 2011
R=Replicate Sample

	127 - MPH	128 - MPH	129 - HAR	130 - HAR	131 - MPH	132 - ALK	133 - HAR	134 - HAR	135 - MPH	136 - MPH	137 - HBI	138 - HBI	139 - HPH	140 - HPH
4600-60	3	2	3	4	4	10	7	10	7	6	4	5	7	6
4600-61	3	2	3	3	3	10	8	10	7	7	4	6	1	6
4600-61-R	3	2	3	3	4			10	7	6	4	6	7	6
4600-62	3	3	3	3	3			11	7	7	4	6	7	6
4600-63	3	2	<u>~</u>		3			11	8		····	5	1	5
4600-64	3	2	3		4	4		11	7			6		6
4600-65	3	2	3	4	4	-		11	7	<u> </u>	3	6		6
4600-66 4600-67	3	2	· · · · · · · · · · · · · · · · · · ·	· · · · · · · · · · · · · · · · · · ·	4	12		10 9	7	, , , , , , , , , , , , , , , , , , ,	4	6		b
4600-68	ა ვ	2	3	ა	3			10	7	' 6		5		5
4600-69	3	2	· · · · · · · · · · · · · · · · · · ·	4	3			10	7			5		5
4600-70	3	2			3			10	7	-		5		5
4600-71	3	2	3		3			10	8		4	6		5
4600-72	3	2	3		3			10	7		4	6	6	6
4600-73	3	2	3	4	4	15	8	11	8	3 7	5	7	1	6
4600-74	3	2	3	3	3	10	7	10	7	7	4	6	7	6
4600-75	3	2	3	3	4	10	8	9	7	5	4	6	7	5
4600-76	3	2		•	3			10	7		4	6		5
4600-76-R	3	2	3	4	3	-		10	7	,	4	6		6
4600-77	3	2	•		4	9		10	7			6		6
4600-78	3	2	<u>~</u>	3	3			10	7	6	4	6		6
4700-57	3	2	3	4	3			12	- /	. 7	4	6		6
4700-58 4700-59	ა ა	2	3	4	3			11 11	8	1		6		6
4700-59 4700-60		2	3	3	3			10	7			6		6
4700-61	3	2			3			11	7	<u> </u>		5		6
4700-62	3	2	3	4	4			10	7	7	4	6		5
4700-63	3	2		3	3			10	7	7	4	6		1
4700-64	3	2	2	3	3			10	7	7	4	5		5
4700-65	3	2	3	3	4	12	8	11	7	6	4	6	7	5
4700-66	3	2	3	3	3	11	7	11	7	6	4	6	7	5
4700-67	2	2	3	4	3			10	7			6		5
4700-68	3	2	3		3			9	7			6		5
4700-69	3	2	3	3	3			10	7	6	ΨΨ	6		6
4700-69-R	3	2	Ŭ		4			9	7	<u> </u>		5		5
4700-70 4700-71	3	2	3		3			10 11	6	5		6 5		5
4700-71	3	2	 		3			9	6		<u> </u>	5		
4700-72	3	2	3		3			10	7	7 5		6	· · · · · · · · · · · · · · · · · · ·	5
4700-74	3	2			3			9				5		5
4700-75	3	2	3	4	3			10	7	6	4	6		6
4700-76	3	2	3	3	3	12	7	10	7	6	3	5	6	6
4700-77	3	2	3	3	3	8	7	9	7	6	4	5	6	5
4800-57	3	2	2	3	3			10	7	5	4	6	1	6
4800-58	3	2	3		3			10	6			6	6	5
4800-59	3	2	2		3			9	7			5	7	5
4800-60	3	2			3			10	7	· · ·		5		5
4800-61	3	2	3		3			10	7			6		6
4800-62	3	2	2		3			10	7	· · · · · ·		5		5
4800-63 4800-63-R	3	2	3	4	3			10 10	7	•	4	6		6
4800-63-R 4800-64	2	2	3	4	3			10	7	·	4	5		0
4800-65	ى د	2	3		3			10	7	' 6		6		5
4800-66	ু ব	2	3	3	3			10	7	7	3 A	6		5
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SOIL GAS HYDROCARBONS (SGH) by GC/MS CUNNINGHAM PROJECT SITE

Activation Laboratories Ltd.
Date: November 23, 2011
R=Replicate Sample

	127 - MPH	128 - MPH	129 - HAR	130 - HAR	131 - MPH	132 - ALK	133 - HAR	134 - HAR	135 - MPH	136 - MPH	137 - HBI	138 - HBI	139 - HPH	140 - HPH
4800-67	3	2	3	4	4	14	8	11	7	6	4	6	7	5
4800-68	3	2	3	3	4	11	8	10	8	6	4	6	1	6
4800-69	3	2	3	4	4	12	8	11	7	6	4	6	7	6
4800-70	3	2	3	4	4			11	8		4	6		6
4800-71	3	2	<u>~</u>		3			10	7	·		6		6
4800-72	3	2	3		4			12	8			7		6
4800-73	3	2	3	3	3			11	7	7	4	5		6
4800-74 4800-75	3	2	· · · · · · · · · · · · · · · · · · ·	- -	4			12 11	- 1	/	4	6		5
4800-75	3	2	3	3	3			10	6	6		6		0
4800-70	3	2	· · · · · · · · · · · · · · · · · · ·	•	4			9	7		1 4	6		6
4900-61	3	2			3			11	7	7	5	6		5
4900-61-R	3	2	3		4			10	7	6	4	6		5
4900-62	3	2	3	4	4	10		10	7	7	4	6	7	5
4900-63	3	2	3	4	4	18	9	11	8	7	5	7	7	6
4900-64	3	2	3		3			11	8		4	6	7	5
4900-65	3	2	ŭ		3			10	7	<u> </u>		6	-	5
4900-66	3	2			4			11	8			6		6
4900-67	3	2	3		3			10	7	·	-	5		6
4900-68	3	2	•		3			10	6			5		5
4900-69 4900-70	3	2	3	3	3			9 10	7		4	5 5		5
4900-70	3	2			3			10	6		3	6		ວ 5
4900-71	ე ე	2	2		3			9	6	1		5		5
4900-73	2	2	2	3	3			9	7			6		5
4900-74	3	2			3			10	7	6	3	5		6
4900-75	3	2	3	3	3			10	6	6	4	5	-1	6
4900-76	3	2	3	3	3	8	7	10	6	6	4	5	6	5
4900-76-R	3	2	2	3	3	8	7	9	6	5	3	5	6	5
4900-77	3	2	2		3			9	7			6	1	5
5000-77	3	2		3	3			9	7	Ŭ		6		5
5000-76	3	2	3	3	3	<u> </u>		10	6			6	<u> </u>	5
5000-75 5000-74	3	2	3	3	3			10 10	6			5 5		5
5000-74	3	2		· · · · · · · · · · · · · · · · · · ·	4			10	7			5		
5000-73	3	2	3		4			9				6	<u> </u>	5
5000-71	3	2			3			9	7			5		5
5000-70	3	2	3	3	3			9	7	5	4	5	6	5
5000-69	3	2	3	3	3	9	7	9	7	7	4	6	6	5
5000-68	3	2	3	3	3	9	7	11	7	' 6	4	6	-1	5
5000-67	3	2	Ŭ		3		7	9	6	_	3	5		5
5000-66	3	2	3		3			10	7		4	5		6
5000-65	3	2	3		3			10	7	v	······································	6		5
5000-64 5000-64 P	3	2	3	3	3			11 10	7	′] 7 ′I 6	***************************************	5		5
5000-64-R 5000-63	3	2 م	3		3	9 10		10	7			5		<u>5</u> ء
5000-63	3	2			3			10	7	,	•	6		6
5000-62	2	2	3		3			9	7	1		6		6
5100-75	3	2	3		3			10	7			5		6
5100-74	3	2		4	4			11	7			6		6
5100-73	3	2	3	4	3	9	7	10	7	6	4	6	7	5
5100-72	2	2	3	3	3	8	7	9	6	6	4	5	7	5
5100-71	3	2	3	3	3			10	7	6		6		5
5100-70	2	2	3	4	3	9	8	10	7	6] 3	6	7	6

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 A11-12846 samples are discarded in 90 days. This report is only to be reproduced in full. 59/72

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

	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
5100-69	3	2	3	4	3	-1	7	10	7	6	4	. 5	7	6
5100-68	3	2	3	4	3	9	7	10	7	7	4	6	6	6
5100-67	3	2	3	3	4	8	7	10	7	7	4	. 6	7	6
5100-66	2	2	3	3	3	9	7	10	7	5	4	6	6	6
5100-65	3	2	3	4	3	9	7	10	8	5	4	. 6	7	6
5100-64	3	2	2	3	3	9	7	10	7	6	4	6	1	6
5100-64-R	3	2	2	3	3	8	7	10		7	4	. 6	7	6
5100-63	3	2	3	4	3	10	7	10		7	4	6	7	6
5100-62	3	2	3	4	3		8	12	7	7	4	. 6	·	5
5100-61	3	2		3	3		8	11	7	6	5	6	6	6
5200-77	3	2	3	4	4	12			8	6	4	6	7	6
5200-76	3	2	T	4		11	8			6	5	6		6
5200-75	3	2	3	3		10	8	11	8	, and the second	4	6		6
5200-74	3	2		4		13	8			7	4	6	-1	6
5200-73	3	2	3	3			7	10		7	4	5	6	6
5200-72	3	2		3			8		7	7	4	6		6
5300-76	3	2	3	3		<u>_</u>	7	11	7	6	4	6		5
5300-77	3	2	······································	3		· · · · · · · · · · · · · · · · · · ·	8		7	6	4	6		5
5400-77	3	2	2	3			8	11		5	5	6	<u> </u>	5
5400-76	3	2		3				11	/	6	4	6		6
5500-76	3	2	3	3			8	12	/	6	4	6		6
5500-77	3	2	3	3	3	10	,	11	1		5	6	l l	б
LMB-QA	3	2	3	4	A.	20	8	13	8	6		6	 	C
LMB-QA	3	2	3	4	4	15	0	12		7	4	6		. O
LMB-QA	3	2	3	4	4	10	0	10		7	4	5	<u> </u>	5
LMB-QA	3	2	3	4	3		Ι	10		7	4	6		6
LMB-QA	3	2		3		Ŭ	7	10		, a	ı -	6		5
LMB-QA	3	2	3	3		9	7	10	7		3	5	0	5
LMB-QA	2	2		3		7	7	0	6	5	3	5	6	5
LMB-QA	3	2	3	3			ρ /	10		7		5	7	9
LIVID-QA	3		3	3	3	'	0	10	<u>'</u>	· · · · · ·	4	3	 	6
							I	1	1	I				1

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

Activation Laboratories Ltd.
Date: November 23, 2011
R=Replicate Sample

	141 - HBI	142 - HPH	143 - HA	144 - HBI	145 - HBA	146 - HPH	147 - HBI	148 - HPH	149 - HBI	150 - HPH	151 - HBI	152 - HPH	153 - HPH	154 - HPH
3900-77	6	6	41	7	30	3	5	6	1	7	6	1	10	11
3900-76	6	7	57	8	40	1	5	6	8	3 7	6	8	11	11
3900-75	7	7	69	8			5	6	8	7	7	9	11	2
3900-74	7	1	100	10			5	6	Ψ	7	7	9	2	10
3900-73	7	1	100	10			5	6		8	7	-1		11
3900-73-R	7	7	104	9			5			7	7	2		10
3900-72	7	-1	65	9			6					8		11
3900-71	7	7		10			5	6		***************************************	7	-1		11
3900-70	/	/	86	9			5	6			/	9		11
3900-69	6	8	55	8			5	6			/	8		11
3900-68	7	7		10			5	6		1	/	2		11
3900-67	7	8	51	8 7			5 5	6		/	6	8		40
3900-66	6 6	8	39	9			5 5	6		<u>'</u>	6	9		12 11
3900-65 3900-64	o 6	7	61 40				5 5	6			1	······································		11
3900-64	6	7	65	8			5 5	o -1	3		7	9		11
3900-63	6	7		8			5 5	-1 6	· · · · · · · · · · · · · · · · · · ·		<u> </u>	2		11
3900-62	7	8	56				5	6			6	8		12
3900-60	7	7	35	7			4	6			7	1	2	12
3900-59	6	7		. 9			5	6		7	7		11	11
3900-58	7	-1	34				5	6		7	6	8		11
3900-58-R	6	8	4	8			5		7	7	6	2		11
3900-57	5	7	49	8	*********		5	5	8	3 7	6	8		2
4000-78	7	8	86	9			6	6	1	7	7	8	2	11
4000-77	7	7	42	8	36	11	5	6	7	7	7	2	10	11
4000-76	6	6	17	8	38	11	5	6	7	7	6	1	1	2
4000-75	6	7	75	9	63	-1	5	6	8	8	7	2	10	11
4000-74	6	8	29	8	28	2	5	6	7	7	7	8	2	2
4000-73	6	6	46	8	57	3	5	6	8	7	6	1	11	12
4000-72	7	7					5	6	8	3	7	2		11
4000-71	7	7	52				5	6			7	8		11
4000-70	7	7	55				5	6			7	9		2
4000-69	7	7	69	9		2	5	6		· · · · · · · · · · · · · · · · · · ·	7	1	11	11
4000-68	6	-1		8	*********		5	6			6	8		11
4000-67	6	7	53	8			5	6	,		6	2	·	11
4000-66	6 6	-1 7					5	6			6	-1 8		11
4000-65 4000-65-R	7	7	34 42	8 8			5 5	5 6		1	6	, o	10	11 11
4000-65-R 4000-64	6	1	42				5 5	6		-1	6	0		11
4000-64	6	7					5	5		7	7	8		10
4000-62	6	8	39				5				6		**************************************	10
4000-62	6	-	38				5				6		11	11
4000-60	6	1	34				5	6			7	8		10
4000-59	6	7	48	8			5	6		1 1	6	8		11
4000-58	6	6	41				5	5	7	7	6	1	2	11
4000-57	6	7					5	-1	7	7		9	2	11
4100-57	6	7	67	8			5	6		7	6	9		11
4100-58	7	1	42				5	6		3 7	6	8		10
4100-59	6	7					5	6	7	7	6	8	11	11
4100-60	7	8	174	11			5	6	ε	3 7	7	8		11
4100-61	7	8	65	10			5	6	1	7	6	9	11	11
4100-62	7	7	122	10	64	13	5	6	8	3 7	7	2	11	11
4100-63	7	8	45	8	35	12	5	6	8	8	7	1	2	11
4100-63-R	7	1	58	8	58	2	5	6	ε	3 1	7	2	11	11

