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Report of 2015 Geological Mapping & Sampling Survey on the Hiawatha Property

Sault Ste. Marie Mining District

Central Ontario

UTM: 684600 E, 5415000 N [NAD83] ZONE 16

NTS: 42C/16 SW

Claims: Patents: P500690, P500692, P500693, P500695, P500696, & P500698

Unpatented Claims: 4201059 and 4201060

PREPARED ON BEHALF OF TRELAWNEY MINING & EXPLORATION

2140 Regent Street, Unit 10
Sudbury, Ontario
Canada P3E 5S8

Prepared by:

Stephen Roach, B.Sc
Senior Exploration Geologist

Contributions by:

Al Smith, M.Sc.
District Manager - Exploration

April 15, 2016

Summary Page

Geographic Location: Kabinakagami Lake, Lizar Twp

Claims Worked On: Patents P500690, P500692, P500693, P500695, P500696, & P500698
Unpatented Claims 4201059 and 4201060
Target Commodity: Gold

Map Scale 1:2500

Area (square kilometers): ~2.75

GPS Geological Survey (total line kilometers): 11 km

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SUMMARY

The Hiawatha Property is located 65.5 kilometers northeast of White River and 16 km south of Hornpayne, in central Ontario. The Hiawatha Property can be accessed by float plane from Wawa, White River, or Hornpayne, with helicopter support from Wawa. Road access is limited from White River with a series of logging roads and an old 12 kilometer drill trail to the property. The Hiawatha Property consists of 48 units in four (4) unpatented mining claims and seven (7) patent claims under one lease. The unpatented and patented claims cover an area 768 hectares and 96.55 hectares, respectively. The unpatented mining claims are 100% owned by Trelawney Mining and Exploration Inc. Gold was first discovered in 1926, which further led to discovery of three gold zones on surface, as per North, South (Hiawatha Mine workings), and West Zone. This led to intense surface and underground exploration and mining from 1936 to 1939, culminating in limited production in 1937 (bulk sample) and in 1939 of the South Zone, which combined, returned an overall average mill grade of 0.083 opt Au, producing 159.8 oz Au from 1931 tons. Surface and underground exploration on the Hiawatha Mine was rejuvenated from 1969 to 1983, with de-watering of the underground workings and underground sampling. Overall, exploration work on the Hiawatha Property consisted of geological, geophysical, and geochemical surveys mapping with numerous drill programs and local mechanical stripping. Trelawney conducted more recent surface work from 2012-15, with pole-dipole IP and magnetic surveys in 2015.

The Hiawatha Property is located in the Kabinakagami Lake Greenstone Belt (ca 2.7 Ga) in the Wawa Subprovince of the Superior Province in the Precambrian Shield. The supracrustal rocks underlying the belt consist primarily of metavolcanics with clastic metasediments, bounded and intruded by both younger and older, metamorphosed felsic to intermediate intrusives. The mafic metavolcanics account for 85% of the underlying rocks on the property and consist of magnesium-(iron)-rich tholeiitic basalts, with localized felsic metavolcanics in the form of felsic tuffs. Ultramafic to mafic bodies have been identified on the Hiawatha Property and to the southwest and well bedded arenaceous/siltstones, greywacke, and epiclastic/volcaniclastic tuffs on the east side of Kabinakagami Lake. The supracrustal rocks are bounded and intruded by both younger and syn-tectonic felsic to intermediate intrusives, which range from granodiorite-tonalite-(trondhjemite) (GTT) in composition. There are at least two separate diabase dike swarms, ranging in age from late Archean to late Proterozoic, present in the Kabinakagami Lake area: (1) the northwest striking Matachewan dike swarm (2.47-2.45 Ga), and (2) the northeast trending Kapuskasing/Marathon dike swarm (2.2-2.0 Ga). The average principal shear/foliation trend is generally northeast /southwest (233.5º), with an average sub-vertical dip to the northwest at 84º. Fold axis lineation shows a main southwesterly plunge direction from 60^0 to 70^0, and coincides with intersecting geological contacts and foliation/cleavage. The presence of a lobate cuspate parasitic folds and convergence of litho-stratigraphic units particularly in the mafic metavolcanics may indicate the potential of a larger fold sequence with convergence to the southwest. The principal regional structures are the South Zone Shear and the Bear Creek Fault. The South Zone Shear is a northeast trending ductile-brittle shear zone within the GTT, and hosts the gold-bearing mineralization and alteration of the South Zone. The Bear Creek Fault is approximately 8 kilometers long, parallel to the as the South Zone strain zone, and a recessive area within the Bear Creek watershed.

A total of 11 kilometers of GPS geological mapping/shoreline geology and prospecting was carried out between August 9 and 20, 2015, and confirmed the high grade nature of gold mineralization from the North, South, and West Zones, but also confirmed sulphide mineralization and structure associated with two IP chargeability zones and coincidental magnetic low breaks. The most attractive area for gold-bearing mineralization, alteration, and geometry is the South Zone.

Significant high grade gold mineralization was returned from the following:

North Zone - 350 meter strike length and up to 0.20 meters wide
- trends northeast and dips steeply to the northwest between 78º and 84º
- quartz vein/veinlet contact between HW massive to pillow mafic flows and the granodiorite-(tonalite) sill-like body (≤ 2 m. thick)
- highest gold value in grab sample from the main North Zone is 7.96 g/t Au with no significant Ag values
- values up to 34.40 g/t Au with 45.7 g/t Ag and 30.9 g/t Au with 13.6 g/t Ag from grab samples 170 meters on strike southwest of Main North Zone
- pathfinders of the North Zone include Bi (35.1 ppm), Pb (550 ppm), Te (13.1 ppm), and Zn (208 ppm).

South Zone - outlined 450 meter strike length on surface and up to 1000 meters from drilling
- trends northeast and up to 10 meters wide as weak quartz vein stockwork zone with silicified-sericite alteration envelope up to 40 meters wide
- folded granodiorite-(tonalite) or sheared quartz-eye QP and is up to 180 meters thick with local lobate cusp mafic fold 'rafts/apophyses'
- well developed ribbon to laminated (styolitic) banding with the silicified-(sericitic) granodiorite-(tonalite) wallrock
- the most significant channel returning 46.78 g/t Au over 3.17 meters, including 241 g/t Au over 0.67 meters. A representative chip sample attained a value of 75.8 g/t Au (75.1 g/t Au) over the same 0.67 meter interval in the channel
- Ag-Sb-Bi are weakly to moderately anomalous

West Zone - trends northeast for approximately 30 meters with a very steep sub-vertical to vertical dip between 85º and 90º to the northwest
- quartz vein at contact between HW massive mafic flows and FW granodiorite-(tonalite) GTT (3.0 meters thick) contact
- varies in thickness < 1 cm to 30 cm wide
- well developed styolitic texture with pyrite and galena in chlorite-sericite ribbon or styolitic growth seams and as disseminations in the quartz vein.
- outlined continuous high-grade gold values from the grab samples ranging from 6.41 g/t Au to 21.9 g/t Au
- anomalous pathfinders include Bi (38.4 ppm), Cu (320 ppm), Hg (40 ppb), Mo (424 ppm), Pb (510 ppm), Zn (329 ppm)

With the attractiveness of the South Zone, detailed digital compilation of historical surface samples, diamond drilling and underground sampling (on longitudinal and vertical drill sections) would provide a framework to evaluate for economic concentrations of Au. Detailed structural mapping of the mineralized trench areas (including the South, West, and North Zones)) should also be considered and would further refine the drill targets with the surface and underground compilation.

1.0) Introduction

1.1 General

The Hiawatha Property is located 65.5 kilometers northeast of White River and 16 km south of Hornpayne, in central Ontario (Figure 1). A GPS geological mapping and prospecting program was carried out as a follow-up to earlier 2015 GPS gridded ground geophysical surveys, which included induced potential (IP) and a magnetic survey. Surface exploration was carried out on portions of the two (2) unpatented claims , numbered 4201059 and 4201060, and patented claims P500690, P500692, P500693, P500695, P500696, & P500698, all under one lease.

The purpose of the 2015 geological and prospecting program is to confirm and verify historical gold showings/zones in its litho and structural context and follow-up from an earlier IP and magnetic survey (Roach – 2015). This report describes and interprets the results from the geological mapping and geochemical results from the 2015 program.

2.0) Property Description and Location

2.1) Location, Access, and Accomodation

The Hiawatha Property is located 65.5 kilometers northeast of White River and 16 kilometers south of Hornpayne, in central Ontario (Figure 1). It is located in Lizar Township, Sault Ste. Marie Mining District (NTS 42C16/SW).

The Hiawatha Property was accessed by float plane, serviced by Watson's Skyways from Wawa, to an outfitter on Kabinakagami Lake. This outfitter (Watson's Windy Point Lodge – 187 Shannon Road, Sault Ste. Marie, Ontario P6A 4K2) on Kabinakagami Lake provided our lodging from August 8 to 20, 2015. Access to Kabinakagami Lake can also be accessed by floatplane from White River or Hornpayne. Helicopter support from Wawa or Marathon can also provide additional means of direct landing access to the property.

There is road access from White River via Route 631, using the Breckenridge Road turn-off. Both the Breckenridge (20 km) and Haken (10.5 km) logging roads can be used by vehicle during the summer/fall months and snowmobile in the winter months. Access by way of ATV must be used in the final 12 kilometers to the property, due to overgrowth in the latter part of the Haken logging road.

2.2) Description of Mining Claims

The Hiawatha Property consists of 48 units in four (4) unpatented mining claims and seven (7) patent claims under one lease (Figure 2). The unpatented and patented claims cover an area 768 hectares and 96.55 hectares, respectively. The unpatented mining claims are 100% owned by Trelawney Mining and Exploration Inc. (2140 Regent Street, Unit 10, Sudbury, Ontario P3E 5S8). Trelawney Mining and Exploration Inc. has entered into a 70%

purchase agreement with the lease holders, David Carter, Dan Patrie, Lorne McCarthy, and Dan MacDougall. The claim distribution is summarized in Table 1.

Figure 1 – Location Map of Hiawatha Property

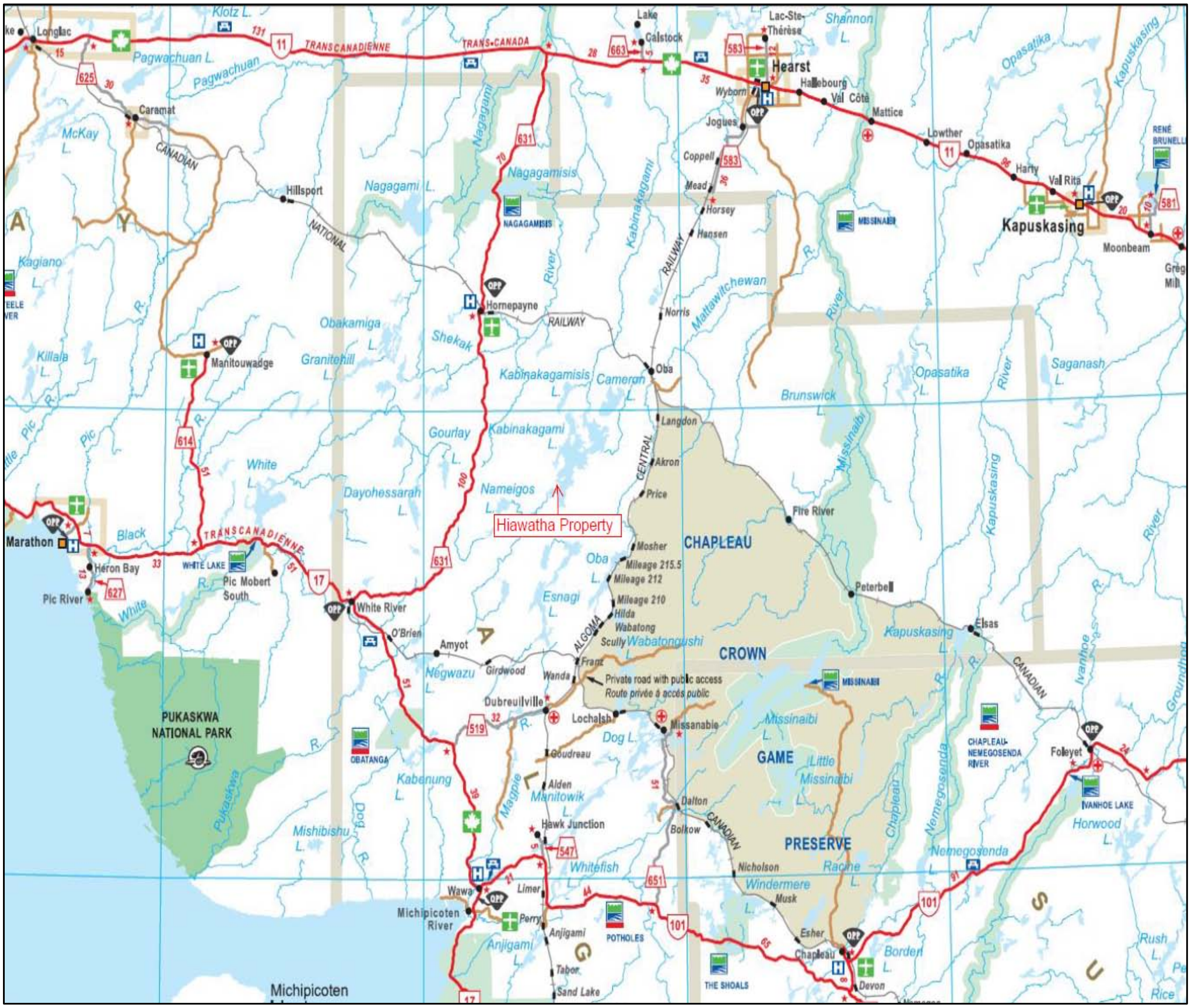


Figure 2 – Hiawatha Property Claim Map

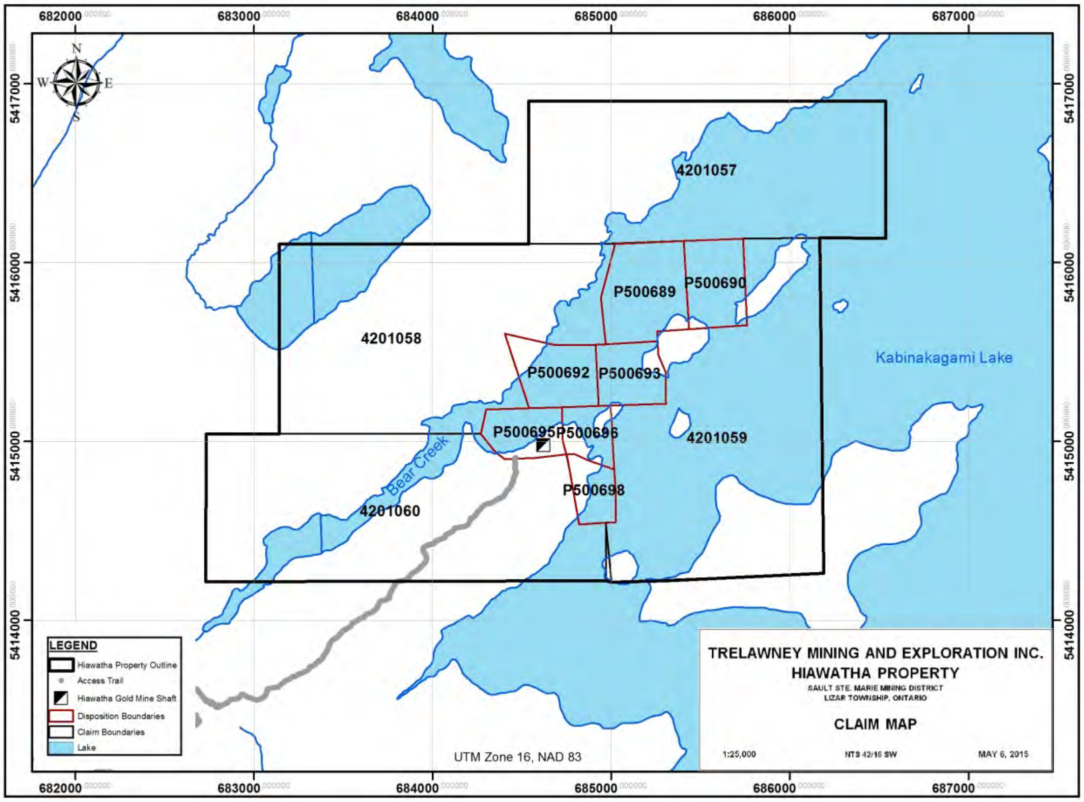


Table 1 – Claim Distribution

Township	Claim Number.	Units	Recording Date	Claim Due Date	Work Required ($)	Total Reserve ($)
Lizar	4201057	12	2006-May-26	2016-May-26	4,800	0
Lizar	4201058	13	2006-May-26	2016-May-26	5,200	0
Lizar	4201059	12	2006-May-26	2016-May-26	4,800	0
Lizar	4201060	11	2006-May-26	2016-May-26	4,400	1, 683

Township	Lease	Start Date	Lease Expiry	Survey Plan	Parcel No.	PIN No.
Lizar	108432	2009-Dec-01	2030-Nov-30	1R7232	1803AL	31056-0001LT
Patent Claims P500689, P500690, P500692, P500693, P500695, P500696, P500698 under Lease 108432						

3.0) Physiography and Vegetation

The Hiawatha Property covers a small area (864.55 ha) and is located along the western shoreline in the central part of Kabinakagami Lake. The eastern part of the property underlies Kabinakagami Lake, as well as, encompassing all and parts of six (6) islands. The height of land ranges from 317 m and 391 meters above sea level. For the most part, the relief on the property is undulating and gentle, with a steep rise in topography on the northwest side of the property. The lower relief area is reflected in the area of Bear Creek, and is occupied by extensive clay-rich swamp and muskeg. Outcrop cover ranges from 5% to 60% with very little outcrop cover along Bear Creek. Bear Creek flows northeastward into Kabinakagami Lake, with the mouth of the creek west of the Hiawatha Gold Mine, forming a peninsula-shaped landmass located on claim 4201060 and three of the patent claims. The overburden cover consists of unconsolidated, fine to medium glacial silty sand to sandy loam, with thicker organic matter and clay in poorly drained lower relief areas. In the higher relief areas, the A and B horizon are well developed, whereas the lower relief, swampy areas are characterized by thick moss and organic-rich humus.

Vegetation consists of mainly of black spruce balsam with local birch, cedar, and jack pine, along with secondary growth of alders and moose maple. Swampy, recessive areas are characterized by alders and locally by cedar, with open grassy and low-lying brush surrounding both lakes. The bush is more open along the low-lying and swampy shorelines of Bear Creek.

4.0) Historical Exploration

Gold was first discovered in 1926, which further led to discovery of three gold zones on surface, as per North and South (Hiawatha Mine workings), and West Zone (Table 1). This led to intense surface and underground exploration and mining from 1936 to 1939, culminating in limited production in 1937 (bulk sample) and in 1939 of the South Zone, which combined, returned an overall average mill grade of 0.083 opt Au, producing 159.8 oz Au from 1931 tons (Table 1). The shaft is 99.0 meters (325 ft) deep, with a drift level at 45.7 meters (150 ft level) and at 83.8 meters (275 ft level). A total of 3.97 kilometers and 0.90 km of surface and underground diamond drilling were reported, respectively. Underground work consisted of 1034 meters of drifting, 828 meters of cross-cutting, and 76 meters of underground raising. No reported and documented exploration work was carried out from 1940 to 1965, and subsequently the Hiawatha Mines charter was cancelled in 1961, reverting to the Crown, then re-staked in 1965.

Surface and underground exploration on the Hiawatha Mine was rejuvenated from 1969 to 1983, with de-watering of the underground workings and underground sampling. Both surface and underground exploration work were carried out by Primrock Mining and Exploration (1969) and Keltic Mining Corporation (1974). Tanglewood Resources (1983) compiled the 1969 and 1974 underground sampling results, and conducted extensive surface mapping and chip sampling in the immediate area of the Hiawatha Mine area, covering the North, South, and West Zones.

Overall, exploration work on the Hiawatha Property consisted of geological mapping, prospecting and sampling, trenching & power washing, channel sampling, and trench mapping. Ground geophysical surveys include Crone EM, VLF-EM, and magnetic surveys, and a pole-dipole IP (24 km) and magnetic (48.3 km) survey carried out by Ginguro Exploration Inc. in 2007. This latest IP survey appears to have extended the mineralized shears of the North and South Zone as chargeable zones for approximately 500 meters to the northeast and as a series of discontinuous, chargeable zones in excess of 3 kilometers along strike. A review of historical data in the assessment files confirm a total of 3.57 kilometers of shallow drilling in 36 drill holes were carried out by a number of companies, with last drill campaign in 1983. Only anomalous values and moderate gold intercepts over thin widths were intersected (Table 1).

More recently, Trelawney Mining and Exploration Inc. conducted rock and soil sampling in 2012 and 2014, respectively. In the spring of 2015, Trelawney also completed a 6.325 kilometer pole-dipole IP and magnetic survey. They outlined four (4) IP chargeability zones with variable chargeability responses associated with strong linear magnetic low breaks (Table 1).

Three major airborne surveys were conducted in the region. Aerodat in 1983 covered the entire area between southern end of Kabinakagami Lake and Nameigos Lake, encompassing parts of five (5) townships. EM-magnetic airborne surveys were conducted for a variety of clients. In more recent times, Geotech flew a VTEM/magnetic survey (831 line km) on behalf of Rencore Resources in 2011 and Furgo Airborne Systems flew an airborne EM/magnetic (1503 line km) survey for Freewest Resources Canada/Teck Cominco in 2003. Both these survey areas are located southwest of the Hiawatha Property. A total of 18 weak to moderate conductive trends were outlined from the VTEM survey, some with coinciding strong magnetic features. A recent VTEM / magnetic survey data was released in April, 2015 on behalf of the Ontario Geological Survey. A total of 15,970 line kilometers was flown over the Kabinakagami Lake Greenstone Belt.

As well, in 2000, a regional lake sediment and water geochemical survey was completed in the Kabinakagami Lake area. Lake sediment samples were collected at 950 sites and lake water samples were collected at 1035 sample sites, and were analyzed for a suite more than 50 elements. The anomalous elements include Au, Ni, Cu, Co, Cr, Zn, Cd, Ag, and Mo (Jackson - 2002).

Table 2 – Historical Work on Hiawatha Property

Company/Individual	Year	Area	File No	Description of Work
Trelawney Mining & Exploration	2015	Hiawatha Property – Hiawatha Mine		Line-Cutting IP/Magnetic surveys - 6.325 km with the outline of 4 IP chargeability anomalies associated with magnetic low linear breaks
Trelawney Mining & Exploration	2014	Hiawatha Mine		Soil Sampling – 139 samples – anomalous values up to 366 ppb Au in 4 anomaly trends
Trelawney Mining & Exploration	2012	Hiawatha Mine	20010312	Sampling of trench (6 samples) – no significant Au assays
Ginguro Explorations Inc./Dan Patrie Exploration Ltd.	2010	Hiawatha Property – Hiawatha Mine	20000957-958	Trenching, power stripping/washing, mapping, and channel sampling – highlighted by 38.0 g/t Au/1.0 m. in North Zone and 24.0 g/t Au /0.6 m. in South Zone
Ginguro Explorations Inc.	2007	Hiawatha Property – Hiawatha Mine	20004512	48.3 km of line cutting, 24 km of pole-dipole IP and 48.3 km of magnetic surveys – at least 4 chargeability IP zone outlined with extension of North and South Zones & shears
Noranda Exploration Ltd	1990	Hiawatha Mine area & SW of Hiawatha – Lizar Twp.	42C16SW0001	Lithogeochemical sampling with WRA – highlights includes grab values up to 1.30 g/t Au, 16 g/t Ag, and >1.00% Cu
Noranda Exploration Ltd	1989	SW of Hiawatha Mine – Lizar Twp	42C16SW0004	Prospecting and sampling (including WRA) highlighted by grab which returned 2.23 g/t Au
Noranda Exploration Ltd	1989	Hiawatha Mine area & SW of Hiawatha – Lizar Twp	42C16SW0003	Geological mapping, prospecting, lithogeochemical sampling (WRA included) and soil sampling (466 samples)
Noranda Exploration Ltd	1988	SW of Hiawatha Mine – Lizar Twp	42C15SE0002	Soil sampling (991 samples) – no significant values
Noranda Exploration Ltd	1987	West of Hiawatha Mine on Bear Creek	42C16SW0007	Soil sampling (123 samples) – no significant values
Tanglewood Consolidated Resources Inc.	1983	Hiawatha Mine Area	42C16SW0009	37.8 km of line-cutting, geological mapping, prospecting and sampling, trenching (10 trenches), and channel sampling. Described 3 zones… North Zone - grabs up to 167.81 g/t Au West Zone - 15.73 g/t Au / 2.03 m and grabs up to 382.53 g/t Au South Zone – 46.23 g/t Au / 0.91 m. and grabs up to 103.77 g/t Au Lester Showing – grab sample returned 5.14 g/t Au (parallels North/South Zone) 1370.6 meters of drilling in 12 drill holes with the most significant drill intercept returned 5.48 g/t Au / 0.91 m. in drill hole T-80-12
Sveinson Way Mineral Services	1980	Hiawatha Mine area	42C16NW0010 & 42C16SW0012	1299.9 meters of diamond drilling in 18 drill holes, 19 km of line-cutting, and soil sampling - most significant drill hole assay returned 6.51 g/t Au / 0.8 m., highlight chip from trench returned 618.49 g/t Au / 0.22 m, soil sampling up to 85 ppb Au near Hiawatha Mine shaft
Nickel Rim Mines Ltd	1978	Hiawatha Mine Area	42C16SW0013	823.5 meters of diamond drilling in 4 drill holes – most significant intercept from drill hole NR-L-78-4 which returned 14.38 g/t Au / 1.83 m. including 41.44 g/t Au / 0.64 m.

Company/Individual	Year	Area	File No	Description of Work
Nickel Rim Mines Ltd	1978	Hiawatha Mine Area	42C16SW0011	9.0 km line-cutting, geological mapping, prospecting & sampling, and 9.0 km magnetic survey highlighted by panned tail from mill concentrate returning 832.87 g/t Au and 143.15 g/t Ag
Keltic Mining Corporation	1974	Hiawatha Mine - ug	42C16SW0014 / 4242C16SW0016	22.8 km of line-cutting, 19.75 km OF Crone 'Radem' EM and magnetic surveys on northeast extension of Hiawatha Mine on Kabinakagami Lake Mapping & underground (ug) sampling using air compressed chipper highlighted…… Level 150' - 25.34 g/t / 0.91m Level 275' – 47.95 g/t Au / 0.79m, and 9.59 g/t Au / 1.22m. and 1.36 g/t Au / 5.49 m. open to the east
Bear Creek Gold Mines/Primrock Mining & Exploration	1971	Hiawatha Mine - surface	NA	Reported geological and sampling, EM, and magnetic surveys – work not reported
Primrock Mining & Exploration	1969	Hiawatha Mine - ug	42C16SW0015 / 42C16SW0017	UG manual chip sampling highlighted by 319.52 g/t Au / 1.07m, 92.12 g/t Au / 1.22m, 65.06 g/t Au / 1.52 m, & 95.20 g/t Au / 0.91m 76.2 meters in two drill holes on West Zone returning 9.24 g/t Au / 0.69 & 13.70 g/t Au / 0.67 m in drill hole 1A and 2A, respectively
Hiawatha Gold Mines Ltd	1965	Hiawatha Mine		Charter cancellation and revert to the Ontario Crown
Hiawatha Gold Mines Ltd	1939	Hiawatha Mine		Operations suspended due to theft and poor mill procedures, & outbreak of World War 11
Hiawatha Gold Mines Ltd	1937-39	Hiawatha Mine		1937-39 – Produced 159.8 oz in 1931 tons @ 0.083 opt Au 1939 – test mill treated and returned 142 oz Au in 1928 tons @ 0.074 opt Au 1937 - bulk sample returned 17.8 oz Au in 3 tons @ 5.93 opt Au
Hiawatha Gold Mines Ltd	1937-39	Hiawatha Mine		Three compartment shaft sunk to 325 ft level (99 meters) and established levels at 150 ft (46 meters), and at 275ft (84 meters); completed 1938 meters of drifting, cross-cutting drift, and limited raising (76 meters) 1059 meters of ug drilling on South Zone over 457 meters varying in width 0.05 to 0.36 meters wide
Hiawatha Gold Mines Ltd	1936-37	Hiawatha Mine		Prospecting, trenching, and drilled 3973 meters in 32 drill holes with discovery of North and West Zones + additional 16 drill holes – no logs/location/results available
Numerous Prospectors	1926 to 1931	Hiawatha Mine		Prospecting and sampling, trenching
Pierre Louttit (Hiawatha 1st Nations)	1926	Hiawatha Mine		First discovery of gold mineralization close to Picard's Point near Kabinakagami Lake

5.0) Geological Settings

5.1) Regional Geology

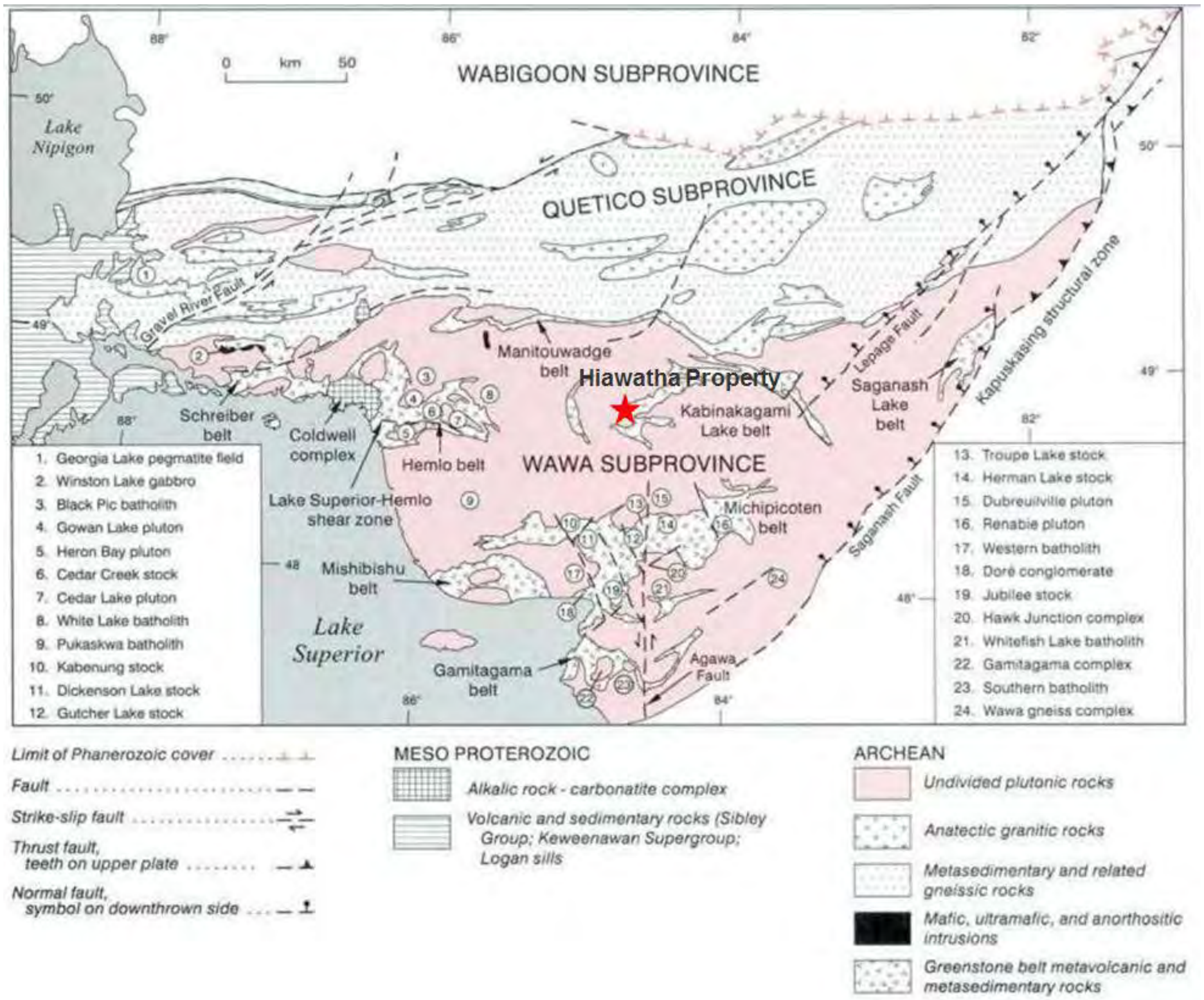
The supracrustal rocks underlying the general area are located in the Kabinakagami Lake Greenstone Belt (ca 2.7 Ga) in the Wawa Subprovince of the Superior Province in the Precambrian Shield (Figure 3). The northeastern trending greenstone belt is arcuate in shape, extending for approximately 100 km and is between 1 and 8 kilometers wide. The supracrustal rocks underlying the belt consist primarily of metavolcanics with clastic metasediments, bounded and intruded by both younger and older, metamorphosed felsic to intermediate intrusives.

