HEATON LAKE PROJECT

2014 ASSESSMENT REPORT:

GEOLOGY & SOIL GEOCHEMISTRY

Field Work Dates: July 2-5 and August 21-29, 2014

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SUMMARY

During the summer of 2014, personnel from Goldcorp Canada Ltd.'s Musselwhite Mine exploration department undertook a program of soil sampling and geological mapping on the western portion of the Heaton Lake claim block. In spite of the poor quality of most soil in the area, a series of 426 humus and 118 red sand samples were collected on north-south lines across the length of the claims and over the presumed location of the Totogan shear zone. Results suggest that there is a modest gold anomaly on claim # 4267734 with elevated arsenic levels in adjacent samples. Geological mapping confirmed the presence of the Totogan shear zone over a length of >7km and a width of >300m, primarily exposed as highly sheared, schistose siliciclastic metasediments. Mapping also located a number of outcrops of ultramafic and high-Mg basalts in an area originally thought to be underlain by metasediments. When combined with the aeromagnetic pattern of the area, these outcrops suggest that the Opapimiskan-Markop assemblage (OMU) occurs over an extensive area on the property.

A follow-up program of soil sampling, mapping and prospecting is recommended for the OMU area. A follow-up program of detailed mapping is also recommended for claim # 4267734 in an attempt to locate additional outcrops and any signs of mineralization on the vicinity of the anomalous soil samples.

1 INTRODUCTION

The Musselwhite Mine has actively supported and co-financed a number of academic research programs at the mine site and throughout the North Caribou greenstone belt (NCGB) for many years. During the course of one such program, MSc student Jason Duff from the University of Ottawa collected samples of fine-grained clastic metasedimentary rocks from various sites throughout the NCGB. He subsequently age-dated these samples and determined that the metasediments at Heaton Lake (Figs. 1, 2) have an age of ~2681 Ma (Duff, 2014) which is virtually identical to the age of the syn-orogenic Timiskaming-type sediments found in so many gold camps in the Canadian Shield (e.g. Timmins, Kirkland Lake) and thought by many experts to be a key positive indicator of gold potential in these areas. These metasediments lie along a major east-trending crustal scale shear zone, the Totogan shear, further enhancing the areas prospectivity. Goldcorp consequently staked 23 claims in the Heaton Lake area in May 2012 to cover this conceptual target.

2 LOCATION AND ACCESS

The western edge of the Heaton Lake claims is 22km ESE of the Musselwhite Mine which itself is 480km NNW of Thunder Bay (Fig. 1) and 197 km by road north of the town of Pickle Lake. The claim block is about 50km due north of the North Road (Pickle Lake to Round Lake gravel road) and is bisected by the north-south winter road which extends from that road to the communities of Kingfisher Lake, Wunnummin Lake and on up to Big Trout Lake (Fig.2).

The claims are located in the Patricia Mining District of northwestern Ontario, largely on NTS 1:50,000 map sheets 53A/5, 53A/12, and 53B/9, with a small portion on 53B/8. They straddle the boundary between MNDM claim maps Karl Lake, Dusten Lake and Schryburt Lake to the north, and Forester Lake, Neawagank Lake, and Pineimuta River to the south. In terms of the UTM NAD 83 datum co-ordinates, the western few claims are located in Zone 15 whereas the rest of the block is in Zone 16; all of the property-

Figure 1: General Location Map

scale maps in this report are presented in Zone 16 coordinates. The centre of the block lies at about 52º 30' N and 89 º 53' W.

Access for the soil sampling program was by charter helicopter from the Musselwhite mine. A Bell Long Ranger chartered from Wisk Air of Thunder Bay was use for this work.

3 FIRST NATION CONSULTATIONS

The 2014 exploration program was carried out solely on the 10 claims west of the north-south winter road which connects the North Road (Pickle Lake to Round Lake) to the more northern First Nation communities including Big Trout Lake, Wunnummin Lake and Kingfisher Lake (Fig. 2). The claims west of this road lie within the traditional lands of the North Caribou first nation. Under the terms of the Ontario Mining Act as revised

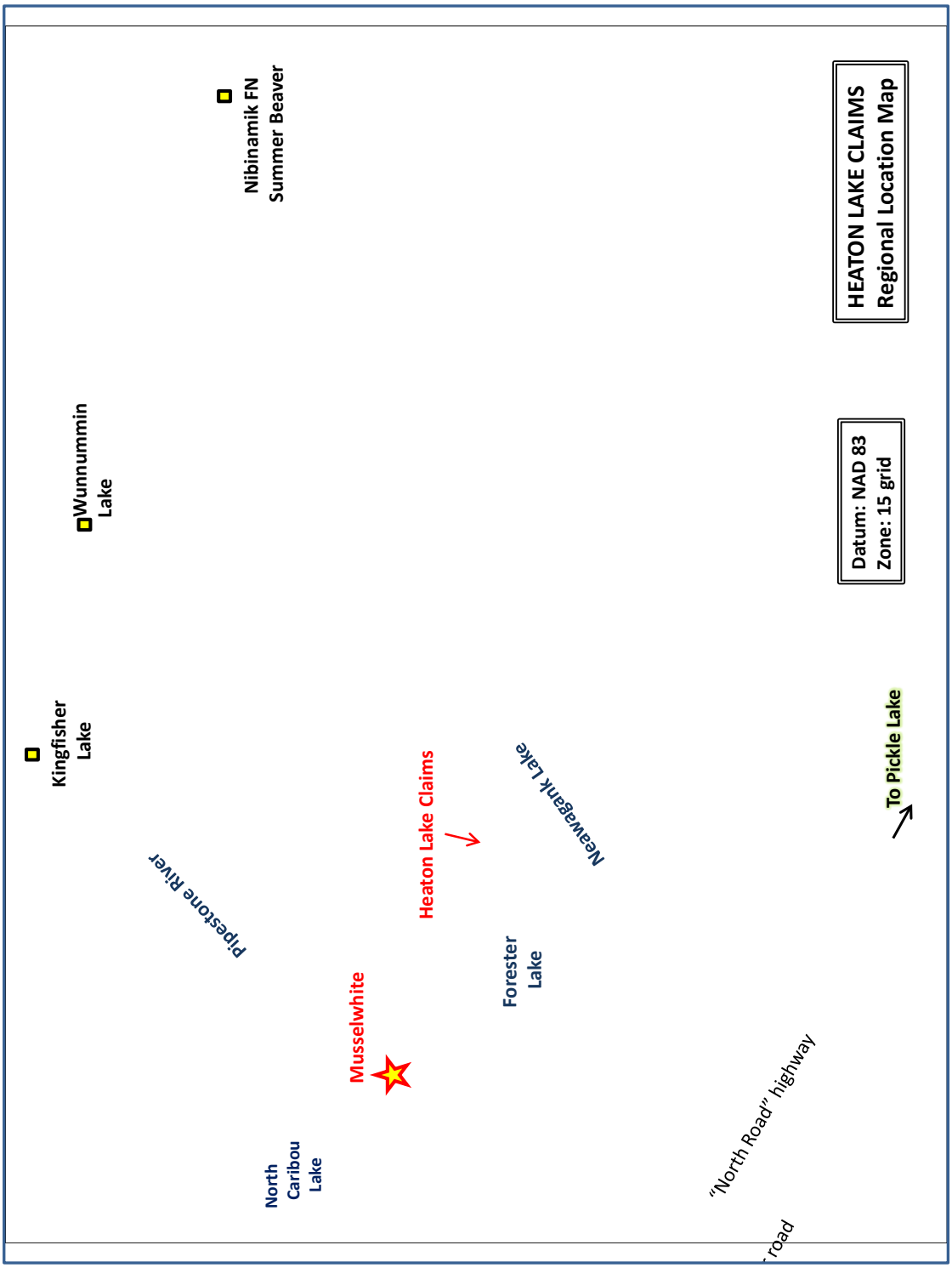

Figure 2: Regional Location Map

in 2009, no plan, permit or authorization is required from the local community for low-impact, "boots on the ground" work like soil sampling or mapping. However, the community was nevertheless advised of the planned work at a public forum on May 8, 2014 and 3 young workers were subsequently hired from that community for the work.

The claims east of the winter road are within the traditional lands of the Nibinamik (Summer Beaver) first nation which has its own written “access protocol” for companies wishing to explore in this area. This protocol contains a number of requirements which are well beyond those in the Mining Act and are not agreeable to this company as currently stated. Counter-proposals have been offered and discussions are ongoing, albeit at a pace which prevented any agreement in time to work on the eastern claims in 2014.

4 PROPERTY DESCRIPTION

Goldcorp Canada Ltd. is the 100% owner of 23 mining claims in the Luraas-Heaton-Obabigan Lakes area located 22 to 47km east-southeast of the company’s Musselwhite mine. The claims were acquired by staking in May 2012 by company personnel and contractors. The claims are depicted in Figure 3 below and details provided in Table One.

Claim #	G-Plan	Units	Recorded
PA 4267726	Karl Lake G-2082	15	2012-May-24
PA 4267727	Karl Lake G-2082	15	2012-May-24
PA 4267728	Karl Lake G-2082	15	2012-May-24
PA 4267743	Dusten Lake G-2015	12	2012-May-24
PA 4267729	Karl Lake G-2082	15	2012-May-24
PA 4267730	Dusten Lake G-2015	15	2012-May-24
PA 4267731	Karl Lake G-2082	15	2012-May-24
PA 4267732	Karl Lake G-2082	15	2012-May-24
PA 4267733	Karl Lake G-2082	15	2012-May-24
PA 4267734	Dusten Lake G-2015	15	2012-May-24
PA 4267735	Dusten Lake G-2015	15	2012-May-24
PA 4267736	Dusten Lake G-2015	15	2012-May-24
PA 4267737	Dusten Lake G-2015	15	2012-May-24
PA 4267738	Dusten Lake G-2015	15	2012-May-24
PA 4267739	Dusten Lake G-2015	15	2012-May-24
PA 4267740	Dusten Lake G-2015	15	2012-May-24
PA 4267741	Dusten Lake G-2015	16	2012-May-24
PA 4267742	Dusten Lake G-2015	16	2012-May-24
PA 4245207	Schryburt Lake	12	2012-May-24
PA 4245209	Schryburt Lake	12	2012-May-24
PA 4245210	Schryburt Lake	12	2012-May-24
PA 4267744	Pineimuta River	16	2012-May-24
PA 4267745	Pineimuta River	16	2012-May-24

Table 1: Claim Details

Correspondence concerning these claims should be addressed to the author or Musselwhite Chief Geologist at:

Musselwhite Mine Exploration Dept., P.O. Box 7500
Thunder Bay, ON, P7B 6S8

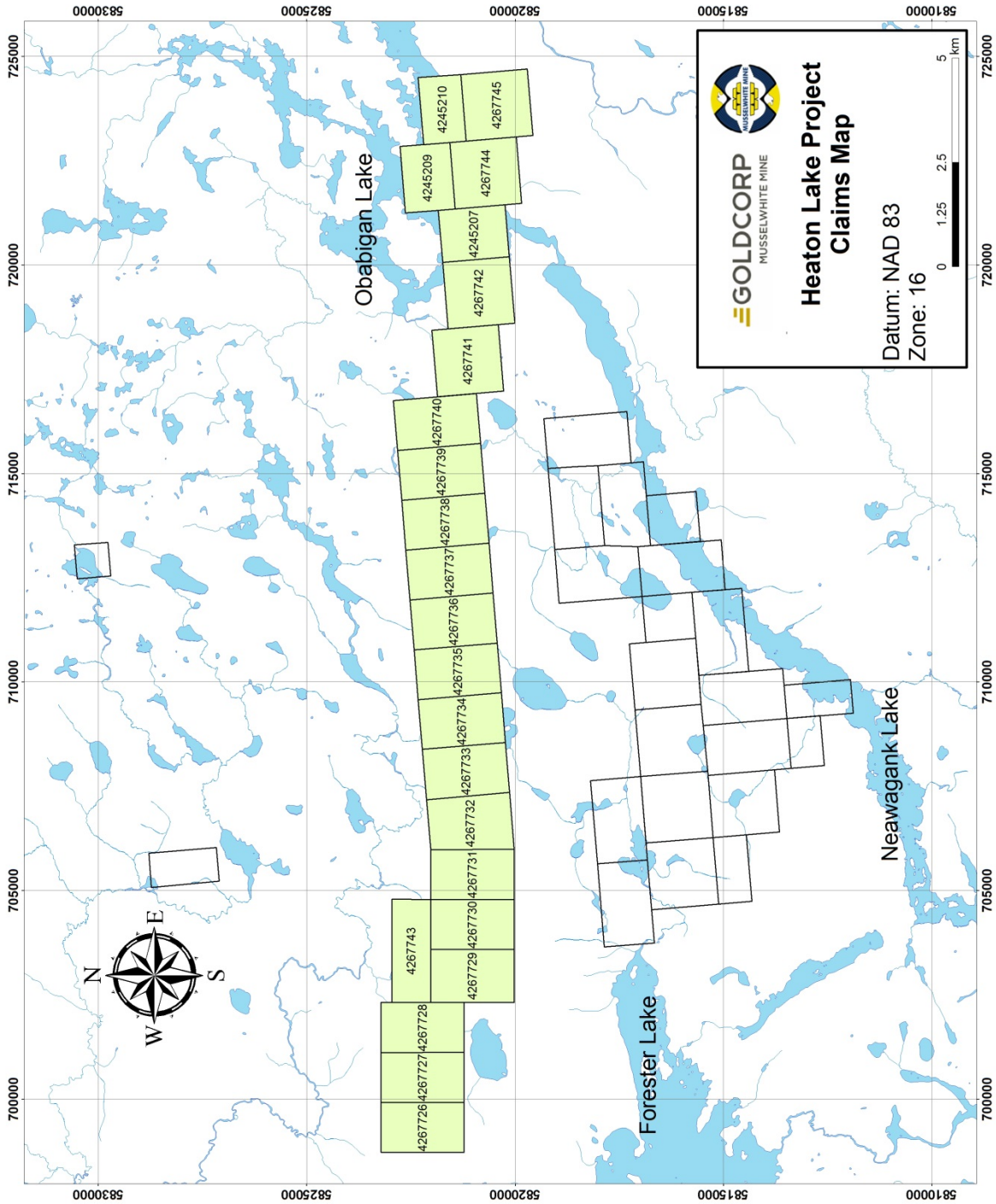

Figure 3: Detailed claim map

5 PAST WORK

There is no record of past exploration work within the claim block known to the author other than that by Goldcorp. Considerable work was done in past years 2 to 8km south of the Heaton Lake claims, in the Forester-Neawagank metavolcanic package, by a number of companies exploring for Musselwhite-type gold deposits. Work is currently ongoing on a claim block in this area owned by Benton Resources under option to Parkside Resources.

6 2014 WORK PROGRAM

The entire 2014 program was conducted on the claims west of the winter road. It consisted of 3 main phases:

- Soil sampling throughout the claims.
- Geological mapping wherever outcrops were discovered while soil sampling, interpreted from aerial imagery, or observed when flying over the area in a helicopter. This phase included local detailed mapping of shear zones and sampling of quartz veins for assay.
- Scientific research into the age and chemical composition of the sedimentary and volcanic rocks on the claims and immediately adjacent areas, as well as the provenance of the sediments as revealed by trace element geochemistry. This work forms the basis of an MSc thesis project by Ms. Octavia Bath at the University of Ottawa.

The field work was conducted from July 2nd to 5th and from August 21st to 29th, 2014. Musselwhite personnel were transported to and from the claims in a Bell LongRanger helicopter chartered from Wisk Air of Thunder Bay, Ont. The following personnel participated in the work program:

o John Biczok, P.Geo.	Senior Exploration Geologist
o Jim Edwards	Senior Exploration Geologist
o Serena Moores	Exploration Geologist
o Matt Zago	Exploration Geologist
o Andre Moncion	Mine surveyor
o Lianna Vice	Geology Summer Student
o Jordan Baird	Geology Summer Student
o Kenny Quequish	Labourer (North Caribou FN)
o Aaron Kakekayash	Labourer (North Caribou FN)
o Kaneesha Kanakakeesic	Labourer (North Caribou FN)
o Octavia Bath	MSc research student, Univ. of Ottawa
o Julian Varaschin	Mine engineer
o Nick Singer	Mine engineering student
o Albert Keeash	Core cutter

7 GEOLOGY

The Heaton Lake claims lie in the approximate centre of the Opapimiskan-Neawagank Lakes Area geology map, eastern mapsheet. This area was geologically mapped by Breaks et al. (1986) as Ontario Geological Survey Preliminary Map P.3061 and is discussed in more detail in OGS Open File Report 6023, “Geology of the North Caribou Lake Area, Northwestern Ontario (Breaks et al., 2001). However, there is minimal bedrock exposure in the immediate claims area so the extent of the major units is commonly extrapolated from the few existing outcrops and/or inferred from the OGS airborne magnetic and electromagnetic survey of 1985 (i.e. OGS 1985 Geophysical Series, Maps 80745, 80746, 80747, 80750, 80751, and 80752).

7.1 Lithology

In general, the claims lie along the northern edge of the easternmost portion of the Archean North Caribou greenstone belt which trends east-west in this area (Map 1). The belt is flanked to the north by granites and granitic gneiss of the Schade Lake gneiss complex which has been dated at 2880-2850 Ma (Biczok et al., 2012; Van Lankvelt, 2013). The northernmost unit of the belt itself is a ~0.5-1.2km wide basaltic horizon of generally massive flows, locally recrystallised into coarser-grained amphibolite. Good exposures of this unit are found on claim 4267727 (the 2nd farthest west) south of the small lake on that claim. Breaks et al. (1986) included this unit with the Forester-Neawagank Metavolcanic unit which dominates the southern part of the belt, however, it is uncertain if these volcanic belts are indeed folded repetitions of each other or actually separate formations. At this stage we have assumed that these basalts are part of the North Rim assemblage which is found along the majority of the belt west of the Heaton Lake claims. Ongoing geochronology and lithogeochemical studies sponsored by Musselwhite are expected to answer this question in the near term.

The rocks immediately south of the basaltic horizon were mapped by Breaks et al. (1987) as a 2-5 km wide interval of siliciclastic metasediments (wackes, arenite, mudstone, conglomerate, etc.). The few small exposures of this unit within the claims area are generally fine-grained sericite-quartz-feldspar schists, thought to be derived from arkoses and arenites but typically too highly sheared to determine the original grain size or any sedimentary features (Figs. 4, 5). The majority of these schistose outcrops contain a few to numerous white quartz veins from a few cm to 50cm in width (Fig. 5). These veins are thought to be locally derived during the shearing of the siliciclastic metasediments and as a consequence are barren of any mineralisation. Assay results from the quartz vein and one rusty area were all negative; these are presented in Appendix IV.

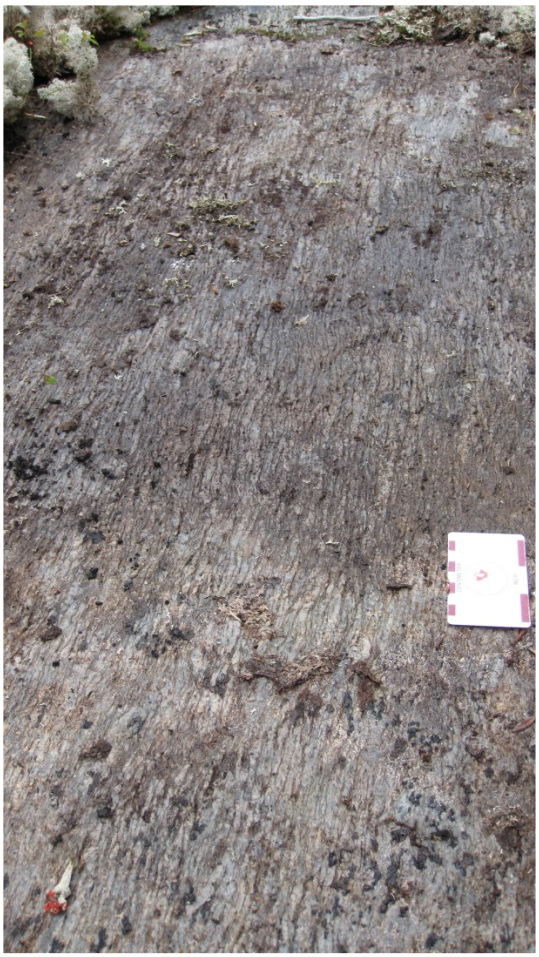

Figure 4: Closely spaced cleavage in highly sheared siliciclastic metasediments, claim #4267734

Figure 5: Barren quartz veins in highly sheared siliciclastic metasediments, claim #4267734.

Reconnaissance scale mapping during the course of the 2014 program uncovered several outcrops of high-Mg basalt and ultramafic volcanic units on the western claims in an area inferred to be continuous metasediments by Breaks et al. (1987). These outcrops have been used in conjunction with an enhanced processed image of the aeromagnetic survey to outline the inferred extent of these volcanic rocks (Map 1). The presence of ultramafic rocks in this area was unexpected and implies that this volcanic horizon is part of the Opapimiskan-Markop assemblage (although there is no indication that there are any appreciable iron formation units in this area).

7.2 Structural Geology

The northern boundary of the North Caribou greenstone belt with the adjacent Schade Lake terrane of the Island Lake Domain is commonly inferred to be a series of major crustal scale faults including the Dinnick Lake mylonite north of Musselwhite and the Totogan Shear Zone (TSZ) in the Heaton Lake area (e.g. Osmani and Stott, 1988). Due to preliminary nature of previous mapping in this area and the paucity of studied outcrops, the TSZ was poorly defined and its existence had been somewhat uncertain

in this region. However, during the 2014 program, numerous outcrops of intensely sheared and deformed schists derived from the siliciclastic metasediments were noted over a length of almost 12 km and across a width of >300 m (Map 1; Figs. 4 and 5). The apparent result of this major shear zone on the fabric of the local rocks is that the foliation is dominantly east-west, with near-vertical dips, within a 5-600m corridor along the northern margin of the greenstone belt. Only a few outcrops south of this corridor were located during this program and several of these show more ENE foliations.

8 SOIL GEOCHEMICAL SURVEY

As a first pass, humus sample sites were planned 25m apart along north-south lines spaced 100m apart on all claims west of the winter road. As expected, in many cases the planned sample sites were found to be in peat bogs, thick sand plains or other unsuitable areas and these sites and/or the entire line were skipped resulting in the sample distribution depicted on Fig. 6. Hand-held GPS units for used for positioning in the field. A total of 426 humus samples and 118 sand samples were collected on 40 lines. Humus samples were collected using shovels to turn over the surface plant layer (mainly moss and lesser grass) to expose the black organic layer (humus) at the base of the plant material. Typically the plant layer was 30-50cm thick and the humus layer below was only 1-2cm thick. The humus was scraped or cut off with a knife and placed in standard kraft-paper soil bags. Samples were air dried, and then sent to Actlabs in Ancaster, Ontario for 34 element analysis by Neutron Activation (Actlabs code 2A-15g Humus INAA). Results are presented in Appendix II.

In areas where no humus was present, sand was sampled in its place if possible. Typically the sand in this region is characterized by an upper few cm of white to-light grey, leached sand overlaying 10 to >30cm of orange-red sand followed by white sand with a minor to major clay component locally. The sand samples were sent to Actlabs in Ancaster, Ontario for analysis by Enzyme Leach. This selective extraction technique targets amorphous mixed oxide coatings on the soil (sand) grains which act as a chemical “sponge” for metal ions in the water table that rises and falls over the millennia. For this reason, and for consistency, the orange-red sand layer was preferentially sampled whenever present. According to the description provided at ActLabs.com, the samples are leached in enzyme matrix containing a glucose oxidaze solution at 30° C for 1 hour. The enzyme reacts with amorphous MnO_2 dissolving it. The metals released are complexed with the gluconic acid present. An overview of the analytical methodology is presented in Appendix One and complete results of the analyses are presented in Appendix III. Au values are in ppb, all other elements are reported in ppm. Sample locations and numbers are depicted on Figures 6-11 overlain on the geological map of the area. Gold and arsenic values of the eastern most grid area are depicted on Figure 12.

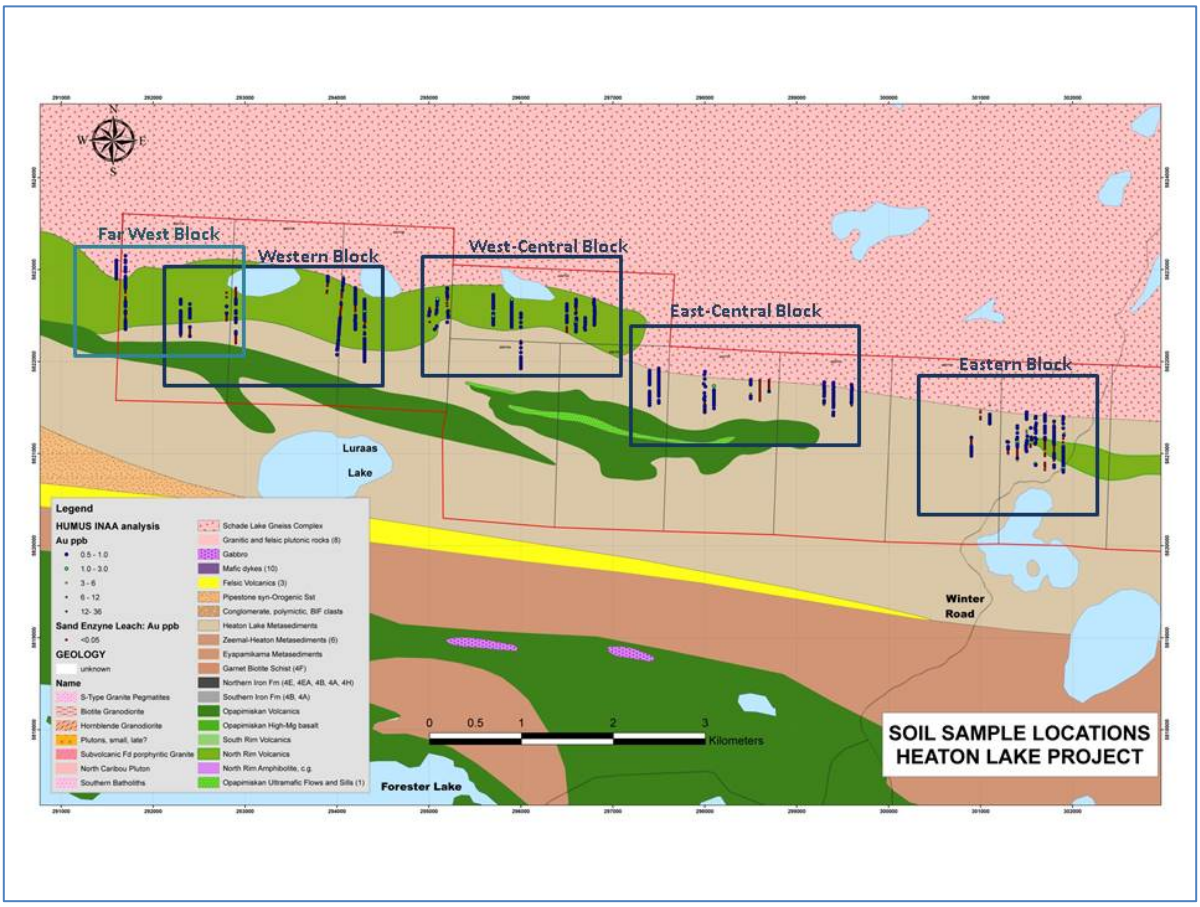

Figure 6: Soil sample location map.

8.1 Humus Results

Results of the humus analyses by INAA are given in Appendix II and discussed below.

8.1.1 Gold Results

Gold values in humus range from <1 to 36 ppb, however, follow-up sampling of the site with the highest value (36 ppb) failed to replicate this value and it is considered spurious. The next highest value is 12 ppb. The gold values have a mean of 0.7ppb and a standard deviation of 0.99, generating an anomalous threshold of 2.7ppb. The sample results are depicted on the following 5 figures (Figs. 7 to 11) representing the geographic blocks outlined on Fig. 6.

Several anomalous gold values are scattered across the length of the claims block (Figs. 7 to 11) but the only cluster of elevated values is found on the easternmost grid lines (Fig 11). While these anomalous values are not aligned in a continuous trend, given the poor quality of the local humus and highly variable nature of the underlying

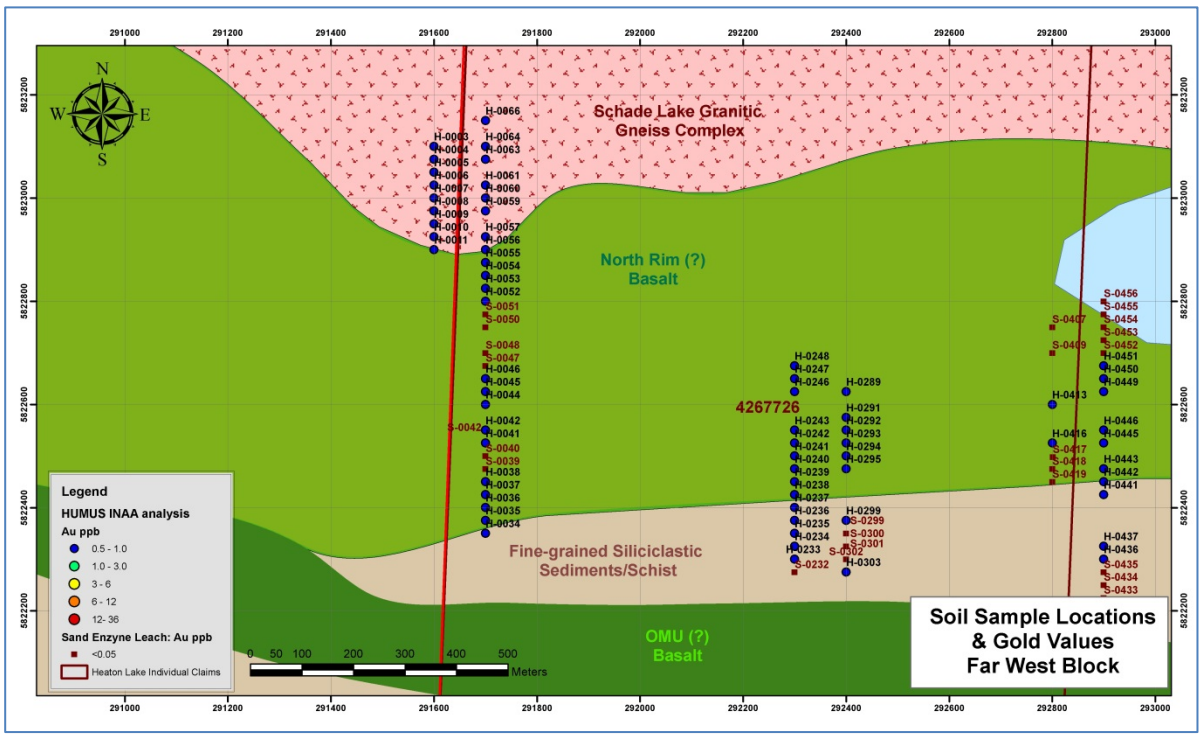

Figure 7: Soil sample locations and Gold values, far western block

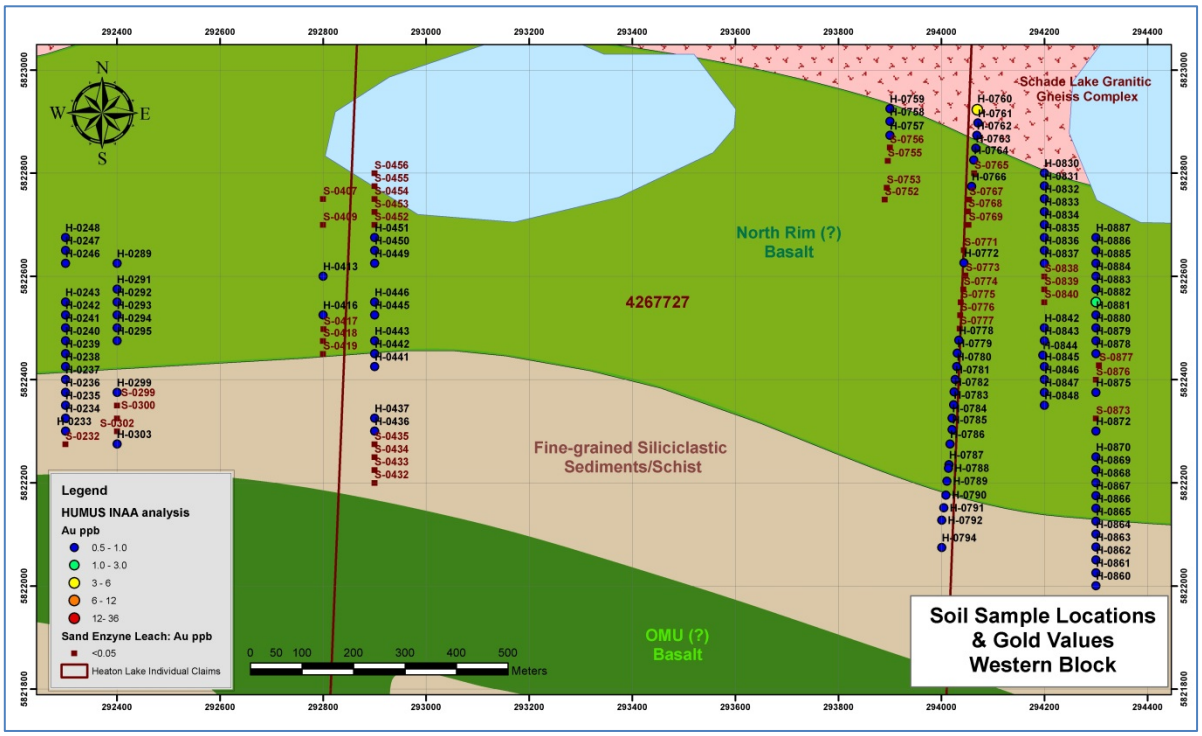

Figure 8: Soil sample locations and Gold values, western block

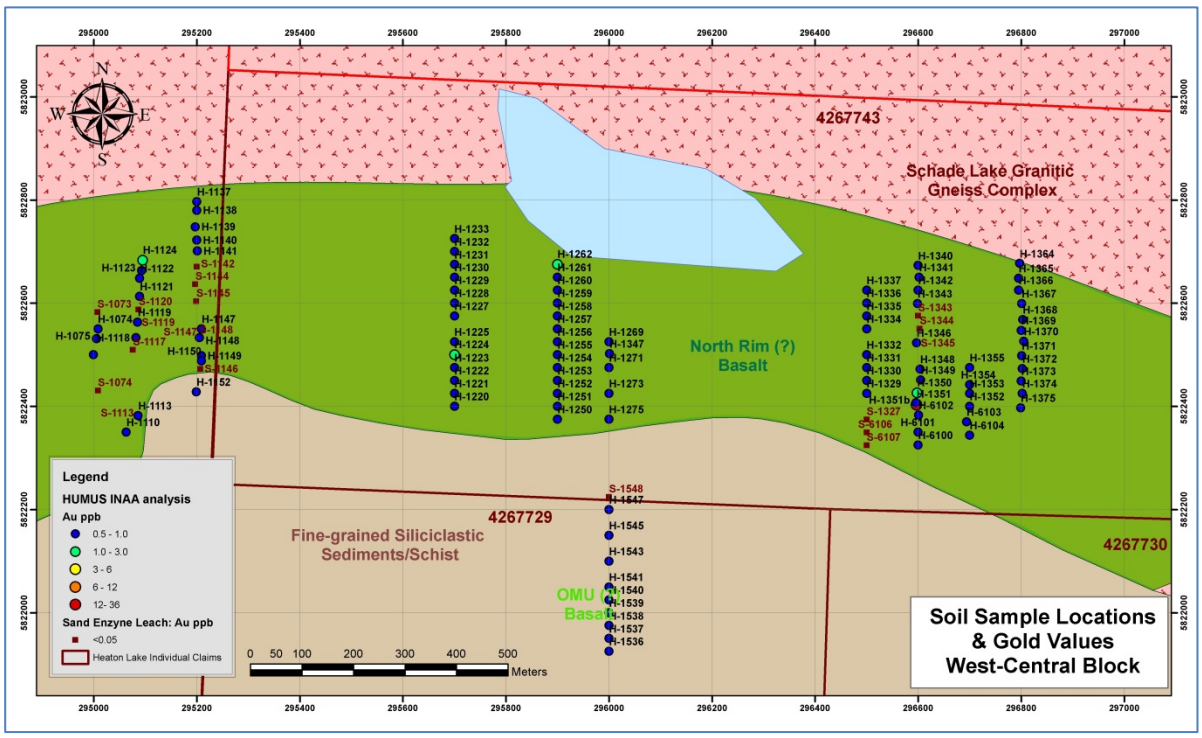

Figure 9: Soil sample locations and Gold values, west-central block.

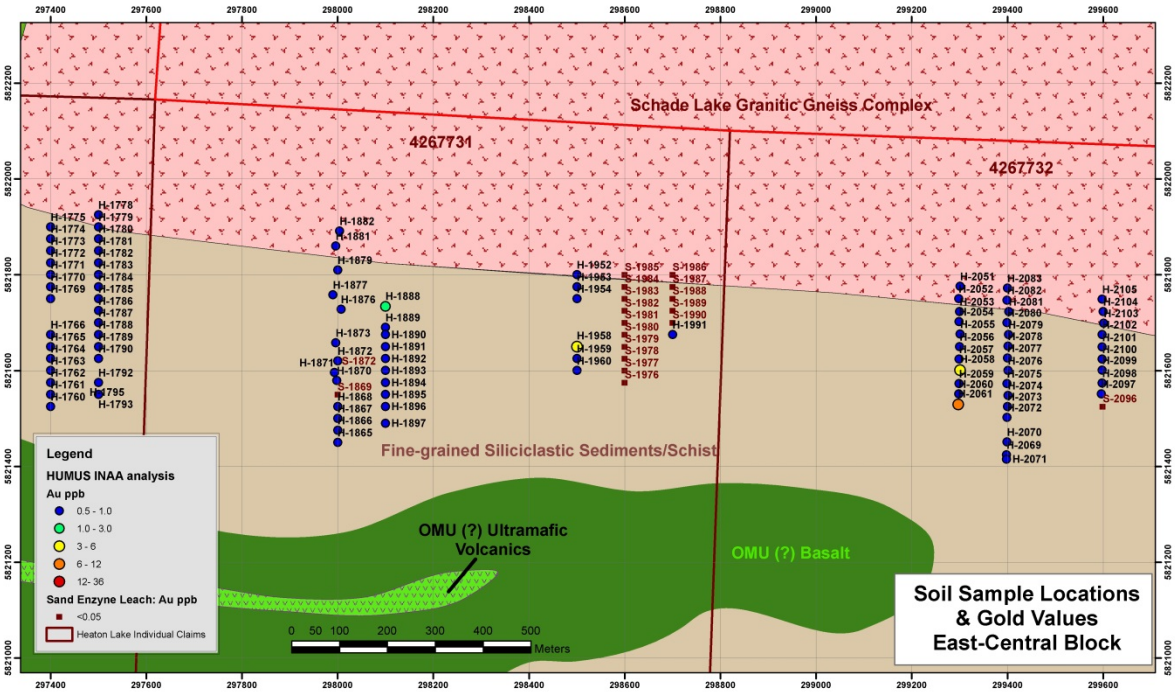

Figure 10: Soil sample locations and Gold values, east-central block.

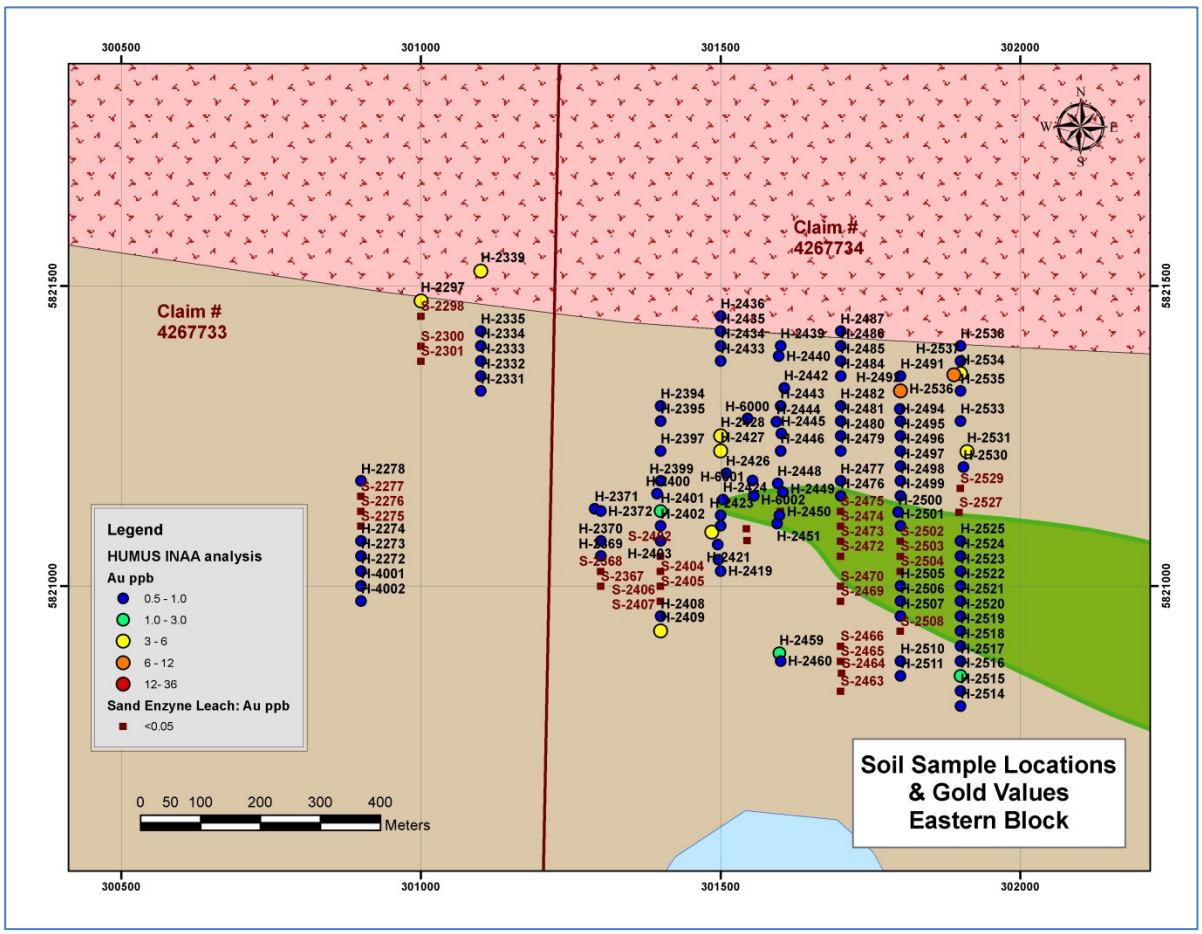

Figure 11: Soil sample locations and Gold values, eastern block.

soil (sand, spruce bog, exposed outcrop, etc.) it may be significant that there is a concentration of elevated values in this area.

8.2 Other elements

Statistical summaries for results from 7 elements commonly anomalous in gold deposits are given below in Table 2. The number of anomalies as calculated using the Mean + 2 x standard deviation is commonly higher than that indicated by inspection of the cumulative frequency of the data, perhaps due in some cases to the value assigned to results below the lower detection limit being too high (e.g. many zinc values are reported as <20 ppm and these are inferred to average 10 ppm in the database). The number of anomalous samples marked with an asterisk in Table 2 was determined by inspection of the numerical frequency trends.

The number of anomalous values in any metals of interest other than gold and arsenic is quite low (Table 2, Appendix II) and there is no clustering of these elevated results in any geographic location. While this is not an encouraging sign for mineralization in the local bedrock it should be noted that there is virtually no enrichment of pathfinder elements in many areas of gold-in-soil anomalies at the Musselwhite mine either.

Element	Mean	Std. Dev.	Anomalous threshold (mean + 2X Std Dev)	Max. value	No. of anomalous samples
As	20.3	72	164.3	1100	12
Ba	228	185	598	1600	~3*
Co	12.2	19.4	51	245	~4*
La	18.2	27.3	72.8	271	~6*
Mo	4.7	9.8	24.3	124	~6*
Sb	0.3	0.38	1.1	6.4	~3*
Zn	18.8	21.4	61.6	250	~8*

Table 2: Statistical summary of pathfinder element results from INAA analysis of humus

Plots of gold values versus the other common pathfinder elements including As, Mo, La and Sb show little or no correlation (Fig. 12). For all elements other than gold and arsenic there are rarely more than one or two samples that returned anomalous results and even these values are typically low (e.g. max 6.4 ppm Sb; see Table 2 above).

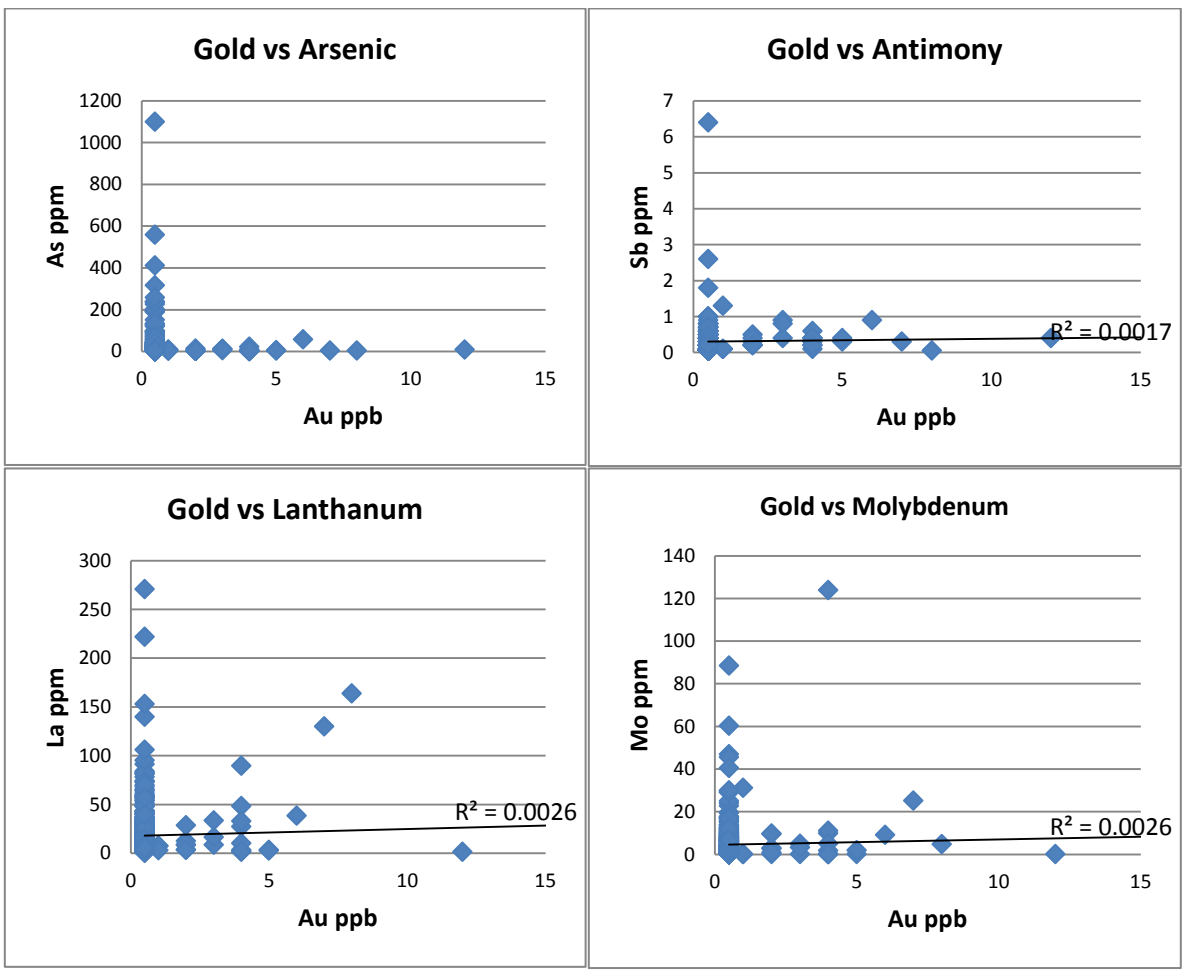

Figure 12: Scatter plots of gold vs various pathfinder elements in humus samples.
A) gold vs Arsenic, B) Gold versus Antimony, C) Gold versus Lanthanum, D) gold vs Molybdenum. R2 values are correlation coefficients between the 2 metals.

8.2.1 Arsenic

As noted above, although there is no statistical correlation of gold values with arsenic levels, 12 samples are anomalous and the most widespread arsenic anomalies are clustered in the same eastern grid area as the aforementioned gold anomalies (Fig. 13). The high arsenic values may not coincide with the gold anomalies precisely but they do tend to cluster near them.

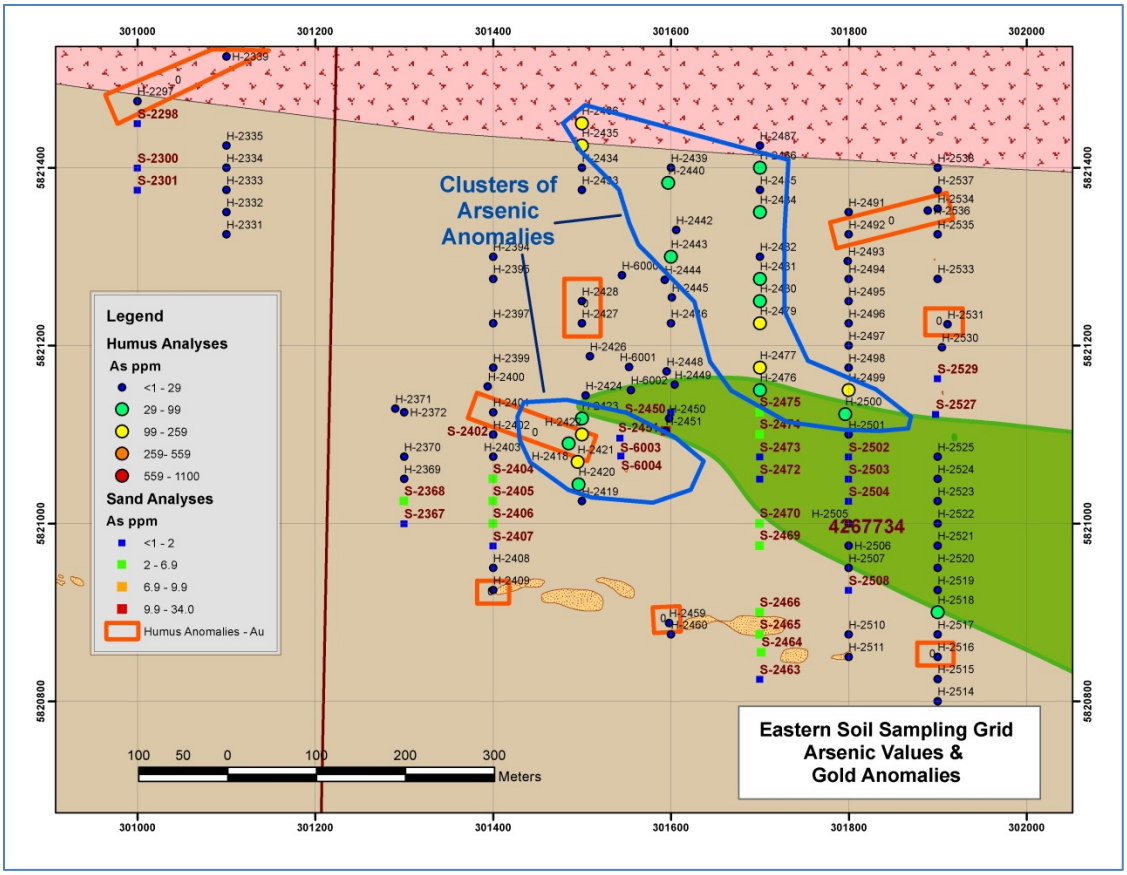

Figure 13: Arsenic values and gold anomalies, eastern block.

8.3 Sand Sample Enzyme Leach Results

Results of the enzyme leach analysis of the sand samples are given in Appendix III; all gold values were below detection limit. A statistical summary of the pathfinder elements found to have the most significant variation is given below in Table 3. In spite of a sometimes reasonable range of values for these elements, few results are statistically anomalous. There is no coherent cluster of any elevated results near the gold anomalies on the eastern grid lines, which in part may be due to the sporadic nature of the sand sample coverage in this area (i.e. collected only where humus was unavailable).

Element	Mean	Std Dev	Anomalous Threshold	Max value	Anomalous samples
As	3.63	3.57	10.77	34	1
Ba	269	161	591	971	6
Bi	0.67	0.57	1.81	4.2	1
Cl	7744	4422	16588	29000	4
Co	9.3	8.9	27.1	59	1
Cu	7.6	5.8	19.2	54	2
La	4.2	8.3	20.8	74.7	3
Ni	25.7	31.8	89.3	270	4
V	24.9	24.6	74.1	193	2
Zn	52.9	41.1	135.1	230	4

Table 3: Statistical summary of the pathfinder elements of most interest in the enzyme leach analyses of sand samples.

Based on the authors experience developed during soil sampling test surveys around the Musselwhite mine and evident in the data from the Heaton Lake survey, it appears that while INAA analysis of humus samples can be effective at detecting gold from local bedrock sources, enzyme leach of sand samples is not effective in this terrain. The enzyme leach results, however, can be used to detect pathfinders for gold such as copper (in the Musselwhite area) or the more typical suite of metals such as As, Sb, Ag found in many orogenic gold deposits. In the case of the Heaton Lake samples, however, no element other than arsenic show a clustering of elevated values near the anomalous gold samples.

9 CONCLUSIONS

The 2014 exploration program of soil sampling and geological mapping was intended to assess the mineral potential of sheared metasedimentary and metavolcanic rocks of Timiskaming age (~2680 Ma) in the Heaton Lake area of the North Caribou greenstone belt. Due to the poor soil quality over the majority of the claims (and resultant patchy nature of the soil sampling coverage) and the paucity of outcrop, the work accomplished so far is largely at a reconnaissance scale. Nevertheless, a series of soil samples were successfully collected on each of the western claims and a cluster of anomalous gold values was noted on claim # 4267734, flanked by 2 relatively coherent arsenic anomalies. The results suggest that humus samples are a suitable medium for detecting gold and other anomalous metals in this area (where humus is present) although the low levels necessitate the use of neutron activation analysis (INAA). Where no humus was present, samples of the red sand were collected and analyzed by enzyme leach instead. As has been the case in sampling programs and test cases (over known mineralization) around the Musselwhite mine, this technique does not appear to be effective in detecting gold anomalies but does return a suite of potentially useful pathfinder elements such as As, Ag, Cu, Mo, Sb, etc. The enzyme leach

analyses of the sand samples returned scattered elevated levels of various metals but only arsenic formed coherent anomalies, primarily around the clusters of gold anomalies on claim # 4267734.

Geological mapping of the limited outcrops available has confirmed the presence of a major east-west shear zone at least 300m wide, running along the northern margin of the metasedimentary belt south of the granite contact. One small outcrop of highly sheared mafic metavolcanics was found within this shear zone on claim # 4267734. Sampling of numerous quartz veins on the property, primarily from the sheared metasediments, did not return any anomalous gold values. It is most likely that these veins are locally derived from shearing of the metasediments and that the adjacent mafic metavolcanic rocks, largely buried, may be a more prospective host for gold mineralization.

The discovery of ultramafic rocks on claim # 4267729 was unexpected; interpretation of the aeromagnetic pattern in this area from the 1985 OGS airborne survey suggest that the ultramafic and flanking mafic volcanic rocks may extend over an area >7km long and 800m wide. These rocks are now believed to be part of the Opapimiskan-Markop assemblage (OMU) which hosts the mineralized iron formation at the Musselwhite mine, 25 km to the northwest. Although there is no indication of iron formations on the western Heaton Lake claims, the high-Mg rocks of the OMU may well provide a better source rock for gold and/or a trap for any mineralizing fluids than the adjacent siliciclastic sediments do. These rocks have not been prospected as yet nor were they covered by the 2014 soil geochemical survey.

10 RECOMMENDATIONS

The following program is recommended as a follow-up to the work in 2014:

1. Undertake geological mapping and prospecting throughout the area now believed to be underlain by OMU metavolcanic rocks.
2. Undertake soil sampling throughout the OMU area.
3. Undertake further geological mapping and prospecting on claim #4267729 in the vicinity of the gold and arsenic anomalies. Although very little outcrop was noted here during the 2014 program, finding any other outcrops may lead to the discovery of mineralized veins which would be highly significant in this area.
4. If an access agreement can be reached with the Nibinamik First Nation, initiate a program of soil sampling, mapping and prospecting on the western claims.

Respectfully submitted,

John Biczok

John L. Biczok, P.Geo.

Senior Exploration Geologist
Musselwhite Mine

LIST OF REFERENCES

Breaks, F.W., Osmani, I.A., and DeKemp, E.A.,1987. Precambrian Geology of the Opapimiskan-Neawagank Lakes Area, Eastern Part (Opapimiskan Lake Project), Kenora District (Patricia Portion). Ontario Geological Survey, Map P. 3081. Geological Series – Preliminary Map, scale 1:31 680, Geology 1986.

Breaks, F.W., Osmani, I., and deKemp, E.A., 2001. Geology of the North Caribou Lake Area, Northwestern Ontario. OGS Open File Report 6023. 80 pp.

Biczok, J., Hollings, P., Klipfel, P., Heaman, L., Maas, R., Hamilton, M., Kamo, S., and Friedman, R ., 2012. Geochronology of the North Caribou greenstone belt, Superior Province Canada: Implications for tectonic history and gold mineralization at the Musselwhite mine. Precambrian Research, V. 192-195, p. 209-230.

Duff, J., 2014. A Geochemical and Isotopic Investigation of Metasedimentary Rocks from the North Caribou Greenstone Belt, Western Superior Province, Canada, Unpublished MSc thesis, University of Ottawa. 168 p.

Osmani, I.A. and Stott, G.M., 1988, Regional-Scale Shear Zones in Sachigo Subprovince and their Economic Significance; in Summary of Field Work and Other Activities 1988, Ontario Geological Survey, Miscellaneous Paper 141, p. 53-67.

Van Lankvelt, A., 2013. Protracted magmatism within the North Caribou Terrane, Superior Province: Petrology, Geochronology, and Geochemistry of Meso- to Neoarchean TTG Suites. Unpublished MSc. thesis. University of Ottawa. 208 p.

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STATEMENT OF QUALIFICATIONS

I, John Biczok, of the town of Greely, Ontario, do hereby swear and affirm that:

1. I am a Professional Geologist registered in good standing with the Association of Professional Geoscientists of Ontario (since 2007).

2. I have an Honours B.Sc. degree in Geology from Lakehead University in Thunder Bay, ON.

3. I have been employed as an exploration geologist on a full-time basis since 1979 throughout central and western Canada and much of India.

4. I am currently a Senior Exploration Geologist at the Musselwhite Mine and supervised the work described in this report.

Signed: __ *John Biczok* _____

Date: ____February 16, 2015_____

HOME ADDRESS

6629 Woodstream Drive
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WORK ADDRESS:

c/o Musselwhite Mine Exploration Dept.
P.O. Box 7500
Thunder Bay, ON, P7B 6S8
Ph: 807-928-3101
e-mail: john.biczok@goldcorp.com

STATEMENT OF EXPENDITURES

Helicopter (27.9 hrs @ $1,170/hr + WiskAir fuel, oil)……$35,289

Helicopter fuel purchased by Musselwhite……... 5,188

Wages for field personnel (see timesheet) 21,625

Board & room for personnel (50 days @ $75 per day)…….....3,750

Geochemical analyses costs (426 humus @ $21.25 per sample) ……..... …….9,053

Geochemical analyses (118 samples @ 32.00) ……..... …….3,776

Report Writing, 4 days..... …….2,800

TOTAL: $81,481

APPENDIX ONE: DESCRIPTION OF HUMUS SAMPLE ANALYTICAL TECHNIQUE

ANALYTICAL METHOD: 2A - Humus - INAA

Ground humus samples weighing 6 to 15 g are compressed under 30 tons of pressure to form a briquette (smaller samples are weighed in vials). Briquettes are stacked with flux wires and an internal standard (1 for 29 samples) and irradiated at a thermal flux of 7 x 10^{12} n cm^{-2} s^{-1} for 15 minutes. After a 7-day decay to allow Na-24 to decay the samples are counted on a high purity Ge detector with resolution of better than 1.7 KeV for the 1332 KeV Co-60 photopeak. Using the flux wires, the decay-corrected activities are compared to a calibration developed from multiple certified international reference materials. The standard present is only a check on accuracy and is not used for calibration purposes. From 10-30% of the samples are rechecked by re-measurement. For values exceeding the upper limits, assays are recommended. One standard is analyzed for every 29 samples. Duplicates are analyzed when provided.

Preparation Code B1 is required.

Further details are available on isotopes and gamma-ray energies:

Hoffman, E.L., 1992. Instrumental Neutron Activation in Geoanalysis. Journal of Geochemical Exploration, volume 44, pp. 297-319.

Code 2A (Humus) Elements and Detection Limits (ppm)

Element	Detection Limit	Element	Detection Limit	Element	Detection Limit	Element	Detection Limit
Ag	2	Cs	0.5	Na	100	Sr	100
As	1	Eu	0.2	Nd	3	Ta	0.5
Au	1 ppb	Fe	0.05%	Ni	10	Tb	0.2
Ba	100	Hf	0.5	Rb	20	Th	0.5
Br	1	Hg	0.5	Sb	0.1	U	0.1
Ca	0.5%	Ir	5 ppb	Sc	0.1	W	1
Ce	1	La	0.1	Se	2	Yb	0.1
Co	1	Lu	0.1	Sm	0.1	Zn	20
Cr	1	Mo	0.5				

APPENDIX TWO: Certificates of Analysis, Humus & Sand

Quality Analysis ... *Innovative Technologies*

Date Submitted:	09-Jul-14
Invoice No.:	A14-04609
Invoice Date:	31-Jul-14
Your Reference:	9250

GOLDCORP Canada Ltd--Musselwhite Mine
Musselwhite Mine
P.O BOX 7500
Thunder Bay ON P7B 6S8
Canada

ATTN: John Biczok (PO#WA9R00280-W0001)

CERTIFICATE OF ANALYSIS

251 Humus samples were submitted for analysis.

The following analytical package was requested: Code 2A-15g Humus INAA(INAAGEO)

REPORT **A14-04609**

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 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 material submitted for analysis.

Notes:

CERTIFIED BY:

Emmanuel Eseme , Ph.D.
Quality Control

SCC Accredited LAB
LAB Accrédité CCN TM

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Results

	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA
SAMPLE	Au	Ag	As	Ba	Br	Ca	Co	Cr	Cs	Fe	Hf	Hg	Ir	Mo	Na	Ni	Rb	Sb	Sc	Se	Sr	Ta	Th
DESCRIPTION	ppb	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
HL-2051	< 1	< 2	15	300	31	3.5	18	7	< 0.5	1.24	< 0.5	< 0.5	< 5	6.7	300	< 10	< 20	0.3	0.9	< 2	< 100	< 0.5	1.6
HL-2052	< 1	< 2	3	100	28	3.9	3	7	0.9	0.25	< 0.5	< 0.5	< 5	2.1	400	< 10	< 20	0.4	0.7	< 2	< 100	< 0.5	0.8
HL-2053	< 1	< 2	2	100	38	4.9	< 1	6	1.1	0.26	< 0.5	< 0.5	< 5	1.9	400	< 10	< 20	0.3	0.5	< 2	< 100	< 0.5	0.9
HL-2054	< 1	< 2	9	100	57	3.9	18	5	1.5	1.94	< 0.5	< 0.5	< 5	< 0.5	400	< 10	< 20	0.3	0.5	< 2	< 100	< 0.5	0.7
HL-2055	< 1	< 2	7	< 100	52	3.3	5	2	< 0.5	0.95	< 0.5	< 0.5	< 5	< 0.5	400	< 10	< 20	0.3	0.4	< 2	< 100	< 0.5	< 0.5
HL-2056	< 1	< 2	4	100	47	5.2	< 1	5	< 0.5	0.29	< 0.5	< 0.5	< 5	1.5	500	< 10	< 20	0.3	0.6	< 2	200	< 0.5	0.6
HL-2057	< 1	< 2	3	200	32	5.0	2	5	< 0.5	0.24	< 0.5	< 0.5	< 5	1.9	400	< 10	< 20	0.3	0.5	< 2	< 100	< 0.5	0.6
HL-2058	4	< 2	5	< 100	57	5.0	< 1	3	< 0.5	0.30	< 0.5	< 0.5	< 5	1.8	400	< 10	< 20	0.4	0.5	< 2	< 100	< 0.5	0.5
HL-2059	< 1	< 2	6	< 100	88	5.9	< 1	2	< 0.5	0.25	< 0.5	< 0.5	< 5	8.2	400	< 10	< 20	0.6	0.4	< 2	< 100	< 0.5	0.5
HL-2060	< 1	< 2	4	100	90	5.4	< 1	7	< 0.5	0.07	< 0.5	< 0.5	< 5	13.0	300	< 10	< 20	0.8	0.2	< 2	< 100	< 0.5	< 0.5
HL-2061	12	< 2	9	< 100	55	5.2	3	9	< 0.5	0.27	< 0.5	< 0.5	< 5	< 0.5	500	< 10	< 20	0.4	0.4	< 2	< 100	< 0.5	< 0.5
HL-2069	< 1	< 2	2	100	71	6.3	< 1	7	< 0.5	0.08	< 0.5	< 0.5	< 5	12.3	300	< 10	< 20	0.7	0.3	< 2	< 100	< 0.5	< 0.5
HL-2070	< 1	< 2	12	200	152	7.2	46	3	< 0.5	0.54	< 0.5	< 0.5	< 5	7.1	400	< 10	< 20	0.8	0.3	< 2	< 100	< 0.5	< 0.5
HL-2071	< 1	< 2	5	< 100	71	5.5	6	2	< 0.5	0.09	< 0.5	< 0.5	< 5	2.6	400	< 10	< 20	0.4	0.3	< 2	< 100	< 0.5	< 0.5
HL-2072	< 1	< 2	4	100	82	5.9	< 1	5	< 0.5	0.09	< 0.5	< 0.5	< 5	4.3	400	< 10	< 20	0.6	0.2	< 2	< 100	< 0.5	< 0.5
HL-2073	< 1	< 2	6	200	71	6.5	< 1	5	< 0.5	0.54	< 0.5	< 0.5	< 5	60.3	600	< 10	< 20	6.4	0.6	< 2	< 100	< 0.5	0.7
HL-2074	< 1	< 2	5	100	54	5.1	22	4	< 0.5	0.64	< 0.5	< 0.5	< 5	0.9	400	< 10	< 20	0.7	0.5	< 2	< 100	< 0.5	0.8
HL-2075	< 1	< 2	3	100	52	4.7	< 1	5	< 0.5	0.30	< 0.5	< 0.5	< 5	1.1	400	< 10	< 20	0.4	0.4	< 2	< 100	< 0.5	< 0.5
HL-2076	< 1	< 2	33	500	123	7.4	< 1	4	< 0.5	2.05	< 0.5	< 0.5	< 5	3.0	500	< 10	< 20	0.5	0.6	< 2	< 100	< 0.5	0.5
HL-2077	< 1	< 2	14	< 100	192	6.4	< 1	13	< 0.5	0.50	< 0.5	< 0.5	< 5	5.7	600	< 10	< 20	1.0	0.4	< 2	< 100	< 0.5	0.5
HL-2078	< 1	< 2	19	100	58	4.8	< 1	3	< 0.5	1.31	< 0.5	< 0.5	< 5	< 0.5	500	< 10	< 20	0.3	0.4	< 2	< 100	< 0.5	< 0.5
HL-2079	< 1	< 2	19	200	61	5.9	6	7	< 0.5	3.55	< 0.5	< 0.5	< 5	< 0.5	600	< 10	< 20	0.2	1.0	< 2	200	< 0.5	1.0
HL-2080	< 1	< 2	3	100	50	5.5	< 1	3	< 0.5	0.97	< 0.5	< 0.5	< 5	< 0.5	400	< 10	< 20	0.1	0.5	< 2	300	< 0.5	0.5
HL-2081	< 1	< 2	10	200	47	6.4	22	43	2.3	5.14	1.2	< 0.5	< 5	3.2	3900	< 10	< 20	0.3	3.9	< 2	< 100	< 0.5	2.4
HL-2082	< 1	< 2	39	200	79	6.1	< 1	8	< 0.5	2.12	< 0.5	< 0.5	< 5	7.8	400	< 10	< 20	0.4	0.5	< 2	< 100	< 0.5	< 0.5
HL-2083	< 1	< 2	5	200	104	4.7	< 1	3	< 0.5	0.66	< 0.5	< 0.5	< 5	< 0.5	500	< 10	< 20	0.3	0.4	< 2	< 100	< 0.5	< 0.5
HL-2097	< 1	< 2	11	200	61	8.2	9	5	< 0.5	1.01	0.5	< 0.5	< 5	< 0.5	600	< 10	< 20	0.1	0.9	< 2	< 100	< 0.5	1.0
HL-2098	< 1	< 2	20	200	56	6.8	< 1	5	< 0.5	2.29	< 0.5	< 0.5	< 5	< 0.5	500	< 10	< 20	0.1	0.7	< 2	< 100	< 0.5	0.7
HL-2099	< 1	< 2	9	200	55	6.3	5	7	0.5	1.56	< 0.5	< 0.5	< 5	< 0.5	600	< 10	< 20	0.1	0.9	< 2	< 100	< 0.5	1.4
HL-2100	< 1	< 2	4	< 100	31	4.9	3	6	< 0.5	0.73	< 0.5	< 0.5	< 5	< 0.5	500	< 10	< 20	0.2	0.8	< 2	< 100	< 0.5	0.9
HL-2101	< 1	< 2	129	400	40	3.7	7	8	< 0.5	5.19	< 0.5	< 0.5	< 5	< 0.5	600	< 10	< 20	0.3	1.0	< 2	300	< 0.5	1.2
HL-2102	< 1	< 2	46	100	53	4.4	8	3	< 0.5	1.38	< 0.5	< 0.5	< 5	< 0.5	400	< 10	< 20	0.2	0.4	< 2	< 100	< 0.5	< 0.5
HL-2103	< 1	< 2	42	400	53	4.7	6	5	< 0.5	2.86	< 0.5	< 0.5	< 5	< 0.5	500	< 10	< 20	0.2	0.9	< 2	< 100	< 0.5	1.0
HL-2104	< 1	< 2	8	< 100	61	5.6	< 1	< 1	0.7	1.30	< 0.5	< 0.5	< 5	< 0.5	500	< 10	< 20	0.3	0.4	< 2	200	< 0.5	< 0.5
HL-2105	< 1	< 2	1	< 100	68	3.3	< 1	3	< 0.5	0.41	< 0.5	< 0.5	< 5	< 0.5	400	< 10	< 20	< 0.1	0.5	< 2	< 100	< 0.5	0.5
HL-1760	< 1	< 2	21	< 100	36	5.5	5	6	< 0.5	1.06	< 0.5	< 0.5	< 5	< 0.5	300	< 10	< 20	0.2	0.6	< 2	< 100	< 0.5	0.9
HL-1761	< 1	< 2	93	300	41	2.5	15	49	2.9	2.65	2.4	< 0.5	< 5	< 0.5	8800	< 10	< 20	< 0.1	6.5	< 2	< 100	< 0.5	5.5
HL-1762	< 1	< 2	1100	1600	64	4.2	60	25	< 0.5	14.5	1.6	< 0.5	< 5	< 0.5	3300	< 10	< 20	< 0.1	3.7	< 2	< 100	< 0.5	4.3
HL-1763	< 1	< 2	412	300	61	3.5	15	17	0.9	5.51	< 0.5	< 0.5	< 5	< 0.5	1000	< 10	< 20	0.6	2.2	< 2	< 100	< 0.5	2.9
HL-1764	< 1	< 2	316	600	72	4.4	16	15	3.1	4.75	< 0.5	< 0.5	< 5	< 0.5	800	< 10	< 20	0.6	1.6	< 2	< 100	< 0.5	2.1
HL-1765	< 1	< 2	25	200	59	5.2	8	10	< 0.5	1.52	< 0.5	< 0.5	< 5	< 0.5	600	< 10	< 20	0.1	2.0	< 2	< 100	< 0.5	2.1
HL-1766	< 1	< 2	14	< 100	132	5.3	9	< 1	< 0.5	1.00	< 0.5	< 0.5	< 5	< 0.5	400	< 10	< 20	0.4	0.7	< 2	< 100	< 0.5	0.8
HL-1769	< 1	< 2	21	100	52	5.7	14	9	< 0.5	1.08	< 0.5	< 0.5	< 5	< 0.5	400	< 10	< 20	0.2	0.9	< 2	< 100	< 0.5	1.2
HL-1770	< 1	< 2	15	100	54	5.2	18	7	< 0.5	1.02	< 0.5	< 0.5	< 5	< 0.5	400	< 10	< 20	0.4	0.5	< 2	< 100	< 0.5	< 0.5
HL-1771	< 1	< 2	2	100	32	5.3	4	10	< 0.5	0.49	< 0.5	< 0.5	< 5	< 0.5	500	< 10	< 20	0.2	1.3	< 2	200	< 0.5	1.5
HL-1772	< 1	< 2	3	< 100	31	3.9	4	6	< 0.5	0.45	< 0.5	< 0.5	< 5	< 0.5	700	< 10	< 20	0.2	1.3	< 2	< 100	< 0.5	1.6
HL-1773	< 1	< 2	5	100	45	4.3	7	5	< 0.5	0.60	< 0.5	< 0.5	< 5	< 0.5	500	< 10	< 20	0.3	0.8	< 2	< 100	< 0.5	1.0
HL-1774	< 1	< 2	3	< 100	26	3.5	3	4	< 0.5	0.50	< 0.5	< 0.5	< 5	< 0.5	400	< 10	< 20	0.1	0.8	< 2	< 100	< 0.5	0.9
HL-1775	< 1	< 2	5	< 100	35	4.3	3	9	< 0.5	0.88	< 0.5	< 0.5	< 5	< 0.5	500	< 10	< 20	0.2	0.8	< 2	< 100	< 0.5	0.9
HL-1778	< 1	< 2	3	100	36	3.8	3	7	< 0.5	0.88	0.6	< 0.5	< 5	< 0.5	600	< 10	< 20	0.1	1.3	< 2	< 100	< 0.5	1.3