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

Activation Laboratories Ltd.
Date: November 23, 2011
R=Replicate Sample

	141 - HBI	142 - HPH	143 - HA	144 - HBI	145 - HBA	146 - HPH	147 - HBI	148 - HPH	149 - HBI	150 - HPH	151 - HBI	152 - HPH	153 - HPH	154 - HPH
4100-64	6		48	8		2	5							11
4100-65	6		42	8		-1	5							
4100-66	7	7	132	9	62	2	5	6			7	g		12
4100-67	6	7	38	8		2	5	5				_		12
4100-68	7	1	36	8		1	5	6			6	***************************************		11
4100-69	7	1	57	9	42	2	5	6		3 7	6	ç	11	11
4100-70	7	8		9		12	5	6	8	3 7	7	g	11	11
4100-71	7	1	66	9	46	2	5	6	ε	3 7	6	8	2	11
4100-72	7	7	75	9	51	12	5	5	8	3 7	7	9	2	11
4100-74	7	1	70	9	52	1	5	6	8	3 7	7	2	11	11
4100-75	7	7	41	8		11	5	6	8	3 7	6	8	10	11
4100-76	7	7	120	10		3	5	6			7	2	12	11
4100-77	6			8		1	5	6			6		10	2
4100-78	6	8	54	9		12	5	6			7	8		12
4200-78	6	8	51	9	34	12	5	6			7	8		11
4200-78-R	6	7		9		2	5	6			•			
4200-77	6	7	35	8	27	2	5	6			6	2	11	11
4200-76 4200-75	7	8	96 56	9		2 12	6 5	6			1 7	1 8	13	13 11
4200-75 4200-74	-1	-1		7	22	12	5 5	5		<u> </u>	, 6		10	11
4200-74	6		48	8		2	5	5			6	• • • • • • • • • • • • • • • • • • •		11
4200-70	6		49	8		-1	5	6			7	9		11
4200-69	6		65	8		1	5	6			6		11	11
4200-68	7	8	125	10	66	1	5	6		3 7	7	8	11	11
4200-67	8	9	87	10	60	9	6	6	8	3 7	7	8	12	15
4200-66	6	7	68	8	35	12	5	6	7	7	7	8	10	11
4200-65	7	9	240	13	101	14	6	6	9	8	8	g	12	11
4200-64	7	7	84	9	63	-1	5	5			7	1	11	11
4200-63	6	7	69	9		3	5	6			6		10	12
4200-62	6			8		3	5	6			6		10	11
4200-61	7	8	46	9		13	5	6		7 7	7	-1	10	11
4200-61-R	6		53 39	8		12	5	6 6		I	6	2	11 10	11 11
4200-60 4200-59	6	O 77	50	9	25	2	5 5	6			0	9	-	11
4200-58	7	1	50	8		1	5	6			7	·		11
4200-56 4200-57	7		41	8		13	5				6	,		11
4300-57	6		46	8		2	5	5		7	7	1	2	11
4300-58	6		61	9		12	5	5		3 7	6	1	10	11
4300-59	6		76	9		12	5	6	8	3 7	6	9		11
4300-60	6	7	35	7	20	1	5	6	7	7	6	2	10	11
4300-61	6		00	8		-1	5	6			6			11
4300-62	6		36	8		-1	5				7	8		10
4300-63	6		36	8		2	5	6		<u> </u>	6		11	11
4300-64	7	7		8		12	5			7			11	11
4300-65	6	8	33	8	21	12	5	6		7	6			11
4300-66	6	1	47	8		2	5			7	6		11	11
4300-67 4300-67 P	6	7	62	9		2	5 5	6			<u> </u>	-1	10 10	11 11
4300-67-R 4300-68	7	7	49 39	8		2	5 5	6			7	2		10
4300-69	6	7	35	9		10	5 5	5		· · · · · · · · · · · · · · · · · · ·	6			10
4300-09	7	7	34	8		2	5	6			1 6		10	11
4300-71	6		76	9	57	4	5	6			6		11	11
4300-72	6		56	8		3	5	6		7 8	7	1	12	11
4300-73	6		45		28	12	5	5				2	11	10
			· · · · · · · · · · · · · · · · · · ·	<u>~</u>			~	· · · · · · · · · · · · · · · · · · ·	~	<u> </u>	<u> </u>		*	, , , , ,

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

Activation Laboratories Ltd.
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	141 - HBI	142 - HPH	143 - HA	144 - HBI	145 - HBA	146 - HPH	147 - HBI	148 - HPH	149 - HBI	150 - HPH	151 - HBI	152 - HPH	153 - HPH	154 - HPH
4300-74	7	1	72	9	44	2	5	6	8	7		2		12
4300-75	6	7	1			2						9		
4300-76	6	1	119	10		2	5	6	8	7	7	9	11	11
4400-57	7	8	103	11	82	2	6	6	. 8	7	7	2	11	11
4400-58	6	7	58	9	51	2	5	5	-1	1	6	9	3	
4400-59	7	7			<u> </u>	12		6			7	1	10	
4400-60	7					12								
4400-61	7	1				2						<u>_</u>		
4400-62	6					11								_
4400-62-R	6		·			7	· · · · · · · · · · · · · · · · · · ·			•	6	1	10	
4400-63 4400-64	7	1					5 5				7	1	11 11	
4400-65	7	1				1					7	8		
4400-66	6					12	v				7	2		
4400-67	7	7				12		6			6	· · · · · · · · · · · · · · · · · · ·	12	
4400-68	6	1				2	5					,, 		
4400-69	6	7	7 70	9		12		6	8	7	7	8	2	
4400-70	7	7				3	5	5	8	7	6	9	11	
4400-71	6					2						9	11	11
4400-72	6					1	5				6		· · · · · · · · · · · · · · · · · · ·	
4400-73	7	8				3	5				7	9		
4400-74	6					4	5				7	9		
4400-75	7	7	00			11 2				7	7	8		
4400-76 4400-77	6	· · · · · · · · · · · · · · · · · · ·				2	5			7	6		11 11	
4400-77 4400-77-R	6		1			-1	5	5		7	6		10	
4300-77	6					2				7	6			
4300-78	6	. 8				- 12		6		. 8		- 8	2	
4500-57	6	7				11		5			6	1	10	
4500-58	6	7	29	8	20	12	5	6	7	7	6	8	11	2
4500-59	6					1	5			1	6	8		
4500-60	6					2		~	•	7	6		11	
4500-61	6	7				2	5			6			11	
4500-62	6	7	19		17	11	5	6		7	6			
4500-63 4500-64	7 6	7			Ŭ.	12 2					6		10 10	
4500-64 4500-65	6						5 5			7	6		10	
4500-65 4500-66	7	7				3	5			7	6	 		
4500-67	6	• • • • • • • • • • • • • • • • • • • •				11								
4500-68	6		28			2	5			7	6		10	
4500-68-R	6					3				7	6			
4500-69	6		4		4	1	4		7	7	6	2	11	
4500-70	6					10		5			6			
4500-71	6					2	5			7		**************************************		
4500-72	6	7			.0	1	5	6		7	6			
4500-73	6		- 9			1	5			7	6		2	
4500-74	6					-1 1				8		·	10	
4500-75 4500-76	6 6					1 1	5 5			7	6		2 11	
4500-76 4500-77	р 6					1				7	6		11	
4600-77	8						5			***************************************	6		10	
4600-57	7	7	1			3	5			1	6		2	
4600-58	6					11				1	6	· · · · · · · · · · · · · · · · · · ·		
4600-59	6		18		22	2	5				6		11	
7000-03	υυ	<i>I</i>	1 10	4	1 44	4		1	ı O	<u> </u>		1	4	1

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

Activation Laboratories Ltd.
Date: November 23, 2011
R=Replicate Sample

	141 - HBI	142 - HPH	143 - HA	144 - HBI	145 - HBA	146 - HPH	147 - HBI	148 - HPH	149 - HBI	150 - HPH	151 - HBI	152 - HPH	153 - HPH	154 - HPH
4600-60	6	7	27	7	22	2	5	6	7	7	6	2	10	11
4600-61	6	1	11	8	18	2	5	6	7	7	6	g	11	11
4600-61-R	6	7	13	8		-1	5	6	7	7	7	8		
4600-62	6	7	26	2		3	5	6			6	· · · · · · · · · · · · · · · · · · ·		11
4600-63	6	8	27	8		12	5	6		<u>'</u>	6	-	2 10	
4600-64	6	7	10	7	28	2	5	6			ļ	· · · · · · · · · · · · · · · · · · ·	(<u>, , , , , , , , , , , , , , , , , , , </u>	11
4600-65	7	1 -1	24	7	18	2	5	5		<u> </u>	6			11
4600-66 4600-67	5 5	- I 1	27 19	7	22 16	2	5 5	5 5			6	·		12 11
4600-68	7	7	30	8		1	5	6		 	<u> </u>			11
4600-69	6	7	21	7	19	3	5	6		7	6		11	
4600-70	5	7	12	7	12	11	5	6		6	6	2		
4600-71	6	6	15	7	16	2	5	6	7	7	6	1	10	
4600-72	1	7	24	7	17	11	4	5	7	7	6	8	10	11
4600-73	8	8		8		2	5	6		<u> </u>	7	8		11
4600-74	6	6	26	7	21	-1	5	5	8		6			
4600-75	6	6	28	7	23	1	4	6	7	,	6		1	10
4600-76	7	7	23	7	21 14	11	5	6		7	6		1.9	
4600-76-R 4600-77	6	-1	21 29	7	14	1	4	5 5	/ 8	1) b	_	! 10 ! 10	
4600-77	6	7	29 17	7		2	5	5 6	•	· · · · · · · · · · · · · · · · · · ·	V	£	. 10	
4700-57	8	8	51			-1	5	6		·	6		11	11
4700-58	7	7	36	8		11	5	6		1	6	8		
4700-59	7	7	36	8		3	5	6	7	1	7	8		
4700-60	6	7	24	8	23	1	5	5	7	7	6	8	2	11
4700-61	6	7		8		3	5	6	7	6	6	8	11	11
4700-62	6	7	34	8	29	1	5	5	8	7	6	 		
4700-63	7	7	26	7	25	3	5	6		7	6			11
4700-64	5	6	22	7	12	2	5	5		·	6			. 0
4700-65 4700-66	6 6	-1	39 36	8	24 22	2	5 5	5 6		, ,	6		+	11
4700-66	6			7		1	3 A	6		7	Ŭ			
4700-68	6	7	25	7	15	-1	4	6		7	6	***************************************		
4700-69	6	7	27	7	21	2	4	6		7	6			
4700-69-R	6	7	25	7	18	2	5	5	7	7	6	1	10	
4700-70	6	6	32	7	18	11	5	5	7	7	6	-1	11	11
4700-71	6	-1		8	23	1	4	5	7	7	6	8	Ü	10
4700-72	6	7	25	7	17	2	5	5		6			10	
4700-73	6	7	31	7	19	11	4	6			6		10	
4700-74 4700-75	5	7	26 37		20 17	10 11	4 5	5 5	7	7	6			
4700-75 4700-76	6 -1	7	43		25	11	5 5	ა 5	1 	1	6		10	
4700-70	5	6		7		10	4	5	7	• • • • • • • • • • • • • • • • • • • •	· · · · · · · · · · · · · · · · · · ·			
4800-57	6	6	39	7	23	-1	5	5	7	7	6			9
4800-58	6	6	31	7	22	10	4	5	1	7	6		***************************************	10
4800-59	6	7		7	13	10	5	5	7	1	6	2		10
4800-60	6	7	28	7	22	2	4	5					1	10
4800-61	6	1	32	7	20	2	4	5	8		6		10	
4800-62	6		26	7		2	5	5						
4800-63	6		29	7	21	1	5	6			6			12
4800-63-R	5	7	36	8		3	5	5	7	·	6			12
4800-64 4800-65	6 6	7	21 28	7 8	14 22	3 11	4 5	6 5			6		10	
4800-66	5	,	12	8		11	5 5	ა 5		,	6		10 6	10
4 000-00	3		14	о	141	[-1]	၁	5	<i>f</i>	1	<u>ı</u> 0	1	1 э	10

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 A11-12846 samples are discarded in 90 days. This report is only to be reproduced in full. 64/72