The rocks of the Kabinakagami Lake Greenstone Belt are characterized by an extensive, metavolcanic assemblage, which accounts for 60% of the underlying supracrustal rock types. The mafic metavolcanics have been outlined for approximately 100 kilometers, with thicknesses of up to 8 kilometers. The mafic metavolcanics are characterized by older, magnesium-(iron)-rich tholeiitic basalts, and the felsic metavolcanics are classified as calc-alkaline dacite to rhyodacite. Ultramafic to mafic bodies have been identified on the Hiawatha Property and to the southwest, however, the extent is not truly known. Clastic metasediments account for 30% of the supracrustal rocks and are located on the east side of Kabinakagami Lake. They consist of well bedded arenaceous/siltstones, greywacke, and epiclastic/volcaniclastic tuffs. The supracrustal rocks are bounded and intruded by felsic to intermediate intrusives, which range from granodiorite-tonalite-(trondhjemite) (GTT) in composition. These intrusives have in part been metamorphosed and may be in part syn-volcanic and occur as pre to syn-deformational intrusives. There are at least two separate diabase dike swarms, ranging in age from late Archean to late Proterozoic, present in the Kabinakagami Lake area: (1) the northwest striking Matachewan dike swarm (2.47-2.45 Ga), and (2) the northeast trending Kapuskasing/Marathon dike swarm (2.2-2.0 Ga).

The principal regional structures are the South Zone Shear and the Bear Creek Fault, which both trend northeast-southwest. The South Zone Shear is approximately one (1) kilometer in strike and is a ductile-brittle gold-bearing shear with southwest converging plunging folds. The Bear Creek Fault is a linear structure which underlies a recessive area within the Bear Creek watershed for approximately eight (8) kilometers. Siragusa (1977) has described this as a strain zone, characterized by numerous thin shears over a 50 to 100 meter width from the margins of Bear Creek. The supracrustal rocks have undergone lower to mid greenschist metamorphism, with upper greenschist and lower amphibolite near the younger felsic to intermediate intrusives.

The Hiawatha Gold Mine is the only historical producer in the region and operated from 1937-39. It produced and returned an average mill grade of 0.083 opt Au, producing 159.8 oz Au from 1931 tons. It consists of two gold-bearing structures; 1) North Zone is described in a fractured quartz-feldspar body and 2) the South Zone is characterized by a silicified/sericitic quartz stockwork in a sheared granodiorite/tonalite intrusive. There are numerous precious and base metal showings and zones southwest of the Hiawatha Mine..

Figure 3 – Wawa Sub-province - Kabinakagami Lake Greenstone Belt

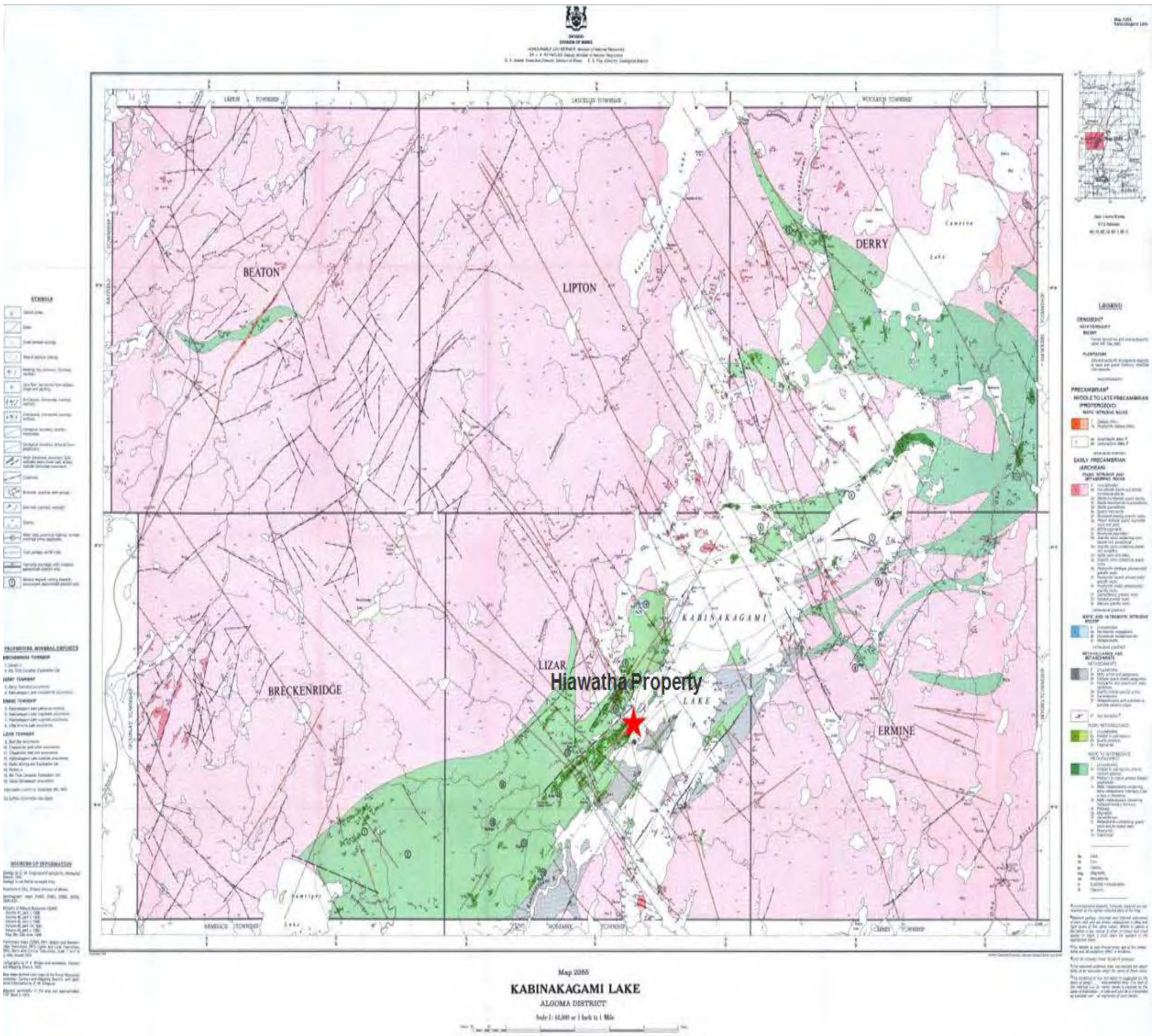


5.2) Property Geology

The supracrustal rocks underlying the Hiawatha Property are characteristic of the mafic to ultramafic metavolcanics with semi-conformable to conformable granodiorite-tonalite-(trondhjemite) sill like bodies (Figure 4). The property geology is consistent with the lithologically rock type characteristics compiled by Siragusa (1972 & 1977).

The mafic metavolcanics are the predominant rock type and constitute 85% of the rocks underlying the property. The thickest part of the mafic rocks is up to 7 km wide in the western part of the property. The metavolcanics are primarily magnesium-rich tholeiitic basalts, with localized iron-rich varieties. Basaltic rocks range from massive to pillow flows with minor inter-flow mafic volcaniclastics. There are localized, thin felsic to intermediate metavolcanics sequences, which are generally felsic tuffs. At least three ultramafic sills have been recognized on the property, with two located southeast of the Hiawatha Mine shaft and one located along Bear Creek.

Figure 4 – Property Geology (after Siragusa – 1972)



The two closest to the Hiawatha Mine shaft trend northeast and are between 45 and 90 meters thick. Brewster and Leonard (1983) have described both these sill-like bodies as fine to coarse-grained amphibolites (termed pyroxenite) and are comprised of 80% to 90% amphibole-(pyroxene?) + calcic-plagioclase + titanite + ilmenite + magnetite. There appears to be a magnetite cumulate at the base of the most westerly ultramafic sill. Ultramafics along Bear Creek (Bear Creek Fault) have been recognized by Siragusa (1977) and Noranda sampling (in 1989-90) returned MgO compositions up to 26.11% MgO. The extent of the ultramafics on the Hiawatha Property is not truly known. Clastic metasediments (10%) are located on the eastern side of the property, extending into Kabinakagami Lake and the lake's islands. They consist of well bedded arenaceous metasediments, which include sandstone, siltstone, and quartzite.

Granodiorite-tonalite-(trondhjemite) (GTT) series of intrusives account for the remaining 5% of the rocks underlying the property. These felsic to intermediate rocks trend in a northeast direction and is part of a more prolific intrusive body that extends to the southwest for approximately 14 kilometers. GTT is up to 180 meters thick on the Hiawatha Property. The remaining ≤1% part of the property is underlain by northwest (Matachewan) and northeast (Kapuskasing-Marathon) diabase dykes. The sub-vertical to vertical dipping diabase is up to 4 meters thick. The supracrustal rocks underlying the property have undergone low to mid greenschist metamorphism, with increase metamorphism near younger felsic to intermediate intrusives.

The northeast trending South Zone Shear and Bear Creek Fault are part of a regional strain zones (up to 8 km long) underlying the south part of the Hiawatha Property. It has been described as a sub-vertical structure. Ultramafics are spatially associated with the Bear Creek Fault, which may indicate a deep-seated structure. Shears and gold-bearing structures of the South Zone Shear parallel Bear Creek Fault, although kinematics is largely unknown.

The Hiawatha Mine has been the only historical producer in the Kabinakagami Lake Greenstone Belt. The mine produced 159.8 oz Au with an average mill grade of 0.083 opt Au from 1931 tons, including a 3 ton bulk sample which returned 17.8 oz Au @ 5.93 opt Au.

6.0) Deposit Types

The Kabinakagami Lake Greenstone Belt area is part of the Wawa sub-province, and hosts a diverse array of precious and base metal deposits. Major breaks such as the Mishibishu Lake Deformation Zone and Goudreau Lake Deformation Zone host a number of gold deposits in the Wawa Sub-province. There are two distinct styles of gold mineralization; 1) orogenic lode-gold greenstone hosted mesothermal gold, and 2) intrusive-related 'porphyry' disseminated style. Examples of orogenic gold structures are Wesdome's Eagle River Mine (Eagle River Deformation Zone) and Harte Gold's Sugar Zone in the Dayohesarrah (Sugar Deformation Zone). Intrusive-related hosts are similar to the Moose Lake Porphyry Complex at Hemlo and Webb Lake Intrusive at Magino.

The potential of gold mineralization Hiawatha Property fits the orogenic style of mineralization with the host GTT and the presence of the regional South Zone Shear strain zone and the Bear Creek Fault.

7.0) Discussion of Results from 2015 Surface Exploration Program

Between August 9 and 20, 2015, Trelawney Mining and Exploration Inc. conducted a semi-detailed geological mapping and sampling program with prospecting in local areas. The 2015 surface exploration program was initiated to evaluate the potential for gold mineralization on a target scale on historical showings, particularly on the North, South, and West Zones. The field work was undertaken to understand the potential gold environment and structural controls conducive for precious metal mineralization.

The author conducted the mapping with the aid of Shane O'Neil, who carried out the sampling and prospecting. Mapping and prospecting/sampling was carried out using a GPS and compass survey (Garmin GPSMAP 62S) over 200 meter intervals across stratigraphy, as well as shoreline mapping and sampling using a boat on Kabinakagami Lake. Accuracy of the GPS unit is approximately 3 to 6 meters. Approximately 11 kilometers of GPS geological mapping was completed, with in-fill geological mapping, prospecting and sampling in local areas. Nad 83 in Zone 16N was utilized in the mapping, prospecting, and sampling program. Geological and other cultural features, such as claim posts and surveyed iron pins, were referenced to observed UTM co-ordinates

1) Northwest edge of shaft – 5414985 N / 684618 E
2) Southeast edge of shaft – 5414973 N / 684625 E

The following is presented in the appendices at the back of the report…….

Appendix 1 – Track, Geology, and Sample Location/Gold Geochemistry Maps at 1:2500 scale

Appendix 2 – 2015 Surface Sample Descriptions

Appendix 3 – 2015 Activation Laboratories (Actlabs) Assay/Geochemical Certificates

8.0) Analytical Quality Control and Quality Assurance

An aggregate total of 82 rock samples (including both grab and standards/blanks) were analyzed from this surface exploration program. Samples were analyzed by Activation Laboratories (1010 Lorne Street, Unit West 4, Sudbury, Ontario *P3C 4R9*).

All samples were bagged, and secured with security twist tags in rice bags. The samples were personally delivered by Trelawney Mining and Exploration personnel to the Actlabs laboratory in Sudbury. All samples were analyzed for gold by fire assay/AA and a 61 element ICP-0ES and ICP-MS rock package. All methods used, analyses, and detection limits are on hand in the form of assay certificate A15-06926 (Appendix 3).

Activation Laboratories (Actlabs) are accredited by the Standards Council of Canada to ISO 17025 for specific registered tests or certification to ISO 9001:2008 certifications for accredited methods. Sample preparation, analytical and quality control procedures employed are mutually similar in procedure and are as follows:

8.1) Sample Preparation

Once the samples have been received, they are entered into the Actlabs Quality Management System and given an internal sample control number. The samples are then checked for dryness prior to any sample preparation and dried if needed. The samples are split off 1.0 kg and pulverized split to better than 85% passing 75 microns using a Jones Rifler. Silica cleaning between each sample is also performed to prevent any cross contamination. Random screen analysis is performed daily to check for attainable mesh size.

8.2) Gold Analysis

All Au analysis is performed at a 50g charge by fire assay using lead collection with a silver inquart. The detection limit is 5 ppb. The beads are then digested and an atomic absorption finish is used.

8.3) Gold Pulp Metallic Analysis

Pulp metallic analysis includes the crushing of the entire pulp sample to a 100 mesh sieve using a Jones Rifler to split the sample to a 1 kg sub sample. The entire sub sample is then pulverized to 90% -100 mesh and subsequently sieved through a 100 mesh screen. The entire +100 portion is assayed along with two duplicate cuts of the -100 portion. Results are reported as a calculated weighted average of gold in the entire sample. Gold metallic analyses was used on samples identified with visible gold and with over 5 g/t Au using a fire assay method.

8.4) Multi Scan Analysis

Multi scan analysis (61 elements) was performed using a near total to total four acid digestion (hydrochloric, nitric, perchloric, hydrofluoric). It is then analyzed by ICP-OES and ICP-MS method.

8.5) Laboratory & Company Quality Control / Quality Assurance (QC/QA)

Certified standard and blank assays are usually run for each rack of samples. A non-reproducible check assay are an indication of nugget problems within the sample and both laboratories recommend that further analysis be performed to generate a better representation of the sample.

All standards run are graphed to monitor the performance of the laboratory. Actlabs warning limit is 2 times the standard deviation and our control limit is 3 times the standard deviation. Any work order with a standard running outside the warning limit will have selected re-assays performed, and any work order with a standard running outside the control limit will have the entire batch of samples re-analyzed.

All QC/QA data run with each work order is kept with the clients file. If desired, the client may have all the blanks and certified standards reported on a certificate to correspond to the client's samples. All quality control graphs are available upon request.

The laboratory also keeps daily log books for the sample throughput. These logs record all information pertaining to; 1) who performed the analysis, 2) when the analysis was done, 3) how the analysis was performed, and 4) what other sample were analyzed at the same time. This is done to help eliminate the possibility of misrepresentation and cross-contamination of the client's samples.

Actlabs instruments are calibrated using ISO traceable calibration standards and our quality control standards are created from separate stock solutions. Their instruments are directly tied to their quality control program eliminating the need for manual data entry, hence, reducing human error.

Trelawney Mining and Exploration Inc. also inserted and alternated one sample standard and blank every 12 samples. The author believes that the results of sampling and analysis of core samples collected during this program reliably reflect the nature of mineralization observed.

9.0) Discussion of Results from 2015 Surface Exploration Program

9.1) Geology

The following is a synopsis of major rock types and alteration, structure, and mineralization encountered as a result of mapping and sampling and presented at 1:2500 scale. A combination of geological, track, and sample location/gold geochemistry maps are presented at a scale of 1:2500 in Appendix 1. Sample descriptions with gold and ICP geochemistry and Actlabs assay certificates are presented in Appendix 2 and 3, respectively.

The following briefly summarizes the geological and assay results from the 2015 mapping and sampling surface exploration program.

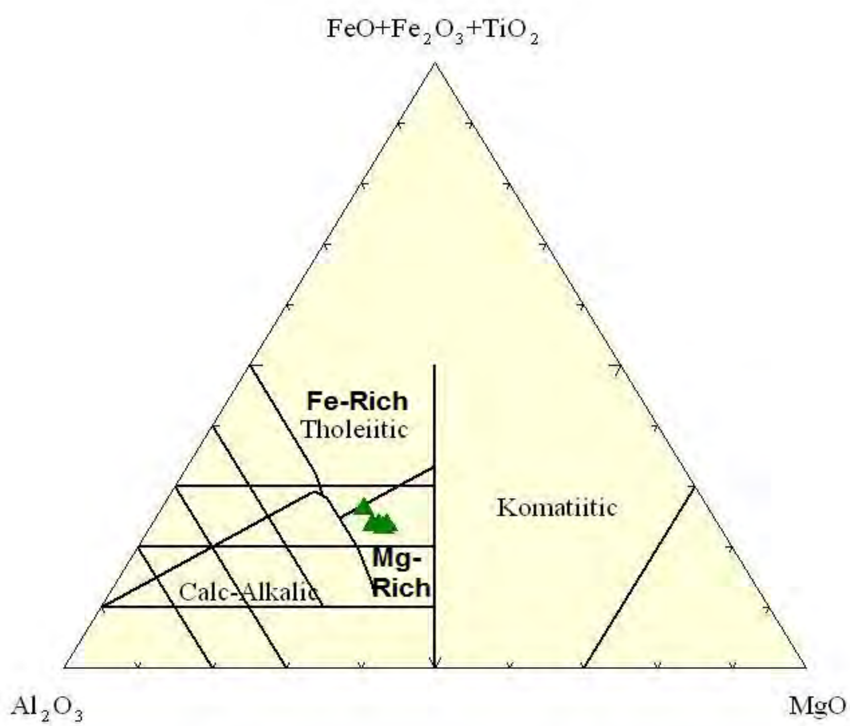
9.1.1) Lithology and Alteration

Mafic Metavolcanics

The mafic litho-stratigraphy on the Hiawatha Property is part of larger northeast trend for 100 kilometers and constitutes approximately 85% of the underlying rocks on the property. There are numerous GTT sills intruding into the mafic metavolcanics sequence, where the contacts have characteristically sharp boundaries. The mafic metavolcanics vary from 30 meters to 350 meters thick in the southern part of the map area, within a thicker 7 kilometer wide sequence in the unmapped, northwestern part of the property. In the eastern part of the map area, the recognition of thin felsic metavolcanics and clastic metasediments are not well constrained due to the lack of outcrop exposure.

The mafic litho-stratigraphy has been outlined for 2 kilometers from the northeastern to southwestern part of the map area. It is the major litho-stratigraphic unit within the Kabinakagami Lake Greenstone Belt. The northeastern trending mafic units range in thickness from 30 meters to 350 meters in the map area. It is steeply dipping to the northwest to vertical dipping, with local rolls to the southeast. The unaltered mafics weathered and fresh colors range from dark green, green, to grayish green. The unaltered mafic metavolcanics classify mainly as magnesium-rich tholeiitic basalts with minor iron-rich affinities (Figure 5) as flows and gabbroic equivalents. In un-deformed domains, the mafic metavolcanics are typically massive to pillowed flows, with extensive sheared and foliated varieties. Volcaniclastics and clastic metasedimentary inter-formational units have also been observed. The weakly metamorphosed mineralogy assemblage consists of a very-very fine to fine-grained (up to 1.0 mm in size) of amphibole (hornblende) + albite plagioclase ± chlorite ± quartz ± carbonate ± biotite ± epidote ± magnetite ± muscovite ± sulphides. Quartz has typically very low concentrations in the mafic metavolcanics.

Figure 5 - Jensen Cation Plot of Mafic Metavolcanics (normalized & anhydrous)



The mafic metavolcanics have undergone weak to moderate chlorite and weak carbonate alteration (calcite and local ankerite/siderite). Stronger chlorite alteration of both amphiboles and feldspars is reflected by strong shearing proximal to mineralized structures and within mafic volcaniclastics. There is local silicification and sericite alteration, particularly along the GTT contacts near the auriferous quartz vein/stockwork structures of the North, South, and West Zones. No higher grade metamorphic mineralogy was recognized.

The mafic rocks consist mainly of very fine to medium-grained massive flows, pillow flows and pillow breccias, and porphyritic flows. The mafic flows show a well-developed massive texture, displaying a very weak fabric. Pillow textures have not been extensively recognized through field mapping, but best recognized in local areas along the shoreline and previously mechanically stripped and washed outcrops. Weakly to strongly deformed pillow flow textures have been locally preserved and recognized (PLA-1). Pillows vary from 0.10 to 0.80 meters in length, and are generally tightly packed showing well developed chilled chlorite-feldspar-epidote-(carbonate) selvages up to 5 cm wide. Sense of tops in the central part of the map area is uncertain, as it may be to the southeast, and in the northeastern part of map area, facing is to the northwest.

Amphibole-rich, melanocratic porphyritic flows have only been recognized in the southwestern map area, located towards Bear Creek. These flows may be in part being gabbro and may represent synvolcanic equivalent, as a hypabyssal feeder to the coarser grained mafic metavolcanic flows observed on the property. They consist of 25% to 40% very-fine to medium grained ≤ 0.20 cm in size) amphiboles porphyroblasts in a very-fine grained ferromagnesian mafic matrix.

Mafic volcaniclastics have also been recognized and occur as thin inter-formational units within massive and pillow mafic flows and in areas proximal to felsic metavolcanics. It forms a gradual one (1) kilometer northeast trend along the eastern part of the map area in the Kabinakagami Lake area. Although generally strongly sheared and altered, they are distinguishable by their chlorite-rich mineralogy, with relict compositional bedding (<0.5 meters wide) being well preserved. The mafic volcaniclastics may be part of and are intercalated with epiclastic rocks.

PLA-1 – Mafic Pillow Flow at Trail Trench with sense of tops to the east - Located at 5414920N / 684470E (looking north-northwest)

Felsic to Intermediate Intrusives

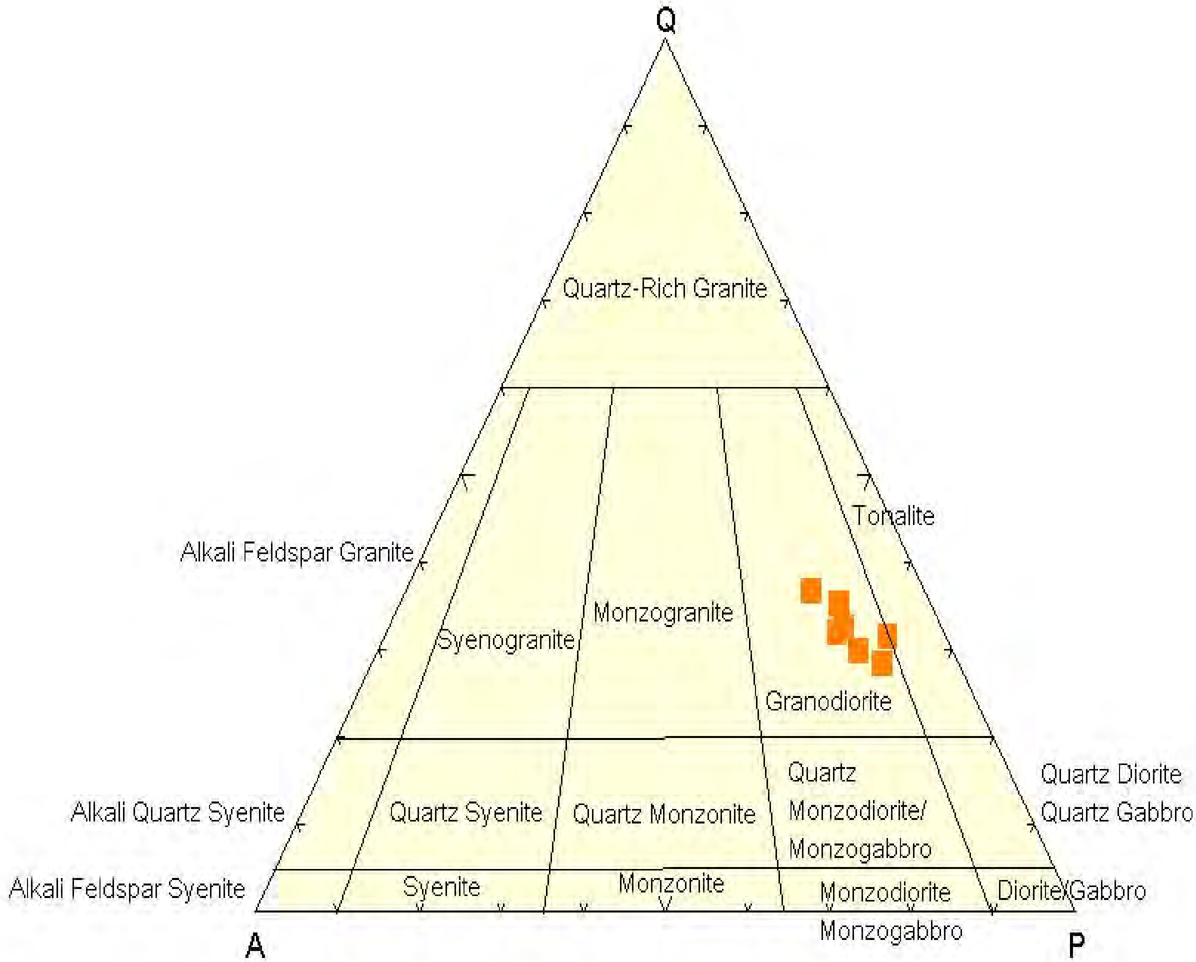
The felsic to intermediate intrusives rocks occupy approximately 10% of the underlying rock types in the map area. A central northeastern trending felsic to intermediate intrusive body extends for the entire map area of 2.2 kilometers and is up to 180 meters wide. Another similar trending body has been outlined for at least one (1) kilometer to the southeast and is up to a 100 meters wide. There are numerous, thin sill-like bodies which range from 0.1 meters to 5 to 10 meters wide. The felsic to intermediate intrusives classify mainly as a granodiorite close to the tonalite field on the QAP plot by Streckheisen (Figure 6).

The weathered and fresh colors are light gray to gray color. They are felsic to intermediate in composition with unaltered modal, normative analyses of historical whole rock analyses showing plagioclase (65% to 71%) + quartz (22% to 28%) + biotite (5% to 10%) ± amphibole ± chlorite ± epidote ± sericite ± zircon ± rutile ± pyrite (Wilson – 1993). Sheared, fine to medium grained quartz-eye augens and feldspars range 5% to 30% in a very fine grained quartz-feldspathic matrix giving the granodiorite a well- developed porphyritic texture (PLA-2). Wilson (1993) has reported that these quartz eyes have been extensively re-crystallized being strained and granulated, showing pressure shadows and re-growth of quartz as aggregates in the quartz-eye augen. The porphyritic nature of the thinner sill-like intrusive bodies is less apparent to the fine grained nature of the sill.

The most significant alteration observed is hosted within the central granodiorite, directly associated with the South Zone. This northeasterly trending alteration has been outlined for approximately one (1) kilometer and is 40 meters at its thickest. The alteration bifurcates in the southwest part of the zone towards the West Zone. It is moderately to strongly sericitic and silicified, reflected by weak to and moderate sodium-depletion and potassic enrichment. Other silicification-sericite alteration has been noted on the North and West Zone, but more constricted to the auriferous mineralized structures and their shears and fracture system. Significant chlorite alteration is conspicuously absent in the granodiorite.

A northeastern trending sheared granodiorite intrusive breccia forms a 1.2 kilometer marker between the granodiorite and mafic metavolcanics along the southeastern contact of the main intrusive contact (PLA-3). It is up to 20 meters thick. It consists of assimilated and/or stoped, sheared mafic metavolcanics rafts up to 5 meters in size, but typically 0.1 to 0.3 meters in size. The rafts are sub-angular to sub-elliptical in shape. They are raft supported near the contact, constituting 20% to 40%. The rafts are mono-lithologic consisting of dark green, very-fine grained amphibole-rich (melanocratic) blocks.

Figure 6 – QAP Diagram of Unaltered Felsic to Intermediate Intrusives



PLA-2 – Altered Porphyritic Granodiorite - Sample 163405 located at 5414460 N / 683991 E

PLA-3 – Granodiorite Intrusive Breccia with Assimilated Mafic Rafts **–** located at 5414907 N / 684774E (looking north-northwest)

Felsic Metavolcanics

Felsic metavolcanics form as two thin sequences within the mafic metavolcanics and are both located in the eastern part of the map along and near the shoreline of Kabinakagami Lake and on a localized island. They may be equivalent to the felsic to intermediate intrusives. They form a one (1) kilometer northeast trend and account for <5% of the underlying rocks in the map area. The more dominant sequence averages 50 meters thick, with the other one being 10 meters wide.

They classify as calc-alkaline rhyolite to dacite, and are part of a bimodal metavolcanic sequence. The intermediate varieties are atypical. The weathered and fresh color of the felsic metavolcanics vary from gray to greenish-gray colors. It is typically has a very-fined grained matrix composed of quartz + feldspar + muscovite + sericite ± epidote ± carbonate ± zircon ± sulphides (Siragusa – 1977). They form massive, weakly sheared tuffs and may be in part very fine grained sill-like features of the felsic to intermediate intrusives. Local crystal-rich tuffs have been recognized locally along the shoreline of Kabinakagami Lake with 5% to 10% very-fined grained quartz and feldspar crystals in a very-fined, aphanitic matrix. Geological contacts with the surrounding mafic metavolcanics are sharp.

Chemical Metasediments

Chemical metasediments occur locally and are associated with mineralized sulphide zones. They account for < 1% of the underlying rocks in the map area and are found within the mafic metavolcanics as inter-formational horizons. There are two local occurrences…..

1) Mouth of Bear Creek into Kabinakagami Lake beside the MNR cabin on patented claim P500692
2) Shoreline of Kabinakagami Lake in the southeastern part of the map area on unpatented claim 4201060

The first occurrence is a mineralized cherty tuff which is intermittently exposed for approximately 100 meters in a north to northeast direction along the shoreline of Kabinakagami Lake, near the mouth of Bear Creek. It is up to 5 meters wide and weathers rusty brown with fresh colors as bleached grayish white to light gray in color. The cherty tuff is strongly silicified with weak to moderate shear controlled sericite alteration and is very-fine grained, being aphanitic. It is moderately to strongly sheared and weakly fractured with < 1% to 2% quartz stringers. The cherty tuff hosts <1% to 5% disseminated and sheared pyrite grains. A 5 cm wide massive pyrite (80% to 85%) lens is also located in the same area (PLA-4). No significant precious and base metal values were returned from grab samples in this area.