	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA
SAMPLE	Au	Ag	As	Ba	Br	Ca	Co	Cr	Cs	Fe	Hf	Hg	Ir	Mo	Na	Ni	Rb	Sb	Sc	Se	Sr	Ta	Th
DESCRIPTION	ppb	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
HL-1779	< 1	< 2	2	< 100	30	4.6	2	6	< 0.5	0.41	< 0.5	< 0.5	< 5	< 0.5	500	< 10	< 20	0.2	0.8	< 2	< 100	< 0.5	0.9
HL-1780	< 1	< 2	4	100	29	4.7	6	4	< 0.5	0.80	< 0.5	< 0.5	< 5	< 0.5	400	< 10	< 20	0.2	0.7	< 2	< 100	< 0.5	1.0
HL-1781	< 1	< 2	3	200	49	5.4	12	6	< 0.5	1.09	< 0.5	< 0.5	< 5	< 0.5	500	< 10	< 20	0.4	0.9	< 2	< 100	< 0.5	1.1
HL-1782	< 1	< 2	3	< 100	26	4.2	3	6	< 0.5	0.36	0.5	< 0.5	< 5	< 0.5	600	< 10	< 20	0.3	1.4	< 2	< 100	< 0.5	1.6
HL-1783	< 1	< 2	5	100	30	4.9	4	4	< 0.5	0.64	< 0.5	< 0.5	< 5	< 0.5	400	< 10	< 20	0.3	0.7	< 2	< 100	< 0.5	1.0
HL-1784	< 1	< 2	1	< 100	19	5.0	2	10	< 0.5	0.23	< 0.5	< 0.5	< 5	< 0.5	300	< 10	< 20	0.1	0.6	< 2	< 100	< 0.5	0.6
HL-1785	< 1	< 2	3	200	24	3.8	17	13	< 0.5	0.67	1.1	< 0.5	< 5	1.0	3200	< 10	< 20	0.2	3.5	< 2	< 100	< 0.5	5.0
HL-1786	< 1	< 2	2	200	17	5.0	< 1	15	1.3	0.61	0.9	< 0.5	< 5	2.4	2200	< 10	< 20	0.3	2.5	< 2	< 100	< 0.5	3.7
HL-1787	< 1	< 2	1	< 100	31	4.4	2	4	< 0.5	0.21	< 0.5	< 0.5	< 5	1.5	300	< 10	< 20	0.2	0.6	< 2	< 100	< 0.5	1.2
HL-1788	< 1	< 2	< 1	100	18	5.5	3	4	< 0.5	0.20	< 0.5	< 0.5	< 5	1.7	300	< 10	< 20	< 0.1	0.5	< 2	< 100	< 0.5	0.7
HL-1789	< 1	< 2	1	200	17	4.0	3	3	< 0.5	0.24	< 0.5	< 0.5	< 5	2.5	300	< 10	< 20	0.1	0.5	< 2	< 100	< 0.5	0.8
HL-1790	< 1	< 2	2	300	17	5.3	4	6	< 0.5	0.64	< 0.5	< 0.5	< 5	2.8	500	< 10	< 20	0.3	1.1	< 2	< 100	< 0.5	2.1
HL-1792	< 1	< 2	3	200	27	4.6	6	9	0.8	1.08	< 0.5	< 0.5	< 5	2.0	500	< 10	< 20	0.2	1.3	< 2	< 100	< 0.5	2.3
HL-1793	< 1	< 2	18	300	26	4.8	26	9	< 0.5	2.53	< 0.5	< 0.5	< 5	1.8	400	< 10	< 20	0.2	0.9	< 2	< 100	< 0.5	1.4
HL-1795	< 1	< 2	2	200	23	4.6	6	14	< 0.5	0.71	1.1	< 0.5	< 5	< 0.5	2400	< 10	< 20	0.2	2.7	< 2	< 100	< 0.5	3.5
HL-1865	< 1	< 2	1	300	27	3.7	8	16	< 0.5	0.81	0.7	< 0.5	< 5	1.6	400	< 10	< 20	0.3	2.9	< 2	< 100	< 0.5	4.1
HL-1866	< 1	< 2	14	300	15	4.3	7	29	< 0.5	6.68	1.6	< 0.5	< 5	< 0.5	7100	< 10	< 20	< 0.1	4.2	< 2	< 100	< 0.5	5.3
HL-1867	< 1	< 2	2	300	15	4.9	9	20	< 0.5	0.80	1.4	< 0.5	< 5	< 0.5	4600	< 10	< 20	< 0.1	3.0	< 2	< 100	< 0.5	4.7
HL-1868	< 1	< 2	< 1	300	24	2.8	9	30	1.7	1.26	1.2	< 0.5	< 5	0.7	1400	< 10	20	< 0.1	7.8	< 2	< 100	< 0.5	15.9
HL-1870	< 1	< 2	2	200	21	2.1	8	29	< 0.5	1.44	1.2	< 0.5	< 5	1.6	6000	< 10	< 20	< 0.1	6.7	< 2	< 100	< 0.5	9.9
HL-1871	< 1	< 2	2	100	16	2.4	5	17	1.6	0.90	1.2	< 0.5	< 5	0.9	4000	< 10	< 20	0.1	4.4	< 2	< 100	< 0.5	5.7
HL-1872	< 1	< 2	2	200	11	0.8	6	18	< 0.5	0.84	1.1	< 0.5	< 5	< 0.5	7300	< 10	40	0.3	2.9	< 2	< 100	< 0.5	4.0
HL-1873	< 1	< 2	2	300	22	2.4	26	33	1.3	1.21	1.4	< 0.5	< 5	2.8	2900	< 10	< 20	< 0.1	6.9	< 2	< 100	< 0.5	12.1
HL-1876	< 1	< 2	11	200	26	4.1	13	5	< 0.5	0.87	< 0.5	< 0.5	< 5	2.9	500	< 10	< 20	0.4	0.8	< 2	< 100	< 0.5	1.0
HL-1877	< 1	< 2	11	200	28	5.0	12	8	0.8	1.06	< 0.5	< 0.5	< 5	3.4	300	< 10	< 20	0.3	0.6	< 2	< 100	< 0.5	0.7
HL-1879	< 1	< 2	5	< 100	13	4.3	7	33	< 0.5	0.92	1.4	< 0.5	< 5	< 0.5	7600	< 10	< 20	0.4	3.3	< 2	< 100	< 0.5	2.0
HL-1881	< 1	< 2	15	500	24	3.6	245	27	< 0.5	4.52	1.0	< 0.5	< 5	4.9	1800	< 10	< 20	0.2	2.8	< 2	< 100	< 0.5	3.8
HL-1882	< 1	< 2	< 1	300	19	3.3	15	76	1.6	2.15	1.7	< 0.5	< 5	8.7	9200	< 10	< 20	< 0.1	11.1	< 2	< 100	< 0.5	11.4
HL-1888	2	< 2	5	200	22	4.0	9	7	0.5	1.11	< 0.5	< 0.5	< 5	3.0	600	< 10	< 20	0.5	1.1	< 2	< 100	< 0.5	1.5
HL-1889	< 1	< 2	5	300	28	5.1	8	26	< 0.5	1.05	0.9	< 0.5	< 5	3.4	800	< 10	< 20	< 0.1	4.8	< 2	< 100	< 0.5	9.5
HL-1890	< 1	< 2	8	200	32	3.8	114	62	2.2	3.81	1.7	< 0.5	< 5	7.9	3300	< 10	< 20	< 0.1	8.8	< 2	< 100	< 0.5	18.4
HL-1891	< 1	< 2	3	200	21	1.1	8	42	2.1	1.25	1.9	< 0.5	< 5	1.0	9700	< 10	< 20	< 0.1	6.7	< 2	< 100	< 0.5	7.6
HL-1892	< 1	< 2	1	200	19	2.0	5	36	3.1	1.24	1.7	< 0.5	< 5	< 0.5	4000	< 10	50	< 0.1	6.0	< 2	< 100	< 0.5	9.2
HL-1893	< 1	< 2	2	200	14	0.9	< 1	26	1.1	0.67	1.8	< 0.5	< 5	< 0.5	7400	< 10	< 20	0.1	4.1	< 2	< 100	< 0.5	4.7
HL-1894	< 1	< 2	< 1	100	16	5.0	3	11	< 0.5	0.60	0.9	< 0.5	< 5	1.4	1200	< 10	< 20	0.1	1.9	< 2	< 100	< 0.5	3.2
HL-1895	< 1	< 2	< 1	100	14	4.7	2	5	< 0.5	0.23	< 0.5	< 0.5	< 5	0.9	300	< 10	< 20	< 0.1	0.5	< 2	< 100	< 0.5	0.7
HL-1896	< 1	< 2	1	200	15	4.7	3	5	< 0.5	0.40	< 0.5	< 0.5	< 5	1.9	300	< 10	< 20	0.1	0.7	< 2	< 100	< 0.5	0.9
HL-1897	< 1	< 2	< 1	200	17	4.8	4	7	< 0.5	0.72	< 0.5	< 0.5	< 5	3.9	300	< 10	< 20	0.2	1.2	< 2	< 100	< 0.5	1.6
HL-1952	< 1	< 2	1	< 100	43	5.2	< 1	8	< 0.5	0.21	< 0.5	< 0.5	< 5	7.3	400	< 10	< 20	0.3	0.6	< 2	< 100	< 0.5	0.8
HL-1953	< 1	< 2	< 1	200	30	5.3	< 1	14	< 0.5	0.58	< 0.5	< 0.5	< 5	6.3	600	< 10	< 20	0.3	1.8	< 2	< 100	< 0.5	2.4
HL-1954	< 1	< 2	< 1	300	12	3.0	7	34	< 0.5	1.23	2.1	< 0.5	< 5	< 0.5	14500	< 10	< 20	< 0.1	5.7	< 2	300	< 0.5	3.1
HL-1958	4	< 2	1	200	6	< 0.5	4	33	1.0	0.89	2.3	< 0.5	< 5	< 0.5	11300	< 10	40	0.4	3.6	< 2	< 100	< 0.5	2.5
HL-1959	< 1	< 2	< 1	100	12	< 0.5	< 1	23	0.9	0.41	1.2	< 0.5	< 5	2.0	2100	< 10	< 20	0.2	4.6	< 2	< 100	< 0.5	4.1
HL-1960	< 1	< 2	1	200	10	< 0.5	3	31	< 0.5	0.55	2.0	< 0.5	< 5	2.2	6400	< 10	40	< 0.1	3.9	< 2	< 100	< 0.5	3.5
HL-1991	< 1	< 2	1	200	36	7.2	5	15	< 0.5	0.48	< 0.5	< 0.5	< 5	6.7	500	< 10	< 20	0.3	1.5	< 2	< 100	< 0.5	1.5
HL-2272	< 1	< 2	10	200	35	5.0	6	4	< 0.5	0.21	< 0.5	< 0.5	< 5	11.7	300	< 10	< 20	0.9	0.5	< 2	100	< 0.5	0.7
HL-2273	< 1	< 2	8	100	27	4.8	3	3	< 0.5	0.15	< 0.5	< 0.5	< 5	6.0	300	< 10	< 20	0.5	0.5	< 2	< 100	< 0.5	0.6
HL-2274	< 1	< 2	3	200	33	6.9	5	10	< 0.5	0.42	0.5	< 0.5	< 5	1.5	400	< 10	< 20	0.4	1.6	< 2	< 100	< 0.5	2.7
HL-2278	< 1	< 2	3	200	37	5.9	11	14	< 0.5	1.09	< 0.5	< 0.5	< 5	2.4	400	< 10	< 20	1.0	1.2	< 2	< 100	< 0.5	1.4
HL-2297	4	< 2	2	100	42	7.1	10	16	< 0.5	0.89	< 0.5	< 0.5	< 5	5.1	500	< 10	< 20	0.2	2.2	< 2	< 100	< 0.5	2.6
HL-2331	< 1	< 2	2	200	33	5.7	4	5	< 0.5	0.28	< 0.5	< 0.5	< 5	6.2	300	< 10	< 20	0.1	0.6	< 2	< 100	< 0.5	0.6

	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA
SAMPLE	Au	Ag	As	Ba	Br	Ca	Co	Cr	Cs	Fe	Hf	Hg	Ir	Mo	Na	Ni	Rb	Sb	Sc	Se	Sr	Ta	Th
DESCRIPTION	ppb	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
HL-2332	< 1	< 2	< 1	100	21	6.1	3	3	< 0.5	0.20	< 0.5	< 0.5	< 5	7.9	200	< 10	< 20	0.1	0.3	< 2	< 100	< 0.5	< 0.5
HL-2333	< 1	< 2	1	200	35	6.9	7	10	< 0.5	0.61	< 0.5	< 0.5	< 5	2.0	400	< 10	< 20	0.1	1.2	< 2	< 100	< 0.5	1.6
HL-2334	< 1	< 2	1	200	26	6.1	2	6	0.9	0.38	< 0.5	< 0.5	< 5	3.5	300	< 10	< 20	< 0.1	0.6	< 2	100	< 0.5	0.9
HL-2335	< 1	< 2	< 1	100	30	5.6	1	2	< 0.5	0.31	< 0.5	< 0.5	< 5	3.2	200	< 10	< 20	0.1	0.3	< 2	100	< 0.5	< 0.5
HL-2339	5	< 2	5	100	33	3.3	< 1	4	< 0.5	0.52	< 0.5	< 0.5	< 5	2.0	600	< 10	< 20	0.4	0.7	< 2	< 100	< 0.5	0.8
HL-2369	< 1	< 2	< 1	600	6	< 0.5	9	80	2.5	1.42	4.1	< 0.5	< 5	2.1	20700	< 10	< 20	< 0.1	8.4	< 2	< 100	< 0.5	6.7
HL-2370	< 1	< 2	4	300	45	6.0	11	24	< 0.5	0.58	0.8	< 0.5	< 5	2.2	1900	< 10	< 20	0.4	3.1	< 2	< 100	< 0.5	3.5
HL-2371	< 1	< 2	3	200	50	6.2	10	15	< 0.5	0.51	< 0.5	< 0.5	< 5	15.2	600	< 10	< 20	0.5	1.8	< 2	< 100	< 0.5	1.8
HL-2372	< 1	< 2	4	300	46	4.2	14	47	0.5	1.12	1.9	< 0.5	< 5	5.9	5300	< 10	< 20	0.4	6.6	< 2	< 100	< 0.5	3.7
HL-2418	6	< 2	58	200	69	5.2	19	31	< 0.5	0.91	< 0.5	< 0.5	< 5	9.2	700	< 10	< 20	0.9	5.3	< 2	< 100	< 0.5	4.0
HL-2419	< 1	< 2	11	200	25	2.0	7	12	< 0.5	0.81	< 0.5	< 0.5	< 5	1.8	600	< 10	< 20	0.3	3.1	< 2	< 100	< 0.5	2.2
HL-2420	< 1	< 2	47	300	31	4.3	71	37	3.9	2.61	1.4	0.9	< 5	6.9	3800	< 10	20	0.6	5.6	< 2	< 100	< 0.5	5.6
HL-2421	< 1	< 2	126	200	24	3.0	36	30	2.7	3.59	1.2	< 0.5	< 5	11.1	2300	< 10	< 20	0.3	4.1	< 2	< 100	< 0.5	5.8
HL-2422	< 1	< 2	226	200	37	2.7	38	17	< 0.5	8.65	< 0.5	< 0.5	< 5	12.7	300	< 10	< 20	0.3	1.8	< 2	< 100	< 0.5	2.7
HL-2423	< 1	< 2	36	200	29	3.4	12	10	< 0.5	1.76	< 0.5	< 0.5	< 5	5.4	400	< 10	< 20	0.5	1.5	< 2	< 100	< 0.5	1.6
HL-2424	< 1	< 2	28	200	25	3.5	9	6	< 0.5	1.47	< 0.5	< 0.5	< 5	< 0.5	400	< 10	< 20	0.6	0.9	< 2	< 100	< 0.5	1.4
HL-2426	< 1	< 2	14	300	28	3.4	6	14	0.7	1.51	< 0.5	< 0.5	< 5	< 0.5	500	< 10	< 20	0.7	0.8	< 2	< 100	< 0.5	1.2
HL-2427	4	< 2	6	200	22	2.1	4	8	< 0.5	0.72	< 0.5	< 0.5	< 5	< 0.5	600	< 10	< 20	0.6	0.9	< 2	< 100	< 0.5	0.8
HL-2428	5	< 2	4	< 100	29	3.5	3	6	1.6	0.61	< 0.5	< 0.5	< 5	< 0.5	400	< 10	< 20	0.3	0.7	< 2	< 100	< 0.5	0.7
HL-2433	< 1	< 2	10	< 100	50	3.4	8	12	< 0.5	0.96	< 0.5	< 0.5	< 5	< 0.5	600	< 10	< 20	0.5	0.8	< 2	< 100	< 0.5	1.1
HL-2434	< 1	< 2	16	< 100	50	2.8	4	3	< 0.5	1.38	< 0.5	< 0.5	< 5	< 0.5	400	< 10	< 20	0.5	0.7	< 2	< 100	< 0.5	1.3
HL-2435	< 1	< 2	201	700	45	3.3	19	9	< 0.5	3.96	< 0.5	< 0.5	< 5	< 0.5	500	< 10	< 20	0.5	0.8	< 2	< 100	< 0.5	1.1
HL-2436	< 1	< 2	235	500	54	3.9	13	< 1	< 0.5	2.77	< 0.5	< 0.5	< 5	< 0.5	500	< 10	< 20	0.8	0.6	< 2	< 100	< 0.5	0.5
HL-2476	< 1	< 2	46	600	29	6.0	44	13	< 0.5	1.75	< 0.5	< 0.5	< 5	6.2	400	< 10	< 20	0.8	0.9	< 2	< 100	< 0.5	0.7
HL-2477	< 1	< 2	189	400	35	3.7	32	13	< 0.5	3.31	< 0.5	< 0.5	< 5	2.6	400	< 10	< 20	0.2	1.0	< 2	< 100	< 0.5	1.6
HL-2479	< 1	< 2	192	600	43	3.2	51	15	< 0.5	4.79	1.4	< 0.5	< 5	4.7	300	< 10	< 20	0.3	1.4	< 2	< 100	< 0.5	3.6
HL-2480	< 1	< 2	33	600	30	5.5	13	61	7.8	1.71	3.4	< 0.5	< 5	< 0.5	7500	< 10	60	0.8	8.1	< 2	< 100	< 0.5	8.0
HL-2481	< 1	< 2	56	300	37	2.9	24	26	2.8	4.42	1.8	< 0.5	< 5	< 0.5	7300	< 10	< 20	0.4	4.4	< 2	< 100	< 0.5	6.6
HL-2482	< 1	< 2	11	400	38	5.2	19	19	< 0.5	1.49	< 0.5	< 0.5	< 5	3.8	600	< 10	< 20	< 0.1	1.4	< 2	< 100	< 0.5	2.8
HL-2484	< 1	< 2	38	400	31	3.6	67	7	< 0.5	6.20	< 0.5	0.6	< 5	6.6	500	< 10	< 20	1.0	1.1	< 2	< 100	< 0.5	1.1
HL-2485	< 1	< 2	26	500	57	4.5	13	23	< 0.5	3.27	< 0.5	< 0.5	< 5	1.1	500	< 10	< 20	0.3	1.5	< 2	< 100	< 0.5	2.4
HL-2486	< 1	< 2	80	700	59	4.7	30	17	< 0.5	5.62	< 0.5	< 0.5	< 5	5.6	500	< 10	< 20	0.8	1.5	< 2	< 100	< 0.5	2.2
HL-2487	< 1	< 2	9	300	41	7.5	8	26	< 0.5	1.48	1.0	< 0.5	< 5	3.8	700	< 10	< 20	< 0.1	2.1	< 2	< 100	< 0.5	3.7
HL-4001	< 1	< 2	15	< 100	54	5.9	4	4	< 0.5	0.16	< 0.5	< 0.5	< 5	5.4	300	< 10	< 20	1.8	0.5	< 2	< 100	< 0.5	0.9
HL-4002	< 1	< 2	96	200	33	6.3	11	42	< 0.5	1.02	1.6	< 0.5	< 5	1.7	3500	< 10	< 20	2.6	3.9	< 2	< 100	< 0.5	4.0
HL-233	< 1	< 2	7	400	52	2.4	28	37	< 0.5	1.11	< 0.5	< 0.5	< 5	3.9	1100	< 10	< 20	0.7	4.1	< 2	< 100	< 0.5	4.4
HL-234	< 1	< 2	5	< 100	53	2.8	56	75	< 0.5	1.39	1.3	< 0.5	< 5	6.9	2200	< 10	< 20	0.6	6.0	< 2	< 100	< 0.5	8.5
HL-235	< 1	< 2	3	400	29	< 0.5	23	85	6.4	1.30	1.9	< 0.5	< 5	2.6	5300	< 10	< 20	< 0.1	7.7	< 2	< 100	< 0.5	10.6
HL-236	< 1	< 2	66	800	32	4.7	66	33	< 0.5	6.07	< 0.5	< 0.5	< 5	11.8	1600	< 10	< 20	0.5	3.4	< 2	< 100	< 0.5	5.8
HL-237	< 1	< 2	9	300	49	4.6	15	42	< 0.5	1.46	< 0.5	< 0.5	< 5	3.8	400	< 10	< 20	< 0.1	3.8	< 2	< 100	< 0.5	4.4
HL-238	< 1	< 2	7	300	27	5.5	8	5	< 0.5	1.14	< 0.5	< 0.5	< 5	< 0.5	400	< 10	< 20	< 0.1	0.9	< 2	< 100	< 0.5	1.1
HL-239	< 1	< 2	16	200	43	3.8	10	7	< 0.5	1.84	< 0.5	< 0.5	< 5	< 0.5	500	< 10	< 20	0.3	0.9	< 2	< 100	< 0.5	1.1
HL-240	< 1	< 2	31	300	45	4.9	20	28	< 0.5	2.33	< 0.5	< 0.5	< 5	< 0.5	1500	< 10	< 20	0.4	1.5	< 2	< 100	< 0.5	2.7
HL-241	< 1	< 2	10	300	28	4.5	4	23	1.7	1.60	2.2	< 0.5	< 5	< 0.5	9200	< 10	< 20	0.7	3.4	< 2	< 100	< 0.5	7.1
HL-242	< 1	< 2	3	300	30	4.0	6	15	1.4	0.91	< 0.5	< 0.5	< 5	2.7	1200	< 10	< 20	0.3	2.7	< 2	< 100	< 0.5	4.6
HL-243	< 1	< 2	2	100	24	3.6	9	8	1.0	0.62	< 0.5	< 0.5	< 5	1.2	400	< 10	< 20	0.3	1.0	< 2	< 100	< 0.5	1.6
HL-246	< 1	< 2	9	200	18	2.2	22	400	3.1	1.30	0.8	< 0.5	< 5	< 0.5	1200	< 10	< 20	0.2	10.6	< 2	< 100	< 0.5	2.2
HL-247	< 1	< 2	22	200	45	4.8	60	99	3.1	1.81	< 0.5	< 0.5	< 5	1.8	1200	< 10	< 20	0.1	14.9	< 2	< 100	< 0.5	6.0
HL-248	< 1	< 2	8	< 100	37	3.6	15	38	5.5	1.40	< 0.5	< 0.5	< 5	2.7	1100	< 10	< 20	0.3	6.1	< 2	< 100	< 0.5	6.1
HL-289	< 1	< 2	3	200	51	6.0	13	56	< 0.5	1.59	0.7	< 0.5	< 5	4.6	3400	< 10	< 20	0.3	7.9	< 2	< 100	< 0.5	10.2
HL-291	< 1	< 2	7	200	30	4.7	15	15	2.0	0.95	< 0.5	< 0.5	< 5	3.3	800	< 10	< 20	0.3	2.7	< 2	< 100	< 0.5	4.9

	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA
SAMPLE	Au	Ag	As	Ba	Br	Ca	Co	Cr	Cs	Fe	Hf	Hg	Ir	Mo	Na	Ni	Rb	Sb	Sc	Se	Sr	Ta	Th
DESCRIPTION	ppb	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
HL-292	< 1	< 2	5	200	19	4.4	11	4	< 0.5	0.42	< 0.5	< 0.5	< 5	3.8	500	< 10	< 20	0.2	0.8	< 2	< 100	< 0.5	0.9
HL-293	< 1	< 2	20	200	20	4.7	33	7	< 0.5	1.19	< 0.5	< 0.5	< 5	3.1	400	< 10	< 20	0.2	1.4	< 2	< 100	< 0.5	1.8
HL-294	< 1	< 2	5	300	17	4.8	11	10	1.3	0.80	< 0.5	< 0.5	< 5	1.3	700	< 10	< 20	0.3	1.7	< 2	< 100	< 0.5	2.2
HL-295	< 1	< 2	7	300	17	4.3	13	8	1.2	1.03	< 0.5	< 0.5	< 5	< 0.5	500	< 10	< 20	0.2	1.3	< 2	< 100	< 0.5	1.6
HL-299	< 1	< 2	18	300	30	5.4	73	427	6.7	5.01	2.6	< 0.5	< 5	8.3	20400	< 10	< 20	0.5	15.1	< 2	< 100	< 0.5	5.9
HL-303	< 1	< 2	4	300	23	3.6	28	116	3.0	1.76	3.7	< 0.5	< 5	< 0.5	17800	< 10	30	0.4	10.2	< 2	< 100	< 0.5	6.4
HL-413	< 1	< 2	2	100	40	7.3	5	23	1.9	0.49	< 0.5	< 0.5	< 5	0.8	800	< 10	< 20	1.0	1.8	< 2	< 100	< 0.5	1.9
HL-416	< 1	< 2	28	400	17	3.9	21	169	6.5	2.52	2.5	< 0.5	< 5	2.2	16800	< 10	< 20	0.5	11.7	< 2	< 100	< 0.5	14.6
HL-436	< 1	< 2	2	300	14	< 0.5	13	81	4.0	1.69	4.7	< 0.5	< 5	< 0.5	17400	< 10	40	0.3	8.5	< 2	< 100	< 0.5	9.5
HL-437	< 1	< 2	2	200	35	7.0	23	49	2.4	1.24	< 0.5	< 0.5	< 5	3.7	4000	< 10	< 20	0.2	5.2	< 2	< 100	< 0.5	6.4
HL-441	< 1	< 2	8	400	16	4.8	26	69	8.3	3.47	2.7	< 0.5	< 5	3.6	7700	< 10	70	0.2	7.8	< 2	< 100	< 0.5	8.4
HL-442	< 1	< 2	15	200	13	5.7	21	70	4.1	2.33	1.9	< 0.5	< 5	< 0.5	7300	< 10	< 20	0.1	5.4	< 2	< 100	< 0.5	2.8
HL-443	< 1	< 2	70	500	20	5.4	28	72	10.8	3.39	2.9	< 0.5	< 5	< 0.5	9500	< 10	60	0.6	7.3	< 2	< 100	< 0.5	8.4
HL-445	< 1	< 2	25	400	26	< 0.5	14	55	3.7	3.31	< 0.5	< 0.5	< 5	9.7	6000	< 10	< 20	0.3	8.8	< 2	< 100	< 0.5	14.1
HL-446	< 1	< 2	25	300	26	3.8	14	55	5.8	1.92	3.3	< 0.5	< 5	9.4	6000	< 10	< 20	0.2	7.2	< 2	< 100	< 0.5	10.1
HL-449	< 1	< 2	2	100	27	7.6	2	8	< 0.5	0.27	< 0.5	< 0.5	< 5	2.9	700	< 10	< 20	0.4	0.9	< 2	< 100	< 0.5	1.0
HL-450	< 1	< 2	1	200	27	6.6	5	9	< 0.5	0.36	0.5	< 0.5	< 5	1.0	700	< 10	< 20	0.3	1.5	< 2	< 100	< 0.5	2.4
HL-451	< 1	< 2	1	< 100	18	6.8	3	10	< 0.5	0.37	< 0.5	< 0.5	< 5	2.1	700	< 10	< 20	0.5	1.4	< 2	< 100	< 0.5	1.9
HL-1074	< 1	< 2	< 1	200	14	1.8	< 1	18	< 0.5	0.50	1.9	< 0.5	< 5	< 0.5	5700	< 10	< 20	0.2	3.0	< 2	< 100	< 0.5	2.8
HL-1075	< 1	< 2	15	300	23	4.3	24	16	< 0.5	2.27	0.5	< 0.5	< 5	< 0.5	4000	< 10	< 20	0.1	2.2	< 2	< 100	< 0.5	3.3
HL-1076	< 1	< 2	12	200	37	3.4	15	24	0.8	1.30	< 0.5	< 0.5	< 5	< 0.5	1700	< 10	< 20	0.6	2.2	< 2	< 100	< 0.5	3.1
HL-1110	< 1	< 2	4	300	25	2.5	10	40	1.9	1.61	3.2	< 0.5	< 5	< 0.5	9100	< 10	30	0.2	5.1	< 2	< 100	< 0.5	5.8
HL-1113	< 1	< 2	4	400	20	< 0.5	6	39	< 0.5	1.11	2.0	< 0.5	< 5	< 0.5	6900	< 10	< 20	0.2	3.9	< 2	< 100	< 0.5	4.8
HL-1118	< 1	< 2	3	< 100	37	< 0.5	< 1	134	< 0.5	2.37	< 0.5	< 0.5	< 5	< 0.5	8800	< 10	< 20	0.4	14.7	< 2	< 100	< 0.5	32.8
HL-1119	< 1	< 2	5	400	17	< 0.5	< 1	36	< 0.5	1.06	2.0	< 0.5	< 5	8.7	6700	< 10	< 20	< 0.1	5.3	< 2	< 100	< 0.5	7.2
HL-1121	< 1	< 2	6	600	22	< 0.5	40	117	5.3	4.60	3.4	< 0.5	< 5	4.5	7700	< 10	< 20	0.2	13.4	< 2	< 100	< 0.5	26.0
HL-1122	< 1	< 2	3	< 100	14	1.2	14	38	2.4	1.89	1.5	< 0.5	< 5	< 0.5	1600	< 10	< 20	0.2	4.8	< 2	< 100	< 0.5	7.7
HL-1123	< 1	< 2	8	800	10	< 0.5	< 1	143	11.9	5.88	5.9	< 0.5	< 5	7.8	11700	< 10	140	< 0.1	16.9	< 2	< 100	< 0.5	20.3
HL-1124	2	< 2	2	400	23	2.9	9	35	< 0.5	1.43	< 0.5	< 0.5	< 5	9.8	1600	< 10	< 20	0.4	5.2	< 2	< 100	< 0.5	7.2
HL-1137	< 1	< 2	2	300	26	3.8	< 1	30	< 0.5	1.02	< 0.5	< 0.5	< 5	14.0	700	< 10	< 20	0.3	3.4	< 2	< 100	< 0.5	7.7
HL-1138	< 1	< 2	5	500	33	2.7	18	32	3.8	1.59	< 0.5	< 0.5	< 5	13.9	1200	< 10	< 20	0.5	5.3	< 2	< 100	< 0.5	9.7
HL-1139	< 1	< 2	8	< 100	12	< 0.5	32	80	5.6	3.38	2.4	< 0.5	< 5	< 0.5	2400	< 10	60	0.3	9.3	< 2	200	< 0.5	14.2
HL-1140	< 1	< 2	5	700	15	< 0.5	15	133	9.8	4.75	4.1	< 0.5	< 5	< 0.5	2600	< 10	80	0.3	15.8	< 2	< 100	< 0.5	26.7
HL-1141	< 1	< 2	3	< 100	16	< 0.5	19	92	9.7	3.95	4.2	< 0.5	< 5	8.4	3600	< 10	140	0.5	16.4	< 2	< 100	< 0.5	21.9
HL-1147	< 1	< 2	4	500	8	< 0.5	< 1	36	< 0.5	0.96	2.9	< 0.5	< 5	< 0.5	12200	< 10	< 20	0.3	4.1	< 2	< 100	< 0.5	4.8
HL-1149	< 1	< 2	11	300	39	< 0.5	35	54	< 0.5	4.11	2.3	< 0.5	< 5	25.1	6100	< 10	< 20	0.3	7.0	< 2	< 100	< 0.5	10.4
HL-1220	< 1	< 2	4	300	21	3.9	8	19	0.9	0.89	< 0.5	< 0.5	< 5	10.6	900	< 10	< 20	0.2	1.3	< 2	< 100	< 0.5	2.3
HL-1221	< 1	< 2	42	200	35	3.1	19	30	< 0.5	2.26	0.7	< 0.5	< 5	< 0.5	700	< 10	< 20	0.1	1.6	< 2	< 100	< 0.5	3.3
HL-1222	< 1	< 2	13	300	34	3.8	10	21	2.3	1.58	1.2	< 0.5	< 5	< 0.5	800	< 10	< 20	0.2	2.1	< 2	< 100	< 0.5	4.7
HL-1223	< 1	< 2	9	400	36	2.4	11	31	< 0.5	1.57	< 0.5	< 0.5	< 5	< 0.5	700	< 10	< 20	< 0.1	2.3	< 2	< 100	< 0.5	3.7
HL-1224	2	< 2	13	200	33	3.2	5	31	< 0.5	1.59	1.0	< 0.5	< 5	< 0.5	700	< 10	< 20	0.2	2.3	< 2	< 100	< 0.5	4.0
HL-1225	< 1	< 2	31	300	30	4.4	9	18	< 0.5	3.08	0.7	< 0.5	< 5	< 0.5	700	< 10	< 20	0.1	1.6	< 2	< 100	< 0.5	2.4
HL-1227	< 1	< 2	238	500	45	3.4	31	< 1	< 0.5	7.40	< 0.5	< 0.5	< 5	22.9	400	< 10	< 20	0.3	0.5	< 2	< 100	< 0.5	1.3
HL-1228	< 1	< 2	9	< 100	25	3.2	5	10	< 0.5	1.17	0.7	< 0.5	< 5	< 0.5	600	< 10	< 20	0.1	1.4	< 2	< 100	< 0.5	1.7
HL-1229	< 1	< 2	10	200	26	2.2	6	4	< 0.5	1.00	< 0.5	< 0.5	< 5	7.9	400	< 10	< 20	0.2	0.9	< 2	< 100	< 0.5	1.5
HL-1230	< 1	< 2	16	< 100	37	2.7	< 1	16	< 0.5	1.55	0.6	< 0.5	< 5	4.0	600	< 10	< 20	0.1	1.4	< 2	< 100	< 0.5	2.3
HL-1231	< 1	< 2	93	500	31	2.6	19	20	< 0.5	3.29	< 0.5	< 0.5	< 5	13.9	400	< 10	< 20	0.2	1.0	< 2	< 100	< 0.5	1.8
HL-1232	< 1	< 2	559	900	40	< 0.5	78	42	< 0.5	15.7	1.7	< 0.5	< 5	45.6	1100	< 10	< 20	0.5	2.9	< 2	< 100	< 0.5	4.2
HL-1233	< 1	< 2	14	600	24	3.4	8	17	2.6	1.22	1.1	< 0.5	< 5	9.0	800	< 10	< 20	0.2	2.0	6	< 100	< 0.5	2.1
HL-1250	< 1	< 2	5	200	26	3.3	5	7	< 0.5	0.62	< 0.5	< 0.5	< 5	5.8	400	< 10	< 20	0.2	1.0	< 2	< 100	< 0.5	2.0
HL-1251	< 1	< 2	18	200	43	3.4	15	15	< 0.5	2.03	< 0.5	< 0.5	< 5	< 0.5	300	< 10	< 20	0.2	0.6	< 2	< 100	< 0.5	0.8

	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA
SAMPLE	Au	Ag	As	Ba	Br	Ca	Co	Cr	Cs	Fe	Hf	Hg	Ir	Mo	Na	Ni	Rb	Sb	Sc	Se	Sr	Ta	Th
DESCRIPTION	ppb	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
HL-1252	< 1	< 2	5	200	31	3.3	< 1	4	< 0.5	0.74	< 0.5	< 0.5	< 5	< 0.5	400	< 10	< 20	0.3	1.1	< 2	< 100	< 0.5	1.5
HL-1253	< 1	< 2	3	< 100	22	3.3	< 1	9	< 0.5	0.48	< 0.5	< 0.5	< 5	< 0.5	400	< 10	< 20	0.2	1.0	< 2	< 100	< 0.5	1.1
HL-1254	< 1	< 2	2	< 100	22	3.6	< 1	15	< 0.5	0.41	< 0.5	< 0.5	< 5	< 0.5	400	< 10	< 20	0.3	1.2	< 2	< 100	< 0.5	1.7
HL-1255	< 1	< 2	2	< 100	19	3.3	< 1	9	< 0.5	0.71	< 0.5	< 0.5	< 5	6.9	500	< 10	< 20	0.2	1.2	< 2	< 100	< 0.5	1.2
HL-1256	< 1	< 2	4	< 100	24	3.0	< 1	14	< 0.5	0.87	0.8	< 0.5	< 5	< 0.5	800	< 10	< 20	0.3	1.9	< 2	< 100	< 0.5	2.6
HL-1257	< 1	< 2	3	100	21	3.1	1	12	1.2	0.58	< 0.5	< 0.5	< 5	< 0.5	600	< 10	< 20	0.3	1.5	< 2	< 100	< 0.5	2.2
HL-1258	< 1	< 2	2	300	40	4.9	< 1	15	< 0.5	0.37	0.9	< 0.5	< 5	15.5	500	< 10	< 20	0.4	1.5	< 2	< 100	< 0.5	2.5
HL-1259	< 1	< 2	3	200	32	4.6	5	10	< 0.5	0.81	< 0.5	< 0.5	< 5	< 0.5	500	< 10	< 20	0.2	1.2	< 2	< 100	< 0.5	1.5
HL-1260	< 1	< 2	5	200	32	4.4	< 1	6	< 0.5	0.71	0.6	< 0.5	< 5	< 0.5	600	< 10	< 20	0.4	1.6	< 2	< 100	< 0.5	2.2
HL-1261	< 1	< 2	2	< 100	25	2.9	4	6	< 0.5	0.37	< 0.5	< 0.5	< 5	< 0.5	500	< 10	< 20	0.3	1.1	< 2	< 100	< 0.5	1.8
HL-1262	2	< 2	3	200	28	3.3	< 1	9	< 0.5	0.56	< 0.5	< 0.5	< 5	9.6	500	< 10	< 20	0.3	1.4	< 2	< 100	< 0.5	1.7
HL-1269	< 1	< 2	1	300	41	4.9	4	9	< 0.5	0.38	< 0.5	< 0.5	< 5	7.3	400	< 10	< 20	0.2	0.6	< 2	< 100	< 0.5	0.9
HL-1271	< 1	< 2	3	100	33	4.4	5	7	< 0.5	0.81	< 0.5	< 0.5	< 5	< 0.5	500	< 10	< 20	0.3	0.9	< 2	< 100	< 0.5	1.1
HL-1273	< 1	< 2	85	700	68	4.3	30	31	< 0.5	4.54	< 0.5	< 0.5	< 5	29.4	500	< 10	< 20	0.1	1.0	< 2	< 100	< 0.5	1.7
HL-1275	< 1	< 2	4	< 100	27	6.4	< 1	8	1.0	0.55	< 0.5	< 0.5	< 5	3.5	400	< 10	< 20	0.2	0.6	< 2	< 100	< 0.5	0.7
HL-1340	< 1	< 2	3	< 100	30	4.5	5	11	< 0.5	0.76	< 0.5	< 0.5	< 5	8.7	400	< 10	< 20	0.3	0.8	< 2	< 100	< 0.5	1.8
HL-1341	< 1	< 2	4	100	31	4.6	< 1	< 1	< 0.5	1.47	< 0.5	< 0.5	< 5	< 0.5	400	< 10	< 20	0.2	0.7	< 2	< 100	< 0.5	1.0
HL-1342	< 1	< 2	3	< 100	44	6.0	< 1	9	< 0.5	0.67	< 0.5	< 0.5	< 5	10.8	400	< 10	< 20	0.4	1.1	< 2	< 100	< 0.5	3.0
HL-1346	< 1	< 2	2	< 100	14	0.6	< 1	13	0.9	0.47	1.1	< 0.5	< 5	6.7	900	< 10	< 20	0.4	2.8	< 2	< 100	< 0.5	4.8
HL-1347	< 1	< 2	4	< 100	23	2.5	< 1	< 1	< 0.5	0.56	< 0.5	< 0.5	< 5	7.3	700	< 10	< 20	0.5	1.1	< 2	< 100	< 0.5	1.4
HL-1348	< 1	< 2	7	200	20	3.4	7	11	< 0.5	0.98	< 0.5	< 0.5	< 5	< 0.5	700	< 10	< 20	0.2	1.4	< 2	< 100	< 0.5	2.1
HL-1349	< 1	< 2	3	< 100	21	2.0	< 1	5	< 0.5	0.43	< 0.5	< 0.5	< 5	< 0.5	400	< 10	< 20	0.2	0.6	< 2	< 100	< 0.5	0.9
HL-1350	2	< 2	4	200	23	4.6	< 1	4	< 0.5	1.12	< 0.5	< 0.5	< 5	2.7	500	< 10	< 20	0.2	1.3	< 2	< 100	< 0.5	2.7
HL-1351	36	< 2	4	< 100	13	2.4	< 1	2	< 0.5	0.17	< 0.5	< 0.5	< 5	3.3	300	< 10	< 20	0.5	0.4	< 2	< 100	< 0.5	0.7
HL-1364	< 1	< 2	10	700	17	< 0.5	13	52	1.2	1.95	2.0	< 0.5	< 5	< 0.5	10000	< 10	40	< 0.1	4.1	< 2	< 100	< 0.5	5.7
HL-1365	< 1	< 2	9	1300	64	4.8	8	24	< 0.5	1.28	1.1	< 0.5	< 5	19.7	1800	< 10	< 20	< 0.1	3.7	< 2	< 100	< 0.5	6.3
HL-1366	< 1	< 2	21	500	48	3.1	16	70	7.8	2.78	3.1	< 0.5	< 5	6.1	7300	< 10	100	< 0.1	7.6	< 2	< 100	< 0.5	9.4
HL-1367	< 1	< 2	151	600	40	3.8	27	66	7.8	4.48	3.4	< 0.5	< 5	17.8	7200	< 10	< 20	0.8	8.0	< 2	< 100	< 0.5	8.9
HL-1368	< 1	< 2	16	400	50	3.0	9	30	3.3	1.60	2.0	< 0.5	< 5	< 0.5	2700	< 10	40	0.1	3.2	< 2	< 100	< 0.5	3.7
HL-1369	< 1	< 2	30	400	35	2.9	15	48	6.5	2.36	2.2	< 0.5	< 5	6.3	4800	< 10	< 20	0.2	6.2	< 2	< 100	< 0.5	7.6
HL-1370	1	< 2	8	300	27	3.8	6	33	4.1	1.11	1.3	< 0.5	< 5	31.3	2100	< 10	< 20	0.1	3.0	< 2	100	< 0.5	3.5
HL-1371	< 1	< 2	4	200	22	3.5	4	10	< 0.5	0.80	< 0.5	< 0.5	< 5	4.5	700	< 10	< 20	< 0.1	1.2	< 2	< 100	< 0.5	1.5
HL-1372	< 1	< 2	21	200	34	3.1	6	3	< 0.5	2.03	< 0.5	< 0.5	< 5	< 0.5	300	< 10	< 20	< 0.1	0.4	< 2	< 100	< 0.5	0.5
HL-1373	< 1	< 2	3	300	38	3.3	< 1	< 1	< 0.5	0.81	< 0.5	< 0.5	< 5	< 0.5	300	< 10	< 20	0.1	0.5	< 2	< 100	< 0.5	< 0.5
HL-1375	< 1	< 2	6	200	58	4.4	4	11	< 0.5	1.44	< 0.5	< 0.5	< 5	< 0.5	400	< 10	< 20	< 0.1	0.9	< 2	< 100	< 0.5	1.4
HL-1379	< 1	< 2	2	100	48	3.7	< 1	10	< 0.5	0.47	< 0.5	< 0.5	< 5	< 0.5	300	< 10	< 20	< 0.1	0.6	< 2	< 100	< 0.5	1.0
HL-1536	< 1	< 2	4	300	11	< 0.5	< 1	45	4.2	1.49	2.5	< 0.5	< 5	9.2	9300	< 10	< 20	0.2	4.4	< 2	< 100	< 0.5	6.0
HL-1537	< 1	< 2	2	400	28	2.7	31	36	< 0.5	1.37	< 0.5	< 0.5	< 5	< 0.5	800	< 10	< 20	0.2	4.3	< 2	< 100	< 0.5	5.7
HL-1538	< 1	< 2	< 1	100	40	5.7	5	28	< 0.5	0.69	< 0.5	< 0.5	< 5	47.0	500	< 10	< 20	0.1	1.7	< 2	< 100	< 0.5	2.5
HL-1539	< 1	< 2	2	< 100	44	4.9	3	12	< 0.5	0.31	< 0.5	< 0.5	< 5	3.9	400	< 10	< 20	0.2	0.9	< 2	< 100	< 0.5	1.3
HL-1540	< 1	< 2	2	200	23	3.8	21	5	< 0.5	0.63	< 0.5	< 0.5	< 5	6.7	200	< 10	< 20	< 0.1	0.4	< 2	< 100	< 0.5	< 0.5
HL-1541	< 1	< 2	6	400	29	3.2	25	3	< 0.5	1.04	< 0.5	< 0.5	< 5	8.1	300	< 10	< 20	0.1	0.4	< 2	< 100	< 0.5	0.7
HL-1543	< 1	< 2	9	300	31	4.3	22	16	1.8	1.21	1.5	< 0.5	< 5	8.3	5600	< 10	< 20	0.2	3.4	< 2	< 100	< 0.5	4.7
HL-1545	< 1	< 2	4	100	35	3.7	< 1	30	< 0.5	0.70	< 0.5	< 0.5	< 5	< 0.5	1800	< 10	< 20	0.1	2.0	< 2	< 100	< 0.5	2.3
HL-1547	< 1	< 2	2	< 100	22	3.8	6	25	< 0.5	0.66	0.7	< 0.5	< 5	< 0.5	2500	< 10	< 20	0.2	1.9	< 2	< 100	< 0.5	1.7
HL-1148	< 1	< 2	2	400	9	< 0.5	3	34	< 0.5	0.88	1.7	< 0.5	< 5	< 0.5	7100	< 10	< 20	0.2	3.0	< 2	< 100	< 0.5	3.8
HL-1150	< 1	< 2	2	400	13	0.8	< 1	20	< 0.5	0.87	2.8	< 0.5	< 5	< 0.5	6800	< 10	< 20	< 0.1	4.5	< 2	300	< 0.5	3.6
HL-1152	< 1	< 2	121	< 100	32	< 0.5	30	49	3.5	3.88	< 0.5	< 0.5	< 5	< 0.5	3500	< 10	< 20	0.2	4.5	< 2	< 100	< 0.5	6.4
L-STD-4 Meas	23				5	3.6	1			0.11					300			0.1	0.2				
L-STD-4 Cert	20.0				5.60	3.67	0.600			0.110					365			0.160	0.240				
L-STD-4 Meas	20				6	3.8	< 1			0.12					300			0.1	0.3				

	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA
SAMPLE	Au	Ag	As	Ba	Br	Ca	Co	Cr	Cs	Fe	Hf	Hg	Ir	Mo	Na	Ni	Rb	Sb	Sc	Se	Sr	Ta	Th
DESCRIPTION	ppb	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
L-STD-4 Cert	20.0				5.60	3.67	0.600			0.110					365			0.160	0.240				
L-STD-4 Meas	19				6	3.6	2			0.11					300			0.2	0.3				
L-STD-4 Cert	20.0				5.60	3.67	0.600			0.110					365			0.160	0.240				
L-STD-4 Meas	20				5	3.7	1			0.12					300			0.1	0.2				
L-STD-4 Cert	20.0				5.60	3.67	0.600			0.110					365			0.160	0.240				

Results

	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA
SAMPLE	U	W	Zn	La	Ce	Nd	Sm	Eu	Tb	Yb	Lu	Mass
DESCRIPTION	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	g
HL-2051	0.6	< 1	40	17.2	49	19	1.7	0.3	< 0.2	0.3	< 0.1	15.4
HL-2052	0.5	< 1	< 20	13.3	18	19	1.4	0.2	< 0.2	0.4	< 0.1	15.4
HL-2053	< 0.1	< 1	30	6.6	10	12	0.7	< 0.2	< 0.2	0.2	< 0.1	15.0
HL-2054	< 0.1	< 1	30	2.5	4	9	0.3	< 0.2	< 0.2	< 0.1	< 0.1	15.3
HL-2055	< 0.1	< 1	40	1.6	3	6	0.2	< 0.2	< 0.2	0.2	< 0.1	15.3
HL-2056	0.4	< 1	40	2.3	5	5	0.4	< 0.2	< 0.2	0.1	< 0.1	15.1
HL-2057	0.8	< 1	< 20	2.0	4	7	0.3	< 0.2	< 0.2	0.1	< 0.1	15.1
HL-2058	1.4	< 1	40	1.6	3	7	0.3	< 0.2	< 0.2	< 0.1	< 0.1	14.6
HL-2059	6.0	< 1	40	1.3	3	14	0.2	< 0.2	< 0.2	< 0.1	< 0.1	15.7
HL-2060	10.1	< 1	30	0.6	2	13	0.1	< 0.2	< 0.2	< 0.1	< 0.1	14.8
HL-2061	< 0.1	< 1	50	1.3	2	8	0.2	< 0.2	< 0.2	0.1	< 0.1	9.40
HL-2069	10.4	< 1	30	1.0	2	11	0.2	< 0.2	< 0.2	< 0.1	< 0.1	15.1
HL-2070	6.5	< 1	60	1.3	4	20	0.2	< 0.2	< 0.2	< 0.1	< 0.1	15.4
HL-2071	2.5	< 1	20	1.0	2	8	0.2	< 0.2	< 0.2	< 0.1	< 0.1	9.70
HL-2072	3.3	< 1	< 20	0.9	1	8	0.1	< 0.2	< 0.2	< 0.1	< 0.1	14.9
HL-2073	46.4	< 1	20	2.1	7	30	0.5	< 0.2	< 0.2	< 0.1	< 0.1	15.2
HL-2074	1.7	< 1	60	2.4	5	10	0.5	< 0.2	< 0.2	0.2	< 0.1	15.4
HL-2075	0.8	< 1	< 20	1.5	2	< 3	0.2	< 0.2	< 0.2	< 0.1	< 0.1	15.1
HL-2076	1.4	< 1	90	1.9	4	19	0.3	< 0.2	< 0.2	0.1	< 0.1	15.1
HL-2077	4.7	< 1	< 20	1.4	5	27	0.3	< 0.2	< 0.2	< 0.1	< 0.1	14.7
HL-2078	0.4	< 1	50	1.5	3	7	0.3	< 0.2	< 0.2	< 0.1	< 0.1	11.0
HL-2079	0.8	< 1	20	3.3	7	10	0.6	< 0.2	< 0.2	0.3	< 0.1	15.1
HL-2080	0.3	< 1	20	1.7	3	8	0.3	< 0.2	< 0.2	0.2	< 0.1	14.8
HL-2081	1.4	< 1	40	9.1	19	17	1.7	0.3	< 0.2	0.6	< 0.1	15.9
HL-2082	4.6	< 1	30	2.1	4	17	0.4	< 0.2	< 0.2	< 0.1	0.1	15.4
HL-2083	0.6	< 1	< 20	1.6	3	13	0.2	< 0.2	< 0.2	< 0.1	< 0.1	15.4
HL-2097	< 0.1	< 1	< 20	3.1	7	7	0.5	< 0.2	< 0.2	0.2	< 0.1	15.1
HL-2098	< 0.1	< 1	< 20	2.5	6	8	0.4	< 0.2	< 0.2	0.2	< 0.1	15.0
HL-2099	0.4	< 1	< 20	3.4	6	9	0.6	< 0.2	< 0.2	0.2	< 0.1	15.5
HL-2100	0.3	< 1	< 20	2.5	4	< 3	0.4	< 0.2	< 0.2	< 0.1	< 0.1	15.0
HL-2101	0.5	< 1	< 20	3.7	6	< 3	0.5	< 0.2	< 0.2	0.2	< 0.1	15.8
HL-2102	< 0.1	< 1	< 20	1.5	2	< 3	0.2	< 0.2	< 0.2	< 0.1	< 0.1	15.6
HL-2103	< 0.1	< 1	< 20	2.5	5	6	0.4	< 0.2	< 0.2	0.2	< 0.1	15.1
HL-2104	< 0.1	< 1	30	1.3	5	10	0.2	< 0.2	< 0.2	< 0.1	< 0.1	8.42
HL-2105	< 0.1	< 1	< 20	1.7	4	8	0.2	< 0.2	< 0.2	< 0.1	< 0.1	15.4
HL-1760	0.3	< 1	30	5.0	6	6	0.5	< 0.2	< 0.2	< 0.1	< 0.1	15.4
HL-1761	2.8	< 1	100	20.6	34	12	2.6	0.6	0.7	0.8	0.1	15.7
HL-1762	1.3	< 1	250	23.7	38	17	2.5	< 0.2	< 0.2	0.6	< 0.1	15.8
HL-1763	1.8	< 1	100	12.0	16	20	1.3	< 0.2	< 0.2	0.4	< 0.1	15.0
HL-1764	1.1	< 1	140	14.1	22	14	1.5	< 0.2	< 0.2	0.5	< 0.1	15.5
HL-1765	0.8	< 1	< 20	13.2	28	14	1.6	0.3	< 0.2	0.6	< 0.1	15.3

	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA
SAMPLE	U	W	Zn	La	Ce	Nd	Sm	Eu	Tb	Yb	Lu	Mass
DESCRIPTION	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	g
HL-1766	< 0.1	< 1	< 20	5.6	5	17	0.6	< 0.2	< 0.2	< 0.1	< 0.1	15.2
HL-1769	1.2	< 1	< 20	9.7	13	13	1.0	< 0.2	< 0.2	0.4	< 0.1	15.1
HL-1770	< 0.1	< 1	< 20	3.3	6	12	0.4	< 0.2	< 0.2	< 0.1	< 0.1	15.4
HL-1771	0.5	< 1	< 20	4.3	7	4	0.6	< 0.2	< 0.2	0.2	< 0.1	15.3
HL-1772	0.3	< 1	< 20	4.2	< 1	7	0.6	< 0.2	< 0.2	0.2	< 0.1	15.8
HL-1773	0.5	< 1	< 20	3.7	5	6	0.5	< 0.2	< 0.2	< 0.1	< 0.1	15.9
HL-1774	0.9	< 1	< 20	2.8	5	6	0.4	< 0.2	< 0.2	0.2	< 0.1	15.4
HL-1775	0.7	< 1	< 20	3.1	5	9	0.4	< 0.2	< 0.2	0.2	< 0.1	15.3
HL-1778	1.2	< 1	< 20	5.0	8	3	0.6	0.3	< 0.2	0.3	< 0.1	15.3
HL-1779	< 0.1	< 1	< 20	3.1	6	6	0.4	< 0.2	< 0.2	0.2	< 0.1	15.7
HL-1780	0.4	< 1	< 20	2.5	4	7	0.4	< 0.2	< 0.2	0.2	< 0.1	15.1
HL-1781	0.4	< 1	60	3.2	4	7	0.5	< 0.2	< 0.2	0.2	< 0.1	15.3
HL-1782	< 0.1	< 1	< 20	4.4	10	6	0.7	< 0.2	< 0.2	0.4	< 0.1	15.3
HL-1783	< 0.1	< 1	30	2.7	6	< 3	0.4	< 0.2	< 0.2	0.1	< 0.1	15.4
HL-1784	< 0.1	< 1	< 20	2.5	5	< 3	0.3	< 0.2	< 0.2	0.2	< 0.1	15.0
HL-1785	1.6	< 1	< 20	22.0	40	16	2.1	0.4	< 0.2	0.6	< 0.1	15.2
HL-1786	1.0	< 1	< 20	19.1	37	19	1.9	0.4	< 0.2	0.6	< 0.1	15.3
HL-1787	1.5	< 1	< 20	6.8	12	7	0.7	< 0.2	< 0.2	0.1	< 0.1	15.3
HL-1788	0.5	< 1	30	3.2	5	< 3	0.4	< 0.2	< 0.2	0.2	< 0.1	15.5
HL-1789	0.5	< 1	< 20	6.0	7	9	0.6	< 0.2	< 0.2	0.2	< 0.1	15.3
HL-1790	2.2	< 1	< 20	14.6	18	9	1.4	0.4	< 0.2	0.4	< 0.1	15.3
HL-1792	1.5	< 1	< 20	17.1	24	17	1.4	0.3	< 0.2	0.4	< 0.1	15.6
HL-1793	0.4	< 1	30	11.0	21	13	1.1	0.2	0.3	0.3	< 0.1	15.4
HL-1795	2.4	< 1	30	36.8	59	30	3.4	0.6	< 0.2	0.9	0.1	15.3
HL-1865	1.6	< 1	< 20	33.3	40	35	3.0	0.6	< 0.2	1.0	0.2	15.1
HL-1866	2.1	< 1	30	23.3	35	18	2.2	0.5	< 0.2	0.8	< 0.1	15.5
HL-1867	1.6	< 1	< 20	25.0	40	18	2.6	0.5	< 0.2	1.1	< 0.1	15.4
HL-1868	4.3	< 1	< 20	84.3	139	51	6.8	1.2	< 0.2	1.0	0.2	15.7
HL-1870	3.2	< 1	< 20	68.4	< 1	40	4.9	1.3	< 0.2	0.8	0.1	15.2
HL-1871	1.7	< 1	< 20	31.5	44	19	2.4	0.5	< 0.2	0.6	< 0.1	15.3
HL-1872	1.5	< 1	< 20	18.2	28	17	1.3	0.4	< 0.2	0.4	< 0.1	15.8
HL-1873	3.9	< 1	< 20	91.3	162	57	7.4	1.8	< 0.2	1.8	0.2	15.4
HL-1876	< 0.1	< 1	< 20	7.1	11	8	0.7	< 0.2	< 0.2	0.3	< 0.1	15.2
HL-1877	0.3	< 1	< 20	2.7	6	< 3	0.3	< 0.2	< 0.2	0.2	< 0.1	15.5
HL-1879	0.9	< 1	< 20	8.1	13	7	1.1	0.2	< 0.2	0.4	< 0.1	15.6
HL-1881	0.6	< 1	< 20	19.6	50	15	1.8	0.3	< 0.2	0.4	< 0.1	15.2
HL-1882	2.8	< 1	< 20	74.3	120	30	4.0	0.7	< 0.2	1.0	0.2	15.1
HL-1888	0.6	< 1	< 20	8.2	14	7	0.8	< 0.2	< 0.2	0.2	< 0.1	15.2
HL-1889	7.1	< 1	< 20	81.8	100	59	6.7	1.4	< 0.2	1.6	0.2	15.3
HL-1890	4.7	< 1	< 20	140	233	78	9.6	1.7	< 0.2	1.4	0.3	15.6
HL-1891	2.1	< 1	< 20	26.6	46	21	2.3	0.4	< 0.2	0.7	< 0.1	15.7
HL-1892	2.7	< 1	< 20	30.5	50	27	2.6	0.6	< 0.2	0.7	< 0.1	15.8
HL-1893	1.5	< 1	< 20	15.2	25	8	1.3	0.4	< 0.2	0.4	< 0.1	15.9
HL-1894	0.9	< 1	< 20	29.2	37	15	1.6	0.4	< 0.2	0.5	< 0.1	15.8
HL-1895	0.4	< 1	30	3.0	4	< 3	0.3	< 0.2	< 0.2	0.1	< 0.1	15.5
HL-1896	0.3	< 1	< 20	3.9	5	6	0.5	< 0.2	< 0.2	0.2	< 0.1	15.4
HL-1897	0.6	< 1	< 20	5.2	6	6	0.7	< 0.2	< 0.2	0.3	< 0.1	15.2
HL-1952	7.6	< 1	< 20	8.8	10	11	0.6	< 0.2	< 0.2	0.2	< 0.1	15.0
HL-1953	3.4	< 1	< 20	23.2	32	25	2.0	0.4	< 0.2	0.5	0.1	15.3

	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA
SAMPLE	U	W	Zn	La	Ce	Nd	Sm	Eu	Tb	Yb	Lu	Mass
DESCRIPTION	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	g
HL-1954	1.6	< 1	< 20	22.4	29	8	2.0	0.4	< 0.2	0.6	< 0.1	15.4
HL-1958	0.5	< 1	< 20	10.3	19	10	1.2	0.3	< 0.2	0.5	< 0.1	15.7
HL-1959	1.8	< 1	< 20	10.6	17	6	0.9	0.2	< 0.2	0.6	< 0.1	15.9
HL-1960	1.1	< 1	< 20	9.5	14	7	0.9	0.3	< 0.2	0.4	0.1	15.6
HL-1991	7.9	< 1	< 20	5.6	8	8	0.7	< 0.2	< 0.2	0.3	< 0.1	15.0
HL-2272	0.6	< 1	20	2.8	5	6	0.4	< 0.2	< 0.2	0.2	< 0.1	15.6
HL-2273	0.3	< 1	< 20	2.2	3	4	0.3	< 0.2	< 0.2	< 0.1	< 0.1	15.8
HL-2274	2.1	< 1	< 20	13.8	15	15	1.6	0.3	< 0.2	0.5	0.1	15.3
HL-2278	0.3	< 1	< 20	5.5	9	8	0.7	< 0.2	< 0.2	0.3	< 0.1	15.1
HL-2297	3.1	< 1	40	32.8	46	17	2.1	0.5	< 0.2	0.6	< 0.1	15.2
HL-2331	< 0.1	< 1	20	2.9	5	7	0.3	< 0.2	< 0.2	< 0.1	< 0.1	15.2
HL-2332	0.2	< 1	40	1.1	2	< 3	0.2	< 0.2	< 0.2	< 0.1	< 0.1	15.4
HL-2333	1.5	< 1	20	7.5	12	7	0.8	< 0.2	< 0.2	0.2	< 0.1	15.9
HL-2334	< 0.1	< 1	< 20	2.4	4	6	0.3	< 0.2	< 0.2	0.2	< 0.1	15.1
HL-2335	< 0.1	< 1	< 20	1.2	2	< 3	0.2	< 0.2	< 0.2	< 0.1	< 0.1	15.1
HL-2339	< 0.1	< 1	< 20	2.7	5	< 3	0.3	< 0.2	< 0.2	0.2	< 0.1	15.3
HL-2369	1.4	< 1	< 20	17.7	24	10	1.8	0.4	0.5	1.1	0.2	15.9
HL-2370	1.2	< 1	< 20	12.1	17	16	1.3	0.3	< 0.2	0.7	< 0.1	15.4
HL-2371	5.8	< 1	30	13.4	18	16	1.2	0.3	< 0.2	0.4	0.1	15.3
HL-2372	7.5	< 1	< 20	39.9	32	30	3.8	1.0	< 0.2	1.0	0.2	15.7
HL-2418	6.3	< 1	50	38.5	39	38	5.3	1.1	0.9	1.6	0.3	15.5
HL-2419	1.5	< 1	60	41.2	50	41	4.5	1.1	0.7	0.8	0.2	15.2
HL-2420	4.1	< 1	< 20	32.4	32	29	3.8	0.8	< 0.2	1.4	0.1	15.6
HL-2421	1.8	< 1	< 20	25.6	42	26	3.0	0.6	< 0.2	1.1	0.2	15.5
HL-2422	0.8	< 1	< 20	24.8	38	20	2.6	0.4	< 0.2	0.5	< 0.1	15.6
HL-2423	0.7	< 1	40	14.6	19	20	1.9	0.3	< 0.2	0.8	0.1	15.2
HL-2424	< 0.1	< 1	20	7.2	11	8	0.9	0.2	< 0.2	< 0.1	< 0.1	15.4
HL-2426	< 0.1	< 1	< 20	4.0	5	4	0.5	< 0.2	< 0.2	0.3	< 0.1	15.1
HL-2427	< 0.1	< 1	< 20	3.5	6	< 3	0.4	< 0.2	< 0.2	0.3	< 0.1	15.2
HL-2428	< 0.1	< 1	< 20	3.5	6	< 3	0.4	< 0.2	< 0.2	< 0.1	< 0.1	15.3
HL-2433	< 0.1	< 1	50	4.0	6	< 3	0.5	< 0.2	< 0.2	< 0.1	< 0.1	15.2
HL-2434	< 0.1	< 1	20	3.2	3	10	0.4	< 0.2	< 0.2	< 0.1	< 0.1	15.7
HL-2435	< 0.1	< 1	120	3.2	8	18	0.4	< 0.2	< 0.2	< 0.1	< 0.1	15.4
HL-2436	< 0.1	< 1	110	2.7	4	< 3	0.4	< 0.2	< 0.2	< 0.1	< 0.1	15.3
HL-2476	0.5	< 1	60	5.4	11	< 3	0.7	< 0.2	< 0.2	< 0.1	< 0.1	15.3
HL-2477	< 0.1	< 1	< 20	6.0	6	< 3	0.7	< 0.2	< 0.2	< 0.1	< 0.1	15.5
HL-2479	< 0.1	< 1	60	21.7	43	9	2.1	0.5	< 0.2	0.5	< 0.1	15.1
HL-2480	< 0.1	< 1	< 20	19.4	29	15	2.2	0.4	< 0.2	1.1	< 0.1	15.3
HL-2481	1.6	< 1	< 20	22.6	29	15	2.2	0.4	< 0.2	1.1	0.2	15.4
HL-2482	< 0.1	< 1	30	7.8	12	11	0.9	< 0.2	< 0.2	0.2	< 0.1	15.1
HL-2484	< 0.1	< 1	< 20	6.0	9	< 3	0.7	< 0.2	< 0.2	0.2	< 0.1	15.5
HL-2485	< 0.1	< 1	20	6.2	9	< 3	0.9	< 0.2	< 0.2	0.6	< 0.1	15.3
HL-2486	< 0.1	< 1	50	6.4	15	20	0.9	< 0.2	< 0.2	0.5	< 0.1	15.3
HL-2487	0.8	< 1	30	7.9	10	10	1.0	< 0.2	< 0.2	0.5	< 0.1	15.3
HL-4001	0.6	< 1	< 20	4.2	3	13	0.4	< 0.2	< 0.2	< 0.1	< 0.1	15.4
HL-4002	2.4	< 1	< 20	13.3	15	19	1.4	< 0.2	< 0.2	0.7	0.1	15.1
HL-233	4.4	< 1	< 20	31.7	43	28	2.9	0.7	< 0.2	0.8	0.2	15.3
HL-234	8.4	< 1	< 20	48.8	87	49	4.1	0.8	< 0.2	1.0	0.3	15.2
HL-235	3.2	< 1	< 20	55.5	72	29	4.6	1.2	1.1	1.2	0.3	15.4

	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA
SAMPLE	U	W	Zn	La	Ce	Nd	Sm	Eu	Tb	Yb	Lu	Mass
DESCRIPTION	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	g
HL-236	9.9	< 1	< 20	53.9	118	27	4.8	1.3	< 0.2	1.0	0.3	15.5
HL-237	3.3	< 1	< 20	26.7	22	43	2.4	0.5	< 0.2	0.9	0.1	15.9
HL-238	< 0.1	< 1	< 20	3.8	13	< 3	0.5	< 0.2	< 0.2	0.3	< 0.1	15.6
HL-239	< 0.1	< 1	< 20	5.6	10	< 3	0.6	< 0.2	< 0.2	< 0.1	< 0.1	15.3
HL-240	< 0.1	< 1	40	14.7	26	< 3	1.5	< 0.2	< 0.2	0.6	< 0.1	15.6
HL-241	1.3	< 1	< 20	30.8	35	19	2.8	0.2	< 0.2	1.1	< 0.1	15.6
HL-242	2.5	< 1	< 20	28.8	37	21	2.9	0.6	0.5	0.5	< 0.1	15.9
HL-243	1.5	< 1	20	11.4	18	10	1.1	0.2	< 0.2	0.2	< 0.1	15.6
HL-246	0.7	< 1	< 20	9.3	12	4	1.1	< 0.2	< 0.2	0.6	< 0.1	15.5
HL-247	3.0	< 1	< 20	59.1	69	39	5.5	0.9	< 0.2	1.4	0.2	15.3
HL-248	4.3	< 1	< 20	64.2	84	44	6.0	1.0	< 0.2	0.9	0.1	15.2
HL-289	9.2	< 1	< 20	95.4	100	44	8.6	1.3	1.2	0.9	0.3	15.8
HL-291	3.1	< 1	< 20	25.3	39	17	2.6	0.5	< 0.2	0.4	< 0.1	15.3
HL-292	0.9	< 1	< 20	7.0	9	3	0.8	< 0.2	< 0.2	0.3	< 0.1	15.8
HL-293	1.3	< 1	30	12.4	24	12	1.4	< 0.2	< 0.2	0.2	< 0.1	15.2
HL-294	1.0	< 1	< 20	12.7	20	14	1.8	0.4	0.3	0.3	< 0.1	15.2
HL-295	0.5	< 1	< 20	7.0	10	7	0.9	< 0.2	< 0.2	0.3	< 0.1	15.2
HL-299	1.9	< 1	< 20	23.7	34	14	3.0	1.2	< 0.2	0.9	< 0.1	15.9
HL-303	2.2	< 1	< 20	40.7	51	14	4.1	1.3	< 0.2	1.1	0.2	15.3
HL-413	0.8	< 1	< 20	9.9	11	11	1.2	0.2	< 0.2	0.4	< 0.1	15.9
HL-416	8.4	< 1	< 20	51.4	71	17	5.3	1.7	< 0.2	0.8	0.2	15.7
HL-436	1.5	< 1	< 20	48.6	74	15	3.9	0.7	< 0.2	0.8	0.1	15.8
HL-437	2.6	< 1	< 20	31.3	45	12	2.9	0.7	< 0.2	0.7	< 0.1	15.8
HL-441	5.4	< 1	60	30.2	55	15	3.4	0.7	< 0.2	0.8	0.1	15.9
HL-442	1.2	< 1	60	12.4	18	10	1.4	0.5	< 0.2	0.8	< 0.1	15.9
HL-443	1.8	< 1	50	24.7	48	20	2.8	0.6	< 0.2	0.8	< 0.1	15.2
HL-445	8.9	< 1	< 20	73.6	108	37	7.8	1.4	< 0.2	1.5	0.4	15.9
HL-446	13.6	< 1	< 20	54.1	68	33	5.6	0.9	< 0.2	1.0	0.3	15.2
HL-449	2.1	< 1	30	5.7	10	5	0.7	< 0.2	< 0.2	0.2	< 0.1	15.3
HL-450	1.2	< 1	< 20	5.7	9	5	0.8	< 0.2	< 0.2	0.4	< 0.1	15.9
HL-451	0.9	< 1	< 20	5.5	8	9	0.8	< 0.2	< 0.2	0.3	< 0.1	15.7
HL-1074	0.9	< 1	< 20	8.3	13	9	1.1	< 0.2	< 0.2	0.6	< 0.1	15.4
HL-1075	0.7	< 1	< 20	13.1	19	9	1.6	< 0.2	< 0.2	0.5	< 0.1	15.6
HL-1076	0.7	< 1	20	19.3	31	15	1.9	0.5	< 0.2	0.6	< 0.1	16.0
HL-1110	0.6	< 1	< 20	23.4	39	11	2.7	0.5	< 0.2	0.8	0.1	15.3
HL-1113	< 0.1	< 1	< 20	11.8	17	11	1.3	0.2	0.3	0.5	< 0.1	15.5
HL-1118	5.9	< 1	< 20	271	293	108	15.0	2.7	< 0.2	1.5	0.3	15.6
HL-1119	1.4	< 1	< 20	29.6	39	32	2.3	0.4	< 0.2	0.6	< 0.1	15.2
HL-1121	7.7	< 1	< 20	82.6	115	65	7.7	1.3	< 0.2	1.7	0.3	15.9
HL-1122	1.3	< 1	< 20	24.9	34	15	2.1	0.4	< 0.2	0.5	< 0.1	15.8
HL-1123	3.7	< 1	< 20	42.7	61	21	4.0	0.7	< 0.2	1.3	0.2	15.7
HL-1124	1.6	< 1	< 20	28.8	42	22	2.5	0.6	0.4	0.9	0.2	15.9
HL-1137	4.5	< 1	< 20	25.1	31	22	2.3	0.5	< 0.2	0.6	0.1	15.9
HL-1138	5.9	< 1	< 20	32.3	47	17	3.1	0.6	< 0.2	0.9	0.2	16.0
HL-1139	3.5	< 1	80	81.1	93	49	7.2	1.3	< 0.2	1.8	0.2	15.5
HL-1140	3.5	< 1	< 20	58.6	89	32	5.0	1.1	< 0.2	1.4	0.2	15.7
HL-1141	2.8	< 1	< 20	78.4	130	56	7.8	1.7	< 0.2	2.4	0.3	15.5
HL-1147	< 0.1	< 1	< 20	10.9	15	5	0.9	0.3	< 0.2	0.6	< 0.1	15.8
HL-1149	6.8	< 1	< 20	24.6	48	23	3.3	0.7	< 0.2	0.9	0.2	16.0

	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA
SAMPLE	U	W	Zn	La	Ce	Nd	Sm	Eu	Tb	Yb	Lu	Mass
DESCRIPTION	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	g
HL-1220	3.0	< 1	40	6.4	12	10	0.8	0.2	< 0.2	0.3	< 0.1	15.3
HL-1221	0.5	< 1	< 20	7.0	13	12	0.8	< 0.2	< 0.2	0.3	< 0.1	15.5
HL-1222	1.5	< 1	< 20	8.2	16	5	1.0	< 0.2	< 0.2	0.4	< 0.1	15.6
HL-1223	1.9	< 1	< 20	10.0	17	10	1.1	0.3	0.2	0.5	< 0.1	15.6
HL-1224	1.7	< 1	< 20	8.9	13	12	1.1	0.2	< 0.2	0.4	< 0.1	15.6
HL-1225	1.1	< 1	< 20	4.9	7	9	0.6	< 0.2	< 0.2	0.4	< 0.1	15.7
HL-1227	< 0.1	< 1	< 20	2.3	4	6	0.3	< 0.2	< 0.2	0.1	< 0.1	15.2
HL-1228	< 0.1	< 1	< 20	3.6	6	< 3	0.5	< 0.2	< 0.2	0.2	< 0.1	15.6
HL-1229	< 0.1	< 1	< 20	2.1	3	5	0.3	< 0.2	< 0.2	0.1	< 0.1	15.9
HL-1230	1.6	< 1	< 20	4.1	8	8	0.5	< 0.2	< 0.2	0.2	< 0.1	15.6
HL-1231	0.6	< 1	< 20	3.0	5	< 3	0.4	< 0.2	< 0.2	0.2	< 0.1	15.4
HL-1232	< 0.1	< 1	< 20	8.0	16	6	1.2	< 0.2	< 0.2	0.6	< 0.1	15.1
HL-1233	< 0.1	< 1	< 20	5.2	9	12	0.7	0.2	< 0.2	0.4	< 0.1	15.5
HL-1250	< 0.1	< 1	< 20	7.3	8	4	0.7	< 0.2	< 0.2	0.2	< 0.1	15.2
HL-1251	< 0.1	< 1	< 20	5.6	6	9	0.5	< 0.2	< 0.2	0.2	< 0.1	15.9
HL-1252	< 0.1	< 1	< 20	8.5	7	10	0.8	< 0.2	< 0.2	0.3	< 0.1	15.7
HL-1253	< 0.1	< 1	< 20	7.1	5	7	0.8	0.2	< 0.2	0.3	< 0.1	15.1
HL-1254	< 0.1	< 1	< 20	7.3	7	14	0.8	< 0.2	< 0.2	0.3	< 0.1	15.7
HL-1255	0.7	< 1	< 20	5.2	6	10	0.6	< 0.2	< 0.2	0.3	< 0.1	15.3
HL-1256	0.9	< 1	< 20	7.3	10	10	0.8	< 0.2	0.2	0.4	< 0.1	15.9
HL-1257	0.6	< 1	< 20	5.2	6	9	0.6	< 0.2	< 0.2	0.3	< 0.1	15.1
HL-1258	< 0.1	< 1	< 20	5.4	7	9	0.7	< 0.2	< 0.2	0.2	< 0.1	15.6
HL-1259	< 0.1	< 1	< 20	3.6	6	< 3	0.5	< 0.2	< 0.2	0.3	< 0.1	15.3
HL-1260	< 0.1	< 1	< 20	4.8	7	3	0.8	< 0.2	< 0.2	0.3	< 0.1	15.1
HL-1261	0.8	< 1	< 20	3.5	5	5	0.4	< 0.2	< 0.2	0.2	< 0.1	15.2
HL-1262	< 0.1	< 1	< 20	3.9	< 1	8	0.6	< 0.2	< 0.2	0.2	< 0.1	15.4
HL-1269	< 0.1	< 1	30	2.2	4	8	0.3	< 0.2	< 0.2	0.2	< 0.1	15.3
HL-1271	1.2	< 1	< 20	3.4	6	5	0.5	< 0.2	< 0.2	0.2	< 0.1	15.4
HL-1273	2.6	< 1	< 20	6.9	13	13	0.7	< 0.2	< 0.2	0.2	< 0.1	15.6
HL-1275	0.6	< 1	< 20	2.3	4	4	0.2	< 0.2	< 0.2	0.2	< 0.1	15.4
HL-1340	1.4	< 1	< 20	6.5	6	10	0.6	< 0.2	< 0.2	0.2	< 0.1	15.2
HL-1341	1.3	< 1	20	6.6	9	9	0.6	< 0.2	< 0.2	0.2	< 0.1	15.2
HL-1342	2.5	< 1	< 20	19.2	20	29	1.6	0.2	< 0.2	0.3	< 0.1	15.3
HL-1346	2.0	< 1	< 20	8.8	14	9	1.0	0.2	< 0.2	0.3	< 0.1	15.0
HL-1347	< 0.1	12	< 20	3.1	4	5	0.4	< 0.2	< 0.2	< 0.1	< 0.1	15.2
HL-1348	0.7	< 1	30	8.1	10	8	0.8	< 0.2	< 0.2	0.3	< 0.1	15.4
HL-1349	0.5	< 1	< 20	6.6	8	7	0.6	< 0.2	< 0.2	0.2	< 0.1	15.7
HL-1350	4.6	< 1	< 20	12.5	14	11	1.2	0.2	< 0.2	0.2	< 0.1	15.7
HL-1351	< 0.1	< 1	40	1.4	2	4	0.2	< 0.2	< 0.2	< 0.1	< 0.1	14.7
HL-1364	1.2	< 1	20	21.5	30	18	2.4	0.5	< 0.2	0.6	< 0.1	15.2
HL-1365	5.7	< 1	< 20	27.2	38	26	2.9	0.4	< 0.2	0.6	< 0.1	15.5
HL-1366	5.7	< 1	100	19.6	34	24	2.6	0.4	< 0.2	0.8	0.1	15.4
HL-1367	3.3	< 1	< 20	23.0	46	24	3.1	0.4	< 0.2	1.0	0.1	15.4
HL-1368	3.6	< 1	60	9.5	18	7	1.2	0.2	< 0.2	0.4	< 0.1	15.5
HL-1369	4.9	< 1	< 20	16.5	27	13	1.5	0.3	< 0.2	0.7	< 0.1	15.4
HL-1370	2.3	< 1	30	7.3	12	11	0.8	0.2	< 0.2	0.3	< 0.1	15.3
HL-1371	1.1	< 1	< 20	3.4	5	3	0.4	< 0.2	< 0.2	0.2	< 0.1	15.3
HL-1372	0.4	< 1	< 20	1.4	2	6	0.1	< 0.2	< 0.2	0.1	< 0.1	15.1
HL-1373	< 0.1	< 1	< 20	1.1	2	< 3	0.1	< 0.2	< 0.2	0.1	< 0.1	15.3

	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA
SAMPLE	U	W	Zn	La	Ce	Nd	Sm	Eu	Tb	Yb	Lu	Mass
DESCRIPTION	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	g
HL-1375	< 0.1	< 1	< 20	1.8	4	5	0.3	< 0.2	< 0.2	0.1	< 0.1	15.2
HL-1379	< 0.1	< 1	< 20	1.8	3	9	0.2	< 0.2	< 0.2	< 0.1	< 0.1	15.3
HL-1536	2.4	< 1	< 20	42.7	59	17	2.6	0.6	< 0.2	0.7	< 0.1	15.5
HL-1537	2.4	< 1	< 20	35.0	45	22	2.5	0.6	0.3	0.5	< 0.1	15.3
HL-1538	16.3	< 1	< 20	20.5	30	20	1.5	0.5	< 0.2	0.4	< 0.1	15.9
HL-1539	1.1	< 1	< 20	5.8	7	9	0.5	< 0.2	< 0.2	0.2	< 0.1	15.6
HL-1540	< 0.1	4	< 20	1.5	2	3	0.1	< 0.2	< 0.2	< 0.1	< 0.1	15.6
HL-1541	< 0.1	< 1	30	1.4	2	4	0.1	< 0.2	< 0.2	< 0.1	< 0.1	15.4
HL-1543	< 0.1	< 1	< 20	8.7	15	9	0.9	0.2	< 0.2	0.4	< 0.1	15.1
HL-1545	< 0.1	< 1	< 20	17.2	19	9	1.3	0.3	< 0.2	0.4	< 0.1	15.4
HL-1547	< 0.1	< 1	70	8.5	10	8	0.7	< 0.2	< 0.2	0.2	< 0.1	15.6
HL-1148	1.6	< 1	< 20	8.0	12	11	0.6	< 0.2	< 0.2	0.5	< 0.1	15.5
HL-1150	1.2	< 1	< 20	9.8	14	4	0.9	0.2	0.2	0.3	< 0.1	15.8
HL-1152	< 0.1	< 1	< 20	16.6	28	9	1.6	0.3	< 0.2	0.5	< 0.1	15.8
L-STD-4 Meas			40	0.8	1		0.1					
L-STD-4 Cert			32.0	0.800	1.41		0.130					
L-STD-4 Meas			30	0.7	< 1		< 0.1					
L-STD-4 Cert			32.0	0.800	1.41		0.130					
L-STD-4 Meas			30	0.8	2		0.1					
L-STD-4 Cert			32.0	0.800	1.41		0.130					
L-STD-4 Meas			40	0.8	2		0.1					
L-STD-4 Cert			32.0	0.800	1.41		0.130					

Quality Analysis ... *Innovative Technologies*

Date Submitted:	09-Jul-14
Invoice No.:	A14-04610
Invoice Date:	30-Jul-14
Your Reference:	9250

GOLDCORP Canada Ltd--Musselwhite Mine
Musselwhite Mine
P.O BOX 7500
Thunder Bay ON P7B 6S8
Canada

ATTN: John Biczok (PO#WA9R00280-W0001)

CERTIFICATE OF ANALYSIS

72 sand samples were submitted for analysis.