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

Activation Laboratories Ltd.
Date: November 23, 2011
R=Replicate Sample

	141 - HBI	142 - HPH	143 - HA	144 - HBI	145 - HBA	146 - HPH	147 - HBI	148 - HPH	149 - HBI	150 - HPH	151 - HBI	152 - HPH	153 - HPH	154 - HPH
4800-67	6	7	55	8	28	11	5	5	7	7	6	g	2	10
4800-68	6	8	35		24	2	5	6	7	7	6	1	11	2
4800-69	6	8	35			2	5	6	8	3	6	1	15	
4800-70	6	7	48			2		6			7	1	11	12
4800-71	6	1	30	8		2		6		, , , , , , , , , , , , , , , , , , ,	6	1	10	
4800-72	7	8				12		6		•	7	g		11
4800-73	6	6	18	7		2		5			6			11
4800-74 4800-75	6	6	37 25	8 7	24 23	12	5 5	6 6			6	· · · · · · · · · · · · · · · · · · ·		11 11
4800-75	6	7	28	7	15	2		6			6	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	10	
4800-77	6	6	27	7	20	11		6			6	2	11	
4900-61	6	-1		8		1	5	6	8	7	6	2		
4900-61-R	6	7	26	7	22	2	5	6	7	7	6	8	11	11
4900-62	6	7	25		19	3	5	6	7	7	6	ç	11	10
4900-63	7	9	72			14		7			7	2		12
4900-64	6	7	38	9	20	11	5	6			7	2	10	
4900-65	6	6	32 20	8	22 17	-1	5	5	8		7	-1		
4900-66 4900-67	6	7	20 26	1	17	3 2		6 5		′I -1		8		11 10
4900-67	6	6	24	7	17	2	5	5	7	7	6	i c		10
4900-69	5	7	20	7		-1	4	5	6	6	6		, , ,	
4900-70	6	1	23	6		1	4	6	7	' 6	5	8	2	2
4900-71	5	7	24	7	15	2	4	5	6	6	6	8	10	10
4900-72	6	-1	23	6		1	4	5	6	6	6	2	9	10
4900-73	5	6	23	6		1	4	5	7	·	6			
4900-74	6		· · · · · · · · · · · · · · · · · · ·		10	11		5	7		•		2	10
4900-75 4900-76	6 5	6 1	29 22	7	17 14	1	4	5 5	1	6] 	9	10
4900-76 4900-76-R	6	6	21	6		10	4	5 5	6		· · · · · · · · · · · · · · · · · · ·	7	•	10
4900-77	6	7	23		16	3		5				8		
5000-77	5	-1	23	7	16	1	5	6		1	6	8	+	
5000-76	5	6	24	7	15	2	4	5	1	7	6	1	1	10
5000-75	5	7	21	7	14	10	4	5	6	-1	6	8	10	
5000-74	6	7	20	6		10		5	6		· · · · · · · · · · · · · · · · · · ·		9	10
5000-73	6	6	26	7	16	2		5		7	6			
5000-72 5000-71	6 6	6	23 24		14 17	11 2		5 5	6	6	6			10
5000-71	5	6	17	6		3		5			5		9	10
5000-70	6	6	24		14	11		6			6		• • • • • • • • • • • • • • • • • • • •	10
5000-68	6	6	24		14	3		6		7	6			
5000-67	6	6	20	7	14	2	4	5	7	7	6	2	9	10
5000-66	7	1	25		16	2	5	5	7	7	6		10	
5000-65	6	7			16	2		6	7	7	6			
5000-64	6	7	23	8	16	1	5	5	7	1	6			
5000-64-R	6	6	23	7	17 21	11		6			6			11
5000-63 5000-62	7 6	7 6	28 22	8	21 15	2 3	5 5	5 5		1 7	6			12 11
5000-62	6	6	20	8			5 5	ა 5	7	1 7	6			
5100-75	6		19			2	-	6	8	7	6			
5100-74	6	7	22	7	16	3		6			6		<u> </u>	2
5100-73	6	-1		8		2	5	5	7	1	6	1	10	2
5100-72	1	-1	22	7	10	1	4	5	7	7	6	2	10	
5100-71	5	-1	28	7	18	1	4	5		U		_	-	11
5100-70	6	7	25	7	18	2	4	5	7	' 6	6	8	10	11

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 A11-12846 samples are discarded in 90 days. This report is only to be reproduced in full. 65/72

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

	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
5100-69	6	-1	21	7	17	2	5	6	7	7	6	8	11	10
5100-68	6	1	29	8	19	2	5	6	7	7	6	2	10	2
5100-67	6	7	25		15		5	6	7	7	6	8	11	11
5100-66	6	7	27	8	17	2	5	6	8	7	6	8	10	2
5100-65	6	7	26	7	13	3	5	5	7	7	6	8	11	11
5100-64	6	1	23		16	1	5	6	7	7	6	2	10	11
5100-64-R	6	7	20		18		5	6	1	7	6	9	11	10
5100-63	6	7	23		18		5	6	7	7	6	1	11	11
5100-62	7	-1	32				5	5	8	7	6	8	10	11
5100-61	6	7	28		· · · · · · · · · · · · · · · · · · ·		4	5	7	7	6	2	10	
5200-77	7	8	33				5	6	7	7	6	8	11	11
5200-76	7	7	24				5	6	7	1	6	1	11	12
5200-75	7	7	26				5	6	7	7	6	9	11	11
5200-74	7	8	00				5	6	1	7	6	9	11	11
5200-73	6		27		18		4	6	7	7	6	8	10	11
5200-72	6	***************************************	34		10		5	5	7	7	6	9	2	11
5300-76	6	<u> </u>	22		17		5	5	7	7	6	8	2	11
5300-77	6		22		18		4	5	7	7	6	8	2	10
5400-77		6	25		20			6	7	7	6	8	10	11
5400-76	6		25		21		4	5	7	7	-1	8	10	
5500-76	7	7	26			1	5	6	7	1	6	8	2	11
5500-77	6	7	26	7	21	3	5	6	7	7	6	1	11	11
	_			_		_	_	_	_			_		
LMB-QA	6		38				5	5	8	7	7	9	11	2
LMB-QA	6	<u> </u>	48				5	6	8	7	6	9	2	11
LMB-QA	6		14	-	* .		5	5	8	7	6	9	10	11
LMB-QA	6	·	4	,	17		5	6	8	1	6	1	10	11
LMB-QA	6	***************************************	11		24		5	6	7	6	6	8	10	
LMB-QA	5		19		18		5	5	7	7	6	2	10	
LMB-QA	6	<u> </u>	17				5	5	7	6	6	8	10	10
LMB-QA	6	6	21	7	16	1	4	6	7	7	6	1	10	11
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SOIL GAS HYDROCARBONS (SGH) by GC/MS CUNNINGHAM PROJECT SITE

	155 - HPH	156 - HBI	157 - HAR	158 - HBA	159 - HBA	160 - HBI	161 - HA	162 - HPH
3900-77	11	9	9	29	12	11	42	2
3900-76	11	-1	9	34	11	12	47	12
3900-75	11	10	9	39	12	1	54	2
3900-74	11	10	10	44	12	13	60	2
3900-73	2	10	10	48	12	12	70	13
3900-73-R	11	9	10	45	1	12	66	2
3900-72	11	10	10	43	12	12	54	1
3900-71	10	9	9	45	11	2	60	1
3900-70	11	9	9	42	11	12	58	12
3900-69	11	9	10	37	12	13	49	2
3900-68	11	10	10	42	12	12	24	12
3900-67	11	9	10	36	2	12	27	2
3900-66	11	9	10	33	12	12	43	2
3900-65	11	10	9	39	2	11	50	13
3900-64	12	9	9	32	11	11	38	12
3900-63	11	9	9	34	11	12	47	12
3900-62	11	9	10	31	13	12	41	2
3900-61	12	10	10	35	12	13	42	11
3900-60	11	9	9	29	2	12	38	2
3900-59	11	10	10	38	12	12	48	2
3900-58	11	10	10	28	11	12	175	12
3900-58-R	11	9	9	27	11	12	105	12
3900-57	3	9	10	29	13	12	41	12
4000-78	11	9	10	36	12	13	46	12
4000-77	11	9	10	31	11	11	43	12
4000-76	11	9	9	30	12	12	40	13
4000-75	11	9	9	33	12	2	39	12
4000-74	11	9	9	-1	11	- 12	32	2
4000-73	11	10	10	31	12	12	15	2
4000-72	11	9	9	33	11	12	44	2
4000-71	11	10	10	30	2	13	41	12
4000-70	11	9	10	29	12	12	42	12
4000-69	11	9	9	35	12	12	46	2
4000-68	11	9	10	28	12	11	36	12
4000-67	11	9	10	32	11	12	41	2
4000-66	11	9	10	28	2	12	38	12
4000-65	11	9	10	24	2	2	35	12
4000-65-R	12	9	9	30	12	12	21	2
4000-64	11	9	9	27	11	12	37	12
4000-63	10	9	9	24	12	2	35	12
4000-62	11	9	10	27	2	11	34	12
4000-61	11	9	10	28	11	12	43	12
4000-60	11	9	10	24	11	12	33	12
4000-59	12	10	10	32	12	12	23	12
4000-58	11	9	10	30	2	12	42	13
4000-57	11	9	10	28	- 12	12	36	11
4100-57	11	10	9	21	11	11	43	12
4100-58	11	10	9	29	11	11	41	12
4100-59	12	9	9	33	11	12	47	11
4100-60	12	10	9	42	11	11	63	12
4100-61	12	9	9	27	12	12	41	12
4100-62	12	9	9	39	12	13	51	12
4100-63	11	10	10	31	3	13	41	12
4100-63-R	11	10	10	32	11	2	19	13
1100 00 10		10	ı ı u	UZ.	T-1		10	

Activation Laboratories Ltd.
Date: November 23, 2011
R=Replicate Sample

	155 - HPH	156 - HBI	157 - HAR	158 - HBA	159 - HBA	160 - HBI	161 - HA	162 - HPH
4100-64	11	-1	9	28	12	12	36	12
4100-65	12	10	9	29	2	12	35	12
4100-66	11	10	10	38	2	12	53	12
4100-67	11	9	10	24	12	12	35	5
4100-68	11	9	9	29	1	13	39	12
4100-69	11	10	9	27	11	2	38	12
4100-70	12	10	10	33	12	12	46	13
4100-71	11	9	9	29	11	12	42	12
4100-72	10	10	9	34	12	13	41	12
4100-74	11	10	9	31	12	2	36	12
4100-75	10	10	10	-1	12	12	19	2
4100-76	12	10	10	41	12	13	51	12
4100-77	12	10	10	29	2	12	38	2
4100-78	11	10	10	31	11	11	39	11
4200-78	11	10	9	-1	11	2	34	2
4200-78-R	12	9	10	28	12	13	17	12
4200-77	11	10	10	28	12	12	5	12
4200-76	11	9	9	34	2	12	45	2
4200-75	12	10	10	31	12	13	42	12
4200-74	11	9	10	24	12	12	14	12
4200-71	11	9	9	26	11	12	37	2
4200-70	11	9	11	-1	12	12	36	12
4200-69	11	10	10	31	11	12	43	3
4200-68	12	10	10	1	12	13	48	12
4200-67	11	10	10	34	2	12	45	13
4200-66	12	10	10	31	2	12	35	1
4200-65	11	10	10	49	12	13	67	3
4200-64	11	9	9	31	11	12	45	2
4200-63	11	9	10	30	12	12	41	13
4200-62	12	10	10	26	11	2	33	12
4200-61	11	10	10	29	2	13	38	2
4200-61-R	12	9	9	29	11	12	41	2
4200-60	11	10	9	27	11	13	32	3
4200-59	11	9	9	-1	11	13	38	13
4200-58	11	10	9	29	11	13	22	13
4200-57	11	10	10	26	12	12	36	13
4300-57	11	-1	9	28	12	2	18	2
4300-58	11	9	10	30	12	13	39	11
4300-59	12	9	10	32	2	12	42	12
4300-60	11	9	10	27	2	12	33	3
4300-61	11	-1	9	21	11	12	29	12
4300-62	11	9	10	25	12	11	35	12
4300-63	11	9	10	24	11	2	36	2
4300-64	10	9	10	26	12	12	35	12
4300-65	11	10	9	25	12	12	28	12
4300-66	12	10	9	27	12	12	33	12
4300-67	12	10	10	36	11	12	45	13
4300-67-R	12	10	10	32	11	12	46	12
4300-68	11	9	10	26	11	12	29	12
4300-69	11	10	9	23	11	11	31	1
4300-70	12	10	10	25	10	12	36	12
4300-71	11	9	10	29	12	12	38	12
4300-72	11	9	10	24	12	12	43	12
4300-73	11	10	10	27	12	12	16	12