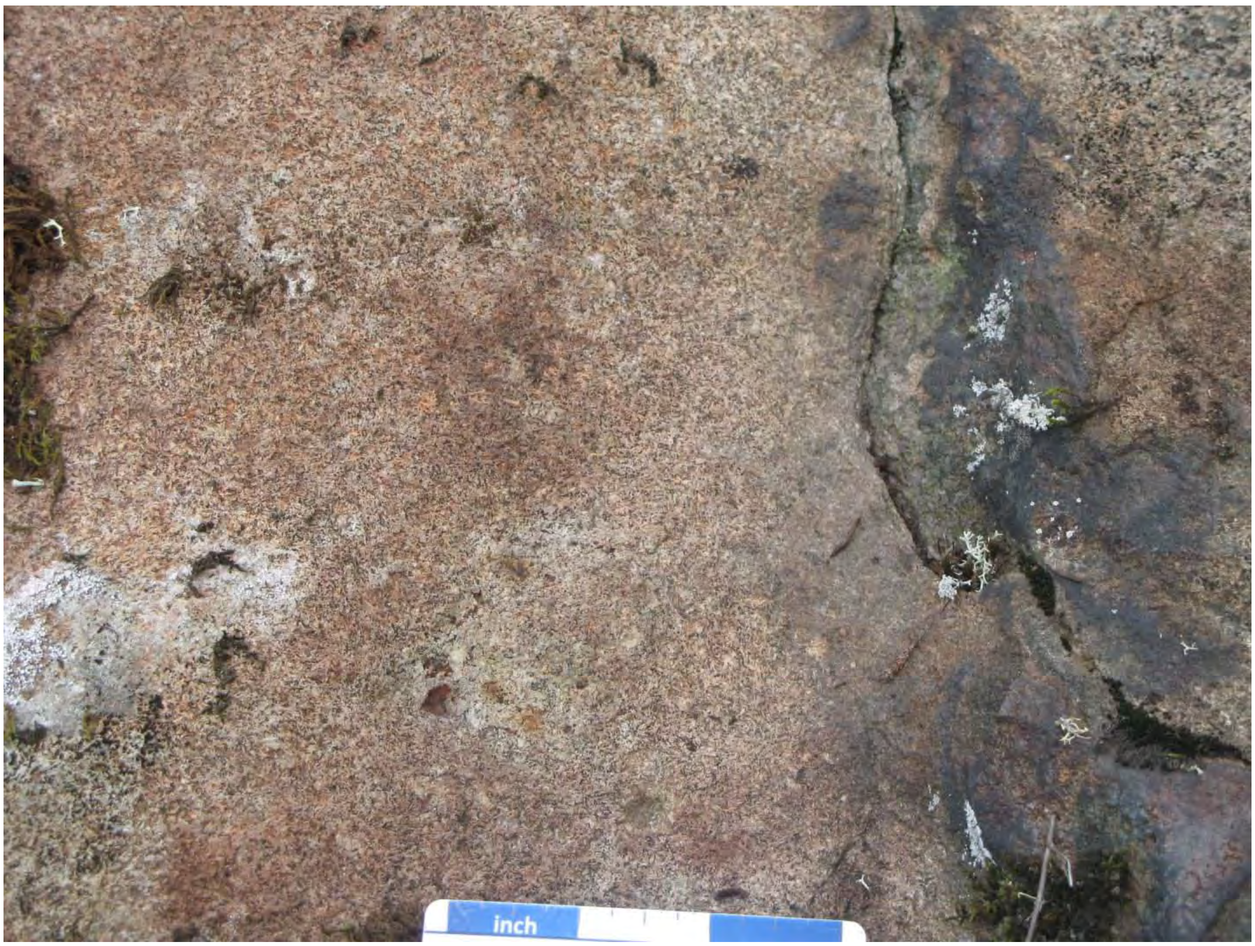
The second occurrence is located in the southeastern part of the map area on the shoreline of Kabinakagami Lake. This thin (0.25 meters wide) cherty tuff horizon is found within mafic volcaniclastics/massive flows, trending east-west. The strike extent is unknown. It is moderately rusty brown on weathered surface and grayish-white to gray on fresh surface. The cherty tuff is very fine-grained with microcrystalline laminated and banded quartz, with bands hosting 5% to 10% biotite. There is 1% to 3% scattered, sheared pyrite grains with trace chalcopyrite.

PLA-4 - Massive Pyrite – Sample 163431 located at 5415549 N / 684627 E

Mafic Intrusives – Diabase Dykes

Younger diabase dykes cross-cut all supracrustal metavolcanics and chemical metasediments, including the GTT (PLA-5). They constitute of up to 1% of the remaining rock types underlying the property. There are two different trending diabase dykes; 1) Kapuskasing-Marathon northeast trend, and 2) Matachewan northwest trend. Both trending diabase dykes are 5 to 10 meters wide, except at their intersection point where the diabase are up to 30 to 35 meters wide. The Matachewan is older than the Kapuskasing-Marathon diabase with no visual offset. There are four (4) sets of northwest trending Matachewan diabase dykes in the map area, with the most extensive one observed outlined for approximately 450 meters, starting at the Hiawatha Mine shaft and extending to the shoreline of Kabinakagami Lake. One central northeast trending Kapuskasing-Marathon diabase dyke has been outlined for approximately 650 meters. These dykes correlate well with both the northwest and northeast trending ground magnetic highs.

The dykes are greenish brown on weathered surface being greenish black, dark green to black as fresh surface colors, being mafic in composition. They are typically mafic in composition with of pyroxene + calcic plagioclase + magnetite ± amphibole ± epidote ± ilmenite. The diabase dykes are typically moderately to strongly magnetic, with locally weak magnetic variations. Leucoxene has not been observed in any of the samples. Both dyke trends are very-fine to fine grained with black-colored, aphanitic chill margins. They generally become coarser grained toward the center of the intrusive. They display an ophitic/sub-ophitic to coarser equigranular texture. The contacts are inferred due to the lack of exposure on the property.



PLA-5 – Typical reddish-brown Weathering of Diabase Dyke - Location at 5414877 N / 684776 E (looking northwest)

9.1.2) Structure

Supracrustal rocks underlying the Hiawatha Property have undergone variable structural deformation proximal to the South Zone Shear and Bear Creek Fault. This deformation is characterized by a series of complex shears. Ductile-brittle shearing and tight isoclinal parasitic folding have been observed within the main granodiorite body and mafic metavolcanics. Although regional fold features are not fully understood in this area, local smaller scale folding observed on the Hiawatha Property may reflect a series of larger regional folds. There appears to be a regional southwest convergence in the mafic metavolcanics apophyses within the central felsic to intermediate intrusive body, particularly in the South Zone near the Hiawatha Mine shaft.

Bedding

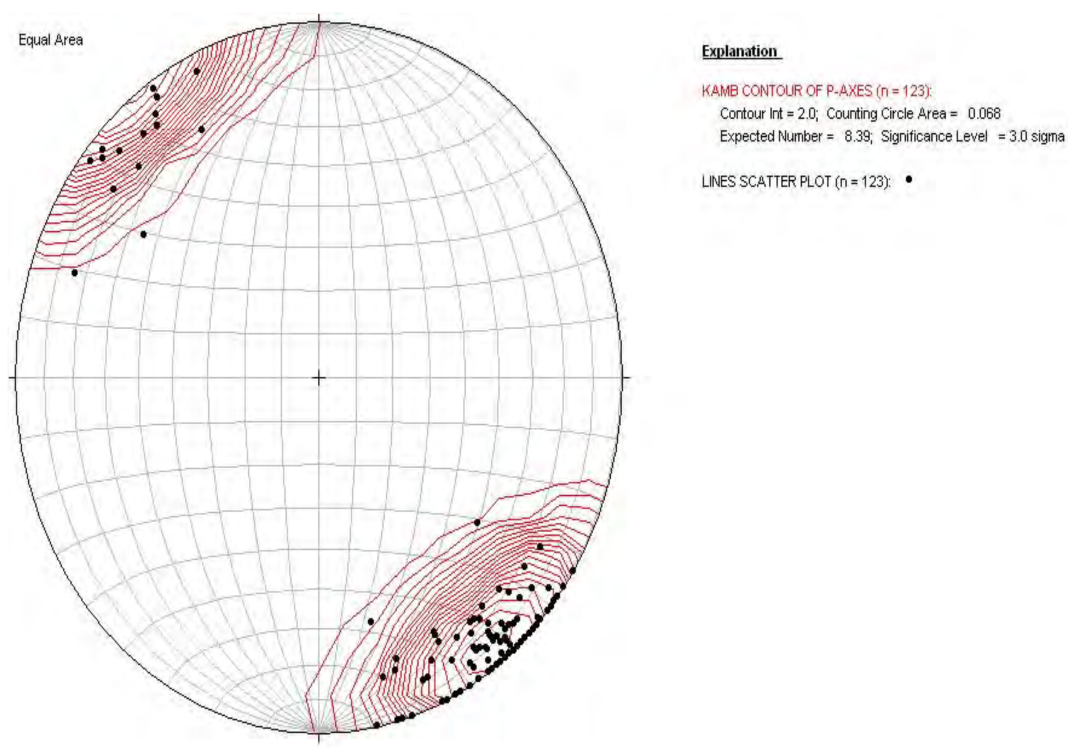
Although no extensive clastic and chemical metasediments were encountered from the mapping program, only a few primary banding and bedding textures were recognized, and are best preserved in the chemical metasediments and mafic volcaniclastics. Compositional banding, laminations, and bedding (S_0) define primary bedding. S_0 exhibits a dominant general northeast trend in the metasediments and reworked metavolcanics, with moderate to steep dips to both the southeast and northwest. Local bedding features within the inter-formational cherty tuff and mafic volcaniclastics in the southeastern part of the map vary in strike from 240º to 250º and range in dip 81º to 85º to the northwest. Conversely, at the mouth of Bear Creek at Kabinakagami Lake, a bedding measurement averages 210º and dips to the southeast 65º. This variation in opposite dips may indicate a synformal feature centered on the Bear Creek Fault.

Foliation/Cleavage

Overall, there is a strongly developed penetrative, metamorphic foliation (S_1) overprint in most rock types, excluding the diabase dykes. The mafic metavolcanics, chemical metasediments, and felsic to intermediate intrusives display a variation of weak to locally strong regional fabric. The foliation is defined by the sub-parallel elongation of platy minerals such as chlorite, biotite, sericite, and amphibole. The steeply dipping S_1 has a regional average strike of 233.5º and northwest dip of 84.0º. There are at least two generations of cleavage which have been locally recognized in the project area; 1) dominant northeast-southwest direction and 2) north direction. These areas also have a somewhat consistent variation in the direction and dip of the foliation/cleavage (Figure 7) .

The first sheared area is the South Zone Shear, which is located along the area of the South Zone on the main peninsula and the adjacent island (Amisk Island). A tight antiformal structure is interpreted in this area within the main granodiorite body, with the occurrences as of small and regional scale lobate cuspate fold hinges of the mafic metavolcanic 'apophyses'. The mafic metavolcanics litho-stratigraphy exhibit a moderate plunging southwest convergence (PLA-6). The steeply dipping (77º to 86º) southeast foliation trends northeast, ranging from 47º to 73º, and is located southwest of the South Zone. There are local flexures in the foliation/cleavage in this area. The second sheared area, which shows both a change in strike and dip, is located at the mouth of Bear Creek along the Kabinakagami Lake shoreline, where the foliation shows a more northerly (20º to 61º) trend with dips to the southeast between 60º to 87º. Altered mineralized inter-formational zones along the shoreline show intense and localized shearing, reflected by quartz-sericite-pyrite schist.

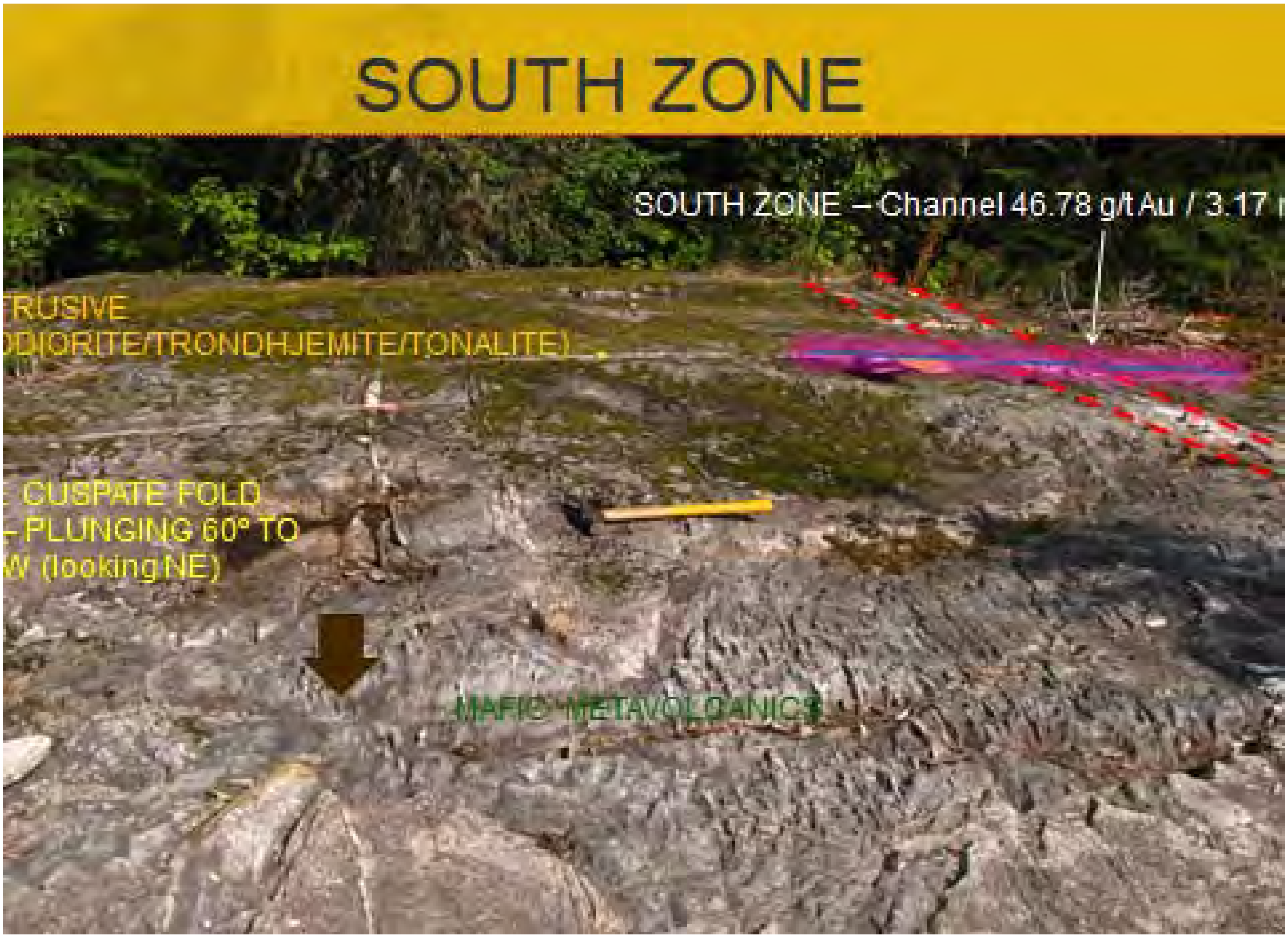
Figure 7 - Stereonet of Scatter and Contour Poles of Foliation/Cleavage Measurements



Lineation and Folding

Fold axis lineation are locally well developed in the felsic to intermediate intrusives and mafic metavolcanics throughout the property, particularly in the tightly folded mafic metavolcanic 'apophyses' within the South Zone. The principal lineation measured and defined is a fold axis lineation in tight parasitic and regional folds. Measured lineation of fold axis occur and are reflected as stretched weathered cavities, which reflect plunging fold axis. This coincides with the intersecting lineation between mafic metavolcanic and granodiorite geological contacts and foliation/cleavage.

Although there are a limited number of measured lineation's, they suggest two plunge directions; 1) main southwest plunge between 48º to 70º and 2) eastward plunges of 72º. These variance in lineation direction reflect the southwestern plunge of the South Zone and east plunge direction of the altered and mineralized zones near the Bear Creek Fault.



PLA-6 – Lobate Cusp Folding in the South Zone with Steeply Plunging Fold Axes – Location at 5414930 N / 684724 E (looking northeast)

The South Shear Zone best reflects the lineation of parasitic folds with well-developed fold axes within the lobate cusp folds of the mafic metavolcanic 'apophyses'. The lineation plunges to the southwest moderately to steeply between 60º and 70º. The auriferous quartz veins within the quartz stockwork of the South Zone are axial planar to the folds, and are symmetrically parallel the fold axis of the folds.

Structural Lineaments

There are two main structural lineaments; 1) South Zone Shear and 2) Bear Creek Fault. The South Zone is more characteristic of an altered and gold-bearing mineralized ductile-brittle shear/strain zone. The Bear Creek Fault is the main regional structure on the property and occupies a northeast-southwest trending recessive area, as reflected by Bear Creek.

The strain zone underlying the South Zone occurs as an anastomosing array of southwest plunging shears and quartz vein/stockwork fracture-filling. The strain zone is at least one (1) kilometer long with the alteration up to 40 meters wide. The quartz veins do not show continuity, but the weak to moderate gold-bearing quartz stockwork structure shows continuity and pinch and swell geometry. There are very localized ladder structures/connectors and folded quartz veins in the South Zone. The quartz vein/stockwork structures coincide with a moderate linear magnetic low break trending northwest/southeast. There is no chargeability response over the South Zone.

The other prolific structural lineament is the Bear Creek Fault. It is located along the Bear Creek, which trends northeast-southwest for approximately 8 kilometers. Although not fully understood, this linear structure underlies a recessive area within the Bear Creek watershed. Siragusa (1977) has described this as a strain zone, characterized by numerous thin shears over a 50 to 100 meter width from the margins of Bear Creek. The Bear Creek Fault is characterized by multiple ductile shears within the mafic metavolcanics and their inter-formational units. The boudinage-like shears are thin and their shear component is not truly known. The Bear Creek Fault is reflected by a series of strong magnetic low breaks in the 1VD magnetics and a variable weak to strong chargeability response.

9.1.3) Mineralization

The mapping and prospecting program was successful in confirming the presence of historical gold mineralization, as well as additional new sulphide mineralization. It was also successful in delineating favorable altered structures in and along contacts in a variety of different rock types. This may infer strata-bound implications along geological litho-contacts for gold-bearing structures.

Mapping has confirmed and identified five (5) zones and occurrences from mapping and prospecting. The mineralized and structural host rocks are generally granodiorite-(tonalite) and mafic metavolcanics, showing variable degrees of alteration and deformation, including extensive fracturing. Pyrite is the dominant sulphide mineral with localized pyrrhotite, galena, chalcopyrite, sphalerite, molybdenite, and visible gold/electrum. Local malachite stain has also been identified. Significant gold-bearing mineralization was identified on the South, West, and North Zone and extension. Significant Ag and Pb mineralization was recognized in the North and West Zone, respectively. The sulphides mineralization commonly occur as very-fine grained disseminated grains in the quartz veins and altered wallrock in the North, West, and South Zones, and as strongly disseminated to semi-massive sulphide coincidental to IP chargeability zone HI-04. Sulphide concentrations vary from < 1% to 80%-85%, with sulphides within mineralized quartz veins typically ranging from < 1% to 3%, with local increases 4% to 10%.

The following is a brief summary of the more significant sulphide mineralized target areas;

North Zone

The North Zone has been outlined for approximately 350 meters and is up to 0.20 meters wide. It trends northeast and dips steeply to the northwest between 78º and 84º. It consists of a very thin quartz veinlet, which commonly pinch and swells between <0.5 cm to 20 cm, and marks the contact between HW massive to pillow mafic flows and the granodiorite-(tonalite) sill-like body (≤ 2 m. thick). This program did confirm the extension of North Zone quartz veining and mineralization to the southwest with sulphides up to 5% to 10% pyrite along styolitic fractures hosted in quartz veinlets at the contact between the mafics and granodiorite-(tonalite).

The main North Zone quartz vein varies from white to smokey white in color and the quartz ranges from sugary, crystalline, to drusy and is strongly fractured. The strongly fractured vein commonly has chl-ser styolitic fractures and seams with < 1% to 5% pyrite ± pyrrhotite ± chalcopyrite ± galena. A spec of visible gold has been identified in sample 163444 (3.91 g/t Au), located in the north end of the trench area where Tanglewood Exploration documented a 27.08 g/t Au grab sample. More recent trenching and channel sampling by Ginguro Explorations returned historical values returned up to 38 g/t Au. The highest sample collected during the 2015 geological mapping program from the main North Zone is 7.96 g/t with no significant Ag values. The Trail trench did confirm significant gold and silver values with values up to 34.40 g/t Au with 45.7 g/t Ag and 30.9 g/t Au with 13.6 g/t Ag from grab samples. It is hosted in a 6 cm wide quartz veinlet at a mafic pillow/GTT contact. Gold analyses from the Wheel Trench (old millsite) returned an anomalous gold value of 0.11 g/t Au with no significant Ag and base metal values. Pathfinders of the North Zone include Bi (35.1 ppm), Pb (550 ppm), Te (13.1 ppm), and Zn (208 ppm).

The West Zone may be the southwestern extension of the North Zone.

South Zone

The South Zone has been intermittently outlined for approximetely 450 meters on surface and approximately 1000 meters from the interpretation using both the underground and drill data. It is up to 10 meters thick as weak stockwork on surface, and up to a 40 meter wide as a silicified and sericitic alteration envelope in the central part of the zone. It parallels the North Zone, trending northeast and dipping/rolling northwest and southeast 80º to 85º. It is hosted in a folded granodiorite-(tonalite) or sheared quartz-eye QP , which is up to 180 meters thick, with local lobate cusp mafic fold 'rafts/apophyses' (PLA-6). The South Zone consist of sheeted quartz veins and silicified/sericitic and sheared granodiorite-(tonalite). The quartz vein structures show both linear continuity, boudinage, and folded forms (PLA-6). The quartz vein is up to 0.5 meters thick and shows well developed ribbon to laminated (styolitic) banding with the silicified-(sericitic) granodiorite-(tonalite) wallrock. Sulphide is consistent throughout the gold-bearing South Zone avaraging 2% to 4% pyrite. Chalcopyrite and galena are sparse. The main trench is well sampled with several historical channel samples by Ginguro Exploration in 2010, with the most significant channel returning 46.78 g/t Au over 3.17 meters, including 241 g/t Au over 0.67 meters. A representative chip sample attained a value of 75.8 g/t Au (75.1 g/t Au) over the same 0.67 meter interval in the channel. No visible gold has been identified in this sample interval nor in any other channels. Ag-Sb-Bi are weakly to moderately anomalous.

This program was successful in extending the the South Zone from the peninsula mainland to the adjacent Amisk Island to the northeast for approximetely 300 meters, where very little historical sampling took place. The northern part of the island shows a well developed weak quartz stockwork structure up to 10 meters wide (Appendix 1). The stockwork consists of widely spaced sheeted quartz stringers and veinlets up to 30% with alteration and veinlets hosting up to 7% pyrite along wallrock/vein contact. Although no significant gold values were retuned in this area (up to 0.054 g/t Au), a grab sample from the southern part of the island returned 2.44 g/t Au in a quartz stockwork hosting 2% to 5% disseminated pyrite with a weak malachite stain.

West Zone Trench

The West Zone is located in the southern most part of the Hiawatha Property and lies 750 meters southwest from the North Zone. It has been trenched and channel sampled and shows an older historical open stope (up to 4 meters of water) along the quartz vein structure. A bulk sample was reportedly collected from the West Zone site, although there is no documentation of tonnage and grade results. It is similar to the North Zone as…

1) Trends in a northeast direction with a very steep sub-vertical to vertical dip between 85º and 90º to the northwest.

2) Quartz vein structure at HW massive mafic flows and FW granodiorite-(tonalite) GTT (3.0 meters thick) contact
3) Thickness varies < 1 cm to 30 cm wide

The quartz vein/veinlet is commonly sugary/crystalline in texture with 1% to 4% pyrite and up to 2% galena in vein matte and up to 5% very-fine grained pyrite in the silicified and sheared GTT. The thin quartz vein shows a well developed styolitic with pyrit and galena in chlorite-sericite ribbon or styolitic growth seams and as disseminations in the quartz vein. Galena also occurs as fractures. Results near the open stope outlined continuous high-grade gold values from the grab samples ranging from 6.41 g/t Au to 21.9 g/t Au, with significant increase in gold mineralization in the ribbon/styolitic quartz veins. Both Ag-Bi show a moderate correlation with gold, and surprisingly Pb has a very weak correlation with Au. Anomalous pathfinders include Bi (38.4 ppm), Cu (320 ppm), Hg (40 ppb), Mo (424 ppm), Pb (510 ppm), Zn (329 ppm). An anomalous Mo value (898 ppm) was returned west of the West Zone trench.

Chargeability Zone HI-01

This area coincides with a weak to moderate chargeability zone (Roach – 2015), where Tanglewood Exploration reported a value from a grab sample returning 5.13 g.t Au. It is located approximately 100 meters southeast of and parallels the South Zone, and is vertically dipping, rolling to the northwest and southeast. A number of shear contacts between the mafics and granodiorite-(tonalite) with quartz veins were recognized intermittently for approximately 150 meters within the chargeability zone. A diabase dyke underlies the northwest margin of the chargeability zone. A 30 cm wide quartz vein was uncovered showing well developed styolitic chloritic/sericitic seams and fractures replaced by 2% to 4% pyrite and 1% to 2% scattered pyrite in the vein matte. No significant gold values were returned with values up to 0.069 g/t Au.

Chargeability Zone HI-04

This mineralized zone is located on the northwest shoreline of Kabinakagami Lake at the mouth of Bear Creek and coincides with the 2015 IP chargeability zone HI-04 and a series of magnetic low breaks which defines the Bear Creek Fault (Roach – 2015).

The weathered surface is rusty brown and somewhat gossanous and the sulphide content does explain the IP chargeability zone. Because of the limited shoreline exposure and IP data, the full extent of the zone is unknown. It trends northeast, dipping steeply to the southeast between 69º and 90º. It forms as a series of thin (up to 3 meters wide), sheared cherty tuff inter-formational mafic volcaniclastic units and/or altered GTT. The mafics have undergone intense silicification and sericite alteration. Pyrite is the dominant sulphide varying < 1% to 15%, although a thin pod of massive pyrite has been recognized. Pyrrhotite has also been identified and concentrations are up to 5%. Overall, there is a variable weak to moderate magnetism to those gossanous features. No significant gold and base metal values were encountered in this area, as the highest gold value returned 0.022 g/t Au from grab samples.

10.0) Conclusions

The mapping and prospecting program was successful in confirming the high-grade gold nature of the three most prolific historical zones on the Hiawatha Property. Additional mineralization and structures have also been identified and are associated with a number of IP chargeability responses and magnetic low linear breaks proximal to the Hiawatha Mine area. The most attractive area in the scope of gold-bearing mineralization, alteration, and geometry is the ***South Zone*** with the following characteristics:

1) Geometry – strike length of 1.0 kilometer with quartz vein/stockwork structures up to 10 meters wide and silicified-sericite alteration envelopes up to 40 meters wide
2) Surface grades up to 46.78 g/t Au over 3.17 meters with continuous down-plunge and down-dip intercepts returning 18.49 g/t Au / 0.34 meters. Other plunging shoots from underground sampling on the two levels returned grades of 25.34 g/t Au / 0.91 meters and 34.93 g/t Au / 0.91 meters, and coincide with the plunge direction of the deepest historical drill hole intercept of 14.38 g/t Au / 1.83 meters
3) Widespread silicified and sericite alteration up to 40 meters wide with gold mineralization up to 7.14 g/t Au / 0.67 meters in historical drilling and underground sampling up to 18.19 g/t Au / 3.35 meters and 97.60 g/t Au / 1.52 meters

Although the North and West Zones returned high-grade grabs, the geometry of the zone is very thin with no to limited contribution of gold in the hanging-wall and footwall. On the positive side, both zones offer a strata-bound target at the contact between the mafic metavolcanics and a granodiorite-(tonalite) sill-like body and the historical drilling has been shallow and very limited, particularly on the West Zone.

Significant sulphide mineralization has been identified and explains variable IP chargeability responses along magnetic low breaks. No significant precious and base metal mineralization was returned from two of the chargeability responses.

Major regional linear structures are located within a favorable geological environment and remain untested. Both the strain zone of the South Zone and the Bear Creek Fault are the most prolific regional structures. The lineaments are conducive to precious metal, lode gold-bearing mesothermal mineralization. They may represent later stages of major re-activated, dilatational structures. The potential to look for dilatational, open flexures and trans-compressional folds would provide pathways and traps for auriferous hydrothermal fluid movement in this steeply-dipping and moderately to steeply plunging structure(s), as per South Zone. The gold-bearing structures of the North and South Zones of the Hiawatha Mine are reflected by linear magnetic low breaks, as other IP chargeability zones.

11.0) Recommendations

A detailed digital compilation of historical surface samples, diamond drilling and underground sampling for the South Zone (on longitudinal and vertical drill sections) would provide a framework to evaluate this target area for economic concentrations of Au.

Detailed structural mapping of the trench areas (South, West, and North Zones and other trenches) should also be considered. This would further refine the drill targets with the surface and underground compilation. A small prospecting program should be coordinated with the structural mapping to follow-up on southwest extensions of the South and North Zone (34.40 g/t Au), IP chargeability and magnetic responses, and soil anomalies.

12.0) References

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Geology of the Kabinakagami Lake Area, District of Algoma; Ontario Geoscience Report 159 accompanied by Map 2355. 39 pp.

Siragusa, G.M. (1972)

Preliminary Map P.812 Geological Series, Kabinakagami Lake Area, Lipton and Lizar Townships, District of Algoma. Cover NTS 42C/15E, 42C/16W, 42F/1W, and 42F/2E. 1 inch = ¼ Mile

STATEMENT OF QUALIFICATIONS – STEPHEN ROACH

I, Stephen Roach, of 47 Crantham Crescent, Stittsville, Ontario K2S 1R2, certify that;

1. I obtained a Bachelor degree in Geology from Concordia University in 1977. In addition, I attended Carleton University from 1981-83 in a Graduate Program.
2. I have worked as a geologist for more than 35 years since my graduation from university been in the practice of my profession as Exploration Geologist since 1977.
3. I am responsible for this report entitled Report of 2015 Geological Mapping & Sampling on the Hiawatha Property, Sault Ste. Marie Mining Division, in Central Ontario.
4. I have no beneficial interest, direct or indirect in the Hiawatha Property that is the subject of this report.

Dated April 15, 2016 – Stephen Roach

Digitally signed by Stephen Roach
DN: cn=Stephen Roach
Date: 2016.04.17 11:35:54 -04'00'

STATEMENT OF QUALIFICATIONS – ALAN SMITH

I, Alan Smith, do hereby certify that:

1. I have been the District Manager – Exploration for Trelawney Mining and Exploration Inc., a wholly-owned subsidiary of IAMGOLD, since February, 2013.

2. I graduated with an Honors Bachelor of Science Degree in Geology from the University of Western Ontario in 1984. I completed a M.Sc. Degree in Geology at the University of Western Ontario in 1987.

3. I am a practicing member in good standing with the Association of Professional Geoscientists of Ontario (Membership Number 0201). I am also a Member of the PDAC, CIM, and OPA.