The following analytical package was requested: Code 7-ESE-Enzyme Leach Enzyme Leach ICP/MS(ENZYME)

REPORT **A14-04610**

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Notes:

CERTIFIED BY:

Emmanuel Eseme , Ph.D.
Quality Control

SCC Accredited LAB
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Results

	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS
SAMPLE	Al	Ca	Fe	K	Mg	Na	Cl	Br	I	V	As	Se	Mo	Sb	Te	W	Re	Au	Hg	Th	U	Co	Ni
DESCRIPTION	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
HL-1869	7.9	145	4	7	23	< 5	7000	108	26	45	5	< 5	< 1	0.3	< 1	< 1	< 0.01	< 0.05	< 1	17.5	1.6	4	14
HL-1872	9.5	14	6	< 5	4	7	5000	57	8	39	2	< 5	1	0.2	< 1	< 1	< 0.01	< 0.05	< 1	1.4	0.5	6	18
HL-1976	7.6	29	3	6	4	6	< 2000	39	7	31	1	< 5	< 1	0.2	< 1	< 1	< 0.01	< 0.05	< 1	0.5	0.4	5	24
HL-1977	28.4	19	9	8	3	6	4000	99	12	12	3	< 5	< 1	0.2	< 1	< 1	< 0.01	< 0.05	< 1	1.6	1.0	11	30
HL-1978	23.0	36	3	7	3	< 5	9000	118	12	6	1	< 5	< 1	0.2	< 1	< 1	< 0.01	< 0.05	< 1	0.8	0.5	8	24
HL-1979	26.9	23	9	13	4	6	4000	141	15	33	4	< 5	< 1	0.1	< 1	< 1	< 0.01	< 0.05	< 1	2.0	0.8	7	16
HL-1980	18.1	22	4	6	3	< 5	8000	74	8	9	2	< 5	< 1	0.1	< 1	< 1	< 0.01	< 0.05	< 1	0.6	0.4	8	17
HL-1981	31.5	17	6	12	3	6	8000	112	10	16	2	< 5	< 1	0.1	< 1	< 1	< 0.01	< 0.05	< 1	1.0	0.5	8	20
HL-1982	20.2	33	6	6	4	5	8000	70	9	22	2	< 5	< 1	0.2	< 1	< 1	< 0.01	< 0.05	< 1	1.7	0.5	21	27
HL-1983	23.3	9	4	13	3	< 5	4000	89	9	33	2	< 5	< 1	0.1	< 1	< 1	< 0.01	< 0.05	< 1	1.1	0.4	9	18
HL-1984	22.0	12	6	11	3	6	4000	86	11	6	1	< 5	< 1	0.1	< 1	< 1	< 0.01	< 0.05	< 1	0.8	1.0	3	12
HL-1985	28.8	11	8	8	< 2	< 5	5000	76	8	19	2	< 5	< 1	0.1	< 1	< 1	< 0.01	< 0.05	< 1	1.0	0.7	5	18
HL-1986	24.4	20	6	8	3	5	7000	89	10	7	2	< 5	< 1	0.1	< 1	< 1	< 0.01	< 0.05	< 1	1.4	0.6	12	29
HL-1987	10.5	25	6	11	4	< 5	6000	62	10	31	4	< 5	< 1	0.3	< 1	< 1	< 0.01	< 0.05	< 1	1.2	0.6	8	15
HL-1988	34.9	16	5	11	2	6	9000	79	10	8	2	< 5	< 1	0.2	< 1	< 1	< 0.01	< 0.05	< 1	1.2	0.6	9	38
HL-1989	22.7	20	6	11	4	6	9000	73	10	16	3	< 5	< 1	< 0.1	< 1	< 1	< 0.01	< 0.05	< 1	2.1	0.6	7	14
HL-1990	2.4	10	< 1	6	3	< 5	5000	16	2	18	< 1	< 5	< 1	0.1	< 1	< 1	< 0.01	< 0.05	< 1	0.3	0.3	4	37
HL-2064	26.3	14	8	13	3	< 5	7000	115	11	14	2	< 5	< 1	0.1	< 1	< 1	< 0.01	< 0.05	< 1	0.6	0.5	8	31
HL-2096	5.4	8	7	17	2	6	5000	30	4	41	7	< 5	1	0.3	< 1	< 1	< 0.01	< 0.05	< 1	3.4	0.4	3	6
HL-2275	19.3	7	2	7	< 2	< 5	10000	63	7	7	2	< 5	< 1	< 0.1	< 1	< 1	< 0.01	< 0.05	< 1	0.4	0.3	10	15
HL-2276	23.6	12	4	8	< 2	< 5	4000	67	8	9	2	< 5	< 1	0.1	< 1	< 1	< 0.01	< 0.05	< 1	0.7	0.3	7	28
HL-2277	23.5	24	6	10	5	< 5	5000	65	7	15	6	< 5	< 1	0.4	< 1	< 1	< 0.01	< 0.05	< 1	0.3	0.2	9	93
HL-2298	31.9	12	4	12	3	< 5	5000	74	9	10	1	< 5	< 1	0.3	< 1	< 1	< 0.01	< 0.05	< 1	1.1	0.5	10	37
HL-2367	35.9	20	5	6	2	< 5	5000	130	13	5	2	< 5	< 1	0.1	< 1	< 1	< 0.01	< 0.05	< 1	0.9	0.7	7	45
HL-2368	24.9	14	12	8	6	6	4000	107	18	59	5	< 5	1	0.2	< 1	< 1	< 0.01	< 0.05	< 1	1.7	1.3	10	37
HL-2300	22.8	6	3	10	< 2	< 5	4000	89	11	6	< 1	< 5	< 1	0.2	< 1	< 1	< 0.01	< 0.05	< 1	1.2	0.6	7	18
HL-2301	35.0	6	4	9	< 2	< 5	5000	127	19	17	2	< 5	< 1	0.1	< 1	< 1	< 0.01	< 0.05	< 1	1.3	0.5	10	27
HL-2371	35.8	5	6	6	< 2	< 5	4000	119	16	6	2	< 5	< 1	0.1	< 1	< 1	< 0.01	< 0.05	< 1	1.3	0.7	6	19
HL-2463	30.2	25	7	7	6	< 5	4000	98	14	13	2	< 5	< 1	0.2	< 1	< 1	< 0.01	< 0.05	< 1	2.3	0.6	20	37
HL-2465	11.1	14	4	11	6	7	6000	49	7	48	4	< 5	1	0.2	< 1	< 1	< 0.01	< 0.05	< 1	0.6	0.3	36	33
HL-2466	30.4	19	5	10	4	< 5	7000	105	14	11	4	< 5	< 1	0.3	< 1	< 1	< 0.01	< 0.05	< 1	1.0	0.6	14	34
HL-2469	27.6	18	7	7	2	< 5	3000	103	10	9	3	< 5	< 1	0.1	< 1	< 1	< 0.01	< 0.05	< 1	0.6	0.6	10	46
HL-2470	24.2	15	10	10	4	5	7000	104	22	18	4	< 5	< 1	0.1	< 1	< 1	< 0.01	< 0.05	< 1	0.9	0.6	8	28
HL-2472	4.9	80	3	12	15	< 5	5000	70	11	35	2	< 5	2	0.2	< 1	< 1	< 0.01	< 0.05	< 1	1.5	0.6	5	15
HL-2473	11.0	9	5	9	4	< 5	< 2000	45	6	24	2	< 5	< 1	< 0.1	< 1	< 1	< 0.01	< 0.05	< 1	0.7	0.3	8	24
HL-2474	8.9	< 5	9	8	4	< 5	< 2000	71	11	27	3	< 5	< 1	0.1	< 1	< 1	< 0.01	< 0.05	< 1	0.9	0.4	7	28
HL-2475	14.7	6	8	7	< 2	< 5	< 2000	78	8	22	3	< 5	< 1	< 0.1	< 1	< 1	< 0.01	< 0.05	< 1	0.3	0.4	5	23
HL-232	29.2	18	3	10	3	14	7000	69	9	7	1	< 5	< 1	0.2	< 1	< 1	< 0.01	< 0.05	< 1	1.3	0.5	9	40
HL-299	3.6	130	1	14	20	18	13000	323	21	36	4	< 5	4	0.7	< 1	< 1	< 0.01	< 0.05	< 1	1.2	1.1	7	27
HL-300	18.2	69	2	11	9	7	6000	116	10	18	1	< 5	< 1	0.4	< 1	< 1	< 0.01	< 0.05	< 1	1.5	1.8	8	48
HL-301	5.7	24	3	12	6	7	4000	49	8	90	5	< 5	1	0.2	< 1	< 1	< 0.01	< 0.05	< 1	1.1	0.6	44	36
HL-302	9.1	60	3	11	9	9	10000	63	10	15	2	< 5	< 1	0.3	< 1	< 1	< 0.01	< 0.05	< 1	1.2	0.5	6	27
HL-407	8.3	12	4	9	4	8	7000	63	9	34	6	< 5	< 1	0.2	< 1	< 1	< 0.01	< 0.05	< 1	1.1	0.6	6	31
HL-409	24.9	12	7	13	3	11	10000	70	13	8	2	< 5	< 1	0.1	< 1	< 1	< 0.01	< 0.05	< 1	1.4	0.4	14	46
HL-418	27.0	25	4	5	2	9	9000	37	5	10	2	< 5	< 1	0.3	< 1	< 1	< 0.01	< 0.05	< 1	1.7	0.5	11	53
HL-419	11.2	75	2	7	8	8	5000	98	7	4	2	< 5	< 1	0.2	< 1	< 1	< 0.01	< 0.05	< 1	1.0	0.4	4	14
HL-432	13.9	16	4	10	4	8	7000	80	15	14	4	< 5	< 1	0.3	< 1	< 1	< 0.01	< 0.05	< 1	2.6	0.8	13	20
HL-433	8.1	12	4	9	3	7	6000	57	8	9	3	< 5	< 1	0.5	< 1	< 1	< 0.01	< 0.05	< 1	0.8	0.6	12	20
HL-434	5.2	57	2	< 5	7	10	7000	101	6	5	< 1	< 5	< 1	0.3	< 1	< 1	< 0.01	< 0.05	< 1	1.0	0.5	2	7
HL-435	2.8	42	2	12	10	14	13000	44	10	28	3	< 5	< 1	0.3	< 1	< 1	< 0.01	< 0.05	< 1	1.4	0.6	19	15

	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS
SAMPLE	Al	Ca	Fe	K	Mg	Na	Cl	Br	I	V	As	Se	Mo	Sb	Te	W	Re	Au	Hg	Th	U	Co	Ni
DESCRIPTION	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
HL-452	3.5	88	6	8	30	11	8000	77	22	59	34	< 5	< 1	1.3	< 1	< 1	< 0.01	< 0.05	< 1	24.5	0.8	21	100
HL-453	11.7	7	5	8	5	12	11000	58	13	9	7	< 5	< 1	0.5	< 1	< 1	< 0.01	< 0.05	< 1	4.1	0.6	24	113
HL-454	14.9	10	3	14	3	8	8000	52	6	7	1	< 5	< 1	0.2	< 1	< 1	< 0.01	< 0.05	< 1	1.4	0.4	10	72
HL-455	8.9	12	5	12	5	10	10000	66	7	4	1	< 5	< 1	0.2	< 1	< 1	< 0.01	< 0.05	< 1	1.5	0.3	59	270
HL-456	11.1	23	7	12	5	10	9000	97	11	7	3	< 5	< 1	0.2	< 1	< 1	< 0.01	< 0.05	< 1	1.4	0.5	33	169
HL-469	5.5	26	3	6	7	6	7000	33	5	7	2	< 5	< 1	0.2	< 1	< 1	< 0.01	< 0.05	< 1	0.6	0.3	8	33
HL-1113	0.8	71	< 1	< 5	7	< 5	5000	18	< 2	72	3	< 5	< 1	0.2	< 1	< 1	< 0.01	< 0.05	< 1	0.4	0.2	1	5
HL-1117	1.4	64	2	< 5	9	13	9000	53	7	63	8	< 5	2	0.3	< 1	< 1	< 0.01	< 0.05	< 1	2.9	0.3	9	20
HL-1119	2.2	45	< 1	< 5	4	12	10000	64	< 2	22	1	< 5	< 1	0.1	< 1	< 1	< 0.01	< 0.05	< 1	0.4	0.1	6	16
HL-1120	2.1	54	4	7	10	15	6000	124	16	31	6	< 5	1	0.3	< 1	< 1	< 0.01	< 0.05	< 1	10.5	0.9	26	13
HL-1142	13.0	19	1	12	3	7	10000	87	12	5	2	< 5	< 1	0.5	< 1	< 1	< 0.01	< 0.05	< 1	1.4	0.6	7	28
HL-1144	13.4	10	4	12	3	6	7000	118	16	6	3	< 5	< 1	0.3	< 1	< 1	< 0.01	< 0.05	< 1	1.9	0.8	8	25
HL-1145	8.1	34	3	12	9	10	18000	90	11	6	3	< 5	< 1	0.3	< 1	< 1	< 0.01	< 0.05	< 1	2.0	0.6	8	29
HL-1147	7.7	5	< 1	7	< 2	< 5	3000	102	7	4	< 1	< 5	< 1	< 0.1	< 1	< 1	< 0.01	< 0.05	< 1	0.3	0.6	1	< 3
HL-1073	12.6	8	2	7	< 2	6	4000	121	13	4	2	< 5	< 1	0.1	< 1	< 1	< 0.01	< 0.05	< 1	1.1	0.6	7	18
HL-1074	1.2	56	< 1	< 5	5	5	< 2000	30	3	7	< 1	< 5	< 1	0.1	< 1	< 1	< 0.01	< 0.05	< 1	0.3	0.3	2	9
HL-1343	1.4	102	1	< 5	12	7	3000	187	20	26	3	< 5	3	0.2	< 1	1	< 0.01	< 0.05	< 1	8.1	1.2	2	< 3
HL-1344	4.0	18	5	11	7	7	< 2000	71	10	72	5	< 5	< 1	0.1	< 1	< 1	< 0.01	< 0.05	< 1	2.1	0.4	15	18
HL-1345	5.2	20	7	10	4	12	7000	136	21	71	9	< 5	1	0.2	< 1	< 1	< 0.01	< 0.05	< 1	3.2	0.7	7	19
HL-1146	11.2	6	5	13	2	5	5000	103	15	11	4	< 5	< 1	0.3	< 1	< 1	< 0.01	< 0.05	< 1	1.5	0.6	14	15
HL-1148	10.5	8	3	5	< 2	6	3000	68	6	5	< 1	< 5	< 1	0.1	< 1	< 1	< 0.01	< 0.05	< 1	0.7	0.4	3	10
HL-1548	3.0	76	2	7	13	< 5	< 2000	81	10	13	2	< 5	< 1	0.2	< 1	< 1	< 0.01	< 0.05	< 1	5.1	0.8	13	17
TILL-1 Meas			71					605		196	65		7	67.5				0.05	< 1	11.5	5.3	80	55
TILL-1 Cert			48100.00					6400.0		99000	18000		2000	7800.0				13	90.0	5600.0	2200.0	18000	24000
TILL-1 Meas			54					621		166	53		6	60.4				< 0.05	< 1	9.4	5.2	69	41
TILL-1 Cert			48100.00					6400.0		99000	18000		2000	7800.0				13	90.0	5600.0	2200.0	18000	24000
TILL-2 Meas			76					1510		177	72		89	2.6		9		< 0.05	< 1	27.8	16.8	44	72
TILL-2 Cert			38400.00					12200.0		77000	26000		14000	800.0		5000		2	70.0	18400.0	5700.0	15000	32000
TILL-2 Meas			72					1540		168	66		82	2.5		8		< 0.05	< 1	26.9	17.3	42	75
TILL-2 Cert			38400.00					12200.0		77000	26000		14000	800.0		5000		2	70.0	18400.0	5700.0	15000	32000
HL-1988 Orig	34.9	16	5	11	2	6	9000	79	10	8	2	< 5	< 1	0.2	< 1	< 1	< 0.01	< 0.05	< 1	1.2	0.6	9	38
HL-1988 Dup	39.5	17	6	12	2	6	8000	74	10	9	2	< 5	< 1	0.2	< 1	< 1	< 0.01	< 0.05	< 1	1.4	0.7	10	37
HL-2465 Orig	11.1	14	4	11	6	7	6000	49	7	48	4	< 5	1	0.2	< 1	< 1	< 0.01	< 0.05	< 1	0.6	0.3	36	33
HL-2465 Dup	8.5	13	3	11	5	7	7000	49	6	43	4	< 5	< 1	0.3	< 1	< 1	< 0.01	< 0.05	< 1	0.5	0.3	33	31
HL-418 Orig	27.0	25	4	5	2	9	9000	37	5	10	2	< 5	< 1	0.3	< 1	< 1	< 0.01	< 0.05	< 1	1.7	0.5	11	53
HL-418 Dup	23.4	26	3	5	2	6	7000	32	5	9	2	< 5	< 1	0.3	< 1	< 1	< 0.01	< 0.05	< 1	1.4	0.4	10	49
HL-1120 Orig	2.1	54	4	7	10	15	6000	124	16	31	6	< 5	1	0.3	< 1	< 1	< 0.01	< 0.05	< 1	10.5	0.9	26	13
HL-1120 Dup	2.1	50	4	7	9	14	6000	117	15	29	6	< 5	1	0.3	< 1	< 1	< 0.01	< 0.05	< 1	10.7	0.9	24	12
Method Blank	< 0.5	< 5	< 1	< 5	< 2	< 5	< 2000	< 5	< 2	< 1	< 1	< 5	< 1	< 0.1	< 1	< 1	< 0.01	< 0.05	< 1	< 0.1	< 0.1	< 1	< 3
Method Blank	< 0.5	< 5	< 1	< 5	< 2	< 5	< 2000	< 5	< 2	< 1	< 1	< 5	< 1	< 0.1	< 1	< 1	< 0.01	< 0.05	< 1	< 0.1	< 0.1	< 1	< 3

Results

	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS
SAMPLE	Cu	Zn	Pb	Ga	Ge	Ag	Cd	In	Sn	Tl	Bi	Ti	Cr	Y	Zr	Nb	Hf	Ta	La	Ce	Pr	Nd	Sm
DESCRIPTION	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
HL-1869	25	20	3	2	< 0.5	< 0.2	< 0.2	< 0.1	< 0.8	0.2	< 0.8	300	30	23.0	34	2	0.7	0.1	74.7	83.2	17.2	62.5	10.0
HL-1872	8	30	1	1	< 0.5	< 0.2	< 0.2	< 0.1	< 0.8	0.2	< 0.8	600	< 20	1.3	2	1	< 0.1	< 0.1	4.7	6.3	1.0	3.4	0.6
HL-1976	4	40	1	2	< 0.5	< 0.2	< 0.2	< 0.1	< 0.8	0.2	< 0.8	700	< 20	0.9	1	1	< 0.1	< 0.1	2.1	3.2	0.5	1.7	0.3

	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS
SAMPLE	Cu	Zn	Pb	Ga	Ge	Ag	Cd	In	Sn	Tl	Bi	Ti	Cr	Y	Zr	Nb	Hf	Ta	La	Ce	Pr	Nd	Sm
DESCRIPTION	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
HL-1977	8	30	1	1	< 0.5	< 0.2	0.9	< 0.1	< 0.8	0.2	< 0.8	200	< 20	1.7	4	< 1	0.1	< 0.1	4.0	6.9	0.8	3.0	0.6
HL-1978	7	50	2	< 1	< 0.5	< 0.2	2.5	< 0.1	< 0.8	0.2	< 0.8	< 100	< 20	1.1	2	< 1	< 0.1	< 0.1	1.8	2.8	0.4	1.2	0.3
HL-1979	8	80	2	2	< 0.5	< 0.2	0.7	< 0.1	< 0.8	0.3	< 0.8	500	< 20	1.6	5	1	0.1	< 0.1	2.8	5.3	0.6	2.4	0.5
HL-1980	4	40	3	< 1	< 0.5	< 0.2	0.4	< 0.1	< 0.8	0.2	< 0.8	200	< 20	1.6	2	< 1	< 0.1	< 0.1	2.1	4.0	0.5	1.9	0.4
HL-1981	4	120	3	2	< 0.5	< 0.2	2.0	< 0.1	< 0.8	0.3	< 0.8	300	< 20	1.2	3	< 1	< 0.1	< 0.1	2.2	3.7	0.4	1.5	0.3
HL-1982	6	120	3	2	< 0.5	< 0.2	1.9	< 0.1	< 0.8	0.2	< 0.8	400	30	1.0	3	< 1	0.1	< 0.1	2.0	3.6	0.4	1.6	0.3
HL-1983	7	30	2	3	< 0.5	< 0.2	0.9	< 0.1	< 0.8	0.2	< 0.8	500	< 20	1.4	4	< 1	0.1	< 0.1	2.5	4.9	0.6	2.1	0.4
HL-1984	5	40	2	< 1	< 0.5	< 0.2	0.2	< 0.1	< 0.8	0.2	< 0.8	100	< 20	1.0	2	< 1	< 0.1	< 0.1	1.9	3.5	0.4	1.4	0.3
HL-1985	9	40	1	1	< 0.5	< 0.2	0.5	< 0.1	< 0.8	0.2	< 0.8	200	< 20	1.2	2	< 1	< 0.1	< 0.1	3.5	6.4	0.7	2.5	0.5
HL-1986	7	90	3	< 1	< 0.5	< 0.2	3.4	< 0.1	< 0.8	0.2	< 0.8	200	< 20	1.2	3	< 1	0.1	< 0.1	2.0	3.7	0.4	1.4	0.3
HL-1987	9	230	3	2	< 0.5	< 0.2	2.7	< 0.1	< 0.8	0.2	< 0.8	600	< 20	0.8	4	1	0.1	< 0.1	2.0	3.2	0.4	1.3	0.3
HL-1988	5	80	3	< 1	< 0.5	< 0.2	2.8	< 0.1	< 0.8	0.3	< 0.8	200	< 20	1.0	4	< 1	0.1	< 0.1	1.5	2.7	0.3	1.1	0.3
HL-1989	6	100	4	1	< 0.5	< 0.2	2.9	< 0.1	< 0.8	0.2	< 0.8	300	< 20	1.0	5	< 1	0.2	< 0.1	2.4	4.2	0.4	1.6	0.4
HL-1990	4	20	2	< 1	< 0.5	< 0.2	< 0.2	< 0.1	< 0.8	0.1	< 0.8	200	< 20	10.8	3	< 1	< 0.1	< 0.1	0.8	1.2	0.1	0.6	0.1
HL-2064	8	60	2	2	< 0.5	< 0.2	0.5	< 0.1	< 0.8	0.2	< 0.8	400	< 20	1.0	2	< 1	< 0.1	< 0.1	1.4	2.6	0.3	1.2	0.3
HL-2096	18	140	9	2	< 0.5	< 0.2	1.5	< 0.1	< 0.8	0.2	< 0.8	800	< 20	1.3	7	2	0.2	< 0.1	2.9	5.4	0.6	2.3	0.5
HL-2275	4	30	3	< 1	< 0.5	< 0.2	1.1	< 0.1	< 0.8	0.2	< 0.8	100	< 20	2.0	2	< 1	< 0.1	< 0.1	2.5	4.3	0.5	2.0	0.5
HL-2276	7	40	3	1	< 0.5	< 0.2	1.1	< 0.1	< 0.8	0.3	< 0.8	200	< 20	1.1	2	< 1	< 0.1	< 0.1	1.7	3.1	0.4	1.3	0.3
HL-2277	14	70	2	1	< 0.5	< 0.2	0.3	< 0.1	< 0.8	0.2	< 0.8	200	< 20	0.6	1	< 1	< 0.1	< 0.1	1.3	2.3	0.4	1.7	0.2
HL-2298	9	50	2	< 1	< 0.5	< 0.2	1.5	< 0.1	< 0.8	0.3	< 0.8	100	< 20	2.4	3	< 1	0.1	< 0.1	3.9	7.8	0.9	3.0	0.7
HL-2367	13	40	2	< 1	< 0.5	< 0.2	1.1	< 0.1	< 0.8	0.2	< 0.8	100	< 20	1.7	3	< 1	< 0.1	< 0.1	3.0	5.3	0.6	2.1	0.4
HL-2368	14	60	3	3	< 0.5	< 0.2	0.6	< 0.1	< 0.8	0.2	< 0.8	1000	40	1.5	5	2	0.1	< 0.1	2.6	4.9	0.5	2.0	0.4
HL-2300	9	40	1	< 1	< 0.5	< 0.2	0.7	< 0.1	< 0.8	0.2	< 0.8	100	< 20	2.3	3	< 1	0.1	< 0.1	3.8	6.6	0.8	3.0	0.6
HL-2301	14	40	2	< 1	< 0.5	< 0.2	2.2	< 0.1	< 0.8	0.2	< 0.8	300	< 20	2.6	5	< 1	0.1	< 0.1	3.3	6.7	0.8	3.2	0.7
HL-2371	7	40	2	< 1	< 0.5	< 0.2	1.0	< 0.1	< 0.8	0.2	< 0.8	200	< 20	2.0	5	< 1	0.1	< 0.1	3.5	7.0	0.7	3.0	0.6
HL-2463	17	70	2	< 1	< 0.5	< 0.2	0.5	< 0.1	< 0.8	0.3	< 0.8	400	< 20	1.5	5	< 1	0.1	< 0.1	4.6	8.5	0.9	3.2	0.5
HL-2465	7	110	2	3	< 0.5	< 0.2	1.5	< 0.1	< 0.8	0.4	< 0.8	700	< 20	0.8	2	< 1	< 0.1	< 0.1	1.6	3.2	0.2	1.0	0.2
HL-2466	10	90	2	< 1	< 0.5	< 0.2	1.1	< 0.1	< 0.8	0.5	< 0.8	300	< 20	1.3	3	< 1	< 0.1	< 0.1	2.6	4.6	0.5	2.0	0.4
HL-2469	8	30	2	< 1	< 0.5	< 0.2	2.1	< 0.1	< 0.8	0.2	< 0.8	200	< 20	1.4	2	< 1	< 0.1	< 0.1	2.4	4.9	0.5	1.9	0.4
HL-2470	10	40	2	2	< 0.5	< 0.2	1.3	< 0.1	< 0.8	0.4	< 0.8	500	< 20	1.0	4	1	0.1	< 0.1	1.6	2.8	0.3	1.1	0.2
HL-2472	10	< 10	1	< 1	< 0.5	< 0.2	< 0.2	< 0.1	< 0.8	0.3	< 0.8	100	< 20	1.8	5	< 1	0.1	< 0.1	2.3	5.7	0.7	2.7	0.6
HL-2473	7	50	1	1	< 0.5	< 0.2	1.3	< 0.1	< 0.8	0.2	< 0.8	300	< 20	0.7	1	< 1	< 0.1	< 0.1	2.1	3.8	0.4	1.3	0.3
HL-2474	12	50	2	1	< 0.5	< 0.2	1.0	< 0.1	< 0.8	0.2	< 0.8	600	20	0.8	3	1	0.2	< 0.1	1.5	2.8	0.3	1.2	0.3
HL-2475	4	20	2	< 1	< 0.5	< 0.2	0.6	< 0.1	< 0.8	0.2	< 0.8	100	< 20	< 0.5	< 1	< 1	< 0.1	< 0.1	1.0	1.7	0.2	0.6	0.1
HL-232	8	20	2	< 1	< 0.5	< 0.2	0.2	< 0.1	< 0.8	0.2	< 0.8	100	< 20	1.4	3	< 1	< 0.1	< 0.1	2.7	5.3	0.6	2.2	0.4
HL-299	10	20	1	< 1	< 0.5	< 0.2	< 0.2	< 0.1	< 0.8	0.4	< 0.8	< 100	< 20	1.3	5	< 1	0.1	< 0.1	2.1	4.6	0.5	1.7	0.4
HL-300	11	20	1	< 1	< 0.5	< 0.2	1.3	< 0.1	< 0.8	0.2	< 0.8	100	< 20	4.5	4	< 1	< 0.1	< 0.1	5.4	7.3	1.2	4.1	0.9
HL-301	7	110	2	2	< 0.5	< 0.2	2.5	< 0.1	< 0.8	0.2	< 0.8	600	< 20	0.9	3	1	< 0.1	< 0.1	1.8	2.6	0.3	1.4	0.2
HL-302	5	30	1	< 1	< 0.5	< 0.2	0.4	< 0.1	< 0.8	0.2	< 0.8	500	< 20	0.8	3	< 1	< 0.1	< 0.1	1.9	3.1	0.4	1.4	0.3
HL-407	6	30	3	2	< 0.5	< 0.2	0.6	< 0.1	< 0.8	0.3	< 0.8	600	< 20	0.9	2	2	< 0.1	< 0.1	2.0	3.2	0.3	1.3	0.3
HL-409	6	50	3	< 1	< 0.5	< 0.2	0.7	< 0.1	< 0.8	0.4	< 0.8	300	< 20	1.0	2	< 1	< 0.1	< 0.1	2.5	3.8	0.4	1.4	0.3
HL-418	6	30	2	< 1	< 0.5	< 0.2	0.2	< 0.1	< 0.8	0.3	< 0.8	300	< 20	1.2	2	< 1	< 0.1	< 0.1	2.9	5.4	0.5	1.9	0.4
HL-419	4	10	< 1	< 1	< 0.5	< 0.2	< 0.2	< 0.1	< 0.8	0.1	< 0.8	100	20	0.6	1	< 1	< 0.1	0.1	1.6	3.0	0.3	1.2	0.2
HL-432	8	120	4	2	< 0.5	< 0.2	2.9	< 0.1	< 0.8	0.3	1.1	300	< 20	1.6	5	< 1	0.2	< 0.1	4.8	8.7	0.9	3.4	0.6
HL-433	11	110	3	2	< 0.5	< 0.2	1.8	< 0.1	< 0.8	0.4	< 0.8	300	< 20	0.8	2	< 1	< 0.1	< 0.1	2.9	5.0	0.6	1.9	0.3
HL-434	4	10	2	< 1	< 0.5	< 0.2	0.2	< 0.1	< 0.8	0.3	0.9	< 100	< 20	0.7	2	< 1	< 0.1	< 0.1	2.0	3.3	0.4	1.4	0.3
HL-435	7	50	2	2	< 0.5	< 0.2	1.6	< 0.1	< 0.8	0.3	0.8	300	< 20	0.7	7	< 1	0.2	< 0.1	2.6	4.9	0.6	2.1	0.3
HL-452	54	20	2	2	< 0.5	< 0.2	< 0.2	< 0.1	< 0.8	0.5	1.4	300	90	37.3	51	4	1.0	0.6	46.8	45.0	11.8	43.4	9.0
HL-453	8	40	2	< 1	< 0.5	< 0.2	2.1	< 0.1	< 0.8	0.4	< 0.8	300	60	3.2	10	< 1	0.2	< 0.1	6.3	11.3	1.4	5.1	0.9

	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS
SAMPLE	Cu	Zn	Pb	Ga	Ge	Ag	Cd	In	Sn	Tl	Bi	Ti	Cr	Y	Zr	Nb	Hf	Ta	La	Ce	Pr	Nd	Sm
DESCRIPTION	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
HL-454	4	50	2	< 1	< 0.5	< 0.2	1.4	< 0.1	< 0.8	0.4	< 0.8	< 100	< 20	1.1	3	< 1	0.1	< 0.1	2.7	4.6	0.5	1.8	0.4
HL-455	11	40	2	< 1	< 0.5	< 0.2	1.0	< 0.1	< 0.8	0.3	< 0.8	< 100	70	1.4	5	< 1	0.2	< 0.1	1.1	2.3	0.3	0.9	0.2
HL-456	12	30	2	< 1	< 0.5	< 0.2	1.2	< 0.1	< 0.8	0.2	< 0.8	200	< 20	1.3	2	< 1	< 0.1	< 0.1	1.9	3.4	0.4	1.5	0.4
HL-469	3	30	1	< 1	< 0.5	< 0.2	< 0.2	< 0.1	< 0.8	0.3	< 0.8	200	< 20	0.5	1	< 1	< 0.1	< 0.1	1.2	2.4	0.3	1.1	0.2
HL-1113	< 3	< 10	< 1	< 1	< 0.5	< 0.2	< 0.2	< 0.1	< 0.8	0.2	< 0.8	200	< 20	0.7	3	2	< 0.1	< 0.1	1.3	2.8	0.4	1.3	0.2
HL-1117	8	40	< 1	< 1	< 0.5	< 0.2	0.3	< 0.1	< 0.8	0.5	< 0.8	200	< 20	1.1	10	1	0.3	< 0.1	3.6	9.0	0.9	3.6	0.6
HL-1119	< 3	50	< 1	< 1	< 0.5	< 0.2	< 0.2	< 0.1	< 0.8	0.2	< 0.8	200	< 20	< 0.5	< 1	< 1	< 0.1	< 0.1	0.5	1.1	0.1	0.5	< 0.1
HL-1120	9	70	2	1	< 0.5	< 0.2	0.3	< 0.1	< 0.8	0.3	0.9	400	< 20	3.4	17	2	0.5	< 0.1	7.9	21.1	2.4	9.1	1.7
HL-1142	4	90	2	< 1	< 0.5	< 0.2	1.9	< 0.1	< 0.8	0.2	< 0.8	< 100	< 20	2.8	5	< 1	0.1	< 0.1	3.0	5.4	0.6	2.3	0.5
HL-1144	< 3	80	3	1	< 0.5	< 0.2	2.8	< 0.1	< 0.8	0.4	< 0.8	100	< 20	1.4	4	< 1	0.1	< 0.1	2.8	5.4	0.6	2.3	0.4
HL-1145	4	90	2	1	< 0.5	< 0.2	0.9	< 0.1	< 0.8	0.2	0.8	100	< 20	1.0	4	< 1	< 0.1	< 0.1	2.7	5.2	0.6	2.2	0.4
HL-1147	< 3	20	1	< 1	< 0.5	< 0.2	0.4	< 0.1	< 0.8	0.1	< 0.8	< 100	< 20	2.9	1	< 1	< 0.1	< 0.1	10.0	12.8	1.2	4.0	0.6
HL-1073	5	60	3	1	< 0.5	< 0.2	3.3	< 0.1	< 0.8	0.2	< 0.8	< 100	< 20	1.7	3	< 1	< 0.1	< 0.1	3.8	6.6	0.7	2.6	0.5
HL-1074	< 3	30	1	< 1	< 0.5	< 0.2	< 0.2	< 0.1	< 0.8	0.1	< 0.8	100	< 20	< 0.5	< 1	< 1	< 0.1	< 0.1	1.0	2.0	0.2	0.9	0.2
HL-1343	4	< 10	< 1	< 1	< 0.5	< 0.2	< 0.2	< 0.1	< 0.8	0.1	< 0.8	< 100	< 20	4.4	11	< 1	0.3	< 0.1	14.0	14.5	3.7	13.2	2.5
HL-1344	6	70	1	2	< 0.5	< 0.2	1.7	< 0.1	< 0.8	0.2	< 0.8	1800	< 20	0.8	5	3	0.2	< 0.1	2.3	3.8	0.5	2.0	0.3
HL-1345	7	120	2	2	< 0.5	< 0.2	1.0	< 0.1	< 0.8	0.2	< 0.8	800	< 20	2.1	6	2	0.1	< 0.1	4.8	10.8	1.2	4.2	0.8
HL-1146	5	220	2	2	< 0.5	< 0.2	1.8	< 0.1	< 0.8	0.3	< 0.8	300	< 20	1.6	9	< 1	0.2	< 0.1	2.4	5.0	0.6	2.2	0.5
HL-1148	< 3	20	1	< 1	< 0.5	< 0.2	0.4	< 0.1	< 0.8	0.2	< 0.8	100	< 20	1.4	2	< 1	< 0.1	< 0.1	2.3	4.6	0.6	2.3	0.4
HL-1548	9	30	1	< 1	< 0.5	< 0.2	< 0.2	< 0.1	< 0.8	0.4	< 0.8	100	70	4.1	8	< 1	0.2	< 0.1	8.3	18.3	2.2	8.1	1.7
TILL-1 Meas	283	310	55									3100	50	43.9	35	9	0.8	0.6	45.2	140		52.4	11.6
TILL-1 Cert	47000	98000	22000									5990000	65000	38000	502000	10000	13000	700.0	28000	71000		26000	5900.0
TILL-1 Meas	262	160	42									2600	40	36.4	28	6	0.6	0.3	35.6	105		41.0	9.4
TILL-1 Cert	47000	98000	22000									5990000	65000	38000	502000	10000	13000	700.0	28000	71000		26000	5900.0
TILL-2 Meas	393	270	62									5900	100	60.6	137	20	3.2	1.2	59.9	160		58.7	13.9
TILL-2 Cert	150000	130000	31000									5300000	74000	40000	390000	20000	11000	1900.0	44000	98000		36000	7400.0
TILL-2 Meas	396	270	59									5300	70	58.8	126	18	3.2	1.1	54.4	149		57.9	13.2
TILL-2 Cert	150000	130000	31000									5300000	74000	40000	390000	20000	11000	1900.0	44000	98000		36000	7400.0
HL-1988 Orig	5	80	3	< 1	< 0.5	< 0.2	2.8	< 0.1	< 0.8	0.3	< 0.8	200	< 20	1.0	4	< 1	0.1	< 0.1	1.5	2.7	0.3	1.1	0.3
HL-1988 Dup	5	80	4	< 1	< 0.5	< 0.2	2.8	< 0.1	< 0.8	0.3	< 0.8	200	< 20	1.2	5	< 1	0.2	< 0.1	1.9	3.3	0.4	1.3	0.3
HL-2465 Orig	7	110	2	3	< 0.5	< 0.2	1.5	< 0.1	< 0.8	0.4	< 0.8	700	< 20	0.8	2	< 1	< 0.1	< 0.1	1.6	3.2	0.2	1.0	0.2
HL-2465 Dup	6	100	2	2	< 0.5	< 0.2	1.4	< 0.1	< 0.8	0.4	< 0.8	600	< 20	0.7	2	< 1	< 0.1	< 0.1	1.1	1.9	0.2	0.8	0.2
HL-418 Orig	6	30	2	< 1	< 0.5	< 0.2	0.2	< 0.1	< 0.8	0.3	< 0.8	300	< 20	1.2	2	< 1	< 0.1	< 0.1	2.9	5.4	0.5	1.9	0.4
HL-418 Dup	5	30	1	< 1	< 0.5	< 0.2	0.3	< 0.1	< 0.8	0.3	< 0.8	200	< 20	1.0	2	< 1	< 0.1	< 0.1	2.5	4.6	0.5	1.6	0.3
HL-1120 Orig	9	70	2	1	< 0.5	< 0.2	0.3	< 0.1	< 0.8	0.3	0.9	400	< 20	3.4	17	2	0.5	< 0.1	7.9	21.1	2.4	9.1	1.7
HL-1120 Dup	9	60	2	1	< 0.5	< 0.2	0.2	< 0.1	< 0.8	0.3	1.4	300	< 20	3.2	17	3	0.4	< 0.1	8.3	21.8	2.5	9.5	1.9
Method Blank	< 3	< 10	< 1	< 1	< 0.5	< 0.2	< 0.2	< 0.1	< 0.8	< 0.1	< 0.8	< 100	< 20	< 0.5	< 1	< 1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Method Blank	< 3	< 10	< 1	< 1	< 0.5	< 0.2	< 0.2	< 0.1	< 0.8	< 0.1	< 0.8	< 100	< 20	< 0.5	< 1	< 1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1

Results

	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS
SAMPLE	Eu	Gd	Tb	Dy	Ho	Er	Tm	Yb	Lu	Li	Be	Sc	Mn	Rb	Sr	Cs	Ba	Ru	Pd	Os	Pt
DESCRIPTION	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
HL-1869	1.8	7.0	0.9	4.0	0.7	2.1	0.3	1.9	0.2	4	< 2	< 100	478	39	207	0.3	472	< 1	< 1	< 1	< 1
HL-1872	0.1	0.4	< 0.1	0.2	< 0.1	0.1	< 0.1	< 0.1	< 0.1	9	< 2	< 100	141	39	100	2.4	155	< 1	< 1	< 1	< 1
HL-1976	< 0.1	0.2	< 0.1	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	2	< 2	< 100	133	50	154	2.4	182	< 1	< 1	< 1	< 1

	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS
SAMPLE	Eu	Gd	Tb	Dy	Ho	Er	Tm	Yb	Lu	Li	Be	Sc	Mn	Rb	Sr	Cs	Ba	Ru	Pd	Os	Pt
DESCRIPTION	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
HL-1977	0.2	0.4	< 0.1	0.3	< 0.1	0.1	< 0.1	0.1	< 0.1	5	< 2	< 100	178	62	188	1.7	249	< 1	< 1	< 1	< 1
HL-1978	< 0.1	0.2	< 0.1	0.2	< 0.1	0.1	< 0.1	0.1	< 0.1	5	< 2	< 100	1340	67	155	1.7	297	< 1	< 1	< 1	< 1
HL-1979	0.1	0.4	< 0.1	0.3	< 0.1	0.1	< 0.1	0.1	< 0.1	7	< 2	< 100	545	92	125	0.8	389	< 1	< 1	< 1	< 1
HL-1980	0.1	0.3	< 0.1	0.3	< 0.1	0.2	< 0.1	0.1	< 0.1	7	< 2	< 100	404	60	171	1.3	418	< 1	< 1	< 1	< 1
HL-1981	0.1	0.3	< 0.1	0.2	< 0.1	0.1	< 0.1	0.1	< 0.1	5	3	< 100	311	120	161	1.7	367	< 1	< 1	< 1	< 1
HL-1982	0.1	0.3	< 0.1	0.2	< 0.1	0.1	< 0.1	< 0.1	< 0.1	5	< 2	< 100	2350	59	111	0.8	302	< 1	< 1	< 1	< 1
HL-1983	0.1	0.3	< 0.1	0.2	< 0.1	0.1	< 0.1	0.1	< 0.1	2	< 2	< 100	235	93	146	0.6	306	< 1	< 1	< 1	< 1
HL-1984	0.1	0.2	< 0.1	0.2	< 0.1	0.1	< 0.1	0.1	< 0.1	6	< 2	< 100	86	115	179	1.3	399	< 1	< 1	< 1	< 1
HL-1985	0.1	0.4	< 0.1	0.2	< 0.1	0.1	< 0.1	< 0.1	< 0.1	< 2	< 2	< 100	108	48	86	1.0	176	< 1	< 1	< 1	< 1
HL-1986	< 0.1	0.2	< 0.1	0.2	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	20	2	< 100	654	83	144	1.3	404	< 1	< 1	< 1	< 1
HL-1987	< 0.1	0.2	< 0.1	0.2	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	13	< 2	< 100	2940	43	97	0.4	203	< 1	< 1	< 1	< 1
HL-1988	0.1	0.2	< 0.1	0.2	< 0.1	< 0.1	< 0.1	0.1	< 0.1	5	< 2	< 100	1250	107	112	1.9	759	< 1	< 1	< 1	< 1
HL-1989	0.1	0.2	< 0.1	0.2	< 0.1	0.1	< 0.1	0.1	< 0.1	11	< 2	< 100	372	77	93	1.0	243	< 1	< 1	< 1	< 1
HL-1990	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	2	< 2	< 100	102	19	70	0.2	99	< 1	< 1	< 1	< 1
HL-2064	< 0.1	0.2	< 0.1	0.2	< 0.1	< 0.1	< 0.1	0.1	< 0.1	5	< 2	< 100	131	105	137	2.4	311	< 1	< 1	< 1	< 1
HL-2096	0.1	0.3	< 0.1	0.3	< 0.1	0.2	< 0.1	0.1	< 0.1	4	< 2	< 100	161	26	33	0.3	238	< 1	< 1	< 1	< 1
HL-2275	0.1	0.4	< 0.1	0.3	< 0.1	0.2	< 0.1	0.2	< 0.1	17	3	< 100	113	43	52	1.4	300	< 1	< 1	< 1	< 1
HL-2276	0.1	0.2	< 0.1	0.2	< 0.1	0.1	< 0.1	< 0.1	< 0.1	8	< 2	< 100	751	59	146	1.7	333	< 1	< 1	< 1	< 1
HL-2277	< 0.1	0.1	< 0.1	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	4	< 2	< 100	361	57	142	1.8	208	< 1	< 1	< 1	< 1
HL-2298	0.2	0.5	< 0.1	0.4	< 0.1	0.2	< 0.1	0.2	< 0.1	13	3	< 100	691	90	89	2.5	509	< 1	< 1	< 1	< 1
HL-2367	0.1	0.3	< 0.1	0.3	< 0.1	0.2	< 0.1	0.2	< 0.1	8	< 2	< 100	69	92	145	3.5	274	< 1	< 1	< 1	< 1
HL-2368	0.1	0.3	< 0.1	0.3	< 0.1	0.2	< 0.1	0.1	< 0.1	11	< 2	< 100	227	71	162	2.8	197	< 1	< 1	< 1	< 1
HL-2300	0.2	0.5	< 0.1	0.4	< 0.1	0.2	< 0.1	0.1	< 0.1	41	3	< 100	213	83	76	2.1	971	< 1	< 1	< 1	< 1
HL-2301	0.2	0.5	< 0.1	0.5	< 0.1	0.2	< 0.1	0.2	< 0.1	19	3	< 100	155	62	72	1.2	466	< 1	< 1	< 1	< 1
HL-2371	0.2	0.5	< 0.1	0.4	< 0.1	0.2	< 0.1	0.2	< 0.1	19	3	< 100	96	62	49	1.8	468	< 1	< 1	< 1	< 1
HL-2463	0.2	0.4	< 0.1	0.3	< 0.1	0.2	< 0.1	0.1	< 0.1	23	< 2	< 100	186	93	158	2.3	540	< 1	< 1	< 1	< 1
HL-2465	< 0.1	0.1	< 0.1	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	3	< 2	< 100	195	41	105	1.8	190	< 1	< 1	< 1	< 1
HL-2466	0.1	0.4	< 0.1	0.2	< 0.1	0.2	< 0.1	< 0.1	< 0.1	6	< 2	< 100	149	54	136	4.4	212	< 1	< 1	< 1	< 1
HL-2469	0.1	0.3	< 0.1	0.3	< 0.1	0.1	< 0.1	0.1	< 0.1	9	< 2	< 100	139	49	140	2.6	300	< 1	< 1	< 1	< 1
HL-2470	0.1	0.2	< 0.1	0.2	< 0.1	0.1	< 0.1	0.1	< 0.1	12	< 2	< 100	214	214	185	3.6	426	< 1	< 1	< 1	< 1
HL-2472	0.1	0.5	< 0.1	0.3	< 0.1	0.2	< 0.1	0.2	< 0.1	2	< 2	< 100	161	45	158	1.8	301	< 1	< 1	< 1	< 1
HL-2473	< 0.1	0.2	< 0.1	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	7	< 2	< 100	185	41	87	1.4	156	< 1	< 1	< 1	< 1
HL-2474	< 0.1	0.2	< 0.1	0.2	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	20	< 2	< 100	153	35	63	2.1	205	< 1	< 1	< 1	< 1
HL-2475	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	3	< 2	< 100	80	41	67	1.4	112	< 1	< 1	< 1	< 1
HL-232	0.1	0.3	< 0.1	0.3	< 0.1	0.1	< 0.1	0.1	< 0.1	3	4	< 100	244	52	135	6.8	252	< 1	< 1	< 1	< 1
HL-299	0.1	0.3	< 0.1	0.2	< 0.1	< 0.1	< 0.1	0.1	< 0.1	10	< 2	< 100	628	66	217	14.7	379	< 1	< 1	< 1	< 1
HL-300	0.2	0.8	0.1	0.5	0.1	0.3	< 0.1	0.3	< 0.1	4	3	< 100	187	52	209	5.4	303	< 1	< 1	< 1	< 1
HL-301	< 0.1	0.2	< 0.1	0.2	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	3	< 2	< 100	882	23	106	0.9	112	< 1	< 1	< 1	< 1
HL-302	< 0.1	0.2	< 0.1	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	6	< 2	< 100	167	60	240	3.7	268	< 1	< 1	< 1	< 1
HL-407	< 0.1	0.2	< 0.1	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	7	4	< 100	222	64	76	12.7	137	< 1	< 1	< 1	< 1
HL-409	< 0.1	0.2	< 0.1	0.2	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	17	2	< 100	291	167	162	4.6	274	< 1	< 1	< 1	< 1
HL-418	0.1	0.3	< 0.1	0.3	< 0.1	0.1	< 0.1	< 0.1	< 0.1	16	4	< 100	178	51	161	2.2	445	< 1	< 1	< 1	< 1
HL-419	< 0.1	0.2	< 0.1	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	8	< 2	< 100	86	50	180	1.8	214	< 1	< 1	< 1	< 1
HL-432	0.2	0.5	< 0.1	0.4	< 0.1	0.2	< 0.1	0.2	< 0.1	8	< 2	< 100	555	60	98	1.3	280	< 1	< 1	< 1	< 1
HL-433	< 0.1	0.3	< 0.1	0.2	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	6	< 2	< 100	617	86	75	2.1	217	< 1	< 1	< 1	< 1
HL-434	< 0.1	0.2	< 0.1	0.2	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	4	< 2	< 100	69	46	218	3.5	262	< 1	< 1	< 1	< 1
HL-435	< 0.1	0.2	< 0.1	0.1	< 0.1	0.1	< 0.1	< 0.1	< 0.1	4	< 2	< 100	322	62	193	1.3	224	< 1	< 1	< 1	< 1
HL-452	2.0	8.9	1.4	7.3	1.3	3.2	0.4	2.9	0.3	16	< 2	< 100	1000	58	236	2.7	306	< 1	< 1	< 1	< 1
HL-453	0.3	0.9	0.1	0.7	0.1	0.3	< 0.1	0.2	< 0.1	28	3	< 100	221	62	174	3.3	735	< 1	< 1	< 1	< 1

	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS
SAMPLE	Eu	Gd	Tb	Dy	Ho	Er	Tm	Yb	Lu	Li	Be	Sc	Mn	Rb	Sr	Cs	Ba	Ru	Pd	Os	Pt
DESCRIPTION	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
HL-454	0.1	0.3	< 0.1	0.2	< 0.1	0.1	< 0.1	< 0.1	< 0.1	10	3	< 100	390	173	155	5.1	322	< 1	< 1	< 1	< 1
HL-455	< 0.1	0.2	< 0.1	0.3	< 0.1	0.1	< 0.1	0.1	< 0.1	32	< 2	< 100	658	78	92	9.5	425	< 1	< 1	< 1	< 1
HL-456	< 0.1	0.3	< 0.1	0.3	< 0.1	0.1	< 0.1	0.1	< 0.1	39	2	< 100	538	122	150	16.3	327	< 1	< 1	< 1	< 1
HL-469	< 0.1	0.2	< 0.1	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	9	< 2	< 100	103	54	130	9.6	203	< 1	< 1	< 1	< 1
HL-1113	< 0.1	0.2	< 0.1	0.2	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	3	< 2	< 100	223	9	118	0.9	119	< 1	< 1	< 1	< 1
HL-1117	0.1	0.4	< 0.1	0.3	< 0.1	0.1	< 0.1	< 0.1	< 0.1	12	< 2	< 100	1110	46	140	1.1	288	< 1	< 1	< 1	< 1
HL-1119	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	5	< 2	< 100	484	19	148	0.4	134	< 1	< 1	< 1	< 1
HL-1120	0.3	1.3	0.2	0.8	0.1	0.4	< 0.1	0.3	< 0.1	21	< 2	< 100	2460	65	139	0.5	327	< 1	< 1	< 1	< 1
HL-1142	0.3	0.7	0.1	0.7	0.1	0.2	< 0.1	0.2	< 0.1	4	6	< 100	233	66	166	2.6	691	< 1	< 1	< 1	< 1
HL-1144	0.2	0.4	< 0.1	0.3	< 0.1	0.1	< 0.1	0.2	< 0.1	5	4	< 100	858	163	73	3.1	369	< 1	< 1	< 1	< 1
HL-1145	0.1	0.4	< 0.1	0.3	< 0.1	0.1	< 0.1	0.1	< 0.1	8	2	< 100	912	27	192	0.9	325	< 1	< 1	< 1	< 1
HL-1147	0.2	0.6	< 0.1	0.4	< 0.1	0.2	< 0.1	0.2	< 0.1	2	6	< 100	56	54	72	0.3	356	< 1	< 1	< 1	< 1
HL-1073	0.2	0.5	< 0.1	0.4	< 0.1	0.2	< 0.1	0.1	< 0.1	4	7	< 100	244	55	99	0.8	604	< 1	< 1	< 1	< 1
HL-1074	< 0.1	0.2	< 0.1	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	22	< 2	< 100	200	67	168	0.3	282	< 1	< 1	< 1	< 1
HL-1343	0.4	1.7	0.2	1.0	0.2	0.5	< 0.1	0.5	< 0.1	2	< 2	< 100	132	22	152	0.2	273	< 1	< 1	< 1	< 1
HL-1344	< 0.1	0.3	< 0.1	0.2	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	21	< 2	< 100	218	35	91	0.5	116	< 1	< 1	< 1	< 1
HL-1345	0.2	0.6	< 0.1	0.4	< 0.1	0.2	< 0.1	0.2	< 0.1	17	< 2	< 100	199	22	103	0.2	334	< 1	< 1	< 1	< 1
HL-1146	0.2	0.4	< 0.1	0.3	< 0.1	0.2	< 0.1	0.1	< 0.1	3	5	< 100	153	83	90	0.6	326	< 1	< 1	< 1	< 1
HL-1148	0.1	0.3	< 0.1	0.2	< 0.1	< 0.1	< 0.1	0.1	< 0.1	2	4	< 100	123	59	115	0.4	330	< 1	< 1	< 1	< 1
HL-1548	0.3	1.3	0.2	1.0	0.2	0.4	< 0.1	0.4	< 0.1	3	< 2	< 100	465	69	156	7.2	292	< 1	< 1	< 1	< 1
TILL-1 Meas	2.5		1.5			4.0		3.9	0.6	15	< 2	< 100	37700	65	435	1.5	940				
TILL-1 Cert	1300.0		1100.0			3600.0		3900.0	600.0	15000	2400.0	13000	1420000	44000	291000	1000.0	702000				
TILL-1 Meas	1.9		1.2			3.2		3.0	0.5	10	< 2	< 100	37900	63	436	1.3	798				
TILL-1 Cert	1300.0		1100.0			3600.0		3900.0	600.0	15000	2400.0	13000	1420000	44000	291000	1000.0	702000				
TILL-2 Meas	2.9		1.9			5.7		5.7	0.8	52	6	< 100	9550	353	843	19.2	1610				
TILL-2 Cert	1000.0		1200.0			3700.0		3700.0	600.0	47000	4000.0	12000	780000	143000	144000	12000	540000				
TILL-2 Meas	2.9		1.8			5.4		5.5	0.8	48	6	< 100	9170	343	779	18.4	1460				
TILL-2 Cert	1000.0		1200.0			3700.0		3700.0	600.0	47000	4000.0	12000	780000	143000	144000	12000	540000				
HL-1988 Orig	0.1	0.2	< 0.1	0.2	< 0.1	< 0.1	< 0.1	0.1	< 0.1	5	< 2	< 100	1250	107	112	1.9	759	< 1	< 1	< 1	< 1
HL-1988 Dup	0.1	0.2	< 0.1	0.2	< 0.1	0.1	< 0.1	< 0.1	< 0.1	6	3	< 100	1270	109	111	2.1	792	< 1	< 1	< 1	< 1
HL-2465 Orig	< 0.1	0.1	< 0.1	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	3	< 2	< 100	195	41	105	1.8	190	< 1	< 1	< 1	< 1
HL-2465 Dup	< 0.1	0.2	< 0.1	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	3	< 2	< 100	186	39	100	1.8	167	< 1	< 1	< 1	< 1
HL-418 Orig	0.1	0.3	< 0.1	0.3	< 0.1	0.1	< 0.1	< 0.1	< 0.1	16	4	< 100	178	51	161	2.2	445	< 1	< 1	< 1	< 1
HL-418 Dup	0.1	0.3	< 0.1	0.2	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	14	3	< 100	183	52	163	2.1	455	< 1	< 1	< 1	< 1
HL-1120 Orig	0.3	1.3	0.2	0.8	0.1	0.4	< 0.1	0.3	< 0.1	21	< 2	< 100	2460	65	139	0.5	327	< 1	< 1	< 1	< 1
HL-1120 Dup	0.3	1.3	0.2	0.7	0.1	0.4	< 0.1	0.3	< 0.1	21	< 2	< 100	2280	67	135	0.5	309	< 1	< 1	< 1	< 1
Method Blank	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 2	< 2	< 100	< 1	< 1	< 1	< 0.1	< 1	< 1	< 1	< 1	< 1
Method Blank	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 2	< 2	< 100	< 1	< 1	< 1	< 0.1	< 1	< 1	< 1	< 1	< 1

Quality Analysis ... *Innovative Technologies*

Date Submitted:	02-Sep-14
Invoice No.:	A14-06147
Invoice Date:	22-Sep-14
Your Reference:	9250

GOLDCORP Canada Ltd--Musselwhite Mine
Musselwhite Mine
P.O BOX 7500
Thunder Bay ON P7B 6S8
Canada

ATTN: John Biczok (PO#WA9R00280-W0001)

CERTIFICATE OF ANALYSIS

96 Humus samples were submitted for analysis.

The following analytical package was requested: Code 2A-15g Humus INAA(INAAGEO)

REPORT **A14-06147**

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Notes:

CERTIFIED BY:

Emmanuel Eseme , Ph.D.
Quality Control

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Results

	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA
SAMPLE	Au	Ag	As	Ba	Br	Ca	Co	Cr	Cs	Fe	Hf	Hg	Ir	Mo	Na	Ni	Rb	Sb	Sc	Se	Sr	Ta	Th
DESCRIPTION	ppb	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
GF-003	< 1	< 2	2	200	27	4.5	18	36	< 0.5	1.20	< 0.5	1.0	< 5	2.1	700	< 10	< 20	0.2	4.0	< 2	< 100	< 0.5	3.3
GF-004	< 1	< 2	< 1	200	22	4.5	5	15	< 0.5	0.48	< 0.5	< 0.5	< 5	0.8	600	< 10	< 20	0.4	2.1	< 2	< 100	< 0.5	1.8
GF-005	< 1	< 2	1	< 100	20	3.5	2	4	0.5	0.24	< 0.5	< 0.5	< 5	1.0	800	< 10	< 20	0.2	1.1	< 2	< 100	< 0.5	1.0
GF-006	< 1	< 2	< 1	100	16	1.5	3	9	< 0.5	0.37	< 0.5	< 0.5	< 5	0.7	1100	< 10	< 20	0.2	2.0	2	< 100	< 0.5	2.1
GF-007	< 1	< 2	< 1	300	14	1.8	3	21	0.9	0.90	1.8	< 0.5	< 5	0.9	10700	< 10	< 20	0.2	4.1	< 2	< 100	< 0.5	3.6
GF-008	< 1	< 2	2	200	17	3.8	12	22	2.7	0.71	1.4	< 0.5	< 5	1.7	3900	< 10	30	0.2	3.3	< 2	< 100	< 0.5	3.5
GF-009	< 1	< 2	10	300	21	3.3	83	27	1.7	1.90	1.1	< 0.5	< 5	2.8	2900	< 10	30	0.6	3.7	< 2	< 100	< 0.5	4.3
GF-010	< 1	< 2	111	900	38	2.1	130	11	< 0.5	8.67	< 0.5	< 0.5	< 5	16.3	600	< 10	< 20	0.5	1.2	< 2	< 100	< 0.5	2.9
GF-011	2	< 2	24	200	33	3.0	102	53	2.5	7.85	1.2	< 0.5	< 5	6.7	4100	< 10	< 20	0.3	5.3	< 2	< 100	< 0.5	6.4
GF-012	< 1	< 2	19	300	34	3.2	104	61	< 0.5	5.15	1.9	< 0.5	< 5	9.8	7700	< 10	< 20	0.4	5.9	< 2	< 100	< 0.5	5.9
GF-101	< 1	< 2	3	300	53	6.0	50	45	1.5	0.89	< 0.5	< 0.5	< 5	5.1	1000	< 10	< 20	0.3	3.2	< 2	< 100	< 0.5	3.0
GF-102	< 1	< 2	< 1	200	21	3.6	5	15	2.3	0.54	0.9	< 0.5	< 5	1.7	3800	< 10	< 20	< 0.1	2.1	< 2	< 100	< 0.5	2.2
GF-103	< 1	< 2	< 1	100	16	3.4	5	9	< 0.5	0.37	< 0.5	< 0.5	< 5	1.4	500	< 10	< 20	0.3	1.3	< 2	< 100	< 0.5	1.5
GF-104	< 1	< 2	< 1	200	17	< 0.5	3	34	1.5	0.57	1.8	< 0.5	< 5	1.3	4500	< 10	< 20	0.1	5.4	< 2	< 100	< 0.5	4.6
GF-105	< 1	< 2	< 1	300	13	< 0.5	5	31	< 0.5	0.54	3.2	< 0.5	< 5	< 0.5	8600	< 10	< 20	0.2	3.6	< 2	< 100	< 0.5	3.2
GF-109	< 1	< 2	12	200	23	3.3	11	9	< 0.5	1.65	< 0.5	< 0.5	< 5	3.5	700	< 10	< 20	0.4	1.0	< 2	< 100	< 0.5	1.1
HL-1329	< 1	< 2	2	100	49	6.3	4	7	< 0.5	0.30	< 0.5	< 0.5	< 5	12.4	300	< 10	< 20	0.5	0.6	< 2	< 100	< 0.5	1.2
HL-1330	< 1	< 2	7	800	49	5.8	65	13	< 0.5	1.14	0.6	< 0.5	< 5	15.7	500	< 10	< 20	0.4	1.4	< 2	< 100	< 0.5	2.9
HL-1331	< 1	< 2	6	200	29	5.1	11	6	0.6	1.12	< 0.5	< 0.5	< 5	2.3	500	< 10	< 20	0.2	0.7	< 2	200	< 0.5	1.5
HL-1332	< 1	< 2	4	200	12	4.6	10	19	1.6	1.01	1.9	< 0.5	< 5	1.6	6300	< 10	< 20	0.2	2.8	< 2	< 100	< 0.5	4.7
HL-1334	< 1	< 2	2	100	18	4.5	< 1	8	< 0.5	0.28	< 0.5	< 0.5	< 5	1.8	900	< 10	< 20	0.1	0.9	< 2	< 100	< 0.5	1.8
HL-1335	< 1	< 2	3	300	33	5.6	10	9	< 0.5	0.74	< 0.5	< 0.5	< 5	17.2	900	< 10	< 20	0.4	1.9	< 2	< 100	< 0.5	4.1
HL-1336	< 1	< 2	2	100	24	6.4	3	4	1.9	0.29	< 0.5	< 0.5	< 5	4.8	600	< 10	< 20	0.2	0.8	< 2	< 100	< 0.5	1.0
HL-1337	< 1	< 2	3	300	41	6.6	42	4	< 0.5	0.66	< 0.5	< 0.5	< 5	5.0	600	< 10	< 20	0.2	0.7	< 2	< 100	< 0.5	1.0
HL-1351B	< 1	< 2	2	200	31	7.1	< 1	4	< 0.5	0.36	< 0.5	< 0.5	< 5	1.4	500	< 10	< 20	0.2	0.6	< 2	< 100	< 0.5	0.9
HL-1352	< 1	< 2	2	400	11	< 0.5	4	25	1.1	0.73	3.2	< 0.5	< 5	1.2	11300	< 10	< 20	0.4	3.9	< 2	< 100	< 0.5	4.7
HL-1353	< 1	< 2	5	200	39	5.9	9	11	< 0.5	0.81	0.8	< 0.5	< 5	< 0.5	1300	< 10	< 20	0.3	2.0	< 2	< 100	< 0.5	4.0
HL-1354	< 1	< 2	6	200	35	5.5	12	6	< 0.5	0.73	0.7	< 0.5	< 5	1.0	2300	< 10	< 20	0.3	0.9	< 2	< 100	< 0.5	2.2
HL-1355	< 1	< 2	2	< 100	25	6.3	< 1	3	< 0.5	0.25	< 0.5	< 0.5	< 5	2.5	600	< 10	< 20	0.2	0.5	< 2	< 100	< 0.5	0.8
HL-6000	< 1	< 2	4	100	26	3.6	< 1	3	< 0.5	0.65	< 0.5	< 0.5	< 5	< 0.5	400	< 10	< 20	0.1	0.5	< 2	< 100	< 0.5	0.5
HL-6001	< 1	< 2	18	200	34	3.6	28	10	< 0.5	2.79	0.6	< 0.5	< 5	5.5	700	< 10	< 20	0.6	0.9	< 2	< 100	< 0.5	1.2
HL-6002	< 1	< 2	3	300	39	4.0	20	33	2.0	1.62	2.0	< 0.5	< 5	4.6	6100	< 10	< 20	0.3	6.2	< 2	< 100	< 0.5	6.4
HL-6100	< 1	< 2	5	200	23	3.8	8	7	1.5	0.84	< 0.5	< 0.5	< 5	0.6	800	< 10	< 20	0.2	1.0	< 2	< 100	< 0.5	2.1
HL-6101	< 1	< 2	3	< 100	20	4.2	< 1	6	< 0.5	0.32	< 0.5	< 0.5	< 5	< 0.5	500	< 10	< 20	0.3	0.7	< 2	< 100	< 0.5	1.2
HL-6102	< 1	< 2	4	200	25	5.4	3	7	1.0	0.49	< 0.5	< 0.5	< 5	3.6	500	< 10	< 20	0.3	0.9	< 2	< 100	< 0.5	1.5
HL-6103	< 1	< 2	2	100	18	4.2	3	10	< 0.5	0.47	0.7	< 0.5	< 5	< 0.5	1600	< 10	< 20	< 0.1	1.1	< 2	< 100	< 0.5	1.9
HL-6104	< 1	< 2	34	600	54	4.3	29	6	< 0.5	1.77	< 0.5	< 0.5	< 5	6.1	700	< 10	< 20	0.3	0.9	< 2	< 100	< 0.5	1.0
HL-2500	< 1	< 2	34	200	35	3.8	9	16	1.9	0.91	< 0.5	< 0.5	< 5	< 0.5	500	< 10	< 20	0.2	1.7	< 2	< 100	< 0.5	2.6
HL-2501	< 1	< 2	8	200	19	4.6	9	28	1.7	0.69	0.9	0.7	< 5	2.4	1400	< 10	< 20	0.3	4.6	< 2	< 100	< 0.5	6.2
HL-2505	< 1	< 2	4	100	20	4.5	2	7	< 0.5	0.16	< 0.5	< 0.5	< 5	8.9	300	< 10	< 20	0.2	0.6	< 2	< 100	< 0.5	0.7
HL-2506	< 1	< 2	5	200	32	5.2	5	5	< 0.5	0.14	< 0.5	< 0.5	< 5	24.1	300	< 10	< 20	0.4	0.5	2	< 100	< 0.5	0.8
HL-2507	< 1	< 2	6	400	13	2.0	21	91	3.7	2.85	3.3	< 0.5	< 5	1.0	12300	< 10	70	0.3	10.7	< 2	< 100	< 0.5	9.2
HL-2510	< 1	< 2	2	100	15	< 0.5	5	13	0.7	0.52	< 0.5	< 0.5	< 5	< 0.5	800	< 10	< 20	0.2	3.2	< 2	< 100	< 0.5	2.1
HL-2511	< 1	< 2	8	400	11	< 0.5	< 1	68	3.8	0.82	4.4	< 0.5	< 5	1.9	4000	< 10	40	0.8	6.8	< 2	< 100	< 0.5	7.0
HL-2514	< 1	< 2	10	200	18	5.1	5	11	1.4	0.85	< 0.5	< 0.5	< 5	< 0.5	400	< 10	< 20	0.2	1.0	< 2	< 100	< 0.5	1.3
HL-2515	< 1	< 2	19	100	21	3.5	13	7	< 0.5	1.13	< 0.5	< 0.5	< 5	< 0.5	500	< 10	< 20	0.5	0.8	< 2	< 100	< 0.5	0.8
HL-2516	3	< 2	11	200	14	2.3	4	19	< 0.5	0.78	1.2	< 0.5	< 5	< 0.5	1100	< 10	< 20	0.4	2.8	< 2	100	< 0.5	2.4
HL-2517	< 1	< 2	15	< 100	17	2.7	4	11	< 0.5	0.63	< 0.5	< 0.5	< 5	< 0.5	500	< 10	< 20	< 0.1	1.4	< 2	< 100	< 0.5	2.1
HL-2518	< 1	< 2	57	200	25	3.5	3	9	< 0.5	1.49	< 0.5	< 0.5	< 5	< 0.5	400	< 10	< 20	0.1	1.1	< 2	< 100	< 0.5	1.5
HL-2519	< 1	< 2	25	100	21	3.6	5	9	< 0.5	1.07	< 0.5	< 0.5	< 5	2.1	500	< 10	< 20	0.2	1.8	< 2	< 100	< 0.5	2.4