	155 - HPH	156 - HBI	157 - HAR	158 - HBA	159 - HBA	160 - HBI	161 - HA	162 - HPH
4300-74	12	9	9	31	11	12	43	13
4300-75	11	10	10	29	12	12	35	12
4300-76	11	10	10	40	12	13	53	13
4400-57	12	10	10	35	12	12	47	2
4400-58	11	10	10	28	12	13	32	2
4400-59	12	10	10	30	11	13	38	12
4400-60	11	10	9	30	12	12	42	12
4400-61	12	10	10	34	12	13	44	12
4400-62	11	9	9	23	2	2	31	12
4400-62-R	11	9	10	-1	2	12	30	12
4400-63	2	10	10	31	12	12	39	13
4400-64	11	10	9	31	12	12	43	12
4400-65	12	10	10	25	12	12	31	12
4400-66	12	10	10	31	2	12	46	2
4400-67	12	10	10	34	12	2	5	2
4400-68	11	10	10	31	11	12	40	13
4400-69	12	10	10	35	11	12	44	12
4400-70	11	9	10	27	12	12	31	12
4400-71	11	-1	9	26	1	11	3	12
4400-72	11	9	10	27	12	12	33	2
4400-73	11	9	10	31	12	13	41	13
4400-74	11	9	9	23	12	12	33	13
4400-75	11	9	10	27	12	12	33	13
4400-76	11	9	9	23	3	13	3	2
4400-77	12	9	9	20	11	12	26	12
4400-77-R	11	9	9	22	2	12	32	12
4300-77	12	10	10	23	12	12	29	2
4300-78	2	10	9	26	11	2	19	2
4500-57	11	10	9	21	12	12	9	2
4500-58	3	9	9	24	11	1	30	12
4500-59	10	9	9	22	11	2	28	3
4500-60	11	9	9	25	2	12	31	13
4500-61	13	9	9	24	12	11	5	2
4500-62	11	9	9	22	11	2	29	12
4500-63	11	-1	10	26	12	12	15	12
4500-64	11	9	8	23	11	12	27	2
4500-65	11	9	10	11	1	12	27	11
4500-66	11	9	10	20	2	2	26	13
4500-67	12	9	8	21	2	11	32	3
4500-68	11	9	9	23	12	12	3	12
4500-68-R	11	9	9	-1	11	13	27	12
4500-69	11	9	9	22	11	11	28	11
4500-70	10	9	9	22	11	12	30	11
4500-71	11	9	9	21	11	12	27	13
4500-72	11	9	10	22	11	12	28	12
4500-73	11	9	9	21	12	12	26	1
4500-74	11	9	9	22	12	2	30	11
4500-75	11	10	10	21	11	11	28	12
4500-76	11	9	9	21	12	11	28	2
4500-77	12	10	9	21	11	2	23	12
4600-56	2	9	10	24	12	12	19	2
4600-57	12	9	10	22	11	12	29	1
4600-58	11	10	9	20	11	12	29	13
4600-59	12	9	9	23	11	12	12	2

	155 - HPH	156 - HBI	157 - HAR	158 - HBA	159 - HBA	160 - HBI	161 - HA	162 - HPH
4600-60	10	10	9	23	12	2	14	12
4600-61	11	10	10	23	12	12	27	12
4600-61-R	12	9	10	24	12	12	10	12
4600-62	11	9	9	22	12	2	12	2
4600-63	11	9	9	21	11	12	26	12
4600-64	12	9	10	24	12	12	33	12
4600-65	11	10	9	23	11	12	3	12
4600-66	11	10	10	23	12	12	31	13
4600-67	11	8	8	17	11	11	25	11
4600-68	10	9	9	25	11	11	32	12
4600-69	11	9	10	20	11	11	26	12
4600-70	11	9	9	-1	11	11	20	12
4600-71	10	9	9	21	12	12	26	12
4600-72	10	9	9	25	11	11	30	12
4600-73	11	10	9	26	11	12	37	2
4600-74	12	9	9	24	11	2	32	12
4600-75	11	10	9	24	12	11	29	2
4600-76	11	9	10	21	11	11	28	12
4600-76-R	11	8	9	20	12	11	26	2
4600-77	11	8	10	23	12	12	27	12
4600-78	11	9	8	21	2	11	24	2
4700-57	11	9	9	27	12	2	36	12
4700-58	11	10	9	-1	2	12	30	13
4700-59	11	9	9	27	11	12	34	12
4700-60	10	9	8	20	11	10	29	11
4700-61	11	9	10	21	12	11	29	12
4700-62	11	9	-1	25	12	12	33	2
4700-63	11	9	9	23	1	11	4	2
4700-64	10	9	9	20	12	2	13	12
4700-65	11	9	9	23	11	12	32	2
4700-66	10	9	9	22	12	12	29	12
4700-67	11	9	9	24	2	2	29	12
4700-68	10	9	9	22	11	11	27	11
4700-69	11	9	-1	22	2	11	3	2
4700-69-R	11	9	9	24	12	2	27	3
4700-70	10	9	-1	23	11	12	26	2
4700-71	11	9	9	22	12	2	24	12
4700-72	11	9	9	21	10	10	28	11
4700-73	10	9	9	21	11	2	26	11
4700-74	10	9	9	-1	11	11	29	11
4700-75	11	8	9	24	2	11	31	2
4700-76	11	9	-1	23	11	10	31	1
4700-77	10	9	9	2	10	2	24	2
4800-57	10	9	9	21	11	10	30	11
4800-58	11	8	9	22	2	11	26	11
4800-59	10	8	9	21	10	11	26	11
4800-60	11	8	9	21	2	2	29	2
4800-61	11	9	9	21	11	12	30	12
4800-62	11	8	9	19	11	2	23	3
4800-63	10	9	9	21	10	10	30	12
4800-63-R	11	9	10	22	11	12	29	12
4800-64	11	9	10	15	11	12	24	12
4800-65	10	9	9	22	11	12	27	2
4800-66	11	8	9	18	11	2	22	11

	155 - HPH	156 - HBI	157 - HAR	158 - HBA	159 - HBA	160 - HBI	161 - HA	162 - HPH
4800-67	11	9	9	24	11	12	34	11
4800-68	11	10	10	22	12	11	30	12
4800-69	12	10	8	22	2	12	28	12
4800-70	11	10	10	27	12	3	31	2
4800-71	12	10	9	22	12	13	5	13
4800-72	12	10	10	28	2	13	35	12
4800-73	11	10	9	20	12	12	29	13
4800-74	10	10	10	26	12	2	33	2
4800-75	11	9	9	21	11	12	27	12
4800-76	12	10	10	25	2	2	34	12
4800-77	11	9	9	23	12	2	26	13
4900-61	11	9	10	23	11	12	30	12
4900-61-R	11	9	10	26	12	12	30	13
4900-62	2	10	10	21	11	12	26	12
4900-63	12	10	10	28	2	12	39	12
4900-64	12	11	10	-1	2	13	33	12
4900-65	10	9	10	24	2	12	27	2
4900-66	11	-1	10	22	11	11	24	12
4900-67	10	9	9	23	2	10	31	12
4900-68	10	8	9	21	11	2	29	11
4900-69	11	8	9	20	11	10	24	11
4900-70	10	9	8	20	10	10	29	1
4900-71	10	8	9	21	10	11	28	11
4900-72	9	9	8	18	10	10	26	2
4900-73	10	9	9	20	11	11	24	2
4900-74	10	9	9	19	11	11	25	2
4900-75	10	9	9	22	10	10	27	12
4900-76	11	9	8	20	11	11	25	11
4900-76-R	10	9	9	18	10	11	14	11
4900-77	11	9	9	22	10	11	29	12
5000-77	10	9	9	-1	1	2	27	11
5000-76	10	9	-1	20	11	11	25	11
5000-75	11	9	9	20	10	11	26	12
5000-74	2	8	8	18	10	10	26	11
5000-73	11	9	9	23	11	11	27	2
5000-72	11	8	9	-1	11	12	27	11
5000-71	9	9	8	20	10	10	24	1
5000-70	9	8	9	21	11	2	23	11
5000-69	10	10	-1	19	11	11	28	12
5000-68	11	9	9	22	11	12	27	12
5000-67	11	9	9	21	11	11	28	2
5000-66	10	9	9	21	11	11	26	12
5000-65	12	9	10	19	2	10	29	12
5000-64	11	9	10	10	13	12	25	12
5000-64-R	11	9	10	21	12	12	27	2
5000-63	11	10	9	25	11	12	17	12
5000-62	10	9	9	22	11	12	26	11
5000-61	11	9	10	-1	12	11	27	12
5100-75	11	9	9	19	2	12	29	12
5100-74	11	9	9	21	11	11	28	11
5100-73	2	9	10	21	12	12	29	12
5100-72	11	8	8	18	1	11	24	2
5100-71	10	9	9	22	11	2	29	11
5100-70	10	9	9	23	11	11	33	12

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

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

Activation Laboratories Ltd.
Date: November 23, 2011
R=Replicate Sample

	155 - HPH	156 - HBI	157 - HAR	158 - HBA	159 - HBA	160 - HBI	161 - HA	162 - HPH
5100-69	11	9	10	21	11	11	28	2
5100-68	10	8	9	22	12	12	28	11
5100-67	12	9	10	21	11	11	26	12
5100-66	11	9	10	22	2	11	27	12
5100-65	12	9	9	10	11	12	31	12
5100-64	11	9	10	20	11	11	26	12
5100-64-R	11	9	10	22	2	11	29	2
5100-63	11	9	9	20	2	12	25	12
5100-62	11	9	9	27	11	12	30	1
5100-61	10	9	9	24	12	12	28	2
5200-77	11	10	10	28	11	12	34	12
5200-76	12	9	9	-1	2	12	32	12
5200-75	11	9	9	25	10	11	30	2
5200-74	10	9	10	27	12	1	33	1
5200-73	11	9	10	25	12	2	31	2
5200-72	11	9	9	27	11	12	31	12
5300-76	11	9	10	22	11	10	25	2
5300-77	11	9	9	21	2	10	28	12
5400-77	11	-1	10	20	1	12	25	2
5400-76	10	9	9	21	11	11	24	2
5500-76	11	-1	9	24	2		31	2
5500-77	10	9	8	23	11	11	27	2
LMB-QA	11	9	9	36	11	2	52	12
LMB-QA	11	10	10	33	12	13	47	12
LMB-QA	12	10	9	23	12	12	33	12
LMB-QA	11	9	10	21	13	12	29	12
LMB-QA	11	9	9	23	11	10	24	2
LMB-QA	10	9	9	23	10	11	29	11
LMB-QA	9	9	8	22	10	10	30	11
LMB-QA	11	-1	9	-1	11	11	27	12

SGH – SOIL GAS HYDROCARBON Predictive Geochemistry

for

KEYSTONE ASSOCIATES INC. "CUNNINGHAM PROJECT"

December 9, 2011

* Dale Sutherland,

Activation Laboratories Ltd

(* - author, originator)

EVALUATION OF SOIL SAMPLES

DATA EXPLORATION FOR: "COPPER" TARGETS

SGH COPPER TEMPLATE USED FOR THIS REPORT

Workorder: A11-12846

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PREFACE

THIS "STANDARD" SGH INTERPRETATION REPORT:

The purpose of this Soil Gas Hydrocarbon (SGH) interpretation "Standard Report" is to ensure that clients and other potential reviewers of the results have a good understanding of this organic, deep penetrating geochemistry. As SGH provides such a large data set and is not interpreted in the same way as inorganic geochemistries, this 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. 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.

"SUPPLEMENTAL REPORT": (\$ 1,500.00, as of July 1, 2011)

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

"ADDITIONAL INTERPRETATION": (\$ 1,500.00, as of July 1, 2011)

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 \$1,500 per area, thus a total of \$3,000.

"BASIC OR SUPPLEMENTAL REPORT GIS PACKAGE": (\$ 120.00)

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

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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. SGH has been successful for delineating targets found at over 500 metres in depth. Samples of various media have been successfully analyzed such as soil (any horizon), drill core, rock, peat, lake-bottom sediments and even snow. The SGH analysis incorporates a very weak leach, essentially aqueous, that only extracts the surficial bound hydrocarbon compounds and those compounds in interstitial spaces around the sample particles. These are the hydrocarbons that have been mobilized from the target depth. SGH is unique and should not be confused with other hydrocarbon tests or traditional analyses that measure C1 (Methane) to C5 (Pentane) or other gases. SGH is also different from soil hydrocarbon tests that thermally 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 to isolate, confirm, and measure the presence of only the individual hydrocarbons that have been found to be of interest from initial research and development and from performance testing in two Canadian Mining Industry Research Organization (CAMIRO) projects (97E04 and 01E02).

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

SGH has attracted the attention of a large number of Exploration companies. In the above mentioned research projects the sponsors have included (in no order): Western Mining Corporation, BHP-Billiton, Inco, Noranda, Outokumpu, Xstrata, Cameco, Cominco, Rio Algom, Alberta Geological Survey, Ontario Geological Survey, Manitoba Geological Survey and OMET. Further, beyond this research, Activation Laboratories Ltd. has interpreted the SGH data for over 400 targets from clients since January of 2004. In both CAMIRO research projects over known mineralization and in exploration projects over unknown targets, SGH has performed exceptionally well. As an example, in

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the first CAMIRO research project that commenced in 1997 (Project 97E04), there were 10 study areas that were submitted blindly to Actlabs. These study sites were selected since other inorganic geochemistries were unsuccessful at illustrating anomalies related to the target.

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

Sample Type and Survey Design It is highly recommended that a *minimum* of 50 sample "locations" is preferred to obtain enough samples into background areas on both sides of *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, lakebottom sediments, and even snow. The sampling design is suggested to use evenly spaced samples from 15 metres to 200 metres and line spacing from 50 metres to 500 metres depending on the size and type of target. A 4:1 ratio is suggested, however, larger orientation surveys have also been successful. Ideally even large grids should have one-third of the samples over the target and twothirds of the samples into anticipated background areas. This will allow the proper assessment of the SGH geochromatographic vectoring and background site signature levels with minimal bias. Individual samples taken at significant distances from the main survey area to represent background are not of value in the SGH interpretation as SGH results are not background subtracted. Samples can be drip dried in the field and do not need special preservation for shipping and has been specifically designed to avoid common contaminants from sample handling and shipping. SGH has also been shown to be robust to cultural activities even to the point that successful results and interpretation has been obtained from roadside right-of-ways.