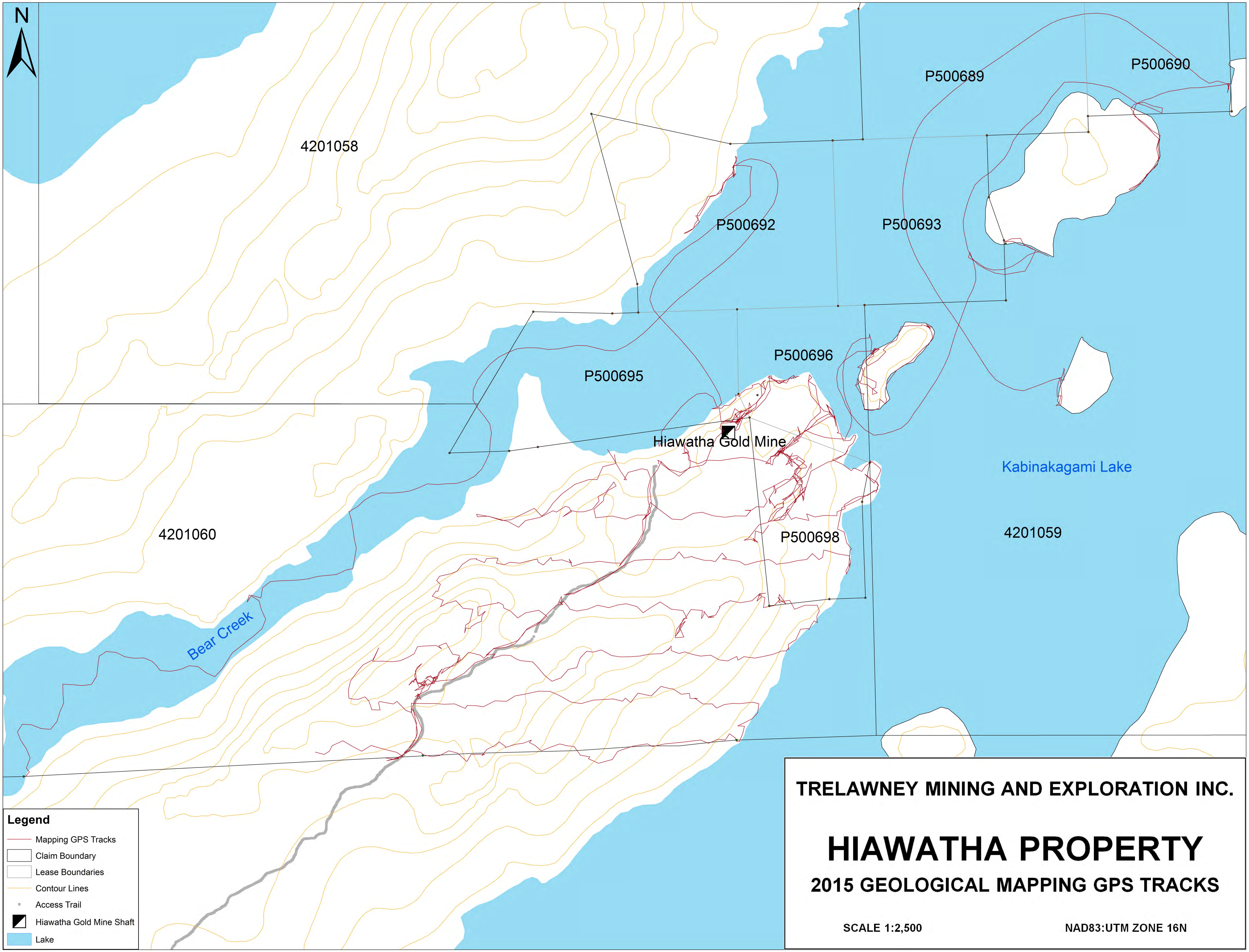
4. I have worked as a Geologist for more than 32 years since graduation from University.

5. I am responsible for the reporting of the 2015 Surface Exploration Program on the Hiawatha Property, and have reviewed the contents of this assessment report.

6. I have been involved in the Trelawney Mining and Exploration Inc. Côté Gold / Swayze Exploration program since February of 2013.

Dated April 15, 2016

APPENDIX 1


N
4201058
P500689
P500690
P500692
P500693
P500696
P500695
Hiawatha Gold Mine
Kabinakagami Lake
4201060
P500698
4201059
Bear Creek
Legend
Mapping GPS Tracks
Claim Boundary
Lease Boundaries
Contour Lines
Access Trail
Hiawatha Gold Mine Shaft
Lake
TRELAWNEY MINING AND EXPLORATION INC.
HIAWATHA PROPERTY
2015 GEOLOGICAL MAPPING GPS TRACKS
SCALE 1:2,500
NAD83:UTM ZONE 16N


PROTEROZOIC to ARCHEAN
ARCHEAN
MAPPING SYMBOLS
NORTH ZONE
SOUTH ZONE
WEST ZONE
HIAWATHA GOLD MINE
BEAR CREEK FAULT
Bear Creek
UNMAPPED
4201058
4201060
4201059
P500689
P500690
P500692
P500693
P500695
P500696
P500698
7.34 g/t Au / 0.5m
7.96 g/t Au
3.93 g/t Au
7.13 g/t Au
75.80 g/t Au
30.90 g/t Au
46.78 g/t Au / 3.17m
34.40 g/t Au
21.9 g/t Au
6.41 g/t Au
5.52 g/t Au
12.60 g/t Au
Kabinakagami Lake
(317 m elevation)
UTM Zone 16, NAD 83
1:2,500
0
50
100
metres
PROJECT LOCATION MAP
HIAWATHA PROJECT
Marathon
White River
Wawa
Hawk Junction
Kilometers
683,500
684,000
684,500
685,000
685,500
5,415,500
5,415,000
5,414,500
IAMGOLD CORPORATION
HIAWATHA PROPERTY
LIZAR TWP., ONTARIO
GEOLOGICAL MAPPING and COMPILATION
NTS: 46C/16
Scale 1:2,500
Drawn: BCS
Date: October 16, 2015

LEGEND
ATV Trail
Walking Trail
Slope Base
10m Topographic Contour
Swamp/Muskeg
Building/Structure
Claim Post GPS Located
Lake
Claim and Patented Claim Boundary (patents from survey plan, Bowman 1988)
2015 Rock Sample
Posted Values
Sample Number (g/t Au, g/t Ag (if >= 10 g/t))
>3 g/t Au
<= 3 g/t Au
693,500
694,000
694,500
695,000
695,500
5,415,500
5,415,000
5,414,500
P500689
P500690
P500692
P500693
P500695
P500696
P500698
4201058
4201060
4201059
MNR Cabin
Bear Bait Station
NORTH ZONE
SOUTH ZONE
WEST ZONE
HIAWATHA GOLD MINE
Hiawatha Mine Shaft
Bear Creek
Kabinakagami Lake (317 m elevation)
163447 (34.4,45.6)
163446 (30.9,13.6)
163482 (75.8,10.1)
163456 (7.13)
163439 (7.96)
163444 (3.91)
163409 (12.6,17.4)
163404 (21.9)
163407 (6.41)
163408 (5.52,10.9)
UTM Zone 16, NAD 83
1:2,500
0 50 100
metres
PROJECT LOCATION MAP
HIAWATHA PROJECT
Marathon
White River
Wawa
Hawk Junction
0 25 50
Kilometers
IAMGOLD CORPORATION
HIAWATHA PROPERTY
LIZAR TWP., ONTARIO
SAMPLE LOCATION/GOLD GEOCHEMISTRY MAP
NTS: 46C/16
Scale 1:2,500
Drawn: BCS
Date: November 10, 2015

Appendix 2

HEADER							SAMPLE		Lithology			Au
Date	Geologist	Property	Zone/Area	UTM Easting (Stn)	UTM Northing (Stn)	Elevation (Stn)	Number	Type	Lithology	Rock Code	Description	ppb
9-Aug-15	Stephen Roach	Hiawatha	West	683996	5414456	390	163401	Rock Grab	Quartz Vein	QV	Quartz Vein - milky white-white color, quartz composition, sugary/crystalline vfg qtz with biotite stylite fractures, up to 5% sil wallrock, <1% to 5% disseminated py in wallrock and up to 1% py in ven matte, <1% galena in styolite fractures with biotite, 5-8 cm wide and trending 237°/87°N	1008
9-Aug-15	Stephen Roach	Hiawatha	West	683989	5414456	389	163402	Rock Grab	Quartz Vein	QV	Quartz Vein - milky white-white color, quartz composition, massive opaque vfg qtz with <1%-2% biotite styolite fractures in vein, weakly fractured quartz and 5% sh granodiorite wallrock, <1% to 5% disseminated py in wallrock and up to 1% py as fractures in ven matte, <1% galena in fractures with biotite, 30 cm wide and strikes 237°/90°	317
9-Aug-15	Stephen Roach	Hiawatha	West	683988	5414453	390	163403	Rock Grab	Quartz Vein	QV	Quartz Vein - milky white to white color, quartz composition being vfg and sugary texture, 10% sil wallrock in sample with 2%-3% disseminated and fracture-fill py and coarse splashes of galena (1%-2%), occassional cpy < 1%, 20 cm width, trends 243°/85°N	217
9-Aug-15	Stephen Roach	Hiawatha	West	683989	5414451	391	163404	Rock Grab		QS/QTSW	Quartz Stockwork/Fractured-Silicified Granodiorite/Tonalite - white and grayish-white/creamy gray color, stronglt silicified wallrock with weak bio-ser fractures, 20%-40% qs with 2%-3% py-(gn) in qs, <1% galena in styolitic fractures and occassional < 1% cpy	21900
9-Aug-15	Stephen Roach	Hiawatha	West	683991	5414460	392	163405	Rock Grab		6Dsil	Silicified Granodiorite/Tonalite - gray to bleached grayish-white colors, strongly pervasive sil with 5% to 10% sheared biotite amd < 1% to 2% bluish white qe, <1% qs, 3% to 5% disseminated and scattered vfg to fg pyrite, shearing strikes 231°/87°N	18
9-Aug-15	Stephen Roach	Hiawatha	West	683989	6414456	393	163406	Rock Grab		6Dsil	Silicified Granodiorite/Tonalite - rusty brown weathered color and bleached grayish-white color, strongly pervasive sil with 5% to 10% sheared biotite, <5% qs up to 0.5 cm, 2% to 4% disseminated and scattered vfg to fg pyrite and occassional galena (<0.5%) in wallrock, and up to 1% py in vein matte, shearing strikes 242°/86°N	57

HEADER							SAMPLE		Lithology			Au
Date	Geologist	Property	Zone/Area	UTM Easting (Stn)	UTM Northing (Stn)	Elevation (Stn)	Number	Type	Lithology	Rock Code	Description	ppb
9-Aug-15	Stephen Roach	Hiawatha	West	683973	5414446	394	163407	Rock Grab		QS/6Dsil-ser	Fractured & Silicified/Sericitic Granodiorite (Quartz Stringers) - moderate brown hematatite weathered surface and bleached creamy white fresh color, altered composition with strong shear-controlled sil-ser, strongly sheared and 10% qs up to 3 cm wide, 1% to 2% disseminated/scattered vfg py in altered wallrock and up to 1% in vn matte, occassional cpy and gn (<0.5%), sheared 240º/79ºN	6430
9-Aug-15	Stephen Roach	Hiawatha	West	683970	5414437	392	163408	Rock Grab		QV	Quartz Vein - local rust fractures on weathered surface and generally milky white to white color, quartz composition with sugary/crystalline qtz being vfg to fg, wk fractured vn matte, 2%-4% py-gn as styolitic fractures with 1%-2% scattered py, 1%-2% gn in fractures, and widely scattered cpy < 1%, trend of vein 240º/86ºN and is 7 cm wide	5490
9-Aug-15	Stephen Roach	Hiawatha	West	683970	5414438	389	163409	Rock Grab		QV	Quartz Vein - rusty brown weathered surface and generally milky white to white quartz and grayish white altered wallrock colors, quartz composition with sugary/crystalline qtz being vfg to fg, wk fractured vn matte, ribbon/styolitic textures on vn, 5% siliicifed wallrock, 2%-3% scattered vfg py and occassional galena up to 1% as coarser splashes and occassional cpy < 1%, trend of vein/shearing 250º/90º and vein is 5 to 7 cm wide	13600
9-Aug-15	Stephen Roach	Hiawatha	West	683961	5414439	390	163410	Rock Grab		6Dfract/QS	Fractured & Silicified Granodiorite/Tonalite - rusty weathered surface and bleached grayish-white to white fresh color, altered composition with strong pervasive fracture-controlled sil and strong chl-bio fractures; 50% qs varying 1 to 4 cm wide, fractured/stockwork appearance, 2% to 3%disseminated and fracture-fill py with local 20% py along joints and up to 1% py in vn, cpy along joints up to 1% locally, vein/shear strike 252º/81ºN	77

HEADER							SAMPLE		Lithology			Au
Date	Geologist	Property	Zone/Area	UTM Easting (Stn)	UTM Northing (Stn)	Elevation (Stn)	Number	Type	Lithology	Rock Code	Description	ppb
9-Aug-15	Stephen Roach	Hiawatha	West	683953	5414425	388	163411	Rock Grab		QV	Quartz Vein - weak to moderate hematite stain on weathered surface and white fresh color, quartz composition being more granular in texture, moderately fractured qtz, weak and local cb alteration associated with malachite stain, widely scattered 1% to 2% py and occassional cpy < 1% with local mal stain, vein is 7 cm wide and trends 020º/0.5ºE	10
9-Aug-15	Stephen Roach	Hiawatha	West				163412	Standard				253
9-Aug-15	Stephen Roach	Hiawatha	West	683947	5414416	388	163413	Rock Grab		6Dsil-fract	Fractured and Silicified Granodiorite/Diorite - grayish-white and greenish-white fresh colors, intermediate composition with moderate to strong sil and wk-mod cb in qs, massive to sub-equigranular texture with 5% to 10% qs with chl fractures, scattered 1% to 2% py in wr and qv and cpy up to 1% with local malachite stain,	39
10-Aug-15	Stephen Roach	Hiawatha	Regional	684136	5414297	383	163414	Rock Grab		6CDsil	Silicified Granodiorite/Tonalite - local rust hem weathered stain and pinkish grayish white fresh color, intermediate composition with strong sil (cherty-like) of matrix, up to 5% biotite-amphibole (relict) and weakly sheared, 5% qs up to 4 cm wide, scattered vfg to fg py ranging 1% to 2% and occassional cpy < 0.5%, vein is striking 233º/90º	<5
10-Aug-15	Stephen Roach	Hiawatha	Regional	684194	5414317	378	163415	Rock Grab		6CDsil-fract	Fractured and Silicified Granodiorite/Tonalite - local rsut on weathered surface and creamy gray fresh colors, intermediate composition with moderate to strong sil and mod chl in fractures and seams, fractured appearance with 10% to 15% qs (up to 15 cm wide), 1% to 3% disseminated and clots of py with possible black galena or specular hem xtls in fractures ranging 1% to 2%, veins strike 110º/90ºS and foliation is striking 75º/90º	<5
10-Aug-15	Stephen Roach	Hiawatha	Regional	684648	5414351	329	163416	Rock Grab		4B/1Lsil	Cherty Tuff/Silicified Mafic Volcaniclastic - moderately rusty brown weathered color and grayish-white to gray fresh color, mod-strong sil band with thin cherty-like lam/bands, local biotite-rich (5% to 10%) laminations, banded/laminated texture, <1% qs, 1% to 3% sh disseminated py and occassional po-cpy < 0.5%, locally weakly magnetic, banded 250º/85ºN	<5

HEADER							SAMPLE		Lithology			Au
Date	Geologist	Property	Zone/Area	UTM Easting (Stn)	UTM Northing (Stn)	Elevation (Stn)	Number	Type	Lithology	Rock Code	Description	ppb
10-Aug-15	Stephen Roach	Hiawatha	Regional	684404	5414407	372	163417	Rock Grab		1ABsil-fract	Fractured and Silicified Mafic Flow - greenish-gray, gray, and white color, mafic composition with moderate to strong sil adjacent to qs, fractured appeartance, 10% to 12% qs up to 1 cm in width, <1% scattered py in wallrock and vein and occassional cpy in wallrock < 0.5%, qs strikes 40°/90°	<5
10-Aug-15	Stephen Roach	Hiawatha	Regional	684404	5414407	372	163418	Rock Grab		1AB/8Ash	Sheared Mg-(Fe)-rich Mafic-(Ultramafic) Flow - brownish dark green weathered color and dark green to greenish black fresh color, mafic to ultramafic? Composition with mod to strong chl-bio and strongly sheared, < 1% to 2% qs up to 1 cm wide, 1% to 2% scattered sheared py and occassional < 0.5% cpy; strongly magnetic with 5% disseminated vfg magnetite, qs trends 110°/90°	5
10-Aug-15	Stephen Roach	Hiawatha	West	683990	5414450	385	163419	Dump Grab		6CDsil-fract	Fractured and Silicified Granodiorite/Tonalite - bleached grayish-white fresh color, intermediate composition with strong, pervasive sil wallrock, fractured appearance with 20% qs, 5% disseminated py in altered wallrock and occassional coarse splashes/aggregates of cpy < 1% - 1% to 2% py-cpy in qs	153
11-Aug-15	Stephen Roach	Hiawatha	Regional	684186	5414554	367	163420	Sub/oc & Rock Grab		6CDsil-chl	Silicified and Chlorite Fractures Granodiorite/Tonalite - locally rusty weathered surface and bleached grayish-white fresh colors, intermediate composition with strong pervasive sil wallrock and moderate to strong chl fractures (10% to 20%), fractured appearance, 5% qs up to 2 cm in width, <1% to 5% py scattered and generally associated with chl fractures, non-magnetic	10
11-Aug-15	Stephen Roach	Hiawatha	Regional	684114	5414499	376	163421	Rock Grab		QV/6CDsil	Quartz Veinlet & Silicified Granodiorite/Tonalite - weak hem rust on surface and white and grayish-white fresh colors, strongly sil wallrock with 60% wallrock and 40% vein samples, weakly sheared 243°/84°N, <1% py widely scattered in wallrock and up to 1% py in ven matte	151

HEADER							SAMPLE		Lithology			Au
Date	Geologist	Property	Zone/Area	UTM Easting (Stn)	UTM Northing (Stn)	Elevation (Stn)	Number	Type	Lithology	Rock Code	Description	ppb
11-Aug-15	Stephen Roach	Hiawatha	Regional	684797	5414565	324	163422	Rock Grab		6CDsil	Silicified Granodiorite/Tonalite - locally rusty on weathered surface and bleached grayish-white fresh colors, intermediate composition with strong pervasive sil cherty-like alteration, fractured/jointed appearnace, 1% to 2% qs up to 1 cm, weakly sheared 233°/90°, widely scattered up to 1% py and occassional < 0.5% cpy	6
11-Aug-15	Stephen Roach	Hiawatha	Regional	684739	5414621	339	163423	Rock Grab		1Bsh	Sheared Mafic Flow - local rust on weathered surface and dark green fresh color, mafic composition with moderate to strong sh controlled chl and wk-mod cb along shear and fractures, sheared 228°/83°N and 5% random oriented qcs/cs < 0.5-1.0 cm in width, ≤1% py associated in wallrock and in qcs	5
11-Aug-15	Stephen Roach	Hiawatha	Regional				163424	Blank			Blank	<5
11-Aug-15	Stephen Roach	Hiawatha	Regional	684731	5414632	341	163425	Rock Grab		1Bfract/QV	Fractured Mafic Flow & Quartz Vein - locally rusty and green/white fresh color, mafic composition with mod chl about qs/qv and fractured with 60% wallrock and 40% qs, qs up to 30 cm wide trending 74°/90°, <1% to local 5% py clustered along vn/wr contact and py in wallrock	5
11-Aug-15	Stephen Roach	Hiawatha	Regional	684273	5414601	368	163426	Rock Grab		6CDsil	Silicified Granodiorite/Tonalite - greenish-gray fresh color, intermediate composition with mod sil interstitial in matrix, fg-mg (<0.20 cm) and felsphyric, sub-equigranular to sub-porp texture, up to 1% qs and < 1 cm wide, scattered ≤1% to 2% py and occassional cpy < 0.5%	<5
13-Aug-15	Stephen Roach	Hiawatha	Regional	684619	5414701	362	163427	Rock Grab		6CDsil-ser	Silicified-(Sericitic) Granodiorite/Tonalite - local rust weathered surface and creamy grayish-white to bleached white fresh colors, altered intermediate composition with strong pervasive sh-controlled sil and mod-strong ser, relict porp texture with 15% to 20% relict fd in sil matrix, < 1% qs, sheared texture at 224°/90° and trend of contact at 220°, widely scattered ≤1%-2% py	<5
13-Aug-15	Stephen Roach	Hiawatha	Regional	684882	5414688	332	163428	Rock Grab		IB/QV	Mafic Flow Cross-Cut by Quartz Vein - green and white fresh colors, mafic composition with moderate to (strong) chl, 20% xcutting qs up to 5 cm wide trending 212°/90, wk to moderate sh 213°/76°, ≤1%-2% py generally at vn/wr contact	5

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Date	Geologist	Property	Zone/Area	UTM Easting (Stn)	UTM Northing (Stn)	Elevation (Stn)	Number	Type	Lithology	Rock Code	Description	ppb
13-Aug-15	Stephen Roach	Hiawatha	Regional	684888	5414728	330	163429	Rock Grab		1B	Sheared Mafic Flow - green color, mafic composition with mod chl and weak cb, mod sh to msv appearance 223º/90º, < 1% qs, up to 1% widely scattered py	5
13-Aug-15	Stephen Roach	Hiawatha	Regional	684745	5414816	339	163430	Rock Grab		3Fsil	Silicified Felsic Tuff - rusty brown weathered surface and grayish-white fresh colrs, altered felsic composition with mod to strong sil, sheared at 218º/90º, widely scattered py ≤1%	<5
13-Aug-15	Stephen Roach	Hiawatha	HI-04	684627	5415549	323	163431	Rock Grab		Massive Pyrite	Massive Sulphide (Pyrite) - extremely rusty brown on weathered surface being bronze colored on fresh surface, fg massive py (80%-85%) with interstitial biotite (10% to 15%) and 5% quartz, hosted in mafic pillow flows and up to 5 cm wide trending 230º	22
13-Aug-15	Stephen Roach	Hiawatha	HI-04	684636	5415538	326	163432	Rock Grab		4Bpy	Cherty Tuff - rusty brown weathered color and grayish white to light gray fresh color, strong pervasive sil/cherty-like flooding, wk to mod ser shear controlled, vfg to fg and sheared 38º/75ºE, up to 1%-2% qs, 3%-5% sheared dissemination and widely scattered grains of pyrite	13
13-Aug-15	Stephen Roach	Hiawatha	HI-04	684626	5415526	325	163433	Rock Grab		4Bpy	Cherty Tuff - rusty brown weathered color and bleached grayish white fresh color, strong pervasive sil/cherty-like flooding, mod ser shear controlled, vfg to fg and sheared 39º/87ºE, < 1% qs, 10% to 15% sheared dissemination py and <1% to 5% disseminated po, minor fracture-filling of sulphides	<5
13-Aug-15	Stephen Roach	Hiawatha	HI-04	684600	5415493	323	163434	Rock Grab		1Lsil	Sheared & Silicified Mafic Volcaniclastic - rusty brown weathered color and greenish gray fresh color, mafic composition with wk-mod sil and mod chl, sheared and interbedded with sil cherty tuff, <2% to 5% qs up to 0.5 cm wide, moderately sheared 35º/60ºE, ≤1%-2% scattered vfg py	<5
13-Aug-15	Stephen Roach	Hiawatha	North	684672	5415026	338	163435	Rock Grab		QV	Quartz Vein - brownish milky and glassy white to trnslucent glassy appearance, quartz composition being strong fractured vein matte, drusy qtz being smokey-gray, strikes 225º/90º and up to 20 cm wide, adjacent mafic wallrock shows mod shearing 232º/80ºN, scattered 1%-3% py and occassional cpy (<0.5%) at wallrock/vein contact	74

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Date	Geologist	Property	Zone/Area	UTM Easting (Stn)	UTM Northing (Stn)	Elevation (Stn)	Number	Type	Lithology	Rock Code	Description	ppb
13-Aug-15	Stephen Roach	Hiawatha					163436	Standard-204			Standard-204	996
13-Aug-15	Stephen Roach	Hiawatha	North	684672	5415024	336	163437	Rock Grab		6CDsil	Silicified and Pyritic Granodiorite and Tonalite - weak to mod rust brown weatherd color and grayish white fresh color, intermdiate composition with strong pervasive sil with relict 5% to 10% biotite, <1% qs, mod to strongly sheared 232°/80° with possible aspy replacing biotite < 1% to 2% - sample taken close to mafic flow	83
13-Aug-15	Stephen Roach	Hiawatha	North	684656	5415018	339	163438	Rock Grab		QV	Quartz Vein - brownish milky and glassy white to crystalline appearance, quartz composition and strikes 226°/83°N and strong adjacent shearing of wallrock 231°/78°N, 1% to 3% disseminated/scattered and minor fracture-fill py	1751
14-Aug-15	Stephen Roach	Hiawatha	North	684633	5415000	338	163439	Rock Grab		QV	Quartz Vein - weak rusty brown weathered color and grayish-white to white fresh color, quartz composition being vfg, ser-(chl) styolitic fractures, trends 221°/84°N and strongly sheared wallrock 225°/90°, quartz vein is 7 cm wide and in sil granodiorite/tonalite near mafic contact, up to 1% to 5% py along styolitic fractures with possible galena < 0.5%??	7480
14-Aug-15	Stephen Roach	Hiawatha	Regional Shoreline	684706	5415103	330	163440	Rock Grab		1Gsh-fract	Sheared and Fractured Mafic Pillow Flow - moderate hem rust on weathered surface and greenish-white & white fresh colors, mafic composition with wk-mod sh controlled sil-ser and none to weak cb, 10% to 20% qs (<0.5-1 cm wide) trending 56°/85°S and strongly sheared 56°/85°S, shear is between 5-10 cm wide, 5% to 10% disseminated and fracture-fill py in both wallrock and qs with 5% scattered py in vn	733
14-Aug-15	Stephen Roach	Hiawatha	Regional Shoreline	684715	5415100	327	163441	Rock Grab		SHchl-1Gsh	Sheared Mafic Pillow Flow - light hem on weathered surface and dark green to greenish-black fresh color, mafic composition with mod chl and wk-mod bio shear controlled alteration, strongly sheared texture trending 225°/73°N, <1% to 2% qs up to 0.5 cm wide, barren to occassional < 1% py	63

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Date	Geologist	Property	Zone/Area	UTM Easting (Stn)	UTM Northing (Stn)	Elevation (Stn)	Number	Type	Lithology	Rock Code	Description	ppb
14-Aug-15	Stephen Roach	Hiawatha	North	684764	5415099	329	163442	Rock Grab		QV(QTSW)	Quartz Vein/Quartz Stockwork - lt brown grayish-white and white and green fresh colors, quartz composition of the veining (40%) at sil granodiorite/tonalite and mafic contact, veining trends 213º/70º to 90º and up to 8 cm wide, <1% to local 3% py at wallrock/vein contact	9
14-Aug-15	Stephen Roach	Hiawatha	North	684763	5415109	330	163443	Rock Grab		6CDsil	Silicified Granodiorite/Tonalite - bleached white fresh and weathered color, intermediate composition being strongly sil with wk-mod ser, sheared at 231º/85ºN, <1% qs, 5% disseminated vfg py and up to 1% scattered po being weakly magnetic locally, sample located at northern margin of mafic flow and sil granodiorite/tonalite contact	88
14-Aug-15	Stephen Roach	Hiawatha	North	684683	5415034	336	163444	Rock Grab		QV/6CDsil	Quartz Vein and Silicified Grandiorite/Tonalite - translucent white and grayish white vn and grayish-white wallrock, altered intermediate composition of wr with strong pervasive sil, cross-cut by 17 cm wide qs with styolitic ser-chl seams and trending 265º/90º, <1% to 2% py along ser-chl styolitic fractures/seams and a spec of ***VG***	3458
14-Aug-15	Stephen Roach	Hiawatha	Trail	684473	5414923	339	163445	Rock Grab		QV/6CDsil	Quartz Vein and Minor Silicified Grandiorite/Tonalite - brownish white weathered color and white to grayish-white fresh colors, altered wallrock being strong sil grandiorite/Tonalite (10% to 15%), cross-cut by 85% to 90% qs/qv up to 6 cm wide and trending 240º/90º, strongly sheared contact between mafic and sil granodiorite/tonalite at 240º/90º, 5% to 10% disseminated and seam/fracture py with msassive py up to 0.5 cm seams, 5% disseminated py in vn matte	53
14-Aug-15	Stephen Roach	Hiawatha	Trail	684471	5414913	341	163446	Rock Grab		QV	Quartz Vein - brownish grayish white weathered color and smokey grayish white fresh color, sugary/crystalline quartz composition being vfg, trends 237º and is 6 cm wide, 2% to 3% disseminated py in vein matte and along styolitic seams/fractures, at mafic pillow flow and sil granodiorite/tonalite contact	38600

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Date	Geologist	Property	Zone/Area	UTM Easting (Stn)	UTM Northing (Stn)	Elevation (Stn)	Number	Type	Lithology	Rock Code	Description	ppb
14-Aug-15	Stephen Roach	Hiawatha	Trail	684474	5414915	342	163447	Rock Grab		QV	Quartz Veinlet - brownish white weathered color and translucent white to smokey gray color, granular qtz composition being strongly fractured vein matte, trends 057º85ºS and is 6 cm wide, occassional to widely scattered py < 1%, located at mafic pillow flow and sil granodiorite/tonalite contact	34400
14-Aug-15	Stephen Roach	Hiawatha					163448	Blank		10A	Blank - Diabase	24
15-Aug-15	Stephen Roach	Hiawatha	Wheel	684540	5414943	341	163449	Rock Grab		QV	Quartz Vein - translucent grayish-white, quartz composition with strongly fractured and granulated quartz, tourmaline as discontinuous seams, 7 cm wide and trends 230º/84º, occassional py < 0.5%	5
15-Aug-15	Stephen Roach	Hiawatha	Wheel	684534	5414939	341	163450	Rock Grab		QV	Quartz Vein - brownish translucent grayish-white color, quartz composition with strong fracturing and granulated qtz, up to 1% tourmaline, trends 242º/76ºN and is 5 cm wide, occassional py < 1% at vn/wallrock (sil granodiorite-tonalite) contact with < 0.5% cpy	21
15-Aug-15	Stephen Roach	Hiawatha	Wheel	684521	5414936	339	163451	Rock Grab		QV	Quartz Vein (Minor Chloritic Mafic Flow) - translucent brownish grayish-white and white color,fractured and granular quartz composition of vn with < 5% altered mafic composition of wallrock with mod chl, qv is 2.5 cm wide and trends 250º/60ºN and strong sheared wallrock at 256º/60ºN, <1% py at vn/wal;lrock contact and occassional cpy < 0.5%	112
16-Aug-15	Stephen Roach	Hiawatha	Regional	684927	5414916	327	163452	Rock Grab		QV	Quartz Vein - translucent milky white color, quartz composition with 5% chl-bio fractures and inclusions, moderately fractured qtz, trends 223º/90º and 8 cm wide, <0.5% py along chl-bio and vn contact	<5
16-Aug-15	Stephen Roach	Hiawatha	Regional	684851	5415006	326	163453	Rock Grab		6CDEsil-ser	Silicified-Sericitic Granodiorite/Quartz Diorite - light creamy green, grayish-green color, intermediate composition with mod-strong sil and mod ser as sh controlled alteration, <1% to 3% fg qe, relict sub-porp texture and strongly sh 235º/82ºN, < 1% qs, occassional to widely scattered py < 1%	158