	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA
SAMPLE	Au	Ag	As	Ba	Br	Ca	Co	Cr	Cs	Fe	Hf	Hg	Ir	Mo	Na	Ni	Rb	Sb	Sc	Se	Sr	Ta	Th
DESCRIPTION	ppb	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
HL-2520	< 1	< 2	8	200	18	3.5	4	9	< 0.5	0.70	< 0.5	< 0.5	< 5	0.6	500	< 10	< 20	0.2	1.1	< 2	< 100	< 0.5	1.4
HL-2521	< 1	< 2	9	200	16	3.3	4	13	1.5	0.69	< 0.5	< 0.5	< 5	1.5	700	< 10	< 20	0.2	2.3	< 2	< 100	< 0.5	3.3
HL-2522	< 1	< 2	5	300	33	4.0	11	9	< 0.5	1.37	< 0.5	< 0.5	< 5	2.0	400	< 10	< 20	0.1	1.2	< 2	< 100	< 0.5	1.9
HL-2523	< 1	< 2	4	300	21	4.9	8	9	< 0.5	1.25	0.7	< 0.5	< 5	2.2	500	< 10	< 20	0.4	1.4	< 2	< 100	< 0.5	1.9
HL-2524	< 1	< 2	2	100	15	3.6	2	6	< 0.5	0.15	< 0.5	< 0.5	< 5	4.5	400	< 10	< 20	0.1	0.4	< 2	< 100	< 0.5	< 0.5
HL-2525	< 1	< 2	1	200	24	3.6	9	7	< 0.5	0.43	< 0.5	< 0.5	< 5	2.9	300	< 10	< 20	0.3	0.7	< 2	< 100	< 0.5	0.9
HL-2530	< 1	< 2	6	300	34	< 0.5	< 1	21	< 0.5	1.05	< 0.5	< 0.5	< 5	2.3	5200	< 10	< 20	0.3	5.4	< 2	< 100	< 0.5	9.2
HL-2531	4	< 2	9	500	42	2.7	48	39	2.9	4.64	1.8	< 0.5	< 5	9.9	1700	< 10	< 20	0.1	5.2	< 2	< 100	< 0.5	8.3
HL-2533	< 1	< 2	2	300	18	2.5	6	49	1.2	1.34	2.0	< 0.5	< 5	3.5	8000	< 10	< 20	0.3	4.7	< 2	< 100	< 0.5	4.5
HL-2534	4	< 2	22	800	78	5.0	114	117	11.9	3.49	< 0.5	< 0.5	< 5	124	1300	< 10	< 20	0.4	13.2	< 2	< 100	< 0.5	18.7
HL-2535	< 1	< 2	2	200	17	1.3	8	33	1.6	1.14	1.7	< 0.5	< 5	2.7	6900	< 10	< 20	0.1	6.3	< 2	< 100	< 0.5	6.6
HL-2536	7	< 2	4	300	46	2.8	118	83	1.5	6.25	< 0.5	< 0.5	< 5	25.2	1500	< 10	< 20	0.3	13.1	< 2	< 100	< 0.5	15.7
HL-2537	< 1	< 2	1	300	15	< 0.5	9	50	1.1	0.92	2.5	< 0.5	< 5	3.4	8300	< 10	< 20	< 0.1	5.4	< 2	< 100	< 0.5	6.8
HL-2338	< 1	< 2	< 1	300	21	2.1	8	43	2.7	1.38	2.3	< 0.5	< 5	4.1	12100	< 10	< 20	0.2	8.1	< 2	< 100	< 0.5	11.3
HL-2394	< 1	< 2	4	100	33	2.5	< 1	11	< 0.5	0.44	< 0.5	< 0.5	< 5	< 0.5	600	< 10	< 20	0.3	0.6	< 2	< 100	< 0.5	0.8
HL-2395	< 1	< 2	4	100	41	2.3	< 1	5	< 0.5	0.35	< 0.5	< 0.5	< 5	< 0.5	600	< 10	< 20	0.5	0.8	< 2	< 100	< 0.5	0.6
HL-2397	< 1	< 2	3	100	22	3.7	2	5	< 0.5	0.18	< 0.5	0.6	< 5	3.2	500	< 10	< 20	0.1	0.7	< 2	< 100	< 0.5	0.7
HL-2399	< 1	< 2	9	200	36	4.6	5	8	< 0.5	0.55	< 0.5	< 0.5	< 5	4.6	500	< 10	< 20	0.5	0.9	< 2	< 100	< 0.5	1.0
HL-2400	< 1	< 2	7	200	38	5.0	6	9	< 0.5	0.41	< 0.5	< 0.5	< 5	9.6	400	< 10	< 20	0.6	1.1	< 2	< 100	< 0.5	1.1
HL-2401	3	< 2	12	200	41	3.9	< 1	11	2.5	0.49	0.6	< 0.5	< 5	3.3	800	< 10	< 20	0.8	2.0	< 2	< 100	< 0.5	1.6
HL-2402	< 1	< 2	4	400	19	4.2	6	47	1.7	1.12	4.1	< 0.5	< 5	2.7	15500	< 10	< 20	0.3	5.8	< 2	< 100	< 0.5	3.6
HL-2403	< 1	< 2	2	300	30	0.9	10	32	3.3	1.05	1.7	< 0.5	< 5	5.2	5400	< 10	< 20	0.3	5.5	< 2	< 100	< 0.5	5.1
HL-2408	< 1	< 2	1	400	23	3.6	45	31	3.6	0.99	1.6	< 0.5	< 5	2.0	2500	< 10	30	0.5	7.2	< 2	< 100	< 0.5	6.8
HL-2409	4	< 2	3	400	26	0.6	10	111	4.0	1.90	4.4	< 0.5	< 5	11.1	10300	< 10	< 20	0.3	10.6	< 2	< 100	< 0.5	9.9
HL-2439	< 1	< 2	14	200	30	3.4	9	7	1.6	1.02	< 0.5	< 0.5	< 5	1.7	900	< 10	< 20	0.6	1.1	< 2	< 100	< 0.5	1.2
HL-2440	< 1	< 2	99	400	64	4.9	31	11	1.0	4.26	0.5	< 0.5	< 5	< 0.5	800	< 10	< 20	0.4	1.0	< 2	< 100	< 0.5	1.4
HL-2442	< 1	< 2	13	200	60	4.3	11	7	1.6	1.44	< 0.5	< 0.5	< 5	< 0.5	600	< 10	< 20	0.3	0.6	< 2	< 100	< 0.5	0.8
HL-2443	< 1	< 2	55	300	56	5.1	28	6	< 0.5	4.24	< 0.5	< 0.5	< 5	2.1	600	< 10	< 20	0.5	0.8	< 2	< 100	< 0.5	1.2
HL-2444	< 1	< 2	29	300	32	4.6	13	4	0.7	1.94	< 0.5	< 0.5	< 5	< 0.5	600	< 10	< 20	0.7	0.7	< 2	< 100	< 0.5	1.0
HL-2445	< 1	< 2	20	300	43	3.6	13	9	1.7	2.38	0.7	< 0.5	< 5	< 0.5	600	< 10	< 20	0.5	0.9	< 2	< 100	< 0.5	1.0
HL-2446	< 1	< 2	18	300	46	5.4	21	33	1.8	1.52	0.9	< 0.5	< 5	4.6	700	< 10	< 20	0.3	2.7	< 2	< 100	< 0.5	5.7
HL-2448	< 1	< 2	20	400	38	5.1	24	25	2.0	3.63	1.2	< 0.5	< 5	7.5	1200	< 10	< 20	0.2	3.9	< 2	< 100	< 0.5	5.5
HL-2449	< 1	< 2	23	400	53	7.4	20	28	3.0	4.22	1.2	< 0.5	< 5	8.2	900	< 10	< 20	0.4	3.8	< 2	200	< 0.5	5.0
HL-2450	< 1	< 2	5	300	27	6.3	15	61	2.8	2.67	2.5	< 0.5	< 5	6.1	5500	< 10	50	0.2	8.5	< 2	< 100	< 0.5	10.3
HL-2451	< 1	< 2	4	200	21	2.1	12	50	1.7	1.35	3.3	< 0.5	< 5	2.0	10300	< 10	< 20	0.2	7.8	< 2	< 100	< 0.5	5.4
HL-2459	3	< 2	5	300	26	< 0.5	8	36	< 0.5	1.49	1.1	< 0.5	< 5	5.0	2000	< 10	< 20	0.9	7.9	< 2	< 100	< 0.5	8.1
HL-2460	1	< 2	7	200	12	1.0	6	18	1.1	0.57	1.2	0.6	< 5	< 0.5	1900	< 10	< 20	1.3	2.3	< 2	< 100	< 0.5	1.8
HL-2491	< 1	< 2	1	< 100	26	1.3	14	45	< 0.5	1.22	0.8	< 0.5	< 5	< 0.5	1200	< 10	< 20	0.1	5.4	< 2	< 100	< 0.5	7.6
HL-2492	8	< 2	4	200	53	4.0	9	20	< 0.5	0.71	< 0.5	< 0.5	< 5	4.8	500	< 10	< 20	< 0.1	3.5	< 2	< 100	< 0.5	6.4
HL-2493	< 1	< 2	2	200	29	4.1	4	6	< 0.5	0.52	< 0.5	< 0.5	< 5	2.2	200	< 10	< 20	0.2	0.5	< 2	< 100	< 0.5	0.7
HL-2494	< 1	< 2	6	200	48	4.1	9	8	< 0.5	1.01	< 0.5	< 0.5	< 5	< 0.5	300	< 10	< 20	0.2	0.8	< 2	< 100	< 0.5	0.8
HL-2495	< 1	< 2	3	200	29	3.4	21	9	< 0.5	1.26	< 0.5	< 0.5	< 5	3.0	400	< 10	< 20	0.2	0.9	< 2	< 100	< 0.5	1.3
HL-2496	< 1	< 2	7	200	41	3.2	13	10	< 0.5	0.95	< 0.5	< 0.5	< 5	2.5	300	< 10	< 20	0.3	0.8	< 2	< 100	< 0.5	0.9
HL-2497	< 1	< 2	13	200	30	4.4	8	8	1.5	1.01	0.5	< 0.5	< 5	1.4	500	< 10	< 20	0.2	1.1	< 2	< 100	< 0.5	1.7
HL-2498	< 1	< 2	16	200	16	3.1	4	4	< 0.5	0.84	< 0.5	< 0.5	< 5	< 0.5	300	< 10	< 20	< 0.1	0.6	< 2	< 100	< 0.5	0.8
HL-2499	< 1	< 2	193	300	41	4.0	38	9	1.0	2.02	< 0.5	< 0.5	< 5	< 0.5	400	< 10	< 20	0.3	0.7	< 2	< 100	< 0.5	1.0
L-Std-3 Meas	19		< 1	< 100	5	3.6	1			0.09					300		< 20	0.1	0.2		< 100		
L-Std-3 Cert	20.0		1.23	71.0	4.00	3.60	1.40			0.350					1660		9.00	0.240	0.890		105		
L-Std-3 Meas	21		< 1	< 100	6	3.7	< 1			0.10					300		< 20	0.2	0.2		100		
L-Std-3 Cert	20.0		1.23	71.0	4.00	3.60	1.40			0.350					1660		9.00	0.240	0.890		105		

Results

	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA
SAMPLE	U	W	Zn	La	Ce	Nd	Sm	Eu	Tb	Yb	Lu	Mass
DESCRIPTION	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	g
GF-003	1.7	< 1	< 20	25.2	38	27	3.1	0.6	0.5	0.7	< 0.1	15.6
GF-004	0.5	< 1	30	16.6	19	22	2.0	0.4	< 0.2	0.5	< 0.1	15.9
GF-005	0.6	< 1	< 20	4.3	7	4	0.5	< 0.2	< 0.2	0.2	< 0.1	15.3
GF-006	0.9	< 1	< 20	7.5	14	8	0.9	0.2	< 0.2	0.3	< 0.1	15.7
GF-007	1.1	< 1	< 20	12.3	20	14	1.8	0.4	< 0.2	0.5	< 0.1	16.0
GF-008	0.8	< 1	< 20	11.6	17	13	1.4	0.3	< 0.2	0.5	< 0.1	15.4
GF-009	1.3	< 1	30	20.5	50	19	2.4	0.4	< 0.2	0.7	< 0.1	15.6
GF-010	0.8	< 1	140	23.7	65	21	2.2	< 0.2	< 0.2	0.5	< 0.1	15.5
GF-011	0.6	< 1	40	30.6	72	22	3.3	0.5	< 0.2	0.8	< 0.1	15.7
GF-012	0.8	< 1	40	27.6	72	22	3.1	0.6	1.0	0.8	< 0.1	15.2
GF-101	3.5	1	40	17.1	33	15	2.2	0.4	0.3	0.6	< 0.1	15.1
GF-102	1.2	1	< 20	7.4	11	6	1.0	0.2	< 0.2	0.4	< 0.1	16.0
GF-103	0.9	< 1	< 20	9.2	16	13	1.2	0.2	< 0.2	0.4	< 0.1	15.5
GF-104	1.6	< 1	< 20	15.3	23	10	1.6	0.4	< 0.2	0.5	< 0.1	15.8
GF-105	1.0	< 1	< 20	8.4	13	7	0.9	0.3	< 0.2	0.6	< 0.1	15.7
GF-109	0.4	< 1	< 20	13.2	18	21	1.4	0.2	< 0.2	0.4	< 0.1	15.6
HL-1329	9.8	< 1	< 20	11.2	10	21	0.9	0.3	< 0.2	< 0.1	< 0.1	15.2
HL-1330	5.0	< 1	20	27.4	35	24	2.1	0.3	< 0.2	0.4	< 0.1	15.5
HL-1331	0.8	< 1	40	12.3	18	14	1.1	< 0.2	< 0.2	0.3	< 0.1	15.2
HL-1332	2.1	< 1	< 20	37.5	52	35	3.3	0.4	< 0.2	0.7	< 0.1	15.2
HL-1334	0.4	< 1	< 20	17.9	25	22	1.4	< 0.2	< 0.2	0.3	< 0.1	15.4
HL-1335	12.3	< 1	< 20	30.7	40	29	2.9	0.6	< 0.2	0.5	< 0.1	15.7
HL-1336	0.5	< 1	< 20	4.1	6	6	0.5	< 0.2	< 0.2	0.2	< 0.1	15.2
HL-1337	0.7	< 1	< 20	3.5	5	7	0.4	< 0.2	< 0.2	0.2	< 0.1	15.5
HL-1351B	1.3	< 1	< 20	15.5	15	16	1.3	0.2	< 0.2	0.3	< 0.1	15.2
HL-1352	0.8	< 1	< 20	26.1	39	26	2.6	0.5	0.2	0.8	< 0.1	15.6
HL-1353	0.7	< 1	< 20	34.8	46	29	3.1	0.6	< 0.2	0.4	< 0.1	15.9
HL-1354	0.4	< 1	30	10.9	11	16	1.2	0.2	0.5	0.3	< 0.1	15.1
HL-1355	0.6	< 1	< 20	10.9	13	12	0.9	< 0.2	< 0.2	0.3	< 0.1	15.4
HL-6000	< 0.1	< 1	< 20	2.5	4	5	0.3	< 0.2	< 0.2	0.2	< 0.1	15.8
HL-6001	< 0.1	< 1	50	5.2	9	7	0.8	< 0.2	< 0.2	0.3	< 0.1	15.6
HL-6002	2.3	< 1	< 20	40.0	54	41	4.5	0.9	< 0.2	1.3	< 0.1	15.6
HL-6100	0.8	< 1	< 20	9.3	15	12	0.9	< 0.2	< 0.2	0.2	< 0.1	15.4
HL-6101	0.3	< 1	< 20	21.2	25	24	1.7	0.3	< 0.2	0.3	< 0.1	15.5
HL-6102	1.8	< 1	< 20	19.3	24	16	1.7	0.3	< 0.2	0.3	< 0.1	15.8
HL-6103	0.4	< 1	< 20	10.0	15	7	1.0	0.2	< 0.2	0.2	< 0.1	15.3
HL-6104	< 0.1	< 1	110	4.8	9	14	0.6	< 0.2	< 0.2	0.3	< 0.1	15.4
HL-2500	1.2	< 1	< 20	10.2	19	13	1.2	0.3	< 0.2	0.4	< 0.1	15.3
HL-2501	1.3	< 1	< 20	25.9	47	36	3.2	0.4	< 0.2	0.8	< 0.1	15.5
HL-2505	0.4	< 1	< 20	2.7	4	< 3	0.4	< 0.2	< 0.2	0.1	< 0.1	15.2
HL-2506	0.3	< 1	< 20	2.8	5	5	0.4	< 0.2	< 0.2	0.2	< 0.1	15.1
HL-2507	1.7	< 1	50	43.9	67	42	5.0	1.1	< 0.2	1.3	0.2	15.9
HL-2510	0.8	< 1	30	16.3	25	15	1.6	0.3	< 0.2	0.3	< 0.1	15.8
HL-2511	2.9	< 1	< 20	20.4	32	20	2.0	0.5	< 0.2	1.3	0.3	15.8
HL-2514	0.2	< 1	< 20	5.9	8	8	0.8	< 0.2	< 0.2	0.3	< 0.1	15.2
HL-2515	0.4	< 1	30	5.9	9	9	0.7	< 0.2	< 0.2	0.3	< 0.1	15.2
HL-2516	0.9	< 1	< 20	8.8	13	12	1.0	0.2	< 0.2	0.6	< 0.1	15.3
HL-2517	1.1	< 1	< 20	16.2	23	17	1.8	0.4	< 0.2	0.4	< 0.1	15.4

	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA
SAMPLE	U	W	Zn	La	Ce	Nd	Sm	Eu	Tb	Yb	Lu	Mass
DESCRIPTION	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	g
HL-2518	0.3	< 1	< 20	15.3	20	23	1.7	0.4	< 0.2	0.4	< 0.1	15.2
HL-2519	1.1	< 1	< 20	19.5	27	18	2.1	0.4	< 0.2	0.4	< 0.1	15.2
HL-2520	0.8	< 1	< 20	13.1	15	14	1.4	0.3	< 0.2	0.3	< 0.1	15.3
HL-2521	1.7	< 1	< 20	27.2	36	32	2.9	0.4	0.3	0.6	< 0.1	15.8
HL-2522	1.1	< 1	< 20	12.8	18	15	1.3	0.3	< 0.2	0.4	< 0.1	15.0
HL-2523	1.3	< 1	< 20	14.7	20	15	1.5	0.2	< 0.2	0.4	< 0.1	15.9
HL-2524	0.5	< 1	< 20	3.1	5	3	0.3	< 0.2	< 0.2	0.1	< 0.1	15.0
HL-2525	0.6	< 1	< 20	13.6	24	16	1.3	0.3	< 0.2	0.4	< 0.1	15.7
HL-2530	4.2	< 1	< 20	222	321	168	17.6	2.4	1.8	1.6	0.1	15.4
HL-2531	5.3	< 1	30	48.4	75	51	5.4	0.9	0.9	1.2	0.2	15.7
HL-2533	2.9	< 1	< 20	36.5	48	34	3.6	0.7	0.4	1.0	< 0.1	15.5
HL-2534	40.8	< 1	< 20	89.6	146	81	11.8	2.5	< 0.2	3.2	0.9	15.4
HL-2535	2.5	< 1	< 20	30.7	46	38	3.7	0.8	< 0.2	1.0	0.1	15.6
HL-2536	7.0	< 1	30	130	180	117	15.9	2.5	2.0	3.1	0.5	15.1
HL-2537	1.9	< 1	< 20	15.8	24	13	1.9	0.5	< 0.2	0.7	< 0.1	15.7
HL-2338	3.5	< 1	< 20	48.2	73	36	5.0	1.0	< 0.2	1.1	0.2	15.9
HL-2394	0.5	< 1	40	3.4	5	8	0.4	< 0.2	< 0.2	0.1	< 0.1	15.6
HL-2395	< 0.1	< 1	30	2.5	4	6	0.3	< 0.2	< 0.2	0.1	< 0.1	15.5
HL-2397	0.3	< 1	30	2.7	4	5	0.4	< 0.2	< 0.2	0.2	< 0.1	15.2
HL-2399	0.3	< 1	40	5.9	5	10	0.9	< 0.2	< 0.2	0.3	< 0.1	15.3
HL-2400	< 0.1	< 1	40	9.3	8	17	1.3	0.2	< 0.2	0.4	< 0.1	15.4
HL-2401	0.5	< 1	60	16.4	21	21	2.2	0.3	0.3	0.5	< 0.1	15.5
HL-2402	0.8	3	< 20	18.9	27	18	2.4	0.5	< 0.2	1.1	< 0.1	15.8
HL-2403	1.5	< 1	< 20	22.0	37	26	2.5	0.7	< 0.2	0.7	0.1	15.7
HL-2408	4.7	< 1	40	56.5	80	67	8.7	1.7	1.6	2.1	0.3	15.5
HL-2409	3.7	< 1	50	27.4	45	18	3.0	0.7	< 0.2	1.3	0.3	15.8
HL-2439	< 0.1	< 1	30	4.3	6	5	0.7	< 0.2	< 0.2	0.3	< 0.1	15.3
HL-2440	< 0.1	< 1	50	4.7	9	13	0.7	< 0.2	< 0.2	0.3	< 0.1	15.8
HL-2442	< 0.1	< 1	20	3.5	4	9	0.5	< 0.2	< 0.2	0.2	< 0.1	15.9
HL-2443	< 0.1	< 1	30	5.9	8	7	0.8	< 0.2	< 0.2	0.2	< 0.1	15.4
HL-2444	< 0.1	< 1	40	4.7	21	9	0.7	< 0.2	< 0.2	0.3	< 0.1	15.9
HL-2445	< 0.1	< 1	< 20	6.7	9	9	0.8	< 0.2	< 0.2	0.3	< 0.1	15.3
HL-2446	0.8	< 1	< 20	26.4	56	41	3.2	0.5	< 0.2	0.7	< 0.1	15.3
HL-2448	1.4	< 1	< 20	32.3	68	49	3.7	0.6	0.7	0.8	< 0.1	15.4
HL-2449	1.3	< 1	30	28.8	53	35	3.6	0.6	0.3	0.9	< 0.1	15.5
HL-2450	2.2	< 1	< 20	64.4	95	66	7.7	1.5	< 0.2	2.0	0.1	15.6
HL-2451	1.3	< 1	< 20	17.6	25	19	2.0	0.6	< 0.2	0.9	< 0.1	15.1
HL-2459	5.3	< 1	< 20	33.6	51	34	3.5	0.7	< 0.2	0.7	< 0.1	15.2
HL-2460	1.0	< 1	60	7.7	13	10	1.1	0.3	< 0.2	0.5	< 0.1	15.5
HL-2491	1.6	< 1	< 20	34.0	70	34	4.5	0.9	< 0.2	0.6	< 0.1	15.7
HL-2492	6.8	< 1	< 20	164	242	147	15.4	1.7	1.3	1.2	0.1	15.3
HL-2493	< 0.1	< 1	< 20	7.8	8	11	0.8	< 0.2	< 0.2	0.2	< 0.1	15.6
HL-2494	0.4	< 1	40	6.7	7	7	0.9	0.2	< 0.2	0.3	< 0.1	15.8
HL-2495	0.5	< 1	50	9.4	12	10	1.2	0.2	< 0.2	0.4	< 0.1	15.9
HL-2496	0.4	< 1	40	7.1	11	10	1.0	< 0.2	< 0.2	0.3	< 0.1	15.3
HL-2497	0.6	< 1	< 20	5.2	6	9	0.8	< 0.2	< 0.2	0.3	< 0.1	15.6
HL-2498	0.5	< 1	< 20	2.9	4	3	0.4	< 0.2	< 0.2	0.1	< 0.1	15.4
HL-2499	0.3	< 1	< 20	3.2	7	4	0.4	< 0.2	< 0.2	0.2	< 0.1	15.7
L-Std-3 Meas	< 0.1		30	0.8	2		0.1			< 0.1		

	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA
SAMPLE	U	W	Zn	La	Ce	Nd	Sm	Eu	Tb	Yb	Lu	Mass
DESCRIPTION	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	g
L-Std-3 Cert	0.210		64.0	2.73	5.60		0.400			0.290		
L-Std-3 Meas	< 0.1		30	0.9	1		0.1			< 0.1		
L-Std-3 Cert	0.210		64.0	2.73	5.60		0.400			0.290		

Quality Analysis ... *Innovative Technologies*

Date Submitted:	02-Sep-14
Invoice No.:	A14-06152
Invoice Date:	18-Sep-14
Your Reference:	9250

GOLDCORP Canada Ltd--Musselwhite Mine
Musselwhite Mine
P.O BOX 7500
Thunder Bay ON P7B 6S8
Canada

ATTN: John Biczok (PO#WA9R00280-W0001)

CERTIFICATE OF ANALYSIS

26 sand samples were submitted for analysis.

The following analytical package was requested: Code 7-ESE-Enzyme Leach Enzyme Leach ICP/MS(ENZYME)

REPORT **A14-06152**

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Notes:

CERTIFIED BY:

Emmanuel Eseme , Ph.D.
Quality Control

SCC Accredited LAB
LAB Accrédité CCN

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Results

	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS
SAMPLE	Al	Ca	Fe	K	Mg	Na	Cl	Br	I	V	As	Se	Mo	Sb	Te	W	Re	Au	Hg	Th	U	Co	Ni
DESCRIPTION	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
GF-001	3.8	7	2	6	2	6	8000	59	13	18	3	< 5	< 1	0.2	< 1	< 1	< 0.01	< 0.05	< 1	0.6	0.4	5	17
GF-002	5.0	7	1	8	< 2	6	13000	91	15	2	2	< 5	< 1	0.1	< 1	< 1	< 0.01	< 0.05	< 1	0.4	0.4	4	12
GF-013	1.9	22	< 1	7	4	7	12000	109	9	6	1	< 5	< 1	0.2	< 1	< 1	< 0.01	< 0.05	< 1	0.6	0.4	2	12
GF-106	2.5	17	< 1	5	2	10	18000	290	4	5	< 1	< 5	< 1	< 0.1	< 1	< 1	< 0.01	< 0.05	< 1	0.2	0.2	2	10
GF-107	6.0	8	1	12	2	12	33000	147	20	1	2	< 5	4	0.1	< 1	< 1	< 0.01	< 0.05	< 1	0.8	0.5	9	13
GF-108	3.1	11	1	7	< 2	10	22000	44	9	< 1	< 1	< 5	< 1	0.2	< 1	< 1	< 0.01	< 0.05	< 1	0.7	0.3	3	9
GF-110	4.3	12	< 1	< 5	< 2	< 5	8000	31	3	3	< 1	< 5	< 1	< 0.1	< 1	< 1	< 0.01	< 0.05	< 1	0.1	0.2	2	9
HL-1327	1.4	< 5	< 1	11	< 2	< 5	11000	40	6	32	6	< 5	1	0.2	< 1	< 1	< 0.01	< 0.05	< 1	2.8	0.3	< 1	5
HL-1352	1.3	28	< 1	< 5	5	< 5	5000	47	13	7	2	< 5	2	0.2	< 1	< 1	< 0.01	< 0.05	< 1	1.1	0.3	3	5
HL-2402	0.8	38	< 1	< 5	7	< 5	7000	58	9	25	2	< 5	3	0.1	< 1	< 1	0.01	< 0.05	< 1	0.5	0.2	< 1	6
HL-2450	5.2	21	2	< 5	3	6	10000	48	29	7	2	< 5	< 1	< 0.1	< 1	< 1	< 0.01	< 0.05	< 1	3.4	0.6	23	18
HL-2451	1.1	39	1	< 5	7	12	8000	14	3	193	10	< 5	5	0.2	< 1	< 1	< 0.01	< 0.05	< 1	0.6	0.2	2	14
HL-2502	5.5	< 5	3	< 5	< 2	< 5	< 2000	77	17	10	2	< 5	< 1	0.1	< 1	< 1	< 0.01	< 0.05	< 1	0.2	0.3	3	25
HL-2503	2.6	< 5	3	< 5	2	< 5	3000	30	10	15	1	< 5	1	< 0.1	< 1	< 1	< 0.01	< 0.05	< 1	1.2	0.3	4	13
HL-2504	1.0	30	1	< 5	7	< 5	4000	34	9	15	2	< 5	2	0.1	< 1	< 1	< 0.01	< 0.05	< 1	0.7	0.5	1	5
HL-2508	6.5	< 5	3	5	< 2	< 5	3000	99	30	6	2	< 5	< 1	< 0.1	< 1	< 1	< 0.01	< 0.05	< 1	0.9	0.4	5	17
HL-6003	7.9	< 5	1	< 5	< 2	5	18000	67	10	< 1	< 1	< 5	< 1	< 0.1	< 1	< 1	< 0.01	< 0.05	< 1	1.4	0.4	5	14
HL-6004	4.1	< 5	2	< 5	2	7	16000	93	15	8	2	< 5	< 1	< 0.1	< 1	< 1	0.01	< 0.05	< 1	0.5	0.4	6	23
HL-6106	1.9	< 5	1	11	< 2	7	10000	34	7	39	4	< 5	2	0.2	< 1	< 1	0.02	< 0.05	< 1	1.1	0.3	1	7
HL-6107	5.3	10	3	6	3	5	11000	75	17	10	2	< 5	< 1	0.1	< 1	< 1	< 0.01	< 0.05	< 1	3.8	0.6	12	16
HL-2404	5.3	< 5	5	6	2	6	12000	76	27	20	4	< 5	< 1	0.1	< 1	< 1	< 0.01	< 0.05	< 1	1.3	0.6	3	14
HL-2405	2.5	45	1	8	6	6	12000	104	19	9	4	< 5	3	0.3	< 1	< 1	0.04	< 0.05	< 1	0.7	0.7	4	8
HL-2406	5.5	< 5	5	8	< 2	< 5	7000	73	17	12	4	< 5	< 1	0.1	< 1	< 1	< 0.01	< 0.05	< 1	0.9	0.4	6	11
HL-2407	2.0	< 5	3	6	< 2	6	10000	32	9	52	2	< 5	1	0.1	< 1	< 1	< 0.01	< 0.05	< 1	0.7	0.4	4	10
HL-2527	4.3	< 5	2	6	< 2	7	12000	58	13	9	2	< 5	< 1	< 0.1	< 1	< 1	< 0.01	< 0.05	< 1	0.4	0.3	5	28
HL-2529	4.6	6	1	< 5	< 2	< 5	3000	45	15	2	< 1	< 5	< 1	< 0.1	< 1	< 1	< 0.01	< 0.05	< 1	1.1	0.5	5	18
TILL-1 Meas			20					325		77	29		5	40.6				< 0.05	1	4.4	3.2	40	25
TILL-1 Cert			48100.00					6400.0		99000	18000		2000	7800.0				13	90.0	5600.0	2200.0	18000	24000
TILL-1 Meas			19					283		63	24		4	31.5				< 0.05	< 1	3.6	2.8	34	21
TILL-1 Cert			48100.00					6400.0		99000	18000		2000	7800.0				13	90.0	5600.0	2200.0	18000	24000
TILL-2 Meas			71					1050		165	88		102	2.7		14		0.08	< 1	29.9	17.6	40	100
TILL-2 Cert			38400.00					12200.0		77000	26000		14000	800.0		5000		2	70.0	18400.0	5700.0	15000	32000
TILL-2 Meas			73					960		168	90		99	2.6		13		0.08	< 1	28.6	16.8	42	102
TILL-2 Cert			38400.00					12200.0		77000	26000		14000	800.0		5000		2	70.0	18400.0	5700.0	15000	32000
HL-2402 Orig	0.8	38	< 1	< 5	7	< 5	7000	58	9	25	2	< 5	3	0.1	< 1	< 1	0.01	< 0.05	< 1	0.5	0.2	< 1	6
HL-2402 Dup	0.8	41	< 1	< 5	7	< 5	6000	57	10	30	2	< 5	3	0.2	< 1	< 1	0.01	< 0.05	< 1	0.5	0.2	< 1	7
HL-2404 Orig	5.3	< 5	5	6	2	6	12000	76	27	20	4	< 5	< 1	0.1	< 1	< 1	< 0.01	< 0.05	< 1	1.3	0.6	3	14
HL-2404 Dup	5.1	< 5	5	6	< 2	6	11000	75	27	20	4	< 5	< 1	0.1	< 1	< 1	< 0.01	< 0.05	< 1	1.3	0.6	3	13
Method Blank	< 0.5	< 5	< 1	< 5	< 2	< 5	< 2000	< 5	< 2	< 1	< 1	< 5	< 1	< 0.1	< 1	< 1	< 0.01	< 0.05	< 1	< 0.1	< 0.1	< 1	< 3

Results

	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS
SAMPLE	Cu	Zn	Pb	Ga	Ge	Ag	Cd	In	Sn	Tl	Bi	Ti	Cr	Y	Zr	Nb	Hf	Ta	La	Ce	Pr	Nd	Sm
DESCRIPTION	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
GF-001	9	140	2	1	< 0.5	< 0.2	0.5	< 0.1	< 0.8	< 0.1	< 0.8	300	< 20	1.5	2	< 1	0.1	< 0.1	2.6	4.5	0.6	2.1	0.4
GF-002	8	110	2	< 1	< 0.5	< 0.2	1.0	< 0.1	< 0.8	0.1	< 0.8	< 100	< 20	1.3	1	< 1	< 0.1	< 0.1	1.8	3.4	0.4	1.6	0.3
GF-013	5	< 10	1	< 1	< 0.5	< 0.2	< 0.2	< 0.1	< 0.8	0.1	< 0.8	< 100	< 20	1.1	1	< 1	< 0.1	< 0.1	2.3	4.5	0.6	2.1	0.4
GF-106	< 3	40	1	< 1	< 0.5	< 0.2	< 0.2	< 0.1	< 0.8	< 0.1	< 0.8	100	< 20	0.5	< 1	< 1	< 0.1	< 0.1	1.0	1.8	0.2	0.8	0.1
GF-107	8	220	2	< 1	< 0.5	< 0.2	2.4	< 0.1	< 0.8	0.2	< 0.8	< 100	< 20	1.5	2	< 1	< 0.1	< 0.1	3.2	5.6	0.7	2.5	0.5
GF-108	7	60	1	< 1	< 0.5	< 0.2	< 0.2	< 0.1	< 0.8	< 0.1	< 0.8	< 100	< 20	1.4	2	< 1	< 0.1	< 0.1	3.0	5.8	0.8	3.0	0.5
GF-110	< 3	50	1	< 1	< 0.5	< 0.2	0.2	< 0.1	< 0.8	< 0.1	< 0.8	< 100	< 20	< 0.5	< 1	< 1	< 0.1	< 0.1	0.9	1.5	0.2	0.7	0.1
HL-1327	4	10	1	1	< 0.5	< 0.2	0.3	< 0.1	< 0.8	0.2	1.1	500	< 20	0.6	5	2	< 0.1	< 0.1	1.7	2.7	0.3	1.0	0.2
HL-1352	5	20	1	< 1	< 0.5	< 0.2	< 0.2	< 0.1	< 0.8	< 0.1	< 0.8	100	< 20	1.3	2	< 1	< 0.1	< 0.1	3.1	6.7	0.8	3.1	0.5
HL-2402	3	< 10	< 1	< 1	< 0.5	< 0.2	< 0.2	< 0.1	< 0.8	< 0.1	< 0.8	< 100	< 20	< 0.5	2	< 1	< 0.1	< 0.1	1.1	2.0	0.3	1.0	0.2
HL-2450	6	20	< 1	< 1	< 0.5	< 0.2	0.6	< 0.1	< 0.8	0.2	1.1	< 100	< 20	8.4	12	< 1	0.3	< 0.1	13.8	23.9	3.8	14.7	2.6
HL-2451	8	< 10	< 1	< 1	< 0.5	< 0.2	< 0.2	< 0.1	< 0.8	0.2	0.9	700	< 20	1.1	3	2	< 0.1	< 0.1	2.5	4.2	0.6	2.1	0.4
HL-2502	5	40	< 1	< 1	< 0.5	< 0.2	0.3	< 0.1	< 0.8	0.1	< 0.8	100	< 20	0.6	< 1	< 1	< 0.1	< 0.1	1.4	2.4	0.3	1.0	0.2
HL-2503	5	< 10	< 1	< 1	< 0.5	< 0.2	0.4	< 0.1	< 0.8	0.1	< 0.8	300	< 20	0.9	2	< 1	< 0.1	< 0.1	1.9	3.4	0.4	1.4	0.3
HL-2504	4	< 10	1	< 1	< 0.5	< 0.2	< 0.2	< 0.1	< 0.8	< 0.1	1.2	100	< 20	0.7	2	< 1	< 0.1	< 0.1	1.7	3.0	0.4	1.6	0.3
HL-2508	5	10	1	< 1	< 0.5	< 0.2	0.6	< 0.1	< 0.8	0.1	< 0.8	100	< 20	1.1	3	< 1	0.1	< 0.1	1.8	3.2	0.4	1.5	0.3
HL-6003	13	30	1	< 1	< 0.5	< 0.2	0.3	< 0.1	< 0.8	0.1	< 0.8	< 100	< 20	1.9	3	< 1	0.1	< 0.1	4.4	9.9	1.0	3.6	0.7
HL-6004	6	< 10	< 1	< 1	< 0.5	< 0.2	0.4	< 0.1	< 0.8	0.1	< 0.8	100	< 20	0.9	1	< 1	< 0.1	< 0.1	2.7	5.4	0.6	2.2	0.4
HL-6106	5	40	2	2	< 0.5	< 0.2	1.0	< 0.1	< 0.8	0.3	< 0.8	700	< 20	0.6	7	2	0.2	0.1	1.0	1.9	0.3	0.6	0.2
HL-6107	5	60	1	< 1	< 0.5	< 0.2	0.9	< 0.1	< 0.8	0.2	< 0.8	300	< 20	5.0	7	< 1	0.2	< 0.1	10.4	21.6	2.8	10.8	2.0
HL-2404	6	20	2	2	< 0.5	< 0.2	1.8	< 0.1	< 0.8	0.2	< 0.8	300	< 20	1.6	4	< 1	0.2	< 0.1	3.0	5.8	0.7	3.1	0.6
HL-2405	8	< 10	1	< 1	< 0.5	< 0.2	0.9	< 0.1	< 0.8	0.2	< 0.8	< 100	< 20	1.3	2	< 1	< 0.1	< 0.1	2.1	4.6	0.6	2.2	0.4
HL-2406	7	60	2	1	< 0.5	< 0.2	1.0	< 0.1	< 0.8	0.1	< 0.8	300	< 20	0.8	3	< 1	0.1	< 0.1	1.2	2.3	0.3	1.2	0.2
HL-2407	5	40	2	2	< 0.5	< 0.2	0.9	< 0.1	< 0.8	0.2	< 0.8	400	< 20	< 0.5	4	1	0.1	< 0.1	0.7	1.4	0.3	0.8	0.1
HL-2527	5	30	1	< 1	< 0.5	< 0.2	0.5	< 0.1	< 0.8	0.1	< 0.8	200	< 20	0.7	1	< 1	< 0.1	< 0.1	1.6	2.9	0.3	1.2	0.2
HL-2529	6	< 10	1	< 1	< 0.5	< 0.2	0.6	< 0.1	< 0.8	0.2	< 0.8	< 100	< 20	1.7	2	< 1	< 0.1	< 0.1	4.2	7.5	0.9	3.3	0.5
TILL-1 Meas	146	100	24									1000	< 20	17.7	15	3	0.4	0.2	17.4	50.1		21.4	4.6
TILL-1 Cert	47000	98000	22000									5990000	65000	38000	502000	10000	13000	700.0	28000	71000		26000	5900.0
TILL-1 Meas	122	70	21									1000	< 20	15.1	14	3	0.4	0.2	16.4	48.8		19.0	4.0
TILL-1 Cert	47000	98000	22000									5990000	65000	38000	502000	10000	13000	700.0	28000	71000		26000	5900.0
TILL-2 Meas	378	260	74									6000	100	50.5	147	24	4.2	1.8	57.6	170		59.5	12.8
TILL-2 Cert	150000	130000	31000									5300000	74000	40000	390000	20000	11000	1900.0	44000	98000		36000	7400.0
TILL-2 Meas	395	280	72									5900	100	52.1	149	24	4.2	1.8	57.3	160		57.9	12.4
TILL-2 Cert	150000	130000	31000									5300000	74000	40000	390000	20000	11000	1900.0	44000	98000		36000	7400.0
HL-2402 Orig	3	< 10	< 1	< 1	< 0.5	< 0.2	< 0.2	< 0.1	< 0.8	< 0.1	< 0.8	< 100	< 20	< 0.5	2	< 1	< 0.1	< 0.1	1.1	2.0	0.3	1.0	0.2
HL-2402 Dup	3	< 10	< 1	< 1	< 0.5	< 0.2	< 0.2	< 0.1	< 0.8	< 0.1	< 0.8	< 100	< 20	< 0.5	2	< 1	< 0.1	< 0.1	0.9	1.8	0.2	0.9	0.2
HL-2404 Orig	6	20	2	2	< 0.5	< 0.2	1.8	< 0.1	< 0.8	0.2	< 0.8	300	< 20	1.6	4	< 1	0.2	< 0.1	3.0	5.8	0.7	3.1	0.6
HL-2404 Dup	6	20	2	2	< 0.5	< 0.2	1.7	< 0.1	< 0.8	0.2	< 0.8	300	< 20	1.3	4	< 1	0.1	< 0.1	2.3	4.3	0.5	1.8	0.3
Method Blank	< 3	< 10	< 1	< 1	< 0.5	< 0.2	< 0.2	< 0.1	< 0.8	< 0.1	< 0.8	< 100	< 20	< 0.5	< 1	< 1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1

Results

	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS
SAMPLE	Eu	Gd	Tb	Dy	Ho	Er	Tm	Yb	Lu	Li	Be	Sc	Mn	Rb	Sr	Cs	Ba	Ru	Pd	Os	Pt
DESCRIPTION	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
GF-001	0.1	0.4	< 0.1	0.3	< 0.1	0.2	< 0.1	< 0.1	< 0.1	7	< 2	< 100	231	8	38	0.3	68	< 1	< 1	< 1	< 1
GF-002	< 0.1	0.3	< 0.1	0.3	< 0.1	0.1	< 0.1	< 0.1	< 0.1	2	< 2	< 100	120	19	40	0.7	126	< 1	< 1	< 1	< 1

	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS
SAMPLE	Eu	Gd	Tb	Dy	Ho	Er	Tm	Yb	Lu	Li	Be	Sc	Mn	Rb	Sr	Cs	Ba	Ru	Pd	Os	Pt
DESCRIPTION	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
GF-013	0.1	0.3	< 0.1	0.3	< 0.1	0.1	< 0.1	0.1	< 0.1	3	< 2	< 100	198	26	68	0.6	238	< 1	< 1	< 1	< 1
GF-106	< 0.1	0.1	< 0.1	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	2	< 2	< 100	41	15	47	0.2	70	< 1	< 1	< 1	< 1
GF-107	0.1	0.4	< 0.1	0.3	< 0.1	0.2	< 0.1	0.2	< 0.1	8	< 2	< 100	328	32	64	0.3	202	< 1	< 1	< 1	< 1
GF-108	0.1	0.4	< 0.1	0.3	< 0.1	0.1	< 0.1	0.1	< 0.1	4	< 2	< 100	63	31	50	0.4	132	< 1	< 1	< 1	< 1
GF-110	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	3	< 2	< 100	125	17	54	0.2	129	< 1	< 1	< 1	< 1
HL-1327	< 0.1	0.1	< 0.1	0.1	< 0.1	< 0.1	< 0.1	0.1	< 0.1	7	< 2	< 100	206	70	21	0.3	51	< 1	< 1	< 1	< 1
HL-1352	0.1	0.4	< 0.1	0.3	< 0.1	0.2	< 0.1	0.1	< 0.1	6	< 2	< 100	45	26	63	0.3	80	< 1	< 1	< 1	< 1
HL-2402	< 0.1	0.2	< 0.1	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	2	< 2	< 100	13	12	71	0.3	70	< 1	< 1	< 1	< 1
HL-2450	0.5	2.0	0.3	1.6	0.3	0.9	0.1	0.8	0.1	5	< 2	< 100	513	53	128	0.9	354	< 1	< 1	< 1	< 1
HL-2451	< 0.1	0.3	< 0.1	0.2	< 0.1	0.1	< 0.1	< 0.1	< 0.1	2	< 2	< 100	163	14	76	1.2	71	< 1	< 1	< 1	< 1
HL-2502	< 0.1	0.2	< 0.1	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	7	< 2	< 100	40	34	35	1.3	155	< 1	< 1	< 1	< 1
HL-2503	< 0.1	0.2	< 0.1	0.2	< 0.1	0.1	< 0.1	0.1	< 0.1	9	< 2	< 100	62	32	32	1.1	181	< 1	< 1	< 1	< 1
HL-2504	< 0.1	0.2	< 0.1	0.2	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	3	< 2	< 100	14	12	92	0.4	144	< 1	< 1	< 1	< 1
HL-2508	< 0.1	0.3	< 0.1	0.2	< 0.1	0.2	< 0.1	0.1	< 0.1	7	< 2	< 100	81	47	57	0.9	201	< 1	< 1	< 1	< 1
HL-6003	0.2	0.5	< 0.1	0.4	< 0.1	0.2	< 0.1	0.1	< 0.1	8	< 2	< 100	63	34	53	2.6	704	< 1	< 1	< 1	< 1
HL-6004	< 0.1	0.3	< 0.1	0.2	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	11	< 2	< 100	57	19	54	1.3	132	< 1	< 1	< 1	< 1
HL-6106	< 0.1	0.1	< 0.1	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	7	< 2	< 100	143	26	23	0.3	97	< 1	< 1	< 1	< 1
HL-6107	0.4	1.4	0.2	1.0	0.2	0.6	< 0.1	0.5	< 0.1	26	< 2	< 100	1070	32	51	0.3	336	< 1	< 1	< 1	< 1
HL-2404	0.1	0.4	< 0.1	0.4	< 0.1	0.2	< 0.1	0.2	< 0.1	9	< 2	< 100	118	33	53	0.5	126	< 1	< 1	< 1	< 1
HL-2405	0.1	0.3	< 0.1	0.3	< 0.1	0.1	< 0.1	< 0.1	< 0.1	2	< 2	< 100	70	44	96	1.8	300	< 1	< 1	< 1	< 1
HL-2406	< 0.1	0.2	< 0.1	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	23	< 2	< 100	43	24	23	0.6	83	< 1	< 1	< 1	< 1
HL-2407	< 0.1	0.1	< 0.1	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	6	< 2	< 100	49	25	29	0.7	65	< 1	< 1	< 1	< 1
HL-2527	< 0.1	0.2	< 0.1	0.2	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	7	< 2	< 100	66	19	50	0.6	111	< 1	< 1	< 1	< 1
HL-2529	0.1	0.4	< 0.1	0.3	< 0.1	0.2	< 0.1	0.2	< 0.1	3	< 2	< 100	120	32	66	2.2	173	< 1	< 1	< 1	< 1
TILL-1 Meas	1.0		0.6			2.0		1.9	0.3	7	< 2	< 100	18500	32	230	0.5	458				
TILL-1 Cert	1300.0		1100.0			3600.0		3900.0	600.0	15000	2400.0	13000	1420000	44000	291000	1000.0	702000				
TILL-1 Meas	0.9		0.5			1.5		1.5	0.2	6	< 2	< 100	15500	27	188	0.6	403				
TILL-1 Cert	1300.0		1100.0			3600.0		3900.0	600.0	15000	2400.0	13000	1420000	44000	291000	1000.0	702000				
TILL-2 Meas	2.8		1.9			5.5		5.4	0.8	79	7	< 100	5330	311	494	23.5	1260				
TILL-2 Cert	1000.0		1200.0			3700.0		3700.0	600.0	47000	4000.0	12000	780000	143000	144000	12000	540000				
TILL-2 Meas	2.7		1.8			5.7		5.2	0.8	86	7	< 100	5520	335	509	26.1	1260				
TILL-2 Cert	1000.0		1200.0			3700.0		3700.0	600.0	47000	4000.0	12000	780000	143000	144000	12000	540000				
HL-2402 Orig	< 0.1	0.2	< 0.1	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	2	< 2	< 100	13	12	71	0.3	70	< 1	< 1	< 1	< 1
HL-2402 Dup	< 0.1	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 2	< 2	< 100	15	12	75	0.4	76	< 1	< 1	< 1	< 1
HL-2404 Orig	0.1	0.4	< 0.1	0.4	< 0.1	0.2	< 0.1	0.2	< 0.1	9	< 2	< 100	118	33	53	0.5	126	< 1	< 1	< 1	< 1
HL-2404 Dup	0.1	0.3	< 0.1	0.3	< 0.1	0.1	< 0.1	0.1	< 0.1	9	< 2	< 100	114	32	51	0.5	122	< 1	< 1	< 1	< 1
Method Blank	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 2	< 2	< 100	< 1	< 1	< 1	< 0.1	< 1	< 1	< 1	< 1	< 1

Date Submitted: 08-Sep-14
Invoice No.: A14-06343 (i)
Invoice Date: 01-Oct-14
Your Reference:

GOLDCORP Canada Ltd--Musselwhite Mine
Musselwhite Mine
P.O BOX 7500
Thunder Bay ON P7B 6S8
Canada

ATTN: John Biczok (PO#WA9R00280-W0001)

CERTIFICATE OF ANALYSIS

132 Humus samples were submitted for analysis.

The following analytical package was requested:

Code 2A-15g Humus INAA(INAAGEO)
Code 4B-INAA(4B) INAA(INAAGEO)
Code 4LITHO (1-10) Major Elements Fusion ICP(WRA)/Trace Elements Fusion ICP/MS(WRA4B2)
Code 7-ESE-Enzyme Leach Enzyme Leach ICP/MS(ENZYME)

REPORT **A14-06343 (i)**

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 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 material submitted for analysis.

Notes:

Values which exceed the upper limit should be assayed for most accurate values.
We recommend using option 4B1 for accurate levels of the base metals Cu, Pb, Zn, Ni and Ag. Option 4B-INAA for As, Sb, high W >100ppm, Cr >1000ppm and Sn >50ppm by Code 5D. Values for these elements provided by Fusion ICP/MS, are order of magnitude only and are provided for general information. Mineralized samples should have the Quant option selected or request assays for values which exceed the range of option 4B1. Total includes all elements in % oxide to the left of total.

CERTIFIED BY:

Emmanuel Eseme , Ph.D.
Quality Control

SCC Accredited LAB
LAB Accrédité CCN

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Results

	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA
SAMPLE	As	Au	Br	Cr	Ir	Mass	Sb	Sc	Se	Au	Ag	As	Ba	Br	Ca	Co	Cr	Cs	Fe	Hf	Hg	Ir	Mo
DESCRIPTION	ppm	ppb	ppm	ppm	ppb	g	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm
HL-003										< 1	< 2	2	< 100	15	4.8	2	< 1	< 0.5	0.17	< 0.5	< 0.5	< 5	6.9
HL-004										< 1	< 2	2	100	23	4.8	3	3	< 0.5	0.13	< 0.5	< 0.5	< 5	4.9
HL-005										< 1	< 2	1	100	29	4.6	3	< 1	< 0.5	0.20	< 0.5	< 0.5	< 5	3.2
HL-006										< 1	< 2	< 1	100	15	4.1	2	< 1	< 0.5	0.08	< 0.5	< 0.5	< 5	3.6
HL-007										< 1	< 2	< 1	100	19	5.1	< 1	< 1	< 0.5	0.15	< 0.5	< 0.5	< 5	3.9
HL-008										< 1	< 2	< 1	100	24	6.2	4	4	< 0.5	0.22	< 0.5	< 0.5	< 5	12.1
HL-009										< 1	< 2	6	100	12	4.9	4	5	< 0.5	1.69	< 0.5	< 0.5	< 5	2.4
HL-010										< 1	< 2	2	200	15	4.1	4	7	< 0.5	0.51	< 0.5	< 0.5	< 5	3.2
HL-011										< 1	< 2	6	200	18	4.1	6	8	< 0.5	0.97	< 0.5	< 0.5	< 5	1.7
HL-034										< 1	< 2	< 1	200	48	5.0	13	19	< 0.5	1.44	< 0.5	< 0.5	< 5	10.3
HL-035										< 1	< 2	3	200	30	4.5	9	7	< 0.5	1.02	< 0.5	< 0.5	< 5	6.3
HL-036										< 1	< 2	5	300	25	4.9	24	6	1.9	1.36	< 0.5	< 0.5	< 5	4.4
HL-037										< 1	< 2	7	200	63	3.0	10	29	< 0.5	1.04	< 0.5	< 0.5	< 5	5.4
HL-038										< 1	< 2	5	100	45	4.8	8	21	< 0.5	0.94	< 0.5	< 0.5	< 5	< 0.5
HL-041										< 1	< 2	3	600	53	2.4	27	46	2.0	1.23	< 0.5	< 0.5	< 5	11.7
HL-042										< 1	< 2	7	400	99	5.4	48	68	< 0.5	1.83	< 0.5	< 0.5	< 5	10.2
HL-044										< 1	< 2	4	200	34	3.6	8	11	1.6	0.86	< 0.5	< 0.5	< 5	0.9
HL-045										< 1	< 2	5	< 100	35	3.3	7	16	< 0.5	1.69	< 0.5	< 0.5	< 5	5.0
HL-046										< 1	< 2	2	200	21	2.4	8	11	< 0.5	0.66	1.3	< 0.5	< 5	1.4
HL-052										< 1	< 2	4	200	67	7.6	17	9	< 0.5	0.45	< 0.5	< 0.5	< 5	16.9
HL-053										< 1	< 2	2	< 100	43	5.7	8	7	< 0.5	0.83	< 0.5	< 0.5	< 5	10.2
HL-054										< 1	< 2	3	200	19	4.1	6	13	< 0.5	0.69	< 0.5	< 0.5	< 5	< 0.5
HL-055										< 1	< 2	3	200	14	3.1	< 1	8	< 0.5	0.75	< 0.5	< 0.5	< 5	3.6
HL-056										< 1	< 2	12	< 100	37	3.4	6	5	< 0.5	0.90	< 0.5	< 0.5	< 5	0.6
HL-057										< 1	< 2	40	100	23	3.6	14	6	2.0	1.78	< 0.5	< 0.5	< 5	< 0.5
HL-059										< 1	< 2	3	< 100	14	< 0.5	11	38	1.7	1.43	0.8	< 0.5	< 5	< 0.5
HL-060										< 1	< 2	9	< 100	21	3.5	19	10	< 0.5	1.45	0.6	< 0.5	< 5	7.9
HL-061										< 1	< 2	4	< 100	29	4.4	6	4	< 0.5	0.87	< 0.5	< 0.5	< 5	0.7
HL-063										< 1	< 2	1	< 100	15	3.8	3	7	0.9	0.37	0.9	< 0.5	< 5	< 0.5
HL-064										1	< 2	2	< 100	18	3.6	3	6	0.5	0.51	< 0.5	< 0.5	< 5	< 0.5
HL-066										< 1	< 2	2	< 100	19	3.4	17	22	< 0.5	0.84	< 0.5	< 0.5	< 5	< 0.5
HL-757										< 1	< 2	3	200	13	2.2	3	13	0.8	0.63	1.6	< 0.5	< 5	3.5
HL-758										< 1	< 2	1	< 100	28	6.0	< 1	2	< 0.5	0.32	< 0.5	< 0.5	< 5	2.0
HL-759										< 1	< 2	3	200	27	6.2	5	4	< 0.5	0.76	< 0.5	< 0.5	< 5	< 0.5
HL-760										4	< 2	1	< 100	26	5.8	2	3	< 0.5	0.17	< 0.5	< 0.5	< 5	< 0.5
HL-761										< 1	< 2	2	< 100	14	4.4	2	4	< 0.5	0.19	< 0.5	< 0.5	< 5	1.8
HL-762										< 1	< 2	3	< 100	19	5.8	3	4	< 0.5	0.22	< 0.5	< 0.5	< 5	1.9
HL-763										< 1	< 2	3	< 100	25	5.1	3	5	< 0.5	0.18	< 0.5	< 0.5	< 5	1.8
HL-764										< 1	< 2	1	< 100	13	2.7	< 1	3	< 0.5	0.25	< 0.5	< 0.5	< 5	3.0
HL-766										< 1	< 2	< 1	100	27	7.5	4	8	< 0.5	0.41	< 0.5	< 0.5	< 5	1.0
HL-772										< 1	< 2	3	300	13	< 0.5	3	14	< 0.5	0.55	2.4	< 0.5	< 5	< 0.5
HL-778										< 1	< 2	< 1	200	22	3.6	9	12	1.1	1.34	< 0.5	< 0.5	< 5	4.3
HL-779										< 1	< 2	3	200	36	3.4	7	10	< 0.5	0.69	< 0.5	< 0.5	< 5	3.9
HL-780										< 1	< 2	6	100	24	3.2	16	5	< 0.5	1.77	< 0.5	< 0.5	< 5	1.4
HL-781										< 1	< 2	3	100	20	3.3	3	7	< 0.5	0.77	< 0.5	< 0.5	< 5	4.3
HL-782										< 1	< 2	4	100	26	4.1	3	4	< 0.5	1.29	< 0.5	< 0.5	< 5	3.8
HL-783										< 1	< 2	1	100	22	2.4	2	5	0.7	0.38	0.8	< 0.5	< 5	7.4
HL-784										< 1	< 2	1	< 100	30	3.7	3	5	< 0.5	0.36	< 0.5	< 0.5	< 5	4.6
HL-785										< 1	< 2	1	< 100	52	2.9	4	4	< 0.5	0.28	< 0.5	< 0.5	< 5	1.5
HL-786										< 1	< 2	4	100	30	4.4	5	7	< 0.5	0.50	< 0.5	< 0.5	< 5	2.3

	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA
SAMPLE	As	Au	Br	Cr	Ir	Mass	Sb	Sc	Se	Au	Ag	As	Ba	Br	Ca	Co	Cr	Cs	Fe	Hf	Hg	Ir	Mo
DESCRIPTION	ppm	ppb	ppm	ppm	ppb	g	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm
HL-787										< 1	< 2	6	< 100	21	3.5	6	8	0.6	1.15	< 0.5	< 0.5	< 5	< 0.5
HL-788										< 1	< 2	3	< 100	35	1.7	7	11	< 0.5	0.37	< 0.5	< 0.5	< 5	1.2
HL-789										< 1	< 2	3	300	64	5.8	20	16	< 0.5	0.68	< 0.5	< 0.5	< 5	9.9
HL-790										< 1	< 2	2	200	46	5.5	10	22	< 0.5	0.62	< 0.5	< 0.5	< 5	9.7
HL-791										< 1	< 2	4	100	17	3.1	16	2	< 0.5	0.51	< 0.5	< 0.5	< 5	3.0
HL-792										< 1	< 2	3	< 100	14	2.9	6	4	< 0.5	0.54	< 0.5	< 0.5	< 5	5.9
HL-794										< 1	< 2	5	100	35	5.5	5	5	< 0.5	0.46	< 0.5	< 0.5	< 5	2.0
HL-830										< 1	< 2	2	< 100	31	3.6	5	5	< 0.5	0.47	< 0.5	< 0.5	< 5	< 0.5
HL-831										< 1	< 2	2	100	30	5.8	3	4	< 0.5	0.39	< 0.5	< 0.5	< 5	1.1
HL-832										< 1	< 2	7	400	49	6.9	21	4	< 0.5	0.94	< 0.5	< 0.5	< 5	2.2
HL-833										< 1	< 2	4	200	61	6.2	7	6	< 0.5	0.32	0.5	< 0.5	< 5	< 0.5
HL-834										< 1	< 2	3	100	31	6.2	82	192	< 0.5	1.13	< 0.5	< 0.5	< 5	11.0
HL-835										< 1	< 2	2	200	55	8.8	7	14	< 0.5	0.37	< 0.5	< 0.5	< 5	16.5
HL-836										< 1	< 2	2	200	55	9.0	7	18	< 0.5	0.52	< 0.5	< 0.5	< 5	11.0
HL-837										< 1	< 2	2	300	21	5.9	10	57	2.8	1.53	2.0	< 0.5	< 5	< 0.5
HL-842										< 1	< 2	5	300	67	5.8	14	21	1.3	1.32	< 0.5	< 0.5	< 5	1.8
HL-843										< 1	< 2	259	1100	54	6.4	50	54	< 0.5	10.5	< 0.5	< 0.5	< 5	88.5
HL-844										< 1	< 2	74	800	44	5.4	14	25	< 0.5	3.64	1.4	< 0.5	< 5	30.0
HL-845										< 1	< 2	133	500	26	5.3	34	26	2.6	5.54	1.3	< 0.5	< 5	17.1
HL-846										< 1	< 2	7	200	34	5.2	8	10	2.3	0.91	0.6	< 0.5	< 5	4.2
HL-847										< 1	< 2	7	200	36	5.8	7	16	2.9	1.49	1.3	< 0.5	< 5	12.8
HL-848										< 1	< 2	11	100	37	2.6	5	19	< 0.5	2.01	1.0	< 0.5	< 5	3.8
HL-860										< 1	< 2	5	< 100	37	6.0	5	5	< 0.5	0.80	< 0.5	< 0.5	< 5	< 0.5
HL-861										< 1	< 2	1	100	19	4.8	< 1	2	< 0.5	0.21	< 0.5	< 0.5	< 5	2.7
HL-862										< 1	< 2	1	200	28	6.5	5	11	1.0	0.41	< 0.5	< 0.5	< 5	2.0
HL-863										< 1	< 2	2	< 100	29	5.1	3	7	< 0.5	0.69	0.7	< 0.5	< 5	< 0.5
HL-864										< 1	< 2	3	200	33	3.6	3	10	1.8	0.78	0.6	< 0.5	< 5	< 0.5
HL-865										< 1	< 2	1	< 100	28	3.9	3	8	< 0.5	0.27	< 0.5	< 0.5	< 5	2.3
HL-866										< 1	< 2	3	100	37	3.8	4	10	0.7	0.58	1.0	< 0.5	< 5	4.6
HL-867										< 1	< 2	8	200	33	4.7	8	19	2.0	1.17	1.0	< 0.5	< 5	0.8
HL-868										< 1	< 2	13	200	24	4.5	8	7	0.8	1.15	< 0.5	< 0.5	< 5	6.7
HL-869										< 1	< 2	36	300	39	4.1	23	23	2.2	3.81	0.9	< 0.5	< 5	29.2
HL-870										< 1	< 2	3	300	19	5.6	5	13	< 0.5	1.72	< 0.5	0.6	< 5	9.6
HL-872										< 1	< 2	4	600	49	6.7	22	31	< 0.5	1.16	< 0.5	< 0.5	< 5	2.3
HL-875										< 1	< 2	18	400	56	5.4	35	92	4.0	4.88	< 0.5	< 0.5	< 5	40.6
HL-878										< 1	< 2	1	300	27	1.5	< 1	15	< 0.5	0.85	1.9	< 0.5	< 5	7.9
HL-879										< 1	< 2	6	400	30	6.5	20	31	3.3	1.77	< 0.5	< 0.5	< 5	17.7
HL-880										< 1	< 2	14	300	20	3.2	14	44	5.7	2.60	2.8	< 0.5	< 5	19.5
HL-881										< 1	< 2	4	300	25	4.8	12	11	0.6	0.58	< 0.5	< 0.5	< 5	3.5
HL-882										2	< 2	2	< 100	18	5.3	2	4	< 0.5	0.77	< 0.5	< 0.5	< 5	1.0
HL-883										< 1	< 2	1	100	23	5.6	3	4	0.7	0.21	< 0.5	< 0.5	< 5	< 0.5
HL-884										< 1	< 2	2	< 100	24	5.3	3	4	< 0.5	0.27	< 0.5	< 0.5	< 5	< 0.5
HL-885										< 1	< 2	3	300	25	4.5	8	5	1.6	0.51	< 0.5	< 0.5	< 5	1.9
HL-886										< 1	< 2	1	< 100	24	4.2	< 1	2	< 0.5	0.12	< 0.5	< 0.5	< 5	< 0.5
HL-887										< 1	< 2	1	< 100	25	3.4	6	3	< 0.5	0.16	< 0.5	< 0.5	< 5	< 0.5
HL-039																							
HL-040																							
HL-042																							
HL-047																							
HL-048																							
HL-050																							

	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA
SAMPLE	As	Au	Br	Cr	Ir	Mass	Sb	Sc	Se	Au	Ag	As	Ba	Br	Ca	Co	Cr	Cs	Fe	Hf	Hg	Ir	Mo
DESCRIPTION	ppm	ppb	ppm	ppm	ppb	g	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm
HL-051																							
HL-752																							
HL-753																							
HL-755																							
HL-756																							
HL-765																							
HL-767																							
HL-768																							
HL-769																							
HL-771																							
HL-773																							
HL-774																							
HL-775																							
HL-776																							
HL-777																							
HL-838																							
HL-839																							
HL-840																							
HL-873																							
HL-876																							
HL-877																							
E494912	0.8	< 2	< 0.5	675	< 5	30.0	2.2	36.8	< 3														
E494915	2.1	< 2	< 0.5	108	< 5	32.7	9.0	38.4	< 3														
E494916	< 0.5	< 2	< 0.5	116	< 5	33.2	2.2	38.5	< 3														
E494917	< 0.5	< 2	< 0.5	299	< 5	28.4	0.3	13.1	< 3														
E494920	5.3	< 2	< 0.5	529	< 5	33.4	0.9	32.3	< 3														
E494921	31.5	< 2	< 0.5	1170	< 5	34.1	4.8	30.7	< 3														
E494922	4.1	< 2	< 0.5	722	< 5	32.6	1.3	36.2	< 3														
E494923	17.4	< 2	< 0.5	1270	< 5	31.9	1.0	30.6	< 3														
E494924	20.8	< 2	< 0.5	1410	< 5	34.2	2.1	33.8	< 3														
E494925	30.7	< 2	< 0.5	1490	< 5	28.9	2.9	31.2	< 3														
NIST 694 Meas																							
NIST 694 Cert																							
DNC-1 Meas																							
DNC-1 Cert																							
GBW 07113 Meas																							
GBW 07113 Cert																							
LKSD-3 Meas																							
LKSD-3 Cert																							
TILL-1 Meas																							
TILL-1 Cert																							
TILL-1 Meas																							
TILL-1 Cert																							
TILL-2 Meas																							
TILL-2 Cert																							
TILL-2 Meas																							
TILL-2 Cert																							
W-2a Meas																							
W-2a Cert																							
DTS-2b Meas																							
DTS-2b Cert																							

	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA
SAMPLE	As	Au	Br	Cr	Ir	Mass	Sb	Sc	Se	Au	Ag	As	Ba	Br	Ca	Co	Cr	Cs	Fe	Hf	Hg	Ir	Mo
DESCRIPTION	ppm	ppb	ppm	ppm	ppb	g	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm
SY-4 Meas																							
SY-4 Cert																							
CTA-AC-1 Meas																							
CTA-AC-1 Cert																							
BIR-1a Meas																							
BIR-1a Cert																							
NCS DC86312 Meas																							
NCS DC86312 Cert																							
NCS DC70009 (GBW07241) Meas																							
NCS DC70009 (GBW07241) Cert																							
OREAS 100a (Fusion) Meas																							
OREAS 100a (Fusion) Cert																							
OREAS 101a (Fusion) Meas																							
OREAS 101a (Fusion) Cert																							
JR-1 Meas																							
JR-1 Cert																							
L-STD-4 Meas										21				5	3.8	2			0.09				
L-STD-4 Cert										20.0				5.60	3.67	0.600			0.110				
L-STD-4 Meas										20				5	3.3	< 1			0.09				
L-STD-4 Cert										20.0				5.60	3.67	0.600			0.110				
DMMAS 117 Meas	1900	1710		83			6.9																
DMMAS 117 Cert	1745	1718		76			6.7																
HL-755 Orig																							
HL-755 Dup																							
HL-777 Orig																							
HL-777 Dup																							
E494925 Orig																							
E494925 Dup																							
Method Blank																							
Method Blank	< 0.5	< 2	< 0.5	< 5			< 0.2		< 3													< 5	
Method Blank																							

Results

	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	FUS-ICP	FUS-ICP
SAMPLE	Na	Ni	Rb	Sb	Sc	Se	Sr	Ta	Th	U	W	Zn	La	Ce	Nd	Sm	Eu	Tb	Yb	Lu	Mass	SiO2	Al2O3
DESCRIPTION	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	g	%	%
HL-003	300	< 10	< 20	0.2	0.4	< 2	< 100	< 0.5	0.6	4.3	< 1	< 20	4.9	7	6	0.5	< 0.2	< 0.2	0.1	< 0.1	15.2		
HL-004	400	< 10	< 20	0.2	0.6	< 2	< 100	< 0.5	0.5	1.9	< 1	< 20	2.8	4	< 3	0.3	< 0.2	< 0.2	< 0.1	< 0.1	15.3		
HL-005	500	< 10	< 20	0.2	0.8	< 2	< 100	< 0.5	1.1	2.5	< 1	< 20	7.6	10	5	0.7	< 0.2	< 0.2	0.2	< 0.1	15.5		
HL-006	300	< 10	< 20	< 0.1	0.4	< 2	< 100	< 0.5	0.7	0.7	< 1	< 20	2.4	3	< 3	0.2	< 0.2	< 0.2	< 0.1	< 0.1	15.5		
HL-007	300	< 10	< 20	0.1	0.7	< 2	< 100	< 0.5	1.1	1.2	< 1	< 20	9.4	12	9	0.9	< 0.2	< 0.2	0.2	< 0.1	15.5		
HL-008	400	< 10	< 20	0.2	0.9	< 2	< 100	< 0.5	1.4	5.1	< 1	< 20	7.6	9	7	0.8	< 0.2	< 0.2	0.2	< 0.1	15.4		
HL-009	400	< 10	< 20	< 0.1	0.8	< 2	< 100	< 0.5	1.6	1.8	< 1	< 20	9.7	14	6	0.9	< 0.2	< 0.2	0.2	< 0.1	15.3		
HL-010	1100	< 10	< 20	0.3	1.5	< 2	< 100	< 0.5	2.3	2.4	< 1	< 20	15.0	18	8	1.5	0.3	< 0.2	0.2	< 0.1	15.3		
HL-011	700	< 10	< 20	0.2	1.4	< 2	< 100	< 0.5	1.6	2.4	< 1	< 20	8.9	11	4	1.0	< 0.2	< 0.2	0.2	< 0.1	15.5		
HL-034	6400	< 10	< 20	< 0.1	4.9	< 2	< 100	< 0.5	7.6	3.3	< 1	< 20	57.2	82	19	4.4	0.8	< 0.2	0.5	< 0.1	15.8		

	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	FUS-ICP	FUS-ICP
SAMPLE	Na	Ni	Rb	Sb	Sc	Se	Sr	Ta	Th	U	W	Zn	La	Ce	Nd	Sm	Eu	Tb	Yb	Lu	Mass	SiO2	Al2O3
DESCRIPTION	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	g	%	%
HL-035	600	< 10	< 20	0.3	1.2	< 2	< 100	< 0.5	1.7	0.7	< 1	< 20	6.0	9	7	0.7	< 0.2	< 0.2	0.2	< 0.1	15.7		
HL-036	600	< 10	< 20	0.3	1.2	< 2	< 100	< 0.5	1.4	0.4	< 1	< 20	4.1	7	4	0.6	< 0.2	< 0.2	0.3	< 0.1	15.8		
HL-037	600	< 10	< 20	0.2	3.2	< 2	< 100	< 0.5	6.9	2.5	< 1	< 20	39.9	71	40	3.9	0.7	< 0.2	0.4	0.1	15.9		
HL-038	3700	< 10	< 20	< 0.1	6.6	< 2	< 100	< 0.5	11.0	4.1	< 1	< 20	70.2	92	38	7.0	1.0	1.0	0.7	0.1	15.4		
HL-041	1100	< 10	< 20	0.4	9.6	< 2	< 100	< 0.5	5.9	6.1	< 1	< 20	65.7	72	65	10.2	1.9	1.4	1.9	0.3	15.8		
HL-042	7200	< 10	< 20	0.2	10.6	< 2	< 100	< 0.5	14.4	5.4	< 1	< 20	59.9	99	58	7.5	1.3	1.1	1.0	0.2	15.5		
HL-044	500	< 10	< 20	0.1	1.4	< 2	< 100	< 0.5	2.4	0.6	< 1	< 20	9.8	13	7	1.1	< 0.2	< 0.2	0.2	< 0.1	15.4		
HL-045	6500	< 10	< 20	0.5	7.6	< 2	< 100	< 0.5	18.9	3.7	< 1	< 20	106	201	78	10.1	1.7	< 0.2	0.8	0.2	15.2		
HL-046	3400	< 10	< 20	0.2	4.0	< 2	< 100	< 0.5	5.3	2.0	< 1	40	26.4	43	10	2.7	0.5	< 0.2	0.8	< 0.1	15.6		
HL-052	1000	< 10	< 20	0.7	2.2	< 2	< 100	< 0.5	2.5	6.6	< 1	< 20	17.9	23	13	2.0	0.3	< 0.2	0.4	0.1	15.6		
HL-053	600	< 10	< 20	0.3	2.4	< 2	< 100	< 0.5	4.4	6.8	< 1	< 20	36.0	54	21	3.2	0.4	0.2	0.4	0.1	15.3		
HL-054	700	< 10	< 20	0.3	2.9	< 2	< 100	< 0.5	3.9	2.6	< 1	< 20	30.1	32	15	3.0	0.5	< 0.2	0.5	< 0.1	15.8		
HL-055	700	< 10	< 20	0.1	2.1	< 2	< 100	< 0.5	3.5	1.8	< 1	< 20	14.4	17	13	1.7	0.2	0.4	0.5	< 0.1	15.6		
HL-056	500	< 10	< 20	0.1	1.0	< 2	< 100	< 0.5	1.3	1.3	< 1	< 20	5.8	6	5	0.6	< 0.2	< 0.2	0.1	< 0.1	15.7		
HL-057	1400	< 10	< 20	0.3	1.1	< 2	< 100	< 0.5	1.4	0.9	< 1	30	8.3	13	6	0.9	< 0.2	< 0.2	0.2	< 0.1	15.7		
HL-059	4900	< 10	30	0.2	7.9	< 2	< 100	< 0.5	2.2	0.5	< 1	< 20	10.6	16	6	1.6	< 0.2	< 0.2	0.8	0.1	15.6		
HL-060	2300	< 10	< 20	0.2	1.7	< 2	< 100	< 0.5	2.4	1.5	< 1	< 20	9.2	21	7	0.9	< 0.2	< 0.2	0.3	< 0.1	15.9		
HL-061	500	< 10	< 20	0.2	0.8	< 2	< 100	< 0.5	0.9	0.4	< 1	< 20	3.0	5	< 3	0.5	< 0.2	< 0.2	0.2	< 0.1	15.9		
HL-063	1100	< 10	< 20	0.1	1.7	< 2	< 100	< 0.5	1.2	0.9	< 1	< 20	4.7	8	5	0.6	< 0.2	< 0.2	0.3	< 0.1	15.5		
HL-064	700	< 10	< 20	0.1	1.1	< 2	< 100	< 0.5	1.2	0.8	< 1	< 20	3.2	7	5	0.5	< 0.2	< 0.2	0.2	< 0.1	15.3		
HL-066	1000	< 10	< 20	0.4	7.2	< 2	< 100	< 0.5	16.1	1.8	< 1	< 20	73.1	102	52	6.9	1.1	< 0.2	1.0	0.1	15.4		
HL-757	6700	< 10	20	0.2	2.3	< 2	< 100	< 0.5	5.9	3.5	< 1	< 20	24.3	47	10	2.1	< 0.2	< 0.2	0.3	< 0.1	15.4		
HL-758	500	< 10	< 20	0.1	0.7	< 2	< 100	< 0.5	0.6	< 0.1	< 1	< 20	2.7	8	< 3	0.4	< 0.2	< 0.2	< 0.1	< 0.1	15.2		
HL-759	600	< 10	< 20	0.1	0.9	< 2	< 100	< 0.5	0.8	< 0.1	< 1	< 20	3.1	9	4	0.4	< 0.2	< 0.2	0.2	< 0.1	15.7		
HL-760	500	< 10	< 20	0.2	0.7	< 2	< 100	< 0.5	0.6	< 0.1	< 1	< 20	2.2	4	< 3	0.3	< 0.2	< 0.2	0.2	< 0.1	15.5		
HL-761	700	< 10	< 20	0.3	0.8	< 2	< 100	< 0.5	0.5	< 0.1	< 1	30	2.2	6	< 3	0.3	< 0.2	< 0.2	0.2	< 0.1	15.4		
HL-762	600	< 10	< 20	0.4	0.7	< 2	< 100	< 0.5	0.6	< 0.1	< 1	40	2.3	4	3	0.4	< 0.2	< 0.2	0.2	< 0.1	15.4		
HL-763	600	< 10	< 20	0.5	0.7	< 2	< 100	< 0.5	< 0.5	0.6	< 1	< 20	2.2	4	5	0.3	< 0.2	< 0.2	0.1	< 0.1	15.7		
HL-764	800	< 10	< 20	< 0.1	1.0	< 2	< 100	< 0.5	1.5	1.4	< 1	< 20	5.9	11	4	0.6	< 0.2	< 0.2	0.2	< 0.1	15.5		
HL-766	1500	< 10	< 20	0.1	1.8	< 2	< 100	< 0.5	2.1	1.5	< 1	< 20	10.0	17	7	1.2	< 0.2	< 0.2	0.3	< 0.1	15.3		
HL-772	9800	< 10	< 20	0.7	2.7	< 2	< 100	< 0.5	1.6	0.6	< 1	< 20	8.5	15	6	1.0	< 0.2	< 0.2	0.5	< 0.1	15.3		
HL-778	700	< 10	< 20	0.2	3.3	< 2	< 100	< 0.5	7.2	2.7	< 1	< 20	27.4	56	28	2.8	0.5	< 0.2	0.5	< 0.1	15.9		
HL-779	900	< 10	< 20	0.5	2.6	< 2	< 100	< 0.5	3.3	5.4	< 1	< 20	35.8	63	22	3.6	0.5	0.6	0.6	< 0.1	15.9		
HL-780	900	< 10	< 20	0.4	1.7	< 2	< 100	< 0.5	1.9	1.0	< 1	< 20	12.7	22	8	1.3	0.2	< 0.2	0.3	< 0.1	15.7		
HL-781	700	< 10	< 20	0.1	1.6	< 2	< 100	< 0.5	1.8	1.7	< 1	< 20	7.4	15	14	0.9	< 0.2	< 0.2	0.3	< 0.1	15.4		
HL-782	400	< 10	< 20	0.1	0.9	< 2	< 100	< 0.5	1.2	0.9	< 1	< 20	3.0	6	4	0.4	< 0.2	< 0.2	0.1	< 0.1	15.4		
HL-783	900	< 10	< 20	0.2	1.5	< 2	< 100	< 0.5	1.5	0.9	< 1	< 20	4.3	8	< 3	0.6	< 0.2	< 0.2	0.3	< 0.1	15.6		
HL-784	400	< 10	< 20	0.2	0.8	< 2	< 100	< 0.5	1.2	< 0.1	< 1	< 20	2.9	4	< 3	0.4	< 0.2	< 0.2	0.2	< 0.1	15.5		
HL-785	400	< 10	< 20	< 0.1	0.8	< 2	< 100	< 0.5	0.7	< 0.1	< 1	< 20	2.3	5	7	0.4	< 0.2	< 0.2	0.2	< 0.1	15.4		
HL-786	600	< 10	< 20	0.1	1.5	< 2	< 100	< 0.5	1.7	0.4	< 1	< 20	3.5	2	5	0.6	< 0.2	< 0.2	0.2	< 0.1	15.5		
HL-787	600	< 10	< 20	0.1	0.9	< 2	< 100	< 0.5	1.1	0.4	< 1	< 20	4.7	7	< 3	0.6	< 0.2	< 0.2	0.2	< 0.1	15.5		
HL-788	500	< 10	< 20	0.1	1.7	< 2	< 100	< 0.5	2.4	1.2	< 1	< 20	14.2	22	9	1.5	0.2	< 0.2	0.4	< 0.1	15.3		
HL-789	600	< 10	< 20	0.6	2.2	< 2	< 100	< 0.5	3.1	2.7	< 1	< 20	16.9	36	10	1.8	0.3	< 0.2	0.4	< 0.1	15.8		
HL-790	900	< 10	< 20	0.3	3.7	< 2	< 100	< 0.5	5.8	4.5	< 1	< 20	34.7	68	28	3.6	0.5	< 0.2	0.6	< 0.1	15.6		
HL-791	500	< 10	< 20	0.3	0.6	< 2	< 100	< 0.5	0.6	0.7	< 1	20	6.1	19	4	0.6	< 0.2	< 0.2	0.2	< 0.1	15.4		
HL-792	300	< 10	< 20	0.3	0.5	< 2	< 100	< 0.5	0.6	0.5	< 1	20	4.8	9	4	0.5	< 0.2	< 0.2	< 0.1	< 0.1	15.3		
HL-794	300	< 10	< 20	0.3	0.6	< 2	< 100	< 0.5	0.7	< 0.1	< 1	30	5.4	8	< 3	0.6	< 0.2	< 0.2	0.2	< 0.1	15.6		
HL-830	400	< 10	< 20	0.1	0.5	< 2	< 100	< 0.5	1.0	< 0.1	< 1	< 20	2.1	3	< 3	0.3	< 0.2	< 0.2	< 0.1	< 0.1	15.4		
HL-831	500	< 10	< 20	0.3	0.6	< 2	< 100	< 0.5	0.6	0.5	< 1	< 20	1.8	4	6	0.3	< 0.2	< 0.2	0.2	< 0.1	15.4		