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

- Minimum of 50 samples "locations"
- Evenly spaced in the target area one-third over the target and one-third on each side of the target
- Different sample types even "within" the same survey or transect
- Evenly spaced samples lines spaced in a 4:1 ratio
- Samples can be drip dried.
- No special preservation for shipping is needed.

Sample Preparation and Analysis

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

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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 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.

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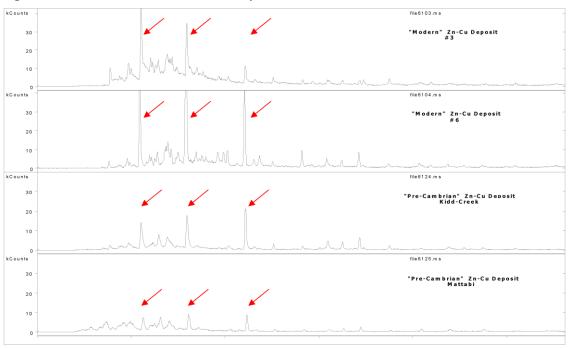
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SGH – FORENSIC GEOCHEMICAL SIGNATURES

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 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.



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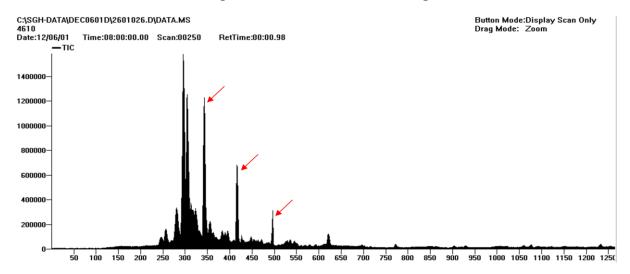


The above profiles are:

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

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

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

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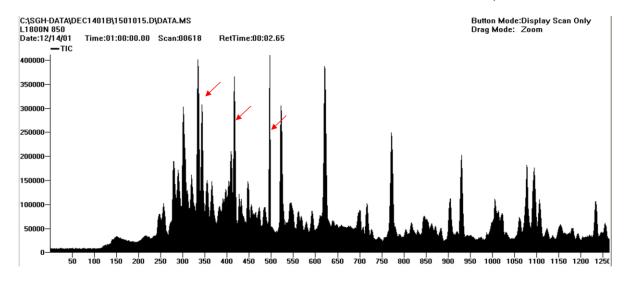
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complex SGH signature, however the visible portion of the VMS signature as indicated by the red arrows is still observed as in the black smoker, Mattabi and Kidd Creek ore samples.



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

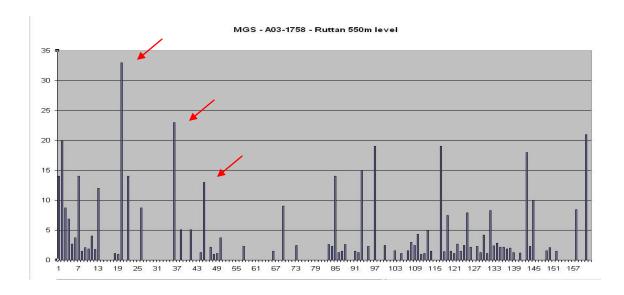
The chromatograms shown on the preceding page from the GC/MS analysis are not used directly in the interpretation of SGH data. As we are only interested in a specific list of 162 hydrocarbons, the mass spectrometer and associated software programs specifically identifies the hydrocarbons of interest,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

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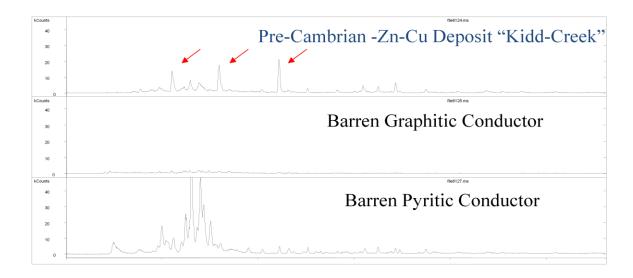
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Through the work done in the SGH CAMIRO research projects, it was observed that the hydrocarbon signature produced by the SGH technique appeared to also be able to be used to differentiate barren from ore-bearing conductors. This was explored further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

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



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

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

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

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

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using %CV, the concentration of duplicate pairs is irrelevant because the units of concentration cancel out in the formation of the coefficient of variation ratio. For SGH, the %CV is calculated on all values ≥ 2 ppt. These values are averaged and represent a value for each pair of replicate analysis of the sample. All of the %CV values for the replicates are then averaged to report one %CV value to represent the overall estimate of the relative error in the laboratory sub-sampling from the prepared samples, and any instrumental variability, in the SGH data set for the survey. Actlabs' has successfully addressed the analytical challenge to minimize analytical variability for such a large list of compounds. Thus as SGH is also interpreted as a signature and is solely used for exploration and not assay measurement, the data from SGH is "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 has a range having a maximum of 12.4% CV, a minimum of 3.0% CV, with a standard deviation of 1.6%, in a population made up of over 400 targets (over 45,000 samples) interpreted since June of 2004. Again the precision of 6.8% CV included all of the sample types as soil from different horizons, peat, till, humus, lake-bottom sediments, ocean-bottom sediments, and even snow. When field duplicates have been revealed to us, we have found that the precision of the field duplicates are in the range of about 9 to 12 %CV. As SGH is interpreted using a combination of compounds as a chemical "class" or signature, the affect of a few concentrations that may be imprecise in a direct comparison of duplicates is not significant. Further, projects that have been re-sampled at different times or seasons are expected to have different SGH concentrations. The SGH anomalies may not be in exactly the same position or of the same intensity due to variable conditions that may have affected the dispersion of different pathfinder classes. However, the SGH "signature" as to the presence of the specific mix of SGH pathfinder classes will definitely still exist, and will retain the ability to identify the deposit type and vector to the same target location.

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

The LMB-OA 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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SGH DATA INTERPRETATION

GEOCHEMICAL ANOMALY THRESHOLD VALUE

In the interpretation of "inorganic" geochemical data one of the determinations to be made is to calculate a "Threshold" value above which data is considered anomalous. This is done on an element by element basis. In the interpretation of this "organic" geochemical data this determination is done differently. The determination of a threshold value is not calculated for each hydrocarbon compound. The determination of a threshold value is also a concentration below which geochemical data is considered as "noise" for the purposes of geochemical interpretation. As discussed, 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 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.

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.

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SGH DATA LEVELING

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

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

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



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, IOCG, Base Metal, Polymetallic, and Copper, as well as for Kimberlites. SGH data has developed into a dual exploration tool. From the interpretation, a vertical projection of the predicted location of the target can be made as well as a statement on the rating of the comparability of the identification of the anticipated target type to that from known case studies, as an example: if the client anticipates the target to be a Gold deposit, what is the rating or comparability that the target is similar to the SGH results over a Gold deposit in Nunavut, shear hosted and sediment hosted deposits in Nevada, or Paleochannel Gold mineralization in Western Australia.

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

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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 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

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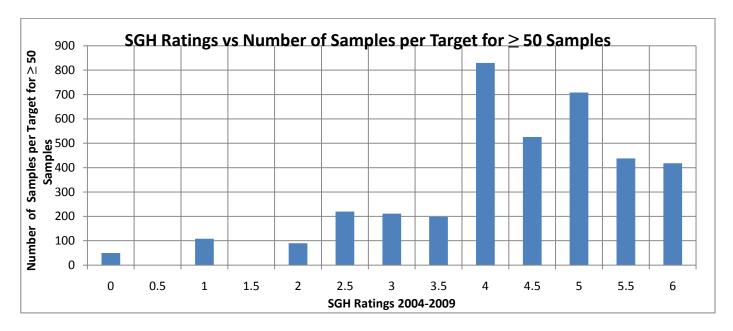
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is not said to be linked to grade of a deposit or depth to the target. Even in exploration surveys clients tend to submit samples over more promising targets due to knowledge of the geology and prior geochemical or geophysical results. As shown in 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.



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

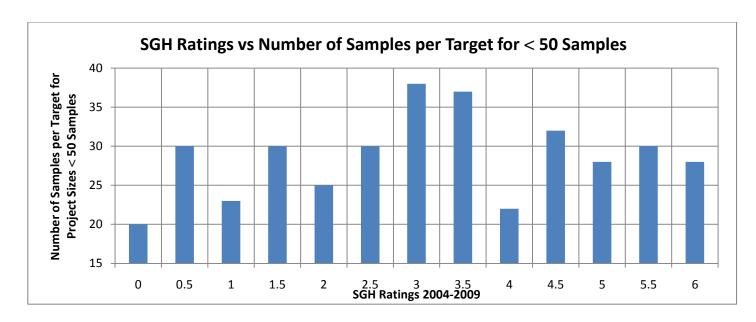
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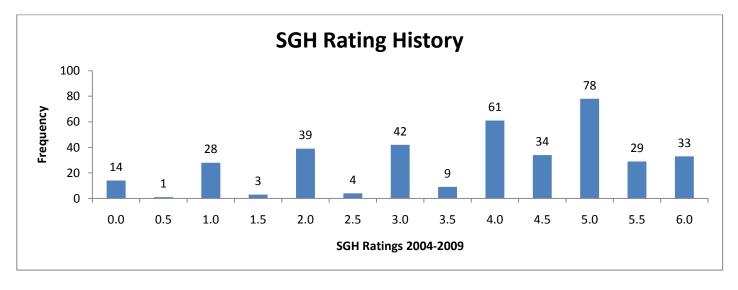
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The overall rating frequency for over 400 targets from January 2004 to December 2009 is shown in the chart below illustrating that surveys over more promising targets are most often submitted for best use of research or exploration dollars. It also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

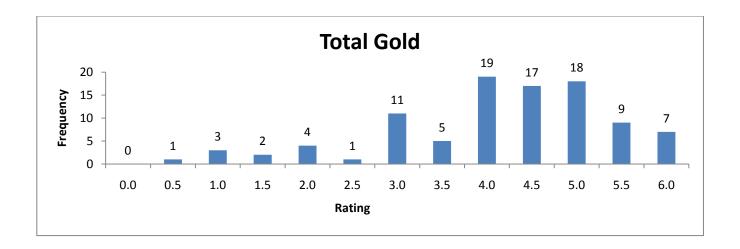


More specific for SGH interpretation for Gold targets, the overall rating frequency for 97 targets from January 2004 to December 2009 is shown in the chart below that also illustrates that surveys over more promising Gold targets are most often submitted for best use of research or exploration dollars.

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DISCLAIMER

This "SGH Interpretation Report" has been prepared to assist the user in understanding the development and capabilities of this Organic based Geochemistry. The interpretation of the Soil Gas Hydrocarbon (SGH) data is in reference to a template or group of SGH classes of compounds specific to a type of mineralization or target that is chosen by the client (i.e. the template for gold, copper, VMS, uranium, etc.). Although the template of SGH Pathfinder Classes that has been developed through research and review of case studies has proven to be able to address many lithologies, Activation Laboratories Ltd. cannot guarantee that the template is applicable to every type of target in every type of environment. The interpretation in this report attempts to identify an anomaly that has the best SGH signature in the survey for the type of mineralization or target chosen by the client. However, this interpretation is not exhaustive and there may be additional SGH anomalies that may warrant interest. It should not be viewed due to the generation of this SGH report, that Activation Laboratories Ltd. has the expertise or is in the business of interpreting geochemical data as a general service. As the author is the originator of the SGH geochemistry, has researched and developed this exploration tool since 1996, and has produced similar interpretations using SGH data for over 500 surveys, he is perhaps the best qualified to prepare this interpretation as assistance to clients wishing to use SGH. Activation Laboratories Ltd. can offer assistance in general suggestions for sampling protocols and in sample grid location design; however we accept no responsibility to the appropriateness of the samples taken. Activation Laboratories Ltd. has made every attempt to ensure the accuracy and reliability of the information provided in this report. Activation Laboratories Ltd. or its employees, does not accept any responsibility or liability for the accuracy, content, completeness, legality, or reliability of the information or description of processes contained in this report. The information is provided "as is" without a guarantee of any kind in the interpretation or use of the results of the SGH geochemistry. The client or user accepts all risks and responsibility for losses, damages, costs and other consequences resulting directly or indirectly form using any information or material contained in this report or using data from the associated spreadsheet of results.

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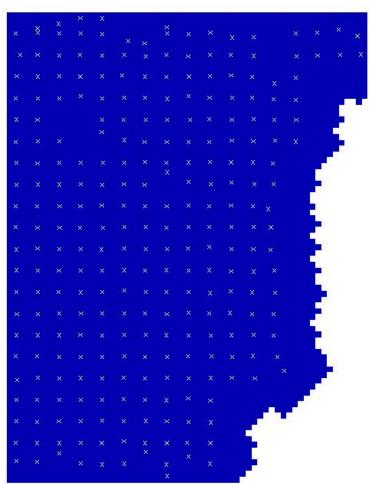


INTERPRETATION OF SGH RESULTS A11-12846 – KEYSTONE ASSOCIATES INC. CUNNINGHAM PROJECT

SGH SOIL SAMPLE SURVEY INTERPRETATION

This report is based on the SGH results from the analysis of a total of 275 soil samples. The Cunningham Project is comprised of a regular grid with samples spaced at approximately 100 metres apart. The project area covers approximately 1.6 km by 2.0 km. Sample coordinates were provided for mapping of the SGH results for these soil samples as UTM coordinates based in NAD83 Zone 17.