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Date	Geologist	Property	Zone/Area	UTM Easting (Stn)	UTM Northing (Stn)	Elevation (Stn)	Number	Type	Lithology	Rock Code	Description	ppb
16-Aug-15	Stephen Roach	Hiawatha	South Zone/Shoreline	684837	5415035	328	163454	Rock Grab		6EFsil	Silicified Quartz Porphyry/Quartz Diorite - light rusty brown weathered surface color and dirty greenish gray fresh color, intermediate composition with mod to strong sil and mod ser in matrix, 5% qe and 10% to 15% vfg to fg fd phenocrysts, <1% qs, mod to strongly sheared 227º/84ºN, scattered 1% to 2% vfg py	15
16-Aug-15	Stephen Roach	Hiawatha	South Zone/Shoreline	684838	5415031	328	164455	Rock Grab		QV	Quartz Vein - milky white to white and translucent glassy white color, quartz composition with 5% chl wr and seams, strongly fractured quartz, trends 218º/90º and is 26 cm wide, <1% py as fracture/seam associated with chl	<5
16-Aug-15	Stephen Roach	Hiawatha	South Zone Trench	684735	5414947	341	163456	Rock Grab		QV/6Esil	Quartz Vein/Silicified QP-Qtz Diorite - white and burnt brownish-white weathered color and white & reddish-white fresh colors, intermediate composition with mod-strong sil and mod ser as shear controlled alteration, sugary/crstalline 30% qs/qv being strongly fractured vn matte, qv is 8 cm wide and trends 228º/81ºN and strongly sheared 229º/83ºN, ≤1%-2% disseminated py in wr and < 0.5% py in vn, located along tight parasitic fold	3450
16-Aug-15	Stephen Roach	Hiawatha	South Zone Trench	684734	5414943	340	163457	Rock Grab		6Esh	Sheared Quartz-Diorite - light burnt red hem stain on weathered surface and grayish-white fresh color, intermediate composition with mod sil-ser associated with strong sh, relict sub-equigranular/porp texture with < 5% to 10% chl-bio, <1% to 2% qs trending 231º/90º and strongly sh in same direction, shear is 25 cm wide, ≤1%-2% widely scattered py	511
16-Aug-15	Stephen Roach	Hiawatha	South Zone Trench	684764	5414960	340	163458	Rock Grab		QTSW	Quartz Stockwork - white and bleached white color, intermediate composition (qtz-diorite host) with strong sil wallrock and mod to strong ser, 40% to 50% qs as sheeted vns trending 219º/90º varying 4-7 cm wide, strongly sheared parallel to qs/qv, up to 1% scattered vfg py mostly in qs	133

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Date	Geologist	Property	Zone/Area	UTM Easting (Stn)	UTM Northing (Stn)	Elevation (Stn)	Number	Type	Lithology	Rock Code	Description	ppb
16-Aug-15	Stephen Roach	Hiawatha	South Zone/south part of Amisk Island	684897	5415089	325	163459	Rock Grab		QTSW	Quartz Stockwork - local rusty brown on weathered surface and bleached grayish-white and brownish-white qtz fresh colors, intermediate composition with strong sil and mod ser wallrock adjacent to qs, weak cb along joints, 30% to 40% qs (sheeted) with strongly fractured qtz, qs up to 3 cm wide and qs trends 44°/81°S......qs parallels to shearing, 2% to 5% disseminated in altered wallrock and < 1% to 2% py in qs, weak malachite stain and occassional cpy < 0.5%	2439
16-Aug-15	Stephen Roach	Hiawatha					163460	Standard			Standard-504	1409
16-Aug-15	Stephen Roach	Hiawatha	South Zone/south part of Amisk Island	684896	5415084	325	163461	Rock Grab		QTSW	Quartz Stockwork (QS xcut Silicified Quartz Diorite) - white and bleached grayish-white color, intermediate composition being strong pervasive sil and mod ser in matrix, 40% qs and 60% wallrock with qs trending 231°/90° and up to 30 cm wide, 2% to 4% disseminated py in wallrock and ≤1%-2% py in vn	67
16-Aug-15	Stephen Roach	Hiawatha	South Zone/south part of Amisk Island	684894	5415083	324	163462	Rock Grab		6Esil-sh	Silicified and Sheared Quartz-Diorite - wk to mod rusty brown weathered color and bleached grayish white fresh colors, altered intermediate composition with strong pervasive sil and mod ser, mod to stronglt sheared at 40°/90°, up to 5% qs trending 40°/90° up to 1 cm wide, 2% to 5% disseminated/scattered py in wallrock and ≤1%-3% py in qs	422
17-Aug-15	Stephen Roach	Hiawatha	Regional	684937	5415161	306	163463	Rock Grab		6CDEser-sil	Sericitic-Silicified Granodiorite/Qtz-Diorite - gray weathered surface color and light grayish-brown to greenish-white fresh color, altered intermediate composition with strong ser-sil sh controlled alteration, strongly sh texture with sh trending 226°/84°N, < 1% qs, ≤1%-2% widely scattered vfg py	475
17-Aug-15	Stephen Roach	Hiawatha	South Zone/south part of Amisk Island	684901	5415092	328	163464	Rock Grab		QTSW	Quartz Stockwork - brownish-gray, grayish-white, and white fresh surface colors, strongly fractured with strong sil and wk-mod ser altered wallrock (granodiorite/qtz-diorite), series of 25% to 35% qs forming sheeted vns up to 4 cm wide and trending 54°/81°S, strongly sheared 54°/81°S parallel to veining, widely scattered vfg py < 1% to 3% mainly in altered wallrock	88

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Date	Geologist	Property	Zone/Area	UTM Easting (Stn)	UTM Northing (Stn)	Elevation (Stn)	Number	Type	Lithology	Rock Code	Description	ppb
17-Aug-15	Stephen Roach	Hiawatha	South Zone/north part of Amisk Island	685054	5415206	323	163465	Rock Grab		QS/6CEsil	Quartz Stringers/Silicified Grandiorite/Qtz-Diorite - grayish-white and gray color, strong pervasive sil and moderate to strong ser alteration of wallrock, series of sheeted qs up to 2 cm wide with qtz being strongly fractured, 30% qs parralel to shearing trending 232°/82°N, 5% to 7% vfg disseminated py in both wallrock and qs with 5% py in qs	54
17-Aug-15	Stephen Roach	Hiawatha	South Zone/north part of Amisk Island	685047	5415208	325	163466	Rock Grab		6CEsil	Weakly Fractured and Silicified Granodiorite/Qtz Diorite - weak hem with burnt gray on weathered surface and translucent grayish-white to gray fresh color, altered intermediate composition with strong pervasive sil and wk-mod ser alteration, strongly sheared at 236°/90° parallel to 5% to 10% qs, qs shows strongly fractured quartz vein matte, qs up to 2 cm wide, ≤1% to 3% vfg disseminated/scattered py in wallrock and < 1% py in qs	44
17-Aug-15	Stephen Roach	Hiawatha	South Zone/north part of Amisk Island	685045	5415214	322	163467	Rock Grab		6CEsil-qs	Silicified and Weakly Fractured Granodiorite/Qtz-Diorite - rusty brown weathered surface and white to gray fresh surface colors, altered intermediate composition with strong pervasive sil and moderate ser alteration associated with 5% to 12% qs fracturing, qs up to 2 cm trending 232°/83°N with shearing parallel to qs, ≤1% to 2% disseminated py in wallrock and up to 1% py in thin qs	51
17-Aug-15	Stephen Roach	Hiawatha	Regional	685540	5415567	325	163468	Rock Grab		6CDbx	Granodiorite/Tonalite 'Breccia' - grayish white to bleached white and green fresh/weathered colors, granodiorite is strongly sil and wk ser with <5% mafic clasts up to 5 cm, 5% to 10% disseminated tourmaline xtls, < 1% qs, foliated/sheared 226°/90°, vfg occassional py < 1%	<5
18-Aug-15	Stephen Roach	Hiawatha	Regional	684275	5414702	366	163469	Rock Grab		6CDsil-sh	Silicified Granodiorite/Tonalite - rusty brown weathered color and bleached white fresh colors, altered intermediate composition with strong pervasive sil in matrix, strongly sheared 65°/85°S, <1% to 2% qs ranging from 0.5cm to 5 cm wide…strike 253°/90°, widely scattered py mostly in altered wallrock ≤1%	17

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18-Aug-15	Stephen Roach	Hiawatha	Regional	684068	5414558	390	163470	Rock Grab		QV	Quartz Vein - white and smokey grayish white color, quartz composition with moderately to strongly quartz, mod to strong epidote joint, ≤2% to 3% chloritic wallrock inclusions and up to 1% tourmaline seams, vein between 10cm and 60 cm wide and trends 236°/90°, occassional vfg py < 1%	5
18-Aug-15	Stephen Roach	Hiawatha	Regional	684127	5414618	375	163471	Rock Grab		QV	Quartz Vein - milky white and white and green fractures, quartz composition with weak to moderately fractured quartz, local styolitic fractures with 5% chlorite filled fractures, vn is 10 cm wide and trends 231°/90° , barren	<5
18-Aug-15	Stephen Roach	Hiawatha					163472	Blank			Blank - Diabase	<5
18-Aug-15	Stephen Roach	Hiawatha	West	684043	5414487	393	163473	Rock Grab		QV/6CDEsil-ser	Quartz Vein/Silicified-Sericitic Granodiorite to Quartz-Diorite - reddish-white weathered surface color and light green, white, and whitish-green fresh colors, 25% wallrock being strongly sil and mod ser of intermediate composition, 75% qs/qv which is 7 cm wide and trend 70°/89°S and vein matte is strongly fractured, widely scattered up to 1% py concentrated along vn/wallrock contact	<5
18-Aug-15	Stephen Roach	Hiawatha	West	684045	5414492	390	163474	Rock Grab		6CDsil	Silicified Granodiorite/Tonalite - moderate rusty brown weathered surface and buff brown fresh surface, altered intermediate composition with strongly pervasive sugary type sil being cherty-like, ≤ 1% qs up to 0.5 cm wide at mafic/granodiorite/tonalite contact trending 56°/79°S, occassional to widely scattered py at 1%	<5
18-Aug-15	Stephen Roach	Hiawatha	West	684038	5414493	391	163475	Rock Grab		6CDsil	Silicified Granodiorite/Tonalite - bleached grayish white color, altered intermediate composition with strong pervasive sil altered matrix and up to 5% vfg to fg qe, up to 5% thin hairline qs <0.1 to 1 cm wide randomly oriented, vfg scattered to disseminated ≤2% to 5% py	5
18-Aug-15	Stephen Roach	Hiawatha	Regional	684036	5414506	384	163476	Rock Grab		6CDsil	Silicified Granodiorite/Tonalite - weak to moderate rusty brown weathered surface and bleached white to light rusty grayish-white fresh colors, altered intermediate composition with strong pervasive sil, ≤1% to 3% qs < 0.5 cm wide, sheared at 224°, occassional to widely scattersed py ≤1%	<5

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Date	Geologist	Property	Zone/Area	UTM Easting (Stn)	UTM Northing (Stn)	Elevation (Stn)	Number	Type	Lithology	Rock Code	Description	ppb
18-Aug-15	Stephen Roach	Hiawatha	Regional	683871	5414411	396	163477	Rock Grab		QTSW/1AB/ 6CDsil	Quartz Stockwork - local rusty brown weathered color and light green, grayish-white, and white color, altered intermediate composition of granodiorite/tonalite with strong sil altered matrix and strong chl alteration of mafic flow, 30% qs with strongly fractured vein matte, up to 4 cm wide and strikes 237º/90º, qs at contact between mafics/granodiorite/tonalite at 237º/90º, occassional py <1%	8
19-Aug-15	Stephen Roach	Hiawatha	HI-01	684799	5414908	332	163478	Rock Grab		QV	Quartz Vein - milky white to white color, quartz composition with mod quartz fracturing, 10% to 20% chl altered seams and wallrock inclusions, qv ranges 5 cm to 20 cm in width and trends 210º/90º, occassional py < 0.5% generally at vn/wallrock contact	6
19-Aug-15	Stephen Roach	Hiawatha	HI-01	684796	5414906	333	163479	Rock Grab		QV	Quartz Vein - milky white to white color, quartz composition with moderately fractured quartz, styolitic texture in vn matte with strong chloritic and weak to moderate sericite styolite fractures and seams, vein strikes 43º/88ºS and is 30 cm wide, 2% to 4% vfg disseminated and scattered pyrite in chl-ser styolite seams and fractures	7
19-Aug-15	Stephen Roach	Hiawatha	HI-01	684773	5414857	342	163480	Rock Grab		QS at 1AB/6CDSIL contact	Quartz Veinlet/Stronger at Mafic Flow/Silicified Granodiorite/Tonalite Contact - white, greenish-gray, and green color, both mafic composition with weak to moderate chlorite alteration and intermediate composition of granodiorite / tonalite with wk-mod sil-ser, 20% to 30% qs trending 255º/83ºN and 5 cm wide, vfg to fg py cubes at wr contacts with qs with 5% to 10% py in wr and <1% py in vn	69
20-Aug-15	Stephen Roach	Hiawatha	HI-01	684704	5414777	354	163481	Rock Grab		QS at 1ABchl/6CDs il contact	Quartz Stringer at Mafic Flow/Silicified Granodiorite/Tonalite Contact - wk-mod rusty brownish-green weathered color and white/dark green/brownish-white fresh colors, mafics are mod to strong chl with no cb and granodiorite/tonalite show mod to strong sil, strongly sheared contact 235º/81ºN and vein strikes 235º/90º, 15% to 20% qs up to 2 cm wide, 5% disseminated py along vn/sheared wallrock contact	<5

HEADER							SAMPLE		Lithology			Au
Date	Geologist	Property	Zone/Area	UTM Easting (Stn)	UTM Northing (Stn)	Elevation (Stn)	Number	Type	Lithology	Rock Code	Description	ppb
20-Aug-15	Stephen Roach	Hiawatha	South Zone Trench (channel)	684741	5414940	348	163482	Chip Sample over 0.67m		Sheeted QV	Sheeted Qaurtz Vein - reddish white to white color, quartz composition vn matte (90%) with strong sil-(ser) altered wallrock (10%), qs strikes 242º/90º and is up to 0.67 m wide, 2% to 4% disseminated to scattered vfg to fg pyrite in both wallrock and vein matte, part of a channel which returned 241 g/t Au over 0.67 m width	75100 (75800)

2015 Hiawatha Property Sample Descriptions

Sample No	Au_FE-MeT	Ag_TD-MS	Al_TD-MS	As_TD-MS	Ba_TD-MS	Be_TD-MS	Bi_TD-MS	Ca_TD-MS	Cd_TD-MS	Ce_TD-MS	Co_TD-MS	Cr_TD-MS	Cs_TD-MS	Cu_TD-MS	Dy_TD-MS	Er_TD-MS	Eu_TD-MS	Fe_TD-MS	Ga_TD-MS	Gd_TD-MS	Ge_TD-MS	Hf_TD-MS
	ppb	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm
163401		3.78	5.45	10.8	68	0.8	7	0.98	< 0.1	6.7	4.3	40	0.26	68.9	0.3	0.2	0.17	1.4	14.4	0.4	< 0.1	1.5
163402		2.82	4.39	11.8	79	0.5	4.52	0.86	0.2	8.7	4.2	52.2	0.3	138	0.4	0.2	0.15	1.46	10.7	0.5	< 0.1	1.4
163403		8.14	8.19	19.2	124	1.1	17.2	1.4	0.2	15	8.1	54.2	0.56	252	0.6	0.3	0.29	2.28	20.8	0.8	< 0.1	2.9
163404		4.59	8.7	19.2	96	1.2	7.3	1.17	0.1	14.5	6.8	58.2	0.56	182	0.6	0.3	0.29	2.29	26.3	0.8	< 0.1	3
163405		0.96	> 10.0	3.2	234	0.9	1.77	2.83	0.2	21.8	8.7	42.2	0.67	80.4	0.9	0.5	0.41	2.39	24.6	1.2	< 0.1	3.8
163406		0.83	> 10.0	9.5	286	1.1	2.18	1.85	0.1	17.2	7.4	41.8	0.78	315	0.8	0.4	0.39	2.48	24	0.9	< 0.1	3.7

2015 Hiawatha Property Sample Descriptions

	Au_FE-MeT	Ag_TD-MS	Al_TD-MS	As_TD-MS	Ba_TD-MS	Be_TD-MS	Bi_TD-MS	Ca_TD-MS	Cd_TD-MS	Ce_TD-MS	Co_TD-MS	Cr_TD-MS	Cs_TD-MS	Cu_TD-MS	Dy_TD-MS	Er_TD-MS	Eu_TD-MS	Fe_TD-MS	Ga_TD-MS	Gd_TD-MS	Ge_TD-MS	Hf_TD-MS
	ppb	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm
163407	6410	7.72	5.26	17.4	97	0.5	2.79	0.09	7.5	9.2	4.2	47	0.41	193	0.4	0.2	0.11	1.47	12	0.6	< 0.1	1.7
163408	5520	10.9	2.22	10.6	41	< 0.1	21.2	0.09	10.4	3.3	3.7	49.4	0.13	112	0.2	< 0.1	< 0.05	1.26	5.1	0.2	< 0.1	0.7
163409	12600	17.4	2.18	12.2	9	0.1	38.4	1.81	3.1	2	9.1	111	< 0.05	320	0.5	0.4	0.09	2.15	4.4	0.4	< 0.1	0.2
163410		2.12	8.84	8.5	185	0.4	1.31	1.46	0.4	11.6	10.6	60.7	0.3	353	0.7	0.4	0.23	4.21	17.2	0.8	< 0.1	2.8

2015 Hiawatha Property Sample Descriptions

Sample No	**Au_FE-MeT**	Ag_TD-MS	Al_TD-MS	As_TD-MS	Ba_TD-MS	Be_TD-MS	Bi_TD-MS	Ca_TD-MS	Cd_TD-MS	Ce_TD-MS	Co_TD-MS	Cr_TD-MS	Cs_TD-MS	Cu_TD-MS	Dy_TD-MS	Er_TD-MS	Eu_TD-MS	Fe_TD-MS	Ga_TD-MS	Gd_TD-MS	Ge_TD-MS	Hf_TD-MS
	ppb	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm
163411		0.83	0.09	2.3	3	< 0.1	3.69	0.47	< 0.1	1	3.4	45.2	< 0.05	235	< 0.1	< 0.1	< 0.05	0.85	0.6	< 0.1	< 0.1	< 0.1
163412		1	> 10.0	25	449	3.7	1.73	3.19	0.1	67.8	17.4	121	9.4	2530	4.5	2.8	1.06	4.64	20.2	4.4	0.4	5.3
163413		0.89	9.24	1.5	243	0.8	12	1.96	0.1	15.2	6.7	34.5	0.68	671	0.7	0.4	0.26	2.11	20.9	0.8	< 0.1	2.3
163414		0.33	8.83	0.8	68	0.7	1.36	0.41	< 0.1	15.3	2.5	30.6	0.54	62.9	0.4	0.2	0.23	1.39	23.2	0.6	< 0.1	2.4
163415		0.25	8.58	2.2	31	0.5	1.11	0.86	0.2	13.6	2.3	31.1	0.18	42.4	0.6	0.2	0.32	1.4	23.8	0.9	< 0.1	2.1
163416		0.16	> 10.0	1.1	150	0.8	0.1	2.31	< 0.1	21.8	11.8	43.1	0.96	32.5	0.9	0.5	0.41	3.68	24.1	0.9	< 0.1	3.3

2015 Hiawatha Property Sample Descriptions

Sample No	**Au_FE-MeT ppb**	Ag_TD-MS ppm	Al_TD-MS %	As_TD-MS ppm	Ba_TD-MS ppm	Be_TD-MS ppm	Bi_TD-MS ppm	Ca_TD-MS %	Cd_TD-MS ppm	Ce_TD-MS ppm	Co_TD-MS ppm	Cr_TD-MS ppm	Cs_TD-MS ppm	Cu_TD-MS ppm	Dy_TD-MS ppm	Er_TD-MS ppm	Eu_TD-MS ppm	Fe_TD-MS %	Ga_TD-MS ppm	Gd_TD-MS ppm	Ge_TD-MS ppm	Hf_TD-MS ppm
163417		0.15	9.06	1.3	142	1	0.21	4.22	< 0.1	16.7	16.9	46.9	0.93	102	1.9	1.3	0.46	4.32	24.4	1.7	< 0.1	2.6
163418		0.28	8.48	0.5	57	0.6	0.61	7.02	0.1	11.7	47.4	31.4	0.76	275	5.3	3.9	0.75	12.2	30	4	< 0.1	1.9
163419		2.23	7.75	8.6	115	0.8	18.5	1.92	0.4	15.3	7.5	52.8	0.45	854	0.7	0.4	0.28	1.97	19.8	0.8	< 0.1	3
163420		0.71	> 10.0	2.1	64	0.8	0.86	3.53	< 0.1	17.6	13.3	15.6	0.66	201	0.9	0.6	0.38	2.61	26.5	1.1	< 0.1	2.9
163421		1.25	> 10.0	1.8	110	1.3	8.19	3.04	0.2	11	6	30	0.78	518	0.6	0.4	0.29	2.35	28.4	0.7	< 0.1	3.9

	Au_FE-MeT	Ag_TD-MS	Al_TD-MS	As_TD-MS	Ba_TD-MS	Be_TD-MS	Bi_TD-MS	Ca_TD-MS	Cd_TD-MS	Ce_TD-MS	Co_TD-MS	Cr_TD-MS	Cs_TD-MS	Cu_TD-MS	Dy_TD-MS	Er_TD-MS	Eu_TD-MS	Fe_TD-MS	Ga_TD-MS	Gd_TD-MS	Ge_TD-MS	Hf_TD-MS
	ppb	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm
163422		0.28	> 10.0	0.9	163	0.9	0.11	0.53	< 0.1	18.7	1.3	19.6	0.16	14.1	0.5	0.2	0.27	0.84	23.8	0.9	< 0.1	3.5
163423		0.18	9.46	0.2	51	1	0.17	7.27	< 0.1	11	56.7	15.4	0.5	44.3	6.6	4.8	1.09	13.6	27.4	4.8	< 0.1	1.1
163424		0.14	> 10.0	< 0.1	106	0.8	0.05	8.06	0.1	25.6	53.5	130	1.27	172	4.5	3.1	0.93	10.4	20.3	3.6	0.2	3.5
163425		0.11	4.19	< 0.1	16	0.6	0.23	3.66	< 0.1	3.4	29.9	32	0.17	41.1	2.3	1.6	0.39	7.21	12.6	1.6	< 0.1	0.6
163426		0.13	> 10.0	0.7	415	1.2	0.34	1.65	< 0.1	16	6.5	26.6	0.47	59	0.7	0.4	0.33	2	24.7	0.9	< 0.1	2.6
163427		0.09	9.84	0.5	157	0.9	0.14	4.07	0.2	32.2	8.6	42.8	0.33	10.2	1	0.6	0.5	2.83	23.6	1.2	< 0.1	1.9
163428		0.11	8.62	0.4	69	0.4	0.09	6.55	0.1	10.4	51.7	98.2	0.17	246	4.6	3.4	0.8	11.9	20.6	3.4	< 0.1	0.8

2015 Hiawatha Property Sample Descriptions

Sample No	**Au_FE-MeT ppb**	Ag_TD-MS ppm	Al_TD-MS %	As_TD-MS ppm	Ba_TD-MS ppm	Be_TD-MS ppm	Bi_TD-MS ppm	Ca_TD-MS %	Cd_TD-MS ppm	Ce_TD-MS ppm	Co_TD-MS ppm	Cr_TD-MS ppm	Cs_TD-MS ppm	Cu_TD-MS ppm	Dy_TD-MS ppm	Er_TD-MS ppm	Eu_TD-MS ppm	Fe_TD-MS %	Ga_TD-MS ppm	Gd_TD-MS ppm	Ge_TD-MS ppm	Hf_TD-MS ppm
163429		0.36	8.64	0.2	21	1.3	0.16	5.91	< 0.1	11.3	41.9	28.3	0.1	97.9	6.7	4.9	1.09	13.1	25.4	4.8	0.3	3.3
163430		0.53	> 10.0	1.7	114	0.8	0.66	2.38	< 0.1	11.2	12.8	45.7	0.42	357	0.6	0.4	0.27	2.45	21.7	0.6	< 0.1	3.3
163431		0.56	1.6	1.1	15	< 0.1	1.45	1.73	0.1	24.7	> 500	46.4	0.12	908	3.4	2.5	0.82	40.1	3.7	2.7	< 0.1	0.7
163432		0.29	> 10.0	< 0.1	108	0.5	0.19	1.88	< 0.1	47.1	16.4	34.5	0.89	58.4	2.2	1.4	0.76	3.35	17.6	2.4	< 0.1	5.9
163433		0.19	8.49	6.1	74	0.7	0.3	1.53	0.7	29.9	26.4	36.3	0.99	106	1.3	0.8	0.41	3.76	17.9	1.4	< 0.1	4.5
163434		0.15	9.93	2.7	4	0.4	0.07	13.4	0.2	13	51.9	914	< 0.05	197	2.6	1.9	0.67	8.53	16.8	2.3	0.7	1.4
163435		0.95	4.95	2.3	117	0.7	1.02	1.24	< 0.1	7.3	7.5	90.4	0.7	177	0.3	0.2	0.15	1.75	8.9	0.4	< 0.1	1.7

2015 Hiawatha Property Sample Descriptions

Sample No	**Au_FE-MeT**	Ag_TD-MS	Al_TD-MS	As_TD-MS	Ba_TD-MS	Be_TD-MS	Bi_TD-MS	Ca_TD-MS	Cd_TD-MS	Ce_TD-MS	Co_TD-MS	Cr_TD-MS	Cs_TD-MS	Cu_TD-MS	Dy_TD-MS	Er_TD-MS	Eu_TD-MS	Fe_TD-MS	Ga_TD-MS	Gd_TD-MS	Ge_TD-MS	Hf_TD-MS
	ppb	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm
163436		0.27	9.42	450	217	1.4	0.08	6.28	< 0.1	39.2	40.6	189	1.89	96.8	4.4	2.3	1.34	9.26	18.9	4.6	< 0.1	2.5
163437		2	> 10.0	1.6	98	1.4	1.51	2.03	< 0.1	21	8	22.1	0.75	355	0.7	0.4	0.37	3.37	22.3	0.9	< 0.1	4.9
163438		4.32	1.84	3.2	13	0.2	5.79	2.2	< 0.1	1.3	12	144	0.2	381	0.3	0.2	0.06	2.46	4.2	0.2	< 0.1	0.2
163439	7960	5.39	1.43	22.3	41	0.2	5.2	2.16	< 0.1	1.7	12.3	82.1	0.22	132	0.3	0.2	0.13	3.16	3.4	0.3	< 0.1	0.1
163440		4.21	7.56	3.6	18	0.3	3.02	4.49	0.9	1.8	143	389	0.16	772	1.1	0.9	0.12	7.69	13.7	0.8	< 0.1	0.4
163441		1.22	9.03	0.8	69	0.4	0.91	7.68	0.5	3.6	45.7	394	0.76	117	2.1	1.6	0.38	7.09	14.8	1.5	< 0.1	0.6

2015 Hiawatha Property Sample Descriptions

Sample No	**Au_FE-MeT**	Ag_TD-MS	Al_TD-MS	As_TD-MS	Ba_TD-MS	Be_TD-MS	Bi_TD-MS	Ca_TD-MS	Cd_TD-MS	Ce_TD-MS	Co_TD-MS	Cr_TD-MS	Cs_TD-MS	Cu_TD-MS	Dy_TD-MS	Er_TD-MS	Eu_TD-MS	Fe_TD-MS	Ga_TD-MS	Gd_TD-MS	Ge_TD-MS	Hf_TD-MS
	ppb	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm
163442		0.57	7.14	5.8	3	0.8	0.3	8.12	< 0.1	2.5	46.3	233	0.06	173	1	0.7	0.17	4.16	15.8	0.7	< 0.1	0.3
163443		0.53	9.26	1.7	235	0.6	0.42	2.56	< 0.1	15.3	6.7	27.8	0.46	70.8	0.8	0.4	0.32	1.69	16.4	0.9	< 0.1	4.2
163444	3910	0.81	0.97	1.6	6	< 0.1	0.77	4.07	< 0.1	2	5.7	46.9	0.11	118	0.4	0.3	0.08	1.85	2.3	0.3	< 0.1	< 0.1
163445		1.39	9.82	0.9	96	1	1.64	2.68	0.4	27.6	60.5	166	0.47	437	1.5	0.9	0.5	6.06	19.5	1.7	< 0.1	3.8
163446	30900	13.6	2.11	5.4	39	0.2	11.4	0.92	0.7	5.2	9.6	88.8	0.12	204	0.2	0.1	0.08	2.28	5.5	0.3	< 0.1	0.4

2015 Hiawatha Property Sample Descriptions

Sample No	**Au_FE-MeT ppb**	Ag_TD-MS ppm	Al_TD-MS %	As_TD-MS ppm	Ba_TD-MS ppm	Be_TD-MS ppm	Bi_TD-MS ppm	Ca_TD-MS %	Cd_TD-MS ppm	Ce_TD-MS ppm	Co_TD-MS ppm	Cr_TD-MS ppm	Cs_TD-MS ppm	Cu_TD-MS ppm	Dy_TD-MS ppm	Er_TD-MS ppm	Eu_TD-MS ppm	Fe_TD-MS %	Ga_TD-MS ppm	Gd_TD-MS ppm	Ge_TD-MS ppm	Hf_TD-MS ppm
163447		45.6	1.63	3	44	0.1	35.1	0.92	1.7	2.1	12	57.2	0.14	179	0.2	0.1	0.06	2.45	3.9	0.2	< 0.1	0.3
163448		0.62	9.71	2.3	196	2	0.12	5.09	< 0.1	48.7	53.5	61.5	0.71	33.5	4.8	2.8	1.41	11.3	27.8	4.8	< 0.1	7.5
163449		0.25	1.88	3.1	90	0.2	0.04	0.54	< 0.1	4.1	2.1	23.8	0.13	29.1	0.2	< 0.1	0.06	0.9	4.4	0.2	< 0.1	0.6
163450		0.25	2.13	6.6	122	0.1	0.15	0.38	< 0.1	2.8	4.5	29.6	0.15	107	0.2	0.1	0.07	1.33	5.1	0.2	< 0.1	0.1
163451		0.49	3.41	4.9	59	0.2	1.04	1.57	< 0.1	1.9	43.8	217	0.5	219	0.6	0.5	0.1	3.71	6.5	0.4	< 0.1	0.5
163452		0.19	2	1.8	18	0.1	0.07	0.27	< 0.1	1.1	3.5	23.5	0.19	36.9	0.1	< 0.1	< 0.05	1.31	7.3	< 0.1	< 0.1	< 0.1
163453		0.12	> 10.0	8.2	327	0.9	0.12	2.12	< 0.1	23.2	8.1	22.3	2.67	22.9	0.9	0.5	0.43	2.47	24.3	1.2	< 0.1	3