	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	FUS-ICP	FUS-ICP
SAMPLE	Na	Ni	Rb	Sb	Sc	Se	Sr	Ta	Th	U	W	Zn	La	Ce	Nd	Sm	Eu	Tb	Yb	Lu	Mass	SiO2	Al2O3
DESCRIPTION	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	g	%	%
HL-832	400	< 10	< 20	0.2	0.4	< 2	< 100	< 0.5	< 0.5	< 0.1	< 1	60	1.7	4	< 3	0.2	< 0.2	< 0.2	< 0.1	< 0.1	15.4		
HL-833	800	< 10	< 20	0.5	1.0	< 2	< 100	< 0.5	0.9	0.5	< 1	< 20	3.3	5	8	0.4	< 0.2	< 0.2	0.2	< 0.1	15.6		
HL-834	500	< 10	< 20	0.4	2.1	< 2	< 100	< 0.5	1.1	11.0	< 1	< 20	4.9	9	< 3	0.6	0.3	< 0.2	< 0.1	< 0.1	15.6		
HL-835	600	< 10	< 20	0.5	1.1	4	< 100	< 0.5	1.7	13.2	< 1	< 20	6.0	10	12	0.8	0.3	< 0.2	< 0.1	< 0.1	15.5		
HL-836	900	< 10	< 20	0.6	2.4	< 2	< 100	< 0.5	3.2	12.3	< 1	< 20	17.6	21	20	1.8	0.3	< 0.2	0.5	0.3	15.3		
HL-837	19000	< 10	< 20	< 0.1	4.4	< 2	< 100	< 0.5	5.5	2.1	< 1	< 20	24.6	38	14	2.7	< 0.2	< 0.2	0.6	< 0.1	15.2		
HL-842	700	< 10	< 20	0.4	3.0	< 2	< 100	< 0.5	4.1	4.3	< 1	< 20	32.6	42	28	3.6	0.5	< 0.2	0.8	0.1	15.5		
HL-843	4200	< 10	< 20	< 0.1	3.6	< 2	< 100	< 0.5	4.9	6.0	< 1	< 20	18.2	41	17	2.4	< 0.2	< 0.2	0.6	< 0.1	15.5		
HL-844	4300	< 10	< 20	0.4	2.4	< 2	< 100	< 0.5	3.9	1.6	< 1	< 20	9.7	22	13	1.4	< 0.2	< 0.2	0.4	< 0.1	15.9		
HL-845	4600	< 10	< 20	0.5	3.5	< 2	< 100	< 0.5	5.0	0.8	< 1	< 20	10.6	19	< 3	1.3	< 0.2	< 0.2	0.5	< 0.1	15.3		
HL-846	1400	< 10	< 20	0.2	1.6	< 2	< 100	< 0.5	2.1	1.3	< 1	< 20	11.9	18	7	1.5	< 0.2	< 0.2	0.5	< 0.1	15.2		
HL-847	1600	< 10	< 20	0.3	3.4	< 2	< 100	< 0.5	5.3	5.8	< 1	< 20	22.0	41	16	2.8	0.4	< 0.2	0.6	0.2	15.8		
HL-848	1700	< 10	30	0.2	3.5	< 2	< 100	< 0.5	4.8	3.0	< 1	< 20	14.8	21	11	1.7	0.6	< 0.2	0.7	< 0.1	15.8		
HL-860	600	< 10	30	0.2	0.8	< 2	< 100	< 0.5	0.9	0.8	< 1	< 20	5.8	6	4	0.6	< 0.2	< 0.2	< 0.1	< 0.1	15.5		
HL-861	400	< 10	< 20	< 0.1	0.4	< 2	< 100	< 0.5	< 0.5	< 0.1	< 1	< 20	1.7	4	< 3	0.2	< 0.2	< 0.2	< 0.1	< 0.1	15.4		
HL-862	600	< 10	< 20	0.1	1.2	< 2	< 100	< 0.5	1.2	< 0.1	< 1	< 20	4.1	7	7	0.7	< 0.2	< 0.2	0.2	< 0.1	15.2		
HL-863	600	< 10	< 20	0.2	1.5	< 2	< 100	< 0.5	1.4	0.7	< 1	< 20	4.3	6	< 3	0.7	< 0.2	< 0.2	0.4	< 0.1	15.3		
HL-864	1200	< 10	< 20	0.1	2.6	< 2	< 100	< 0.5	2.4	1.2	< 1	< 20	6.5	11	5	0.9	< 0.2	< 0.2	0.4	< 0.1	15.7		
HL-865	600	< 10	< 20	< 0.1	1.2	< 2	< 100	< 0.5	1.4	0.2	< 1	< 20	3.2	8	< 3	0.5	< 0.2	< 0.2	0.2	< 0.1	15.5		
HL-866	1300	< 10	< 20	0.1	2.5	< 2	< 100	< 0.5	2.9	1.1	< 1	< 20	6.8	11	6	0.9	< 0.2	< 0.2	0.5	< 0.1	15.9		
HL-867	1300	< 10	< 20	0.3	2.6	< 2	< 100	< 0.5	4.1	1.2	< 1	< 20	10.7	16	10	1.5	< 0.2	< 0.2	0.5	< 0.1	15.2		
HL-868	1000	< 10	< 20	0.4	1.2	< 2	< 100	< 0.5	2.2	1.2	< 1	< 20	6.3	13	< 3	0.9	< 0.2	< 0.2	0.3	< 0.1	15.5		
HL-869	1200	< 10	< 20	0.3	2.6	< 2	< 100	< 0.5	4.1	1.6	< 1	< 20	12.7	20	18	1.7	0.3	< 0.2	0.6	< 0.1	15.7		
HL-870	1100	< 10	< 20	0.3	2.4	< 2	< 100	< 0.5	4.6	1.9	< 1	< 20	37.1	54	34	4.1	0.7	< 0.2	0.8	< 0.1	15.2		
HL-872	5900	< 10	< 20	0.1	8.8	< 2	< 100	< 0.5	7.2	2.9	< 1	< 20	61.5	78	45	6.2	1.0	< 0.2	1.9	0.2	15.4		
HL-875	3600	< 10	< 20	0.5	22.3	< 2	< 100	< 0.5	73.2	10.5	< 1	< 20	153	302	125	18.3	3.1	< 0.2	1.8	0.4	15.7		
HL-878	7900	< 10	< 20	0.2	6.0	< 2	< 100	< 0.5	10.5	5.5	< 1	< 20	58.1	67	37	6.3	1.1	< 0.2	1.1	0.2	15.7		
HL-879	6700	< 10	40	0.4	6.0	< 2	< 100	< 0.5	7.2	13.1	< 1	< 20	43.2	58	42	5.0	0.7	1.0	1.0	0.2	15.6		
HL-880	8200	< 10	50	0.2	7.2	< 2	< 100	< 0.5	8.6	7.2	< 1	< 20	25.9	42	11	3.4	0.7	< 0.2	0.8	0.2	15.2		
HL-881	1300	< 10	< 20	0.6	2.0	< 2	< 100	< 0.5	2.8	2.2	< 1	< 20	11.9	16	6	1.4	0.3	< 0.2	0.4	< 0.1	15.3		
HL-882	300	< 10	< 20	0.2	0.9	< 2	< 100	< 0.5	1.0	0.6	< 1	< 20	3.5	4	4	0.6	< 0.2	< 0.2	0.3	< 0.1	15.5		
HL-883	400	< 10	< 20	0.1	0.5	< 2	< 100	< 0.5	0.6	< 0.1	< 1	< 20	1.8	3	< 3	0.3	< 0.2	< 0.2	0.1	< 0.1	15.6		
HL-884	300	< 10	< 20	0.1	0.4	< 2	< 100	< 0.5	0.5	< 0.1	< 1	< 20	1.3	2	4	0.2	< 0.2	< 0.2	0.1	< 0.1	15.5		
HL-885	500	< 10	< 20	0.2	0.7	< 2	< 100	< 0.5	0.6	0.3	< 1	< 20	2.4	5	5	0.3	< 0.2	< 0.2	0.1	< 0.1	15.7		
HL-886	300	< 10	< 20	0.1	0.4	< 2	< 100	< 0.5	0.5	< 0.1	< 1	20	1.5	3	4	0.2	< 0.2	< 0.2	< 0.1	< 0.1	15.6		
HL-887	400	< 10	< 20	0.1	0.5	< 2	< 100	< 0.5	< 0.5	< 0.1	< 1	< 20	1.5	2	4	0.2	< 0.2	< 0.2	< 0.1	< 0.1	15.3		
HL-039																							
HL-040																							
HL-042																							
HL-047																							
HL-048																							
HL-050																							
HL-051																							
HL-752																							
HL-753																							
HL-755																							
HL-756																							
HL-765																							
HL-767																							

	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	FUS-ICP	FUS-ICP
SAMPLE	Na	Ni	Rb	Sb	Sc	Se	Sr	Ta	Th	U	W	Zn	La	Ce	Nd	Sm	Eu	Tb	Yb	Lu	Mass	SiO2	Al2O3
DESCRIPTION	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	g	%	%
HL-768																							
HL-769																							
HL-771																							
HL-773																							
HL-774																							
HL-775																							
HL-776																							
HL-777																							
HL-838																							
HL-839																							
HL-840																							
HL-873																							
HL-876																							
HL-877																							
E494912																							
E494915																							
E494916																							
E494917																						59.06	14.20
E494920																						51.33	8.65
E494921																						49.13	5.56
E494922																						48.15	7.72
E494923																						47.84	6.93
E494924																						47.75	7.14
E494925																						47.17	5.91
NIST 694 Meas																						11.05	1.88
NIST 694 Cert																						11.2	1.80
DNC-1 Meas																						46.56	18.35
DNC-1 Cert																						47.15	18.34
GBW 07113 Meas																						72.87	12.86
GBW 07113 Cert																						72.8	13.0
LKSD-3 Meas																							
LKSD-3 Cert																							
TILL-1 Meas																							
TILL-1 Cert																							
TILL-1 Meas																							
TILL-1 Cert																							
TILL-2 Meas																							
TILL-2 Cert																							
TILL-2 Meas																							
TILL-2 Cert																							
W-2a Meas																						52.55	15.30
W-2a Cert																						52.4	15.4
DTS-2b Meas																							
DTS-2b Cert																							
SY-4 Meas																						49.54	20.29
SY-4 Cert																						49.9	20.69
CTA-AC-1 Meas																							
CTA-AC-1 Cert																							
BIR-1a Meas																						47.81	15.66

	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	FUS-ICP	FUS-ICP
SAMPLE	Na	Ni	Rb	Sb	Sc	Se	Sr	Ta	Th	U	W	Zn	La	Ce	Nd	Sm	Eu	Tb	Yb	Lu	Mass	SiO2	Al2O3
DESCRIPTION	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	g	%	%
BIR-1a Cert																						47.96	15.50
NCS DC86312 Meas																							
NCS DC86312 Cert																							
NCS DC70009 (GBW07241) Meas																							
NCS DC70009 (GBW07241) Cert																							
OREAS 100a (Fusion) Meas																							
OREAS 100a (Fusion) Cert																							
OREAS 101a (Fusion) Meas																							
OREAS 101a (Fusion) Cert																							
JR-1 Meas																							
JR-1 Cert																							
L-STD-4 Meas	400			0.2	0.2							30	0.8	1		0.1							
L-STD-4 Cert	365			0.160	0.240							32.0	0.800	1.41		0.130							
L-STD-4 Meas	400			0.2	0.2							40	0.7	2		0.1							
L-STD-4 Cert	365			0.160	0.240							32.0	0.800	1.41		0.130							
DMMAS 117 Meas					6.0																		
DMMAS 117 Cert					6.6																		
HL-755 Orig																							
HL-755 Dup																							
HL-777 Orig																							
HL-777 Dup																							
E494925 Orig																						47.17	5.91
E494925 Dup																						47.47	6.00
Method Blank																							
Method Blank					< 0.1																30.0		
Method Blank																							

Results

	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-ICP
SAMPLE	Fe2O3(T)	MnO	MgO	CaO	Na2O	K2O	TiO2	P2O5	LOI	Total	Sc	Be	V	Cr	Co	Ni	Cu	Zn	Ga	Ge	As	Rb	Sr
DESCRIPTION	%	%	%	%	%	%	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
HL-003																							
HL-004																							
HL-005																							
HL-006																							
HL-007																							
HL-008																							
HL-009																							
HL-010																							
HL-011																							
HL-034																							
HL-035																							
HL-036																							
HL-037																							

	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-ICP
SAMPLE	Fe2O3(T)	MnO	MgO	CaO	Na2O	K2O	TiO2	P2O5	LOI	Total	Sc	Be	V	Cr	Co	Ni	Cu	Zn	Ga	Ge	As	Rb	Sr
DESCRIPTION	%	%	%	%	%	%	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
HL-038																							
HL-041																							
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HL-831																							
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HL-833																							

	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-ICP
SAMPLE	Fe2O3(T)	MnO	MgO	CaO	Na2O	K2O	TiO2	P2O5	LOI	Total	Sc	Be	V	Cr	Co	Ni	Cu	Zn	Ga	Ge	As	Rb	Sr
DESCRIPTION	%	%	%	%	%	%	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
HL-834																							
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	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-ICP
SAMPLE	Fe2O3(T)	MnO	MgO	CaO	Na2O	K2O	TiO2	P2O5	LOI	Total	Sc	Be	V	Cr	Co	Ni	Cu	Zn	Ga	Ge	As	Rb	Sr
DESCRIPTION	%	%	%	%	%	%	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
HL-769																							
HL-771																							
HL-773																							
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HL-838																							
HL-839																							
HL-840																							
HL-873																							
HL-876																							
HL-877																							
E494912																							
E494915																							
E494916																							
E494917	6.80	0.109	7.41	5.07	3.54	1.20	0.644	0.18	2.61	100.8	15	< 1	110	350	31	220	40	70	16	1	< 5	38	428
E494920	13.76	0.221	9.57	12.59	1.37	0.08	0.664	0.05	1.54	99.83	36	< 1	229	600	60	180	100	90	10	3	5	< 2	58
E494921	14.49	0.233	13.85	12.54	0.84	0.05	0.529	0.03	2.60	99.85	34	< 1	203	1360	69	380	50	90	7	2	42	< 2	34
E494922	16.49	0.225	11.71	11.10	1.42	0.09	0.654	0.04	1.76	99.35	42	< 1	262	840	71	210	80	100	11	3	< 5	< 2	23
E494923	12.94	0.222	13.04	13.15	1.33	0.04	0.533	0.05	3.54	99.61	35	< 1	203	1470	74	410	130	70	8	2	19	< 2	61
E494924	14.48	0.225	13.83	11.42	1.02	0.05	0.575	0.04	2.13	98.66	37	< 1	211	1610	84	460	60	100	10	2	18	< 2	19
E494925	13.75	0.199	15.65	11.10	0.61	0.03	0.454	0.03	3.68	98.60	33	< 1	185	1640	84	500	170	90	8	3	31	< 2	13
NIST 694 Meas	0.72	0.013	0.33	42.44	0.87	0.54	0.117	30.21					1659										
NIST 694 Cert	0.790	0.0116	0.330	43.6	0.860	0.510	0.110	30.2					1740										
DNC-1 Meas	9.83	0.146	9.91	11.47	1.90	0.22	0.472	0.07			31		157	280	57	250	100						140
DNC-1 Cert	9.97	0.150	10.13	11.49	1.890	0.234	0.480	0.070			31		148	270	57	247	100						144.0
GBW 07113 Meas	3.19	0.141	0.14	0.60	2.47	5.42	0.280	0.04			5	4	< 5										41
GBW 07113 Cert	3.21	0.140	0.160	0.590	2.57	5.43	0.300	0.0500			5.00	4.00	5.00										43.0
LKSD-3 Meas														80	30	50	30				27		
LKSD-3 Cert														87.0	30.0	47.0	35.0				27.0		
TILL-1 Meas																							
TILL-1 Cert																							
TILL-1 Meas																							
TILL-1 Cert																							
TILL-2 Meas																							
TILL-2 Cert																							
TILL-2 Meas																							
TILL-2 Cert																							
W-2a Meas	10.75	0.168	6.25	11.14	2.21	0.61	1.073	0.13			35	< 1	278	80	43	70	110		18			19	194
W-2a Cert	10.7	0.163	6.37	10.9	2.14	0.626	1.06	0.130			36.0	1.30	262	92.0	43.0	70.0	110		17.0			21.0	190
DTS-2b Meas														> 10000	132	3610							
DTS-2b Cert														15500	120	3780							
SY-4 Meas	6.22	0.107	0.49	8.14	6.91	1.65	0.289	0.13			1	3	7										1207
SY-4 Cert	6.21	0.108	0.54	8.05	7.10	1.66	0.287	0.131			1.1	2.6	8.0										1191
CTA-AC-1 Meas																	60						
CTA-AC-1 Cert																	54.0						
BIR-1a Meas	11.34	0.172	9.55	13.59	1.81	0.02	0.959	0.02			43	< 1	338	400	53	170	130	70	15				107

	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-ICP
SAMPLE	Fe2O3(T)	MnO	MgO	CaO	Na2O	K2O	TiO2	P2O5	LOI	Total	Sc	Be	V	Cr	Co	Ni	Cu	Zn	Ga	Ge	As	Rb	Sr
DESCRIPTION	%	%	%	%	%	%	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
BIR-1a Cert	11.30	0.175	9.700	13.30	1.82	0.030	0.96	0.021			44	0.58	310	370	52	170	125	70	16				110
NCS DC86312 Meas																							
NCS DC86312 Cert																							
NCS DC70009 (GBW07241) Meas															4		1010		17	11		511	
NCS DC70009 (GBW07241) Cert															3.7		960		16.5	11.2		500	
OREAS 100a (Fusion) Meas															18		180						
OREAS 100a (Fusion) Cert															18.1		169						
OREAS 101a (Fusion) Meas															49		420						
OREAS 101a (Fusion) Cert															48.8		434						
JR-1 Meas																< 20			17		17	243	
JR-1 Cert																1.67			16.1		16.3	257	
L-STD-4 Meas																							
L-STD-4 Cert																							
L-STD-4 Meas																							
L-STD-4 Cert																							
DMMAS 117 Meas																							
DMMAS 117 Cert																							
HL-755 Orig																							
HL-755 Dup																							
HL-777 Orig																							
HL-777 Dup																							
E494925 Orig	13.75	0.199	15.65	11.10	0.61	0.03	0.454	0.03	3.68	98.60	33	< 1	185	1640	84	500	170	90	8	3	31	< 2	13
E494925 Dup	14.03	0.200	15.64	11.15	0.62	0.03	0.474	0.03	3.68	99.32	34	< 1	184	1630	81	510	170	90	8	3	30	< 2	13
Method Blank																							
Method Blank																							
Method Blank														< 20	< 1	< 20	< 10	< 30	< 1	< 1	< 5	< 2	

Results

	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
SAMPLE	Y	Zr	Nb	Mo	Ag	In	Sn	Sb	Cs	Ba	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er	Tm	Yb
DESCRIPTION	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
HL-003																							
HL-004																							
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HL-011																							
HL-034																							
HL-035																							
HL-036																							
HL-037																							

	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
SAMPLE	Y	Zr	Nb	Mo	Ag	In	Sn	Sb	Cs	Ba	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er	Tm	Yb
DESCRIPTION	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
HL-038																							
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HL-833																							
HL-834																							

	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
SAMPLE	Y	Zr	Nb	Mo	Ag	In	Sn	Sb	Cs	Ba	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er	Tm	Yb
DESCRIPTION	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
HL-835																							
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HL-765																							
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HL-768																							
HL-769																							
HL-771																							

	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
SAMPLE	Y	Zr	Nb	Mo	Ag	In	Sn	Sb	Cs	Ba	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er	Tm	Yb
DESCRIPTION	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
HL-773																							
HL-774																							
HL-775																							
HL-776																							
HL-777																							
HL-838																							
HL-839																							
HL-840																							
HL-873																							
HL-876																							
HL-877																							
E494912																							
E494915																							
E494916																							
E494917	11	131	5	< 2	1.4	< 0.2	1	0.6	4.8	362	23.5	47.2	5.50	21.1	3.6	0.94	2.7	0.4	2.2	0.4	1.1	0.18	1.1
E494920	13	38	2	< 2	0.6	< 0.2	< 1	1.0	< 0.5	29	4.3	9.8	1.37	6.3	1.9	0.67	2.2	0.4	2.4	0.5	1.5	0.22	1.4
E494921	10	28	2	< 2	0.6	< 0.2	< 1	4.0	< 0.5	22	1.6	4.3	0.68	3.7	1.3	0.47	1.6	0.3	1.9	0.4	1.1	0.16	1.0
E494922	12	32	1	< 2	0.6	< 0.2	< 1	1.4	< 0.5	26	1.4	3.7	0.61	3.5	1.3	0.59	1.8	0.4	2.3	0.5	1.3	0.19	1.2
E494923	10	29	< 1	< 2	< 0.5	< 0.2	< 1	1.1	< 0.5	23	2.3	5.7	0.83	4.2	1.4	0.50	1.7	0.3	1.9	0.4	1.2	0.17	1.1
E494924	10	29	1	< 2	< 0.5	< 0.2	< 1	1.8	< 0.5	13	2.5	5.5	0.78	4.0	1.4	0.55	1.7	0.3	2.0	0.4	1.1	0.17	1.0
E494925	7	23	< 1	< 2	< 0.5	< 0.2	< 1	2.2	< 0.5	10	2.2	4.8	0.70	3.3	1.1	0.39	1.3	0.2	1.5	0.3	0.9	0.13	0.8
NIST 694 Meas																							
NIST 694 Cert																							
DNC-1 Meas	16	39						1.0		104	3.8			4.8		0.58							1.9
DNC-1 Cert	18.0	38						0.96		118	3.6			5.20		0.59							2.0
GBW 07113 Meas	44	400								498													
GBW 07113 Cert	43.0	403								506													
LKSD-3 Meas				< 2	2.6				2.3		48.2	91.2		41.4	7.8	1.38			4.7				2.7
LKSD-3 Cert				2.00	2.70				2.30		52.0	90.0		44.0	8.00	1.50			4.90				2.70
TILL-1 Meas																							
TILL-1 Cert																							
TILL-1 Meas																							
TILL-1 Cert																							
TILL-2 Meas																							
TILL-2 Cert																							
TILL-2 Meas																							
TILL-2 Cert																							
W-2a Meas	19	90		< 2	< 0.5					173	10.7	23.5		12.4	3.2	1.06		0.6	3.7	0.8			2.0
W-2a Cert	24.0	94.0		0.600	0.0460					182	10.0	23.0		13.0	3.30	1.00		0.630	3.60	0.760			2.10
DTS-2b Meas																							
DTS-2b Cert																							
SY-4 Meas	114	523								342													
SY-4 Cert	119	517								340													
CTA-AC-1 Meas											> 2000	> 3000		1130	165	45.0	120	14.9					10.7
CTA-AC-1 Cert											2176	3326		1087	162	46.7	124	13.9					11.4
BIR-1a Meas	14	18						0.8		7				2.6	1.2	0.51	1.8						1.7
BIR-1a Cert	16	18						0.58		6				2.5	1.1	0.55	2.0						1.7
NCS DC86312 Meas											> 2000	186		1580			229	34.6	183	35.6	96.1	14.3	87.3
NCS DC86312 Cert											2360	190		1600			225.0	34.6	183	36	96.2	15.1	87.79

	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
SAMPLE	Y	Zr	Nb	Mo	Ag	In	Sn	Sb	Cs	Ba	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er	Tm	Yb
DESCRIPTION	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
NCS DC70009 (GBW07241) Meas					1.7	1.3	> 1000	3.1			24.4	61.1	7.73	31.7	12.8		14.9	3.5	21.5	4.6	13.7		
NCS DC70009 (GBW07241) Cert					1.8	1.3	1701	3.1			23.7	60.3	7.9	32.9	12.5		14.8	3.3	20.7	4.5	13.4		
OREAS 100a (Fusion) Meas				25							278	501	47.1	153	24.8	3.70		3.9	23.4	5.1	15.1		15.8
OREAS 100a (Fusion) Cert				24.1							260	463	47.1	152	23.6	3.71		3.80	23.2	4.81	14.9		14.9
OREAS 101a (Fusion) Meas				20							819	1390	127	390	50.7	7.99		5.5	31.2	6.5	18.9	2.92	18.2
OREAS 101a (Fusion) Cert				21.9							816	1396	134	403	48.8	8.06		5.92	33.3	6.46	19.5	2.90	17.5
JR-1 Meas			15		< 0.5	< 0.2	4	1.3	21.0		21.0	49.2	5.81	23.3	5.7		5.6	1.1	6.3			0.72	4.7
JR-1 Cert			15.2		0.031	0.028	2.86	1.19	20.8		19.7	47.2	5.58	23.3	6.03		5.06	1.01	5.69			0.67	4.55
L-STD-4 Meas																							
L-STD-4 Cert																							
L-STD-4 Meas																							
L-STD-4 Cert																							
DMMAS 117 Meas																							
DMMAS 117 Cert																							
HL-755 Orig																							
HL-755 Dup																							
HL-777 Orig																							
HL-777 Dup																							
E494925 Orig	7	23	< 1	< 2	< 0.5	< 0.2	< 1	2.2	< 0.5	10	2.2	4.8	0.70	3.3	1.1	0.39	1.3	0.2	1.5	0.3	0.9	0.13	0.8
E494925 Dup	8	22	< 1	< 2	< 0.5	< 0.2	< 1	2.3	< 0.5	10	2.1	4.6	0.64	3.4	1.1	0.38	1.3	0.2	1.5	0.3	0.9	0.13	0.8
Method Blank																							
Method Blank																							
Method Blank			< 1	< 2	< 0.5	< 0.2	< 1	< 0.5	< 0.5		< 0.1	< 0.1	< 0.05	< 0.1	< 0.1	< 0.05	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.05	< 0.1

Results

	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS
SAMPLE	Lu	Hf	Ta	W	Tl	Pb	Bi	Th	U	Al	Ca	Fe	K	Mg	Na	Cl	Br	I	V	As	Se	Mo	Sb
DESCRIPTION	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
HL-003																							
HL-004																							
HL-005																							
HL-006																							
HL-007																							
HL-008																							
HL-009																							
HL-010																							
HL-011																							
HL-034																							
HL-035																							
HL-036																							
HL-037																							
HL-038																							
HL-041																							
HL-042																							

	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS
SAMPLE	Lu	Hf	Ta	W	Tl	Pb	Bi	Th	U	Al	Ca	Fe	K	Mg	Na	Cl	Br	I	V	As	Se	Mo	Sb
DESCRIPTION	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
HL-044																							
HL-045																							
HL-046																							
HL-052																							
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HL-832																							
HL-833																							
HL-834																							
HL-835																							
HL-836																							
HL-837																							

	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS
SAMPLE	Lu	Hf	Ta	W	Tl	Pb	Bi	Th	U	Al	Ca	Fe	K	Mg	Na	Cl	Br	I	V	As	Se	Mo	Sb
DESCRIPTION	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
HL-842																							
HL-843																							
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HL-884																							
HL-885																							
HL-886																							
HL-887																							
HL-039										1.0	< 5	< 1	8	2	8	10000	41	8	19	6	< 5	2	0.5
HL-040										3.9	< 5	3	8	3	8	12000	72	19	28	6	< 5	1	0.3
HL-042										1.8	69	2	8	9	24	29000	165	82	33	4	< 5	8	0.6
HL-047										2.0	< 5	1	10	< 2	10	11000	43	11	47	5	< 5	2	0.2
HL-048										2.1	< 5	< 1	7	< 2	6	7000	52	11	30	7	< 5	2	0.2
HL-050										1.5	< 5	< 1	10	< 2	11	16000	37	6	49	6	< 5	2	0.2
HL-051										8.7	7	3	14	3	8	8000	112	40	16	7	< 5	1	0.3
HL-752										12.3	9	13	10	2	12	16000	154	57	41	7	< 5	< 1	0.3
HL-753										1.7	< 5	< 1	8	< 2	8	9000	31	8	18	4	< 5	3	0.3
HL-755										2.5	< 5	2	14	< 2	9	11000	40	15	25	7	< 5	2	0.3
HL-756										4.6	40	4	< 5	4	6	10000	125	37	23	2	< 5	< 1	0.3
HL-765										6.5	109	8	9	19	10	13000	232	82	68	8	5	5	0.6
HL-767										12.5	7	4	10	< 2	8	16000	193	60	28	5	< 5	< 1	0.3
HL-768										6.1	< 5	1	6	< 2	6	9000	180	41	7	< 1	< 5	< 1	< 0.1
HL-769										2.8	6	3	9	< 2	8	11000	57	17	64	5	< 5	2	0.3
HL-771										1.9	< 5	< 1	10	< 2	7	7000	37	7	18	5	< 5	3	0.2
HL-773										10.8	< 5	6	8	< 2	6	9000	91	34	32	4	< 5	< 1	0.1
HL-774										12.8	< 5	15	17	3	14	19000	173	50	71	11	< 5	< 1	0.3
HL-775										6.4	8	3	8	3	7	9000	65	17	27	5	< 5	3	0.2

	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS
SAMPLE	Lu	Hf	Ta	W	Tl	Pb	Bi	Th	U	Al	Ca	Fe	K	Mg	Na	Cl	Br	I	V	As	Se	Mo	Sb
DESCRIPTION	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
HL-776										7.6	< 5	3	13	< 2	6	11000	237	58	13	4	< 5	< 1	0.2
HL-777										4.1	29	3	< 5	5	10	13000	144	32	26	2	< 5	1	0.3
HL-838										3.2	57	3	< 5	8	< 5	5000	94	29	37	3	< 5	2	0.3
HL-839										3.5	< 5	1	< 5	< 2	5	3000	26	11	39	6	< 5	1	0.3
HL-840										1.9	8	1	6	< 2	< 5	3000	22	7	24	5	< 5	2	0.2
HL-873										1.6	44	3	< 5	7	7	9000	55	33	65	7	< 5	4	0.1
HL-876										2.7	6	1	10	< 2	9	13000	37	10	27	5	< 5	2	0.2
HL-877										4.6	31	2	< 5	2	7	12000	144	34	7	1	< 5	1	0.2
E494912																							
E494915																							
E494916																							
E494917	0.16	2.7	0.5	1	0.3	5	< 0.4	4.6	1.1														
E494920	0.21	1.0	0.1	2	0.1	< 5	< 0.4	0.8	0.2														
E494921	0.15	0.7	0.1	1	< 0.1	< 5	< 0.4	0.5	0.1														
E494922	0.17	0.8	0.1	1	< 0.1	< 5	< 0.4	0.4	0.1														
E494923	0.16	0.8	0.1	1	< 0.1	< 5	< 0.4	0.5	0.2														
E494924	0.16	0.8	0.1	1	< 0.1	< 5	< 0.4	0.4	0.1														
E494925	0.12	0.6	< 0.1	< 1	< 0.1	< 5	< 0.4	0.3	0.1														
NIST 694 Meas																							
NIST 694 Cert																							
DNC-1 Meas																							
DNC-1 Cert																							
GBW 07113 Meas																							
GBW 07113 Cert																							
LKSD-3 Meas	0.39	4.5	0.6	< 1					4.3														
LKSD-3 Cert	0.400	4.80	0.700	2.00					4.60														
TILL-1 Meas												56					424		145	67		8	64.6
TILL-1 Cert												48100.00					6400.0		99000	18000		2000	7800.0
TILL-1 Meas												30					393		97	41		6	49.6
TILL-1 Cert												48100.00					6400.0		99000	18000		2000	7800.0
TILL-2 Meas												91					1050		193	107		116	3.2
TILL-2 Cert												38400.00					12200.0		77000	26000		14000	800.0
TILL-2 Meas												50					973		120	65		76	2.4
TILL-2 Cert												38400.00					12200.0		77000	26000		14000	800.0
W-2a Meas				< 1	< 0.1		< 0.4	2.4	0.5														
W-2a Cert				0.300	0.200		0.0300	2.40	0.530														
DTS-2b Meas																							
DTS-2b Cert																							
SY-4 Meas																							
SY-4 Cert																							
CTA-AC-1 Meas	1.06							22.9	4.1														
CTA-AC-1 Cert	1.08							21.8	4.4														
BIR-1a Meas		0.6				< 5																	
BIR-1a Cert		0.60				3																	
NCS DC86312 Meas	11.9							25.2															
NCS DC86312 Cert	11.96							23.6															

	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS
SAMPLE	Lu	Hf	Ta	W	Tl	Pb	Bi	Th	U	Al	Ca	Fe	K	Mg	Na	Cl	Br	I	V	As	Se	Mo	Sb
DESCRIPTION	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
NCS DC70009 (GBW07241) Meas				2200	1.9			28.1															
NCS DC70009 (GBW07241) Cert				2200	1.8			28.3															
OREAS 100a (Fusion) Meas	2.21							52.9	143														
OREAS 100a (Fusion) Cert	2.26							51.6	135														
OREAS 101a (Fusion) Meas	2.49							35.4	419														
OREAS 101a (Fusion) Cert	2.66							36.6	422														
JR-1 Meas	0.68	4.5	1.8			18	0.6	26.7	9.1														
JR-1 Cert	0.71	4.51	1.86			19.3	0.56	26.7	8.88														
L-STD-4 Meas																							
L-STD-4 Cert																							
L-STD-4 Meas																							
L-STD-4 Cert																							
DMMAS 117 Meas																							
DMMAS 117 Cert																							
HL-755 Orig										2.5	< 5	2	14	< 2	9	11000	40	15	25	7	< 5	2	0.3
HL-755 Dup										2.5	< 5	2	13	< 2	10	10000	38	14	26	7	< 5	2	0.2
HL-777 Orig										4.1	29	3	< 5	5	10	13000	144	32	26	2	< 5	1	0.3
HL-777 Dup										3.7	28	3	< 5	5	10	15000	146	32	24	3	< 5	1	0.3
E494925 Orig	0.12	0.6	< 0.1	< 1	< 0.1	< 5	< 0.4	0.3	0.1														
E494925 Dup	0.12	0.6	< 0.1	< 1	< 0.1	< 5	< 0.4	0.3	0.1														
Method Blank										< 0.5	< 5	< 1	< 5	< 2	< 5	< 2000	< 5	< 2	< 1	< 1	< 5	< 1	< 0.1
Method Blank																							
Method Blank	< 0.04	< 0.2	< 0.1	< 1	< 0.1	< 5	< 0.4	< 0.1	< 0.1														

Results

	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS
SAMPLE	Te	W	Re	Au	Hg	Th	U	Co	Ni	Cu	Zn	Pb	Ga	Ge	Ag	Cd	In	Sn	Tl	Bi	Ti	Cr	Y
DESCRIPTION	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
HL-003																							
HL-004																							
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HL-041																							
HL-042																							

	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS
SAMPLE	Te	W	Re	Au	Hg	Th	U	Co	Ni	Cu	Zn	Pb	Ga	Ge	Ag	Cd	In	Sn	Tl	Bi	Ti	Cr	Y
DESCRIPTION	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
HL-044																							
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	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS
SAMPLE	Te	W	Re	Au	Hg	Th	U	Co	Ni	Cu	Zn	Pb	Ga	Ge	Ag	Cd	In	Sn	Tl	Bi	Ti	Cr	Y
DESCRIPTION	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
HL-842																							
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HL-886																							
HL-887																							
HL-039	< 1	< 1	0.03	< 0.05	< 1	1.1	0.8	3	6	9	70	6	< 1	< 0.5	< 0.2	1.0	< 0.1	2.0	0.2	1.2	100	< 20	1.5
HL-040	< 1	< 1	< 0.01	< 0.05	< 1	0.7	0.6	13	21	12	70	5	2	< 0.5	< 0.2	1.7	< 0.1	< 0.8	0.2	1.8	500	< 20	1.5
HL-042	< 1	< 1	0.04	< 0.05	< 1	4.1	1.2	28	39	14	40	4	< 1	< 0.5	< 0.2	0.3	< 0.1	< 0.8	0.6	2.4	200	< 20	3.0
HL-047	< 1	< 1	0.02	< 0.05	< 1	1.5	0.4	2	7	5	50	3	2	< 0.5	< 0.2	1.0	< 0.1	< 0.8	0.2	1.1	600	< 20	0.6
HL-048	< 1	< 1	0.02	< 0.05	< 1	1.0	0.3	2	7	4	30	2	2	< 0.5	< 0.2	0.6	< 0.1	< 0.8	0.2	0.8	600	< 20	0.6
HL-050	< 1	< 1	0.03	< 0.05	< 1	0.8	0.2	3	7	5	60	2	2	< 0.5	< 0.2	1.3	< 0.1	< 0.8	0.4	0.9	500	< 20	0.6
HL-051	< 1	< 1	< 0.01	< 0.05	< 1	3.9	1.4	19	20	10	100	4	2	< 0.5	< 0.2	2.0	< 0.1	< 0.8	0.4	1.3	500	< 20	2.3
HL-752	< 1	< 1	< 0.01	< 0.05	< 1	6.6	1.0	7	17	7	120	5	5	< 0.5	< 0.2	1.3	< 0.1	< 0.8	0.5	2.0	1100	< 20	1.9
HL-753	< 1	< 1	< 0.01	< 0.05	< 1	0.6	0.2	4	6	3	70	2	1	< 0.5	< 0.2	1.1	< 0.1	< 0.8	0.7	< 0.8	500	< 20	< 0.5
HL-755	< 1	< 1	< 0.01	< 0.05	< 1	3.1	0.4	5	8	5	170	3	1	< 0.5	< 0.2	2.0	< 0.1	< 0.8	0.6	1.0	500	< 20	0.8
HL-756	< 1	< 1	< 0.01	< 0.05	< 1	3.2	1.4	4	11	5	20	4	2	< 0.5	< 0.2	0.3	< 0.1	< 0.8	0.2	1.4	400	< 20	2.2
HL-765	< 1	1	< 0.01	< 0.05	< 1	22.3	4.8	9	17	18	30	5	4	< 0.5	0.3	< 0.2	< 0.1	< 0.8	0.2	2.7	700	30	11.6
HL-767	< 1	< 1	< 0.01	< 0.05	< 1	3.0	1.0	9	17	7	80	3	3	< 0.5	< 0.2	1.7	< 0.1	< 0.8	0.3	0.9	700	< 20	2.3
HL-768	< 1	< 1	< 0.01	< 0.05	< 1	0.4	0.3	4	8	4	60	2	< 1	< 0.5	< 0.2	0.9	< 0.1	< 0.8	0.2	< 0.8	< 100	< 20	< 0.5
HL-769	< 1	< 1	< 0.01	< 0.05	< 1	4.9	0.5	2	8	4	80	3	3	< 0.5	< 0.2	1.0	< 0.1	< 0.8	0.4	2.0	800	< 20	0.9
HL-771	< 1	< 1	< 0.01	< 0.05	< 1	1.0	0.4	2	5	4	60	2	2	< 0.5	< 0.2	0.8	< 0.1	< 0.8	0.5	0.8	500	< 20	0.6
HL-773	< 1	< 1	< 0.01	< 0.05	< 1	2.9	0.9	7	12	7	70	4	3	< 0.5	< 0.2	1.5	< 0.1	< 0.8	0.3	1.3	600	< 20	2.5
HL-774	< 1	< 1	0.02	< 0.05	< 1	4.1	0.9	11	22	13	130	6	7	< 0.5	< 0.2	2.7	< 0.1	1.0	0.4	2.2	1100	30	2.7
HL-775	< 1	< 1	< 0.01	< 0.05	< 1	2.3	1.2	16	26	9	80	4	2	< 0.5	< 0.2	1.0	< 0.1	< 0.8	0.6	4.2	500	< 20	1.6

	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS
SAMPLE	Te	W	Re	Au	Hg	Th	U	Co	Ni	Cu	Zn	Pb	Ga	Ge	Ag	Cd	In	Sn	Tl	Bi	Ti	Cr	Y
DESCRIPTION	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
HL-776	< 1	< 1	< 0.01	< 0.05	< 1	2.8	1.1	12	16	7	50	3	1	< 0.5	< 0.2	1.8	< 0.1	< 0.8	0.3	0.9	200	< 20	1.3
HL-777	< 1	< 1	< 0.01	< 0.05	< 1	2.7	1.0	7	22	14	50	3	1	< 0.5	< 0.2	0.5	< 0.1	< 0.8	0.3	0.9	300	< 20	2.1
HL-838	< 1	< 1	< 0.01	< 0.05	< 1	3.1	1.1	3	7	5	20	3	1	< 0.5	< 0.2	0.3	< 0.1	< 0.8	0.1	1.6	300	< 20	1.9
HL-839	< 1	< 1	< 0.01	< 0.05	< 1	1.4	0.8	4	11	5	40	3	3	< 0.5	< 0.2	0.6	< 0.1	< 0.8	0.2	1.3	800	< 20	0.8
HL-840	< 1	< 1	< 0.01	< 0.05	< 1	1.1	0.5	8	18	4	50	2	2	< 0.5	< 0.2	0.6	< 0.1	< 0.8	0.2	< 0.8	500	30	0.7
HL-873	< 1	< 1	< 0.01	< 0.05	< 1	3.1	0.5	6	8	6	40	3	1	< 0.5	< 0.2	0.3	< 0.1	< 0.8	< 0.1	1.4	500	< 20	1.0
HL-876	< 1	< 1	0.02	< 0.05	< 1	2.9	0.6	6	9	5	70	3	3	< 0.5	< 0.2	2.2	< 0.1	< 0.8	0.3	0.9	600	< 20	1.1
HL-877	< 1	< 1	0.01	< 0.05	< 1	2.9	1.0	5	15	8	20	2	< 1	< 0.5	< 0.2	0.4	< 0.1	< 0.8	0.2	< 0.8	100	< 20	1.7
E494912																							
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E494925																							
NIST 694 Meas																							
NIST 694 Cert																							
DNC-1 Meas																							
DNC-1 Cert																							
GBW 07113 Meas																							
GBW 07113 Cert																							
LKSD-3 Meas																							
LKSD-3 Cert																							
TILL-1 Meas				0.07	1	10.9	4.7	57	57	233	180	51									2700	50	36.0
TILL-1 Cert				13	90.0	5600.0	2200.0	18000	24000	47000	98000	22000									5990000	65000	38000
TILL-1 Meas				0.06	1	6.4	4.1	41	32	179	90	31									1500	20	24.4
TILL-1 Cert				13	90.0	5600.0	2200.0	18000	24000	47000	98000	22000									5990000	65000	38000
TILL-2 Meas		15		0.09	1	33.4	18.8	48	120	450	320	85									7200	130	65.5
TILL-2 Cert		5000		2	70.0	18400.0	5700.0	15000	32000	150000	130000	31000									5300000	74000	40000
TILL-2 Meas		9		0.06	< 1	21.4	14.3	31	74	298	190	49									4100	80	42.0
TILL-2 Cert		5000		2	70.0	18400.0	5700.0	15000	32000	150000	130000	31000									5300000	74000	40000
W-2a Meas																							
W-2a Cert																							
DTS-2b Meas																							
DTS-2b Cert																							
SY-4 Meas																							
SY-4 Cert																							
CTA-AC-1 Meas																							
CTA-AC-1 Cert																							
BIR-1a Meas																							
BIR-1a Cert																							
NCS DC86312 Meas																							
NCS DC86312 Cert																							

	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS
SAMPLE	Te	W	Re	Au	Hg	Th	U	Co	Ni	Cu	Zn	Pb	Ga	Ge	Ag	Cd	In	Sn	Tl	Bi	Ti	Cr	Y
DESCRIPTION	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
NCS DC70009 (GBW07241) Meas																							
NCS DC70009 (GBW07241) Cert																							
OREAS 100a (Fusion) Meas																							
OREAS 100a (Fusion) Cert																							
OREAS 101a (Fusion) Meas																							
OREAS 101a (Fusion) Cert																							
JR-1 Meas																							
JR-1 Cert																							
L-STD-4 Meas																							
L-STD-4 Cert																							
L-STD-4 Meas																							
L-STD-4 Cert																							
DMMAS 117 Meas																							
DMMAS 117 Cert																							
HL-755 Orig	< 1	< 1	< 0.01	< 0.05	< 1	3.1	0.4	5	8	5	170	3	1	< 0.5	< 0.2	2.0	< 0.1	< 0.8	0.6	1.0	500	< 20	0.8
HL-755 Dup	< 1	< 1	< 0.01	< 0.05	< 1	3.2	0.4	5	8	4	170	3	2	< 0.5	< 0.2	1.8	< 0.1	< 0.8	0.5	1.1	600	< 20	0.8
HL-777 Orig	< 1	< 1	< 0.01	< 0.05	< 1	2.7	1.0	7	22	14	50	3	1	< 0.5	< 0.2	0.5	< 0.1	< 0.8	0.3	0.9	300	< 20	2.1
HL-777 Dup	< 1	< 1	< 0.01	< 0.05	< 1	2.6	1.0	7	19	14	40	2	< 1	< 0.5	< 0.2	0.6	< 0.1	< 0.8	0.3	1.2	300	< 20	1.9
E494925 Orig																							
E494925 Dup																							
Method Blank	< 1	< 1	< 0.01	< 0.05	< 1	< 0.1	< 0.1	< 1	< 3	< 3	< 10	< 1	< 1	< 0.5	< 0.2	< 0.2	< 0.1	< 0.8	< 0.1	< 0.8	< 100	< 20	< 0.5
Method Blank																							
Method Blank																							

Results

	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS
SAMPLE	Zr	Nb	Hf	Ta	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er	Tm	Yb	Lu	Li	Be	Sc	Mn	Rb
DESCRIPTION	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
HL-003																							
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HL-037																							
HL-038																							
HL-041																							
HL-042																							

	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS
SAMPLE	Zr	Nb	Hf	Ta	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er	Tm	Yb	Lu	Li	Be	Sc	Mn	Rb
DESCRIPTION	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
HL-044																							
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	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS
SAMPLE	Zr	Nb	Hf	Ta	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er	Tm	Yb	Lu	Li	Be	Sc	Mn	Rb
DESCRIPTION	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
HL-842																							
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HL-887																							
HL-039	3	< 1	0.1	< 0.1	2.0	3.6	0.8	2.4	0.4	0.1	0.4	< 0.1	0.3	< 0.1	0.1	< 0.1	0.1	< 0.1	8	< 2	< 100	125	20
HL-040	6	1	0.2	< 0.1	2.2	4.1	0.7	2.3	0.4	0.1	0.4	< 0.1	0.3	< 0.1	0.2	< 0.1	0.1	< 0.1	4	< 2	< 100	113	20
HL-042	10	1	0.4	< 0.1	6.0	13.9	1.8	6.0	1.0	0.2	0.9	0.1	0.7	0.1	0.3	< 0.1	0.3	< 0.1	13	< 2	< 100	2450	30
HL-047	5	3	0.2	0.2	1.1	1.7	0.3	0.8	0.2	< 0.1	0.1	< 0.1	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	14	< 2	< 100	201	14
HL-048	4	2	0.1	0.1	0.7	1.2	0.2	1.2	0.2	< 0.1	< 0.1	< 0.1	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	6	< 2	< 100	95	19
HL-050	4	2	0.1	0.1	1.1	1.4	0.4	0.7	0.1	< 0.1	0.3	< 0.1	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	12	< 2	< 100	84	40
HL-051	6	2	0.2	< 0.1	5.6	10.0	1.1	4.1	0.9	0.2	0.7	0.1	0.5	< 0.1	0.3	< 0.1	0.2	< 0.1	11	2	< 100	207	37
HL-752	13	3	0.6	0.2	3.2	6.6	0.7	2.8	0.5	0.2	0.5	< 0.1	0.4	< 0.1	0.3	< 0.1	0.2	< 0.1	27	2	< 100	148	59
HL-753	2	1	< 0.1	< 0.1	0.8	1.1	0.1	0.5	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	9	< 2	< 100	71	26
HL-755	4	3	0.2	0.1	1.8	3.2	0.4	1.6	0.3	< 0.1	0.3	< 0.1	0.2	< 0.1	< 0.1	< 0.1	0.2	< 0.1	13	7	< 100	148	49
HL-756	7	1	0.2	< 0.1	3.8	7.6	1.1	3.9	0.7	0.2	0.5	< 0.1	0.5	< 0.1	0.3	< 0.1	0.3	< 0.1	7	< 2	< 100	120	40
HL-765	47	3	1.2	0.2	26.2	42.9	7.1	24.7	4.6	0.8	3.6	0.5	2.6	0.4	1.3	0.2	1.2	0.2	28	< 2	< 100	313	37
HL-767	9	2	0.3	< 0.1	5.2	11.1	1.2	4.5	0.9	0.2	0.7	< 0.1	0.5	< 0.1	0.3	< 0.1	0.3	< 0.1	7	3	< 100	175	75
HL-768	1	< 1	< 0.1	< 0.1	1.0	1.4	0.2	0.6	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	6	3	< 100	105	47
HL-769	8	4	0.2	0.2	2.9	5.3	0.6	1.9	0.4	< 0.1	0.3	< 0.1	0.2	< 0.1	0.1	< 0.1	0.1	< 0.1	15	< 2	< 100	51	94
HL-771	2	2	0.1	< 0.1	1.2	2.0	0.2	0.8	0.2	< 0.1	0.1	< 0.1	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	9	< 2	< 100	122	43
HL-773	7	2	0.2	< 0.1	5.6	11.1	1.3	5.0	0.9	0.3	0.7	0.1	0.6	0.1	0.3	< 0.1	0.3	< 0.1	11	2	< 100	105	48
HL-774	22	5	0.7	0.2	4.2	7.8	1.0	4.1	0.8	0.2	0.6	0.1	0.6	0.1	0.3	< 0.1	0.3	< 0.1	22	4	< 100	160	69
HL-775	6	2	0.2	< 0.1	3.3	6.3	0.7	2.7	0.5	0.1	0.4	< 0.1	0.4	< 0.1	0.2	< 0.1	0.2	< 0.1	43	4	< 100	151	47

	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS
SAMPLE	Zr	Nb	Hf	Ta	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er	Tm	Yb	Lu	Li	Be	Sc	Mn	Rb
DESCRIPTION	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
HL-776	6	< 1	0.2	< 0.1	2.2	4.4	0.5	2.0	0.4	0.1	0.4	< 0.1	0.3	< 0.1	0.2	< 0.1	0.1	< 0.1	9	< 2	< 100	131	44
HL-777	4	1	0.2	< 0.1	4.3	8.7	1.1	4.1	0.7	0.2	0.6	< 0.1	0.5	< 0.1	0.3	< 0.1	0.3	< 0.1	21	2	< 100	91	41
HL-838	6	1	0.2	< 0.1	3.5	7.4	0.9	3.5	0.7	0.2	0.6	< 0.1	0.4	< 0.1	0.2	< 0.1	0.2	< 0.1	5	< 2	< 100	88	29
HL-839	8	3	0.3	0.2	1.3	2.5	0.3	1.1	0.2	< 0.1	0.2	< 0.1	0.3	< 0.1	0.1	< 0.1	0.1	< 0.1	10	< 2	< 100	130	23
HL-840	4	3	0.1	< 0.1	2.0	2.1	0.2	0.8	0.2	< 0.1	0.1	< 0.1	0.2	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	10	3	< 100	105	25
HL-873	7	3	0.3	< 0.1	2.1	4.4	0.5	1.8	0.3	< 0.1	0.3	< 0.1	0.2	< 0.1	0.1	< 0.1	< 0.1	< 0.1	16	< 2	< 100	449	16
HL-876	4	2	0.2	0.1	2.0	3.3	0.3	3.3	0.6	< 0.1	0.3	< 0.1	0.3	< 0.1	0.1	< 0.1	0.1	< 0.1	9	< 2	< 100	155	15
HL-877	2	< 1	< 0.1	< 0.1	4.5	7.8	1.0	3.6	0.6	0.1	0.6	< 0.1	0.4	< 0.1	0.2	< 0.1	0.2	< 0.1	4	< 2	< 100	69	19
E494912																							
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E494917																							
E494920																							
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E494925																							
NIST 694 Meas																							
NIST 694 Cert																							
DNC-1 Meas																							
DNC-1 Cert																							
GBW 07113 Meas																							
GBW 07113 Cert																							
LKSD-3 Meas																							
LKSD-3 Cert																							
TILL-1 Meas	34	8	1.3	0.5	39.9	142		46.6	9.7	2.3		1.4			3.9		3.6	0.5	18	< 2	< 100	20000	51
TILL-1 Cert	502000	10000	13000	700.0	28000	71000		26000	5900.0	1300.0		1100.0			3600.0		3900.0	600.0	15000	2400.0	13000	1420000	44000
TILL-1 Meas	16	5	0.6	0.3	24.9	76.9		28.4	6.1	1.4		0.9			2.6		2.5	0.4	10	< 2	< 100	17000	38
TILL-1 Cert	502000	10000	13000	700.0	28000	71000		26000	5900.0	1300.0		1100.0			3600.0		3900.0	600.0	15000	2400.0	13000	1420000	44000
TILL-2 Meas	169	28	4.7	2.0	65.8	186		68.9	13.9	3.3		2.0			6.1		6.0	0.9	95	8	< 100	5580	375
TILL-2 Cert	390000	20000	11000	1900.0	44000	98000		36000	7400.0	1000.0		1200.0			3700.0		3700.0	600.0	47000	4000.0	12000	780000	143000
TILL-2 Meas	110	17	3.1	1.2	42.2	119		45.5	10.0	2.1		1.4			4.6		4.3	0.7	54	4	< 100	4820	262
TILL-2 Cert	390000	20000	11000	1900.0	44000	98000		36000	7400.0	1000.0		1200.0			3700.0		3700.0	600.0	47000	4000.0	12000	780000	143000
W-2a Meas																							
W-2a Cert																							
DTS-2b Meas																							
DTS-2b Cert																							
SY-4 Meas																							
SY-4 Cert																							
CTA-AC-1 Meas																							
CTA-AC-1 Cert																							
BIR-1a Meas																							
BIR-1a Cert																							
NCS DC86312 Meas																							
NCS DC86312 Cert																							
NCS DC70009 (GBW07241) Meas																							

	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS
SAMPLE	Zr	Nb	Hf	Ta	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er	Tm	Yb	Lu	Li	Be	Sc	Mn	Rb
DESCRIPTION	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
NCS DC70009 (GBW07241) Cert																							
OREAS 100a (Fusion) Meas																							
OREAS 100a (Fusion) Cert																							
OREAS 101a (Fusion) Meas																							
OREAS 101a (Fusion) Cert																							
JR-1 Meas																							
JR-1 Cert																							
L-STD-4 Meas																							
L-STD-4 Cert																							
L-STD-4 Meas																							
L-STD-4 Cert																							
DMMAS 117 Meas																							
DMMAS 117 Cert																							
HL-755 Orig	4	3	0.2	0.1	1.8	3.2	0.4	1.6	0.3	< 0.1	0.3	< 0.1	0.2	< 0.1	< 0.1	< 0.1	0.2	< 0.1	13	7	< 100	148	49
HL-755 Dup	17	3	0.2	0.1	1.8	3.1	0.4	1.5	0.3	< 0.1	0.2	< 0.1	0.2	< 0.1	0.1	< 0.1	< 0.1	< 0.1	13	9	< 100	141	46
HL-777 Orig	4	1	0.2	< 0.1	4.3	8.7	1.1	4.1	0.7	0.2	0.6	< 0.1	0.5	< 0.1	0.3	< 0.1	0.3	< 0.1	21	2	< 100	91	41
HL-777 Dup	4	1	0.1	< 0.1	3.9	7.9	1.0	3.8	0.7	0.1	0.5	< 0.1	0.4	< 0.1	0.2	< 0.1	0.2	< 0.1	20	< 2	< 100	90	41
E494925 Orig																							
E494925 Dup																							
Method Blank	< 1	< 1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 2	< 2	< 100	< 1	< 1
Method Blank																							
Method Blank																							

Results

	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS
SAMPLE	Sr	Cs	Ba	Ru	Pd	Os	Pt
DESCRIPTION	ppb	ppb	ppb	ppb	ppb	ppb	ppb
HL-003							
HL-004							
HL-005							
HL-006							
HL-007							
HL-008							
HL-009							
HL-010							
HL-011							
HL-034							
HL-035							
HL-036							
HL-037							
HL-038							
HL-041							
HL-042							
HL-044							
HL-045							

	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS
SAMPLE	Sr	Cs	Ba	Ru	Pd	Os	Pt
DESCRIPTION	ppb	ppb	ppb	ppb	ppb	ppb	ppb
HL-046							
HL-052							
HL-053							
HL-054							
HL-055							
HL-056							
HL-057							
HL-059							
HL-060							
HL-061							
HL-063							
HL-064							
HL-066							
HL-757							
HL-758							
HL-759							
HL-760							
HL-761							
HL-762							
HL-763							
HL-764							
HL-766							
HL-772							
HL-778							
HL-779							
HL-780							
HL-781							
HL-782							
HL-783							
HL-784							
HL-785							
HL-786							
HL-787							
HL-788							
HL-789							
HL-790							
HL-791							
HL-792							
HL-794							
HL-830							
HL-831							
HL-832							
HL-833							
HL-834							
HL-835							
HL-836							
HL-837							
HL-842							
HL-843							

	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS
SAMPLE	Sr	Cs	Ba	Ru	Pd	Os	Pt
DESCRIPTION	ppb	ppb	ppb	ppb	ppb	ppb	ppb
HL-844							
HL-845							
HL-846							
HL-847							
HL-848							
HL-860							
HL-861							
HL-862							
HL-863							
HL-864							
HL-865							
HL-866							
HL-867							
HL-868							
HL-869							
HL-870							
HL-872							
HL-875							
HL-878							
HL-879							
HL-880							
HL-881							
HL-882							
HL-883							
HL-884							
HL-885							
HL-886							
HL-887							
HL-039	37	0.1	109	< 1	< 1	< 1	< 1
HL-040	41	0.9	186	< 1	< 1	< 1	< 1
HL-042	146	1.6	377	< 1	< 1	< 1	< 1
HL-047	47	0.2	95	< 1	< 1	< 1	< 1
HL-048	32	0.2	69	< 1	< 1	< 1	< 1
HL-050	37	0.5	56	< 1	< 1	< 1	< 1
HL-051	95	0.2	233	< 1	< 1	< 1	< 1
HL-752	100	0.5	303	< 1	< 1	< 1	< 1
HL-753	18	0.1	126	< 1	< 1	< 1	< 1
HL-755	41	0.2	93	< 1	< 1	< 1	< 1
HL-756	138	0.5	261	< 1	< 1	< 1	< 1
HL-765	152	1.0	247	< 1	< 1	< 1	< 1
HL-767	72	0.4	267	< 1	< 1	< 1	< 1
HL-768	46	1.3	487	< 1	< 1	< 1	< 1
HL-769	50	1.7	87	< 1	< 1	< 1	< 1
HL-771	29	0.4	74	< 1	< 1	< 1	< 1
HL-773	86	0.4	320	< 1	< 1	< 1	< 1
HL-774	129	0.7	339	< 1	< 1	< 1	< 1
HL-775	95	6.9	228	< 1	< 1	< 1	< 1
HL-776	56	0.8	388	< 1	< 1	< 1	< 1
HL-777	188	1.1	258	< 1	< 1	< 1	< 1

	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS
SAMPLE	Sr	Cs	Ba	Ru	Pd	Os	Pt
DESCRIPTION	ppb	ppb	ppb	ppb	ppb	ppb	ppb
HL-838	116	0.3	254	< 1	< 1	< 1	< 1
HL-839	32	0.3	101	< 1	< 1	< 1	< 1
HL-840	42	0.8	79	< 1	< 1	< 1	< 1
HL-873	87	0.4	147	< 1	< 1	< 1	< 1
HL-876	40	0.2	77	< 1	< 1	< 1	< 1
HL-877	83	0.3	137	< 1	< 1	< 1	< 1
E494912							
E494915							
E494916							
E494917							
E494920							
E494921							
E494922							
E494923							
E494924							
E494925							
NIST 694 Meas							
NIST 694 Cert							
DNC-1 Meas							
DNC-1 Cert							
GBW 07113 Meas							
GBW 07113 Cert							
LKSD-3 Meas							
LKSD-3 Cert							
TILL-1 Meas	273	1.4	654				
TILL-1 Cert	291000	1000.0	702000				
TILL-1 Meas	231	0.8	453				
TILL-1 Cert	291000	1000.0	702000				
TILL-2 Meas	520	29.8	973				
TILL-2 Cert	144000	12000	540000				
TILL-2 Meas	455	16.7					
TILL-2 Cert	144000	12000					
W-2a Meas							
W-2a Cert							
DTS-2b Meas							
DTS-2b Cert							
SY-4 Meas							
SY-4 Cert							
CTA-AC-1 Meas							
CTA-AC-1 Cert							
BIR-1a Meas							
BIR-1a Cert							
NCS DC86312 Meas							
NCS DC86312 Cert							
NCS DC70009 (GBW07241) Meas							
NCS DC70009 (GBW07241) Cert							
OREAS 100a (Fusion) Meas							

	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS
SAMPLE	Sr	Cs	Ba	Ru	Pd	Os	Pt
DESCRIPTION	ppb	ppb	ppb	ppb	ppb	ppb	ppb
OREAS 100a (Fusion) Cert							
OREAS 101a (Fusion) Meas							
OREAS 101a (Fusion) Cert							
JR-1 Meas							
JR-1 Cert							
L-STD-4 Meas							
L-STD-4 Cert							
L-STD-4 Meas							
L-STD-4 Cert							
DMMAS 117 Meas							
DMMAS 117 Cert							
HL-755 Orig	41	0.2	93	< 1	< 1	< 1	< 1
HL-755 Dup	40	0.2	93	< 1	< 1	< 1	< 1
HL-777 Orig	188	1.1	258	< 1	< 1	< 1	< 1
HL-777 Dup	183	1.2	250	< 1	< 1	< 1	< 1
E494925 Orig							
E494925 Dup							
Method Blank	< 1	< 0.1	< 1	< 1	< 1	< 1	< 1
Method Blank							
Method Blank							