SGH SURVEY – SOIL SAMPLE LOCATION MAP



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INTERPRETATION OF SGH RESULTS A11-12846 – KEYSTONE ASSOCIATES INC. CUNNINGHAM PROJECT

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

The overall precision of the SGH analysis for the soil samples in this Cunningham Project was excellent as demonstrated by 18 samples taken from this survey which were used for laboratory replicate analysis. The average Coefficient of Variation (%CV) of the replicate results for the project samples in this submission was 5.7 % which represents an excellent level of analytical performance especially at such low parts-per-trillion concentrations.

No leveling or statistics were conducted on the data in 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 this survey and on these SGH results.**

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

The *overall* SGH interpretation Rating has even a higher level of confidence as it further relies on 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.

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KEYSTONE ASSOCIATES INC. - CUNNINGHAM SGH SURVEY INTERPRETATION FOR COPPER MINERALIZATION

The Copper template of SGH Pathfinder Classes primarily uses low and medium molecular weight classes of hydrocarbon compounds. At least three Pathfinder Class maps, associated with the SGH signature developed for Copper must be present to begin to be considered for assignment of a good rating relative to the SGH performance in case studies over known Copper based mineralization. These SGH classes must also concur and support a consistent interpretation in relation to the expected geochromatographic characteristics of the Pathfinder Class.

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

Note that any concentration value in the accompanying Excel spreadsheet greater than the "Reporting Limit" of 1 ppt is important data and has been able to depict mineralization at depth. The majority of the variability or noise has already been eliminated; additional filtering will adversely affect any interpretation. Note 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 (>750 metres) but also works well for relatively shallow targets. <u>Targets shallower than about 3 to 5 metres</u> will have a reduced SGH signal due to interaction with atmospheric conditions and samples taken right at surface outcrops will have even weaker signals due to a higher degree of weathering from various processes on these volatile and semi-volatile organic hydrocarbons.

The SGH Pathfinder Class maps shown on pages 28 and 29, has consistently been associated with the delineation of Copper based deposits and is just one of the Pathfinder Class maps used in the interpretation (other SGH Pathfinder Class maps are not shown at this price point and report turnaround time). Additional interpretation information, which may contain additional SGH Pathfinder Class maps, is available as a Supplementary Report at an additional price (see page 4).

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KEYSTONE ASSOCIATES INC. - CUNNINGHAM SGH SURVEY INTERPRETATION FOR COPPER MINERALIZATION

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

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KEYSTONE ASSOCIATES INC. - CUNNINGHAM SGH SURVEY INTERPRETATION FOR COPPER MINERALIZATION

The plan view map for one of the most reliable SGH Copper Pathfinder Classes is shown on page 29 for the Cunningham Project. This SGH Copper Pathfinder class is expected to show apical anomalies that are usually associated with the centre of Redox conditions in the overburden and thus often directly over Copper deposition that may be present at depth.

The interpretation in this report for Copper mineralization 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 and the development of an electrochemical cell. This research has resulted in the development by Activation Laboratories of a new enhanced model of the most recent electrochemical/ Redox cell theory originated by Govett (1976) that has graduated to the current 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 resolution. This has resulted is a more confident level of interpretation of SGH and the introduction of a more appropriate terminology for SGH as "Spatiotemporal Geochemical Hydrocarbons", a more accurate description than Soil Gas Hydrocarbons. The analysis and the SGH acronym has remained the same however in the future SGH will be referred to more often as "Spatiotemporal Geochemical Hydrocarbons". With this enhanced interpretation we mark the beginning of the ability to make more confident interpretations as well as statements regarding the possible depth to mineralization as we dissect the Redox cell relative to electrochemical theory with 3D-SGH. The new 3D-SGH models have been formally introduced at the International Applied Geochemistry Symposium organized by The Association of Applied Geochemists that took place in Rovaniemi, Finland, in August 2011.

In interpretation of the SGH Copper signature at the Cunningham Project a very significant apical anomalous zone was observed as a strong north-south anomalous zone on the west side of the survey. Apical anomalies are expected for this SGH Copper Pathfinder Class and are shown within the dashed blue outlines applied to the plan view map on page 29. Some of the more intense anomalies show a significant north-south trending similar to, but not exactly the same as, the predicted Gold mineralization at the Cunningham Project.

As essentially all SGH Class maps support this interpretation, there is thus a high degree of confidence in the existence of this north-south zonation. It must be remembered that many other SGH Class maps not shown in this report have been reviewed to support the interpretation shown.

December 9, 2011

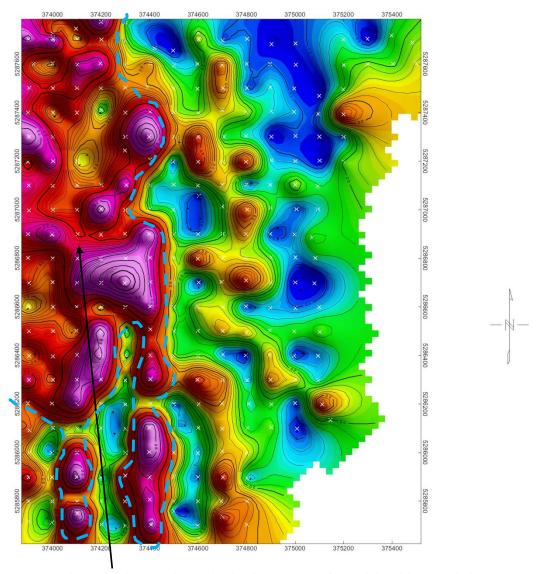
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SGH "COPPER" PATHFINDER CLASS MAP KEYSTONE ASSOCIATES INC. — CUNNINGHAM



BROAD APICAL ANOMALOUS ZONE HAVING AN SGH COPPER SIGNATURE

SGH SIGNATURE RATING RELATED TO COPPER MINERALIZATION = 5.0 OF 6.0



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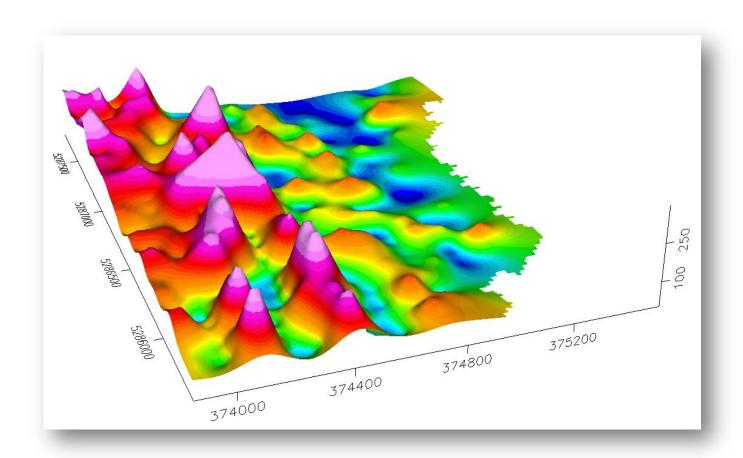
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SGH "COPPER" PATHFINDER CLASS MAP KEYSTONE ASSOCIATES INC. – CUNNINGHAM





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SGH RATING FOR THE SGH "COPPER" TEMPLATE KEYSTONE ASSOCIATES INC. - CUNNINGHAM

A review of the SGH Pathfinder Classes related to Copper has resulted in identification of a prominent apical trend in the SGH Copper Pathfinder Class map on page 29. As this trend is also identified by many SGH Classes with very little dispersion even for higher molecular weight classes the SGH results predict that this mineralization if present is relatively shallow in depth, in the neighbourhood of <100 metres.

After review of all of the combined interpretations using the SGH Copper signature template, the SGH results from this survey grid suggests a "rating of 5.0" for the anomalous zone within the blue dashed outline on page 29. This is a rating of confidence, relative to the performance of past SGH case studies over known Copper mineralization, which is predicted to indicate that Copper mineralization is potentially located directly below this apical anomalous trend at the Cunningham Project survey. This rating is based on a scale of 6.0, in 0.5 increments, with a value of 6.0 being the best. The SGH template for Copper was initially developed from surveys over Paleochannel Copper mineralization in Western Australia, and the Spence deposit in the Atacama Desert in Chile. The general SGH template used for Copper has been developed primarily from these study areas. It has since been enhanced and has been proven effective from the interpretation over many other surveys in many different geographical regions and for a wide variety of lithologies for Gold. The degree of confidence in the rating only starts to be "good" at a level of 4.0.

Potential drill targets would be located as a vertical projection directly at the more significant apical high values within the area defined by the zone within the dashed blue outline as shown on page 29. The identification of a drill target is not an explicit recommendation by Activation Laboratories Ltd. to drill test the associated SGH anomaly. A drill target is implied to ensure that the reader is aware of the location having the highest confidence of being the location of the vertical projection of the centre of mineralization, based only on SGH data. This is also not a recommendation for vertical drilling. Vertical drilling may not be the best approach to test the SGH anomalies in this area. Activation Laboratories Ltd. has no experience in actual exploration drilling techniques.

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

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SGH SURVEY – RECOMMENDATIONS KEYSTONE ASSOCIATES INC. - CUNNINGHAM

Additional samples to expand the grid to the north, south, and west, would provide additional confidence in interpretation of the extent of the potential mineralized zone. If obtaining additional samples is decided, it is recommended to continue the same 100 metre grid spacing. Should additional sampling be considered, please refer to the general recommendations for additional or in-fill sampling for SGH in the section below.

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

Based on the results of this report and/or other information, the client may decide that in-fill sampling may be warranted. To obtain the best results from additional sampling for SGH it is recommended that sample locations within, or bordering, the area of interest be re-sampled rather than just combining new sample results with the sample data from the initial survey. Although several SGH surveys have previously been easily and directly, combined without data leveling, it cannot be guaranteed that data leveling will not be required. It has been found that data leveling is more apt to be required should the new samples be collected under significantly different environmental conditions than during the initial sample survey, i.e. summer collection versus winter collection. The process of data leveling adds a minimum of 3 to 5 days of work to conduct the additional data evaluation, develop additional plots of the results, conduct new interpretations, and in additional report descriptions. Results from data leveling is also always considered "an approximation", thus the confidence in a combined interpretation will be lower that the interpretation from samples collected during one excursion to the field and submitted as one survey. As of September 2010, an additional cost will be invoiced should data leveling operations be required if the client requests that two SGH data sets be interpreted and reported together. Thus re-sampling a few of the original sample locations will provide a faster turnaround time for results and provide more accurate and confident surveys for evaluation and aid in deciding specific drill targets.

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Cautionary Note Regarding Assumptions and Forward Looking Statements

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

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

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

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

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

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

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

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Date Submitted at Actlabs Ancaster: October 31, 2011

Date Analyzed: November 15-23, 2011

Interpretation Report for Copper Targets: December 9, 2011

KEYSTONE ASSOCIATES INC.

145 Riviera Drive, Unit 7 Markam, Ontario, Canada L5R 5J6

Attention: Mr. Marc Gaudreau, Keystone Associates Inc.

RE: Cunningham Survey – Interpreted for Copper Targets

Activation Laboratories Workorder: A11-12846

CERTIFICATE OF ANALYSIS

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

275 samples were submitted for analysis.

Sample preparation was completed at Actlabs Ancaster facility: Code S4 – Drying at 40°C, Sieving -60 mesh

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

December 9, 2011

Activation Laboratories Ltd.

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REPORT/WORKORDER: A11-12846

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

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

The author of this SGH Interpretation Report, Mr. Dale Sutherland, is the creator of the SGH organic geochemistry. He is a Chartered Chemist (C.Chem.) and Forensic Scientist specializing in organic chemistry, and a member of The Association of Applied Geochemists. He is not a professional geologist or a professional geochemist.

CERTIFIED BY:

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

Forensic Scientist, Organics Manager,

Director of Research

Activation Laboratories Ltd.



December 9, 2011

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SGH – SOIL GAS HYDROCARBON Predictive Geochemistry

for

KEYSTONE ASSOCIATES INC. "CUNNINGHAM PROJECT"

December 9, 2011

* Dale Sutherland,

Activation Laboratories Ltd

(* - author, originator)

EVALUATION OF SOIL SAMPLES

DATA EXPLORATION FOR: "GOLD" TARGETS

SGH GOLD TEMPLATE USED FOR THIS REPORT

Workorder: A11-12846

December 9, 2011

Activation Laboratories Ltd.

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Quality Analysis ...



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PREFACE

THIS "STANDARD" SGH INTERPRETATION REPORT:

The purpose of this Soil Gas Hydrocarbon (SGH) interpretation "Standard Report" is to ensure that clients and other potential reviewers of the results have a good understanding of this organic, deep penetrating geochemistry. As SGH provides such a large data set and is not interpreted in the same way as inorganic geochemistries, this 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. 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.

"SUPPLEMENTAL REPORT": (\$ 1,500.00, as of July 1, 2011)

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

"ADDITIONAL INTERPRETATION": (\$ 1,500.00, as of July 1, 2011)

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 \$1,500 per area, thus a total of \$3,000.

"BASIC OR SUPPLEMENTAL REPORT GIS PACKAGE": (\$ 120.00)

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

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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. SGH has been successful for delineating targets found at over 500 metres in depth. Samples of various media have been successfully analyzed such as soil (any horizon), drill core, rock, peat, lake-bottom sediments and even snow. The SGH analysis incorporates a very weak leach, essentially aqueous, that only extracts the surficial bound hydrocarbon compounds and those compounds in interstitial spaces around the sample particles. These are the hydrocarbons that have been mobilized from the target depth. SGH is unique and should not be confused with other hydrocarbon tests or traditional analyses that measure C1 (Methane) to C5 (Pentane) or other gases. SGH is also different from soil hydrocarbon tests that thermally 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 to isolate, confirm, and measure the presence of only the individual hydrocarbons that have been found to be of interest from initial research and development and from performance testing in two Canadian Mining Industry Research Organization (CAMIRO) projects (97E04 and 01E02).