2015 Hiawatha Property Sample Descriptions

Sample No	**Au_FE-MeT**	Ag_TD-MS	Al_TD-MS	As_TD-MS	Ba_TD-MS	Be_TD-MS	Bi_TD-MS	Ca_TD-MS	Cd_TD-MS	Ce_TD-MS	Co_TD-MS	Cr_TD-MS	Cs_TD-MS	Cu_TD-MS	Dy_TD-MS	Er_TD-MS	Eu_TD-MS	Fe_TD-MS	Ga_TD-MS	Gd_TD-MS	Ge_TD-MS	Hf_TD-MS
	ppb	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm
163454		0.28	> 10.0	10.7	159	1.4	0.2	1.81	< 0.1	14.8	8.5	26.3	1.06	109	0.7	0.4	0.25	2.28	23.5	0.9	< 0.1	3
164455		0.13	1.36	3.1	20	0.1	0.05	0.13	< 0.1	2.4	2.9	26.4	0.15	10.1	0.1	< 0.1	< 0.05	1.14	3.5	0.1	< 0.1	0.3
163456	7130	1.04	3.64	15.4	168	0.4	2.65	0.03	0.2	4.5	1.9	25.1	0.4	21.1	0.1	< 0.1	< 0.05	1.31	8.5	0.2	< 0.1	0.9
163457		0.66	7.94	18.7	205	0.8	2.41	0.75	< 0.1	8.6	4	18	1.21	42.3	0.4	0.2	0.18	2.07	19.3	0.5	< 0.1	2.3
163458		1.34	1.59	6.5	42	0.8	3.82	0.1	< 0.1	2.2	2.2	26.1	4.14	62.5	< 0.1	< 0.1	< 0.05	1.05	4	0.1	< 0.1	0.5

2015 Hiawatha Property Sample Descriptions

Sample No	**Au_FE-MeT**	Ag_TD-MS	Al_TD-MS	As_TD-MS	Ba_TD-MS	Be_TD-MS	Bi_TD-MS	Ca_TD-MS	Cd_TD-MS	Ce_TD-MS	Co_TD-MS	Cr_TD-MS	Cs_TD-MS	Cu_TD-MS	Dy_TD-MS	Er_TD-MS	Eu_TD-MS	Fe_TD-MS	Ga_TD-MS	Gd_TD-MS	Ge_TD-MS	Hf_TD-MS
	ppb	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm
163459		2.09	5.15	13.6	109	0.5	8.38	1.12	< 0.1	6.4	4.7	27	2.1	234	0.3	0.2	0.14	1.74	12.5	0.4	< 0.1	1.7
163460		2.73	8.94	6.5	136	1.3	5.39	3.24	0.4	24.3	23	69.1	1.64	> 10000	2.5	1.7	0.61	7.84	18.4	2.3	< 0.1	2.7
163461		0.81	5.65	12.4	201	0.9	0.39	0.65	< 0.1	9.1	3.6	20.3	13.7	19	0.4	0.2	0.16	1.55	12.4	0.5	< 0.1	1.4
163462		0.45	9.94	16.4	242	1.5	0.21	1.86	< 0.1	19.7	6.7	18.2	9.56	31.8	0.8	0.5	0.38	1.99	22.8	1	< 0.1	2.6
163463		0.55	9.76	12.1	493	1.2	1.78	1.2	< 0.1	17.7	7.3	16.3	0.69	292	0.7	0.4	0.3	2.08	19.8	0.9	< 0.1	2.9
163464		1.08	5.82	4.2	150	0.5	1.11	0.53	0.2	9.1	3.5	26.3	2.16	140	0.5	0.2	0.16	1.93	13.7	0.5	< 0.1	2

Sample No	**Au_FE-MeT ppb**	Ag_TD-MS ppm	Al_TD-MS %	As_TD-MS ppm	Ba_TD-MS ppm	Be_TD-MS ppm	Bi_TD-MS ppm	Ca_TD-MS %	Cd_TD-MS ppm	Ce_TD-MS ppm	Co_TD-MS ppm	Cr_TD-MS ppm	Cs_TD-MS ppm	Cu_TD-MS ppm	Dy_TD-MS ppm	Er_TD-MS ppm	Eu_TD-MS ppm	Fe_TD-MS %	Ga_TD-MS ppm	Gd_TD-MS ppm	Ge_TD-MS ppm	Hf_TD-MS ppm
163465		0.37	7.23	19.9	143	0.7	0.68	1.47	< 0.1	12.9	4.9	23.5	0.71	36.1	0.5	0.3	0.16	2.08	17.3	0.7	< 0.1	2.9
163466		0.77	7.2	24.6	236	0.7	0.56	0.68	< 0.1	7.8	3.3	21.6	1.18	25.4	0.4	0.2	0.14	1.85	16.8	0.4	< 0.1	1.9
163467		0.4	7.44	13.9	217	0.9	0.93	1.56	< 0.1	12.4	3.9	23.1	1.25	46.1	0.5	0.3	0.19	1.87	18.4	0.6	< 0.1	2.2
163468		0.29	9.87	1.7	123	0.7	0.11	3.17	< 0.1	18.4	15.4	46.7	0.47	17.8	1	0.6	0.37	2.66	20.4	1	< 0.1	3
163469		0.34	6.64	11.9	269	0.8	0.92	0.43	0.1	8.4	3.5	47.9	0.53	63.6	0.4	0.2	0.14	1.68	17.6	0.4	< 0.1	2.3

2015 Hiawatha Property Sample Descriptions

Sample No	**Au_FE-MeT ppb**	Ag_TD-MS ppm	Al_TD-MS %	As_TD-MS ppm	Ba_TD-MS ppm	Be_TD-MS ppm	Bi_TD-MS ppm	Ca_TD-MS %	Cd_TD-MS ppm	Ce_TD-MS ppm	Co_TD-MS ppm	Cr_TD-MS ppm	Cs_TD-MS ppm	Cu_TD-MS ppm	Dy_TD-MS ppm	Er_TD-MS ppm	Eu_TD-MS ppm	Fe_TD-MS %	Ga_TD-MS ppm	Gd_TD-MS ppm	Ge_TD-MS ppm	Hf_TD-MS ppm
163470		0.35	1.74	1.8	3	< 0.1	1.72	0.89	< 0.1	0.3	1.7	126	< 0.05	12.5	< 0.1	< 0.1	< 0.05	1.11	4.2	< 0.1	< 0.1	< 0.1
163471		0.15	1.96	1.7	31	< 0.1	0.18	2.09	< 0.1	0.6	12.3	191	0.06	12.7	0.3	0.2	0.05	1.98	4.5	0.2	< 0.1	0.1
163472		0.1	8.66	0.3	193	1.7	0.07	4.46	< 0.1	49.1	50.7	52.9	0.62	30.3	4.6	2.7	1.35	10.2	25.3	4.7	< 0.1	1.1
163473		0.25	5.81	3	178	0.4	0.94	1.42	< 0.1	11.2	4.6	124	0.16	89	0.5	0.3	0.23	1.9	12.5	0.6	< 0.1	2.1
163474		0.29	> 10.0	5.9	14	0.3	1.26	0.65	< 0.1	9.1	10.6	19.2	< 0.05	241	0.5	0.4	0.11	1.27	19.2	0.6	< 0.1	3.7
163475		0.17	5.95	2.7	40	0.3	1.45	0.79	< 0.1	15.5	3.1	65.1	0.05	22.8	0.5	0.3	0.11	1.14	9.6	0.6	< 0.1	2.1
163476		0.16	4.27	1.4	7	0.3	1.85	0.33	< 0.1	5.4	1.7	17.3	< 0.05	20.4	0.2	0.1	< 0.05	0.84	5.2	0.2	< 0.1	1

Sample No	**Au_FE-MeT**	Ag_TD-MS	Al_TD-MS	As_TD-MS	Ba_TD-MS	Be_TD-MS	Bi_TD-MS	Ca_TD-MS	Cd_TD-MS	Ce_TD-MS	Co_TD-MS	Cr_TD-MS	Cs_TD-MS	Cu_TD-MS	Dy_TD-MS	Er_TD-MS	Eu_TD-MS	Fe_TD-MS	Ga_TD-MS	Gd_TD-MS	Ge_TD-MS	Hf_TD-MS
	ppb	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm
163477		1.93	5.29	2	45	0.3	20.1	3.63	0.5	2.5	11.2	91.5	0.2	104	0.5	0.4	0.12	3.23	19.9	0.4	< 0.1	0.7
163478		0.4	3.27	2.8	9	0.2	0.11	3.94	< 0.1	1.7	15.4	113	0.13	92.1	1	0.7	0.22	3.43	8.1	0.7	< 0.1	0.3
163479		0.33	0.84	6.1	5	< 0.1	0.16	2.24	0.5	1.1	65.7	38.1	< 0.05	938	0.4	0.3	0.09	2.48	2.7	0.3	< 0.1	0.1
163480		0.3	8.5	4.9	63	1.8	0.67	6.27	< 0.1	49.1	26.5	43.6	0.17	87	3.6	2.1	1.36	6.09	19.4	4.4	< 0.1	4.7
163481		0.17	6.84	3.8	29	0.3	0.71	5.56	< 0.1	5.3	53.9	60.8	0.21	156	2.4	1.8	0.53	10.2	15.7	1.7	< 0.1	0.9

2015 Hiawatha Property Sample Descriptions

Sample No	**Au_FE-MeT**	Ag_TD-MS	Al_TD-MS	As_TD-MS	Ba_TD-MS	Be_TD-MS	Bi_TD-MS	Ca_TD-MS	Cd_TD-MS	Ce_TD-MS	Co_TD-MS	Cr_TD-MS	Cs_TD-MS	Cu_TD-MS	Dy_TD-MS	Er_TD-MS	Eu_TD-MS	Fe_TD-MS	Ga_TD-MS	Gd_TD-MS	Ge_TD-MS	Hf_TD-MS
	ppb	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm
163482		10.1	4.83	18.1	151	0.4	4.47	0.37	0.5	5.6	3.4	15.8	0.58	82.6	0.3	0.2	0.09	1.44	11.7	0.3	< 0.1	1.4

2015 Hiawatha Property Sample Descriptions

Sample No	Hg_TD-MS	Ho_TD-MS	In_TD-MS	K_TD-MS	La_TD-MS	Li_TD-MS	Lu_TD-MS	Mg_TD-MS	Mn_TD-MS	Mo_TD-MS	Na_TD-MS	Nb_TD-MS	Nd_TD-MS	Ni_TD-MS	P_TD-ICP	Pb_TD-MS	Pr_TD-MS	Rb_TD-MS	Re_TD-MS	S_TD-ICP	Sb_TD-MS	Sc_TD-ICP
	ppb	ppm	ppm	%	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm
163401	< 10	< 0.1	< 0.1	1.19	3	7.8	< 0.1	0.29	146	2.77	2.39	1.5	2.7	8.9	0.009	126	0.7	30.2	< 0.001	0.34	0.2	2
163402	< 10	< 0.1	< 0.1	1.44	4.2	7.9	< 0.1	0.25	157	5.29	1.76	1.7	3.7	8.1	0.007	219	0.9	35.3	< 0.001	0.6	0.2	2
163403	< 10	0.1	< 0.1	2.73	6.8	16.8	< 0.1	0.57	177	4.55	2.84	3.2	6	13.1	0.018	605	1.6	67.2	< 0.001	1.13	0.2	3
163404	< 10	0.1	< 0.1	2.9	6.6	17.2	< 0.1	0.67	235	14.1	> 3.00	3.4	5.9	14.5	0.017	84.9	1.5	64.9	0.001	0.7	0.2	3
163405	< 10	0.1	< 0.1	3.12	10.3	22	< 0.1	0.9	223	7.65	> 3.00	3.8	9	16.9	0.03	7.3	2.4	70.2	< 0.001	0.56	< 0.1	5
163406	< 10	0.1	< 0.1	3.73	7	21.2	< 0.1	0.89	217	2.13	> 3.00	3.3	6.6	15	0.027	10.8	1.8	82	< 0.001	0.55	0.1	5
163405																						
163406																						

	Hg_TD-MS	Ho_TD-MS	In_TD-MS	K_TD-MS	La_TD-MS	Li_TD-MS	Lu_TD-MS	Mg_TD-MS	Mn_TD-MS	Mo_TD-MS	Na_TD-MS	Nb_TD-MS	Nd_TD-MS	Ni_TD-MS	P_TD-ICP	Pb_TD-MS	Pr_TD-MS	Rb_TD-MS	Re_TD-MS	S_TD-ICP	Sb_TD-MS	Sc_TD-ICP
	ppb	ppm	ppm	%	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm
163407	< 10	< 0.1	< 0.1	2.59	4.4	9	< 0.1	0.26	85	2.09	1.13	2	3.9	8.8	0.012	412	1.1	66.8	< 0.001	0.77	0.3	2
163408	< 10	< 0.1	< 0.1	1.09	1.4	3.1	< 0.1	0.09	79	4.16	0.77	1.2	1.4	6.4	0.005	866	0.4	24.8	< 0.001	0.68	0.2	1
163409	40	0.1	< 0.1	0.18	0.9	5.1	< 0.1	0.88	259	424	0.45	1.4	1.2	24.3	0.003	510	0.3	2.7	0.072	0.45	0.2	8
163410	10	0.1	< 0.1	2.29	5	38.4	< 0.1	2.55	460	12.7	> 3.00	2.4	4.9	26.9	0.024	21.2	1.3	48.1	< 0.001	0.56	< 0.1	11

2015 Hiawatha Property Sample Descriptions

Sample No	Hg_TD-MS	Ho_TD-MS	In_TD-MS	K_TD-MS	La_TD-MS	Li_TD-MS	Lu_TD-MS	Mg_TD-MS	Mn_TD-MS	Mo_TD-MS	Na_TD-MS	Nb_TD-MS	Nd_TD-MS	Ni_TD-MS	P_TD-ICP	Pb_TD-MS	Pr_TD-MS	Rb_TD-MS	Re_TD-MS	S_TD-ICP	Sb_TD-MS	Sc_TD-ICP
	ppb	ppm	ppm	%	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm
163411	< 10	< 0.1	< 0.1	0.03	0.4	< 0.5	< 0.1	0.03	119	2.61	0.03	1.2	0.4	5.4	0.002	8.6	< 0.1	0.8	< 0.001	0.1	0.1	< 1
163412	< 10	0.9	0.2	> 5.00	31.9	33.5	0.4	1.99	530	83.5	> 3.00	22.7	29.3	43.9	0.099	23.9	7.7	171	< 0.001	0.34	0.5	15
163413	< 10	0.1	< 0.1	1.92	6.9	17.6	< 0.1	0.83	166	2.56	> 3.00	2.6	6.4	10.8	0.025	5.5	1.7	40.4	< 0.001	0.1	< 0.1	4
163414	< 10	< 0.1	< 0.1	0.34	7.2	3.8	< 0.1	0.24	142	8.47	> 3.00	2.9	6	4.8	0.02	7.5	1.6	10.4	< 0.001	0.16	< 0.1	2
163415	< 10	< 0.1	< 0.1	0.23	6.3	1.8	< 0.1	0.12	128	519	> 3.00	1.9	6.1	4.6	0.04	14.5	1.6	5.1	0.075	0.14	0.1	1
163416	< 10	0.2	< 0.1	1.3	9.9	22.9	< 0.1	1.55	640	1.99	> 3.00	4.3	8.3	15.9	0.04	7.5	2.3	26.2	< 0.001	0.55	< 0.1	8

2015 Hiawatha Property Sample Descriptions

	Hg_TD-MS	Ho_TD-MS	In_TD-MS	K_TD-MS	La_TD-MS	Li_TD-MS	Lu_TD-MS	Mg_TD-MS	Mn_TD-MS	Mo_TD-MS	Na_TD-MS	Nb_TD-MS	Nd_TD-MS	Ni_TD-MS	P_TD-ICP	Pb_TD-MS	Pr_TD-MS	Rb_TD-MS	Re_TD-MS	S_TD-ICP	Sb_TD-MS	Sc_TD-ICP
	ppb	ppm	ppm	%	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm
163417	90	0.4	< 0.1	1.15	7.2	10.5	0.2	1.16	582	1.32	> 3.00	0.9	8.3	20	0.041	9.1	2	25.2	0.006	0.38	< 0.1	15
163418	< 10	1.1	< 0.1	0.78	3.8	4.8	0.6	2.67	1490	0.62	2.65	1.3	10	31.4	0.059	6	1.9	10.3	< 0.001	2.01	< 0.1	47
163419	20	0.1	< 0.1	1.43	6.2	13.2	< 0.1	0.65	186	3.56	> 3.00	3	5.9	13.2	0.025	12.1	1.5	38.2	< 0.001	0.89	0.1	4
163420	20	0.2	< 0.1	0.97	8.1	9.8	< 0.1	0.69	326	37	> 3.00	3.3	7.7	15.3	0.043	6.8	2.1	22.1	< 0.001	0.9	< 0.1	5
163421	30	0.1	< 0.1	1.4	4.3	12.9	< 0.1	1.14	332	3.28	> 3.00	3.9	4.6	12.9	0.032	8.1	1.2	29.5	< 0.001	0.3	< 0.1	5

	Hg_TD-MS	Ho_TD-MS	In_TD-MS	K_TD-MS	La_TD-MS	Li_TD-MS	Lu_TD-MS	Mg_TD-MS	Mn_TD-MS	Mo_TD-MS	Na_TD-MS	Nb_TD-MS	Nd_TD-MS	Ni_TD-MS	P_TD-ICP	Pb_TD-MS	Pr_TD-MS	Rb_TD-MS	Re_TD-MS	S_TD-ICP	Sb_TD-MS	Sc_TD-ICP
	ppb	ppm	ppm	%	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm
163422	< 10	< 0.1	< 0.1	1.04	9.2	2.9	< 0.1	0.11	81	0.99	> 3.00	2.3	7.5	2.2	0.015	5.3	2	18.5	< 0.001	0.07	< 0.1	1
163423	< 10	1.4	< 0.1	0.71	3.3	7.6	0.7	3.49	1710	0.22	> 3.00	0.1	10.3	31.9	0.049	4.2	1.9	11.1	0.01	0.11	< 0.1	58
163424	< 10	0.9	< 0.1	1.25	10.8	20.6	0.5	4.76	1510	0.14	2.57	0.3	14.4	82.8	0.048	3.9	3.3	38.9	< 0.001	0.1	< 0.1	43
163425	< 10	0.5	< 0.1	0.3	1.1	10.6	0.2	1.92	792	0.05	0.89	< 0.1	3	20.9	0.016	1.4	0.5	6.9	< 0.001	0.06	< 0.1	32
163426	< 10	0.1	< 0.1	4.14	6.5	20.2	< 0.1	0.74	175	1.43	> 3.00	3.3	6.2	10.8	0.027	4.1	1.5	69.3	< 0.001	0.23	< 0.1	5
163427	< 10	0.2	< 0.1	1.64	14.7	5	< 0.1	1.11	395	1.26	> 3.00	3.8	13.2	23.4	0.04	14.7	3.6	46.9	< 0.001	0.32	0.1	6
163428	< 10	1	< 0.1	0.78	3.5	9.1	0.5	3.79	1800	0.53	2.08	0.9	8.3	56.9	0.032	1.7	1.6	17.9	< 0.001	0.47	< 0.1	47

2015 Hiawatha Property Sample Descriptions

Sample No	Hg_TD-MS	Ho_TD-MS	In_TD-MS	K_TD-MS	La_TD-MS	Li_TD-MS	Lu_TD-MS	Mg_TD-MS	Mn_TD-MS	Mo_TD-MS	Na_TD-MS	Nb_TD-MS	Nd_TD-MS	Ni_TD-MS	P_TD-ICP	Pb_TD-MS	Pr_TD-MS	Rb_TD-MS	Re_TD-MS	S_TD-ICP	Sb_TD-MS	Sc_TD-ICP
	ppb	ppm	ppm	%	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm
163429	30	1.4	< 0.1	0.49	3.2	5.8	0.7	2.61	1870	1.23	3	6.5	9.7	4.5	0.058	5	1.7	2.5	< 0.001	0.25	< 0.1	35
163430	< 10	0.1	< 0.1	1.07	5.4	14.2	< 0.1	0.93	245	2.8	> 3.00	2.6	4.4	15.9	0.026	3.9	1.2	27	< 0.001	0.29	< 0.1	7
163431	< 10	0.7	< 0.1	0.17	14.7	3	0.3	0.52	342	0.89	0.41	1.5	10.4	919	0.018	2.6	2.6	3.8	0.011	> 20.0	< 0.1	9
163432	< 10	0.4	< 0.1	3.94	17	30.5	0.2	1.74	250	2.88	1.82	5.5	21.3	45.3	0.067	9.3	5.7	55.2	0.002	1.27	< 0.1	16
163433	< 10	0.2	< 0.1	1.86	12.5	23.4	0.1	1.14	275	3.76	2.93	4.2	13.1	41.7	0.033	8.8	3.5	49	< 0.001	1.58	< 0.1	9
163434	< 10	0.6	< 0.1	0.13	5.1	1.5	0.3	2.1	1660	1.06	0.52	1.3	8.9	190	0.093	3.7	1.9	1	< 0.001	1.31	0.1	32
163435	< 10	< 0.1	< 0.1	1.22	3.2	16.4	< 0.1	0.77	251	2.46	1.33	1.9	2.9	28.1	0.008	5.7	0.8	46.1	< 0.001	0.21	< 0.1	7

2015 Hiawatha Property Sample Descriptions

Sample No	Hg_TD-MS	Ho_TD-MS	In_TD-MS	K_TD-MS	La_TD-MS	Li_TD-MS	Lu_TD-MS	Mg_TD-MS	Mn_TD-MS	Mo_TD-MS	Na_TD-MS	Nb_TD-MS	Nd_TD-MS	Ni_TD-MS	P_TD-ICP	Pb_TD-MS	Pr_TD-MS	Rb_TD-MS	Re_TD-MS	S_TD-ICP	Sb_TD-MS	Sc_TD-ICP
	ppb	ppm	ppm	%	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm
163436	< 10	0.8	< 0.1	1.18	20.4	10	0.3	5.14	2120	0.31	> 3.00	0.6	22.7	143	0.148	5.3	5.4	22.4	< 0.001	0.75	0.2	20
163437	< 10	0.1	< 0.1	1.39	10	33.8	< 0.1	1.33	310	2.14	> 3.00	4.8	7.9	12.9	0.033	19.9	2.2	36.5	< 0.001	0.95	< 0.1	4
163438	< 10	< 0.1	< 0.1	0.19	0.6	11.1	< 0.1	0.61	191	3.32	0.18	0.8	0.7	38.7	0.002	2.7	0.2	9.4	< 0.001	0.8	< 0.1	8
163439	< 10	< 0.1	< 0.1	0.27	0.8	4.5	< 0.1	0.74	479	9.1	0.23	0.7	1	35.4	0.004	3.3	0.2	13.6	< 0.001	0.87	0.1	4
163440	< 10	0.3	0.2	0.29	0.6	20.8	0.1	3.02	560	15.6	> 3.00	1.3	1.6	63.4	0.013	18.7	0.3	9.4	< 0.001	3.54	0.4	35
163441	20	0.4	< 0.1	1.27	1.1	30.6	0.2	7.92	1540	2.86	1.61	1.2	3.3	144	0.019	5.5	0.6	45.4	0.005	0.95	< 0.1	47

2015 Hiawatha Property Sample Descriptions

Sample No	Hg_TD-MS	Ho_TD-MS	In_TD-MS	K_TD-MS	La_TD-MS	Li_TD-MS	Lu_TD-MS	Mg_TD-MS	Mn_TD-MS	Mo_TD-MS	Na_TD-MS	Nb_TD-MS	Nd_TD-MS	Ni_TD-MS	P_TD-ICP	Pb_TD-MS	Pr_TD-MS	Rb_TD-MS	Re_TD-MS	S_TD-ICP	Sb_TD-MS	Sc_TD-ICP
	ppb	ppm	ppm	%	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm
163442	< 10	0.2	< 0.1	0.02	1	25.4	0.1	1.84	450	1.64	0.08	1	1.7	80.7	0.011	5.3	0.3	0.7	0.014	1.25	0.2	18
163443	< 10	0.1	< 0.1	2.87	7.2	14.2	< 0.1	0.64	209	2.14	> 3.00	3.4	6.4	8.6	0.027	6.7	1.7	58.3	< 0.001	0.47	< 0.1	4
163444	< 10	< 0.1	< 0.1	0.1	0.8	5.9	< 0.1	1.03	395	1.45	0.11	0.3	1.3	13.7	0.004	1.7	0.3	3.2	< 0.001	0.34	< 0.1	4
163445	< 10	0.3	< 0.1	1.08	11.5	25.5	0.1	2.5	539	5.87	> 3.00	3.5	13.6	93.2	0.032	38.9	3.3	26.2	< 0.001	2.25	0.1	18
163446	< 10	< 0.1	< 0.1	0.54	2.5	8.6	< 0.1	0.55	166	61.7	0.81	0.5	2	20.7	0.004	355	0.6	10.6	< 0.001	0.64	0.1	6

2015 Hiawatha Property Sample Descriptions

Sample No	Hg_TD-MS	Ho_TD-MS	In_TD-MS	K_TD-MS	La_TD-MS	Li_TD-MS	Lu_TD-MS	Mg_TD-MS	Mn_TD-MS	Mo_TD-MS	Na_TD-MS	Nb_TD-MS	Nd_TD-MS	Ni_TD-MS	P_TD-ICP	Pb_TD-MS	Pr_TD-MS	Rb_TD-MS	Re_TD-MS	S_TD-ICP	Sb_TD-MS	Sc_TD-ICP
	ppb	ppm	ppm	%	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm
163447	< 10	< 0.1	< 0.1	0.57	1	5.5	< 0.1	0.54	184	13.1	0.58	0.4	1	28.1	0.004	550	0.2	13	< 0.001	0.92	0.1	4
163448	30	0.9	< 0.1	2.48	19	28.7	0.4	3.5	1400	1.05	> 3.00	20	24.9	27.7	0.099	7.9	5.9	49.5	< 0.001	0.18	< 0.1	24
163449	10	< 0.1	< 0.1	0.97	2	6.8	< 0.1	0.13	117	1.01	0.29	0.6	1.7	4.9	0.005	1.5	0.4	18.9	0.008	0.02	0.1	1
163450	< 10	< 0.1	< 0.1	0.87	1.2	4.7	< 0.1	0.14	109	1.95	0.43	0.7	1.2	7.7	0.012	2	0.3	16.8	0.01	0.06	0.2	2
163451	< 10	0.1	< 0.1	0.37	0.7	16.8	< 0.1	1.7	345	1.41	0.91	0.7	1.2	43.9	0.008	1.7	0.3	11.3	< 0.001	0.51	0.2	17
163452	< 10	< 0.1	< 0.1	0.28	0.5	7.1	< 0.1	0.2	142	0.58	1.36	0.5	0.5	10.4	0.002	1.9	0.1	5.3	< 0.001	0.12	0.1	1
163453	< 10	0.2	< 0.1	> 5.00	10.3	32.4	< 0.1	1.38	238	31.9	1.99	1.7	9.5	13.9	0.03	3.6	2.5	150	0.024	0.06	< 0.1	5

2015 Hiawatha Property Sample Descriptions

Sample No	Hg_TD-MS	Ho_TD-MS	In_TD-MS	K_TD-MS	La_TD-MS	Li_TD-MS	Lu_TD-MS	Mg_TD-MS	Mn_TD-MS	Mo_TD-MS	Na_TD-MS	Nb_TD-MS	Nd_TD-MS	Ni_TD-MS	P_TD-ICP	Pb_TD-MS	Pr_TD-MS	Rb_TD-MS	Re_TD-MS	S_TD-ICP	Sb_TD-MS	Sc_TD-ICP
	ppb	ppm	ppm	%	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm
163454	< 10	0.1	< 0.1	2	6.2	26.8	< 0.1	0.88	192	3.99	> 3.00	3.2	6.4	14.8	0.029	11.8	1.6	46	< 0.001	0.64	0.2	5
164455	< 10	< 0.1	< 0.1	0.25	1.1	5.7	< 0.1	0.14	99	0.46	0.72	0.7	1	6.2	0.01	1	0.3	6.9	< 0.001	0.04	0.2	< 1
163456	< 10	< 0.1	< 0.1	2.07	2.2	7.6	< 0.1	0.16	69	3.63	0.28	1.1	1.7	5.2	0.007	17.9	0.5	46.3	0.009	0.27	0.7	1
163457	< 10	< 0.1	< 0.1	4.61	3.8	24.6	< 0.1	0.62	147	1.27	1.65	2.3	3.4	8.2	0.026	18.3	0.9	94.2	< 0.001	0.4	0.2	4
163458	50	< 0.1	< 0.1	0.58	1	6.1	< 0.1	0.08	76	0.78	0.66	0.5	0.9	5.5	0.003	4.7	0.2	28.1	0.002	0.16	0.2	< 1

2015 Hiawatha Property Sample Descriptions

Sample No	Hg_TD-MS	Ho_TD-MS	In_TD-MS	K_TD-MS	La_TD-MS	Li_TD-MS	Lu_TD-MS	Mg_TD-MS	Mn_TD-MS	Mo_TD-MS	Na_TD-MS	Nb_TD-MS	Nd_TD-MS	Ni_TD-MS	P_TD-ICP	Pb_TD-MS	Pr_TD-MS	Rb_TD-MS	Re_TD-MS	S_TD-ICP	Sb_TD-MS	Sc_TD-ICP
	ppb	ppm	ppm	%	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm
163459	10	< 0.1	< 0.1	1.77	3	18.7	< 0.1	0.37	138	4.7	1.66	1.7	2.7	8.7	0.017	15.9	0.7	38	< 0.001	0.42	0.9	3
163460	80	0.5	0.6	4.84	11.6	20.5	0.2	2.44	527	527	> 3.00	8.4	11.9	23.5	0.096	22.1	2.9	69.8	0.014	1.36	1.1	17
163461	< 10	< 0.1	< 0.1	3.72	4.3	19.7	< 0.1	0.33	138	1	1.3	1.5	4	7.9	0.014	10.4	1.1	87.7	< 0.001	0.47	1	3
163462	< 10	0.1	< 0.1	4.97	8.7	40.2	< 0.1	0.66	212	2.03	2.4	2.9	8.2	10.6	0.031	7.8	2.2	118	0.015	0.59	0.4	5
163463	< 10	0.1	< 0.1	> 5.00	7.1	15.7	< 0.1	0.86	214	1.12	> 3.00	2.9	6.5	11	0.031	8.5	1.8	88.1	< 0.001	0.37	0.2	5
163464	< 10	< 0.1	< 0.1	3.64	4.3	23.9	< 0.1	0.65	170	2.5	1.12	2.1	3.8	8.2	0.02	20.9	1	73.4	0.007	0.19	0.4	3

Sample No	Hg_TD-MS	Ho_TD-MS	In_TD-MS	K_TD-MS	La_TD-MS	Li_TD-MS	Lu_TD-MS	Mg_TD-MS	Mn_TD-MS	Mo_TD-MS	Na_TD-MS	Nb_TD-MS	Nd_TD-MS	Ni_TD-MS	P_TD-ICP	Pb_TD-MS	Pr_TD-MS	Rb_TD-MS	Re_TD-MS	S_TD-ICP	Sb_TD-MS	Sc_TD-ICP
	ppb	ppm	ppm	%	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm
163465	< 10	< 0.1	< 0.1	> 5.00	6	4.5	< 0.1	0.16	122	4.22	1.72	2.3	5.7	7.4	0.022	8.9	1.5	88.3	< 0.001	1.01	0.2	4
163466	< 10	< 0.1	< 0.1	4.44	3.7	15.5	< 0.1	0.37	161	1.74	1.62	2.1	2.6	7.2	0.025	13	0.7	104	0.004	0.47	0.2	4
163467	< 10	< 0.1	< 0.1	4.2	5.7	13.9	< 0.1	0.49	165	2.9	2.15	2.4	5	7.7	0.026	9.9	1.3	83.3	< 0.001	0.2	0.3	4
163468	30	0.2	< 0.1	1.01	8.5	12.4	< 0.1	1.51	279	4.85	> 3.00	1.8	7.6	30.2	0.028	5.3	2.1	39.8	< 0.001	0.03	< 0.1	11
163469	< 10	< 0.1	< 0.1	4.69	3.3	11.6	< 0.1	0.38	155	12.5	2.22	2.8	3.2	5.5	0.021	8.8	0.8	93.7	0.003	0.19	0.1	3