APPENDIX THREE: Soil Sample Descriptions and Analyses

SAMPLE	Type	Easting	Northing	Layer Thickness (cm)	Sample depth (cm)	Sand %	Colour	Clay %	Organic %	char-coal %	Unit Above/-Type & Thick (cm)	Unit Below Type & Thickness (cm)	Decomposition	Wet/Dry	Terrain	Trees	Comments	Au	Ag	As	Ba	Br	Ca	Co	Cr	Cs	Fe	Hf	Hg	Ir	Mo	Na	Ni	Rb	Sb	Sc	Se	Sr	Ta	Th	U	W	Zn	La	Ce	Nd	Sm	Eu	Tb	Yb	Lu
HL-0003	H	291600	5823100	5	90	0	brown black	0	100	0	peat	boulders	poor	wet	peaty forest	spruce	10% Peat	0.5	1	2	50	15	4.8	2	< 1	0.25	0.17	0.25	0.25	2.5	7	300	5	10	0.2	0.4	1	50	0.25	0.6	4.3	0.5	10	4.9	7	6	0.5	0.1	0.1	0.1	0.05
HL-0004	H	291600	5823075	10	100	0	black	0	100	0	peat	boulders	mod	wet	peaty forest	spruce	5% Peat	0.5	1	2	100	23	4.8	3	3	0.25	0.13	0.25	0.25	2.5	5	400	5	10	0.2	0.6	1	50	0.25	0.5	1.9	0.5	10	2.8	4	1.5	0.3	0.1	0.1	0.05	0.05
HL-0005	H	291600	5823050	10	60	0	brown black	0	100	0	peat	boulders	good	wet	dense trees in bog	spruce tamarak	none	0.5	1	1	100	29	4.6	3	< 1	0.25	0.2	0.25	0.25	2.5	3	500	5	10	0.2	0.8	1	50	0.25	1.1	2.5	0.5	10	7.6	10	5	0.7	0.1	0.1	0.2	0.05
HL-0006	H	291600	5823025	10	30	0	brown black	0	100	0	peat and wood	boulders	mod	wet	peaty forest	spruce	none	0.5	1	0.5	100	15	4.1	2	< 1	0.25	0.08	0.25	0.25	2.5	4	300	5	10	0.05	0.4	1	50	0.25	0.7	0.7	0.5	10	2.4	3	1.5	0.2	0.1	0.1	0.05	0.05
HL-0007	H	291600	5823000	5	70	0	black	0	100	0	peat	boulders	good	wet	peaty forest	spruce alder	none	0.5	1	0.5	100	19	5.1	0.5	< 1	0.25	0.15	0.25	0.25	2.5	4	300	5	10	0.1	0.7	1	50	0.25	1.1	1.2	0.5	10	9.4	12	9	0.9	0.1	0.1	0.2	0.05
HL-0008	H	291600	5822975	15	60	0	black	0	100	0	peat	boulders	good	wet	peaty forest	spruce	none	0.5	1	0.5	100	24	6.2	4	4	0.25	0.22	0.25	0.25	2.5	12	400	5	10	0.2	0.9	1	50	0.25	1.4	5.1	0.5	10	7.6	9	7	0.8	0.1	0.1	0.2	0.05
HL-0009	H	291600	5822950	2	15	0	brown black	0	100	0	peat	frozen	oor/Mod /We	wet	peaty forest	spruce alder	40% peat	0.5	1	6	100	12	4.9	4	5	0.25	1.69	0.25	0.25	2.5	2	400	5	10	0.05	0.8	1	50	0.25	1.6	1.8	0.5	10	9.7	14	6	0.9	0.1	0.1	0.2	0.05
HL-0010	H	291600	5822925	10	45	0	black	0	100	0	peat	unknown	good	wet	peaty forest	spruce	5% peat	0.5	1	2	200	15	4.1	4	7	0.25	0.51	0.25	0.25	2.5	3	1100	5	10	0.3	1.5	1	50	0.25	2.3	2.4	0.5	10	15	18	8	1.5	0.3	0.1	0.2	0.05
HL-0011	H	291600	5822900	10	15	0	black	0	100	0	peat	unknown	mod	wet	peaty forest	alder/spruce	bit rooty	0.5	1	6	200	18	4.1	6	8	0.25	0.97	0.25	0.25	2.5	2	700	5	10	0.2	1.4	1	50	0.25	1.6	2.4	0.5	10	8.9	11	4	1	0.1	0.1	0.2	0.05
HL-0034	H	291700	5822350	3	15	0	black	0	100	0	peat/moss	boulders	good	wet	flat peaty, open	spruce	none	0.5	1	0.5	200	48	5	13	19	0.25	1.44	0.25	0.25	2.5	10	6400	5	10	0.05	4.9	1	50	0.25	7.6	3.3	0.5	10	57.2	82	19	4.4	0.8	0.1	0.5	0.05
HL-0035	H	291700	5822375	4	30	0	black	0	100	0	peat	boulders	mod	wet	peaty, flat	spruce	none	0.5	1	3	200	30	4.5	9	7	0.25	1.02	0.25	0.25	2.5	6	600	5	10	0.3	1.2	1	50	0.25	1.7	0.7	0.5	10	6	9	7	0.7	0.1	0.1	0.2	0.05
HL-0036	H	291700	5822400	15	50	0	brown black	0	100	0	peat	boulders	mod	wet	peaty forest	alder/spruce	between boulders	0.5	1	5	300	25	4.9	24	6	1.9	1.36	0.25	0.25	2.5	4	600	5	10	0.3	1.2	1	50	0.25	1.4	0.4	0.5	10	4.1	7	4	0.6	0.1	0.1	0.3	0.05
HL-0037	H	291700	5822425	>30	20	0	grey-brown	50	50	0	peat	unknown	mod	wet	open peaty	tamarak/spruce	very strange sample	0.5	1	7	200	63	3	10	29	0.25	1.04	0.25	0.25	2.5	5	600	5	10	0.2	3.2	1	50	0.25	6.9	2.5	0.5	10	39.9	71	40	3.9	0.7	0.1	0.4	0.1
HL-0038	H	291700	5822450	10	15	0	black	0	100	0	peat/moss	boulders	good	wet	peaty forest	spruce	between boulders	0.5	1	5	100	45	4.8	8	21	0.25	0.94	0.25	0.25	2.5	0	3700	5	10	0.05	6.6	1	50	0.25	11	4.1	0.5	10	70.2	92	38	7	1	1	0.7	0.1
HL-0041	H	291700	5822525	10	50	0	black	0	100	0	peat	boulders	good	wet	adjacent to outcrop	spruce	some peat	0.5	1	3	600	53	2.4	27	46	2	1.23	0.25	0.25	2.5	12	1100	5	10	0.4	9.6	1	50	0.25	5.9	6.1	0.5	10	65.7	72	65	10.2	1.9	1.4	1.9	0.3
HL-0042	H	291700	5822550	15	20	0	black	0	100	0	peat	sand	good	wet	peaty, flat	alder/spruce	none	0.5	1	7	400	99	5.4	48	68	0.25	1.83	0.25	0.25	2.5	10	7200	5	10	0.2	10.6	1	50	0.25	14.4	5.4	0.5	10	59.9	99	58	7.5	1.3	1.1	1	0.2
HL-0044	H	291700	5822600	5	20	0	brown black	0	100	0	peat	unknown	poor-mod	wet	peat bog	alder/spruce	25% peat	0.5	1	4	200	34	3.6	8	11	1.6	0.86	0.25	0.25	2.5	1	500	5	10	0.1	1.4	1	50	0.25	2.4	0.6	0.5	10	9.8	13	7	1.1	0.1	0.1	0.2	0.05
HL-0045	H	291700	5822625	10	10	0	black	0	100	0	moss	nd with boulde	good	wet	peat bog	tamarak/spruce	none	0.5	1	5	50	35	3.3	7	16	0.25	1.69	0.25	0.25	2.5	5	6500	5	10	0.5	7.6	1	50	0.25	18.9	3.7	0.5	10	106	201	78	10.1	1.7	0.1	0.8	0.2
HL-0046	H	291700	5822650	2	15	0	brown black	0	100	0	peat and roots	boulders	mod	damp	flat, slight slope NE	spruce	lots of rootlets	0.5	1	2	200	21	2.4	8	11	0.25	0.66	1.3	0.25	2.5	1	3400	5	10	0.2	4	1	50	0.25	5.3	2	0.5	40	26.4	43	10	2.7	0.5	0.1	0.8	0.05
HL-0052	H	291700	5822800	15	30	0	black	0	100	0	peat	boulders	good	wet	beat bog	spruce	none	0.5	1	4	200	67	7.6	17	9	0.25	0.45	0.25	0.25	2.5	17	1000	5	10	0.7	2.2	1	50	0.25	2.5	6.6	0.5	10	17.9	23	13	2	0.3	0.1	0.4	0.1
HL-0053	H	291700	5822825	15	35	0	black	0	100	0	peat	unknown	good	wet	peat bog	spruce	none	0.5	1	2	50	43	5.7	8	7	0.25	0.83	0.25	0.25	2.5	10	600	5	10	0.3	2.4	1	50	0.25	4.4	6.8	0.5	10	36	54	21	3.2	0.4	0.2	0.4	0.1
HL-0054	H	291700	5822850	20	40	0	black	0	100	0	peat	unknown	good	wet	peat bog	spruce	none	0.5	1	3	200	19	4.1	6	13	0.25	0.69	0.25	0.25	2.5	0	700	5	10	0.3	2.9	1	50	0.25	3.9	2.6	0.5	10	30.1	32	15	3	0.5	0.1	0.5	0.05
HL-0055	H	291700	5822875	15	40	0	black	0	100	0	peat	unknown	mod-good	wet	peat bog	alder/spruce	10% peat	0.5	1	3	200	14	3.1	0.5	8	0.25	0.75	0.25	0.25	2.5	4	700	5	10	0.1	2.1	1	50	0.25	3.5	1.8	0.5	10	14.4	17	13	1.7	0.2	0.4	0.5	0.05
HL-0056	H	291700	5822900	5	25	0	brown black	0	95	5	peat	boulders	poor	wet	flat peaty, open	tamarak/spruce	30% peat	0.5	1	12	50	37	3.4	6	5	0.25	0.9	0.25	0.25	2.5	1	500	5	10	0.1	1	1	50	0.25	1.3	1.3	0.5	10	5.8	6	5	0.6	0.1	0.1	0.1	0.05
HL-0057	H	291700	5822925	3	15	0	black	0	100	0	peat	boulders	very poor	wet	peat bog	alder/spruce	~50-60% peat	0.5	1	40	100	23	3.6	14	6	2	1.78	0.25	0.25	2.5	0	1400	5	10	0.3	1.1	1	50	0.25	1.4	0.9	0.5	30	8.3	13	6	0.9	0.1	0.1	0.2	0.05
HL-0059	H	291700	5822975	2	10	0	brown black	0	100	0	peat	boulders	mod	wet	peat bog	spruce	none	0.5	1	3	50	14	0.25	11	38	1.7	1.43	0.8	0.25	2.5	0	4900	5	30	0.2	7.9	1	50	0.25	2.2	0.5	0.5	10	10.6	16	6	1.6	0.1	0.1	0.8	0.1
HL-0060	H	291700	5823000	10	40	0	brown black	0	100	0	peat	boulders	very good	wet	peat bog	spruce	between boulders	0.5	1	9	50	21	3.5	19	10	0.25	1.45	0.6	0.25	2.5	8	2300	5	10	0.2	1.7	1	50	0.25	2.4	1.5	0.5	10	9.2	21	7	0.9	0.1	0.1	0.3	0.05
HL-0061	H	291700	5823025	5	30	0	brown black	0	100	0	peat	boulders	good	wet	peat bog	spruce	between boulders	0.5	1	4	50	29	4.4	6	4	0.25	0.87	0.25	0.25	2.5	1	500	5	10	0.2	0.8	1	50	0.25	0.9	0.4	0.5	10	3	5	1.5	0.5	0.1	0.1	0.2	0.05
HL-0063	H	291700	5823075	5	50	0	brown black	0	100	0	peat	boulders	mod	wet	peat bog	spruce	5% peat	0.5	1	1	50	15	3.8	3	7	0.9	0.37	0.9	0.25	2.5	0	1100	5	10	0.1	1.7	1	50	0.25	1.2	0.9	0.5	10	4.7	8	5	0.6	0.1	0.1	0.3	0.05
HL-0064	H	291700	5823100	15	30	0	black	0	100	0	peat	boulders	good	wet	peat bog	spruce	none	1	1	2	50	18	3.6	3	6	0.5	0.51	0.25	0.25	2.5	0	700	5	10	0.1	1.1	1	50	0.25	1.2	0.8	0.5	10	3.2	7	5	0.5	0.1	0.1	0.2	0.05
HL-0066	H	291700	5823150	15	25	0	black	0	100	0	peat and roots	bedrock	good	wet	peat bog	alder/spruce	5% peat	0.5	1	2	50	19	3.4	17	22	0.25	0.84	0.25	0.25	2.5	0	1000	5	10	0.4	7.2	1	50	0.25	16.1	1.8	0.5	10	73.1	102	52	6.9	1.1	0.1	1	0.1
HL-0233	H	292300	5822300	10	40	0	black	0	100	0	peat	boulders	good	wet	flat peaty	spruce	none	0.5	1	7	400	52	2.4	28	37	0.2	1.11	0.2	0.2	2.5	4	1100	5	10	0.7	4.1	1	50	0.2	4.4	4.4	0.5	10	32	43	28	2.9	0.7	0.1	0.8	0.2
HL-0234	H	292300	5822325	10	50	0	black	0	100	0	peat	boulders	mod	wet	flat peaty	spruce	none	0.5	1	5	50	53	2.8	56	75	0.2	1.39	1.3	0.2	2.5	7	2200	5	10	0.6	6	1	50	0.2	8.5	8.4	0.5	10	49	87	49	4.1	0.8	0.1	1	0.3
HL-0235	H	292300	5822350	5	15	5	black	0	95	0	peat	sand	good	damp	flat boggy	spruce	none	0.5	1	3	400	29	0.2	23	85	6.4	1.3	1.9	0.2	2.5	3	5300	5	10	0.05	7.7	1	50	0.2	10.6	3.2	0.5	10	56	72	29	4.6	1.2	1.1	1.2	0.3
HL-0236	H	292300	5822375	10	30	0	black	0	100	0	peat	boulders	mod	wet	flat boggy	spruce	none	0.5	1	66	800	32	4.7	66	33	0.2	6.07	0.2	0.2	2.5	12	1600	5	10	0.5	3.4	1	50	0.2	5.8	9.9	0.5	10	54	118	27	4.8	1.3	0.1	1	0.3
HL-0237	H	292300	5822400	10	30	0	black brown	0	100	0	peat	peat	poor	wet	flat boggy	spruce	none	0.5	1	9	300	49	4.6	15	42	0.2	1.46	0.2	0.2	2.5	4	400	5	10	0.05	3.8	1	50	0.2	4.4	3.3	0.5	10	27	22	43	2.4	0.5	0.1	0.9	0.1
HL-0238	H	292300	5822425	10	35	0	black brown	0	100	0	peat	peat	poor	wet	flat boggy	spruce	none	0.5	1	7	300	27	5.5	8	5	0.2	1.14	0.2	0.2	2.5	0	400	5	10	0.05	0.9	1	50	0.2	1.1	0.05	0.5	10	4	13	1.5	0.5	0.1	0.1	0.3	0.05
HL-0239	H	292300	5822450	7	50	0	black brown	0	100	0	peat	frozen	poor	wet	flat boggy	spruce	5% peat	0.5	1	16	200	43	3.8	10	7	0.2	1.84	0.2	0.2	2.5	0	500	5	10	0.3	0.9	1	50	0.2	1.1	0.05	0.5	10	6	10	1.5	0.6	0.1	0.1	0.05	0.05
HL-0240	H	292300	5822475	5	25	0	black brown	10	90	0	peat	bedrock	poor	wet	flat boggy	spruce	none	0.5	1	31	300	45	4.9	20	28	0.2	2.33	0.2	0.2	2.5	0	1500	5	10	0.4	1.5	1	50	0.2	2.7	0.05	0.5	40	15	26	1.5	1.5	0.1	0.1	0.6	0.05
HL-0241	H	292300	5822500	5	15	1	black brown	0	100	0	peat	boulders	poor	wet	rounded due to outcrop	spruce	slope due to an outcrop	0.5	1	10	300	28	4.5	4	23	1.7	1.6	2.2	0.2	2.5	0	9200	5	10	0.7	3.4	1	50	0.2	7.1	1.3	0.5	10	31	35	19	2.8	0.2	0.1	1.1	0.05
HL-0242	H	292300	5822525	20	50	0	black brown	0	100	0	peat	boulders	poor	wet	flat boggy	spruce	none	0.5	1	3	300	30	4	6	15	1.4	0.91	0.2	0.2	2.5	3	1200	5	10	0.3	2.7	1	50	0.2	4.6	2.5	0.5	10	29	37	21	2.9	0.6	0.5	0.5	0.05
HL-0243	H	292300	5822550	10	30	0	brown black	0	100	0	peat	unknown	poor	wet	flat boggy	spruce	none	0.5	1	2	100	24	3.6	9	8	1	0.62	0.2	0.2	2.5	1	400	5	10	0.3	1	1	50	0.2	1.6	1.5	0.5	20	11	18	10	1.1	0.2	0.1	0.2	0.05
HL-0246	H	292300	5822625	3	10	0	black	0	100	0	peat/roots	bedrock	good	damp	top of slope, flat	spruce	none	0.5	1	9	200	18	2.2	22	400	3.1	1.3	0.8	0.2	2.5	0	1200	5	10	0.2	10.6	1	50	0.2	2.2	0.7	0.5	10	9	12	4	1.1	0.1	0.1	0.6	0.05
HL-0247	H	292300	5822650	15	30	0	black	0	100	0	peat	sand	good	damp	slope up to S	lots of spruce	bits of wood	0.5	1	22	200	45	4.8	60	99	3.1	1.81	0.2	0.2	2.5	2	1200	5	10	0.1	14.9	1	50	0.2	6	3	0.5	10	59	69	39	5.5	0.9	0.1	1.4	0.2
HL-0248	H	292300	5822675	10	40	0	black brown	7	93	0	peat/moss	unknown	mod-good	wet	flat swampy with slope to S	spruce	none	0.5	1	8	50	37	3.6	15	38	5.5	1.4	0.2	0.2	2.5	3	1100	5	10	0.3	6.1	1	50	0.2	6.1	4.3	0.5	10	64	84	44	6	1	0.1	0.9	0.1
HL-0289	H	292400	5822625	10	40	2	black	0	100	0	peat	boulders	good	wet	flat peaty bog	spruce	boulders	0.5	1	3	200	51	6	13	56	0.2	1.59	0.7	0.2	2.5	5	3400	5	10	0.3	7.9	1	50	0.2	10.2	9.2	0.5	10	95	100	44	8.6	1.3	1.2	0.9	0.3
HL-0291	H	292400	5822575	10	40	0	black brown	0	100	0	peat	boulders	good	wet	flat peaty bog	spruce	none	0.5	1	7	200	30	4.7	15	15	2	0.95	0.2	0.2	2.5	3	800	5	10	0.3	2.7	1	50	0.2	4.9	3.1	0.5	10	25	39	17	2.6	0.5	0.1	0.4	0.05
HL-0292	H	292400	5822550	10	40	0	black brown	0	100	0	peat	unknown	mod	damp	flat peaty bog	spruce	none	0.5	1	5	200	19	4.4	11	4	0.2	0.42	0.2	0.2	2.5	4	500	5	10	0.2	0.8	1	50	0.2	0.9	0.9	0.5	10	7	9	3	0.8	0.1	0.1	0.3	0.05
HL-0293	H	292400	5822525	10	50	0	black brown	0	100	0	peat	unknown	mod	wet	flat peaty bog	spruce	5% peat	0.5	1	20	200	20	4.7	33	7	0.2	1.19	0.2	0.2	2.5	3	400	5	10	0.2	1.4	1	50	0.2	1.8	1.3	0.5	30	12	24	12	1.4	0.1	0.1	0.2	0.05
HL-0294	H	292400	5822500	4	50	0	brown-black	0	100	0	50cm peat	peat	poor-mod	wet	flat peaty bog	spruce	none	0.5	1	5	300	17	4.8	11	10	1.3	0.8	0.2	0.2	2.5	1	700	5	10	0.3	1.7	1	50	0.2	2.2	1	0.5	10	13	20	14	1.8	0.4	0.3	0.3	0.05
HL-0295	H	292400	5822475	>10	30	0	black	0	100	0	peat	unknown	mod-good	wet	flat peaty bog	spruce	none	0.5	1	7	300	17	4.3	13	8	1.2	1.03	0.2	0.2	2.5	0	500	5	10	0.2	1.3	1	50	0.2	1.6	0.5	0.5	10	7	10	7	0.9	0.1	0.1	0.3	0.05
HL-0299	H	292400	5822375	10	15	0	black	0	100	0	15cm peat	sand	mod-good	damp	flat dry moving into peat woods	spruce	none	0.5	1	18	300	30	5.4	73	427	6.7	5.01	2.6	0.2	2.5	8	20400	5	10	0.5	15.1	1	50	0.2	5.9	1.9	0.5	10	24	34	14	3	1.2	0.1	0.9	0.05
HL-0303	H	292400	5822275	15	15	2	black brown	0	98	0	1cm moss	boulder till	mod	damp	flat dry dead forest	spruce	none	0.5	1	4	300	23	3.6	28	116	3	1.76	3.7	0.2	2.5	0	17800	5	30	0.4	10.2	1	50	0.2	6.4	2.2	0.5	10	41	51	14	4.1	1.3	0.1	1.1	0.2
HL-0413	H	292800	5822600	10	30	0	black	0	100	0	peat	?	M-G	W	flat	spruce		0.5	1	2	100	40	7.3	5	23	1.9	0.49	0.2	0.2	2.5	1	800	5	10	1	1.8	1	50	0.2	1.9	0.8	0.5	10	10	11	11	1.2	0.2	0.1	0.4	0.05
HL-0416	H	292800	5822525	5	30	0	cblack	5	95	0	peat	rocks	Gooey	W	flat	spruce/willows		0.5	1	28	400	17	3.9	21	169	6.5	2.52	2.5	0.2	2.5	2	16800	5	10	0.5	11.7	1	50	0.2	14.6	8.4	0.5	10	51	71	17	5.3	1.7	0.1	0.8	0.2
HL-0436	H	292900	5822300	5	15	3	grey-black	5	92	0	moss 10	boulders	G	D	slight slope up to south	spruce		0.5	1	2	300	14	0.2	13	81	4	1.69	4.7	0.2	2.5	0	17400	5	40	0.3	8.5	1	50	0.2	9.5	1.5	0.5	10	49	74	15	3.9	0.7	0.1	0.8	0.1
HL-0437	H	292900	5822325	10	30	0	black	2	98	0	peat 30	boulders	G	D	flat	spruce		0.5	1	2	200	35	7	23	49	2.4	1.24	0.2	0.2	2.5	4	4000	5	10	0.2	5.2	1	50	0.2	6.4	2.6	0.5	10	31	45	12	2.9	0.7	0.1	0.7	0.05
HL-0441	H	292900	5822425	10	30	0	Black	5	95	0	peat 30	sand	G	W	slight slope up to south	spruce/willows	gooey (lake sed or humus?)	0.5	1	8	400	16	4.8	26	69	8.3	3.47	2.7	0.2	2.5	4	7700	5	70	0.2	7.8	1	50	0.2	8.4	5.4	0.5	60	30	55	15	3.4	0.7	0.1	0.8	0.1
HL-0442	H	292900	5822450	5	15	2	grey-black	5	93	0	moss 10	sand	G	M	slight slope up to south	spruce		0.5	1	15	200	13	5.7	21	70	4.1	2.33	1.9	0.2	2.5	0	7300	5	10	0.1	5.4	1	50	0.2	2.8	1.2	0.5	60	12	18	10	1.4	0.5	0.1	0.8	0.05
HL-0443	H	292900	5822475	5	10	0	grey	0	100	0	moss 10	boulders	P	D	slight slope up to south	spruce	poor humus	0.5	1	70	500	20	5.4	28	72	10.8	3.39	2.9	0.2	2.5	0	9500	5	60	0.6	7.3	1	50	0.2	8.4	1.8	0.5	50	25	48	20	2.8	0.6	0.1	0.8	0.05
HL-0445	H	292900	5822525	5	15	0	Black	5	95	0	moss 10	?	G	D	flat	spruce		0.5	1	25	400	26	0.2	14	55	3.7	3.31	0.2	0.2	2.5	10	6000	5	10	0.3	8.8	1	50	0.2	14.1	8.9	0.5	10	74	108	37	7.8	1.4	0.1	1.5	0.4
HL-0446	H	292900	5822550	10	15	0	Black	2	98	0	moss 10	?	G	M	flat	spruce	water holes	0.5	1	25	300	26	3.8	14	55	5.8	1.92	3.3	0.2	2.5	9	6000	5	10	0.2	7.2	1	50	0.2	10.1	13.6	0.5	10	54	68	33	5.6	0.9	0.1	1	0.3
HL-0449	H	292900	5822625	10	50	0	Black	0	100	0	peat 45	?	G	W	flat	spruce	thick moss	0.5	1	2	100	27	7.6	2	8	0.2	0.27	0.2	0.2	2.5	3	700	5	10	0.4	0.9	1	50	0.2	1	2.1	0.5	30	6	10	5	0.7	0.1	0.1	0.2	0.05
HL-0450	H	292900	5822650	10	30	0	Black	2	98	0	peat 30	?	G	M	flat	spruce		0.5	1	1	200	27	6.6	5	9	0.2	0.36	0.5	0.2	2.5	1	700	5	10	0.3	1.5	1	50	0.2	2.4	1.2	0.5	10	6	9	5	0.8	0.1	0.1	0.4	0.05
HL-0451	H	292900	5822675	20	25	0	Black	0	100	0	moss peat 15	?	G	D	flat	spruce	thick moss	0.5	1	1	50	18	6.8	3	10	0.2	0.37	0.2	0.2	2.5	2	700	5	10	0.5	1.4	1	50	0.2	1.9	0.9	0.5	10	6	8	9	0.8	0.1	0.1	0.3	0.05
HL-0757	H	293900	5822873	1	45	0	brown-black	0	100	0	moss	boulders	good	wet	flat swamp	tamarak/spruce	small but good	0.5	1	3	200	13	2.2	3	13	0.8	0.63	1.6	0.25	2.5	4	6700	5	20	0.2	2.3	1	50	0.25	5.9	3.5	0.5	10	24.3	47	10	2.1	0.1	0.1	0.3	0.05
HL-0758	H	293900	5822900	20	100	0	brown-black	0	100	0	peat	water	mod	wet	flat swamp	spruce	none	0.5	1	1	50	28	6	0.5	2	0.25	0.32	0.25	0.25	2.5	2	500	5	10	0.1	0.7	1	50	0.25	0.6	0.05	0.5	10	2.7	8	1.5	0.4	0.1	0.1	0.05	0.05
HL-0759	H	293900	5822925	20	15	0	black	0	100	0	peat	water	mod	wet	flat swamp	spruce	none	0.5	1	3	200	27	6.2	5	4	0.25	0.76	0.25	0.25	2.5	0	600	5	10	0.1	0.9	1	50	0.25	0.8	0.05	0.5	10	3.1	9	4	0.4	0.1	0.1	0.2	0.05
HL-0760	H	294070	5822923	<2	15	0	black brown	0	100	0	peat	peat	poor	wet	flat/swamp	spruce	poor sample, 40% peat	4	1	1	50	26	5.8	2	3	0.25	0.17	0.25	0.25	2.5	0	500	5	10	0.2	0.7	1	50	0.25	0.6	0.05	0.5	10	2.2	4	1.5	0.3	0.1	0.1	0.2	0.05
HL-0761	H	294071	5822897	<3	20	0	brown-black	0	100	0	peat	peat	poor	wet	flat/swamp	tamarak/spruce	poor sample, 35% peat	0.5	1	2	50	14	4.4	2	4	0.25	0.19	0.25	0.25	2.5	2	700	5	10	0.3	0.8	1	50	0.25	0.5	0.05	0.5	30	2.2	6	1.5	0.3	0.1	0.1	0.2	0.05
HL-0762	H	294069	5822873	<5	20	0	brown-black		100	0	peat	peat	poor	wet	flat/swamp	tamarak/spruce	poor sample, 30% peat	0.5	1	3	50	19	5.8	3	4	0.25	0.22	0.25	0.25	2.5	2	600	5	10	0.4	0.7	1	50	0.25	0.6	0.05	0.5	40	2.3	4	3	0.4	0.1	0.1	0.2	0.05
HL-0763	H	294067	5822848	5	40	0	brown-black	0	100	0	moss40	moss	poor	wet	flat/swamp	alder/spruce	poor sample, 30% peat	0.5	1	3	50	25	5.1	3	5	0.25	0.18	0.25	0.25	2.5	2	600	5	10	0.5	0.7	1	50	0.25	0.25	0.6	0.5	10	2.2	4	5	0.3	0.1	0.1	0.1	0.05
HL-0764	H	294063	5822825	4	80	0	brown-black	0	100	0	moss 80	boulders	mod	wet	flat/swamp	tamarak/spruce	poor sample, 35% peat	0.5	1	1	50	13	2.7	0.5	3	0.25	0.25	0.25	0.25	2.5	3	800	5	10	0.05	1	1	50	0.25	1.5	1.4	0.5	10	5.9	11	4	0.6	0.1	0.1	0.2	0.05
HL-0766	H	294059	5822774	5	25	0	black	0	100	0	moss/peat	boulders	good	dry	flat	spruce	<5% peat	0.5	1	0.5	100	27	7.5	4	8	0.25	0.41	0.25	0.25	2.5	1	1500	5	10	0.1	1.8	1	50	0.25	2.1	1.5	0.5	10	10	17	7	1.2	0.1	0.1	0.3	0.05
HL-0772	H	294044	5822626	1	<5	0	brown-black	0	85	0	moss	boulders	mod	dry	flat, dry	balsam	thin layer, 15% peat	0.5	1	3	300	13	0.25	14	14	0.25	0.55	2.4	0.25	2.5	0	9800	5	10	0.7	2.7	1	50	0.25	1.6	0.6	0.5	10	8.5	15	6	1	0.1	0.1	0.5	0.05
HL-0778	H	294034	5822476	60	100	0	black	0	100	0	peat 100	unknown	good	wet	flat	tamarak/spruce	good, 1% peat	0.5	1	0.5	200	22	3.6	9	12	1.1	1.34	0.25	0.25	2.5	4	700	5	10	0.2	3.3	1	50	0.25	7.2	2.7	0.5	10	27.4	56	28	2.8	0.5	0.1	0.5	0.05
HL-0779	H	294031	5822451	85	15	0	black	0	100	0	peat 15	unknown	good	dry	flat	spruce	good, 1% peat	0.5	1	3	200	36	3.4	7	10	0.25	0.69	0.25	0.25	2.5	4	900	5	10	0.5	2.6	1	50	0.25	3.3	5.4	0.5	10	35.8	63	22	3.6	0.5	0.6	0.6	0.05
HL-0780	H	294030	5822425	20	15	0	black	0	100	0	peat15	peat	good	wet	flat/swamp	spruce	good sample 10% peat, on claim	0.5	1	6	100	24	3.2	16	5	0.25	1.77	0.25	0.25	2.5	1	900	5	10	0.4	1.7	1	50	0.25	1.9	1	0.5	10	12.7	22	8	1.3	0.2	0.1	0.3	0.05
HL-0781	H	294027	5822400	5	5	0	brown-black	0	100	0	moss 5	peat	poor-mod	wet	flat	spruce	thin layer with roots, 25% peat	0.5	1	3	100	20	3.3	3	7	0.25	0.77	0.25	0.25	2.5	4	700	5	10	0.1	1.6	1	50	0.25	1.8	1.7	0.5	10	7.4	15	14	0.9	0.1	0.1	0.3	0.05
HL-0782	H	294025	5822376	10	30	0	brown-black	0	100	0	peat 30	boulders	good	wet	flat/swamp	spruce	decent, 25% peat	0.5	1	4	100	26	4.1	3	4	0.25	1.29	0.25	0.25	2.5	4	400	5	10	0.1	0.9	1	50	0.25	1.2	0.9	0.5	10	3	6	4	0.4	0.1	0.1	0.1	0.05
HL-0783	H	294024	5822351	5	35	0	black	0	100	0	peat 35	peat	mod	wet	flat	birch/spruce	decent, 5% peat	0.5	1	1	100	22	2.4	2	5	0.7	0.38	0.8	0.25	2.5	7	900	5	10	0.2	1.5	1	50	0.25	1.5	0.9	0.5	10	4.3	8	1.5	0.6	0.1	0.1	0.3	0.05
HL-0784	H	294021	5822325	100	10	0	black	0	100	0	moss 10	unknown	good	dry	flat	birch/spruce	decent, 5-10% peat	0.5	1	1	50	30	3.7	3	5	0.25	0.36	0.25	0.25	2.5	5	400	5	10	0.2	0.8	1	50	0.25	1.2	0.05	0.5	10	2.9	4	1.5	0.4	0.1	0.1	0.2	0.05
HL-0785	H	294021	5822303	5	100	0	brown-black	15	85	0	peat 100	peat	mod	wet	flat/swamp	spruce	decent sample, 5% peat	0.5	1	1	50	52	2.9	4	4	0.25	0.28	0.25	0.25	2.5	2	400	5	10	0.05	0.8	1	50	0.25	0.7	0.05	0.5	10	2.3	5	7	0.4	0.1	0.1	0.2	0.05
HL-0786	H	294017	5822275	50	25	0	black	0	99	1	peat 25	peat	good	dry	mossy spruce stand	spruce	good sample 2% peat	0.5	1	4	100	30	4.4	5	7	0.25	0.5	0.25	0.25	2.5	2	600	5	10	0.1	1.5	1	50	0.25	1.7	0.4	0.5	10	3.5	2	5	0.6	0.1	0.1	0.2	0.05
HL-0787	H	294015	5822235	50	25	0	black	0	95	5	peat 25	peat	good	wet	mossy spruce stand	spruce	good sample, 5% peat	0.5	1	6	50	21	3.5	6	8	0.6	1.15	0.25	0.25	2.5	0	600	5	10	0.1	0.9	1	50	0.25	1.1	0.4	0.5	10	4.7	7	1.5	0.6	0.1	0.1	0.2	0.05
HL-0788	H	294014	5822228	20	60	0	brown-black	5	95	0	peat 60	boulders	good	wet	mossy spruce stand	spruce	good sample, 5% peat	0.5	1	3	50	35	1.7	7	11	0.25	0.37	0.25	0.25	2.5	1	500	5	10	0.1	1.7	1	50	0.25	2.4	1.2	0.5	10	14.2	22	9	1.5	0.2	0.1	0.4	0.05
HL-0789	H	294011	5822203	>80	20	0	black	0	100	0	peat 20cm	unknown	good	wet	small spruce with labrador tea	spruce	good sample 2% peat	0.5	1	3	300	64	5.8	20	16	0.25	0.68	0.25	0.25	2.5	10	600	5	10	0.6	2.2	1	50	0.25	3.1	2.7	0.5	10	16.9	36	10	1.8	0.3	0.1	0.4	0.05
HL-0790	H	294009	5822176	15	45	0	black	0	100	0	peat 45	roots	good	wet	small spruce with labrador tea	spruce	good sample, 5% peat	0.5	1	2	200	46	5.5	10	22	0.25	0.62	0.25	0.25	2.5	10	900	5	10	0.3	3.7	1	50	0.25	5.8	4.5	0.5	10	34.7	68	28	3.6	0.5	0.1	0.6	0.05
HL-0791	H	294005	5822151	2	100	0	brown-black	0	100	0	peat 1m	roots and boul	poor	wet	small spruce with labrador tea	spruce	poor sample with very thin layer	0.5	1	4	100	17	3.1	16	2	0.25	0.51	0.25	0.25	2.5	3	500	5	10	0.3	0.6	1	50	0.25	0.6	0.7	0.5	20	6.1	19	4	0.6	0.1	0.1	0.2	0.05
HL-0792	H	294001	5822127	20	100	0	brown-black	0	95	5	peat 1m	roots	poor	wet	mossy labrador tea with spruce	spruce	poor sample, 45% peat	0.5	1	3	50	14	2.9	6	4	0.25	0.54	0.25	0.25	2.5	6	300	5	10	0.3	0.5	1	50	0.25	0.6	0.5	0.5	20	4.8	9	4	0.5	0.1	0.1	0.05	0.05
HL-0794	H	294001	5822074	20	40	0	black	0	100	0	peat 40cm	boulders	good	wet	mossy spruce stand	spruce	muddy, 10% peat	0.5	1	5	100	35	5.5	5	5	0.25	0.46	0.25	0.25	2.5	2	300	5	10	0.3	0.6	1	50	0.25	0.7	0.05	0.5	30	5.4	8	1.5	0.6	0.1	0.1	0.2	0.05
HL-0830	H	294200	5822800	20	30	0	brown-black	0	100	0	peat	rotten wood	poor	wet	flat peaty near lake	spruce	30% peat	0.5	1	2	50	31	3.6	5	5	0.25	0.47	0.25	0.25	2.5	0	400	5	10	0.1	0.5	1	50	0.25	1	0.05	0.5	10	2.1	3	1.5	0.3	0.1	0.1	0.05	0.05
HL-0831	H	294200	5822775	15	30	0	brown-black	0	100	0	peat	peat	poor	wet	flat peaty near lake	spruce	40% peat	0.5	1	2	100	30	5.8	3	4	0.25	0.39	0.25	0.25	2.5	1	500	5	10	0.3	0.6	1	50	0.25	0.6	0.5	0.5	10	1.8	4	6	0.3	0.1	0.1	0.2	0.05
HL-0832	H	294200	5822750	10	20	0	black	0	100	0	peat	boulder	mod-good	wet	flat peaty forest	spruce	5% peat	0.5	1	7	400	49	6.9	21	4	0.25	0.94	0.25	0.25	2.5	2	400	5	10	0.2	0.4	1	50	0.25	0.25	0.05	0.5	60	1.7	4	1.5	0.2	0.1	0.1	0.05	0.05
HL-0833	H	294200	5822725	15	30	0	black	0	100	0	peat	peat	poor-mod	wet	flat peaty forest	spruce	20% peat	0.5	1	4	200	61	6.2	7	6	0.25	0.32	0.5	0.25	2.5	0	800	5	10	0.5	1	1	50	0.25	0.9	0.5	0.5	10	3.3	5	8	0.4	0.1	0.1	0.2	0.05
HL-0834	H	294200	5822700	10	60	0	black	0	100	0	peat	boulder	mod	wet	flat peaty forest	spruce	10% peat	0.5	1	3	100	31	6.2	82	192	0.25	1.13	0.25	0.25	2.5	11	500	5	10	0.4	2.1	1	50	0.25	1.1	11	0.5	10	4.9	9	1.5	0.6	0.3	0.1	0.05	0.05
HL-0835	H	294200	5822675	5	50	0	al	0	100	0	peat	boulder	good	wet	slope up to E	spruce	none	0.5	1	2	200	55	8.8	7	14	0.25	0.37	0.25	0.25	2.5	17	600	5	10	0.5	1.1	4	50	0.25	1.7	13.2	0.5	10	6	10	12	0.8	0.3	0.1	0.05	0.05
HL-0836	H	294200	5822650	10	30	0	black	0	100	0	peat	boulder	good	wet	slight slope up to E	spruce	none	0.5	1	2	200	55	9	7	18	0.25	0.52	0.25	0.25	2.5	11	900	5	10	0.6	2.4	1	50	0.25	3.2	12.3	0.5	10	17.6	21	20	1.8	0.3	0.1	0.5	0.3
HL-0837	H	294200	5822625	5	10	0	black	0	100	0	peat	boulder	good	damp	higher flat open ridge	tamarak and spruce	none	0.5	1	2	300	21	5.9	10	57	2.8	1.53	2	0.25	2.5	0	19000	5	10	0.05	4.4	1	50	0.25	5.5	2.1	0.5	10	24.6	38	14	2.7	0.1	0.1	0.6	0.05
HL-0842	H	294200	5822500	15	20	0	brown-black	0	100	0	peat	boulder	mod	damp	higher grounds	spruce	none	0.5	1	5	300	67	5.8	14	21	1.3	1.32	0.25	0.25	2.5	2	700	5	10	0.4	3	1	50	0.25	4.1	4.3	0.5	10	32.6	42	28	3.6	0.5	0.1	0.8	0.1
HL-0843	H	294200	5822475	10	15	0	black	0	100	0	few cm moss	humus	mod-good	wet	higher grounds	alder/spruce	none	0.5	1	259	1100	54	6.4	50	54	0.25	10.5	0.25	0.25	2.5	89	4200	5	10	0.05	3.6	1	50	0.25	4.9	6	0.5	10	18.2	41	17	2.4	0.1	0.1	0.6	0.05
HL-0844	H	294197	5822447	5	25	0	black	0	10	0	peat	boulder	poor-mod	wet	open tall peaty forest	birch/spruce	20% peat	0.5	1	74	800	44	5.4	14	25	0.25	3.64	1.4	0.25	2.5	30	4300	5	10	0.4	2.4	1	50	0.25	3.9	1.6	0.5	10	9.7	22	13	1.4	0.1	0.1	0.4	0.05
HL-0845	H	294200	5822425	10	5	5	black	0	95	0	peat	boulder/sand	mod	damp	open tall peaty forest	spruce	none	0.5	1	133	500	26	5.3	34	26	2.6	5.54	1.3	0.25	2.5	17	4600	5	10	0.5	3.5	1	50	0.25	5	0.8	0.5	10	10.6	19	1.5	1.3	0.1	0.1	0.5	0.05
HL-0846	H	294200	5822400	5	30	0	brown-black	0	100	0	peat and roots	boulder	poor-mod	wet	open tall peaty forest	spruce	30% wood debris	0.5	1	7	200	34	5.2	8	10	2.3	0.91	0.6	0.25	2.5	4	1400	5	10	0.2	1.6	1	50	0.25	2.1	1.3	0.5	10	11.9	18	7	1.5	0.1	0.1	0.5	0.05
HL-0847	H	294200	5822375	20	10	0	black	0	100	0	thin moss	rotten wood	mod-good	wet	open tall peaty forest	birch/spruce	none	0.5	1	7	200	36	5.8	7	16	2.9	1.49	1.3	0.25	2.5	13	1600	5	10	0.3	3.4	1	50	0.25	5.3	5.8	0.5	10	22	41	16	2.8	0.4	0.1	0.6	0.2
HL-0848	H	294200	5822350	20	15	0	black	0	100	0	thin moss	unknown	mod	wet	less open	alder/spruce	some roots	0.5	1	11	100	37	2.6	5	19	0.25	2.01	1	0.25	2.5	4	1700	5	30	0.2	3.5	1	50	0.25	4.8	3	0.5	10	14.8	21	11	1.7	0.6	0.1	0.7	0.05
HL-0860	H	294300	5822000	10	20	0	brown-black	0	100	0	peat and roots	unknown	poor	wet	peat bog	alder/spruce	water surrounding	0.5	1	5	50	37	6	5	5	0.25	0.8	0.25	0.25	2.5	0	600	5	30	0.2	0.8	1	50	0.25	0.9	0.8	0.5	10	5.8	6	4	0.6	0.1	0.1	0.05	0.05
HL-0861	H	294300	5822025	15	50	0	brown-black	0	100	0	peat and roots	peat	poor	wet	peat bog	alder/spruce	20% peat	0.5	1	1	100	19	4.8	0.5	2	0.25	0.21	0.25	0.25	2.5	3	400	5	10	0.05	0.4	1	50	0.25	0.25	0.05	0.5	10	1.7	4	1.5	0.2	0.1	0.1	0.05	0.05
HL-0862	H	294300	5822050	10	50	0	black	0	100	0	peat	unknown	mod	wet	peat forest	spruce	5% peat	0.5	1	1	200	28	6.5	5	11	1	0.41	0.25	0.25	2.5	2	600	5	10	0.1	1.2	1	50	0.25	1.2	0.05	0.5	10	4.1	7	7	0.7	0.1	0.1	0.2	0.05
HL-0863	H	294300	5822075	10	40	0	brown-black	0	100	0	peat	unknown	poor-mod	wet	peat forest	alder/spruce	10% peat	0.5	1	2	50	29	5.1	3	7	0.25	0.69	0.7	0.25	2.5	0	600	5	10	0.2	1.5	1	50	0.25	1.4	0.7	0.5	10	4.3	6	1.5	0.7	0.1	0.1	0.4	0.05
HL-0864	H	294300	5822100	15	30	0	brown-black	0	100	0	peat	unknown	poor-mod	wet	peat forest	spruce	15% peat	0.5	1	3	200	33	3.6	3	10	1.8	0.78	0.6	0.25	2.5	0	1200	5	10	0.1	2.6	1	50	0.25	2.4	1.2	0.5	10	6.5	11	5	0.9	0.1	0.1	0.4	0.05
HL-0865	H	294300	5822125	15	20	0	brown-black	0	100	0	peat and roots	unknown	mod-good	damp	peat forest	spruce	5% wood debris	0.5	1	1	50	28	3.9	3	8	0.25	0.27	0.25	0.25	2.5	2	600	5	10	0.05	1.2	1	50	0.25	1.4	0.2	0.5	10	3.2	8	1.5	0.5	0.1	0.1	0.2	0.05
HL-0866	H	294300	5822150	10	15	0	brown-black	0	100	0	peat	unknown	mod	damp	peat forest	spruce	5% peat	0.5	1	3	100	37	3.8	4	10	0.7	0.58	1	0.25	2.5	5	1300	5	10	0.1	2.5	1	50	0.25	2.9	1.1	0.5	10	6.8	11	6	0.9	0.1	0.1	0.5	0.05
HL-0867	H	294300	5822175	10	20	0	black	0	100	0	peat	unknown	mod-good	wet	peat forest	spruce	none	0.5	1	8	200	33	4.7	8	19	2	1.17	1	0.25	2.5	1	1300	5	10	0.3	2.6	1	50	0.25	4.1	1.2	0.5	10	10.7	16	10	1.5	0.1	0.1	0.5	0.05
HL-0868	H	294300	5822200	10	40	0	brown-black	0	100	0	peat	unknown	poor-mod	wet	peat forest	alder/spruce	10% peat	0.5	1	13	200	24	4.5	8	7	0.8	1.15	0.25	0.25	2.5	7	1000	5	10	0.4	1.2	1	50	0.25	2.2	1.2	0.5	10	6.3	13	1.5	0.9	0.1	0.1	0.3	0.05
HL-0869	H	294300	5822225	10	15	0	black	0	100	0	moss	unknown	good	wet	peat forest	spruce	water holes around	0.5	1	36	300	39	4.1	23	23	2.2	3.81	0.9	0.25	2.5	29	1200	5	10	0.3	2.6	1	50	0.25	4.1	1.6	0.5	10	12.7	20	18	1.7	0.3	0.1	0.6	0.05
HL-0870	H	294300	5822250	10	15	0	black	0	100	0	peat	unknown	good	wet	peat forest	alder/spruce	none	0.5	1	3	300	19	5.6	5	13	0.25	1.72	0.25	0.6	2.5	10	1100	5	10	0.3	2.4	1	50	0.25	4.6	1.9	0.5	10	37.1	54	34	4.1	0.7	0.1	0.8	0.05
HL-0872	H	294300	5822300	2	15	0	black	0	100	0	peat	boulders	good	wet	peat forest	spruce	none	0.5	1	4	600	49	6.7	22	31	0.25	1.16	0.25	0.25	2.5	2	5900	5	10	0.1	8.8	1	50	0.25	7.2	2.9	0.5	10	61.5	78	45	6.2	1	0.1	1.9	0.2
HL-0875	H	294300	5822375	10	30	0	black	0	100	0	peat	unknown	good	wet	peat forest	spruce	none	0.5	1	18	400	56	5.4	35	92	4	4.88	0.25	0.25	2.5	41	3600	5	10	0.5	22.3	1	50	0.25	73.2	10.5	0.5	10	153	302	125	18.3	3.1	0.1	1.8	0.4
HL-0878	H	294300	5822450	2	50	0	black	0	100	0	peat	boulders	good	damp	peat firest	spruce	very good, between boulders	0.5	1	1	300	27	1.5	0.5	15	0.25	0.85	1.9	0.25	2.5	8	7900	5	10	0.2	6	1	50	0.25	10.5	5.5	0.5	10	58.1	67	37	6.3	1.1	0.1	1.1	0.2
HL-0879	H	294300	5822475	>15	10	0	black	0	100	0	3cm moss	unknown	good	wet	low area, peat forest	spruce	none	0.5	1	6	400	30	6.5	20	31	3.3	1.77	0.25	0.25	2.5	18	6700	5	40	0.4	6	1	50	0.25	7.2	13.1	0.5	10	43.2	58	42	5	0.7	1	1	0.2
HL-0880	H	294300	5822500	10	10	0	brown-black	0	100	0	moss and roots	unknown	mod-good	wet	thick peaty forest	birch/spruce	little bit rooty	0.5	1	14	300	20	3.2	14	44	5.7	2.6	2.8	0.25	2.5	20	8200	5	50	0.2	7.2	1	50	0.25	8.6	7.2	0.5	10	25.9	42	11	3.4	0.7	0.1	0.8	0.2
HL-0881	H	294300	5822525	20	10	0	black	0	100	0	moss and roots	unknown	good	wet	thick peaty forest	birch/spruce	none	0.5	1	4	300	25	4.8	12	11	0.6	0.58	0.25	0.25	2.5	4	1100	5	10	0.6	2	1	50	0.25	2.8	2.2	0.5	10	11.9	16	6	1.4	0.3	0.1	0.4	0.05
HL-0882	H	294300	5822550	10	10	0	black	0	100	0	rotting wood and peat	unknown	good	damp	open peaty forest	spruce	none	2	1	2	50	18	5.3	2	4	0.25	0.77	0.25	0.25	2.5	1	300	5	10	0.2	0.9	1	50	0.25	1	0.6	0.5	10	3.5	4	4	0.6	0.1	0.1	0.3	0.05
HL-0883	H	294300	5822575	20	10	0	black	0	100	0	moss and roots	unknown	good	damp	open peaty forest	alder/spruce	none	0.5	1	1	100	23	5.6	3	4	0.7	0.21	0.25	0.25	2.5	0	400	5	10	0.1	0.5	1	50	0.25	0.6	0.05	0.5	10	1.8	3	1.5	0.3	0.1	0.1	0.1	0.05
HL-0884	H	294300	5822600	10	15	0	black	0	100	0	peat and roots	unknown	mod-good	wet	peaty forest	alder/spruce	none	0.5	1	2	50	24	5.3	3	4	0.25	0.27	0.25	0.25	2.5	0	300	5	10	0.1	0.4	1	50	0.25	0.5	0.05	0.5	10	1.3	2	4	0.2	0.1	0.1	0.1	0.05
HL-0885	H	294300	5822625	10	30	0	black	0	100	0	peat	unknown	good	wet	peaty forest	alder/spruce	some roots	0.5	1	3	300	25	4.5	8	5	1.6	0.51	0.25	0.25	2.5	2	500	5	10	0.2	0.7	1	50	0.25	0.6	0.3	0.5	10	2.4	5	5	0.3	0.1	0.1	0.1	0.05

SAMPLE	Type	Easting	Northing	Layer Thickness (cm)	Sample depth (cm)	Sand %	Colour	Clay %	Organic %	char-coal %	Unit Above/-Type & Thick (cm)	Unit Below Type & Thickness (cm)	Decomposition	Wet/Dry	Terrain	Trees	Comments	Au	Ag	As	Ba	Br	Ca	Co	Cr	Cs	Fe	Hf	Hg	Ir	Mo	Na	Ni	Rb	Sb	Sc	Se	Sr	Ta	Th	U	W	Zn	La	Ce	Nd	Sm	Eu	Tb	Yb	Lu
HL-0886	H	294300	5822650	5	50	0	brown-black	0	100	0	peat	peat	poor	wet	peaty forest	spruce	40% peat	0.5	1	1	50	24	4.2	0.5	2	0.25	0.12	0.25	0.25	2.5	0	300	5	10	0.1	0.4	1	50	0.25	0.5	0.05	0.5	20	1.5	3	4	0.2	0.1	0.1	0.05	0.05
HL-0887	H	294300	5822675	25	40	0	brown-black	0	100	0	peat	peat	poor	wet	peaty forest near lake	spruce	40% peat	0.5	1	1	50	25	3.4	6	3	0.25	0.16	0.25	0.25	2.5	0	400	5	10	0.1	0.5	1	50	0.25	0.25	0.05	0.5	10	1.5	2	4	0.2	0.1	0.1	0.05	0.05
HL-1074	H	295008	5822550	2	25	0	Brown	0	100	0	peat 23	Rocks	P	M	flat	spruce		0.5	1	0.5	200	14	1.8	1	18	0.2	0.5	1.9	0.2	2.5	0	5700	5	10	0.2	3	1	50	0.2	2.8	0.9	0.5	10	8	13	9	1.1	0.1	0.1	0.6	0.05
HL-1075	H	295005	5822531	10	30	0	Black	5	95	0	peat 30	Rocks	M-G	W	flat	spruce	gooey	0.5	1	15	300	23	4.3	24	16	0.2	2.27	0.5	0.2	2.5	0	4000	5	10	0.1	2.2	1	50	0.2	3.3	0.7	0.5	10	13	19	9	1.6	0.1	0.1	0.5	0.05
HL-1076	H	294999	5822500	5	25	1	Black	0	99	0	peat	cks and green s	M-G	W	flat	spruce		0.5	1	12	200	37	3.4	15	24	0.8	1.3	0.2	0.2	2.5	0	1700	5	10	0.6	2.2	1	50	0.2	3.1	0.7	0.5	20	19	31	15	1.9	0.5	0.1	0.6	0.05
HL-1110	H	295063	5822350	10	50	0	black	2	98	0	peat 45	sand	M-G	W	flat	spruce>birch		0.5	1	4	300	25	2.5	10	40	1.9	1.61	3.2	0.2	2.5	0	9100	5	30	0.2	5.1	1	50	0.2	5.8	0.6	0.5	10	23	39	11	2.7	0.5	0.1	0.8	0.1
HL-1113	H	295086	5822382	5	40	0	black	5	95	0	peat 35	sand	P	M	flat	spruce>birch		0.5	1	4	400	20	0.2	6	39	0.2	1.11	2	0.2	2.5	0	6900	5	10	0.2	3.9	1	50	0.2	4.8	0.05	0.5	10	12	17	11	1.3	0.2	0.3	0.5	0.05
HL-1118	H	295082	5822533	7	30	0	black	5	95	0	peat	boulders	G	M	slight slope up to south	spruce	big, great forest	0.5	1	3	50	37	0.2	1	134	0.2	2.37	0.2	0.2	2.5	0	8800	5	10	0.4	14.7	1	50	0.2	32.8	5.9	0.5	10	271	293	108	15	2.7	0.1	1.5	0.3
HL-1119	H	295085	5822563	5	30	0	black	5	95	0	peat	sand	P-M	W	flat	spruce	lumpy	0.5	1	5	400	17	0.2	1	36	0.2	1.06	2	0.2	2.5	9	6700	5	10	0.05	5.3	1	50	0.2	7.2	1.4	0.5	10	30	39	32	2.3	0.4	0.1	0.6	0.05
HL-1121	H	295089	5822613	5	30	0	grey-black	5	95	0	peat 30	clay	M	W	flat	spruce		0.5	1	6	600	22	0.2	40	117	5.3	4.6	3.4	0.2	2.5	5	7700	5	10	0.2	13.4	1	50	0.2	26	7.7	0.5	10	83	115	65	7.7	1.3	0.1	1.7	0.3
HL-1122	H	295089	5822648	5	20	0	black	0	100	0	peat 20	?	oor/Mod /We	W	slight slope up to south	spruce		0.5	1	3	50	14	1.2	14	38	2.4	1.89	1.5	0.2	2.5	0	1600	5	10	0.2	4.8	1	50	0.2	7.7	1.3	0.5	10	25	34	15	2.1	0.4	0.1	0.5	0.05
HL-1123	H	295093	5822663	10	30	0	grey	40	60	0	peat 30	?	?	W	slight slope up to south	spruce	boggy	0.5	1	8	800	10	0.2	1	143	11.9	5.88	5.9	0.2	2.5	8	11700	5	140	0.05	16.9	1	50	0.2	20.3	3.7	0.5	10	43	61	21	4	0.7	0.1	1.3	0.2
HL-1124	H	295095	5822683	5	20	0	black	0	100	0	peat 20	boulders	G	W	slight slope up to south	spruce		2	1	2	400	23	2.9	9	35	0.2	1.43	0.2	0.2	2.5	10	1600	5	10	0.4	5.2	1	50	0.2	7.2	1.6	0.5	10	29	42	22	2.5	0.6	0.4	0.9	0.2
HL-1137	H	295200	5822797	10	50	0	black	0	100	0	peat 45	Rocks	M	W	Flat	Spruce	boggy	0.5	1	2	300	26	3.8	1	30	0.2	1.02	0.2	0.2	2.5	14	700	5	10	0.3	3.4	1	50	0.2	7.7	4.5	0.5	10	25	31	22	2.3	0.5	0.1	0.6	0.1
HL-1138	H	295200	5822780	5	50	0	black	0	100	0	peat 45	Rocks	M	W	Flat	Spruce		0.5	1	5	500	33	2.7	18	32	3.8	1.59	0.2	0.2	2.5	14	1200	5	10	0.5	5.3	1	50	0.2	9.7	5.9	0.5	10	32	47	17	3.1	0.6	0.1	0.9	0.2
HL-1139	H	295197	5822748	7	25	0	black	0	100	0	peat 30	Sand, clay	M	M	Flat	Spruce	higher	0.5	1	8	50	12	0.2	32	80	5.6	3.38	2.4	0.2	2.5	0	2400	5	60	0.3	9.3	1	200	0.2	14.2	3.5	0.5	80	81	93	49	7.2	1.3	0.1	1.8	0.2
HL-1140	H	295200	5822722	5	30	0	grey-black	5	95	0	peat 40	till	M	W	Flat	Spruce	is this real humus?	0.5	1	5	700	15	0.2	15	133	9.8	4.75	4.1	0.2	2.5	0	2600	5	80	0.3	15.8	1	50	0.2	26.7	3.5	0.5	10	59	89	32	5	1.1	0.1	1.4	0.2
HL-1141	H	295201	5822701	10	40	2	grey-black	5	93	0	peat 40	till	M-G	M	Flat	Spruce	ayered grey black humus w/ pea	0.5	1	3	50	16	0.2	19	92	9.7	3.95	4.2	0.2	2.5	8	3600	5	140	0.5	16.4	1	50	0.2	21.9	2.8	0.5	10	78	130	56	7.8	1.7	0.1	2.4	0.3
HL-1147	H	295209	5822550	1	10	5	grey-black	0	90	5	10 peat	peat	P-M	D	Flat	spruce		0.5	1	4	500	8	0.2	1	36	0.2	0.96	2.9	0.2	2.5	0	12200	5	10	0.3	4.1	1	50	0.2	4.8	0.05	0.5	10	11	15	5	0.9	0.3	0.1	0.6	0.05
HL-1148	H	295205	5822533	2	15	5	grey-black	0	95	0	moss	sand	M	D	Flat	spruce	open	0.5	1	2	400	9	0.2	3	34	0.2	0.88	1.7	0.2	2.5	0	7100	5	10	0.2	3	1	50	0.2	3.8	1.6	0.5	10	8	12	11	0.6	0.1	0.1	0.5	0.05
HL-1149	H	295209	5822498	5	30	0	black	0	100	0	peat moss	Rocks	G	D	Flat	spruce		0.5	1	11	300	39	0.2	35	54	0.2	4.11	2.3	0.2	2.5	25	6100	5	10	0.3	7	1	50	0.2	10.4	6.8	0.5	10	25	48	23	3.3	0.7	0.1	0.9	0.2
HL-1150	H	295209	5822488	10	30	2	black	0	98	0	peat 40	sand	G	M	Flat	spruce	Big trees	0.5	1	2	400	13	0.8	1	20	0.2	0.87	2.8	0.2	2.5	0	6800	5	10	0.05	4.5	1	300	0.2	3.6	1.2	0.5	10	10	14	4	0.9	0.2	0.2	0.3	0.05
HL-1152	H	295199	5822428	5	20	0	black	2	98	0	peat 20	sand, then clay	G	M	Flat	spruce	thick moss	0.5	1	121	50	32	0.2	30	49	3.5	3.88	0.2	0.2	2.5	0	3500	5	10	0.2	4.5	1	50	0.2	6.4	0.05	0.5	10	17	28	9	1.6	0.3	0.1	0.5	0.05
HL-1220	H	295700	5822400	10	30	0	brown black	0	100	0	peat	peat	M	W	flat peaty forest	spruce/alder		0.5	1	4	300	21	3.9	8	19	0.9	0.89	0.2	0.2	2.5	11	900	5	10	0.2	1.3	1	50	0.2	2.3	3	0.5	40	6	12	10	0.8	0.2	0.1	0.3	0.05
HL-1221	H	295700	5822425	10	40	0	brown black	0	100	0	peat	?	M	W	flat peaty forest	spruce/alder	5% peat	0.5	1	42	200	35	3.1	19	30	0.2	2.26	0.7	0.2	2.5	0	700	5	10	0.1	1.6	1	50	0.2	3.3	0.5	0.5	10	7	13	12	0.8	0.1	0.1	0.3	0.05
HL-1222	H	295700	5822450	5	15	0	brown black	0	100	0	peat	?	M	W	flat peaty forest	spruce/alder	Daniel Radcliffe has a new movie	0.5	1	13	300	34	3.8	10	21	2.3	1.58	1.2	0.2	2.5	0	800	5	10	0.2	2.1	1	50	0.2	4.7	1.5	0.5	10	8	16	5	1	0.1	0.1	0.4	0.05
HL-1223	H	295700	5822475	10	30	0	brown black	0	100	0	30 peat	peat	M	W	flat peaty forest	spruce/alder		0.5	1	9	400	36	2.4	11	31	0.2	1.57	0.2	0.2	2.5	0	700	5	10	0.05	2.3	1	50	0.2	3.7	1.9	0.5	10	10	17	10	1.1	0.3	0.2	0.5	0.05
HL-1224	H	295700	5822500	15	20	0	brown black	0	100	0	20 peat	peat	M	W	flat peaty forest	spruce/alder	through roots	2	1	13	200	33	3.2	5	31	0.2	1.59	1	0.2	2.5	0	700	5	10	0.2	2.3	1	50	0.2	4	1.7	0.5	10	9	13	12	1.1	0.2	0.1	0.4	0.05
HL-1225	H	295700	5822525	7	30	0	brown black	0	100	0	30 peat	?	M-G	W	flat peaty forest	spruce/alder	more open	0.5	1	31	300	30	4.4	9	18	0.2	3.08	0.7	0.2	2.5	0	700	5	10	0.1	1.6	1	50	0.2	2.4	1.1	0.5	10	5	7	9	0.6	0.1	0.1	0.4	0.05
HL-1227	H	295700	5822575	10	30	0	brown black	0	100	0	30 peat	peat	P-M	W	flat peaty forest	spruce/alder	10%peat	0.5	1	238	500	45	3.4	31	0.5	0.2	7.4	0.2	0.2	2.5	23	400	5	10	0.3	0.5	1	50	0.2	1.3	0.05	0.5	10	2	4	6	0.3	0.1	0.1	0.1	0.05
HL-1228	H	295700	5822600	10	30	0	brown black	0	100	0	20 peat	peat	M	W	flat peaty forest	spruce/alder	5% peat	0.5	1	9	50	25	3.2	5	10	0.2	1.17	0.7	0.2	2.5	0	600	5	10	0.1	1.4	1	50	0.2	1.7	0.05	0.5	10	4	6	1.5	0.5	0.1	0.1	0.2	0.05
HL-1229	H	295700	5822625	10	25	0	brown black	0	100	0	20 peat	wood	M	W	flat peaty forest	spruce/birch	a few roots	0.5	1	10	200	26	2.2	6	4	0.2	1	0.2	0.2	2.5	8	400	5	10	0.2	0.9	1	50	0.2	1.5	0.05	0.5	10	2	3	5	0.3	0.1	0.1	0.1	0.05
HL-1230	H	295700	5822650	10	20	0	brown black	0	100	0	20 peat	?	G	W	flat peaty forest	spruce/birch	little bit of peat	0.5	1	16	50	37	2.7	1	16	0.2	1.55	0.6	0.2	2.5	4	600	5	10	0.1	1.4	1	50	0.2	2.3	1.6	0.5	10	4	8	8	0.5	0.1	0.1	0.2	0.05
HL-1231	H	295700	5822675	10	25	0	ed-brown-blac	0	100	0	25 peat	?	M	W	flat peaty forest	spruce/birch	more open, a few roots	0.5	1	93	500	31	2.6	19	20	0.2	3.29	0.2	0.2	2.5	14	400	5	10	0.2	1	1	50	0.2	1.8	0.6	0.5	10	3	5	1.5	0.4	0.1	0.1	0.2	0.05
HL-1232	H	295700	5822700	5	15	0	brown black	0	100	0	15 peat	?	M	W	flat peaty forest	spruce	5% peat	0.5	1	559	900	40	0.2	78	42	0.2	15.7	1.7	0.2	2.5	46	1100	5	10	0.5	2.9	1	50	0.2	4.2	0.05	0.5	10	8	16	6	1.2	0.1	0.1	0.6	0.05
HL-1233	H	295700	5822725	20	25	0	brown black	0	100	0	25 peat	?	G	W	flat peaty forest	spruce	5% peat	0.5	1	14	600	24	3.4	8	17	2.6	1.22	1.1	0.2	2.5	9	800	5	10	0.2	2	6	50	0.2	2.1	0.05	0.5	10	5	9	12	0.7	0.2	0.1	0.4	0.05
HL-1250	H	295900	5822375	8	30	0	brown black	0	100	0	peat	frozen	P	W	forest	spruce	bits of plants+roots	0.5	1	5	200	26	3.3	5	7	0.2	0.62	0.2	0.2	2.5	6	400	5	10	0.2	1	1	50	0.2	2	0.05	0.5	10	7	8	4	0.7	0.1	0.1	0.2	0.05
HL-1251	H	295900	5822400	5	30	0	black	0	100	0	peat	tree roots	M	W	forest	spruce	decomposing plants	0.5	1	18	200	43	3.4	15	15	0.2	2.03	0.2	0.2	2.5	0	300	5	10	0.2	0.6	1	50	0.2	0.8	0.05	0.5	10	6	6	9	0.5	0.1	0.1	0.2	0.05
HL-1252	H	295900	5822425	10	40	0	black	0	100	0	peat	?	M-G	W	forest	spruce	wood/plant fragments	0.5	1	5	200	31	3.3	1	4	0.2	0.74	0.2	0.2	2.5	0	400	5	10	0.3	1.1	1	50	0.2	1.5	0.05	0.5	10	9	7	10	0.8	0.1	0.1	0.3	0.05
HL-1253	H	295900	5822450	10	40	0	black	0	100	0	peat	?	P-M	W	forest	spruce	bits of decomposing plants	0.5	1	3	50	22	3.3	1	9	0.2	0.48	0.2	0.2	2.5	0	400	5	10	0.2	1	1	50	0.2	1.1	0.05	0.5	10	7	5	7	0.8	0.2	0.1	0.3	0.05
HL-1254	H	295900	5822475	10	40	0	black	0	100	0	peat	?	G	W	forest	spruce		0.5	1	2	50	22	3.6	1	15	0.2	0.41	0.2	0.2	2.5	0	400	5	10	0.3	1.2	1	50	0.2	1.7	0.05	0.5	10	7	7	14	0.8	0.1	0.1	0.3	0.05
HL-1255	H	295900	5822500	7	50	0	brown black	0	100	0	peat	?	P-M	W	flat forest	spruce	lots of roots	0.5	1	2	50	19	3.3	1	9	0.2	0.71	0.2	0.2	2.5	7	500	5	10	0.2	1.2	1	50	0.2	1.2	0.7	0.5	10	5	6	10	0.6	0.1	0.1	0.3	0.05
HL-1256	H	295900	5822525	10	30	0	brown black	0	100	0	peat	peat	P-M	W	flat forest	birch+spruce		0.5	1	4	50	24	3	1	14	0.2	0.87	0.8	0.2	2.5	0	800	5	10	0.3	1.9	1	50	0.2	2.6	0.9	0.5	10	7	10	10	0.8	0.1	0.2	0.4	0.05
HL-1257	H	295900	5822550	10	40	0	black	0	100	0	peat	?	G	W	open forest	birch		0.5	1	3	100	21	3.1	1	12	1.2	0.58	0.2	0.2	2.5	0	600	5	10	0.3	1.5	1	50	0.2	2.2	0.6	0.5	10	5	6	9	0.6	0.1	0.1	0.3	0.05
HL-1258	H	295900	5822575	10	50	0	black	0	100	0	peat	?	G	W	open forest	birch+spruce	water holes	0.5	1	2	300	40	4.9	1	15	0.2	0.37	0.9	0.2	2.5	16	500	5	10	0.4	1.5	1	50	0.2	2.5	0.05	0.5	10	5	7	9	0.7	0.1	0.1	0.2	0.05
HL-1259	H	295900	5822600	10	50	0	black	0	100	0	peat	?	M-G	W	peat bog	birch+spruce		0.5	1	3	200	32	4.6	5	10	0.2	0.81	0.2	0.2	2.5	0	500	5	10	0.2	1.2	1	50	0.2	1.5	0.05	0.5	10	4	6	1.5	0.5	0.1	0.1	0.3	0.05
HL-1260	H	295900	5822625	15	30	0	black	0	100	0	peat	?	M	W	peat bog	birch+spruce	roots	0.5	1	5	200	32	4.4	1	6	0.2	0.71	0.6	0.2	2.5	0	600	5	10	0.4	1.6	1	50	0.2	2.2	0.05	0.5	10	5	7	3	0.8	0.1	0.1	0.3	0.05
HL-1261	H	295900	5822650	15	60	0	brown black	0	100	0	peat	ecomposed wo	P	W	peat bog	birch+spruce	decomposing plant matter	0.5	1	2	50	25	2.9	4	6	0.2	0.37	0.2	0.2	2.5	0	500	5	10	0.3	1.1	1	50	0.2	1.8	0.8	0.5	10	4	5	5	0.4	0.1	0.1	0.2	0.05
HL-1262	H	295900	5822675	10	40	0	brown black	2	98	0	peat	?	M	W	peat bog	birch+spruce	water holes	2	1	3	200	28	3.3	1	9	0.2	0.56	0.2	0.2	2.5	10	500	5	10	0.3	1.4	1	50	0.2	1.7	0.05	0.5	10	4	0.5	8	0.6	0.1	0.1	0.2	0.05
HL-1269	H	296000	5822525	10	50	0	black	0	100	0	peat	?	G	W	forest	spruce		0.5	1	1	300	41	4.9	4	9	0.2	0.38	0.2	0.2	2.5	7	400	5	10	0.2	0.6	1	50	0.2	0.9	0.05	0.5	30	2	4	8	0.3	0.1	0.1	0.2	0.05
HL-1271	H	296000	5822475	5	30	0	brown black	0	100	0	peat	peat	P	W	flat forest	spruce	somewhat peaty	0.5	1	3	100	33	4.4	5	7	0.2	0.81	0.2	0.2	2.5	0	500	5	10	0.3	0.9	1	50	0.2	1.1	1.2	0.5	10	3	6	5	0.5	0.1	0.1	0.2	0.05
HL-1273	H	296000	5822425	5	50	0	black	0	100	0	peat	frozen	G	W	flat forest	spruce		0.5	1	85	700	68	4.3	30	31	0.2	4.54	0.2	0.2	2.5	29	500	5	10	0.1	1	1	50	0.2	1.7	2.6	0.5	10	7	13	13	0.7	0.1	0.1	0.2	0.05
HL-1275	H	296000	5822375	10	60	0	black	0	100	0	peat	?	G	W	flat forest	spruce		0.5	1	4	50	27	6.4	1	8	1	0.55	0.2	0.2	2.5	4	400	5	10	0.2	0.6	1	50	0.2	0.7	0.6	0.5	10	2	4	4	0.2	0.1	0.1	0.2	0.05
HL-1329	H	296500	5822425	>10	75	0	black	0	100	0	peat	unknown	poor	wet	peaty forest	Spruce	40% peat	0.5	1	2	100	49	6.3	4	7	0.25	0.3	0.25	0.25	2.5	12	300	5	10	0.5	0.6	1	50	0.25	1.2	9.8	0.5	10	11	10	21	0.9	0.3	0.1	0.05	0.05
HL-1330	H	296500	5822450	>15	20	0	black	0	100	0	peat	unknown	mod-good	wet	flat peat bog	Spruce, small alders		0.5	1	7	800	49	5.8	65	13	0.25	1.14	0.6	0.25	2.5	16	500	5	10	0.4	1.4	1	50	0.25	2.9	5	0.5	20	27	35	24	2.1	0.3	0.1	0.4	0.05
HL-1331	H	296500	5822475	10	60	0	black	0	100	0	peat	boulder	poor	wet	flat peat bog	Spruce, small alders	10% rotting wood	0.5	1	6	200	29	5.1	11	6	0.6	1.12	0.25	0.25	2.5	2	500	5	10	0.2	0.7	1	200	0.25	1.5	0.8	0.5	40	12	18	14	1.1	0.1	0.1	0.3	0.05
HL-1332	H	296500	5822500	5	20	0	black	0	100	0	peat	boulder	poor	damp	flat peat bog	Spruce	rooty	0.5	1	4	200	12	4.6	10	19	1.6	1.01	1.9	0.25	2.5	2	6300	5	10	0.2	2.8	1	50	0.25	4.7	2.1	0.5	10	38	52	35	3.3	0.4	0.1	0.7	0.05
HL-1334	H	296500	5822550	5	60	0	brown black	0	100	0	peat	boulder	poor	damp	flat, lots of boulders	Spruce	none	0.5	1	2	100	18	4.5	0.5	8	0.25	0.28	0.25	0.25	2.5	2	900	5	10	0.1	0.9	1	50	0.25	1.8	0.4	0.5	10	18	25	22	1.4	0.1	0.1	0.3	0.05
HL-1335	H	296500	5822575	20	20	0	black	0	100	0	peat	unknown	good	wet	flat peat bog	Spruce, alders	some wood debris	0.5	1	3	300	33	5.6	10	9	0.25	0.74	0.25	0.25	2.5	17	900	5	10	0.4	1.9	1	50	0.25	4.1	12.3	0.5	10	31	40	29	2.9	0.6	0.1	0.5	0.05
HL-1336	H	296500	5822600	15	25	0	black	0	100	0	peat	unknown	poor-mod	wet	flat peat bog	Spruce	none	0.5	1	2	100	24	6.4	3	4	1.9	0.29	0.25	0.25	2.5	5	600	5	10	0.2	0.8	1	50	0.25	1	0.5	0.5	10	4	6	6	0.5	0.1	0.1	0.2	0.05
HL-1337	H	296500	5822625	15	20	0	black	0	100	0	peat	unknown	mod-good	wet	flat peat bog	Spruce	none	0.5	1	3	300	41	6.6	42	4	0.25	0.66	0.25	0.25	2.5	5	600	5	10	0.2	0.7	1	50	0.25	1	0.7	0.5	10	4	5	7	0.4	0.1	0.1	0.2	0.05
HL-1340	h	296600	5822673	1	40	0	Black/Brown	25	75	0	peat bog	45	Poor	Wet/Dry	Swamp	Spruce		0.5	1	3	50	30	4.5	5	11	0.2	0.76	0.2	0.2	2.5	9	400	5	10	0.3	0.8	1	50	0.2	1.8	1.4	0.5	10	7	6	10	0.6	0.1	0.1	0.2	0.05
HL-1341	h	296602	5822650	2	35	0	Black/ Brown	15	85	0	peat bog	45	Poor	Wet	Swamp	Spurce		0.5	1	4	100	31	4.6	1	0.5	0.2	1.47	0.2	0.2	2.5	0	400	5	10	0.2	0.7	1	50	0.2	1	1.3	0.5	20	7	9	9	0.6	0.1	0.1	0.2	0.05
HL-1342	h	296600	5822625	5	40	92	Black	3	5	0	peat bog					Spurce		0.5	1	3	50	44	6	1	9	0.2	0.67	0.2	0.2	2.5	11	400	5	10	0.4	1.1	1	50	0.2	3	2.5	0.5	10	19	20	29	1.6	0.2	0.1	0.3	0.05
HL-1343	h	296599	5822599	2	5	95	Sand	5	0	0	peat bog				swamp	spruce	ver side of esker down into swam	0.5	1	2	50	14	0.6	1	13	0.9	0.47	1.1	0.2	2.5	7	900	5	10	0.4	2.8	1	50	0.2	4.8	2	0.5	10	9							
HL-1346	H	296597	5822523	10	45	0	Black	5	95	0					swamp	Spruce	Labelled as "S"?	0.5	1	2	50	14	0.6	0.5	13	0.9	0.47	1.1	0.25	2.5	7	900	5	10	0.4	2.8	1	50	0.25	4.8	2	0.5	10	9	14	9	1	0.2	0.1	0.3	0.05
HL-1347	H	296001	5822502	2	40	0	Black	5	95	0					swamp	Spruce	t in field by the hole we dug sorr	0.5	1	4	50	23	2.5	1	0.5	0.2	0.56	0.2	0.2	2.5	7	700	5	10	0.5	1.1	1	50	0.2	1.4	0.05	12	10	3	4	5	0.4	0.1	0.1	0.05	0.05
HL-1348	H	296604	5822472	5	50	0	Black	20	80	0					swamp	Spurce		0.5	1	7	200	20	3.4	7	11	0.2	0.98	0.2	0.2	2.5	0	700	5	10	0.2	1.4	1	50	0.2	2.1	0.7	0.5	30	8	10	8	0.8	0.1	0.1	0.3	0.05
HL-1349	H	296605	5822451	5	50	0	Black Brown	30	60	10		Black			swamp	Spurce		0.5	1	3	50	21	2	1	5	0.2	0.43	0.2	0.2	2.5	0	400	5	10	0.2	0.6	1	50	0.2	0.9	0.5	0.5	10	7	8	7	0.6	0.1	0.1	0.2	0.05
HL-1350	H	296598	5822426	5	30	0	Black	20	60	20		Swamp			swamp	Spurce		2	1	4	200	23	4.6	1	4	0.2	1.12	0.2	0.2	2.5	3	500	5	10	0.2	1.3	1	50	0.2	2.7	4.6	0.5	10	13	14	11	1.2	0.2	0.1	0.2	0.05
HL-1351	H	296597	5822403	1	30	0	Black	25	55	20		field			swamp	Spurce		36	1	4	50	13	2.4	1	2	0.2	0.17	0.2	0.2	2.5	3	300	5	10	0.5	0.4	1	50	0.2	0.7	0.05	0.5	40	1	2	4	0.2	0.1	0.1	0.05	0.05
HL-1351b	H	296596	5822596	20	30	0	black	0	100	0	peat 30	unknown	mod	wet	flat	spruce	none	0.5	1	2	200	31	7.1	0.5	4	0.25	0.36	0.25	0.25	2.5	1	500	5	10	0.2	0.6	1	50	0.25	0.9	1.3	0.5	10	16	15	16	1.3	0.2	0.1	0.3	0.05
HL-1352	H	296700	5822400	2	15	2	brown	0	98	0	moss 15	till	oor/Mod /We	damp	flat	spruce	matted vegetation on top of sand	0.5	1	2	400	11	0.25	4	25	1.1	0.73	3.2	0.25	2.5	1	11300	5	10	0.4	3.9	1	50	0.25	4.7	0.8	0.5	10	26	39	26	2.6	0.5	0.2	0.8	0.05
HL-1353	H	296700	5822425	10	30	0	black	0	100	0	peat20	till	good	damp	flat	spruce	none	0.5	1	5	200	39	5.9	9	11	0.25	0.81	0.8	0.25	2.5	0	1300	5	10	0.3	2	1	50	0.25	4	0.7	0.5	10	35	46	29	3.1	0.6	0.1	0.4	0.05
HL-1354	H	296700	5822442	5	20	2	black	0	98	0	moss 20	boulders	good	damp	flat	spruce	local water holes	0.5	1	6	200	35	5.5	12	6	0.25	0.73	0.7	0.25	2.5	1	2300	5	10	0.3	0.9	1	50	0.25	2.2	0.4	0.5	30	11	11	16	1.2	0.2	0.5	0.3	0.05
HL-1355	H	296700	5822475	>5	40	0	black	0	100	0	peat 40	unknown	mod	frozen	flat	spruce	en, hard to tell if good humus or	0.5	1	2	50	25	6.3	0.5	3	0.25	0.25	0.25	0.25	2.5	3	600	5	10	0.2	0.5	1	50	0.25	0.8	0.6	0.5	10	11	13	12	0.9	0.1	0.1	0.3	0.05
HL-1364	H	296997	5822677	2	60		Black	25	75		30		poor			tag alders		0.5	1	10	700	17	0.2	13	52	1.2	1.95	2	0.2	2.5	0	10000	5	40	0.05	4.1	1	50	0.2	5.7	1.2	0.5	20	22	30	18	2.4	0.5	0.1	0.6	0.05
HL-1365	H	296795	5822648	8	50		Black	5	95		30		Well			Edge of old beaver pond		0.5	1	9	1300	64	4.8	8	24	0.2	1.28	1.1	0.2	2.5	20	1800	5	10	0.05	3.7	1	50	0.2	6.3	5.7	0.5	10	27	38	26	2.9	0.4	0.1	0.6	0.05
HL-1366	H	296795	5822625	2	30		Black	10	90		20		Well			tag alders		0.5	1	21	500	48	3.1	16	70	7.8	2.78	3.1	0.2	2.5	6	7300	5	100	0.05	7.6	1	50	0.2	9.4	5.7	0.5	100	20	34	24	2.6	0.4	0.1	0.8	0.1
HL-1367	H	296801	5822599	2	50		Black	10	90		40		Well			tag alders		0.5	1	151	600	40	3.8	27	66	7.8	4.48	3.4	0.2	2.5	18	7200	5	10	0.8	8	1	50	0.2	8.9	3.3	0.5	10	23	46	24	3.1	0.4	0.1	1	0.1
HL-1368	H	296803	5822568	3	50		Black	20	80		40		poor			Spruce		0.5	1	16	400	50	3	9	30	3.3	1.6	2	0.2	2.5	0	2700	5	40	0.1	3.2	1	50	0.2	3.7	3.6	0.5	60	10	18	7	1.2	0.2	0.1	0.4	0.05
HL-1369	H	296800	5822547	5	20		Black	5	95		35		Well			Spruce		0.5	1	30	400	35	2.9	15	48	6.5	2.36	2.2	0.2	2.5	6	4800	5	10	0.2	6.2	1	50	0.2	7.6	4.9	0.5	10	17	27	13	1.5	0.3	0.1	0.7	0.05
HL-1370	H	296805	5822526	10	30		Black	15	85		50		Well			Under Stump in tag alders		1	1	8	300	27	3.8	6	33	4.1	1.11	1.3	0.2	2.5	31	2100	5	10	0.1	3	1	100	0.2	3.5	2.3	0.5	30	7	12	11	0.8	0.2	0.1	0.3	0.05
HL-1371	H	296801	5822498	1	30		Black/Brown	25	70	5	35		Well			Spruce		0.5	1	4	200	22	3.5	4	10	0.2	0.8	0.2	0.2	2.5	5	700	5	10	0.05	1.2	1	50	0.2	1.5	1.1	0.5	10	3	5	3	0.4	0.1	0.1	0.2	0.05
HL-1372	H	296802	5822473	3	50		Black/Brown	45	55	5		35	poor			Spruce/ Tamerack Boulder field below		0.5	1	21	200	34	3.1	6	3	0.2	2.03	0.2	0.2	2.5	0	300	5	10	0.05	0.4	1	50	0.2	0.5	0.4	0.5	10	1	2	6	0.1	0.1	0.1	0.1	0.05
HL-1373	H	296800	5822449	1	25		Brown	50	50			35	poor			Spruce/ Tamerack Boulder field below		0.5	1	3	300	38	3.3	1	0.5	0.2	0.81	0.2	0.2	2.5	0	300	5	10	0.1	0.5	1	50	0.2	0.2	0.05	0.5	10	1	2	1.5	0.1	0.1	0.1	0.1	0.05
HL-1374	H	296802	5822425	5	30		Black	2.5	90	2.5	45		Well			Spruce		0.5	1	6	200	58	4.4	4	11	0.2	1.44	0.2	0.2	2.5	0	400	5	10	0.05	0.9	1	50	0.2	1.4	0.05	0.5	10	2	4	5	0.3	0.1	0.1	0.1	0.05
HL-1375	H	296799	5822397	5	15		Black	5	95			20	poor			Spruce		0.5	1	6	200	58	4.4	4	11	0.2	1.44	0.2	0.2	2.5	0	400	0.5	10	0.05	0.9	1	0.5	0.2	1.4	0.05	0.5	10	1.8	3	9	0.2	0.1	0.1	0.05	0.05
HL-1536	H	296000	5821925	5	10	5	Black	0	90	5	moss	Boulders	M	D	Hilltop	spruce	roots	0.5	1	4	300	11	0.2	1	45	4.2	1.49	2.5	0.2	2.5	9	9300	5	10	0.2	4.4	1	50	0.2	6	2.4	0.5	10	43	59	17	2.6	0.6	0.1	0.7	0.05
HL-1537	H	296000	5821950	20	30	0	Black	0	100	0	10 peat	?	G	M	Hilltop	spruce		0.5	1	2	400	28	2.7	31	36	0.2	1.37	0.2	0.2	2.5	0	800	5	10	0.2	4.3	1	50	0.2	5.7	2.4	0.5	10	35	45	22	2.5	0.6	0.3	0.5	0.05
HL-1538	H	296000	5821975	20	20	0	Black	0	100	0	1 grass	?	G	W	grassy bog	alders		0.5	1	0.5	100	40	5.7	5	28	0.2	0.69	0.2	0.2	2.5	47	500	5	10	0.1	1.7	1	50	0.2	2.5	16.3	0.5	10	21	30	20	1.5	0.5	0.1	0.4	0.05
HL-1539	H	296000	5822000	20	50	0	Black	0	100	0	30 peat	?	M-G	M	flat forest	spruce		0.5	1	2	50	44	4.9	3	12	0.2	0.31	0.2	0.2	2.5	4	400	5	10	0.2	0.9	1	50	0.2	1.3	1.1	0.5	10	6	7	9	0.5	0.1	0.1	0.2	0.05
HL-1540	H	296000	5822025	20	40	0	Black	0	100	0	20 peat	?	M-G	M	flat forest	spruce		0.5	1	2	200	23	3.8	21	5	0.2	0.63	0.2	0.2	2.5	7	200	5	10	0.05	0.4	1	50	0.2	0.2	0.05	4	10	2	2	3	0.1	0.1	0.1	0.05	0.05
HL-1541	H	296000	5822050	5	60	0	Brown	0	100	0	peat	peat	P	W	flat boggy forest	spruce	may be peat	0.5	1	6	400	29	3.2	25	3	0.2	1.04	0.2	0.2	2.5	8	300	5	10	0.1	0.4	1	50	0.2	0.7	0.05	0.5	30	1	2	4	0.1	0.1	0.1	0.05	0.05
HL-1543	H	296000	5822100	30	40	0	Black	0	100	0	10 peat	Boulders	G	W	Hilltop	alders		0.5	1	9	300	31	4.3	22	16	1.8	1.21	1.5	0.2	2.5	8	5600	5	10	0.2	3.4	1	50	0.2	4.7	0.05	0.5	10	9	15	9	0.9	0.2	0.1	0.4	0.05
HL-1545	H	296000	5822150	10	50	0	Black	0	100	0	40 peat	white sand	M	M	Hillside	spruce		0.5	1	4	100	35	3.7	1	30	0.2	0.7	0.2	0.2	2.5	0	1800	5	10	0.1	2	1	50	0.2	2.3	0.05	0.5	10	17	19	9	1.3	0.3	0.1	0.4	0.05
HL-1547	H	296000	5822200	30	40	0	Black	0	100	0	10 peat	Bouders	G	W	Low spot	Spruce/alders		0.5	1	2	50	22	3.8	6	25	0.2	0.66	0.7	0.2	2.5	0	2500	5	10	0.2	1.9	1	50	0.2	1.7	0.05	0.5	70	9	10	8	0.7	0.1	0.1	0.2	0.05
HL-1760	H	297400	5821525	5	50	0	black	0	100	0	peat	?	M	W	flat	spruce	somewhat peaty, half peat	0.5	1	21	50	36	5.5	5	6	0.2	1.06	0.2	0.2	2.5	0	300	5	10	0.2	0.6	1	50	0.2	0.9	0.3	0.5	30	5	6	6	0.5	0.1	0.1	0.05	0.05
HL-1761	H	297400	5821550	10	30	0	brown black	5	95	0	peat	?	M-G	W	flat	spruce	water holes	0.5	1	93	300	41	2.5	15	49	2.9	2.65	2.4	0.2	2.5	0	8800	5	10	0.05	6.5	1	50	0.2	5.5	2.8	0.5	100	21	34	12	2.6	0.6	0.7	0.8	0.1
HL-1762	H	297400	5821575	5	30	0	brown black	0	100	0	peat	boulders	M	M	flat	spruce	roots, wood bits, water holes	0.5	1	1100	1600	64	4.2	60	25	0.2	14.5	1.6	0.2	2.5	0	3300	5	10	0.05	3.7	1	50	0.2	4.3	1.3	0.5	250	24	38	17	2.5	0.1	0.1	0.6	0.05
HL-1763	H	297400	5821600	5	40	0	black	0	100	0	peat	roots	M-G	W	flat	spruce	rotten wood, water holes	0.5	1	412	300	61	3.5	15	17	0.9	5.51	0.2	0.2	2.5	0	1000	5	10	0.6	2.2	1	50	0.2	2.9	1.8	0.5	100	12	16	20	1.3	0.1	0.1	0.4	0.05
HL-1764	H	297400	5821625	5	30	0	black	0	100	0	peat	boulders	G	W	flat	spruce	surrounded by water holes	0.5	1	316	600	72	4.4	16	15	3.1	4.75	0.2	0.2	2.5	0	800	5	10	0.6	1.6	1	50	0.2	2.1	1.1	0.5	140	14	22	14	1.5	0.1	0.1	0.5	0.05
HL-1765	H	297400	5821650	3	30	0	brown black	0	100	0	peat	boulders	M	W	flat	spruce	lots of roots, peaty	0.5	1	25	200	59	5.2	8	10	0.2	1.52	0.2	0.2	2.5	0	600	5	10	0.1	2	1	50	0.2	2.1	0.8	0.5	10	13	28	14	1.6	0.3	0.1	0.6	0.05
HL-1766	H	297400	5821675	10	20	0	brown black	0	100	0	peat	?	P	W	flat	spruce	half peat	0.5	1	14	50	132	5.3	9	0.5	0.2	1	0.2	0.2	2.5	0	400	5	10	0.4	0.7	1	50	0.2	0.8	0.05	0.5	10	6	5	17	0.6	0.1	0.1	0.05	0.05
HL-1769	H	297400	5821750	7	15	0	brown black	0	100	0	peat	?	P-M	W	flat	spruce	somewhat peaty	0.5	1	21	100	52	5.7	14	9	0.2	1.08	0.2	0.2	2.5	0	400	5	10	0.2	0.9	1	50	0.2	1.2	1.2	0.5	10	10	13	13	1	0.1	0.1	0.4	0.05
HL-1770	H	297400	5821775	5	20	0	brown black	0	100	0	peat	?	P	W	flat	spruce	many roots, peaty	0.5	1	15	100	54	5.2	18	7	0.2	1.02	0.2	0.2	2.5	0	400	5	10	0.4	0.5	1	50	0.2	0.2	0.05	0.5	10	3	6	12	0.4	0.1	0.1	0.05	0.05
HL-1771	H	297400	5821800	15	25	0	black	0	100	0	peat	?	M	W	flat forest	spruce		0.5	1	2	100	32	5.3	4	10	0.2	0.49	0.2	0.2	2.5	0	500	5	10	0.2	1.3	1	200	0.2	1.5	0.5	0.5	10	4	7	4	0.6	0.1	0.1	0.2	0.05
HL-1772	H	297400	5821825	10	30	0	brown black	0	100	0	peat	peat	P-M	W	flat	spruce		0.5	1	3	50	31	3.9	4	6	0.2	0.45	0.2	0.2	2.5	0	700	5	10	0.2	1.3	1	50	0.2	1.6	0.3	0.5	10	4	0.5	7	0.6	0.1	0.1	0.2	0.05
HL-1773	H	297400	5821850	10	30	0	brown black	0	100	0	peat	?	P-M	W	flat, dry	spruce	water holes, peat	0.5	1	5	100	45	4.3	7	5	0.2	0.6	0.2	0.2	2.5	0	500	5	10	0.3	0.8	1	50	0.2	1	0.5	0.5	10	4	5	6	0.5	0.1	0.1	0.05	0.05
HL-1774	H	297400	5821875	10	40	0	brown black	0	100	0	peat	?	M	M	flat, dry	spruce		0.5	1	3	50	26	3.5	3	4	0.2	0.5	0.2	0.2	2.5	0	400	5	10	0.1	0.8	1	50	0.2	0.9	0.9	0.5	10	3	5	6	0.4	0.1	0.1	0.2	0.05
HL-1775	H	297400	5821900	8	20	0	brown black	0	100	0	peat	ten wood and p	P	W	peat bog	spruce	many roots/peat	0.5	1	5	50	35	4.3	3	9	0.2	0.88	0.2	0.2	2.5	0	500	5	10	0.2	0.8	1	50	0.2	0.9	0.7	0.5	10	3	5	9	0.4	0.1	0.1	0.2	0.05
HL-1778	H	297500	5821925	8	30	0	black brown	3	97	0	peat	peat	M	W	flat	spruce	a few roots	0.5	1	3	100	36	3.8	3	7	0.2	0.88	0.6	0.2	2.5	0	600	5	10	0.1	1.3	1	50	0.2	1.3	1.2	0.5	10	5	8	3	0.6	0.3	0.1	0.3	0.05
HL-1779	H	297500	5821900	10	30	0	black brown	0	100	0	peat	?	M	W	flat	spruce		0.5	1	2	50	30	4.6	2	6	0.2	0.41	0.2	0.2	2.5	0	500	5	10	0.2	0.8	1	50	0.2	0.9	0.05	0.5	10	3	6	6	0.4	0.1	0.1	0.2	0.05
HL-1780	H	297500	5821875	15	40	0	black brown	0	100	0	peat	?	M	W	flat	spruce	some peat	0.5	1	4	100	29	4.7	6	4	0.2	0.8	0.2	0.2	2.5	0	400	5	10	0.2	0.7	1	50	0.2	1	0.4	0.5	10	3	4	7	0.4	0.1	0.1	0.2	0.05
HL-1781	H	297500	5821850	8	5	0	black	0	100	0	5cm peat moss	peat	M-G	M	flat	spruce	a few roots	0.5	1	3	200	49	5.4	12	6	0.2	1.09	0.2	0.2	2.5	0	500	5	10	0.4	0.9	1	50	0.2	1.1	0.4	0.5	60	3	4	7	0.5	0.1	0.1	0.2	0.05
HL-1782	H	297500	5821825	10	40	0	black	3	97	0	peat	?	G	W	flat	spruce	rotting wood fragments	0.5	1	3	50	26	4.2	3	6	0.2	0.36	0.5	0.2	2.5	0	600	5	10	0.3	1.4	1	50	0.2	1.6	0.05	0.5	10	4	10	6	0.7	0.1	0.1	0.4	0.05
HL-1783	H	297500	5821800	8	30	0	black brown	0	100	0	peat	peat	P-M	W	flat	spruce		0.5	1	5	100	30	4.9	4	4	0.2	0.64	0.2	0.2	2.5	0	400	5	10	0.3	0.7	1	50	0.2	1	0.05	0.5	30	3	6	1.5	0.4	0.1	0.1	0.1	0.05
HL-1784	H	297500	5821775	5	40	0	black brown	0	100	0	peat	boulders	P	W	flat	spruce		0.5	1	1	50	19	5	2	10	0.2	0.23	0.2	0.2	2.5	0	300	5	10	0.1	0.6	1	50	0.2	0.6	0.05	0.5	10	3	5	1.5	0.3	0.1	0.1	0.2	0.05
HL-1785	H	297500	5821750	5	30	0	black	0	100	0	peat	boulders	M-G	W	flat	spruce	a few roots	0.5	1	3	200	24	3.8	17	13	0.2	0.67	1.1	0.2	2.5	1	3200	5	10	0.2	3.5	1	50	0.2	5	1.6	0.5	10	22	40	16	2.1	0.4	0.1	0.6	0.05
HL-1786	H	297500	5821725	3	35	0	black	0	100	0	peat	outcrop	M	W	flat	spruce		0.5	1	2	200	17	5	1	15	1.3	0.61	0.9	0.2	2.5	2	2200	5	10	0.3	2.5	1	50	0.2	3.7	1	0.5	10	19	37	19	1.9	0.4	0.1	0.6	0.05
HL-1787	H	297500	5821700	5	60	2	black	0	98	0	peat	?	M	W	flat	spruce	wood pieces	0.5	1	1	50	31	4.4	2	4	0.2	0.21	0.2	0.2	2.5	2	300	5	10	0.2	0.6	1	50	0.2	1.2	1.5	0.5	10	7	12	7	0.7	0.1	0.1	0.1	0.05
HL-1788	H	297500	5821675	10	60	0	black	0	100	0	peat	?	G	W	flat	spruce		0.5	1	0.5	100	18	5.5	3	4	0.2	0.2	0.2	0.2	2.5	2	300	5	10	0.05	0.5	1	50	0.2	0.7	0.5	0.5	30	3	5	1.5	0.4	0.1	0.1	0.2	0.05
HL-1789	H	297500	5821650	8	25	0	black	0	100	0	peat	peat	P-M	W	flat	spruce	slightly peaty	0.5	1	1	200	17	4	3	3	0.2	0.24	0.2	0.2	2.5	3	300	5	10	0.1	0.5	1	50	0.2	0.8	0.5	0.5	10	6	7	9	0.6	0.1	0.1	0.2	0.05
HL-1790	H	297500	5821625	5	40	0	black	0	100	0	peat	?	G	W	flat	spruce		0.5	1	2	300	17	5.3	4	6	0.2	0.64	0.2	0.2	2.5	3	500	5	10	0.3	1.1	1	50	0.2	2.1	2.2	0.5	10	15	18	9	1.4	0.4	0.1	0.4	0.05
HL-1792	H	297500	5821575	5	35	0	black brown	0	100	0	peat	boulders	M-G	W	flat	spruce	a few roots	0.5	1	3	200	27	4.6	6	9	0.8	1.08	0.2	0.2	2.5	2	500	5	10	0.2	1.3	1	50	0.2	2.3	1.5	0.5	10	17	24	17	1.4	0.3	0.1	0.4	0.05
HL-1793	H	297500	5821550	?	30	0	black	0	100	0	peat	frozen ?	M-G	W	flat forest	spruce	decomposing plant matter	0.5	1	18	300	26	4.8	26	9	0.2	2.53	0.2	0.2	2.5	2	400	5	10	0.2	0.9	1	50	0.2	1.4	0.4	0.5	30	11	21	13	1.1	0.2	0.3	0.3	0.05
HL-1795	H	297500	5821575	4	60	0	black	0	100	0	60cm peat	grey sand	G	W	flat peaty forest	spruce		0.5	1	2	200	23	4.6	6	14	0.2	0.71	1.1	0.2	2.5	0	2400	5	10	0.2	2.7	1	50	0.2	3.5	2.4	0.5	30	37	59	30	3.4	0.6	0.1	0.9	0.1
HL-1865	H	298000	5821450	5	50	0	Brown black	0	100	0	peat 30	peat	P	M	flat	spruce	boggy	0.5	1	1	300	27	3.7	8	16	0.2	0.81	0.7	0.2	2.5	2	400	5	10	0.3	2.9	1	50	0.2	4.1	1.6	0.5	10	33	40	35	3	0.6	0.1	1	0.2
HL-1866	H	298000	5821475	5	30	5	Brown-grey	3	92	0	peat 30	sand	P	W	flat	spruce	peaty	0.5	1	14	300	15	4.3	7	29	0.2	6.68	1.6	0.2	2.5	0	7100	5	10	0.05	4.2	1	50	0.2	5.3	2.1	0.5	30	23	35	18	2.2	0.5	0.1	0.8	0.05
HL-1867	H	298000	5821500	5	30	0	Brown black	0	100	0	peat 30	boulders	P	W	flat	spruce		0.5	1	2	300	15	4.9	9	20	0.2	0.8	1.4	0.2	2.5	0	4600	5	10	0.05	3	1	50	0.2	4.7	1.6	0.5	10	25	40	18	2.6	0.5	0.1	1.1	0.05
HL-1868	H	298000	5821525	10	30	0	Black	0	100	0	peat 30	boulders	G	D	flat	spruce	thick moss floor	0.5	1	0.5	300	24	2.8	9	30	1.7	1.26	1.2	0.2	2.5	1	1400	5	20	0.05	7.8	1	50	0.2	15.9	4.3	0.5	10	84	139	51	6.8	1.2	0.1	1	0.2
HL-1870	H	297998	5821579	5	15	2	Black	0	98	0	grass	boulders	M-G	D	flat	spruce		0.5	1	2	200	21	2.1	8	29	0.2	1.44	1.2	0.2	2.5	2	6000	5	10	0.05	6.7	1	50	0.2	9.9	3.2	0.5	10	68	0.5	40	4.9	1.3	0.1	0.8	0.1
HL-1871	H	297993	5821596	5	20	3	Black	0	97	0	moss	boulders	M-G	M	flat	spruce		0.5	1	2	100	16	2.4	5	17	1.6	0.9	1.2	0.2	2.5	1	4000	5	10	0.1	4.4	1	50	0.2	5.7	1.7	0.5	10	32	44	19	2.4	0.5	0.1	0.6	0.05
HL-1872	H	298000	5821620	2	10	0	Grey	0	100	0	moss	sand	P	M	flat	spruce		0.5	1	2	200	11	0.8	6	18	0.2	0.84	1.1	0.2	2.5	0	7300	5	40	0.3	2.9	1	50	0.2	4	1.5	0.5	10	18	28	17	1.3	0.4	0.1	0.4	0.05
HL-1873	H	297996	5821658	2	30	0	Grey-Black	0	100	0	peat	Rocks	P-M	W	flat	spruce	bog edge	0.5	1	2	300	22	2.4	26	33	1.3	1.21	1.4	0.2	2.5	3	2900	5	10	0.05	6.9	1	50	0.2	12.1	3.9	0.5	10	91	162	57	7.4	1.8	0.1	1.8	0.2
HL-1876	H	298007	5821728	10	15	0	Black	0	95	5	moss	?	M-G	M	flat	spruce	many rootlets	0.5	1	11	200	26	4.1	13	5	0.2	0.87	0.2	0.2	2.5	3	500	5	10	0.4	0.8	1	50	0.2	1	0.05	0.5	10	7	11	8	0.7	0.1	0.1	0.3	0.05
HL-1877	H	297990	5821758	10	15	0	Black	0	100	0	moss	peat	P	W	flat	spruce	water holes	0.5	1	11	200	28	5	12	8	0.8	1.06	0.2	0.2	2.5	3	300	5	10	0.3	0.6	1	50	0.2	0.7	0.3	0.5	10	3	6	1.5	0.3	0.1	0.1	0.2	0.05
HL-1879	H	298000	5821810	10	10	0	Brown black	0	98	2	moss	peat	P	W	flat	spruce	water holes	0.5	1	5	50	13	4.3	7	33	0.2	0.92	1.4	0.2	2.5	0	7600	5	10	0.4	3.3	1	50	0.2	2	0.9	0.5	10	8	13	7	1.1	0.2	0.1	0.4	0.05
HL-1881	H	297996	5821860	7	10	2	Black	0	98	0	moss	till	G	M	flat	spruce		0.5	1	15	500	24	3.6	245	27	0.2	4.52	1	0.2	2.5	5	1800	5	10	0.2	2.8	1	50	0.2	3.8	0.6	0.5	10	20	50	15	1.8	0.3	0.1	0.4	0.05
HL-1882	H	298004	5821891	10	30	2	Black	0	98	0	peat	sand	G	W	flat	spruce		0.5	1	0.5	300	19	3.3	15	76	1.6	2.15	1.7	0.2	2.5	9	9200	5	10	0.05	11.1	1	50	0.2	11.4	2.8	0.5	10	74	120	30	4	0.7	0.1	1	0.2