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

SGH has attracted the attention of a large number of Exploration companies. In the above mentioned research projects the sponsors have included (in no order): Western Mining Corporation, BHP-Billiton, Inco, Noranda, Outokumpu, Xstrata, Cameco, Cominco, Rio Algom, Alberta Geological Survey, Ontario Geological Survey, Manitoba Geological Survey and OMET. Further, beyond this research, Activation Laboratories Ltd. has interpreted the SGH data for over 400 targets from clients since January of 2004. In both CAMIRO research projects over known mineralization and in exploration projects over unknown targets, SGH has performed exceptionally well. As an example, in

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the first CAMIRO research project that commenced in 1997 (Project 97E04), there were 10 study areas that were submitted blindly to Actlabs. These study sites were selected since other inorganic geochemistries were unsuccessful at illustrating anomalies related to the target.

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

Sample Type and Survey Design It is highly recommended that a *minimum* of 50 sample "locations" is preferred to obtain enough samples into background areas on both sides of 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, lakebottom sediments, and even snow. The sampling design is suggested to use evenly spaced samples from 15 metres to 200 metres and line spacing from 50 metres to 500 metres depending on the size and type of target. A 4:1 ratio is suggested, however, larger orientation surveys have also been successful. Ideally even large grids should have one-third of the samples over the target and twothirds of the samples into anticipated background areas. This will allow the proper assessment of the SGH geochromatographic vectoring and background site signature levels with minimal bias. Individual samples taken at significant distances from the main survey area to represent background are not of value in the SGH interpretation as SGH results are not background subtracted. Samples can be drip dried in the field and do not need special preservation for shipping and has been specifically designed to avoid common contaminants from sample handling and shipping. SGH has also been shown to be robust to cultural activities even to the point that successful results and interpretation has been obtained from roadside right-of-ways.

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

- Minimum of 50 samples "locations"
- Evenly spaced in the target area one-third over the target and one-third on each side of the target
- Different sample types even "within" the same survey or transect
- Evenly spaced samples lines spaced in a 4:1 ratio
- Samples can be drip dried.
- No special preservation for shipping is needed.

Sample Preparation and Analysis

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

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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 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.

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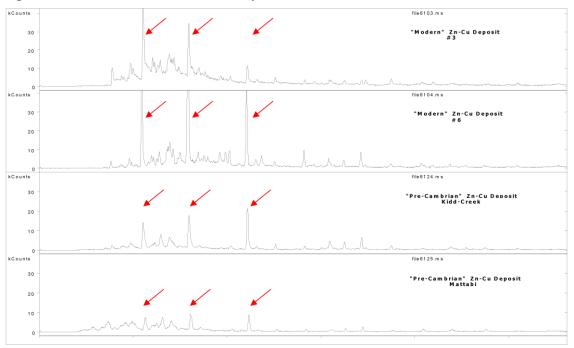
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SGH – FORENSIC GEOCHEMICAL SIGNATURES

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 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.



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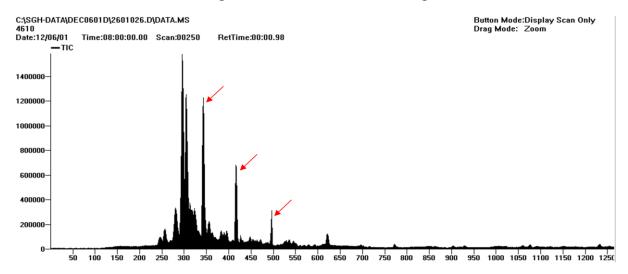


The above profiles are:

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

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

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

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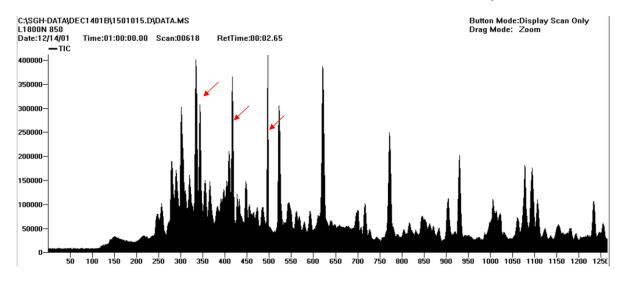
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complex SGH signature, however the visible portion of the VMS signature as indicated by the red arrows is still observed as in the black smoker, Mattabi and Kidd Creek ore samples.



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

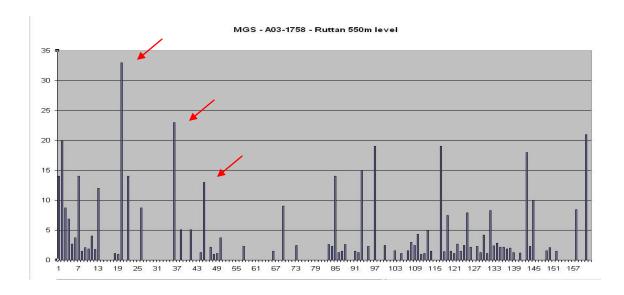
The chromatograms shown on the preceding page from the GC/MS analysis are not used directly in the interpretation of SGH data. As we are only interested in a specific list of 162 hydrocarbons, the mass spectrometer and associated software programs specifically identifies the hydrocarbons of interest,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

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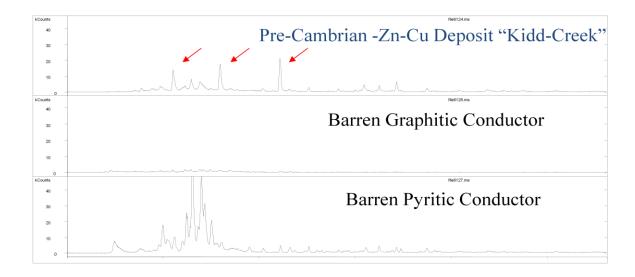
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Through the work done in the SGH CAMIRO research projects, it was observed that the hydrocarbon signature produced by the SGH technique appeared to also be able to be used to differentiate barren from ore-bearing conductors. This was explored further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

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



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

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

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



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

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using %CV, the concentration of duplicate pairs is irrelevant because the units of concentration cancel out in the formation of the coefficient of variation ratio. For SGH, the %CV is calculated on all values ≥ 2 ppt. These values are averaged and represent a value for each pair of replicate analysis of the sample. All of the %CV values for the replicates are then averaged to report one %CV value to represent the overall estimate of the relative error in the laboratory sub-sampling from the prepared samples, and any instrumental variability, in the SGH data set for the survey. Actlabs' has successfully addressed the analytical challenge to minimize analytical variability for such a large list of compounds. Thus as SGH is also interpreted as a signature and is solely used for exploration and not assay measurement, the data from SGH is "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 has a range having a maximum of 12.4% CV, a minimum of 3.0% CV, with a standard deviation of 1.6%, in a population made up of over 400 targets (over 45,000 samples) interpreted since June of 2004. Again the precision of 6.8% CV included all of the sample types as soil from different horizons, peat, till, humus, lake-bottom sediments, ocean-bottom sediments, and even snow. When field duplicates have been revealed to us, we have found that the precision of the field duplicates are in the range of about 9 to 12 %CV. As SGH is interpreted using a combination of compounds as a chemical "class" or signature, the affect of a few concentrations that may be imprecise in a direct comparison of duplicates is not significant. Further, projects that have been re-sampled at different times or seasons are expected to have different SGH concentrations. The SGH anomalies may not be in exactly the same position or of the same intensity due to variable conditions that may have affected the dispersion of different pathfinder classes. However, the SGH "signature" as to the presence of the specific mix of SGH pathfinder classes will definitely still exist, and will retain the ability to identify the deposit type and vector to the same target location.

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

The LMB-OA 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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SGH DATA INTERPRETATION

GEOCHEMICAL ANOMALY THRESHOLD VALUE

In the interpretation of "inorganic" geochemical data one of the determinations to be made is to calculate a "Threshold" value above which data is considered anomalous. This is done on an element by element basis. In the interpretation of this "organic" geochemical data this determination is done differently. The determination of a threshold value is not calculated for each hydrocarbon compound. The determination of a threshold value is also a concentration below which geochemical data is considered as "noise" for the purposes of geochemical interpretation. As discussed, 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 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.

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.

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SGH DATA LEVELING

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

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

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



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, IOCG, Base Metal, Polymetallic, and Copper, as well as for Kimberlites. SGH data has developed into a dual exploration tool. From the interpretation, a vertical projection of the predicted location of the target can be made as well as a statement on the rating of the comparability of the identification of the anticipated target type to that from known case studies, as an example: if the client anticipates the target to be a Gold deposit, what is the rating or comparability that the target is similar to the SGH results over a Gold deposit in Nunavut, shear hosted and sediment hosted deposits in Nevada, or Paleochannel Gold mineralization in Western Australia.

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

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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 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

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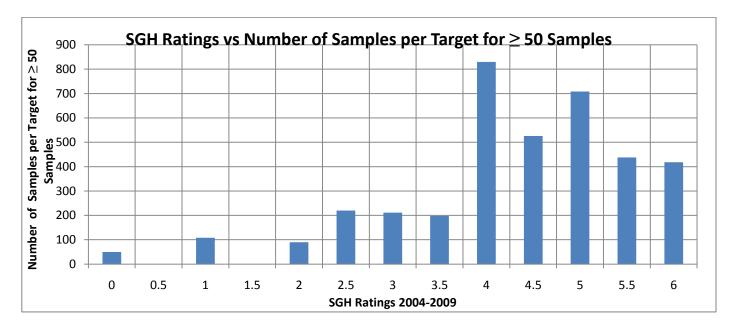
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is not said to be linked to grade of a deposit or depth to the target. Even in exploration surveys clients tend to submit samples over more promising targets due to knowledge of the geology and prior geochemical or geophysical results. As shown in 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.



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

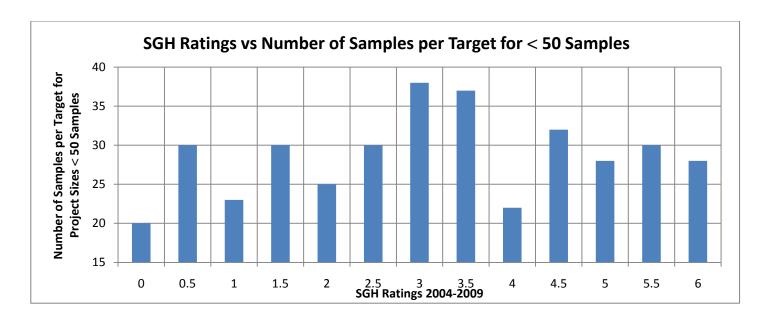
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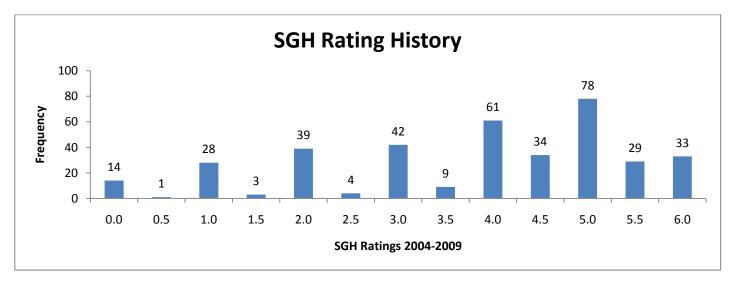
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The overall rating frequency for over 400 targets from January 2004 to December 2009 is shown in the chart below illustrating that surveys over more promising targets are most often submitted for best use of research or exploration dollars. It also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

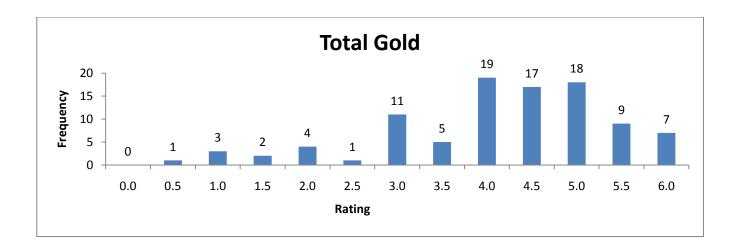


More specific for SGH interpretation for Gold targets, the overall rating frequency for 97 targets from January 2004 to December 2009 is shown in the chart below that also illustrates that surveys over more promising Gold targets are most often submitted for best use of research or exploration dollars.

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DISCLAIMER

This "SGH Interpretation Report" has been prepared to assist the user in understanding the development and capabilities of this Organic based Geochemistry. The interpretation of the Soil Gas Hydrocarbon (SGH) data is in reference to a template or group of SGH classes of compounds specific to a type of mineralization or target that is chosen by the client (i.e. the template for gold, copper, VMS, uranium, etc.). Although the template of SGH Pathfinder Classes that has been developed through research and review of case studies has proven to be able to address many lithologies, Activation Laboratories Ltd. cannot guarantee that the template is applicable to every type of target in every type of environment. The interpretation in this report attempts to identify an anomaly that has the best SGH signature in the survey for the type of mineralization or target chosen by the client. However, this interpretation is not exhaustive and there may be additional SGH anomalies that may warrant interest. It should not be viewed due to the generation of this SGH report, that Activation Laboratories Ltd. has the expertise or is in the business of interpreting geochemical data as a general service. As the author is the originator of the SGH geochemistry, has researched and developed this exploration tool since 1996, and has produced similar interpretations using SGH data for over 500 surveys, he is perhaps the best qualified to prepare this interpretation as assistance to clients wishing to use SGH. Activation Laboratories Ltd. can offer assistance in general suggestions for sampling protocols and in sample grid location design; however we accept no responsibility to the appropriateness of the samples taken. Activation Laboratories Ltd. has made every attempt to ensure the accuracy and reliability of the information provided in this report. Activation Laboratories Ltd. or its employees, does not accept any responsibility or liability for the accuracy, content, completeness, legality, or reliability of the information or description of processes contained in this report. The information is provided "as is" without a guarantee of any kind in the interpretation or use of the results of the SGH geochemistry. The client or user accepts all risks and responsibility for losses, damages, costs and other consequences resulting directly or indirectly form using any information or material contained in this report or using data from the associated spreadsheet of results.