2015 Hiawatha Property Sample Descriptions

Sample No	Hg_TD-MS	Ho_TD-MS	In_TD-MS	K_TD-MS	La_TD-MS	Li_TD-MS	Lu_TD-MS	Mg_TD-MS	Mn_TD-MS	Mo_TD-MS	Na_TD-MS	Nb_TD-MS	Nd_TD-MS	Ni_TD-MS	P_TD-ICP	Pb_TD-MS	Pr_TD-MS	Rb_TD-MS	Re_TD-MS	S_TD-ICP	Sb_TD-MS	Sc_TD-ICP
	ppb	ppm	ppm	%	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm
163470	< 10	< 0.1	< 0.1	0.05	0.2	0.5	< 0.1	0.06	124	16.4	0.88	0.1	0.2	4.2	0.001	4.3	< 0.1	1.2	< 0.001	< 0.01	0.1	1
163471	30	< 0.1	< 0.1	0.48	0.2	1.8	< 0.1	1.09	329	0.44	0.09	0.3	0.5	24	0.008	1.1	< 0.1	12.8	< 0.001	< 0.01	0.1	10
163472	< 10	0.8	< 0.1	2.19	21.1	24.5	0.3	3.13	1250	< 0.05	> 3.00	< 0.1	25.3	25.5	0.08	5.6	6.1	53.1	0.005	0.18	< 0.1	34
163473	< 10	< 0.1	< 0.1	2.23	4.8	6.5	< 0.1	0.44	164	2.26	2.47	2.2	4.5	9.7	0.025	6.8	1.2	49.7	< 0.001	0.18	0.2	3
163474	< 10	0.1	< 0.1	0.12	4.1	1.8	< 0.1	0.1	109	22.2	> 3.00	3.6	3.5	13.4	0.016	4.2	0.9	2.4	0.004	0.2	0.1	3
163475	< 10	< 0.1	< 0.1	0.37	7.1	1.9	< 0.1	0.17	107	33.8	> 3.00	2.9	5.6	4.7	0.011	5.8	1.6	7.2	0.01	0.21	< 0.1	2
163476	< 10	< 0.1	< 0.1	0.05	2.4	2	< 0.1	0.11	84	36.7	> 3.00	1.7	1.9	4.6	0.007	5.7	0.5	0.8	0.003	0.04	0.1	< 1

2015 Hiawatha Property Sample Descriptions

Sample No	Hg_TD-MS	Ho_TD-MS	In_TD-MS	K_TD-MS	La_TD-MS	Li_TD-MS	Lu_TD-MS	Mg_TD-MS	Mn_TD-MS	Mo_TD-MS	Na_TD-MS	Nb_TD-MS	Nd_TD-MS	Ni_TD-MS	P_TD-ICP	Pb_TD-MS	Pr_TD-MS	Rb_TD-MS	Re_TD-MS	S_TD-ICP	Sb_TD-MS	Sc_TD-ICP
	ppb	ppm	ppm	%	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm
163477	< 10	0.1	< 0.1	0.57	1.6	8.6	< 0.1	1.28	352	898	0.83	1.1	1.5	23.5	0.007	87.7	0.3	14.4	0.016	0.03	0.2	12
163478	20	0.2	< 0.1	0.11	0.6	13.8	0.1	1.73	523	4.27	0.39	0.6	1.4	44.6	0.009	1.7	0.3	1.9	< 0.001	0.05	0.1	17
163479	10	< 0.1	< 0.1	0.03	0.5	3.3	< 0.1	0.79	383	2.12	0.13	0.3	0.8	211	0.005	10.5	0.2	0.6	< 0.001	0.3	0.2	4
163480	< 10	0.7	< 0.1	1.06	18.7	34.6	0.3	3.39	730	1.16	2.45	4.9	28.7	25.6	0.198	10.2	6.5	15.5	< 0.001	1.41	0.5	20
163481	10	0.5	< 0.1	0.44	1.6	14.5	0.3	5.8	1360	8.59	1.36	0.8	4.2	175	0.027	2.8	0.8	8	< 0.001	0.92	< 0.1	29

2015 Hiawatha Property Sample Descriptions

Sample No	Hg_TD-MS	Ho_TD-MS	In_TD-MS	K_TD-MS	La_TD-MS	Li_TD-MS	Lu_TD-MS	Mg_TD-MS	Mn_TD-MS	Mo_TD-MS	Na_TD-MS	Nb_TD-MS	Nd_TD-MS	Ni_TD-MS	P_TD-ICP	Pb_TD-MS	Pr_TD-MS	Rb_TD-MS	Re_TD-MS	S_TD-ICP	Sb_TD-MS	Sc_TD-ICP
	ppb	ppm	ppm	%	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm
163482	< 10	< 0.1	< 0.1	2.8	2.7	13.1	< 0.1	0.27	117	4.16	0.67	1.5	2.3	7	0.014	65.9	0.6	65.2	< 0.001	0.48	1.5	3

Sample No	Se_TD-MS	Sm_TD-MS	Sn_TD-MS	Sr_TD-MS	Ta_TD-MS	Tb_TD-MS	Te_TD-MS	Th_TD-MS	Ti_TD-ICP	Tl_TD-MS	Tm_TD-MS	U_TD-MS	V_TD-MS	W_TD-MS	Y_TD-MS	Yb_TD-MS	Zn_TD-MS	Zr_TD-MS
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
163401	< 0.1	0.4	< 1	129	0.1	< 0.1	2	0.7	0.0607	0.21	< 0.1	0.2	19	2.8	1.5	0.1	24.6	28
163402	< 0.1	0.6	< 1	111	0.1	< 0.1	0.6	0.6	0.056	0.25	< 0.1	0.2	14	2.5	1.6	0.1	30.3	26
163403	0.5	1	< 1	194	0.3	0.1	1.6	1.2	0.107	0.53	< 0.1	0.4	30	5.3	2.9	0.3	27	55
163404	< 0.1	1.1	< 1	169	0.3	0.1	0.4	1.3	0.124	0.42	< 0.1	0.4	28	5.5	2.9	0.3	40.1	53
163405	< 0.1	1.6	1	250	0.3	0.2	< 0.1	1.5	0.184	0.47	< 0.1	0.7	43	7	4.2	0.4	46.7	67
163406	< 0.1	1.2	1	260	0.3	0.1	< 0.1	1.4	0.158	0.54	< 0.1	1	42	7.3	3.7	0.3	32.2	70

Sample No	Se_TD-MS ppm	Sm_TD-MS ppm	Sn_TD-MS ppm	Sr_TD-MS ppm	Ta_TD-MS ppm	Tb_TD-MS ppm	Te_TD-MS ppm	Th_TD-MS ppm	Ti_TD-ICP %	Tl_TD-MS ppm	Tm_TD-MS ppm	U_TD-MS ppm	V_TD-MS ppm	W_TD-MS ppm	Y_TD-MS ppm	Yb_TD-MS ppm	Zn_TD-MS ppm	Zr_TD-MS ppm
163407	< 0.1	0.7	< 1	28.2	0.2	< 0.1	2.2	0.6	0.0817	0.36	< 0.1	0.2	19	3.3	1.9	0.2	836	31
163408	0.9	0.3	< 1	7.2	< 0.1	< 0.1	1.5	0.3	0.0365	0.19	< 0.1	< 0.1	8	2	0.9	< 0.1	1190	14
163409	1.5	0.3	< 1	63.9	< 0.1	< 0.1	3.3	< 0.1	0.072	0.05	< 0.1	< 0.1	46	1.1	2.9	0.3	379	4
163410	< 0.1	0.9	< 1	110	0.2	0.1	0.2	1.5	0.189	0.27	< 0.1	0.3	74	1.6	3.5	0.3	141	50

Sample No	Se_TD-MS	Sm_TD-MS	Sn_TD-MS	Sr_TD-MS	Ta_TD-MS	Tb_TD-MS	Te_TD-MS	Th_TD-MS	Ti_TD-ICP	Tl_TD-MS	Tm_TD-MS	U_TD-MS	V_TD-MS	W_TD-MS	Y_TD-MS	Yb_TD-MS	Zn_TD-MS	Zr_TD-MS
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
163411	< 0.1	< 0.1	< 1	7.6	< 0.1	< 0.1	0.3	< 0.1	0.0219	< 0.05	< 0.1	< 0.1	< 1	0.3	0.6	< 0.1	6.3	< 1
163412	0.5	5.3	5	303	1.7	0.6	< 0.1	16	0.511	0.91	0.4	4.3	134	2	22.4	2.4	88.6	95
163413	< 0.1	1.1	< 1	262	0.1	0.1	0.5	1.2	0.161	0.22	< 0.1	0.4	34	0.9	3.4	0.3	29.5	42
163414	< 0.1	0.9	< 1	217	0.2	< 0.1	< 0.1	1.3	0.104	< 0.05	< 0.1	0.3	15	0.5	1.6	0.1	25.6	42
163415	< 0.1	1.2	< 1	245	0.1	0.1	0.1	1.4	0.0504	< 0.05	< 0.1	0.7	5	0.2	2.3	0.2	11.8	34
163416	< 0.1	1.3	< 1	368	0.4	0.1	< 0.1	1.4	0.237	0.15	< 0.1	0.4	71	0.2	4.3	0.4	64.2	69

Sample No	Se_TD-MS	Sm_TD-MS	Sn_TD-MS	Sr_TD-MS	Ta_TD-MS	Tb_TD-MS	Te_TD-MS	Th_TD-MS	Ti_TD-ICP	Tl_TD-MS	Tm_TD-MS	U_TD-MS	V_TD-MS	W_TD-MS	Y_TD-MS	Yb_TD-MS	Zn_TD-MS	Zr_TD-MS
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
163417	83.8	1.8	< 1	432	< 0.1	0.3	< 0.1	0.9	0.391	0.13	0.2	0.3	154	< 0.1	9.8	1.1	47.6	51
163418	< 0.1	3.2	< 1	212	< 0.1	0.7	< 0.1	0.4	0.875	0.09	0.6	0.2	325	< 0.1	29	3.5	99	34
163419	< 0.1	1.1	1	222	0.3	0.1	0.2	1.1	0.145	0.27	< 0.1	0.4	35	5.2	3.3	0.3	45.7	56
163420	< 0.1	1.4	< 1	338	0.3	0.1	0.4	2.5	0.158	0.15	< 0.1	0.6	21	0.5	4.8	0.5	23.4	48
163421	< 0.1	0.9	< 1	499	0.3	< 0.1	0.1	1.6	0.19	0.22	< 0.1	0.6	45	5.4	3.2	0.3	32.3	68

Sample No	Se_TD-MS	Sm_TD-MS	Sn_TD-MS	Sr_TD-MS	Ta_TD-MS	Tb_TD-MS	Te_TD-MS	Th_TD-MS	Ti_TD-ICP	Tl_TD-MS	Tm_TD-MS	U_TD-MS	V_TD-MS	W_TD-MS	Y_TD-MS	Yb_TD-MS	Zn_TD-MS	Zr_TD-MS
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
163422	< 0.1	1.2	< 1	241	0.3	0.1	< 0.1	2.6	0.0346	0.09	< 0.1	0.6	7	0.1	2.2	0.2	16.9	48
163423	< 0.1	3.4	< 1	148	< 0.1	0.9	< 0.1	0.4	0.326	0.05	0.7	0.1	261	< 0.1	36.3	4.2	115	22
163424	< 0.1	3.1	< 1	170	< 0.1	0.6	< 0.1	1.9	0.439	0.18	0.5	0.6	227	< 0.1	23.3	2.7	119	69
163425	< 0.1	1.2	< 1	56.6	< 0.1	0.3	< 0.1	0.1	0.358	< 0.05	0.2	< 0.1	242	< 0.1	12.1	1.4	69.5	12
163426	< 0.1	1.1	< 1	308	0.2	0.1	< 0.1	1.3	0.18	0.33	< 0.1	0.4	39	1.9	3.6	0.4	22.3	45
163427	< 0.1	1.8	< 1	422	0.2	0.2	< 0.1	2.3	0.214	0.21	< 0.1	0.5	49	0.2	5	0.5	44.1	33
163428	< 0.1	2.6	< 1	147	< 0.1	0.6	< 0.1	0.3	0.653	0.09	0.5	< 0.1	303	< 0.1	25.2	3	125	12

2015 Hiawatha Property Sample Descriptions

Sample No	Se_TD-MS	Sm_TD-MS	Sn_TD-MS	Sr_TD-MS	Ta_TD-MS	Tb_TD-MS	Te_TD-MS	Th_TD-MS	Ti_TD-ICP	Tl_TD-MS	Tm_TD-MS	U_TD-MS	V_TD-MS	W_TD-MS	Y_TD-MS	Yb_TD-MS	Zn_TD-MS	Zr_TD-MS
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
163429	< 0.1	3.5	< 1	129	0.5	0.9	< 0.1	0.4	1.18	0.06	0.7	0.1	292	0.3	34.7	4.4	114	61
163430	< 0.1	0.7	< 1	289	0.2	< 0.1	< 0.1	1.6	0.187	0.17	< 0.1	0.4	47	1.3	3	0.4	24.5	62
163431	57.1	2.2	< 1	25	< 0.1	0.4	2.2	0.1	0.158	0.09	0.4	0.5	41	0.1	18.6	2.1	19.8	17
163432	< 0.1	3.4	< 1	127	0.6	0.3	< 0.1	6.3	0.248	0.46	0.2	1.5	82	1.2	10.2	1.3	139	104
163433	0.3	2.2	< 1	121	0.4	0.2	0.2	2	0.189	0.29	0.1	0.6	48	2	6.3	0.7	294	90
163434	< 0.1	2.3	3	233	< 0.1	0.4	< 0.1	0.5	0.431	0.05	0.3	0.4	216	< 0.1	14	1.7	134	22
163435	< 0.1	0.5	< 1	74.5	< 0.1	< 0.1	0.2	0.7	0.0699	0.22	< 0.1	0.2	44	2.1	1.6	0.2	18.2	31

2015 Hiawatha Property Sample Descriptions

Sample No	Se_TD-MS	Sm_TD-MS	Sn_TD-MS	Sr_TD-MS	Ta_TD-MS	Tb_TD-MS	Te_TD-MS	Th_TD-MS	Ti_TD-ICP	Tl_TD-MS	Tm_TD-MS	U_TD-MS	V_TD-MS	W_TD-MS	Y_TD-MS	Yb_TD-MS	Zn_TD-MS	Zr_TD-MS
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
163436	< 0.1	4.8	1	323	< 0.1	0.7	< 0.1	3.4	0.422	0.1	0.3	1	79	< 0.1	19.6	1.7	124	47
163437	< 0.1	1.3	< 1	192	0.5	0.1	0.3	2.6	0.174	0.19	< 0.1	0.8	35	3.7	3.2	0.3	27.6	101
163438	< 0.1	0.2	< 1	10.1	< 0.1	< 0.1	1.2	< 0.1	0.0664	0.07	< 0.1	< 0.1	41	2.3	1.4	0.2	14.7	4
163439	0.5	0.2	< 1	18.4	< 0.1	< 0.1	2.6	< 0.1	0.0342	0.09	< 0.1	< 0.1	26	19.2	1.6	0.2	13.2	2
163440	1.8	0.5	< 1	54.7	< 0.1	0.1	3.4	< 0.1	0.272	0.18	0.1	0.1	183	1.6	6.3	0.8	244	8
163441	< 0.1	1.1	< 1	53.4	< 0.1	0.3	0.2	0.1	0.351	0.26	0.2	0.8	215	9.6	11.1	1.4	119	10

2015 Hiawatha Property Sample Descriptions

Sample No	Se_TD-MS	Sm_TD-MS	Sn_TD-MS	Sr_TD-MS	Ta_TD-MS	Tb_TD-MS	Te_TD-MS	Th_TD-MS	Ti_TD-ICP	Tl_TD-MS	Tm_TD-MS	U_TD-MS	V_TD-MS	W_TD-MS	Y_TD-MS	Yb_TD-MS	Zn_TD-MS	Zr_TD-MS
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
163442	0.3	0.5	< 1	5.4	< 0.1	0.1	0.2	0.1	0.191	< 0.05	0.1	< 0.1	93	4.4	5.6	0.7	66.9	6
163443	< 0.1	1.2	< 1	136	0.4	0.1	0.2	1.6	0.146	0.31	< 0.1	0.6	28	4	3.8	0.3	36.8	79
163444	< 0.1	0.4	< 1	13.5	< 0.1	< 0.1	5.3	< 0.1	0.0283	< 0.05	< 0.1	< 0.1	20	2.1	2.3	0.3	19.3	2
163445	1	2.4	< 1	148	0.2	0.2	1.1	2.5	0.277	0.14	0.1	1.4	141	2.2	7.4	0.8	93.5	78
163446	0.6	0.3	< 1	10.5	< 0.1	< 0.1	4.1	0.3	0.0519	0.09	< 0.1	< 0.1	29	6.6	1.1	0.1	119	8

Sample No	Se_TD-MS	Sm_TD-MS	Sn_TD-MS	Sr_TD-MS	Ta_TD-MS	Tb_TD-MS	Te_TD-MS	Th_TD-MS	Ti_TD-ICP	Tl_TD-MS	Tm_TD-MS	U_TD-MS	V_TD-MS	W_TD-MS	Y_TD-MS	Yb_TD-MS	Zn_TD-MS	Zr_TD-MS
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
163447	1.3	0.2	< 1	13.4	< 0.1	< 0.1	13.1	0.4	0.0393	0.21	< 0.1	< 0.1	21	87.7	0.9	0.1	208	7
163448	< 0.1	5.4	1	134	1.7	0.7	< 0.1	5.9	1.74	0.32	0.4	1.9	523	1.3	22.1	2.2	111	145
163449	< 0.1	0.3	< 1	13.3	< 0.1	< 0.1	< 0.1	0.3	0.0373	0.1	< 0.1	0.1	9	0.5	0.8	< 0.1	8	11
163450	< 0.1	0.2	< 1	18.9	< 0.1	< 0.1	< 0.1	0.4	0.0523	0.08	< 0.1	0.2	16	1	1.1	0.1	6.7	4
163451	< 0.1	0.3	< 1	57.1	< 0.1	< 0.1	0.7	0.1	0.139	0.07	< 0.1	< 0.1	85	1	3.3	0.4	29	9
163452	< 0.1	< 0.1	< 1	28.3	< 0.1	< 0.1	< 0.1	< 0.1	0.0228	< 0.05	< 0.1	0.3	4	0.2	0.6	< 0.1	8.5	< 1
163453	< 0.1	1.6	1	305	< 0.1	0.1	< 0.1	1.6	0.193	0.88	< 0.1	0.4	40	3.1	4.2	0.4	23.9	53

2015 Hiawatha Property Sample Descriptions

Sample No	Se_TD-MS ppm	Sm_TD-MS ppm	Sn_TD-MS ppm	Sr_TD-MS ppm	Ta_TD-MS ppm	Tb_TD-MS ppm	Te_TD-MS ppm	Th_TD-MS ppm	Ti_TD-ICP %	Tl_TD-MS ppm	Tm_TD-MS ppm	U_TD-MS ppm	V_TD-MS ppm	W_TD-MS ppm	Y_TD-MS ppm	Yb_TD-MS ppm	Zn_TD-MS ppm	Zr_TD-MS ppm
163454	< 0.1	1.1	< 1	612	0.3	0.1	< 0.1	1.3	0.176	0.28	< 0.1	0.4	39	3.6	3.5	0.4	24.7	56
164455	< 0.1	0.2	< 1	33.9	< 0.1	< 0.1	< 0.1	0.2	0.0399	< 0.05	< 0.1	< 0.1	5	0.6	0.6	< 0.1	6.1	6
163456	< 0.1	0.3	< 1	57.4	< 0.1	< 0.1	1	0.5	0.0522	0.22	< 0.1	0.1	14	4.2	0.6	< 0.1	43.6	16
163457	< 0.1	0.6	< 1	132	0.2	< 0.1	0.6	1.1	0.146	0.49	< 0.1	0.3	29	10.8	2.1	0.2	48.4	39
163458	< 0.1	0.2	< 1	31.8	< 0.1	< 0.1	0.8	0.2	0.0253	0.2	< 0.1	< 0.1	5	1.3	0.4	< 0.1	10	9

2015 Hiawatha Property Sample Descriptions

Sample No	Se_TD-MS ppm	Sm_TD-MS ppm	Sn_TD-MS ppm	Sr_TD-MS ppm	Ta_TD-MS ppm	Tb_TD-MS ppm	Te_TD-MS ppm	Th_TD-MS ppm	Ti_TD-ICP %	Tl_TD-MS ppm	Tm_TD-MS ppm	U_TD-MS ppm	V_TD-MS ppm	W_TD-MS ppm	Y_TD-MS ppm	Yb_TD-MS ppm	Zn_TD-MS ppm	Zr_TD-MS ppm
163459	< 0.1	0.5	< 1	80	0.2	< 0.1	0.4	0.7	0.104	0.24	< 0.1	0.2	20	3.4	1.6	0.2	26.7	30
163460	9.1	2.4	10	439	0.7	0.3	0.6	3.4	0.369	0.3	0.2	1.2	179	3.1	13.2	1.5	105	52
163461	< 0.1	0.7	< 1	125	0.1	< 0.1	0.5	0.8	0.0982	0.5	< 0.1	0.2	22	6.1	1.9	0.2	21	23
163462	< 0.1	1.4	< 1	275	0.3	0.1	< 0.1	1.4	0.181	0.64	< 0.1	0.6	34	9.2	4	0.4	19.9	44
163463	< 0.1	1.2	1	304	0.3	0.1	< 0.1	1.3	0.187	0.48	< 0.1	0.6	36	8.4	3.5	0.3	27.4	48
163464	< 0.1	0.7	< 1	88.5	0.2	< 0.1	0.1	0.8	0.107	0.42	< 0.1	0.3	22	2.3	2	0.2	42.8	35

2015 Hiawatha Property Sample Descriptions

Sample No	Se_TD-MS	Sm_TD-MS	Sn_TD-MS	Sr_TD-MS	Ta_TD-MS	Tb_TD-MS	Te_TD-MS	Th_TD-MS	Ti_TD-ICP	Tl_TD-MS	Tm_TD-MS	U_TD-MS	V_TD-MS	W_TD-MS	Y_TD-MS	Yb_TD-MS	Zn_TD-MS	Zr_TD-MS
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
163465	< 0.1	0.9	1	102	0.2	< 0.1	0.2	1	0.145	0.53	< 0.1	0.4	30	6	2.2	0.2	6.9	57
163466	< 0.1	0.4	< 1	180	0.2	< 0.1	0.8	1	0.125	0.54	< 0.1	0.3	26	8.6	2	0.2	9.3	34
163467	< 0.1	0.9	1	87.7	0.1	< 0.1	0.2	1.1	0.145	0.46	< 0.1	0.2	29	4.7	2.6	0.2	17.7	40
163468	< 0.1	1.3	< 1	323	0.2	0.1	< 0.1	1.5	0.208	0.2	< 0.1	0.4	63	0.6	4.7	0.5	25.2	57
163469	< 0.1	0.5	1	129	0.3	< 0.1	0.3	1.1	0.133	0.51	< 0.1	0.3	26	5.4	1.8	0.2	23.7	38

Sample No	Se_TD-MS	Sm_TD-MS	Sn_TD-MS	Sr_TD-MS	Ta_TD-MS	Tb_TD-MS	Te_TD-MS	Th_TD-MS	Ti_TD-ICP	Tl_TD-MS	Tm_TD-MS	U_TD-MS	V_TD-MS	W_TD-MS	Y_TD-MS	Yb_TD-MS	Zn_TD-MS	Zr_TD-MS
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
163470	< 0.1	< 0.1	< 1	69.2	< 0.1	< 0.1	0.2	< 0.1	0.0097	< 0.05	< 0.1	< 0.1	20	0.1	0.5	< 0.1	2.3	< 1
163471	< 0.1	0.1	< 1	38.1	< 0.1	< 0.1	< 0.1	< 0.1	0.0627	0.07	< 0.1	< 0.1	43	0.3	1.8	0.2	17.5	3
163472	< 0.1	5.4	< 1	129	< 0.1	0.7	< 0.1	6.4	0.227	0.3	0.4	1.8	202	< 0.1	21.7	2.1	108	26
163473	< 0.1	0.8	1	149	0.2	< 0.1	< 0.1	0.9	0.127	0.29	< 0.1	0.3	21	1.4	2.5	0.3	19.3	41
163474	< 0.1	0.7	1	68.2	0.4	< 0.1	0.2	1.7	0.121	< 0.05	< 0.1	0.9	29	2	3.1	0.3	15.2	58
163475	< 0.1	0.9	< 1	107	0.4	< 0.1	0.2	1.9	0.0664	< 0.05	< 0.1	0.7	17	0.5	2.5	0.3	6.1	32
163476	< 0.1	0.3	< 1	65.8	0.2	< 0.1	0.2	1.1	0.0436	< 0.05	< 0.1	0.3	4	0.4	1	0.1	4.2	17

2015 Hiawatha Property Sample Descriptions

Sample No	Se_TD-MS	Sm_TD-MS	Sn_TD-MS	Sr_TD-MS	Ta_TD-MS	Tb_TD-MS	Te_TD-MS	Th_TD-MS	Ti_TD-ICP	Tl_TD-MS	Tm_TD-MS	U_TD-MS	V_TD-MS	W_TD-MS	Y_TD-MS	Yb_TD-MS	Zn_TD-MS	Zr_TD-MS
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
163477	< 0.1	0.3	1	275	< 0.1	< 0.1	2.6	0.2	0.111	0.16	< 0.1	0.1	87	0.8	3.3	0.3	30.2	14
163478	< 0.1	0.5	< 1	48	< 0.1	0.1	< 0.1	< 0.1	0.139	< 0.05	0.1	< 0.1	85	1.1	5.6	0.7	26.1	6
163479	< 0.1	0.3	< 1	31.2	< 0.1	< 0.1	0.2	< 0.1	0.031	< 0.05	< 0.1	< 0.1	16	0.3	2.6	0.3	40.6	3
163480	0.4	5.7	1	86.8	0.3	0.6	0.2	2.9	0.522	0.13	0.3	1	170	1.6	17.5	1.8	47.1	96
163481	0.2	1.4	1	54.1	< 0.1	0.3	< 0.1	0.3	0.487	< 0.05	0.3	< 0.1	205	26.4	13.4	1.6	87.9	16

Sample No	Se_TD-MS	Sm_TD-MS	Sn_TD-MS	Sr_TD-MS	Ta_TD-MS	Tb_TD-MS	Te_TD-MS	Th_TD-MS	Ti_TD-ICP	Tl_TD-MS	Tm_TD-MS	U_TD-MS	V_TD-MS	W_TD-MS	Y_TD-MS	Yb_TD-MS	Zn_TD-MS	Zr_TD-MS
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
163482	< 0.1	0.5	< 1	74.2	0.2	< 0.1	1.4	0.6	0.0925	0.32	< 0.1	0.2	19	6.1	1.4	0.1	86.5	23

Appendix 3

Quality Analysis ... **Actlabs** *Innovative Technologies*

Date Submitted:	24-Aug-15
Invoice No.:	A15-06926-Au
Invoice Date:	08-Sep-15
Your Reference:	

Trelawney Mining and Exploration
PO BOX 100
Gogama ON P0M 1W0
Canada

ATTN: Alan Smith

CERTIFICATE OF ANALYSIS

82 Rock samples were submitted for analysis.

The following analytical package was requested:

Code 1A2-50-(ppm)Sudbury Au - Fire Assay AA
Code 1A4 (100mesh)-Sudbury-Trelawney Au-Fire Assay-Metallic Screen-500g
Code Wgt Rpt (kg)-Internal Sudbury Received Weights

REPORT **A15-06926-Au**

Notes:

A representative 500 gram split is seived at 100 mesh (149 micron) with assays performed on the entire +100 mesh and 2 splits of the -100 mesh fraction. A final assay is calculated based on the weight of each fraction.
If value exceeds upper limit we recommend reassay by fire assay gravimetric-Code 1A3

Footnote: No reject material is remainiing for samples 163404, 163447 and 163482 to perform 1A4 analysis.

CERTIFIED BY:

Emmanuel Eseme , Ph.D.
Quality Control

SCC Accredited LAB
LAB Accrédité CCN

ACTIVATION LABORATORIES LTD.

1010 Lorne Street Unit West 4, Sudbury, Ontario, Canada, P3C 4R9
TELEPHONE +705 586-3288 or +1.888.228.5227 FAX +1.905.648.9613
E-MAIL Sudbury@actlabs.com ACTLABS GROUP WEBSITE www.actlabs.com

Quality Analysis ... *Innovative Technologies*

Date Submitted:	24-Aug-15
Invoice No.:	A15-06926-Au
Invoice Date:	08-Sep-15
Your Reference:	

Trelawney Mining and Exploration
PO BOX 100
Gogama ON P0M 1W0
Canada

ATTN: Alan Smith

CERTIFICATE OF ANALYSIS

82 Rock samples were submitted for analysis.

The following analytical package was requested: Code UT-6 Total Digestion ICP & ICP/MS

REPORT **A15-06926-Au**

Notes:

A representative 500 gram split is seived at 100 mesh (149 micron) with assays performed on the entire +100 mesh and 2 splits of the -100 mesh fraction. A final assay is calculated based on the weight of each fraction.
If value exceeds upper limit we recommend reassay by fire assay gravimetric-Code 1A3

Footnote: No reject material is remainiing for samples 163404, 163447 and 163482 to perform 1A4 analysis.

CERTIFIED BY:

Emmanuel Eseme , Ph.D.
Quality Control

SCC Accredited LAB
LAB Accrédité CCN

ACTIVATION LABORATORIES LTD.