SAMPLE	Type	Easting	Northing	Layer Thickness (cm)	Sample depth (cm)	Sand %	Colour	Clay %	Organic %	char-coal %	Unit Above/- Type & Thick (cm)	Unit Below Type & Thickness (cm)	Decomposition	Wet/Dry	Terrain	Trees	Comments
HL-1888	H	298100	5821734	5	10	0	Bl	0	100	0	moss	peat	P	W	Flat	Spruce	lots of rootlets
HL-1889	H	298100	5821690	10	40	0	Bl	0	100	0	peat	?	G	M	Flat	Spruce	very good humus
HL-1890	H	298100	5821675	2	30	1	Bl	1	98	0	peat 30	sand	P-M	W	Flat	Spruce	Nice forest
HL-1891	H	298100	5821650	3	20	2	Bl	0	98	0	peat	Boulder	G	M	Elevated, flat	Spruce	Nice forest
HL-1892	H	298100	5821625	5	30	1	Bl	1	98	0	peat 30	sand	G	M	Elevated, flat	Spruce	Nice forest
HL-1893	H	298100	5821600	2	15	2	grey	0	98	0	peat	sand	P	M	Elevated, flat	Spruce	Edge of bog, not good
HL-1894	H	298100	5821575	3	30	0	Bl	0	100	0	peat 30	sand	M	W	Elevated, flat	Spruce	Open forest
HL-1895	H	298100	5821550	5	40	0	Bl	0	100	0	peat 40	?	M	W	Elevated, flat	Spruce	peaty
HL-1896	H	298100	5821525	10	30	0	Bl	0	100	0	peat 30	peat	M	W	Elevated, flat	Spruce	Multiple humus layers in peat
HL-1897	H	298100	5821490	5	30	0	Bl	0	100	0	peat 30	peat	M	W	Elevated, flat	Spruce	slimey; plt-mat visible
HL-1952	H	298500	5821800	10	25	0	brown black	0	100	0	15cm peat	peat	M	Wet/Dry			
HL-1953	H	298500	5821775	20	40	0	brown black	0	100	0	20cm peat	peat	M	M			
HL-1954	H	298500	5821750	10	35	5	brown black	0	95	0	20cm peat	sand	M	M			
HL-1958	H	298500	5821650	20	25	20	grey black	20	60	0	10cm moss	clay sand	P	M			
HL-1959	H	298500	5821625	5	30	0	black	0	100	0	peat	boulder	G	M			
HL-1960	H	298500	5821600	10	40	0	grey black	0	100	0	20cm peat	rock	P	W			
HL-1991	H	298700	5821675	10	50	0	black	0	100	0	40cm peat	peat	M-G	W	flat forest	spruce	
HL-2051	H	299301	5821776	>20	60	0	Dark Brown	0	80	0	Moss & Peat	N/A	Well	M	Flat	Spruce & Lab tea	
HL-2052	H	299298	5821750	~20	40	0	Dark Brown	0	75-80	0	Moss & Peat	N/A	Mod	M	Flat	Spruce & Lab tea	
HL-2053	H	299300	5821723	>20	60	0	Dark Brown	0	90	0	Moss & Peat	N/A	Well	W	Flat	Spruce & Lab tea	
HL-2054	H	299299	5821702	>20	40	0	Dark Brown	0	30	0	Moss & 30cm of peat	N/A	Poor to Mod	W	Flat	Spruce & Lab tea & Pine	
HL-2055	H	299301	5821676	~10	50	0	Dark Brown	0	15	0	Moss & Peat	N/A	Poor	W	Flat	Spruce & Lab tea & Alder	
HL-2056	H	299300	5821650	>20	40	0	Dark Brown	0	40	0	Moss & Peat	N/A	Mod	W	Flat	Spruce & Lab tea & Alder & Cedar	
HL-2057	H	299299	5821624	>20	60	0	Dark Brown	0	30	0	Moss and 40cm of Peat	N/A	Poor to Mod	W	Flat	Spruce & Lab tea & Alder	
HL-2058	H	299301	5821601	30	50	0	Dark Brown	0	40	0	Moss and 20cm of Peat	N/A	Mod	W	Flat	Spruce & Lab tea & Alder	
HL-2059	H	299299	5821573	30	50	0	Dark Brown	0	50	0	Moss and Peat	N/A	Mod	M	Flat	Spruce & Lab tea & Alder	
HL-2060	H	299298	5821551	50	50	0	Dark Brown	0	40	0	Moss	N/A	Moor	M	Flat	Spruce	
HL-2061	H	299297	5821529	10	40	0	Dark Brown	0	10	0	Moss and 30cm of Peat	N/A	Poor to Mod	W	Flat	Spruce	
HL-2069	H	299398	5821424	30	50	0	Dark Brown	0	65	0	Moss & Peat	N/A	Weak	W	Flat	Spruce	
HL-2070	H	299399	5821451	30	40	0	Dark Brown	0	80	0	Moss & Peat	N/A	Mod-Well	W	Flat	Spruce & Lab tea	
HL-2071	H	299398	5821415	~30	60	0	Dark Brown	0	35	0	Moss & Peat	N/A	Poor	W	Flat	Spruce & Lab tea	
HL-2072	H	299399	5821502	10	60	0	Dark Brown	0	20	0	Moss & Peat	N/A	Poor	W	Flat	Spruce & Lab tea	
HL-2073	H	299400	5821525	20	70	0	Dark Brown	0	75	0	Moss & Peat	N/A	Mod	W	Flat	Spruce & Lab tea	
HL-2074	H	299401	5821548	20	40	0	Dark Brown	0	65	0	Moss & Peat	N/A	Mod	W	Flat	Spruce & Lab tea	
HL-2075	H	299399	5821573	20	50	0	Dark Brown	0	70	0	Moss & Peat	N/A	Poor	W	Flat	Spruce & Alder and Lab Tea	
HL-2076	H	299401	5821600	>50	30	0	Dark Brown	0	90	0	Moss & Peat	N/A	Mod-Well	M	Flat	Spruce & Alder and Lab Tea	
HL-2077	H	299400	5821626	>50	50	0	Dark Brown	0	70	0	Moss & Peat	N/A	Mod	M	Flat	Spruce & Tamarack	
HL-2078	H	299401	5821651	~10	40	0	Dark Brown	0	20	0	Moss & Peat	N/A	Poor	W	Flat	Spruce & Lab tea	
HL-2079	H	299402	5821675	>20	30	0	Dark Brown	0	100	0	Moss & Peat	N/A	Well	M	Flat	Spruce & Alder and Lab Tea	
HL-2080	H	299399	5821700	>20	60	0	Dark Brown	0	95	0	Moss & Peat	N/A	Well	M	Flat	Spruce & Alder and Lab Tea	
HL-2081	H	299403	5821723	5	40	0	Dark Brown	2	98	0	Moss & Peat	N/A	Mod	W	Flat	Spruce & Alder and Lab Tea	
HL-2082	H	299399	5821747	>20	60	0	Dark Brown	0	90	0	Moss & Peat	N/A	Mod-Well	W	Flat	Spruce & Alder and Lab Tea	
HL-2083	H	299400	5821772	~10	40	0	Dark Brown	0	80	0	Moss & Peat	N/A	Mod	W	Flat	Spruce & Alder and Lab Tea	
HL-2097	H	299596	5821551	>20	40	0	ark Brown/Bla	0	100	0	Moss & 30cm of Peat	N/A	Well	M	Flat	Spruce & Alder & Lab Tea	
HL-2098	H	299598	5821574	>20	30	0	Dark Brown	10	90	0	Moss & 20cm of Peat	N/A	Mod-Well	M	Flat	Spruce & Alder	
HL-2099	H	299598	5821601	10	50	0	Dark Brown	0	95	0	Moss & 40cm of Peat	N/A	Well	M	Flat	Spruce & Alder & Lab Tea	
HL-2100	H	299598	5821624	>20	50	0	Dark Brown	0	50	0	Moss & Peat	N/A	Poor	W	Flat	Spruce	
HL-2101	H	299598	5821649	>20	50	0	Dark Brown	0	70	0	Moss & Peat	N/A	Poor-Mod	W	Flat	Spruce	
HL-2102	H	299598	5821675	>20	60	0	Dark Brown	0	30	0	Moss & Peat	N/A	Poor	W	Flat	Spruce	
HL-2103	H	299601	5821699	>20	40	0	Dark Brown	0	95	0	Moss & Peat	N/A	Weak	W	Flat	Spruce	
HL-2104	H	299600	5821723	10	50	0	Medium Brown	0	10	0	Moss & Peat	N/A	Poor	W	Flat	Spruce	
HL-2105	H	299598	5821749	>20	50	0	Dark Brown	0	75	0	Moss & Peat	N/A	Mod	W	Flat & very wet	Spruce	
HL-2272	H	300900	5821025	10	30	0	brown black	0	100	0	25cm peat	peat	M	W	boggy forest	spruce	
HL-2273	H	300900	5821050	5	40	0	brown black	0	100	0	20cm peat	peat	M	W	boggy forest	spruce	
HL-2274	H	300900	5821075	10	60	0	black	0	100	0	50cm peat	boulder till	G	W	boggy forest	spruce	
HL-2278	H	300900	5821175	10	30	0	brown black	0	100	0	20cm peat	peat	M	W	boggy forest	spruce	
HL-2297	H	301000	5821475	10	20	0	black	0	100	0	15 cm peat	peat	G	W	flat forest	Spruce	trace peat
HL-2331	H	301100	5821325	10	30	0	black brown	0	100	0	20cm peat	peat	P-M	W	boggy forest	spruce	
HL-2332	H	301100	5821350	10	30	0	black brown	0	100	0	20cm peat	peat	M	W	boggy forest	spruce	
HL-2333	H	301100	5821375	20	20	0	black brown	0	100	0	20cm peat	peat	M	W	boggy forest	spruce	interlayered peat
HL-2334	H	301100	5821400	4	20	0	black	0	100	0	20cm peat	peat	M-G	W	boggy forest	spruce	some peat
HL-2335	H	301100	5821425	5	40	0	black brown	0	100	0	20cm peat	peat	P-M	W	boggy forest	spruce	10% peat
HL-2339	H	301100	5821525	10	40	0	brown	0	100	0	20cm peat	peat	P	W	bog	spruce	lots of roots
HL-2369	H	301300	5821050	2	40	15	grey	10	65	10	40cm peat	till	mod	damp	flat, slope up to south in open	spruce	none
HL-2370	H	301300	5821075	>10	25	0	black	0	100	0	20cm peat	unknown	good	damp	flat, slope up to south in open	spruce	none
HL-2371	H	301290	5821129	>10	30	0	brown black	0	100	0	30cm peat	peat	poor	wet	flat	spruce	to north, 'gooey' layer @ peat sa
HL-2372	H	301300	5821125	3	30	0	black	5	95	0	30cm peat	sand	mod	damp	flat	spruce	open, boggy to north.
HL-2394	H	301400	5821300	3	15	0	black brown	0	100	0	moss 10	peat >20	P	W	peaty forest bog	Spruce	rooty and peaty
HL-2395	H	301400	5821275	3	30	0	brown black	0	100	0	peat 25	peat	P	W	peaty forest bog	Spruce	very poor sample 70% peat
HL-2397	H	301400	5821225	10	50	0	brown	0	100	0	peat 45	unknown	G	W	peaty forest bog	Spruce	wood pieces and roots
HL-2399	H	301400	5821175	5	25	0	brown	0	100	0	peat 20	peat	P	W	peaty forest bog	Spruce	50% peat
HL-2400	H	301394	5821154	5	15	0	black brown	0	100	0	peat	peat	P	W	peaty forest bog	Spruce	50% peat
HL-2401	H	301400	5821125	3	10	0	black brown	0	100	0	moss 10	peat	P-M	W	peaty forest bog	Spruce	lots of roots
HL-2402	H	301400	5821100	10	20	0	black	0	100	0	peat 15	sand	G	W	peaty forest bog	Spruce	
HL-2403	H	301400	5821075	5	40	1	brown grey	0	99	0	peat 30	sand	M	M	peaty forest bog	Spruce	in between boulders
HL-2408	H	301400	5820950	5	40	0	black brown	0	100	0	peat 30	boulders	M	W	peaty forest bog	Spruce	
HL-2409	H	301400	5820925	15	25	1	black brown	0	99	0	peat 20	sand	G	W	peaty forest bog	Spruce	
HL-2418	H	301485	5821090	10	30	0	black	0	100	0	30cm peat	peat	mod-good	wet	flat	spruce	none
HL-2419	H	301500	5821025	5	50	0	black	0	100	0	30cm peat	peat	mod	damp	flat	spruce	strike at 275 a few water holes
HL-2420	H	301496	5821044	10	30	0	black	0	100	0	25cm peat	peat	mod	wet	flat	spruce	frozen
HL-2421	H	301495	5821069	7	30	0	brown black	0	98	2	25cm peat	peat	poor	wet	flat	spruce	aty, a thick higher ground to sou
HL-2422	H	301500	5821100	5	20	0	brown black	0	100	0	20cm peat	peat	poor	wet	flat	spruce	more open forest, thick moss still
HL-2423	H	301500	5821118	5	10	0	brown black	0	100	0	moss	peat	poor	wet	flat	spruce	more open forest, thick moss still
HL-2424	H	301504	5821144	5	10	0	brown black	0	100	0	moss	peat	poor	wet	flat	spruce	more open forest, thick moss still
HL-2426	H	301509	5821188	5	10	0	brown black	0	100	0	10cm moss	peat	poor	wet	flat	spruce	thick peat moss
HL-2427	H	301500	5821225	5	10	0	brown black	0	100	0	20cm moss	peat	poor	wet	flat	spruce	thick peat moss
HL-2428	H	301500	5821250	5	10	0	brown black	0	100	0	peat/moss	peat	mod	wet	flat	spruce	thick peat moss
HL-2433	H	301500	5821375	10	10	0	black	0	100	0	10cm moss	peat	mod	wet	flat	spruce	ots. With moderate soil in betwe
HL-2434	H	301500	5821400	10	10	0	black	0	100	0	10cm moss	peat	poor-mod	wet	flat	spruce	ots. With moderate soil in betwe
HL-2435	H	301500	5821425	10	10	0	black	0	100	0	10cm moss	peat	mod	wet	flat	spruce	ots. With moderate soil in betwe
HL-2436	H	301500	5821450	10	10	0	black	0	100	0	10cm moss	peat	poor-mod	wet	flat	spruce	bog, wet, lots of roots
HL-2439	H	301600	5821400	7	15	0	brown black	0	100	0	moss	peat	P-M	W	Flat	Birch and spruce	
HL-2440	H	301597	5821383	5	15	0	brown black	0	100	0	moss	peat	P-M	W	Flat	spruce	some % peat lots of roots
HL-2442	H	301606	5821330	5	20	0	brown black	0	99	1	moss	peat >20	P-M	W	Flat	spruce	some % peat lots of roots
HL-2443	H	301600	5821300	5	15	0	brown black	0	99	1	moss	peat	P-M	W	Flat	spruce	
HL-2444	H	301593	5821274	10	15	0	brown black	0	99	1	moss	peat	P	W	Flat	spruce	
HL-2445	H	301601	5821254	5	15	0	black	0	100	0	moss	peat	P-M	W	Flat	spruce	million rootlets
HL-2446	H	301600	5821225	8	30	0	brown	0	100	0	moss	peat	P	W	Flat	spruce	hi % of peat
HL-2448	H	301595	5821171	10	30	0	black brown	0	100	0	moss 30	?	P-M	W	Flat	spruce	
HL-2449	H	301604	5821156	10	40	0	black	0	99	1	moss 30	?	P-M	W	Flat	spruce	
HL-2450	H	301598	5821118	8	25	0	black	2	98	0	moss	sand	G	M	Flat	spruce	
HL-2451	H	301594	5821104	10	30	0	light brown	5	95	0	peat 25	sand and rocks	P	W	Flat	spruce	thick peat
HL-2459	H	301598	5820888	10	30	0	black	2	98	0	moss 25	rocks	G	M	Flat	spruce	N edge of ridge to flat boggy are
HL-2460	H	301600	5820875	5	5	2	brown	0	98	0	moss	dirt	P	M	Slope N	spruce	Sed ridge
HL-2476	H	301700	5821150	5	35	0	brown black	0	100	0	15cm peat	unknown	poor	wet	flat forest	spruce	peaty
HL-2477	H	301700	5821175	7	25	0	brown black	0	97	3	30cm peat	unknown	poor	wet	flat forest	spruce	lots of roots, peaty, water holes
HL-2479	H	301700	5821225	10	15	0	black	0	100	0	peat/moss	unknown	poor-mod	wet	swampy flat forest	spruce	some roots
HL-2480	H	301700	5821250	10	20	0	black brown	0	100	0	20cm peat	unknown	poor-mod	wet	swampy flat forest	spruce	slightyly peaty
HL-2481	H	301700	5821275	6	50	0	black	0	100	0	peat/moss	boulders	mod	wet	swampy flat forest	spruce	
HL-2482	H	301700	5821300	10	25	0	black brown	0	100	0	peat and roots	unknown	poor	wet	swampy flat forest	spruce	none
HL-2484	H	301700	5821350	5	15	0	black-brown	0	90	10	peat	frozen	very poor	wet	swampy flat forest	spruce	none
HL-2485	H	301700	5821375	10	25	0	brown black	0	100	0	peat and roots	unknown	poor	wet	swampy flat forest	spruce	lots of roots, peaty
HL-2486	H	301700	5821400	10	5	0	brown black	0	100	0	10cm peat	peat	poor	wet	swampy flat forest	spruce	lots of roots, peaty
HL-2487	H	301700	5821425	10	50	0	dark brown	0	100	0	peat	peat	very poor	wet	swampy flat forest	spruce	poor humus sample
HL-2491	H	301800	5821350	10	40	0	black	0	100	0	peat 35	sand?	good	damp	flat peaty forest	spruce	very nice sample
HL-2492	H	301800	5821325	10	40	0	black	0	100	0	peat 35	sand?	good	damp	flat peaty forest	spruce	none
HL-2493	H	301799	5821295	15	30	0	black	0	100	0	peat 25	peat	mod	damp	flat peaty forest	spruce	yers of alternating peat and hum
HL-2494	H	301800	5821275	15	25	0	black	0	100	0	peat 20	unknown	mod-good	wet	flat peaty forest	spruce	none
HL-2495	H	301800	5821250	10	30	0	black	0	100	0	peat 25	unknown	good	wet	flat peaty forest	spruce	some wood bits
HL-2496	H	301800	5821225	10	15	0	black	0	100	0	peat 15	unknown	good	wet	flat peaty forest	spruce	none
HL-2497	H	301800	5821200	10	20	0	black	0	100	0	peat 20	unknown	mod	wet	flat peaty forest	spruce	some roots
HL-2498	H	301800	5821175	10	20	0	black	0	100	0	peat 20	unknown	mod	wet	flat peaty forest	spruce	some roots

SAMPLE	Au	Ag	As	Ba	Br	Ca	Co	Cr	Cs	Fe	Hf	Hg	Ir	Mo	Na	Ni	Rb	Sb	Sc	Se	Sr	Ta	Th	U	W	Zn	La	Ce	Nd	Sm	Eu	Tb	Yb	Lu
HL-1888	2	1	5	200	22	4	9	7	0.5	1.11	0.2	0.2	2.5	3	600	5	10	0.5	1.1	1	50	0.2	1.5	0.6	0.5	10	8	14	7	0.8	0.1	0.1	0.2	0.05
HL-1889	0.5	1	5	300	28	5.1	8	26	0.2	1.05	0.9	0.2	2.5	3	800	5	10	0.05	4.8	1	50	0.2	9.5	7.1	0.5	10	82	100	59	6.7	1.4	0.1	1.6	0.2
HL-1890	0.5	1	8	200	32	3.8	114	62	2.2	3.81	1.7	0.2	2.5	8	3300	5	10	0.05	8.8	1	50	0.2	18.4	4.7	0.5	10	140	233	78	9.6	1.7	0.1	1.4	0.3
HL-1891	0.5	1	3	200	21	1.1	8	42	2.1	1.25	1.9	0.2	2.5	1	9700	5	10	0.05	6.7	1	50	0.2	7.6	2.1	0.5	10	27	46	21	2.3	0.4	0.1	0.7	0.05
HL-1892	0.5	1	1	200	19	2	5	36	3.1	1.24	1.7	0.2	2.5	0	4000	5	50	0.05	6	1	50	0.2	9.2	2.7	0.5	10	31	50	27	2.6	0.6	0.1	0.7	0.05
HL-1893	0.5	1	2	200	14	0.9	1	26	1.1	0.67	1.8	0.2	2.5	0	7400	5	10	0.1	4.1	1	50	0.2	4.7	1.5	0.5	10	15	25	8	1.3	0.4	0.1	0.4	0.05
HL-1894	0.5	1	0.5	100	16	5	3	11	0.2	0.6	0.9	0.2	2.5	1	1200	5	10	0.1	1.9	1	50	0.2	3.2	0.9	0.5	10	29	37	15	1.6	0.4	0.1	0.5	0.05
HL-1895	0.5	1	0.5	100	14	4.7	2	5	0.2	0.23	0.2	0.2	2.5	1	300	5	10	0.05	0.5	1	50	0.2	0.7	0.4	0.5	30	3	4	1.5	0.3	0.1	0.1	0.1	0.05
HL-1896	0.5	1	1	200	15	4.7	3	5	0.2	0.4	0.2	0.2	2.5	2	300	5	10	0.1	0.7	1	50	0.2	0.9	0.3	0.5	10	4	5	6	0.5	0.1	0.1	0.2	0.05
HL-1897	0.5	1	0.5	200	17	4.8	4	7	0.2	0.72	0.2	0.2	2.5	4	300	5	10	0.2	1.2	1	50	0.2	1.6	0.6	0.5	10	5	6	6	0.7	0.1	0.1	0.3	0.05
HL-1952	0.5	1	1	50	43	5.2	1	8	0.2	0.21	0.2	0.2	2.5	7	400	5	10	0.3	0.6	1	50	0.2	0.8	7.6	0.5	10	9	10	11	0.6	0.1	0.1	0.2	0.05
HL-1953	0.5	1	0.5	200	30	5.3	1	14	0.2	0.58	0.2	0.2	2.5	6	600	5	10	0.3	1.8	1	50	0.2	2.4	3.4	0.5	10	23	32	25	2	0.4	0.1	0.5	0.1
HL-1954	0.5	1	0.5	300	12	3	7	34	0.2	1.23	2.1	0.2	2.5	0	14500	5	10	0.05	5.7	1	300	0.2	3.1	1.6	0.5	10	22	29	8	2	0.4	0.1	0.6	0.05
HL-1958	4	1	1	200	6	0.2	4	33	1	0.89	2.3	0.2	2.5	0	11300	5	40	0.4	3.6	1	50	0.2	2.5	0.5	0.5	10	10	19	10	1.2	0.3	0.1	0.5	0.05
HL-1959	0.5	1	0.5	100	12	0.2	1	23	0.9	0.41	1.2	0.2	2.5	2	2100	5	10	0.2	4.6	1	50	0.2	4.1	1.8	0.5	10	11	17	6	0.9	0.2	0.1	0.6	0.05
HL-1960	0.5	1	1	200	10	0.2	3	31	0.2	0.55	2	0.2	2.5	2	6400	5	40	0.05	3.9	1	50	0.2	3.5	1.1	0.5	10	10	14	7	0.9	0.3	0.1	0.4	0.1
HL-1991	0.5	1	1	200	36	7.2	5	15	0.2	0.48	0.2	0.2	2.5	7	500	5	10	0.3	1.5	1	50	0.2	1.5	7.9	0.5	10	6	8	8	0.7	0.1	0.1	0.3	0.05
HL-2051	0.5	1	15	300	31	3.5	18	7	0.2	1.24	0.2	0.2	2.5	7	300	5	10	0.3	0.9	1	50	0.2	1.6	0.6	0.5	40	17	49	19	1.7	0.3	0.1	0.3	0.05
HL-2052	0.5	1	3	100	28	3.9	3	7	0.9	0.25	0.2	0.2	2.5	2	400	5	10	0.4	0.7	1	50	0.2	0.8	0.5	0.5	10	13	18	19	1.4	0.2	0.1	0.4	0.05
HL-2053	0.5	1	2	100	38	4.9	1	6	1.1	0.26	0.2	0.2	2.5	2	400	5	10	0.3	0.5	1	50	0.2	0.9	0.05	0.5	30	7	10	12	0.7	0.1	0.1	0.2	0.05
HL-2054	0.5	1	9	100	57	3.9	18	5	1.5	1.94	0.2	0.2	2.5	0	400	5	10	0.3	0.5	1	50	0.2	0.7	0.05	0.5	30	3	4	9	0.3	0.1	0.1	0.05	0.05
HL-2055	0.5	1	7	50	52	3.3	5	2	0.2	0.95	0.2	0.2	2.5	0	400	5	10	0.3	0.4	1	50	0.2	0.2	0.05	0.5	40	2	3	6	0.2	0.1	0.1	0.2	0.05
HL-2056	0.5	1	4	100	47	5.2	1	5	0.2	0.29	0.2	0.2	2.5	2	500	5	10	0.3	0.6	1	200	0.2	0.6	0.4	0.5	40	2	5	5	0.4	0.1	0.1	0.1	0.05
HL-2057	0.5	1	3	200	32	5	2	5	0.2	0.24	0.2	0.2	2.5	2	400	5	10	0.3	0.5	1	50	0.2	0.6	0.8	0.5	10	2	4	7	0.3	0.1	0.1	0.1	0.05
HL-2058	4	1	5	50	57	5	1	3	0.2	0.3	0.2	0.2	2.5	2	400	5	10	0.4	0.5	1	50	0.2	0.5	1.4	0.5	40	2	3	7	0.3	0.1	0.1	0.05	0.05
HL-2059	0.5	1	6	50	88	5.9	1	2	0.2	0.25	0.2	0.2	2.5	8	400	5	10	0.6	0.4	1	50	0.2	0.5	6	0.5	40	1	3	14	0.2	0.1	0.1	0.05	0.05
HL-2060	0.5	1	4	100	90	5.4	1	7	0.2	0.07	0.2	0.2	2.5	13	300	5	10	0.8	0.2	1	50	0.2	0.2	10.1	0.5	30	1	2	13	0.1	0.1	0.1	0.05	0.05
HL-2061	12	1	9	50	55	5.2	3	9	0.2	0.27	0.2	0.2	2.5	0	500	5	10	0.4	0.4	1	50	0.2	0.2	0.05	0.5	50	1	2	8	0.2	0.1	0.1	0.1	0.05
HL-2069	0.5	1	2	100	71	6.3	1	7	0.2	0.08	0.2	0.2	2.5	12	300	5	10	0.7	0.3	1	50	0.2	0.2	10.4	0.5	30	1	2	11	0.2	0.1	0.1	0.05	0.05
HL-2070	0.5	1	12	200	152	7.2	46	3	0.2	0.54	0.2	0.2	2.5	7	400	5	10	0.8	0.3	1	50	0.2	0.2	6.5	0.5	60	1	4	20	0.2	0.1	0.1	0.05	0.05
HL-2071	0.5	1	5	50	71	5.5	6	2	0.2	0.09	0.2	0.2	2.5	3	400	5	10	0.4	0.3	1	50	0.2	0.2	2.5	0.5	20	1	2	8	0.2	0.1	0.1	0.05	0.05
HL-2072	0.5	1	4	100	82	5.9	1	5	0.2	0.09	0.2	0.2	2.5	4	400	5	10	0.6	0.2	1	50	0.2	0.2	3.3	0.5	10	1	1	8	0.1	0.1	0.1	0.05	0.05
HL-2073	0.5	1	6	200	71	6.5	1	5	0.2	0.54	0.2	0.2	2.5	60	600	5	10	6.4	0.6	1	50	0.2	0.7	46.4	0.5	20	2	7	30	0.5	0.1	0.1	0.05	0.05
HL-2074	0.5	1	5	100	54	5.1	22	4	0.2	0.64	0.2	0.2	2.5	1	400	5	10	0.7	0.5	1	50	0.2	0.8	1.7	0.5	60	2	5	10	0.5	0.1	0.1	0.2	0.05
HL-2075	0.5	1	3	100	52	4.7	1	5	0.2	0.3	0.2	0.2	2.5	1	400	5	10	0.4	0.4	1	50	0.2	0.2	0.8	0.5	10	2	2	1.5	0.2	0.1	0.1	0.05	0.05
HL-2076	0.5	1	33	500	123	7.4	1	4	0.2	2.05	0.2	0.2	2.5	3	500	5	10	0.5	0.6	1	50	0.2	0.5	1.4	0.5	90	2	4	19	0.3	0.1	0.1	0.1	0.05
HL-2077	0.5	1	14	50	192	6.4	1	13	0.2	0.5	0.2	0.2	2.5	6	600	5	10	1	0.4	1	50	0.2	0.5	4.7	0.5	10	1	5	27	0.3	0.1	0.1	0.05	0.05
HL-2078	0.5	1	19	100	58	4.8	1	3	0.2	1.31	0.2	0.2	2.5	0	500	5	10	0.3	0.4	1	50	0.2	0.2	0.4	0.5	50	2	3	7	0.3	0.1	0.1	0.05	0.05
HL-2079	0.5	1	19	200	61	5.9	6	7	0.2	3.55	0.2	0.2	2.5	0	600	5	10	0.2	1	1	200	0.2	1	0.8	0.5	20	3	7	10	0.6	0.1	0.1	0.3	0.05
HL-2080	0.5	1	3	100	50	5.5	1	3	0.2	0.97	0.2	0.2	2.5	0	400	5	10	0.1	0.5	1	300	0.2	0.5	0.3	0.5	20	2	3	8	0.3	0.1	0.1	0.2	0.05
HL-2081	0.5	1	10	200	47	6.4	22	43	2.3	5.14	1.2	0.2	2.5	3	3900	5	10	0.3	3.9	1	50	0.2	2.4	1.4	0.5	40	9	19	17	1.7	0.3	0.1	0.6	0.05
HL-2082	0.5	1	39	200	79	6.1	1	8	0.2	2.12	0.2	0.2	2.5	8	400	5	10	0.4	0.5	1	50	0.2	0.2	4.6	0.5	30	2	4	17	0.4	0.1	0.1	0.05	0.1
HL-2083	0.5	1	5	200	104	4.7	1	3	0.2	0.66	0.2	0.2	2.5	0	500	5	10	0.3	0.4	1	50	0.2	0.2	0.6	0.5	10	2	3	13	0.2	0.1	0.1	0.05	0.05
HL-2097	0.5	1	11	200	61	8.2	9	5	0.2	1.01	0.5	0.2	2.5	0	600	5	10	0.1	0.9	1	50	0.2	1	0.05	0.5	10	3	7	7	0.5	0.1	0.1	0.2	0.05
HL-2098	0.5	1	20	200	56	6.8	1	5	0.2	2.29	0.2	0.2	2.5	0	500	5	10	0.1	0.7	1	50	0.2	0.7	0.05	0.5	10	3	6	8	0.4	0.1	0.1	0.2	0.05
HL-2099	0.5	1	9	200	55	6.3	5	7	0.5	1.56	0.2	0.2	2.5	0	600	5	10	0.1	0.9	1	50	0.2	1.4	0.4	0.5	10	3	6	9	0.6	0.1	0.1	0.2	0.05
HL-2100	0.5	1	4	50	31	4.9	3	6	0.2	0.73	0.2	0.2	2.5	0	500	5	10	0.2	0.8	1	50	0.2	0.9	0.3	0.5	10	3	4	1.5	0.4	0.1	0.1	0.05	0.05
HL-2101	0.5	1	129	400	40	3.7	7	8	0.2	5.19	0.2	0.2	2.5	0	600	5	10	0.3	1	1	300	0.2	1.2	0.5	0.5	10	4	6	1.5	0.5	0.1	0.1	0.2	0.05
HL-2102	0.5	1	46	100	53	4.4	8	3	0.2	1.38	0.2	0.2	2.5	0	400	5	10	0.2	0.4	1	50	0.2	0.2	0.05	0.5	10	2	2	1.5	0.2	0.1	0.1	0.05	0.05
HL-2103	0.5	1	42	400	53	4.7	6	5	0.2	2.86	0.2	0.2	2.5	0	500	5	10	0.2	0.9	1	50	0.2	1	0.05	0.5	10	3	5	6	0.4	0.1	0.1	0.2	0.05
HL-2104	0.5	1	8	50	61	5.6	1	0.5	0.7	1.3	0.2	0.2	2.5	0	500	5	10	0.3	0.4	1	200	0.2	0.2	0.05	0.5	30	1	5	10	0.2	0.1	0.1	0.05	0.05
HL-2105	0.5	1	1	50	68	3.3	1	3	0.2	0.41	0.2	0.2	2.5	0	400	5	10	0.05	0.5	1	50	0.2	0.5	0.05	0.5	10	2	4	8	0.2	0.1	0.1	0.05	0.05
HL-2272	0.5	1	10	200	35	5	6	4	0.2	0.21	0.2	0.2	2.5	12	300	5	10	0.9	0.5	1	100	0.2	0.7	0.6	0.5	20	3	5	6	0.4	0.1	0.1	0.2	0.05
HL-2273	0.5	1	8	100	27	4.8	3	3	0.2	0.15	0.2	0.2	2.5	6	300	5	10	0.5	0.5	1	50	0.2	0.6	0.3	0.5	10	2	3	4	0.3	0.1	0.1	0.05	0.05
HL-2274	0.5	1	3	200	33	6.9	5	10	0.2	0.42	0.5	0.2	2.5	2	400	5	10	0.4	1.6	1	50	0.2	2.7	2.1	0.5	10	14	15	15	1.6	0.3	0.1	0.5	0.1
HL-2278	0.5	1	3	200	37	5.9	11	14	0.2	1.09	0.2	0.2	2.5	2	400	5	10	1	1.2	1	50	0.2	1.4	0.3	0.5	10	6	9	8	0.7	0.1	0.1	0.3	0.05
HL-2297	4	1	2	100	42	7.1	10	16	0.2	0.89	0.2	0.2	2.5	5	500	5	10	0.2	2.2	1	50	0.2	2.6	3.1	0.5	40	33	46	17	2.1	0.5	0.1	0.6	0.05
HL-2331	0.5	1	2	200	33	5.7	4	5	0.2	0.28	0.2	0.2	2.5	6	300	5	10	0.1	0.6	1	50	0.2	0.6	0.05	0.5	20	3	5	7	0.3	0.1	0.1	0.05	0.05
HL-2332	0.5	1	0.5	100	21	6.1	3	3	0.2	0.2	0.2	0.2	2.5	8	200	5	10	0.1	0.3	1	50	0.2	0.2	0.2	0.5	40	1	2	1.5	0.2	0.1	0.1	0.05	0.05
HL-2333	0.5	1	1	200	35	6.9	7	10	0.2	0.61	0.2	0.2	2.5	2	400	5	10	0.1	1.2	1	50	0.2	1.6	1.5	0.5	20	8	12	7	0.8	0.1	0.1	0.2	0.05
HL-2334	0.5	1	1	200	26	6.1	2	6	0.9	0.38	0.2	0.2	2.5	4	300	5	10	0.05	0.6	1	100	0.2	0.9	0.05	0.5	10	2	4	6	0.3	0.1	0.1	0.2	0.05
HL-2335	0.5	1	0.5	100	30	5.6	1	2	0.2	0.31	0.2	0.2	2.5	3	200	5	10	0.1	0.3	1	100	0.2	0.2	0.05	0.5	10	1	2	1.5	0.2	0.1	0.1	0.05	0.05
HL-2339	5	1	5	100	33	3.3	1	4	0.2	0.52	0.2	0.2	2.5	2	600	5	10	0.4	0.7	1	50	0.2	0.8	0.05	0.5	10	3	5	1.5	0.3	0.1	0.1	0.2	0.05
HL-2369	0.5	1	0.5	600	6	0.2	9	80	2.5	1.42	4.1	0.2	2.5	2	20700	5	10	0.05	8.4	1	50	0.2	6.7	1.4	0.5	10	18	24	10	1.8	0.4	0.5	1.1	0.2
HL-2370	0.5	1	4	300	45	6	11	24	0.2	0.58	0.8	0.2	2.5	2	1900	5	10	0.4	3.1	1	50	0.2	3.5	1.2	0.5	10	12	17	16	1.3	0.3	0.1	0.7	0.05
HL-2371	0.5	1	3	200	50	6.2	10	15	0.2	0.51	0.2	0.2	2.5	15	600	5	10	0.5	1.8	1	50	0.2	1.8	5.8	0.5	30	13	18	16	1.2	0.3	0.1	0.4	0.1
HL-2372	0.5	1	4	300	46	4.2	14	47	0.5	1.12	1.9	0.2	2.5	6	5300	5	10	0.4	6.6	1	50	0.2	3.7	7.5	0.5	10	40	32	30	3.8	1	0.1	1	0.2
HL-2394	0.5	1	4	100	33	2.5	0.5	11	0.25	0.44	0.25	0.25	2.5	0	600	5	10	0.3	0.6	1	50	0.25	0.8	0.5	0.5	40	3	5	8	0.4	0.1	0.1	0.1	0.05
HL-2395	0.5	1	4	100	41	2.3	0.5	5	0.25	0.35	0.25	0.25	2.5	0	600	5	10	0.5	0.8	1	50	0.25	0.6	0.05	0.5	30	3	4	6	0.3	0.1	0.1	0.1	0.05
HL-2397	0.5	1	3	100	22	3.7	2	5	0.25	0.18	0.25	0.6	2.5	3	500	5	10	0.1	0.7	1	50	0.25	0.7	0.3	0.5	30	3	4	5	0.4	0.1	0.1	0.2	0.05
HL-2399	0.5	1	9	200	36	4.6	5	8	0.25	0.55	0.25	0.25	2.5	5	500	5	10	0.5	0.9	1	50	0.25	1	0.3	0.5	40	6	5	10	0.9	0.1	0.1	0.3	0.05
HL-2400	0.5	1	7	200	38	5	6	9	0.25	0.41	0.25	0.25	2.5	10	400	5	10	0.6	1.1	1	50	0.25	1.1	0.05	0.5	40	9	8	17	1.3	0.2	0.1	0.4	0.05
HL-2401	3	1	12	200	41	3.9	0.5	11	2.5	0.49	0.6	0.25	2.5	3	800	5	10	0.8	2	1	50	0.25	1.6	0.5	0.5	60	16	21	21	2.2	0.3	0.3	0.5	0.05
HL-2402	0.5	1	4	400	19	4.2	6	47	1.7	1.12	4.1	0.25	2.5	3	15500	5	10	0.3	5.8	1	50	0.25	3.6	0.8	3	10	19	27	18	2.4	0.5	0.1	1.1	0.05
HL-2403	0.5	1	2	300	30	0.9	10	32	3.3	1.05	1.7	0.25	2.5	5	5400	5	10	0.3	5.5	1	50	0.25	5.1	1.5	0.5	10	22	37	26	2.5	0.7	0.1	0.7	0.1
HL-2408	0.5	1	1	400	23	3.6	45	31	3.6	0.99	1.6	0.25	2.5	2	2500	5	30	0.5	7.2	1	50	0.25	6.8	4.7	0.5	40	57	80	67	8.7	1.7	1.6	2.1	0.3
HL-2409	4	1	3	400	26	0.6	10	111	4	1.9	4.4	0.25	2.5	11	10300	5	10	0.3	10.6	1	50	0.25	9.9	3.7	0.5	50	27	45	18	3	0.7	0.1	1.3	0.3
HL-2418	6	1	58	200	69	5.2	19	31	0.2	0.91	0.2	0.2	2.5	9	700	5	10	0.9	5.3	1	50	0.2	4	6.3	0.5	50	39	39	38	5.3	1.1	0.9	1.6	0.3
HL-2419	0.5	1	11	200	25	2	7	12	0.2	0.81	0.2	0.2	2.5	2	600	5	10	0.3	3.1	1	50	0.2	2.2	1.5	0.5	60	41	50	41	4.5	1.1	0.7	0.8	0.2
HL-2420	0.5	1	47	300	31	4.3	71	37	3.9	2.61	1.4	0.9	2.5	7	3800	5	20	0.6	5.6	1	50	0.2	5.6	4.1	0.5	10	32	32	29	3.8	0.8	0.1	1.4	0.1
HL-2421	0.5	1	126	200	24	3	36	30	2.7	3.59	1.2	0.2	2.5	11	2300	5	10	0.3	4.1	1	50	0.2	5.8	1.8	0.5	10	26	42	26	3	0.6	0.1	1.1	0.2
HL-2422	0.5	1	226	200	37	2.7	38	17	0.2	8.65	0.2	0.2	2.5	13	300	5	10	0.3	1.8	1	50	0.2	2.7	0.8	0.5	10	25	38	20	2.6	0.4	0.1	0.5	0.05
HL-2423	0.5	1	36	200	29	3.4	12	10	0.2	1.76	0.2	0.2	2.5	5	400	5	10	0.5	1.5	1	50	0.2	1.6	0.7	0.5	40	15	19	20	1.9	0.3	0.1	0.8	0.1
HL-2424	0.5	1	28	200	25	3.5	9	6	0.2	1.47	0.2	0.2	2.5	0	400	5	10	0.6	0.9	1	50	0.2	1.4	0.05	0.5	20	7	11	8	0.9	0.2	0.1	0.05	0.05
HL-2426	0.5	1	14	300	28	3.4	6	14	0.7	1.51	0.2	0.2	2.5	0	500	5	10	0.7	0.8	1	50	0.2	1.2	0.05	0.5	10	4	5	4	0.5	0.1	0.1	0.3	0.05
HL-2427	4	1	6	200	22	2.1	4	8	0.2	0.72	0.2	0.2	2.5	0	600	5	10	0.6	0.9	1	50	0.2	0.8	0.05	0.5	10	4	6	1.5	0.4	0.1	0.1	0.3	0.05
HL-2428	5	1	4	50	29	3.5	3	6	1.6	0.61	0.2	0.2	2.5	0	400	5	10	0.3	0.7	1	50	0.2	0.7	0.05	0.5	10	4	6	1.5	0.4	0.1	0.1	0.05	0.05
HL-2433	0.5	1	10	50	50	3.4	8	12	0.2	0.96	0.2	0.2	2.5	0	600	5	10	0.5	0.8	1	50	0.2	1.1	0.05	0.5	50	4	6	1.5	0.5	0.1	0.1	0.05	0.05
HL-2434	0.5	1	16	50	50	2.8	4	3	0.2	1.38	0.2	0.2	2.5	0	400	5	10	0.5	0.7	1	50	0.2	1.3	0.05	0.5	20	3	3	10	0.4	0.1	0.1	0.05	0.05
HL-2435	0.5	1	201	700	45	3.3	19	9	0.2	3.96	0.2	0.2	2.5	0	500	5	10	0.5	0.8	1	50	0.2	1.1	0.05	0.5	120	3	8	18	0.4	0.1	0.1	0.05	0.05
HL-2436	0.5	1	235	500	54	3.9	13	0.5	0.2	2.77	0.2	0.2	2.5	0	500	5	10	0.8	0.6	1	50	0.2	0.5	0.05	0.5	110	3	4	1.5	0.4	0.1	0.1	0.05	0.05
HL-2439	0.5	1	14	200	30	3.4	9	7	1.6	1.02	0.25	0.25	2.5	2	900	5	10	0.6	1.1	1	50	0.25	1.2	0.05	0.5	30	4	6	5	0.7	0.1	0.1	0.3	0.05
HL-2440	0.5	1	99	400	64	4.9	31	11	1	4.26	0.5	0.25	2.5	0	800	5	10	0.4	1	1	50	0.25	1.4	0.05	0.5	50	5	9	13	0.7	0.1	0.1	0.3	0.05
HL-2442	0.5	1	13	200	60	4.3	11	7	1.6	1.44	0.25	0.25	2.5	0	600	5	10	0.3	0.6	1	50	0.25	0.8	0.05	0.5	20	4	4	9	0.5	0.1	0.1	0.2	0.05
HL-2443	0.5	1	55	300	56	5.1	28	6	0.25	4.24	0.25	0.25	2.5	2	600	5	10	0.5	0.8	1	50	0.25	1.2	0.05	0.5	30	6	8	7	0.8	0.1	0.1	0.2	0.05
HL-2444	0.5	1	29	300	32	4.6	13	4	0.7	1.94	0.25	0.25	2.5	0	600	5	10	0.7	0.7	1	50	0.25	1	0.05	0.5	40	5	21	9	0.7	0.1	0.1	0.3	0.05
HL-2445	0.5	1	20	300	43	3.6	13	9	1.7	2.38	0.7	0.25	2.5	0	600	5	10	0.5	0.9	1	50	0.25	1	0.05	0.5	10	7	9	9	0.8	0.1	0.1	0.3	0.05
HL-2446	0.5	1	18	300	46	5.4	21	33	1.8	1.52	0.9	0.25	2.5	5	700	5	10	0.3	2.7	1	50	0.25	5.7	0.8	0.5	10	26	56	41	3.2	0.5	0.1	0.7	0.05
HL-2448	0.5	1	20	400	38	5.1	24	25	2	3.63	1.2	0.25	2.5	8	1200	5	10	0.2	3.9	1	50	0.25	5.5	1.4	0.5	10	32	68	49	3.7	0.6	0.7	0.8	0.05
HL-2449	0.5	1	23	400	53	7.4	20	28	3	4.22	1.2	0.25	2.5	8	900	5	10	0.4	3.8	1	200	0.25	5	1.3	0.5	30	29	53	35	3.6	0.6	0.3	0.9	0.05
HL-2450	0.5	1	5	300	27	6.3	15	61	2.8	2.67	2.5	0.25	2.5	6	5500	5	50	0.2	8.5	1	50	0.25	10.3	2.2	0.5	10	64	95	66	7.7	1.5	0.1	2	0.1
HL-2451	0.5	1	4	200	21	2.1	12	50	1.7	1.35	3.3	0.25	2.5	2	10300	5	10	0.2	7.8	1	50	0.25	5.4	1.3	0.5	10	18	25	19	2	0.6	0.1	0.9	0.05
HL-2459	3	1	5	300	26	0.25	8	36	0.25	1.49	1.1	0.25	2.5	5	2000	5	10	0.9	7.9	1	50	0.25	8.1	5.3	0.5	10	34	51	34	3.5	0.7	0.1	0.7	0.05
HL-2460	1	1	7	200	12	1	6	18	1.1	0.57	1.2	0.6	2.5	0	1900	5	10	1.3	2.3	1	50	0.25	1.8	1	0.5	60	8	13	10	1.1	0.3	0.1	0.5	0.05
HL-2476	0.5	1	46	600	29	6	44	13	0.2	1.75	0.2	0.2	2.5	6	400	5	10	0.8	0.9	1	50	0.2	0.7	0.5	0.5	60	5	11	1.5	0.7	0.1	0.1	0.05	0.05
HL-2477	0.5	1	189	400	35	3.7	32	13	0.2	3.31	0.2	0.2	2.5	3	400	5	10	0.2	1	1	50	0.2	1.6	0.05	0.5	10	6	6	1.5	0.7	0.1	0.1	0.05	0.05
HL-2479	0.5	1	192	600	43	3.2	51	15	0.2	4.79	1.4	0.2	2.5	5	300	5	10	0.3	1.4	1	50	0.2	3.6	0.05	0.5	60	22	43	9	2.1	0.5	0.1	0.5	0.05
HL-2480	0.5	1	33	600	30	5.5	13	61	7.8	1.71	3.4	0.2	2.5	0	7500	5	60	0.8	8.1	1	50	0.2	8	0.05	0.5	10	19	29	15	2.2	0.4	0.1	1.1	0.05
HL-2481	0.5	1	56	300	37	2.9	24	26	2.8	4.42	1.8	0.2	2.5	0	7300	5	10	0.4	4.4	1	50	0.2	6.6	1.6	0.5	10	23	29	15	2.2	0.4	0.1	1.1	0.2
HL-2482	0.5	1	11	400	38	5.2	19	19	0.2	1.49	0.2	0.2	2.5	4	600	5	10	0.05	1.4	1	50	0.2	2.8	0.05	0.5	30	8	12	11	0.9	0.1	0.1	0.2	0.05
HL-2484	0.5	1	38	400	31	3.6	67	7	0.2	6.2	0.2	0.6	2.5	7	500	5	10	1	1.1	1	50	0.2	1.1	0.05	0.5	10	6	9	1.5	0.7	0.1	0.1	0.2	0.05
HL-2485	0.5	1	26	500	57	4.5	13	23	0.2	3.27	0.2	0.2	2.5	1	500	5	10	0.3	1.5	1	50	0.2	2.4	0.05	0.5	20	6	9	1.5	0.9	0.1	0.1	0.6	0.05
HL-2486	0.5	1	80	700	59	4.7	30	17	0.2	5.62	0.2	0.2	2.5	6	500	5	10	0.8	1.5	1	50	0.2	2.2	0.05	0.5	50	6	15	20	0.9	0.1	0.1	0.5	0.05
HL-2487	0.5	1	9	300	41	7.5	8	26	0.2	1.48	1	0.2	2.5	4	700	5	10	0.05	2.1	1	50	0.2	3.7	0.8	0.5	30	8	10	10	1	0.1	0.1	0.5	0.05
HL-2491	0.5	1	1	50	26	1.3	14	45	0.25	1.22	0.8	0.25	2.5	0	1200	5	10	0.1	5.4	1	50	0.25	7.6	1.6	0.5	10	34	70	34	4.5	0.9	0.1	0.6	0.05
HL-2492	8	1	4	200	53	4	9	20	0.25	0.71	0.25	0.25	2.5	5	500	5	10	0.05	3.5	1	50	0.25	6.4	6.8	0.5	10	164	242	147	15.4	1.7	1.3	1.2	0.1
HL-2493	0.5	1	2	200	29	4.1	4	6	0.25	0.52	0.25	0.25	2.5	2	200	5	10	0.2	0.5	1	50	0.25	0.7	0.05	0.5	10	8	8	11	0.8	0.1	0.1	0.2	0.05
HL-2494	0.5	1	6	200	48	4.1	9	8	0.25	1.01	0.25	0.25	2.5	0	300	5	10	0.2	0.8	1	50	0.25	0.8	0.4	0.5	40	7	7	7	0.9	0.2	0.1	0.3	0.05
HL-2495	0.5	1	3	200	29	3.4	21	9	0.25	1.26	0.25	0.25	2.5	3	400	5	10	0.2	0.9	1	50	0.25	1.3	0.5	0.5	50	9	12	10	1.2	0.2	0.1	0.4	0.05
HL-2496	0.5	1	7	200	41	3.2	13	10	0.25	0.95	0.25	0.25	2.5	3	300	5	10	0.3	0.8	1	50	0.25	0.9	0.4	0.5	40	7	11	10	1	0.1	0.1	0.3	0.05
HL-2497	0.5	1	13	200	30	4.4	8	8	1.5	1.01	0.5	0.25	2.5	1	500	5	10	0.2	1.1	1	50	0.25	1.7	0.6	0.5	10	5	6	9	0.8	0.1	0.1	0.3	0.05
HL-2498	0.5	1	16	200	16	3.1	4	4	0.25	0.84	0.25	0.25	2.5	0	300	5	10	0.05	0.6	1	50	0.25	0.8	0.5	0.5	10	3	4	3	0.4	0.1	0.1	0.1	0.05

SAMPLE	Type	Easting	Northing	Layer Thickness (cm)	Sample depth (cm)	Sand %	Colour	Clay %	Organic %	char-coal %	Unit Above/-Type & Thick (cm)	Unit Below Type & Thickness (cm)	Decomposition	Wet/Dry	Terrain	Trees	Comments	Au	Ag	As	Ba	Br	Ca	Co	Cr	Cs	Fe	Hf	Hg	Ir	Mo	Na	Ni	Rb	Sb	Sc	Se	Sr	Ta	Th	U	W	Zn	La	Ce	Nd	Sm	Eu	Tb	Yb	Lu
HL-2499	H	301800	5821150	>10	15	0	brown black	0	100	0	peat 10	humus	mod-good	wet	flat peaty forest	birch and spruce	thick trees	0.5	1	193	300	41	4	38	9	1	2.02	0.25	0.25	2.5	0	400	5	10	0.3	0.7	1	50	0.25	1	0.3	0.5	10	3	7	4	0.4	0.1	0.1	0.2	0.05
HL-2500	H	301796	5821123	10	15	0	black	0	100	0	peat 10	unknown	mod-good	wet	flat peaty forest	birch and spruce	none	0.5	1	34	200	35	3.8	9	16	1.9	0.91	0.25	0.25	2.5	0	500	5	10	0.2	1.7	1	50	0.25	2.6	1.2	0.5	10	10	19	13	1.2	0.3	0.1	0.4	0.05
HL-2501	H	301800	5821100	>15	20	0	brown black	0	100	0	peat 15	unknown	mod-good	damp	flat peaty forest	birch and spruce	none	0.5	1	8	200	19	4.6	9	28	1.7	0.69	0.9	0.7	2.5	2	1400	5	10	0.3	4.6	1	50	0.25	6.2	1.3	0.5	10	26	47	36	3.2	0.4	0.1	0.8	0.05
HL-2505	H	301800	5821000	10	40	0	brown black	0	100	0	peat 35	more peat	poor	wet	flat peaty forest	spruce	high% peat	0.5	1	4	100	20	4.5	2	7	0.25	0.16	0.25	0.25	2.5	9	300	5	10	0.2	0.6	1	50	0.25	0.7	0.4	0.5	10	3	4	1.5	0.4	0.1	0.1	0.1	0.05
HL-2506	H	301800	5820975	10	40	0	brown black	0	100	0	peat 35	unknown	poor-mod	damp	flat peaty forest	spruce	some peat mixed in	0.5	1	5	200	32	5.2	5	5	0.25	0.14	0.25	0.25	2.5	24	300	5	10	0.4	0.5	2	50	0.25	0.8	0.3	0.5	10	3	5	5	0.4	0.1	0.1	0.2	0.05
HL-2507	H	301800	5820950	3	50	0	black	3	97	0	peat45	ay and boulde	good	damp	flat peaty forest	spruce	none	0.5	1	6	400	13	2	21	91	3.7	2.85	3.3	0.25	2.5	1	12300	5	70	0.3	10.7	1	50	0.25	9.2	1.7	0.5	50	44	67	42	5	1.1	0.1	1.3	0.2
HL-2510	H	301800	5820875	5	30	0	grey brown	0	100	0	peat	unknown	poor	wet	peaty forest	spruce	could be fake humus? 1/2 peat	0.5	1	2	100	15	0.25	5	13	0.7	0.52	0.25	0.25	2.5	0	800	5	10	0.2	3.2	1	50	0.25	2.1	0.8	0.5	30	16	25	15	1.6	0.3	0.1	0.3	0.05
HL-2511	H	301800	5820850	3	3	0	black	0	100	0	moss	outcrop	good	damp	on outcrop	spruce	none	0.5	1	8	400	11	0.25	0.5	68	3.8	0.82	4.4	0.25	2.5	2	4000	5	40	0.8	6.8	1	50	0.25	7	2.9	0.5	10	20	32	20	2	0.5	0.1	1.3	0.3
HL-2514	H	301900	5820800	20	30	0	black brown	0	100	0	peat	peat	poor	wet	peat bog	spruce alder	40% peat, roots	0.5	1	10	200	18	5.1	5	11	1.4	0.85	0.25	0.25	2.5	0	400	5	10	0.2	1	1	50	0.25	1.3	0.2	0.5	10	6	8	8	0.8	0.1	0.1	0.3	0.05
HL-2515	H	301900	5820825	3	15	0	black	0	100	0	peat	peat	poor	wet	peat bog	spruce alder	50% peat	0.5	1	19	100	21	3.5	13	7	0.25	1.13	0.25	0.25	2.5	0	500	5	10	0.5	0.8	1	50	0.25	0.8	0.4	0.5	30	6	9	9	0.7	0.1	0.1	0.3	0.05
HL-2516	H	301900	5820850	3	10	0	black	0	100	0	moss	boulder	mod	damp	middle of winter road	spruce alder	quite rooty	3	1	11	200	14	2.3	4	19	0.25	0.78	1.2	0.25	2.5	0	1100	5	10	0.4	2.8	1	100	0.25	2.4	0.9	0.5	10	9	13	12	1	0.2	0.1	0.6	0.05
HL-2517	H	301900	5820875	5	20	0	black	2	98	0	peat	eat and humu	mod-good	wet	peaty forest	spruce	none	0.5	1	15	50	17	2.7	4	11	0.25	0.63	0.25	0.25	2.5	0	500	5	10	0.05	1.4	1	50	0.25	2.1	1.1	0.5	10	16	23	17	1.8	0.4	0.1	0.4	0.05
HL-2518	H	301900	5820900	15	15	0	black brown	0	100	0	peat	unknown	mod	wet	peaty forest	spruce	lil bit peaty	0.5	1	57	200	25	3.5	3	9	0.25	1.49	0.25	0.25	2.5	0	400	5	10	0.1	1.1	1	50	0.25	1.5	0.3	0.5	10	15	20	23	1.7	0.4	0.1	0.4	0.05
HL-2519	H	301900	5820925	10	25	0	black brown	0	100	0	peat	unknown	poor-mod	wet	wet patch peaty forest	spruce	some sticks	0.5	1	25	100	21	3.6	5	9	0.25	1.07	0.25	0.25	2.5	2	500	5	10	0.2	1.8	1	50	0.25	2.4	1.1	0.5	10	20	27	18	2.1	0.4	0.1	0.4	0.05
HL-2520	H	301900	5820950	10	20	0	black	0	100	0	peat	unknown	good	wet	peaty forest	spruce	none	0.5	1	8	200	18	3.5	4	9	0.25	0.7	0.25	0.25	2.5	1	500	5	10	0.2	1.1	1	50	0.25	1.4	0.8	0.5	10	13	15	14	1.4	0.3	0.1	0.3	0.05
HL-2521	H	301900	5820975	5	25	0	black brown	0	100	0	peat	umus and pea	mod	wet	peaty forest	spruce	none	0.5	1	9	200	16	3.3	4	13	1.5	0.69	0.25	0.25	2.5	2	700	5	10	0.2	2.3	1	50	0.25	3.3	1.7	0.5	10	27	36	32	2.9	0.4	0.3	0.6	0.05
HL-2522	H	301900	5821000	20	70	0	black	0	100	0	peat	unknown	mod-good	wet	peaty forest	spruce	some wood debris	0.5	1	5	300	33	4	11	9	0.25	1.37	0.25	0.25	2.5	2	400	5	10	0.1	1.2	1	50	0.25	1.9	1.1	0.5	10	13	18	15	1.3	0.3	0.1	0.4	0.05
HL-2523	H	301900	5821025	10	30	0	black	0	100	0	peat	humus	good	wet	peaty forest	spruce	none	0.5	1	4	300	21	4.9	8	9	0.25	1.25	0.7	0.25	2.5	2	500	5	10	0.4	1.4	1	50	0.25	1.9	1.3	0.5	10	15	20	15	1.5	0.2	0.1	0.4	0.05
HL-2524	H	301900	5821050	10	40	0	black brown	0	100	0	peat	unknown	mod-good	wet	peaty forest	spruce	none	0.5	1	2	100	15	3.6	2	6	0.25	0.15	0.25	0.25	2.5	5	400	5	10	0.1	0.4	1	50	0.25	0.25	0.5	0.5	10	3	5	3	0.3	0.1	0.1	0.1	0.05
HL-2525	H	301900	5821075	10	50	0	black	0	100	0	peat	humus	mod-good	wet	peaty forest	spruce	none	0.5	1	1	200	24	3.6	9	7	0.25	0.43	0.25	0.25	2.5	3	300	5	10	0.3	0.7	1	50	0.25	0.9	0.6	0.5	10	14	24	16	1.3	0.3	0.1	0.4	0.05
HL-2530	H	301905	5821198	10	30	1	black	3	90	6	peat 30	boulders	good	damp	up onto small rise	spruce	none	0.5	1	6	300	34	0.25	0.5	21	0.25	1.05	0.25	0.25	2.5	2	5200	5	10	0.3	5.4	1	50	0.25	9.2	4.2	0.5	10	222	321	168	17.6	2.4	1.8	1.6	0.1
HL-2531	H	301911	5821224	5	30	0	black brown	0	100	0	peat 30	boulders	mod	wet	flat	spruce	possibly high % peat	4	1	9	500	42	2.7	48	39	2.9	4.64	1.8	0.25	2.5	10	1700	5	10	0.1	5.2	1	50	0.25	8.3	5.3	0.5	30	48	75	51	5.4	0.9	0.9	1.2	0.2
HL-2533	H	301900	5821275	5	30	2	black	0	98	0	peat 30	unknown	good	damp	flat	spruce	edge of boggy ground	0.5	1	2	300	18	2.5	6	49	1.2	1.34	2	0.25	2.5	4	8000	5	10	0.3	4.7	1	50	0.25	4.5	2.9	0.5	10	37	48	34	3.6	0.7	0.4	1	0.05
HL-2534	H	301900	5821354	15	30	0	black	0	100	0	peat 30	unknown	good	damp	flat	spruce	edge of boggy ground	4	1	22	800	78	5	114	117	11.9	3.49	0.25	0.25	2.5	124	1300	5	10	0.4	13.2	1	50	0.25	18.7	40.8	0.5	10	90	146	81	11.8	2.5	0.1	3.2	0.9
HL-2535	H	301900	5821325	5	40	2	black brown	0	98	0	peat 40	till	mod	damp	flat	spruce	probably decomposed peat?	0.5	1	2	200	17	1.3	8	33	1.6	1.14	1.7	0.25	2.5	3	6900	5	10	0.1	6.3	1	50	0.25	6.6	2.5	0.5	10	31	46	38	3.7	0.8	0.1	1	0.1
HL-2536	H	301889	5821352	5	30	0	black brown	0	100	0	peat 30	till	poor	wet	flat	spruce	probably decomposed peat?	7	1	4	300	46	2.8	118	83	1.5	6.25	0.25	0.25	2.5	25	1500	5	10	0.3	13.1	1	50	0.25	15.7	7	0.5	30	130	180	117	15.9	2.5	2	3.1	0.5
HL-2537	H	301900	5821375	5	30	3	brown	3	94	0	peat 30	till	poor	damp	flat	spruce	motted vegetation on top of till	0.5	1	1	300	15	0.25	9	50	1.1	0.92	2.5	0.25	2.5	3	8300	5	10	0.05	5.4	1	50	0.25	6.8	1.9	0.5	10	16	24	13	1.9	0.5	0.1	0.7	0.05
HL-2538	H	301900	5821400	5	30	2	black	0	98	0	peat 30	boulders	good	wet	flat	spruce	none	0.5	1	0.5	300	21	2.1	8	43	2.7	1.38	2.3	0.25	2.5	4	12100	5	10	0.2	8.1	1	50	0.25	11.3	3.5	0.5	10	48	73	36	5	1	0.1	1.1	0.2
HL-4001	H	300900	5821000	5	30	0	brown black	0	100	0	25cm peat	peat	M	W	boggy forest	spruce		0.5	1	15	50	54	5.9	4	4	0.2	0.16	0.2	0.2	2.5	5	300	5	10	1.8	0.5	1	50	0.2	0.9	0.6	0.5	10	4	3	13	0.4	0.1	0.1	0.05	0.05
HL-4002	H	300900	5820975	10	25	0	black	0	100	0	20cm peat	boulder till	G	M	flat rise	spruce		0.5	1	96	200	33	6.3	11	42	0.2	1.02	1.6	0.2	2.5	2	3500	5	10	2.6	3.9	1	50	0.2	4	2.4	0.5	10	13	15	19	1.4	0.1	0.1	0.7	0.1
HL-6000	H	301545	5821279	5	20	0	Black	0	100	0	moss	peat	P-M	W	flat	spruce	lots of rootlets	0.5	1	4	100	26	3.6	0.5	3	0.25	0.65	0.25	0.25	2.5	0	400	5	10	0.1	0.5	1	50	0.25	0.5	0.05	0.5	10	3	4	5	0.3	0.1	0.1	0.2	0.05
HL-6001	H	301553	5821176	5	20	0	Black	0	100	0	moss	peat	P-M	W	flat	spruce	lots of rootlets	0.5	1	18	200	34	3.6	28	10	0.25	2.79	0.6	0.25	2.5	6	700	5	10	0.6	0.9	1	50	0.25	1.2	0.05	0.5	50	5	9	7	0.8	0.1	0.1	0.3	0.05
HL-6002	H	301555	5821150	8	25	0	Black	0	100	0	moss/peat	till	M	W	flat	spruce	matted vegetation	0.5	1	3	300	39	4	20	33	2	1.62	2	0.25	2.5	5	6100	5	10	0.3	6.2	1	50	0.25	6.4	2.3	0.5	10	40	54	41	4.5	0.9	0.1	1.3	0.05
HL-6100	H	296600	5822325	10	10	0	black	0	100	0	moss 10	peat	mod	damp	flat	spruce	matted vegetation on till	0.5	1	5	200	23	3.8	8	7	1.5	0.84	0.25	0.25	2.5	1	800	5	10	0.2	1	1	50	0.25	2.1	0.8	0.5	10	9	15	12	0.9	0.1	0.1	0.2	0.05
HL-6101	H	296600	5822350	5	20	0	black	0	100	0	peat 20	rocks	mod	damp	flat	spruce	val from moss, roots, 30cm dow	0.5	1	3	50	20	4.2	0.5	6	0.25	0.32	0.25	0.25	2.5	0	500	5	10	0.3	0.7	1	50	0.25	1.2	0.3	0.5	10	21	25	24	1.7	0.3	0.1	0.3	0.05
HL-6102	H	296601	5822383	15	15	0	black	0	100	0	moss 10	rocks	mod	damp	flat	spruce	none	0.5	1	4	200	25	5.4	3	7	1	0.49	0.25	0.25	2.5	4	500	5	10	0.3	0.9	1	50	0.25	1.5	1.8	0.5	10	19	24	16	1.7	0.3	0.1	0.3	0.05
HL-6103	H	296694	5822370	5	30	1	black	0	99	0	peat 30	till	mod	damp	flat	spruce	matted vegetation on top of sand	0.5	1	2	100	18	4.2	3	10	0.25	0.47	0.7	0.25	2.5	0	1600	5	10	0.05	1.1	1	50	0.25	1.9	0.4	0.5	10	10	15	7	1	0.2	0.1	0.2	0.05
HL-6104	H	296700	5822344	10	10	0	black	0	100	0	peat 10	unknown	very good	wet	flat	spruce	good sample in moss roots	0.5	1	34	600	54	4.3	29	6	0.25	1.77	0.25	0.25	2.5	6	700	5	10	0.3	0.9	1	50	0.25	1	0.05	0.5	110	5	9	14	0.6	0.1	0.1	0.3	0.05