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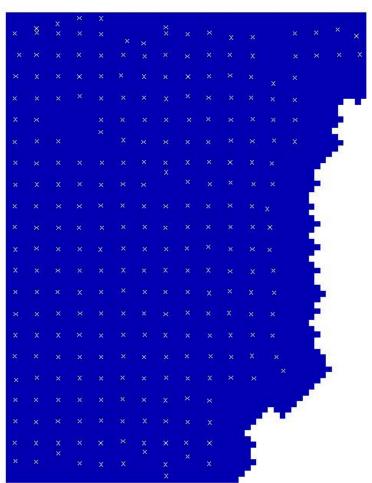


INTERPRETATION OF SGH RESULTS A11-12846 – KEYSTONE ASSOCIATES INC. CUNNINGHAM PROJECT

SGH SOIL SAMPLE SURVEY INTERPRETATION

This report is based on the SGH results from the analysis of a total of 275 soil samples. The Cunningham Project is comprised of a regular grid with samples spaced at approximately 100 metres apart. The project area covers approximately 1.6 km by 2.0 km. Sample coordinates were provided for mapping of the SGH results for these soil samples as UTM coordinates based in NAD83 Zone 17.

SGH SURVEY – SOIL SAMPLE LOCATION MAP



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INTERPRETATION OF SGH RESULTS A11-12846 – KEYSTONE ASSOCIATES INC. CUNNINGHAM PROJECT

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

The overall precision of the SGH analysis for the soil samples in this Cunningham Project was excellent as demonstrated by 18 samples taken from this survey which were used for laboratory replicate analysis. The average Coefficient of Variation (%CV) of the replicate results for the project samples in this submission was 5.7 % which represents an excellent level of analytical performance especially at such low parts-per-trillion concentrations.

No leveling or statistics were conducted on the data in 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 this survey and on these SGH results.**

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

The *overall* SGH interpretation Rating has even a higher level of confidence as it further relies on 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.

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KEYSTONE ASSOCIATES INC. - CUNNINGHAM SGH SURVEY INTERPRETATION FOR GOLD MINERALIZATION

The Gold template of SGH Pathfinder Classes primarily uses low and medium 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 based mineralization. These SGH classes must also concur and support a consistent interpretation in relation to the expected geochromatographic characteristics of the Pathfinder Class.

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

Note that any concentration value in the accompanying Excel spreadsheet greater than the "Reporting Limit" of 1 ppt is important data and has been able to depict mineralization at depth. The majority of the variability or noise has already been eliminated; additional filtering will adversely affect any interpretation. Note 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 (>750 metres) but also works well for relatively shallow targets. <u>Targets shallower than about 3 to 5 metres</u> will have a reduced SGH signal due to interaction with atmospheric conditions and samples taken right at surface outcrops will have even weaker signals due to a higher degree of weathering from various processes on these volatile and semi-volatile organic hydrocarbons.

The SGH Pathfinder Class maps shown on pages 28 and 29, has consistently been associated with the delineation of Gold based deposits and is just one of the Pathfinder Class maps used in the interpretation (other SGH Pathfinder Class maps are not shown at this price point and report turnaround time). Additional interpretation information, which may contain additional SGH Pathfinder Class maps, is available as a Supplementary Report at an additional price (see page 4).

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KEYSTONE ASSOCIATES INC. - CUNNINGHAM SGH SURVEY INTERPRETATION FOR GOLD MINERALIZATION

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

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KEYSTONE ASSOCIATES INC. - CUNNINGHAM SGH SURVEY INTERPRETATION FOR GOLD MINERALIZATION

The plan view map for one of the most reliable SGH Gold Pathfinder Classes is shown on page 29 for the Cunningham Project. This SGH Gold Pathfinder class is expected to show apical anomalies that are usually associated with the centre of Redox conditions in the overburden and thus often directly over Gold deposition that may be present at depth.

The interpretation in this report for Gold mineralization 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 and the development of an electrochemical cell. This research has resulted in the development by Activation Laboratories of a new enhanced model of the most recent electrochemical/ Redox cell theory originated by Govett (1976) that has graduated to the current 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 resolution. This has resulted is a more confident level of interpretation of SGH and the introduction of a more appropriate terminology for SGH as "Spatiotemporal Geochemical Hydrocarbons", a more accurate description than Soil Gas Hydrocarbons. The analysis and the SGH acronym has remained the same however in the future SGH will be referred to more often as "Spatiotemporal Geochemical Hydrocarbons". With this enhanced interpretation we mark the beginning of the ability to make more confident interpretations as well as statements regarding the possible depth to mineralization as we dissect the Redox cell relative to electrochemical theory with 3D-SGH. The new 3D-SGH models have been formally introduced at the International Applied Geochemistry Symposium organized by The Association of Applied Geochemists that took place in Rovaniemi, Finland, in August 2011.

In interpretation of the SGH Gold signature at the Cunningham Project a very significant apical anomaly was observed as a strong north-south trend on the west side of the survey. Apical anomalies are expected for this SGH Gold Pathfinder Class and are shown within the dashed yellow outlines applied to the plan view map on page 29.

As essentially all SGH Class maps support this interpretation, there is thus a very high degree of confidence in the existence of this north-south vein like trend. It must be remembered that many other SGH Class maps not shown in this report have been reviewed to support the interpretation shown.

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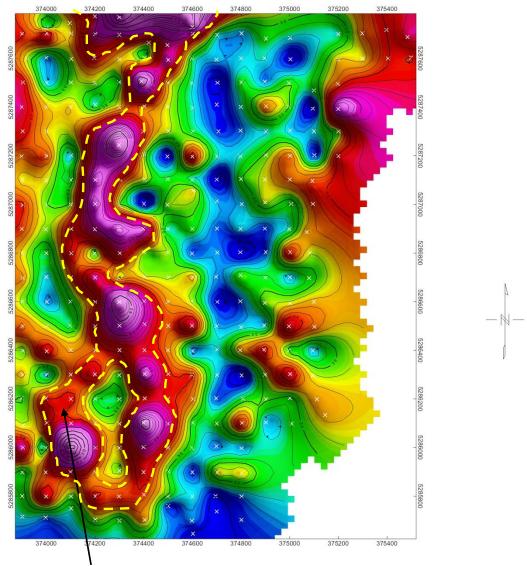
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SGH "GOLD" PATHFINDER CLASS MAP KEYSTONE ASSOCIATES INC. — CUNNINGHAM



APICAL ANOMALOUS ZONES HAVING AN SGH GOLD SIGNATURE

SGH SIGNATURE RATING RELATED TO GOLD MINERALIZATION = 6.0 OF 6.0



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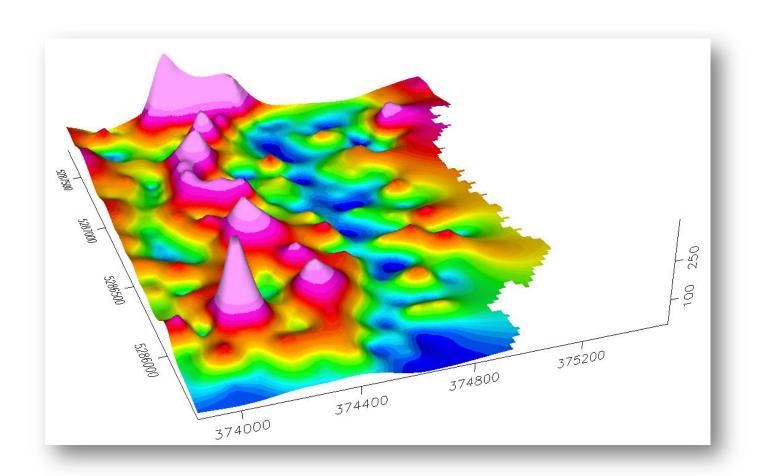
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1336 Sandhill Drive ◆ Ancaster, ON ◆ L9G 4V5 ◆ CANADA ◆ Tel: (905) 648-9611 ◆ Fax: (905) 648-9613 ◆ Toll Free: 1-888-ACTLABS



SGH "GOLD" PATHFINDER CLASS MAP KEYSTONE ASSOCIATES INC. – CUNNINGHAM





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SGH RATING FOR THE SGH "GOLD" TEMPLATE **KEYSTONE ASSOCIATES INC. - CUNNINGHAM**

A review of the SGH Pathfinder Classes related to Gold has resulted in identification of a prominent apical trend in the SGH Gold Pathfinder Class map on page 29. As this trend is also identified by nearly all SGH Classes with very little dispersion even for higher molecular weight classes the SGH results predict that this mineralization if present is relatively shallow in depth, in the neighbourhood of <100 metres.

After review of all of the combined interpretations using the SGH Gold signature template, the SGH results from this survey grid suggests a "rating of 6.0" within the yellow dashed outline on page 29. This is a rating of confidence, relative to the performance of past SGH case studies over known Gold mineralization, which is predicted to indicate that Gold mineralization is potentially located directly below this apical anomalous trend at the Cunningham Project survey. This rating is based on a scale of 6.0, in 0.5 increments, with a value of 6.0 being the best. This rating represents the similarity of these SGH results, and the associated Pathfinder Class maps, primarily to case studies for a Gold case study in Nunavut, shear hosted as well as sediment hosted deposits in Nevada, and Paleochannel Gold deposits in Australia. The general SGH template used for Gold has been developed primarily from these study areas. It has since been enhanced and has been proven effective from the interpretation over many other surveys in many different geographical regions and for a wide variety of lithologies for Gold. The degree of confidence in the rating only starts to be "good" at a level of 4.0.

Potential drill targets would be located as a vertical projection directly at the more significant apical high values within the dashed yellow outline as shown on page 29. The identification of a drill target is not an explicit recommendation by Activation Laboratories Ltd. to drill test the associated SGH anomaly. A drill target is implied to ensure that the reader is aware of the location having the highest confidence of being the location of the vertical projection of the centre of mineralization, based only on SGH data. This is also not a recommendation for vertical drilling. Vertical drilling may not be the best approach to test the SGH anomalies in this area. Activation Laboratories Ltd. has no experience in actual exploration drilling techniques.

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

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SGH SURVEY – RECOMMENDATIONS KEYSTONE ASSOCIATES INC. - CUNNINGHAM

Additional samples to expand the grid to the north and south would provide additional confidence in interpretation of the extent of the potential mineralized trend. If obtaining additional samples is decided, it is recommended to continue the same 100 metre grid spacing. Should additional sampling be considered, please refer to the general recommendations for additional or in-fill sampling for SGH in the section below.

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

Based on the results of this report and/or other information, the client may decide that in-fill sampling may be warranted. To obtain the best results from additional sampling for SGH it is recommended that sample locations within, or bordering, the area of interest be re-sampled rather than just combining new sample results with the sample data from the initial survey. Although several SGH surveys have previously been easily and directly, combined without data leveling, it cannot be guaranteed that data leveling will not be required. It has been found that data leveling is more apt to be required should the new samples be collected under significantly different environmental conditions than during the initial sample survey, i.e. summer collection versus winter collection. The process of data leveling adds a minimum of 3 to 5 days of work to conduct the additional data evaluation, develop additional plots of the results, conduct new interpretations, and in additional report descriptions. Results from data leveling is also always considered "an approximation", thus the confidence in a combined interpretation will be lower that the interpretation from samples collected during one excursion to the field and submitted as one survey. As of September 2010, an additional cost will be invoiced should data leveling operations be required if the client requests that two SGH data sets be interpreted and reported together. Thus re-sampling a few of the original sample locations will provide a faster turnaround time for results and provide more accurate and confident surveys for evaluation and aid in deciding specific drill targets.

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Cautionary Note Regarding Assumptions and Forward Looking Statements

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

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

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

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

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

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

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Date Submitted at Actlabs Ancaster: October 31, 2011

Date Analyzed: November 15-23, 2011

Interpretation Report for Gold Targets: December 9, 2011

KEYSTONE ASSOCIATES INC.

145 Riviera Drive, Unit 7 Markam, Ontario, Canada L5R 5J6

Attention: Mr. Marc Gaudreau, Keystone Associates Inc.

RE: Cunningham Survey – Interpreted for Gold Targets

Activation Laboratories Workorder: A11-12846

CERTIFICATE OF ANALYSIS

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

275 samples were submitted for analysis.

Sample preparation was completed at Actlabs Ancaster facility: Code S4 – Drying at 40°C, Sieving -60 mesh

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

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REPORT/WORKORDER: A11-12846

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

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

The author of this SGH Interpretation Report, Mr. Dale Sutherland, is the creator of the SGH organic geochemistry. He is a Chartered Chemist (C.Chem.) and Forensic Scientist specializing in organic chemistry, and a member of The Association of Applied Geochemists. He is not a professional geologist or a professional geochemist.

CERTIFIED BY:

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

Forensic Scientist, Organics Manager,

Director of Research

Activation Laboratories Ltd.



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