SAMPLE	Easting	Northing	Thickness	depth	Sand	Colour	Clay	Organic	charcoal	UnitAbove	UnitBelow	WetDry	Terrain	Trees	Comments	Au	As	Ba	Bi	Br	Cd	Ce	Cl	Co	Cu	Dy	Er	Eu	Fe	Ga	Gd	Ge	Hf	Hg	Ho	I	In	K	La	Li	Lu	Mg	Mn	Mo	Na	Nb	Nd	Ni	Os
S-1987	298700	5821775	10	15	100	red brown	0	0	0	5cm leach	boulders	D	hilltop	spruce		0.03	4	203	0.4	62	2.7	3	6000	8	9	0.2	0.1	0.1	6	2.0	0.2	0.3	0.1	0.5	0.1	10	0.1	11	2	13	0.1	4	2940	0.5	3	1.0	1	15	0.5
S-1146	295207	5822473	20	20	95	orange-red	5	0	0	moss 5	sand	D	w sandy ri	spruce	open	0.03	4	326	0.4	103	1.8	5	5000	14	5	0.3	0.2	0.2	5	2.0	0.4	0.3	0.2	0.5	0.1	15	0.1	13	2	3	0.1	2	153	0.5	5	0.5	2	15	0.5
S-0755	293896	5822824	3	2	100	grey	0	0	0	moss	boulders	dry	ope up to	spruce	none	0.03	7	93	1	40	2	3.2	11000	5	5	0.2	0.05	0.05	2	1	0.3	0.25	0.2	0.5	0.05	15	0.05	14	1.8	13	0.05	1	148	2	9	3	1.6	8	0.5
S-2096	299599	5821525	3cm	10	90	Grey	0	5	0	loss & Pea	Boulder	M	Esker/Hill	Spruce	Esker	0.03	7	238	0.4	30	1.5	5	5000	3	18	0.3	0.2	0.1	7	2.0	0.3	0.3	0.2	0.5	0.1	4	0.1	17	3	4	0.1	2	161	1.0	6	2.0	2	6	0.5
S-0774	294043	5822575	10	5	95	golden rec	5	0	0	moss, ble	boulders	dry	flat, dry	balsam	none	0.03	11	339	2.2	173	2.7	7.8	19000	11	13	0.6	0.3	0.2	15	7	0.6	0.25	0.7	0.5	0.1	50	0.05	17	4.2	22	0.05	3	160	0.5	14	5	4.1	22	0.5
S-1345	296597	5822523	10	45	0	Black	95	5	0				swamp	Spruce		0.03	9	334	0.4	136	1.0	11	7000	7	7	0.4	0.2	0.2	7	2.0	0.6	0.3	0.1	0.5	0.1	21	0.1	10	5	17	0.1	4	199	1.0	12	2.0	4	19	0.5
S-0752	293890	5822749	5	10	100	golden	0	0	0	moss	boulders	dry	op of ridg	spruce	none	0.03	7	303	2	154	1.3	6.6	16000	7	7	0.4	0.3	0.2	13	5	0.5	0.25	0.6	0.5	0.05	57	0.05	10	3.2	27	0.05	2	148	0.5	12	3	2.8	17	0.5
S-1982	298600	5821725	10	25	100	Red brown	0	0	0	) white sa	boulders	D	Hilltop	Spruce		0.03	2	302	0.4	70	1.9	4	8000	21	6	0.2	0.1	0.1	6	2.0	0.3	0.3	0.1	0.5	0.1	9	0.1	6	2	5	0.1	4	2350	0.5	5	0.5	2	27	0.5
S-1981	298600	5821700	10	20	100	Red brown	0	0	0	) white sa	boulders	D	Hilltop	Spruce		0.03	2	367	0.4	112	2.0	4	8000	8	4	0.2	0.1	0.1	6	2.0	0.3	0.3	0.1	0.5	0.1	10	0.1	12	2	5	0.1	3	311	0.5	6	0.5	2	20	0.5
S-0432	292900	5822200	10	20	100	Red	0	0	0	sand	boulders	D	flat	spruce	te moss fl	0.03	4	280	1.1	80	2.9	9	7000	13	8	0.4	0.2	0.2	4	2.0	0.5	0.3	0.2	0.5	0.1	15	0.1	10	5	8	0.1	4	555	0.5	8	0.5	3	20	0.5
S-0301	292400	5822325	>10	10	100	ight red brow	0	0	0	3cm moss	boulder til	dry	dry dead f	spruce	pebbly	0.03	5	112	0.4	49	2.5	3	4000	44	7	0.2	0.1	0.1	3	2.0	0.2	0.3	0.1	0.5	0.1	8	0.1	12	2	3	0.1	6	882	1.0	7	1.0	1	36	0.5
S-2465	301700	5820875	>10	20	95	ark grey brow	0	5	0	peat/moss	outcrop	dry	pe down t	spruce	ulders, ou	0.03	4	190	0.4	49	1.5	3	6000	36	7	0.1	0.1	0.1	4	3.0	0.1	0.3	0.1	0.5	0.1	7	0.1	11	2	3	0.1	6	195	1.0	7	0.5	1	33	0.5
S-0433	292900	5822225	20	20	100	Brown red	0	0	0	sand	boulders	D	slope up to	spruce	te moss fl	0.03	3	217	0.4	57	1.8	5	6000	12	11	0.2	0.1	0.1	4	2.0	0.3	0.3	0.1	0.5	0.1	8	0.1	9	3	6	0.1	3	617	0.5	7	0.5	2	20	0.5
S-2464	301702	5820855	5	25	100	red brown	0	0	0	nd bleache	till	dry	orest, peat	spruce	some roc	0.03	4	167	0.4	49	1.4	2	7000	33	6	0.1	0.1	0.1	3	2.0	0.2	0.3	0.1	0.5	0.1	6	0.1	11	1	3	0.1	5	186	0.5	7	0.5	1	31	0.5
S-0051	291700	5822775	5	10	95	grey-brown	5	0	0	/peat and	boulder til	dry	slope up t	spruce	ular coarse	0.03	7	233	1.3	112	2	10	8000	19	10	0.5	0.3	0.2	3	2	0.7	0.25	0.2	0.5	0.05	40	0.05	14	5.6	11	0.05	3	207	1	8	2	4.1	20	0.5
S-1989	298700	5821725	5	20	100	red brown	0	0	0	5cm leach	boulders	D	hillside	spruce		0.03	3	243	0.4	73	2.9	4	9000	7	6	0.2	0.1	0.1	6	1.0	0.2	0.3	0.2	0.5	0.1	10	0.1	11	2	11	0.1	4	372	0.5	6	0.5	2	14	0.5
S-2466	301700	5820900	5	25	98	dark red brow	1	1	0	bleached	boulder til	wet	op to S slo	spruce	ween boul	0.03	4	212	0.4	105	1.1	5	7000	14	10	0.2	0.2	0.1	5	0.5	0.4	0.3	0.1	0.5	0.1	14	0.1	10	3	6	0.1	4	149	0.5	3	0.5	2	34	0.5
S-1986	298700	5821800	10	25	100	red brown	0	0	0	10cm leach	boulders	D	hilltop	spruce		0.03	2	404	0.4	89	3.4	4	7000	12	7	0.2	0.1	0.1	6	0.5	0.2	0.3	0.1	0.5	0.1	10	0.1	8	2	20	0.1	3	654	0.5	5	0.5	1	29	0.5
S-1145	295199	5822604	20	15	100	orange-red	0	0	0	moss	white sand	D	w sandy ri	spruce	open	0.03	3	325	0.8	90	0.9	5	18000	8	4	0.3	0.1	0.1	3	1.0	0.4	0.3	0.1	0.5	0.1	11	0.1	12	3	8	0.1	9	912	0.5	10	0.5	2	29	0.5
S-1142	295200	5822671	20	20	100	orange-red	0	0	0	moss	white sand	D	w sandy ri	Spruce		0.03	2	691	0.4	87	1.9	5	10000	7	4	0.7	0.2	0.3	1	0.5	0.7	0.3	0.1	0.5	0.1	12	0.1	12	3	4	0.1	3	233	0.5	7	0.5	2	28	0.5
S-0769	294053	5822700	<3	25	100	grey	0	5	0	moss 25	boulders	dry	flat, dry	blasam/s	poor sam	0.03	5	87	2	57	1	5.3	11000	2	4	0.2	0.1	0.05	3	3	0.3	0.25	0.2	0.5	0.05	17	0.05	9	2.9	15	0.05	1	51	2	8	4	1.9	8	0.5
S-1979	298600	5821650	10	20	100	Red brown	0	0	0	) white sa	boulders	D	Hilltop	Spruce		0.03	4	389	0.4	141	0.7	5	4000	7	8	0.3	0.1	0.1	9	2.0	0.4	0.3	0.1	0.5	0.1	15	0.1	13	3	7	0.1	4	545	0.5	6	1.0	2	16	0.5
S-0767	294054	5822749	<2	7	100	golden	0	0	0	moss, ble	boulders	dry	slight slop	spruce	think laye	0.03	5	267	0.9	193	1.7	11.1	16000	9	7	0.5	0.3	0.2	4	3	0.7	0.25	0.3	0.5	0.05	60	0.05	10	5.2	7	0.05	1	175	0.5	8	2	4.5	17	0.5
S-0775	294038	5822550	5	30	80	golden rec	10	0	0	moss, ble	boulders	dry	flat, dry	balsam	none	0.03	5	228	4.2	65	1	6.3	9000	16	9	0.4	0.2	0.1	3	2	0.4	0.25	0.2	0.5	0.05	17	0.05	8	3.3	43	0.05	3	151	3	7	2	2.7	26	0.5
S-1988	298700	5821750	5	15	100	red brown	0	0	0	10cm leach	boulders	D	hilltop	spruce		0.03	2	759	0.4	79	2.8	3	9000	9	5	0.2	0.1	0.1	5	0.5	0.2	0.3	0.1	0.5	0.1	10	0.1	11	2	5	0.1	2	1250	0.5	6	0.5	1	38	0.5
S-1144	295197	5822637	20	15	100	orange-red	0	0	0	moss	white sand	D	w sandy ri	spruce	open	0.03	3	369	0.4	118	2.8	5	7000	8	2	0.3	0.1	0.2	4	1.0	0.4	0.3	0.1	0.5	0.1	16	0.1	12	3	5	0.1	3	858	0.5	6	0.5	2	25	0.5
S-1344	296603	5822551	>15	30	95	Sand	90	10	0				edge of swa	Spruce	d higher g	0.03	5	116	0.4	71	1.7	4	1000	15	6	0.2	0.1	0.1	5	2.0	0.3	0.3	0.2	0.5	0.1	10	0.1	11	2	21	0.1	7	218	0.5	7	3.0	2	18	0.5
S-0773	294047	5822602	10	10	95	golden	5	0	0	moss, ble	boulders	dry	flat, dry	balsam	none	0.03	4	320	1.3	91	1.5	11.1	9000	7	7	0.6	0.3	0.3	6	3	0.7	0.25	0.2	0.5	0.1	34	0.05	8	5.6	11	0.05	1	105	0.5	6	2	5	12	0.5
S-1120	295087	5822588	15	20	100	sandy	0	0	0	moss	boulders	W	flat	spruce	ig boulder	0.03	6	327	0.9	124	0.3	21	6000	26	9	0.8	0.4	0.3	4	1.0	1.3	0.3	0.5	0.5	0.1	16	0.1	7	8	21	0.1	10	2460	1.0	15	2.0	9	13	0.5
S-0040	291700	5822500	>5	10	80	sandy brown	20	0	0	moss	outcrop	damp	lat outcro	spruce	utcrop of	0.03	6	186	1.8	72	1.7	4.1	12000	13	12	0.3	0.2	0.1	3	2	0.4	0.25	0.2	0.5	0.05	19	0.05	8	2.2	4	0.05	3	113	1	8	1	2.3	21	0.5
S-0876	294300	5822400	>5	30	90	sandy grey	0	10	0	moss	boulders	damp	ulder mou	spruce	bly coarse	0.03	5	77	0.9	37	2.2	3.3	13000	6	5	0.3	0.1	0.05	1	3	0.3	0.25	0.2	0.5	0.05	10	0.05	10	2	9	0.05	1	155	2	9	2	3.3	9	0.5
S-0039	291700	5822475	>10	10	95	sandy brown	0	5	0	peat/moss	boulders	damp	peaty flat	spruce	none	0.03	6	109	1.2	41	1	3.6	10000	3	9	0.3	0.1	0.1	0.5	0.5	0.4	0.25	0.1	0.5	0.05	8	0.05	8	2	8	0.05	2	125	2	8	0.5	2.4	6	0.5
S-0753	293894	5822772	1	10	100	grey	0	0	0	moss	boulders	dry	ope up to	spruce	none	0.03	4	126	0.4	31	1.1	1.1	9000	4	3	0.05	0.05	0.05	0.5	1	0.05	0.25	0.05	0.5	0.05	8	0.05	8	0.8	9	0.05	1	71	3	8	1	0.5	6	0.5
S-2277	300900	5821150	8	30	100	red brown	0	0	0	5cm leach	boulder til	D	ridge side	spruce		0.03	6	208	0.4	65	0.3	2	5000	9	14	0.1	0.1	0.1	6	1.0	0.1	0.3	0.1	0.5	0.1	7	0.1	10	1	4	0.1	5	361	0.5	3	0.5	2	93	0.5
S-2463	301700	5820825	10	20	93	sandy	5	0	2	peat	till	damp	flat forest	spruce	bly coarse	0.03	2	540	0.4	98	0.5	9	4000	20	17	0.3	0.2	0.2	7	0.5	0.4	0.3	0.1	0.5	0.1	14	0.1	7	5	23	0.1	6	186	0.5	3	0.5	3	37	0.5
S-2368	301300	5821025	>10	25	100	brown	0	0	0	20cm peat	till	dry	ope up to	spruce	open	0.03	5	197	0.4	107	0.6	5	4000	10	14	0.3	0.2	0.1	12	3.0	0.3	0.3	0.1	0.5	0.1	18	0.1	8	3	11	0.1	6	227	1.0	6	2.0	2	37	0.5
S-0050	291700	5822750	<5	5	100	grey-brown	0	0	0	) peat/mo	boulder til	dry	boulder m	spruce	ween boul	0.03	6	56	0.9	37	1.3	1.4	16000	3	5	0.1	0.05	0.05	0.5	2	0.3	0.25	0.1	0.5	0.05	6	0.05	10	1.1	12	0.05	1	84	2	11	2	0.7	7	0.5
S-0771	294044	5822651	<5	10	90	grey	10	0	0	moss	boulders	dry	flat, dry	balsam	thin grey	0.03	5	74	0.8	37	0.8	2	7000	2	4	0.1	0.05	0.05	0.5	2	0.1	0.25	0.1	0.5	0.05	7	0.05	10	1.2	9	0.05	1	122	3	7	2	0.8	5	0.5
S-2406	301400	5821000	5	10	100	red sandy	0	0	0	peat 7	boulders	D	aty forest	Spruce	fine sand	0.03	4	83	0.4	73	1.0	2.3	7000	6	7	0.1	0.05	0.05	5	1	0.2	0.25	0.1	0.5	0.05	17	0.05	8	1	23	0.05	1	43	0.5	2.5	0.5	1.2	11	0.5
S-6106	296500	5822350	>15	20	95	grey	5	0	0	peat	boulder	dry	n boulder	Spruce	oulders, c	0.03	2	336	0.4	75	0.9	21.6	11000	12	5	1	0.6	0.4	3	0.5	1.4	0.25	0.2	0.5	0.2	17	0.05	6	10	26	0.05	3	1070	0.5	5	0.5	10.8	16	0.5
S-0768	294052	5822726	5	10	100	golden	0	0	0	moss, ble	boulders	dry	slight slop	spruce	good gold	0.03	0.5	487	0.4	180	0.9	1.4	9000	4	4	0.05	0.05	0.05	1	0.5	0.05	0.25	0.05	0.5	0.05	41	0.05	6	1	6	0.05	1	105	0.5	6	0.5	0.6	8	0.5
S-1073	295007	5822583	20	20	100	Orange red	0	0	0	sand and	Rocks	D	at/low ridg	spruce		0.03	2	604	0.4	121	3.3	7	4000	7	5	0.4	0.2	0.2	2	1.0	0.5	0.3	0.1	0.5	0.1	13	0.1	7	4	4	0.1	1	244	0.5	6	0.5	3	18	0.5
S-0047	291700	5822675	5	5	98	sandy red	2	0	0	ew cm mo	boulder til	dry	ulder mou	spruce	lil pebbly	0.03	5	95	1.1	43	1	1.7	11000	2	5	0.1	0.05	0.05	1	2	0.1	0.25	0.2	0.5	0.05	11	0.05	10	1.1	14	0.05	1	201	2	10	3	0.8	7	0.5
S-0435	292900	5822275	20	20	100	sandy	0	0	0	oarse san	boulders	D	slope up to	spruce		0.03	3	224	0.8	44	1.6	5	13000	19	7	0.1	0.1	0.1	2	2.0	0.2	0.3	0.2	0.5	0.1	10	0.1	12	3	4	0.1	10	322	0.5	14	0.5	2	15	0.5
S-2474	301700	5821100	5	15	100	red brown	0	0	0	at, bleach	wood, bo	damp	ght slope u	spruce	d with pe	0.03	3	205	0.4	71	1.0	3	1000	7	12	0.2	0.1	0.1	9	1.0	0.2	0.3	0.2	0.5	0.1	11	0.1	8	2	20	0.1	4	153	0.5	3	1.0	1	28	0.5
S-0777	294036	5822499	85	15	100	grey-red	0	0	0	peat 15	boulders	dry	flat	spruce	none	0.03	2	258	0.9	144	0.5	8.7	13000	7	14	0.5	0.3	0.2	3	1	0.6	0.25	0.2	0.5	0.05	32	0.05	2.5	4.3	21	0.05	5	91	1	10	1	4.1	22	0.5
S-0840	294200	5822550	>5	10	100	sandy grey	0	0	0	thin moss	boulder	dry	r grounds,	lder/spru	ttle pebbl	0.03	5	79	0.4	22	0.6	2.1	3000	8	4	0.2	0.05	0.05	1	2	0.1	0.25	0.1	0.5	0.05	7	0.05	6	2	10	0.05	1	105	2	2.5	3	0.8	18	0.5
S-2473	301700	5821075	5	20	98	sandy brown	2	0	0	20cm peat	boulder til	damp	crop slope	spruce	en lots of	0.03	2	156	0.4	45	1.3	4	1000	8	7	0.1	0.1	0.1	5	1.0	0.2	0.3	0.1	0.5	0.1	6	0.1	9	2	7	0.1	4	185	0.5	3	0.5	1	24	0.5
S-1119	295085	5822563	30	40	100	red brown	0	0	0	white sand	?	W	flat	spruce	ey, too go	0.03	1	134	0.4	64	0.1	1	10000	6	2	0.1	0.1	0.1	1	0.5	0.1	0.3	0.1	0.5	0.1	1	0.1	3	1	5	0.1	4	484	0.5	12	0.5	1	16	0.5
S-0776	294037	5822525	5	5	70	dolden rec	30	0	0	moss, ble	boulders	dry	elevated a	balsam	none	0.03	4	388	0.9	237	1.8	4.4	11000	12	7	0.3	0.2	0.1	3	1	0.4	0.25	0.2	0.5	0.05	58	0.05	13	2.2	9	0.05	1	131	0.5	6	0.5	2	16	0.5
S-2298	301000	5821450	10	20	100	red brown	0	0	0	2cm moss	boulder til	D	north slop	Spruce		0.03	1	509	0.4	74	1.5	8	5000	10	9	0.4	0.2	0.2	4	0.5	0.5	0.3	0.1	0.5	0.1	9	0.1	12	4	13	0.1	3	691	0.5	3	0.5	3	37	0.5
S-0409	292800	5822700	20	20	100	red	0	0	0	moss	rocks	D	ow till ridg	spruce		0.03	2	274	0.4	70	0.7	4	10000	14	6	0.2	0.1	0.1	7	0.5	0.2	0.3	0.1	0.5	0.1	13	0.1	13	3	17	0.1	3	291	0.5	11	0.5	1	46	0.5
S-0454	292900	5822750	20	20	100	Red	0	0	0	moss 20	Rocks	D	nt slope so	spruce		0.03	1	322	0.4	52	1.4	5	8000	10	4	0.2	0.1	0.1	3	0.5	0.3	0.3	0.1	0.5	0.1	6	0.1	14	3	10	0.1	3	390	0.5	8	0.5	2	72	0.5
S-1978	298600	5821625	15	5	100	Red brown	0	0	0	) white sa	boulders	D	Hilltop	Spruce		0.03	1	297	0.4	118	2.5	3	9000	8	7	0.2	0.1	0.1	3	0.5	0.2	0.3	0.1	0.5	0.1	12	0.1	7	2	5	0.1	3	1340	0.5	3	0.5	1	24	0.5
S-0873	294300	5822325	>5	40	100	red brown	0	0	0	peat	boulders	wet	peat fores	spruce	bly coarse	0.03	7	147	1.4	55	0.3	4.4	9000	6	6	0.2	0.1	0.05	3	1	0.3	0.25	0.3	0.5	0.05	33	0.05	2.5	2.1	16	0.05	7	449	4	7	3	1.8	8	0.5
S-1117	295076	5822510	30	40	100	green	2	98	0	peat 20	boulders	W	flat	spruce	, great for	0.03	8	288	0.4	53	0.3	9	9000	9	8	0.3	0.1	0.1	2	0.5	0.4	0.3	0.3	0.5	0.1	7	0.1	3	4	12	0.1	9	1110	2.0	13	1.0	4	20	0.5
S-2407	301400	5820975	10	15	95	red brown	0	5	0	peat 10	boulders	D	aty forest	Spruce	pebbly	0.03	2	65	0.4	32	0.9	1.4	10000	4	5	0.1	0.05	0.05	3	2	0.1	0.25	0.1	0.5	0.05	9	0.05	6	1	6	0.05	1	49	1	6	1	0.8	10	0.5
S-0839	294200	5822575	>5	10	100	sandy grey	0	0	0	thin moss	boulder	dry	r grounds,	spruce	ttle pebbl	0.03	6	101	1.3	26	0.6	2.5	3000	4	5	0.3	0.1	0.05	1	3	0.2	0.25	0.3	0.5	0.05	11	0.05	2.5	1.3	10	0.05	1	130	1	5	3	1.1	11	0.5
S-6107	296500	5822325	>10	15	95		0	5	0	peat	boulder	dry	pe on bou	Spruce	pebbly	0.03	4	97	0.4	34	1.0	1.9	10000	1	5	0.1	0.05	0.05	1	2	0.1	0.25	0.2	0.5	0.05	7	0.05	11	1	7	0.05	1	143	2	7	2	0.6	7	0.5
S-0042	291700	5822550	>15	70	100	sandy	0	0	0	mus and p	unknown	wet	peaty, flat	lder/spru	none	0.03	4	377	2.4	165	0.3	13.9	29000	28	14	0.7	0.3	0.2	2	0.5	0.9	0.25	0.4	0.5	0.1	82	0.05	8	6	13	0.05	9	2450	8	24	1	6	39	0.5
S-1976	298600	5821575	10	40	95	Brown	0	5	0	peat 30	boulders	W	Bog	Spruce		0.03	1	182	0.4	39	0.1	3	1000	5	4	0.1	0.1	0.1	3	2.0	0.2	0.3	0.1	0.5	0.1	7	0.1	6	2	2	0.1	4	133	0.5	6	1.0	2	24	0.5
S-1985	298600	5821800	5	25	100	Brown	0	0	0	) white sa	boulders	D	Hillside	Spruce		0.03	2	176	0.4	76	0.5	6	5000	5	9	0.2	0.1	0.1	8	1.0	0.4	0.3	0.1	0.5	0.1	8	0.1	8	4	1	0.1	1	108	0.5	3	0.5	3	18	0.5
S-2470	301700	5821000	7	30	100	red brown	0	0	0	eached sa	boulder til	damp	flat forest	spruce	fine sand	0.03	4	426	0.4	104	1.3	3	7000	8	10	0.2	0.1	0.1	10	2.0	0.2	0.3	0.1	0.5	0.1	22	0.1	10	2	12	0.1	4	214	0.5	5	1.0	1	28	0.5
S-2301	301000	5821375	10	40	100	red brown	0	0	0	10cm mos	boulder til	D	flat forest	Spruce		0.03	2	466	0.4	127	2.2	7	5000	10	14	0.5	0.2	0.2	4	0.5	0.5	0.3	0.1	0.5	0.1	19	0.1	9	3	19	0.1	1	155	0.5	3	0.5	3	27	0.5
S-2502	301800	5821075	>10	25	100	sandy brown	0	0	0	peat 20	boulders	dry	flat peaty	birch and	higher gr	0.03	2	155	0.4	77	0.3	2.4	1000	3	5	0.1	0.05	0.05	3	0.5	0.2	0.25	0.05	0.5	0.05	17	0.05	2.5	1	7	0.05	1	40	0.5	2.5	0.5	1	25	0.5
S-0453	292900	5822725	10	15	95	Orange red	5	0	0	moss 10	sand	D	down to	spruce		0.03	7	735	0.4	58	2.1	11	11000	24	8	0.7	0.3	0.3	5	0.5	0.9	0.3	0.2	0.5	0.1	13	0.1	8	6	28	0.1	5	221	0.5	12	0.5	5	113	0.5
S-2276	300900	5821125	10	20	100	red brown	0	0	0	10cm leac	boulder til	D	ridge side	spruce		0.03	2	333	0.4	67	1.1	3	4000	7	7	0.2	0.1	0.1	4	1.0	0.2	0.3	0.1	0.5	0.1	8	0.1	8	2	8	0.1	1	751	0.5	3	0.5	1	28	0.5
S-1980	298600	5821675	10	25	100	Red brown	0	0	0	) white sa	boulders	D	Hilltop	Spruce		0.03	2	418	0.4	74	0.4	4	8000	8	4	0.3	0.2	0.1	4	0.5	0.3	0.3	0.1	0.5	0.1	8	0.1	6	2	7	0.1	3	404	0.5	3	0.5	2	17	0.5
S-2300	301000	5821400	5	25	100	red brown	0	0	0	15cm leac	boulder til	D	flat forest	Spruce	ey sand be	0.03	1	971	0.4	89	0.7	7	4000	7	9	0.4	0.2	0.2	3	0.5	0.5	0.3	0.1	0.5	0.1	11	0.1	10	4	41	0.1	1	213	0.5	3	0.5	3	18	0.5
S-1984	298600	5821775	15	40	100	Red brown	0	0	0	) white sa	boulders	D	Hillside	Spruce		0.03	1	399	0.4	86	0.2	4	4000	3	5	0.2	0.1	0.1	6	0.5	0.2	0.3	0.1	0.5	0.1	11	0.1	11	2	6	0.1	3	86	0.5	6	0.5	1	12	0.5
S-2367	301300	5821000	>15	20	100	brown-red	0	0	0	and white	till	dry	Slope to S	spruce	none	0.03	2	274	0.4	130	1.1	5	5000	7	13	0.3	0.2	0.1	5	0.5	0.3	0.3	0.1	0.5	0.1	13	0.1	6	3	8	0.1	2	69	0.5	3	0.5	2	45	0.5
S-0455	292900	5822775	20	20	100	Red Brown	0	0	0	moss 10	boulders	D	rest of ridg	spruce		0.03	1	425	0.4	66	1.0	2	10000	59	11	0.3	0.1	0.1	5	0.5	0.2	0.3	0.2	0.5	0.1	7	0.1	12	1	32	0.1	5	658	0.5	10	0.5	1	270	0.5
S-0765	294064	5822800	25	5	100	brown	0	0	0	moss 5	boulders	damp	flat	balsam	near old b	0.03	8	247	2.7	232	0.1	42.9	13000	9	18	2.6	1.3	0.8	8	4	3.6	0.25	1.2	0.5	0.4	82	0.05	9	26.2	28	0.2	19	313	5	10	3	24.7	17	0.5
S-1872	298000	5821620	10	20	100	red brown	0	0	0	moss	boulders	M	flat	spruce	moss floo	0.03	2	155	0.4	57	0.1	6	5000	6	8	0.2	0.1	0.1	6	1.0	0.4	0.3	0.1	0.5	0.1	8	0.1	3	5	9	0.1	4	141	1.0	7	1.0	3	18	0.5
S-0407	292800	5822750	20	20	100	grey	0	0	0	boulders	boulders	D	ownhill to	spruce		0.03	6	137	0.4	63	0.6	3	7000	6	6	0.1	0.1	0.1	4	2.0	0.2	0.3	0.1	0.5	0.1	9	0.1	9	2	7	0.1	4	222	0.5	8	2.0	1	31	0.5
S-1983	298600	5821750	10	15	100	Red brown	0	0	0	) white sa	boulders	D	Hilltop	Spruce		0.03	2	306	0.4	89	0.9	5	4000	9	7	0.2	0.1	0.1	4	3.0	0.3	0.3	0.1	0.5	0.1	9	0.1	13	3	2	0.1	3	235	0.5	3	0.5	2	18	0.5
S-0048	291700	5822700	>10	10	100	t brown/blea	0	0	0	5cm moss	boulder til	dry	boulder m	spruce	fine silty	0.03	7	69	0.8	52	0.6	1.2	7000	2	4	0.1	0.05	0.05	0.5	2	0.05	0.25	0.1	0.5	0.05	11	0.05	7	0.7	6	0.05	1	95	2	6	2	1.2	7	0.5
S-0302	292400	5822300	>5	10	100	light brown	0	0	0	1cm moss	boulder til	dry	dry dead f	spruce	pebbly	0.03	2	268	0.4	63	0.4	3	10000	6	5	0.1	0.1	0.1	3	0.5	0.2	0.3	0.1	0.5	0.1	10	0.1	11	2	6	0.1	9	167	0.5	9	0.5	1	27	0.5
S-1548	296000	5822225	10	40	100	Grey	0	0	0	30 peat	Boulders	W	Hillside	Tamarack		0.03	2	292	0.4	81	0.1	18	1000	13	9	1.0	0.4	0.3	2	0.5	1.3	0.3	0.2	0.5	0.2	10	0.1	7	8	3	0.1	13	465	0.5	3	0.5	8	17	0.5
S-1977	298600	5821600	5	25	100	Red brown	0	0	0	white sand	boulders	W	Flat forest	Spruce		0.03	3	249	0.4	99	0.9	7	4000	11	8	0.3	0.1	0.2	9	1.0	0.4	0.3	0.1	0.5	0.1	12	0.1	8	4	5	0.1	3	178	0.5	6	0.5	3	30	0.5
S-0418	292800	5822475	10	15	100	red-brown	0	0	0	sand	boulders	D	t, sandy pl	spruce		0.03	2	445	0.4	37	0.2	5	9000	11	6	0.3	0.1	0.1	4	0.5	0.3	0.3	0.1	0.5	0.1	5	0.1	5	3	16	0.1	2	178	0.5	9	0.5	2	53	0.5
S-0417	292801	5822498	10	20	98	orange-red	2	0	0	moss	till	M	t, sandy pl	spruce		0.03	2	455	0.4	32	0.3	5	7000	10	5	0.2	0.1	0.1	3	0.5	0.3	0.3	0.1	0.5	0.1	5	0.1	5	3	14	0.1	2	183	0.5	6	0.5	2	49	0.5
S-2469	301700	5820975	10	30	100	ight red brow	0	0	0	t and blea	boulder til	damp	flat forest	spruce	fine sand	0.03	3	300	0.4	103	2.1	5	3000	10	8	0.3	0.1	0.1	7	0.5	0.3	0.3	0.1	0.5	0.1	10	0.1	7	2	9	0.1	2	139	0.5	3	0.5	2	46	0.5
S-2527	301898	5821123	10	20	100	grey-red brow	0	0	0	peat	outcrop	dry	e outcrop	spruce	op under	0.03	2	111	0.4	58	0.5	2.9	12000	5	5	0.2	0.05	0.05	2	0.5	0.2	0.25	0.05	0.5	0.05	13	0.05	6	2	7	0.05	1	66	0.5	7	0.5	1.2	28	0.5
S-0456	292900	5822800	20	10	100	Orange red	0	0	0	moss	sand	D	be up to s	pruce/birch		0.03	3	327	0.4	97	1.2	3	9000	33	12	0.3	0.1	0.1	7	0.5	0.3	0.3	0.1	0.5	0.1	11	0.1	12	2	39	0.1	5	538	0.5	10	0.5	2	169	0.5
S-1074	295008	5822431	20	30	100	Dark red	0	0	0	peat 30	Rocks	M	flat	spruce		0.03	1	282	0.4	30	0.1	2	1000	2	2	0.1	0.1	0.1	1	0.5	0.2	0.3	0.1	0.5	0.1	3	0.1	3	1	22	0.1	5	200	0.5	5	0.5	1	9	0.5
S-2275	300900	5821100	10	10	100	ight red brow	0	0	0	2cm moss	boulder til	D	flat hill	spruce		0.03	2	300	0.4	63	1.1	4	10000	10	4	0.3	0.2	0.1	2	0.5	0.4	0.3	0.1	0.5	0.1	7	0.1	7	3	17	0.1	1	113	0.5	3	0.5	2	15	0.5
S-6003	301543	5821096	>20	10	100	Red-brown	0	0	0	moss	till	D	slight slop	spruce		0.03	0.5	704	0.4	67	0.3	9.9	18000	5	13	0.4	0.2	0.2	1	0.5	0.5	0.25	0.1	0.5	0.05	10	0.05	2.5	4	8	0.05	1	63	0.5	5	0.5	3.6	14	0.5
S-0452	292900	5822700	20	20	90	Sandy brown	10	0	0	moss 10	sand	D	edge of til	spruce		0.03	34	306	1.4	77	0.1	45	8000	21	54	7.3	3.2	2.0	6	2.0	8.9	0.3	1.0	0.5	1.3	22	0.1	8	47	16	0.3	30	1000	0.5	11	4.0	43	100	0.5
S-1869	298000	5821550	10	15	98	Beige	2	0	0	grass	?	D	flat	spruce	um size s	0.03	5	472	0.4	108	0.1	83	7000	4	25	4.0	2.1	1.8	4	2.0	7.0	0.3	0.7	0.5	0.7	26	0.1	7	75	4	0.2	23	478	0.5	3	2.0	63	14	0.5
S-0838	294200	5822600	>5	20	100	red brown	0	0	0	moss	boulder	dry	r grounds,	spruce	ttle pebbl	0.03	3	254	1.6	94	0.3	7.4	5000	3	5	0.4	0.2	0.2	3	1	0.6	0.25	0.2	0.5	0.05	29	0.05	2.5	3.5	5	0.05	8	88	2	2.5	1	3.5	7	0.5
S-0299	292400	5822375	>5	25	85	sandy red	15	0	0	eat/humu	boulders	wet	ving into	spruce	pebbly	0.03	4	379	0.4	323	0.1	5	13000	7	10	0.2	0.1	0.1	1	0.5	0.3	0.3	0.1	0.5	0.1	21	0.1	14	2	10	0.1	20	628	4.0	18	0.5	2	27	0.5
S-0756	293900	5822850	35	5	100	golden	0	0	0	/bleached	boulders	dry	tom of N s	spruce	none	0.03	2	261	1.4	125	0.3	7.6	10000	4	5	0.5	0.3	0.2	4	2	0.5	0.25	0.2	0.5	0.05	37	0.05	2.5	3.8	7	0.05	4	120	0.5	6	1	3.9	11	0.5
S-2475	301700	5821125	10	30	100	sandy brown	0	0	0	eat, bleac	boulder til	damp	flat forest	spruce	pebbly	0.03	3	112	0.4	78	0.6	2	1000	5	4	0.1	0.1	0.1	8	0.5	0.1	0.3	0.1	0.5	0.1	8	0.1	7	1	3	0.1	1	80	0.5	3	0.5	1	23	0.5
S-2404	301400	5821050	>10	15	100	sandy red	0	0	0	peat 5	boulders	D	aty forest	Spruce	tween bou	0.03	4	126	0.4	76	1.8	5.8	12000	3	6	0.4	0.2	0.1	5	2	0.4	0.25	0.2	0.5	0.05	27	0.05	6	3	9	0.05	2	118	0.5	6	0.5	3.1	14	0.5
S-0300	292400	5822350	>10	15	100	red-brown	0	0	0	bleached	boulder til	dry	dry dead f	spruce	pebbly s	0.03	1	303	0.4	116	1.3	7	6000	8	11	0.5	0.3	0.2	2	0.5	0.8	0.3	0.1	0.5	0.1	10	0.1	11	5	4	0.1	9	187	0.5	7	0.5	4	48	0.5
S-1990	298700	5821700	10	70	95	grey	0	5	0	60cm peat	boulders	W	base of hil	spruce		0.03	1	99	0.4	16	0.1	1	5000	4	4	0.1	0.1	0.1	1	0.5	0.1	0.3	0.1	0.5	0.1	2	0.1	6	1	2	0.1	3	102	0.5	3	0.5	1	37	0.5
S-0232	292300	5822275	10	50	100	red brown	0	0	0	nd bleache	boulders	dry	flat dry	spruce	none	0.03	1	252	0.4	69	0.2	5	7000	9	8	0.3	0.1	0.1	3	0.5	0.3	0.3	0.1	0.5	0.1	9	0.1	10	3	3	0.1	3	244	0.5	14	0.5	2	40	0.5
S-0877	294306	5822428	10	50	100	red brown	0	0	0	peat	boulders	wet	ope up to	spruce	nt on bou	0.03	1	137	0.4	144	0.4	7.8	12000	5	8	0.4	0.2	0.1	2	0.5	0.6	0.25	0.05	0.5	0.05	34	0.05	2.5	4.5	4	0.05	2	69	1	7	0.5	3.6	15	0.5
S-1352	296700	5822400	>10	20	100	red-brown	0	0	0	at and hun	till	damp	flat	spruce	none	0.03	2	80	0.4	47	0.1	6.7	5000	3	5	0.3	0.2	0.1	0.5	0.5	0.4	0.25	0.05	0.5	0.05	13	0.05	2.5	3	6	0.05	5	45	2	2.5	0.5	3.1	5	0.5
S-2450	301600	5821125	10	15	100	red brown	0	0	0	moss	layey san	D	Flat	spruce	higher gr	0.03	2	354	1.1	48	0.6	23.9	10000	23	6	1.6	0.9	0.5	2	0.5	2	0.25	0.3	0.5	0.3	29	0.05	2.5	14	5	0.1	3	513	0.5	6	0.5	14.7	18	0.5
S-1148	295205	5822533	30	50	100	Red	0	0	0	grey sand	boulders	D	Flat	spruce		0.03	1	330	0.4	68	0.4	5	3000	3	2	0.2	0.1	0.1	3	0.5	0.3	0.3	0.1	0.5	0.1	6	0.1	5	2	2	0.1	1	123	0.5	6	0.5	2	10	0.5
S-1147	295209	5822550	20	30	100	orange-red	0	0	0	moss 10	sand	D	Flat	spruce		0.03	1	356	0.4	102	0.4	13	3000	1	2	0.4	0.2	0.2	1	0.5	0.6	0.3	0.1	0.5	0.1	7	0.1	7	10	2	0.1	1	56	0.5	3	0.5	4	2	0.5
S-1327	296500	5822375	>10	30	90	brown grey	5	5	0	peat	boulder	dry	pe on bou	Spruce	ourse san	0.03	6	51	1.1	40	0.3	2.7	11000	0.5	4	0.1	0.05	0.05	0.5	1	0.1	0.25	0.05	0.5	0.05	6	0.05	11	2	7	0.05	1	206	1	2.5	2	1	5	0.5
S-2508	301800	5820925	>10	10	100	red brown	0	0	0	nd bleache	boulders	dry	flat peaty	spruce	pebbly	0.03	2	201	0.4	99	0.6	3.2	3000	5	5	0.2	0.2	0.05	3	0.5	0.3	0.25	0.1	0.5	0.05	30	0.05	5	2	7	0.05	1	81	0.5	2.5	0.5	1.5	17	0.5
S-0434	292900	5822250	20	10	100	Red	0	0	0	range san	boulders	M	slope up to	spruce		0.03	1	262	0.9	101	0.2	3	7000	2	4	0.2	0.1	0.1	2	0.5	0.2	0.3	0.1	0.5	0.1	6	0.1	3	2	4	0.1	7	69	0.5	10	0.5	1	7	0.5
S-0419	292800	5822450	10	20	100	red-brown	0	0	0	moss 10	till	D	t, sandy pl	spruce		0.03	2	214	0.4	98	0.1	3	5000	4	4	0.1	0.1	0.1	2	0.5	0.2	0.3	0.1	0.5	0.1	7	0.1	7	2	8	0.1	8	86	0.5	8	0.5	1	14	0.5
S-2451	301594	5821104	>10	40	100	beige	0	0	0	Humus 5	rocks	W	Flat	spruce		0.03	10	71	0.9	14	0.1	4.2	8000	2	8	0.2	0.1	0.05	1	0.5	0.3	0.25	0.05	0.5	0.05	3	0.05	2.5	3	2	0.05	7	163	5	12	2	2.1	14	0.5
S-2402	301400	5821100	5	30	100	brown	0	0	0	at and hun	boulders	W	aty forest	Spruce		0.03	2	70	0.4	58	0.1	2	7000	0.5	3	0.1	0.05	0.05	0.5	0.5	0.2	0.25	0.05	0.5	0.05	9	0.05	2.5	1	2	0.05	7	13	3	2.5	0.5	1	6	0.5
S-2504	301800	5821025	7	15	100	ight red brow	0	0	0	peat 10	boulders	dry	beside sa	spruce	pebbly	0.03	2	144	1.2	34	0.1	3	4000	1	4	0.2	0.05	0.05	1	0.5	0.2	0.25	0.05	0.5	0.05	9	0.05	2.5	2	3	0.05	7	14	2	2.5	0.5	1.6	5	0.5
S-2503	301800	5821050	20	25	100	ight red brow	0	0	0	peat 20	boulders	dry	sandy ridg	spruce	higher gr	0.03	1	181	0.4	30	0.4	3.4	3000	4	5	0.2	0.1	0.05	3	0.5	0.2	0.25	0.05	0.5	0.05	10	0.05	2.5	2	9	0.05	2	62	1	2.5	0.5	1.4	13	0.5
S-2405	301400	5821025	10	15	99	light brown	1	0	0	peat 5	boulders	D	aty forest	Spruce	pebbly	0.03	4	300	0.4	104	0.9	4.6	12000	4	8	0.3	0.1	0.1	1	0.5	0.3	0.25	0.05	0.5	0.05	19	0.05	8	2	2	0.05	6	70	3	6	0.5	2.2	8	0.5
S-6004	301544	5821076	>20	10	100	Red-brown	0	0	0	moss	till	D	slight slop	spruce		0.03	2	132	0.4	93	0.4	5.4	16000	6	6	0.2	0.05	0.05	2	0.5	0.3	0.25	0.05	0.5	0.05	15	0.05	2.5	3	11	0.05	2	57	0.5	7	0.5	2.2	23	0.5
S-2529	301900	5821163	>10	30	100	red-brown	0	0	0	moss	boulders	damp	small rise	spruce	none	0.03	0.5	173	0.4	45	0.6	7.5	3000	5	6	0.3	0.2	0.1	1	0.5	0.4	0.25	0.05	0.5	0.05	15	0.05	2.5	4	3	0.05	1	120	0.5	2.5	0.5	3.3	18	0.5
S-1113	295086	5822382	10	50	100	white	0	0	0	humus	?	M	flat	pruce>bir	black silty	0.03	3	119	0.4	18	0.1	3	5000	1	2	0.2	0.1	0.1	1	0.5	0.2	0.3	0.1	0.5	0.1	1	0.1	3	1	3	0.1	7	223	0.5	3	2.0	1	5	0.5
S-2472	301700	5821050	10	25	95	red sandy	4	0	1	t and blea	boulder til	wet	crop slope	spruce	nd with p	0.03	2	301	0.4	70	0.1	6	5000	5	10	0.3	0.2	0.1	3	0.5	0.5	0.3	0.1	0.5	0.1	11	0.1	12	2	2	0.1	15	161	2.0	3	0.5	3	15	0.5
S-1343	296600	5822576	>15	25	95	Sand	95	5	0				high groun	pruce/birch		0.03	3	273	0.4	187	0.1	15	3000	2	4	1.0	0.5	0.4	1	0.5	1.7	0.3	0.3	0.5	0.2	20	0.1	3	14	2	0.1	12	132	3.0	7	0.5	13	2	0.5

Pb	Pd	Pr	Pt	Rb	Re	Ru	Sb	Sc	Se	Sm	Sn	Sr	Ta	Tb	Te	Th	Ti	Tl	Tm	U	V	W	Y	Yb	Zn	Zr
3	0.5	0	0.5	43	0.0	0.5	0.3	50	2.5	0.3	0.4	97	0.1	0.1	0.5	1	600	0.2	0.1	0.6	31	0.5	1	0.1	230	4
2	0.5	1	0.5	83	0.0	0.5	0.3	50	2.5	0.5	0.4	90	0.1	0.1	0.5	2	300	0.3	0.1	0.6	11	0.5	2	0.1	220	9
3	0.5	0.4	0.5	49	0.0	0.5	0.3	50	2.5	0.3	0.4	41	0.1	0.05	0.5	3.1	500	0.6	0.05	0.4	25	0.5	0.8	0.2	170	4
9	0.5	1	0.5	26	0.0	0.5	0.3	50	2.5	0.5	0.4	33	0.1	0.1	0.5	3	800	0.2	0.1	0.4	41	0.5	1	0.1	140	7
6	0.5	1	0.5	69	0.02	0.5	0.3	50	2.5	0.8	1	129	0.2	0.1	0.5	4.1	1100	0.4	0.05	0.9	71	0.5	2.7	0.3	130	22
2	0.5	1	0.5	22	0.0	0.5	0.2	50	2.5	0.8	0.4	103	0.1	0.1	0.5	3	800	0.2	0.1	0.7	71	0.5	2	0.2	120	6
5	0.5	0.7	0.5	59	0.0	0.5	0.3	50	2.5	0.5	0.4	100	0.2	0.05	0.5	6.6	1100	0.5	0.05	1	41	0.5	1.9	0.2	120	13
3	0.5	0	0.5	59	0.0	0.5	0.2	50	2.5	0.3	0.4	111	0.1	0.1	0.5	2	400	0.2	0.1	0.5	22	0.5	1	0.1	120	3
3	0.5	0	0.5	120	0.0	0.5	0.1	50	2.5	0.3	0.4	161	0.1	0.1	0.5	1	300	0.3	0.1	0.5	16	0.5	1	0.1	120	3
4	0.5	1	0.5	60	0.0	0.5	0.3	50	2.5	0.6	0.4	98	0.1	0.1	0.5	3	300	0.3	0.1	0.8	14	0.5	2	0.2	120	5
2	0.5	0	0.5	23	0.0	0.5	0.2	50	2.5	0.2	0.4	106	0.1	0.1	0.5	1	600	0.2	0.1	0.6	90	0.5	1	0.1	110	3
2	0.5	0	0.5	41	0.0	0.5	0.2	50	2.5	0.2	0.4	105	0.1	0.1	0.5	1	700	0.4	0.1	0.3	48	0.5	1	0.1	110	2
3	0.5	1	0.5	86	0.0	0.5	0.5	50	2.5	0.3	0.4	75	0.1	0.1	0.5	1	300	0.4	0.1	0.6	9	0.5	1	0.1	110	2
2	0.5	0	0.5	39	0.0	0.5	0.3	50	2.5	0.2	0.4	100	0.1	0.1	0.5	1	600	0.4	0.1	0.3	43	0.5	1	0.1	100	2
4	0.5	1.1	0.5	37	0.005	0.5	0.3	50	2.5	0.9	0.4	95	0.05	0.1	0.5	3.9	500	0.4	0.05	1.4	16	0.5	2.3	0.2	100	6
4	0.5	0	0.5	77	0.0	0.5	0.1	50	2.5	0.4	0.4	93	0.1	0.1	0.5	2	300	0.2	0.1	0.6	16	0.5	1	0.1	100	5
2	0.5	1	0.5	54	0.0	0.5	0.3	50	2.5	0.4	0.4	136	0.1	0.1	0.5	1	300	0.5	0.1	0.6	11	0.5	1	0.1	90	3
3	0.5	0	0.5	83	0.0	0.5	0.1	50	2.5	0.3	0.4	144	0.1	0.1	0.5	1	200	0.2	0.1	0.6	7	0.5	1	0.1	90	3
2	0.5	1	0.5	27	0.0	0.5	0.3	50	2.5	0.4	0.4	192	0.1	0.1	0.5	2	100	0.2	0.1	0.6	6	0.5	1	0.1	90	4
2	0.5	1	0.5	66	0.0	0.5	0.5	50	2.5	0.5	0.4	166	0.1	0.1	0.5	1	100	0.2	0.1	0.6	5	0.5	3	0.2	90	5
3	0.5	0.6	0.5	94	0.0	0.5	0.3	50	2.5	0.4	0.4	50	0.2	0.05	0.5	4.9	800	0.4	0.05	0.5	64	0.5	0.9	0.1	80	8
2	0.5	1	0.5	92	0.0	0.5	0.1	50	2.5	0.5	0.4	125	0.1	0.1	0.5	2	500	0.3	0.1	0.8	33	0.5	2	0.1	80	5
3	0.5	1.2	0.5	75	0.0	0.5	0.3	50	2.5	0.9	0.4	72	0.05	0.05	0.5	3	700	0.3	0.05	1	28	0.5	2.3	0.3	80	9
4	0.5	0.7	0.5	47	0.0	0.5	0.2	50	2.5	0.5	0.4	95	0.05	0.05	0.5	2.3	500	0.6	0.05	1.2	27	0.5	1.6	0.2	80	6
3	0.5	0	0.5	107	0.0	0.5	0.2	50	2.5	0.3	0.4	112	0.1	0.1	0.5	1	200	0.3	0.1	0.6	8	0.5	1	0.1	80	4
3	0.5	1	0.5	163	0.0	0.5	0.3	50	2.5	0.4	0.4	73	0.1	0.1	0.5	2	100	0.4	0.1	0.8	6	0.5	1	0.2	80	4
1	0.5	1	0.5	35	0.0	0.5	0.1	50	2.5	0.3	0.4	91	0.1	0.1	0.5	2	1800	0.2	0.1	0.4	72	0.5	1	0.1	70	5
4	0.5	1.3	0.5	48	0.0	0.5	0.1	50	2.5	0.9	0.4	86	0.05	0.1	0.5	2.9	600	0.3	0.05	0.9	32	0.5	2.5	0.3	70	7
2	0.5	2	0.5	65	0.0	0.5	0.3	50	2.5	1.7	0.4	139	0.1	0.2	0.5	11	400	0.3	0.1	0.9	31	0.5	3	0.3	70	17
5	0.5	0.7	0.5	20	0.005	0.5	0.3	50	2.5	0.4	0.4	41	0.05	0.05	0.5	0.7	500	0.2	0.05	0.6	28	0.5	1.5	0.1	70	6
3	0.5	0.3	0.5	15	0.02	0.5	0.2	50	2.5	0.6	0.4	40	0.1	0.05	0.5	2.9	600	0.3	0.05	0.6	27	0.5	1.1	0.1	70	4
6	0.5	0.8	0.5	20	0.03	0.5	0.5	50	2.5	0.4	2	37	0.05	0.05	0.5	1.1	100	0.2	0.05	0.8	19	0.5	1.5	0.1	70	3
2	0.5	0.1	0.5	26	0.0	0.5	0.3	50	2.5	0.1	0.4	18	0.05	0.05	0.5	0.6	500	0.7	0.05	0.2	18	0.5	0.25	0.05	70	2
2	0.5	0	0.5	57	0.0	0.5	0.4	50	2.5	0.2	0.4	142	0.1	0.1	0.5	0	200	0.2	0.1	0.2	15	0.5	1	0.1	70	1
2	0.5	1	0.5	93	0.0	0.5	0.2	50	2.5	0.5	0.4	158	0.1	0.1	0.5	2	400	0.3	0.1	0.6	13	0.5	2	0.1	70	5
3	0.5	1	0.5	71	0.0	0.5	0.2	50	2.5	0.4	0.4	162	0.1	0.1	0.5	2	1000	0.2	0.1	1.3	59	0.5	2	0.1	60	5
2	0.5	0.4	0.5	40	0.03	0.5	0.2	50	2.5	0.1	0.4	37	0.1	0.05	0.5	0.8	500	0.4	0.05	0.2	49	0.5	0.6	0.05	60	4
2	0.5	0.2	0.5	43	0.0	0.5	0.2	50	2.5	0.2	0.4	29	0.05	0.05	0.5	1	500	0.5	0.05	0.4	18	0.5	0.6	0.05	60	2
2	0.5	0.3	0.5	24	< 0.01	0.5	0.1	50	2.5	0.2	0.4	23	0.05	0.05	0.5	0.9	300	0.1	0.05	0.4	12	0.5	0.8	0.05	60	3
1	0.5	2.8	0.5	32	0.0	0.5	0.1	50	2.5	2	0.4	51	0.05	0.2	0.5	3.8	300	0.2	0.05	0.6	10	0.5	5	0.5	60	7
2	0.5	0.2	0.5	47	0.0	0.5	0.05	50	2.5	0.1	0.4	46	0.05	0.05	0.5	0.4	50	0.2	0.05	0.3	7	0.5	0.25	0.05	60	1
3	0.5	1	0.5	55	0.0	0.5	0.1	50	2.5	0.5	0.4	99	0.1	0.1	0.5	1	100	0.2	0.1	0.6	4	0.5	2	0.1	60	3
3	0.5	0.3	0.5	14	0.02	0.5	0.2	50	2.5	0.2	0.4	47	0.2	0.05	0.5	1.5	600	0.2	0.05	0.4	47	0.5	0.6	0.05	50	5
2	0.5	1	0.5	62	0.0	0.5	0.3	50	2.5	0.3	0.4	193	0.1	0.1	0.5	1	300	0.3	0.1	0.6	28	0.5	1	0.1	50	7
2	0.5	0	0.5	35	0.0	0.5	0.1	50	2.5	0.3	0.4	63	0.1	0.1	0.5	1	600	0.2	0.1	0.4	27	0.5	1	0.1	50	3
3	0.5	1.1	0.5	41	0.0	0.5	0.3	50	2.5	0.7	0.4	188	0.05	0.05	0.5	2.7	300	0.3	0.05	1	26	0.5	2.1	0.3	50	4
2	0.5	0.2	0.5	25	0.0	0.5	0.2	50	2.5	0.2	0.4	42	0.05	0.05	0.5	1.1	500	0.2	0.05	0.5	24	0.5	0.7	0.05	50	4
1	0.5	0	0.5	41	0.0	0.5	0.1	50	2.5	0.3	0.4	87	0.1	0.1	0.5	1	300	0.2	0.1	0.3	24	0.5	1	0.1	50	1
1	0.5	0	0.5	19	0.0	0.5	0.1	50	2.5	0.1	0.4	148	0.1	0.1	0.5	0	200	0.2	0.1	0.1	22	0.5	0	0.1	50	1
3	0.5	0.5	0.5	44	0.0	0.5	0.2	50	2.5	0.4	0.4	56	0.05	0.05	0.5	2.8	200	0.3	0.05	1.1	13	0.5	1.3	0.1	50	6
2	0.5	1	0.5	90	0.0	0.5	0.3	50	2.5	0.7	0.4	89	0.1	0.1	0.5	1	100	0.3	0.1	0.5	10	0.5	2	0.2	50	3
3	0.5	0	0.5	167	0.0	0.5	0.1	50	2.5	0.3	0.4	162	0.1	0.1	0.5	1	300	0.4	0.1	0.4	8	0.5	1	0.1	50	2
2	0.5	1	0.5	173	0.0	0.5	0.2	50	2.5	0.4	0.4	155	0.1	0.1	0.5	1	100	0.4	0.1	0.4	7	0.5	1	0.1	50	3
2	0.5	0	0.5	67	0.0	0.5	0.2	50	2.5	0.3	0.4	155	0.1	0.1	0.5	1	100	0.2	0.1	0.5	6	0.5	1	0.1	50	2
3	0.5	0.5	0.5	16	0.0	0.5	0.1	50	2.5	0.3	0.4	87	0.05	0.05	0.5	3.1	500	0.05	0.05	0.5	65	0.5	1	0.05	40	7
1	0.5	1	0.5	46	0.0	0.5	0.3	50	2.5	0.6	0.4	140	0.1	0.1	0.5	3	200	0.5	0.1	0.3	63	0.5	1	0.1	40	10
2	0.5	0.3	0.5	25	< 0.01	0.5	0.1	50	2.5	0.1	0.4	29	0.05	0.05	0.5	0.7	400	0.2	0.05	0.4	52	0.5	0.2	0.05	40	4
3	0.5	0.3	0.5	23	0.0	0.5	0.3	50	2.5	0.2	0.4	32	0.2	0.05	0.5	1.4	800	0.2	0.05	0.8	39	0.5	0.8	0.1	40	8
2	0.5	0.3	0.5	26	0.02	0.5	0.2	50	2.5	0.2	0.4	23	0.1	0.05	0.5	1.1	700	0.3	0.05	0.3	39	0.5	0.6	0.05	40	7
4	0.5	1.8	0.5	30	0.04	0.5	0.6	50	2.5	1	0.4	146	0.05	0.1	0.5	4.1	200	0.6	0.05	1.2	33	0.5	3	0.3	40	10
1	0.5	1	0.5	50	0.0	0.5	0.2	50	2.5	0.3	0.4	154	0.1	0.1	0.5	1	700	0.2	0.1	0.4	31	0.5	1	0.1	40	1
1	0.5	1	0.5	48	0.0	0.5	0.1	50	2.5	0.5	0.4	86	0.1	0.1	0.5	1	200	0.2	0.1	0.7	19	0.5	1	0.1	40	2
2	0.5	0	0.5	214	0.0	0.5	0.1	50	2.5	0.2	0.4	185	0.1	0.1	0.5	1	500	0.4	0.1	0.6	18	0.5	1	0.1	40	4
2	0.5	1	0.5	62	0.0	0.5	0.1	50	2.5	0.7	0.4	72	0.1	0.1	0.5	1	300	0.2	0.1	0.5	17	0.5	3	0.2	40	5
0.5	0.5	0.3	0.5	34	0.0	0.5	0.1	50	2.5	0.2	0.4	35	0.05	0.05	0.5	0.2	100	0.1	0.05	0.3	10	0.5	0.6	0.05	40	0.5
2	0.5	1	0.5	62	0.0	0.5	0.5	50	2.5	0.9	0.4	174	0.1	0.1	0.5	4	300	0.4	0.1	0.6	9	0.5	3	0.2	40	10
3	0.5	0	0.5	59	0.0	0.5	0.1	50	2.5	0.3	0.4	146	0.1	0.1	0.5	1	200	0.3	0.1	0.3	9	0.5	1	0.1	40	2
3	0.5	1	0.5	60	0.0	0.5	0.1	50	2.5	0.4	0.4	171	0.1	0.1	0.5	1	200	0.2	0.1	0.4	9	0.5	2	0.1	40	2
1	0.5	1	0.5	83	0.0	0.5	0.2	50	2.5	0.6	0.4	76	0.1	0.1	0.5	1	100	0.2	0.1	0.6	6	0.5	2	0.1	40	3
2	0.5	0	0.5	115	0.0	0.5	0.1	50	2.5	0.3	0.4	179	0.1	0.1	0.5	1	100	0.2	0.1	1.0	6	0.5	1	0.1	40	2
2	0.5	1	0.5	92	0.0	0.5	0.1	50	2.5	0.4	0.4	145	0.1	0.1	0.5	1	100	0.2	0.1	0.7	5	0.5	2	0.2	40	3
2	0.5	0	0.5	78	0.0	0.5	0.2	50	2.5	0.2	0.4	92	0.1	0.1	0.5	2	100	0.3	0.1	0.3	4	0.5	1	0.1	40	5
5	0.5	7.1	0.5	37	0.0	0.5	0.6	50	5	4.6	0.4	152	0.2	0.5	0.5	22.3	700	0.2	0.2	4.8	68	1	11.6	1.2	30	47
1	0.5	1	0.5	39	0.0	0.5	0.2	50	2.5	0.6	0.4	100	0.1	0.1	0.5	1	600	0.2	0.1	0.5	39	0.5	1	0.1	30	2
3	0.5	0	0.5	64	0.0	0.5	0.2	50	2.5	0.3	0.4	76	0.1	0.1	0.5	1	600	0.3	0.1	0.6	34	0.5	1	0.1	30	2
2	0.5	1	0.5	93	0.0	0.5	0.1	50	2.5	0.4	0.4	146	0.1	0.1	0.5	1	500	0.2	0.1	0.4	33	0.5	1	0.1	30	4
2	0.5	0.2	0.5	19	0.02	0.5	0.2	50	2.5	0.2	0.4	32	0.1	0.05	0.5	1	600	0.2	0.05	0.3	30	0.5	0.6	0.05	30	4
1	0.5	0	0.5	60	0.0	0.5	0.3	50	2.5	0.3	0.4	240	0.1	0.1	0.5	1	500	0.2	0.1	0.5	15	0.5	1	0.1	30	3
1	0.5	2	0.5	69	0.0	0.5	0.2	50	2.5	1.7	0.4	156	0.1	0.2	0.5	5	100	0.4	0.1	0.8	13	0.5	4	0.4	30	8
1	0.5	1	0.5	62	0.0	0.5	0.2	50	2.5	0.6	0.4	188	0.1	0.1	0.5	2	200	0.2	0.1	1.0	12	0.5	2	0.1	30	4
2	0.5	1	0.5	51	0.0	0.5	0.3	50	2.5	0.4	0.4	161	0.1	0.1	0.5	2	300	0.3	0.1	0.5	10	0.5	1	0.1	30	2
1	0.5	1	0.5	52	0.0	0.5	0.3	50	2.5	0.3	0.4	163	0.1	0.1	0.5	1	200	0.3	0.1	0.4	9	0.5	1	0.1	30	2
2	0.5	1	0.5	49	0.0	0.5	0.1	50	2.5	0.4	0.4	140	0.1	0.1	0.5	1	200	0.2	0.1	0.6	9	0.5	1	0.1	30	2
1	0.5	0.3	0.5	19	0.0	0.5	0.05	50	2.5	0.2	0.4	50	0.05	0.05	0.5	0.4	200	0.1	0.05	0.3	9	0.5	0.7	0.05	30	1
2	0.5	0	0.5	122	0.0	0.5	0.2	50	2.5	0.4	0.4	150	0.1	0.1	0.5	1	200	0.2	0.1	0.5	7	0.5	1	0.1	30	2
1	0.5	0	0.5	67	0.0	0.5	0.1	50	2.5	0.2	0.4	168	0.1	0.1	0.5	0	100	0.1	0.1	0.3	7	0.5	0	0.1	30	1
3	0.5	1	0.5	43	0.0	0.5	0.1	50	2.5	0.5	0.4	52	0.1	0.1	0.5	0	100	0.2	0.1	0.3	7	0.5	2	0.2	30	2
1	0.5	1	0.5	34	0.0	0.5	0.05	50	2.5	0.7	0.4	53	0.05	0.05	0.5	1.4	100	0.1	0.05	0.4	0.5	0.5	1.9	0.1	30	3
2	0.5	12	0.5	58	0.0	0.5	1.3	50	2.5	9.0	0.4	236	0.6	1.4	0.5	25	300	0.5	0.4	0.8	59	0.5	37	2.9	20	51
3	0.5	17	0.5	39	0.0	0.5	0.3	50	2.5	10.0	0.4	207	0.1	0.9	0.5	18	300	0.2	0.3	1.6	45	0.5	23	1.9	20	34
3	0.5	0.9	0.5	29	0.0	0.5	0.3	50	2.5	0.7	0.4	116	0.05	0.05	0.5	3.1	300	0.1	0.05	1.1	37	0.5	1.9	0.2	20	6
1	0.5	1	0.5	66	0.0	0.5	0.7	50	2.5	0.4	0.4	217	0.1	0.1	0.5	1	100	0.4	0.1	1.1	36	0.5	1	0.1	20	5
4	0.5	1.1	0.5	40	0.0	0.5	0.3	50	2.5	0.7	0.4	138	0.05	0.05	0.5	3.2	400	0.2	0.05	1.4	23	0.5	2.2	0.3	20	7
2	0.5	0	0.5	41	0.0	0.5	0.1	50	2.5	0.1	0.4	67	0.1	0.1	0.5	0	100	0.2	0.1	0.4	22	0.5	0	0.1	20	1
2	0.5	0.7	0.5	33	< 0.01	0.5	0.1	50	2.5	0.6	0.4	53	0.05	0.05	0.5	1.3	300	0.2	0.05	0.6	20	0.5	1.6	0.2	20	4
1	0.5	1	0.5	52	0.0	0.5	0.4	50	2.5	0.9	0.4	209	0.1	0.1	0.5	2	100	0.2	0.1	1.8	18	0.5	5	0.3	20	4
2	0.5	0	0.5	19	0.0	0.5	0.1	50	2.5	0.1	0.4	70	0.1	0.1	0.5	0	200	0.1	0.1	0.3	18	0.5	11	0.1	20	3
2	0.5	1	0.5	52	0.0	0.5	0.2	50	2.5	0.4	0.4	135	0.1	0.1	0.5	1	100	0.2	0.1	0.5	7	0.5	1	0.1	20	3
2	0.5	1	0.5	19	0.01	0.5	0.2	50	2.5	0.6	0.4	83	0.05	0.05	0.5	2.9	100	0.2	0.05	1	7	0.5	1.7	0.2	20	2
1	0.5	0.8	0.5	26	< 0.01	0.5	0.2	50	2.5	0.5	0.4	63	0.05	0.05	0.5	1.1	100	0.05	0.05	0.3	7	0.5	1.3	0.1	20	2
0.5	0.5	3.8	0.5	53	< 0.01	0.5	0.05	50	2.5	2.6	0.4	128	0.05	0.3	0.5	3.4	100	0.2	0.1	0.6	7	0.5	8.4	0.8	20	12
1	0.5	1	0.5	59	0.0	0.5	0.1	50	2.5	0.4	0.4	115	0.1	0.1	0.5	1	100	0.2	0.1	0.4	5	0.5	1	0.1	20	2
1	0.5	1	0.5	54	0.0	0.5	0.1	50	2.5	0.6	0.4	72	0.1	0.1	0.5	0	100	0.1	0.1	0.6	4	0.5	3	0.2	20	1
1	0.5	0.3	0.5	70	< 0.01	0.5	0.2	50	2.5	0.2	0.4	21	0.05	0.05	0.5	2.8	500	0.2	0.05	0.3	32	0.5	0.6	0.1	10	5
1	0.5	0.4	0.5	47	0.0	0.5	0.05	50	2.5	0.3	0.4	57	0.05	0.05	0.5	0.9	100	0.1	0.05	0.4	6	0.5	1.1	0.1	10	3
2	0.5	0	0.5	46	0.0	0.5	0.3	50	2.5	0.3	0.4	218	0.1	0.1	0.5	1	100	0.3	0.1	0.5	5	0.5	1	0.1	10	2
1	0.5	0	0.5	50	0.0	0.5	0.2	50	2.5	0.2	0.4	180	0.1	0.1	0.5	1	100	0.1	0.1	0.4	4	0.5	1	0.1	10	1
0.5	0.5	0.6	0.5	14	< 0.01	0.5	0.2	50	2.5	0.4	0.4	76	0.05	0.05	0.5	0.6	700	0.2	0.05	0.2	193	0.5	1.1	0.05	5	3
0.5	0.5	0.3	0.5	12	0.01	0.5	0.1	50	2.5	0.2	0.4	71	0.05	0.05	0.5	0.5	100	0.05	0.05	0.2	25	0.5	0.2	0.05	5	2
1	0.5	0.4	0.5	12	0.0	0.5	0.1	50	2.5	0.3	0.4	92	0.05	0.05	0.5	0.7	100	0.05	0.05	0.5	15	0.5	0.7	0.05	5	2
0.5	0.5	0.4	0.5	32	0.0	0.5	0.05	50	2.5	0.3	0.4	32	0.05	0.05	0.5	1.2	300	0.1	0.05	0.3	15	0.5	0.9	0.1	5	2
1	0.5	0.6	0.5	44	0.04	0.5	0.3	50	2.5	0.4	0.4	96	0.05	0.05	0.5	0.7	100	0.2	0.05	0.7	9	0.5	1.3	0.05	5	2
0.5	0.5	0.6	0.5	19	0.01	0.5	0.05	50	2.5	0.4	0.4	54	0.05	0.05	0.5	0.5	100	0.1	0.05	0.4	8	0.5	0.9	0.05	5	1
1	0.5	0.9	0.5	32	0.0	0.5	0.05	50	2.5	0.5	0.4	66	0.05	0.05	0.5	1.1	100	0.2	0.05	0.5	2	0.5	1.7	0.2	5	2
1	0.5	0	0.5	9	0.0	0.5	0.2	50	2.5	0.2	0.4	118	0.1	0.1	0.5	0	200	0.2	0.1	0.2	72	0.5	1	0.1	1	3
1	0.5	1	0.5	45	0.0	0.5	0.2	50	2.5	0.6	0.4	158	0.1	0.1	0.5	2	100	0.3	0.1	0.6	35	0.5	2	0.2	1	5
1	0.5	4	0.5	22	0.0	0.5	0.2	50	2.5	2.5	0.4	152	0.1	0.2	0.5	8	100	0.1	0.1	1.2	26	1.0	4	0.5	1	11

APPENDIX FOUR: Gold Assays of Quartz Veins and Rusty Areas

SAMPLE	DATE	Sampler	Comments	UTM zone	Easting NAD 83	Northing NAD 83	Rock Type	Description	Au ppm
HL 001	8/22/2014	J. Biczok	Totogan shear zone in seds	16	301896	5821297	Qtz Vn	2x2m flat block of siltstone, either frost-heave or erratic, samples 2-3" qv.	0.010
E619691	7/6/2012	J. Biczok	Qv sample for assay	16	307023	5820432	Qtz Vn	5-10 cm qv in metaseds.	0.013
E619692	7/6/2012	J. Biczok	Coords moved 2m for plotting, were same as 619691	16	307025	5820434	Qtz Vn	Qv sample for assay	0.010
HL 004	8/22/2014	J. Biczok		16	301796	5820849	Qtz Vn	7cm qv parallel to foliation, smells of sulphides, local minor rust.	0.020
HL 003	8/22/2014	J. Biczok		16	301798	5820852	Qtz Vn	3-4 cm vein	0.020
HL 005	8/22/2014	J. Biczok		16	301798	5820855	Qtz Vn	10cm qv and a bit of adjacent wall rock.	0.020
E619856	6/6/2013	J. Biczok		16	300904	5820937	Qtz Vn	comp chip of a dozen small qtz veinlets	0.028
E619854	6/6/2013	J. Biczok		16	300906	5820942	Schist	Rusty, sheared metased schist	0.015
E619816	7/3/2014	J. Biczok	Totogan shear zone in seds	16	301509	5821072	Qtz Vn	Grabs of 1-4cm qtz veins in sheared seds, ~10-15% qv, strike 285 deg, vert	0.010
HL 002	8/22/2014	J. Biczok		16	301909	5821097	Qtz Vn	comp grabs of 3 qv, 2-8cm wide.	0.020
E619853	6/6/2013	J. Biczok	south shore of lake, low basalt hill	16	293133	5822510	Qtz Vn	6 cm qtz vein in mod sheared basalt	0.033

Appendix IV: Assays of quartz veins and rusty schist, Heaton Lake claims. Assays performed at the Musselwhite mine assay lab.