41 Bittern Street, Ancaster, Ontario, Canada, L9G 4V5
TELEPHONE +905 648-9611 or +1.888.228.5227 FAX +1.905.648.9613
E-MAIL Ancaster@actlabs.com ACTLABS GROUP WEBSITE www.actlabs.com

Results

Analyte Symbol	Au	Au + 100 mesh	Au - 100 mesh (A)	Au - 100 mesh (B)	Total Au	+ 100 mesh	- 100 mesh	Total Weight	AU_SFA_PPM	Au
Unit Symbol	ppm	g/mt	g/mt	g/mt	g/mt	g	g	g	ppm	g/tonne
Lower Limit	0.005	0.07	0.07	0.07	0.07				0.07	0.02
Method Code	FA-AA	FA-MeT	FA-MeT	FA-MeT	FA-MeT	FA-MeT	FA-MeT	FA-MeT	FA-MeT	FA-GRA
163401	1.008									
163402	0.317									
163403	0.217									
163404	> 5.000									21.9
163405	0.018									
163406	0.057									
163407	> 5.000	36.8	5.93	5.31	6.41	20.32	772.81	793.13	6.41	6.43
163408	> 5.000	72.4	4.38	3.65	5.52	17.98	793.70	811.66	5.52	5.49
163409	> 5.000	107	10.2	10.5	12.6	18.55	794.60	813.10	12.6	13.6
163410	0.076									
163411	0.010									
163412	0.253									
163413	0.039									
163414	< 0.005									
163415	< 0.005									
163416	< 0.005									
163417	< 0.005									
163418	0.005									
163419	0.153									
163420	0.009									
163421	0.151									
163422	0.006									
163423	0.005									
163424	< 0.005									
163425	0.005									
163426	< 0.005									
163427	< 0.005									
163428	0.005									
163429	0.005									
163430	< 0.005									
163431	0.022									
163432	0.013									
163433	< 0.005									
163434	< 0.005									
163435	0.074									
163436	0.996									
163437	0.083									
163438	1.751									
163439	> 5.000	13.5	7.75	7.30	7.96	19.73	247.60	267.28	7.96	7.48
163440	0.733									
163441	0.063									
163442	0.009									
163443	0.088									
163444	3.458	0.68	3.64	4.45	3.91	19.22	468.90	488.12	3.91	3.35
163445	0.053									
163446	> 5.000	279	24.5	26.0	30.9	20.25	886.70	906.98	30.9	38.6
163447	> 5.000									34.4
163448	0.024									

Analyte Symbol	Au	Au + 100 mesh	Au - 100 mesh (A)	Au - 100 mesh (B)	Total Au	+ 100 mesh	- 100 mesh	Total Weight	AU_SFA_PPM	Au
Unit Symbol	ppm	g/mt	g/mt	g/mt	g/mt	g	g	g	ppm	g/tonne
Lower Limit	0.005	0.07	0.07	0.07	0.07				0.07	0.02
Method Code	FA-AA	FA-MeT	FA-MeT	FA-MeT	FA-MeT	FA-MeT	FA-MeT	FA-MeT	FA-MeT	FA-GRA
163449	0.005									
163450	0.021									
163451	0.112									
163452	< 0.005									
163453	0.158									
163454	0.015									
163455	< 0.005									
163456	> 5.000	103	4.79	3.95	7.13	23.70	820.70	844.43	7.13	3.45
163457	0.511									
163458	0.133									
163459	2.439									
163460	1.409									
163461	0.067									
163462	0.422									
163463	0.475									
163464	0.088									
163465	0.050									
163466	0.044									
163467	0.051									
163468	< 0.005									
163469	0.017									
163470	0.005									
163471	< 0.005									
163472	< 0.005									
163473	< 0.005									
163474	< 0.005									
163475	0.005									
163476	< 0.005									
163477	0.008									
163478	0.006									
163479	0.008									
163480	0.069									
163481	< 0.005									
163482	> 5.000									75.5

QC

Analyte Symbol	Au	Total Au	Total Weight	AU_SFA _PPM	Au
Unit Symbol	ppm	g/mt	g	ppm	g/tonne
Lower Limit	0.005	0.07		0.07	0.02
Method Code	FA-AA	FA-MeT	FA-MeT	FA-MeT	FA-GRA
HiSilP1 Meas		12.0			
HiSilP1 Cert		12.05			
HiSilP1 Meas		12.6			
HiSilP1 Cert		12.05			
OxD108 Meas	0.424				
OxD108 Cert	0.414				
OxD108 Meas	0.421				
OxD108 Cert	0.414				
OxD108 Meas	0.416				
OxD108 Cert	0.414				
SG66 Meas	1.098				
SG66 Cert	1.086				
SG66 Meas	1.084				
SG66 Cert	1.086				
SG66 Meas	1.094				
SG66 Cert	1.086				
OxK110 Meas					3.56
OxK110 Cert					3.602
OxK110 Meas					3.62
OxK110 Cert					3.602
OxL118 Meas		5.82			5.75
OxL118 Cert		5.828			5.828
OxL118 Meas		5.85			5.95
OxL118 Cert		5.828			5.828
163410 Orig	0.077				
163410 Dup	0.075				
163420 Orig	0.010				
163420 Dup	0.009				
163430 Orig	< 0.005				
163430 Dup	< 0.005				
163445 Orig	0.053				
163445 Dup	0.052				
163450 Split Orig	0.021				
163450 Split	0.017				
163455 Orig	< 0.005				
163455 Dup	< 0.005				
163465 Orig	0.054				
163465 Dup	0.045				
163479 Orig	0.007				
163479 Dup	0.008				
163482 Orig					75.1
163482 Dup					75.8
Method Blank		< 0.07	0.00000		
Method Blank		< 0.07	0.00000		
Method Blank	< 0.005				
Method Blank	< 0.005				
Method Blank	< 0.005				
Method Blank	< 0.005				

Analyte Symbol	Au	Total Au	Total Weight	AU_SFA_PPM	Au
Unit Symbol	ppm	g/mt	g	ppm	g/tonne
Lower Limit	0.005	0.07		0.07	0.02
Method Code	FA-AA	FA-MeT	FA-MeT	FA-MeT	FA-GRA
Method Blank	< 0.005				
Method Blank	< 0.005				
Method Blank					< 0.02
Method Blank					< 0.02
Method Blank		< 0.07	0.00000		
Method Blank		< 0.07	0.00000		
Method Blank					< 0.02
Method Blank					< 0.02

Quality Analysis ... *Innovative Technologies*

Date Submitted:	24-Aug-15
Invoice No.:	A15-06926-TD
Invoice Date:	22-Sep-15
Your Reference:	

Trelawney Mining and Exploration
PO BOX 100
Gogama ON P0M 1W0
Canada

ATTN: Alan Smith

CERTIFICATE OF ANALYSIS

82 Rock samples were submitted for analysis.

The following analytical package was requested: Code UT-6 Total Digestion ICP & ICP/MS

REPORT **A15-06926-TD**

Notes:

CERTIFIED BY:

Emmanuel Eseme , Ph.D.
Quality Control

ACTIVATION LABORATORIES LTD.

41 Bittern Street, Ancaster, Ontario, Canada, L9G 4V5
TELEPHONE +905 648-9611 or +1.888.228.5227 FAX +1.905.648.9613
E-MAIL Ancaster@actlabs.com ACTLABS GROUP WEBSITE www.actlabs.com

Results

Analyte Symbol	Li	Na	Mg	Al	K	Ca	Cd	V	Cr	Mn	Fe	Hf	Hg	Ni	Er	Be	Ho	Ag	Cs	Co	Eu	Bi	Se
Unit Symbol	ppm	%	%	%	%	%	ppm	ppm	ppm	ppm	%	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	0.5	0.01	0.01	0.01	0.01	0.01	0.1	1	0.5	1	0.01	0.1	10	0.5	0.1	0.1	0.1	0.05	0.05	0.1	0.05	0.02	0.1
Method Code	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS
163401	7.7	2.36	0.28	5.38	1.17	0.98	< 0.1	19	38.6	145	1.38	1.5	< 10	8.7	0.2	0.7	< 0.1	3.93	0.26	4.2	0.16	6.84	< 0.1
163402	7.9	1.76	0.25	4.39	1.44	0.86	0.2	14	52.2	157	1.46	1.4	< 10	8.1	0.2	0.5	< 0.1	2.82	0.30	4.2	0.15	4.52	< 0.1
163403	16.8	2.84	0.57	8.19	2.73	1.40	0.2	30	54.2	177	2.28	2.9	< 10	13.1	0.3	1.1	0.1	8.14	0.56	8.1	0.29	17.2	0.5
163404	17.2	> 3.00	0.67	8.70	2.90	1.17	0.1	28	58.2	235	2.29	3.0	< 10	14.5	0.3	1.2	0.1	4.59	0.56	6.8	0.29	7.30	< 0.1
163405	22.0	> 3.00	0.90	> 10.0	3.12	2.83	0.2	43	42.2	223	2.39	3.8	< 10	16.9	0.5	0.9	0.1	0.96	0.67	8.7	0.41	1.77	< 0.1
163406	21.2	> 3.00	0.89	> 10.0	3.73	1.85	0.1	42	41.8	217	2.48	3.7	< 10	15.0	0.4	1.1	0.1	0.83	0.78	7.4	0.39	2.18	< 0.1
163407	9.0	1.13	0.26	5.26	2.59	0.09	7.5	19	47.0	85	1.47	1.7	< 10	8.8	0.2	0.5	< 0.1	7.72	0.41	4.2	0.11	2.79	< 0.1
163408	3.1	0.77	0.09	2.22	1.09	0.09	10.4	8	49.4	79	1.26	0.7	< 10	6.4	< 0.1	< 0.1	< 0.1	10.9	0.13	3.7	< 0.05	21.2	0.9
163409	5.1	0.45	0.88	2.18	0.18	1.81	3.1	46	111	259	2.15	0.2	40	24.3	0.4	0.1	0.1	17.4	< 0.05	9.1	0.09	38.4	1.5
163410	38.4	> 3.00	2.55	8.84	2.29	1.46	0.4	74	60.7	460	4.21	2.8	10	26.9	0.4	0.4	0.1	2.12	0.30	10.6	0.23	1.31	< 0.1
163411	< 0.5	0.03	0.03	0.09	0.03	0.47	< 0.1	< 1	45.2	119	0.85	< 0.1	< 10	5.4	< 0.1	< 0.1	< 0.1	0.83	< 0.05	3.4	< 0.05	3.69	< 0.1
163412	33.5	> 3.00	1.99	> 10.0	> 5.00	3.19	0.1	134	121	530	4.64	5.3	< 10	43.9	2.8	3.7	0.9	1.00	9.40	17.4	1.06	1.73	0.5
163413	17.6	> 3.00	0.83	9.24	1.92	1.96	0.1	34	34.5	166	2.11	2.3	< 10	10.8	0.4	0.8	0.1	0.89	0.68	6.7	0.26	12.0	< 0.1
163414	3.8	> 3.00	0.24	8.83	0.34	0.41	< 0.1	15	30.6	142	1.39	2.4	< 10	4.8	0.2	0.7	< 0.1	0.33	0.54	2.5	0.23	1.36	< 0.1
163415	1.8	> 3.00	0.12	8.58	0.23	0.86	0.2	5	31.1	128	1.40	2.1	< 10	4.6	0.2	0.5	< 0.1	0.25	0.18	2.3	0.32	1.11	< 0.1
163416	22.9	> 3.00	1.55	> 10.0	1.30	2.31	< 0.1	71	43.1	640	3.68	3.3	< 10	15.9	0.5	0.8	0.2	0.16	0.96	11.8	0.41	0.10	< 0.1
163417	10.5	> 3.00	1.16	9.06	1.15	4.22	< 0.1	154	46.9	582	4.32	2.6	90	20.0	1.3	1.0	0.4	0.15	0.93	16.9	0.46	0.21	83.8
163418	4.8	2.65	2.67	8.48	0.78	7.02	0.1	325	31.4	1490	12.2	1.9	< 10	31.4	3.9	0.6	1.1	0.28	0.76	47.4	0.75	0.61	< 0.1
163419	13.2	> 3.00	0.65	7.75	1.43	1.92	0.4	35	52.8	186	1.97	3.0	20	13.2	0.4	0.8	0.1	2.23	0.45	7.5	0.28	18.5	< 0.1
163420	9.8	> 3.00	0.69	> 10.0	0.97	3.53	< 0.1	21	15.6	326	2.61	2.9	20	15.3	0.6	0.8	0.2	0.71	0.66	13.3	0.38	0.86	< 0.1
163421	12.9	> 3.00	1.14	> 10.0	1.40	3.04	0.2	45	30.0	332	2.35	3.9	30	12.9	0.4	1.3	0.1	1.25	0.78	6.0	0.29	8.19	< 0.1
163422	2.9	> 3.00	0.11	> 10.0	1.04	0.53	< 0.1	7	19.6	81	0.84	3.5	< 10	2.2	0.2	0.9	< 0.1	0.28	0.16	1.3	0.27	0.11	< 0.1
163423	7.6	> 3.00	3.49	9.46	0.71	7.27	< 0.1	261	15.4	1710	13.6	1.1	< 10	31.9	4.8	1.0	1.4	0.18	0.50	56.7	1.09	0.17	< 0.1
163424	20.6	2.57	4.76	> 10.0	1.25	8.06	0.1	227	130	1510	10.4	3.5	< 10	82.8	3.1	0.8	0.9	0.14	1.27	53.5	0.93	0.05	< 0.1
163425	10.6	0.89	1.92	4.19	0.30	3.66	< 0.1	242	32.0	792	7.21	0.6	< 10	20.9	1.6	0.6	0.5	0.11	0.17	29.9	0.39	0.23	< 0.1
163426	20.2	> 3.00	0.74	> 10.0	4.14	1.65	< 0.1	39	26.6	175	2.00	2.6	< 10	10.8	0.4	1.2	0.1	0.13	0.47	6.5	0.33	0.34	< 0.1
163427	5.0	> 3.00	1.11	9.84	1.64	4.07	0.2	49	42.8	395	2.83	1.9	< 10	23.4	0.6	0.9	0.2	0.09	0.33	8.6	0.50	0.14	< 0.1
163428	9.1	2.08	3.79	8.62	0.78	6.55	0.1	303	98.2	1800	11.9	0.8	< 10	56.9	3.4	0.4	1.0	0.11	0.17	51.7	0.80	0.09	< 0.1
163429	5.8	3.00	2.61	8.64	0.49	5.91	< 0.1	292	28.3	1870	13.1	3.3	30	4.5	4.9	1.3	1.4	0.36	0.10	41.9	1.09	0.16	< 0.1
163430	14.2	> 3.00	0.93	> 10.0	1.07	2.38	< 0.1	47	45.7	245	2.45	3.3	< 10	15.9	0.4	0.8	0.1	0.53	0.42	12.8	0.27	0.66	< 0.1
163431	3.0	0.41	0.52	1.60	0.17	1.73	0.1	41	46.4	342	40.1	0.7	< 10	919	2.5	< 0.1	0.7	0.56	0.12	> 500	0.82	1.45	57.1
163432	30.5	1.82	1.74	> 10.0	3.94	1.88	< 0.1	82	34.5	250	3.35	5.9	< 10	45.3	1.4	0.5	0.4	0.29	0.89	16.4	0.76	0.19	< 0.1
163433	23.4	2.93	1.14	8.49	1.86	1.53	0.7	48	36.3	275	3.76	4.5	< 10	41.7	0.8	0.7	0.2	0.19	0.99	26.4	0.41	0.30	0.3
163434	1.5	0.52	2.10	9.93	0.13	13.4	0.2	216	914	1660	8.53	1.4	< 10	190	1.9	0.4	0.6	0.15	< 0.05	51.9	0.67	0.07	< 0.1
163435	16.4	1.33	0.77	4.95	1.22	1.24	< 0.1	44	90.4	251	1.75	1.7	< 10	28.1	0.2	0.7	< 0.1	0.95	0.70	7.5	0.15	1.02	< 0.1
163436	10.0	> 3.00	5.14	9.42	1.18	6.28	< 0.1	79	189	2120	9.26	2.5	< 10	143	2.3	1.4	0.8	0.27	1.89	40.6	1.34	0.08	< 0.1
163437	33.8	> 3.00	1.33	> 10.0	1.39	2.03	< 0.1	35	22.1	310	3.37	4.9	< 10	12.9	0.4	1.4	0.1	2.00	0.75	8.0	0.37	1.51	< 0.1
163438	11.1	0.18	0.61	1.84	0.19	2.20	< 0.1	41	144	191	2.46	0.2	< 10	38.7	0.2	0.2	< 0.1	4.32	0.20	12.0	0.06	5.79	< 0.1
163439	4.3	0.23	0.71	1.39	0.26	2.10	< 0.1	25	79.7	457	3.05	0.1	< 10	34.0	0.2	< 0.1	< 0.1	5.00	0.22	11.8	0.13	4.82	< 0.1
163440	20.8	> 3.00	3.02	7.56	0.29	4.49	0.9	183	389	560	7.69	0.4	< 10	63.4	0.9	0.3	0.3	4.21	0.16	143	0.12	3.02	1.8
163441	30.9	1.64	7.98	9.09	1.28	7.72	0.5	217	374	1570	7.14	0.6	< 10	145	1.6	0.4	0.4	1.06	0.74	46.3	0.38	0.92	< 0.1
163442	25.4	0.08	1.84	7.14	0.02	8.12	< 0.1	93	233	450	4.16	0.3	< 10	80.7	0.7	0.8	0.2	0.57	0.06	46.3	0.17	0.30	0.3
163443	14.2	> 3.00	0.64	9.26	2.87	2.56	< 0.1	28	27.8	209	1.69	4.2	< 10	8.6	0.4	0.6	0.1	0.53	0.46	6.7	0.32	0.42	< 0.1
163444	5.9	0.11	1.03	0.97	0.10	4.07	< 0.1	20	46.9	395	1.85	< 0.1	< 10	13.7	0.3	< 0.1	< 0.1	0.81	0.11	5.7	0.08	0.77	< 0.1
163445	25.5	> 3.00	2.50	9.82	1.08	2.68	0.4	141	166	539	6.06	3.8	< 10	93.2	0.9	1.0	0.3	1.39	0.47	60.5	0.50	1.64	1.0
163446	8.6	0.81	0.55	2.11	0.54	0.92	0.7	29	88.8	166	2.28	0.4	< 10	20.7	0.1	0.2	< 0.1	13.6	0.12	9.6	0.08	11.4	0.6
163447	5.5	0.58	0.54	1.63	0.57	0.92	1.7	21	57.2	184	2.45	0.3	< 10	28.1	0.1	0.1	< 0.1	45.6	0.14	12.0	0.06	35.1	1.3
163448	28.7	> 3.00	3.50	9.71	2.48	5.09	< 0.1	523	61.5	1400	11.3	7.5	30	27.7	2.8	2.0	0.9	0.62	0.71	53.5	1.41	0.12	< 0.1
163449	6.8	0.29	0.13	1.88	0.97	0.54	< 0.1	9	23.8	117	0.90	0.6	10	4.9	< 0.1	0.2	< 0.1	0.25	0.13	2.1	0.06	0.04	< 0.1

Analyte Symbol	Li	Na	Mg	Al	K	Ca	Cd	V	Cr	Mn	Fe	Hf	Hg	Ni	Er	Be	Ho	Ag	Cs	Co	Eu	Bi	Se
Unit Symbol	ppm	%	%	%	%	%	ppm	ppm	ppm	ppm	%	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	0.5	0.01	0.01	0.01	0.01	0.01	0.1	1	0.5	1	0.01	0.1	10	0.5	0.1	0.1	0.1	0.05	0.05	0.1	0.05	0.02	0.1
Method Code	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS
163450	4.7	0.43	0.14	2.13	0.87	0.38	< 0.1	16	29.6	109	1.33	0.1	< 10	7.7	0.1	0.1	< 0.1	0.25	0.15	4.5	0.07	0.15	< 0.1
163451	16.8	0.91	1.70	3.41	0.37	1.57	< 0.1	85	217	345	3.71	0.5	< 10	43.9	0.5	0.2	0.1	0.49	0.50	43.8	0.10	1.04	< 0.1
163452	7.1	1.36	0.20	2.00	0.28	0.27	< 0.1	4	23.5	142	1.31	< 0.1	< 10	10.4	< 0.1	0.1	< 0.1	0.19	0.19	3.5	< 0.05	0.07	< 0.1
163453	32.4	1.99	1.38	> 10.0	> 5.00	2.12	< 0.1	40	22.3	238	2.47	3.0	< 10	13.9	0.5	0.9	0.2	0.12	2.67	8.1	0.43	0.12	< 0.1
163454	26.8	> 3.00	0.88	> 10.0	2.00	1.81	< 0.1	39	26.3	192	2.28	3.0	< 10	14.8	0.4	1.4	0.1	0.28	1.06	8.5	0.25	0.20	< 0.1
163455	5.7	0.72	0.14	1.36	0.25	0.13	< 0.1	5	26.4	99	1.14	0.3	< 10	6.2	< 0.1	0.1	< 0.1	0.13	0.15	2.9	< 0.05	0.05	< 0.1
163456	7.6	0.28	0.16	3.64	2.07	0.03	0.2	14	25.1	69	1.31	0.9	< 10	5.2	< 0.1	0.4	< 0.1	1.04	0.40	1.9	< 0.05	2.65	< 0.1
163457	24.6	1.65	0.62	7.94	4.61	0.75	< 0.1	29	18.0	147	2.07	2.3	< 10	8.2	0.2	0.8	< 0.1	0.66	1.21	4.0	0.18	2.41	< 0.1
163458	6.1	0.66	0.08	1.59	0.58	0.10	< 0.1	5	26.1	76	1.05	0.5	50	5.5	< 0.1	0.8	< 0.1	1.34	4.14	2.2	< 0.05	3.82	< 0.1
163459	18.7	1.66	0.37	5.15	1.77	1.12	< 0.1	20	27.0	138	1.74	1.7	10	8.7	0.2	0.5	< 0.1	2.09	2.10	4.7	0.14	8.38	< 0.1
163460	20.5	> 3.00	2.44	8.94	4.84	3.24	0.4	179	69.1	527	7.84	2.7	80	23.5	1.7	1.3	0.5	2.73	1.64	23.0	0.61	5.39	9.1
163461	19.7	1.30	0.33	5.65	3.72	0.65	< 0.1	22	20.3	138	1.55	1.4	< 10	7.9	0.2	0.9	< 0.1	0.81	13.7	3.6	0.16	0.39	< 0.1
163462	40.2	2.40	0.66	9.94	4.97	1.86	< 0.1	34	18.2	212	1.99	2.6	< 10	10.6	0.5	1.5	0.1	0.45	9.56	6.7	0.38	0.21	< 0.1
163463	15.7	> 3.00	0.86	9.76	> 5.00	1.20	< 0.1	36	16.3	214	2.08	2.9	< 10	11.0	0.4	1.2	0.1	0.55	0.69	7.3	0.30	1.78	< 0.1
163464	23.9	1.12	0.65	5.82	3.64	0.53	0.2	22	26.3	170	1.93	2.0	< 10	8.2	0.2	0.5	< 0.1	1.08	2.16	3.5	0.16	1.11	< 0.1
163465	4.5	1.72	0.16	7.23	> 5.00	1.47	< 0.1	30	23.5	122	2.08	2.9	< 10	7.4	0.3	0.7	< 0.1	0.37	0.71	4.9	0.16	0.68	< 0.1
163466	15.5	1.62	0.37	7.20	4.44	0.68	< 0.1	26	21.6	161	1.85	1.9	< 10	7.2	0.2	0.7	< 0.1	0.77	1.18	3.3	0.14	0.56	< 0.1
163467	13.9	2.15	0.49	7.44	4.20	1.56	< 0.1	29	23.1	165	1.87	2.2	< 10	7.7	0.3	0.9	< 0.1	0.40	1.25	3.9	0.19	0.93	< 0.1
163468	12.4	> 3.00	1.51	9.87	1.01	3.17	< 0.1	63	46.7	279	2.66	3.0	30	30.2	0.6	0.7	0.2	0.29	0.47	15.4	0.37	0.11	< 0.1
163469	11.6	2.22	0.38	6.64	4.69	0.43	0.1	26	47.9	155	1.68	2.3	< 10	5.5	0.2	0.8	< 0.1	0.34	0.53	3.5	0.14	0.92	< 0.1
163470	0.5	0.88	0.06	1.74	0.05	0.89	< 0.1	20	126	124	1.11	< 0.1	< 10	4.2	< 0.1	< 0.1	< 0.1	0.35	< 0.05	1.7	< 0.05	1.72	< 0.1
163471	1.8	0.09	1.09	1.96	0.48	2.09	< 0.1	43	191	329	1.98	0.1	30	24.0	0.2	< 0.1	< 0.1	0.15	0.06	12.3	0.05	0.18	< 0.1
163472	24.5	> 3.00	3.13	8.66	2.19	4.46	< 0.1	202	52.9	1250	10.2	1.1	< 10	25.5	2.7	1.7	0.8	0.10	0.62	50.7	1.35	0.07	< 0.1
163473	6.5	2.47	0.44	5.81	2.23	1.42	< 0.1	21	124	164	1.90	2.1	< 10	9.7	0.3	0.4	< 0.1	0.25	0.16	4.6	0.23	0.94	< 0.1
163474	1.8	> 3.00	0.10	> 10.0	0.12	0.65	< 0.1	29	19.2	109	1.27	3.7	< 10	13.4	0.4	0.3	0.1	0.29	< 0.05	10.6	0.11	1.26	< 0.1
163475	1.9	> 3.00	0.17	5.95	0.37	0.79	< 0.1	17	65.1	107	1.14	2.1	< 10	4.7	0.3	0.3	< 0.1	0.17	0.05	3.1	0.11	1.45	< 0.1
163476	2.0	> 3.00	0.11	4.27	0.05	0.33	< 0.1	4	17.3	84	0.84	1.0	< 10	4.6	0.1	0.3	< 0.1	0.16	< 0.05	1.7	< 0.05	1.85	< 0.1
163477	8.7	0.84	1.30	5.35	0.57	3.64	0.5	88	90.3	355	3.25	0.7	< 10	23.6	0.4	0.3	0.1	2.06	0.21	11.4	0.12	20.2	< 0.1
163478	13.8	0.39	1.73	3.27	0.11	3.94	< 0.1	85	113	523	3.43	0.3	20	44.6	0.7	0.2	0.2	0.40	0.13	15.4	0.22	0.11	< 0.1
163479	3.3	0.13	0.79	0.84	0.03	2.24	0.5	16	38.1	383	2.48	0.1	10	211	0.3	< 0.1	< 0.1	0.33	< 0.05	65.7	0.09	0.16	< 0.1
163480	34.6	2.45	3.39	8.50	1.06	6.27	< 0.1	170	43.6	730	6.09	4.7	< 10	25.6	2.1	1.8	0.7	0.30	0.17	26.5	1.36	0.67	0.4
163481	14.5	1.36	5.80	6.84	0.44	5.56	< 0.1	205	60.8	1360	10.2	0.9	10	175	1.8	0.3	0.5	0.17	0.21	53.9	0.53	0.71	0.2
163482	12.3	0.63	0.26	4.56	2.63	0.36	0.5	18	16.3	116	1.39	1.3	< 10	6.8	0.2	0.4	< 0.1	8.54	0.56	3.3	0.08	4.26	< 0.1

Results

Analyte Symbol	Zn	Ga	As	Rb	Y	Sr	Zr	Nb	Mo	In	Sn	Sb	Te	Ba	La	Ce	Pr	Nd	Sm	Gd	Tb	Dy	Cu
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	0.2	0.1	0.1	0.2	0.1	0.2	1	0.1	0.05	0.1	1	0.1	0.1	1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2
Method Code	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS
163401	26.5	14.4	9.5	30.2	1.5	129	29	1.6	2.59	< 0.1	< 1	0.2	2.1	67	2.9	6.6	0.7	2.7	0.4	0.4	< 0.1	0.3	69.0
163402	30.3	10.7	11.8	35.3	1.6	111	26	1.7	5.29	< 0.1	< 1	0.2	0.6	79	4.2	8.7	0.9	3.7	0.6	0.5	< 0.1	0.4	138
163403	27.0	20.8	19.2	67.2	2.9	194	55	3.2	4.55	< 0.1	< 1	0.2	1.6	124	6.8	15.0	1.6	6.0	1.0	0.8	0.1	0.6	252
163404	40.1	26.3	19.2	64.9	2.9	169	53	3.4	14.1	< 0.1	< 1	0.2	0.4	96	6.6	14.5	1.5	5.9	1.1	0.8	0.1	0.6	182
163405	46.7	24.6	3.2	70.2	4.2	250	67	3.8	7.65	< 0.1	1	< 0.1	< 0.1	234	10.3	21.8	2.4	9.0	1.6	1.2	0.2	0.9	80.4
163406	32.2	24.0	9.5	82.0	3.7	260	70	3.3	2.13	< 0.1	1	0.1	< 0.1	286	7.0	17.2	1.8	6.6	1.2	0.9	0.1	0.8	315
163407	836	12.0	17.4	66.8	1.9	28.2	31	2.0	2.09	< 0.1	< 1	0.3	2.2	97	4.4	9.2	1.1	3.9	0.7	0.6	< 0.1	0.4	193
163408	1190	5.1	10.6	24.8	0.9	7.2	14	1.2	4.16	< 0.1	< 1	0.2	1.5	41	1.4	3.3	0.4	1.4	0.3	0.2	< 0.1	0.2	112
163409	379	4.4	12.2	2.7	2.9	63.9	4	1.4	424	< 0.1	< 1	0.2	3.3	9	0.9	2.0	0.3	1.2	0.3	0.4	< 0.1	0.5	320
163410	141	17.2	8.5	48.1	3.5	110	50	2.4	12.7	< 0.1	< 1	< 0.1	0.2	185	5.0	11.6	1.3	4.9	0.9	0.8	0.1	0.7	353
163411	6.3	0.6	2.3	0.8	0.6	7.6	< 1	1.2	2.61	< 0.1	< 1	0.1	0.3	3	0.4	1.0	< 0.1	0.4	< 0.1	< 0.1	< 0.1	< 0.1	235
163412	88.6	20.2	25.0	171	22.4	303	95	22.7	83.5	0.2	5	0.5	< 0.1	449	31.9	67.8	7.7	29.3	5.3	4.4	0.6	4.5	2530
163413	29.5	20.9	1.5	40.4	3.4	262	42	2.6	2.56	< 0.1	< 1	< 0.1	0.5	243	6.9	15.2	1.7	6.4	1.1	0.8	0.1	0.7	671
163414	25.6	23.2	0.8	10.4	1.6	217	42	2.9	8.47	< 0.1	< 1	< 0.1	< 0.1	68	7.2	15.3	1.6	6.0	0.9	0.6	< 0.1	0.4	62.9
163415	11.8	23.8	2.2	5.1	2.3	245	34	1.9	519	< 0.1	< 1	0.1	0.1	31	6.3	13.6	1.6	6.1	1.2	0.9	0.1	0.6	42.4
163416	64.2	24.1	1.1	26.2	4.3	368	69	4.3	1.99	< 0.1	< 1	< 0.1	< 0.1	150	9.9	21.8	2.3	8.3	1.3	0.9	0.1	0.9	32.5
163417	47.6	24.4	1.3	25.2	9.8	432	51	0.9	1.32	< 0.1	< 1	< 0.1	< 0.1	142	7.2	16.7	2.0	8.3	1.8	1.7	0.3	1.9	102
163418	99.0	30.0	0.5	10.3	29.0	212	34	1.3	0.62	< 0.1	< 1	< 0.1	< 0.1	57	3.8	11.7	1.9	10.0	3.2	4.0	0.7	5.3	275
163419	45.7	19.8	8.6	38.2	3.3	222	56	3.0	3.56	< 0.1	1	0.1	0.2	115	6.2	15.3	1.5	5.9	1.1	0.8	0.1	0.7	854
163420	23.4	26.5	2.1	22.1	4.8	338	48	3.3	37.0	< 0.1	< 1	< 0.1	0.4	64	8.1	17.6	2.1	7.7	1.4	1.1	0.1	0.9	201
163421	32.3	28.4	1.8	29.5	3.2	499	68	3.9	3.28	< 0.1	< 1	< 0.1	0.1	110	4.3	11.0	1.2	4.6	0.9	0.7	< 0.1	0.6	518
163422	16.9	23.8	0.9	18.5	2.2	241	48	2.3	0.99	< 0.1	< 1	< 0.1	< 0.1	163	9.2	18.7	2.0	7.5	1.2	0.9	0.1	0.5	14.1
163423	115	27.4	0.2	11.1	36.3	148	22	0.1	0.22	< 0.1	< 1	< 0.1	< 0.1	51	3.3	11.0	1.9	10.3	3.4	4.8	0.9	6.6	44.3
163424	119	20.3	< 0.1	38.9	23.3	170	69	0.3	0.14	< 0.1	< 1	< 0.1	< 0.1	106	10.8	25.6	3.3	14.4	3.1	3.6	0.6	4.5	172
163425	69.5	12.6	< 0.1	6.9	12.1	56.6	12	< 0.1	0.05	< 0.1	< 1	< 0.1	< 0.1	16	1.1	3.4	0.5	3.0	1.2	1.6	0.3	2.3	41.1
163426	22.3	24.7	0.7	69.3	3.6	308	45	3.3	1.43	< 0.1	< 1	< 0.1	< 0.1	415	6.5	16.0	1.5	6.2	1.1	0.9	0.1	0.7	59.0
163427	44.1	23.6	0.5	46.9	5.0	422	33	3.8	1.26	< 0.1	< 1	0.1	< 0.1	157	14.7	32.2	3.6	13.2	1.8	1.2	0.2	1.0	10.2
163428	125	20.6	0.4	17.9	25.2	147	12	0.9	0.53	< 0.1	< 1	< 0.1	< 0.1	69	3.5	10.4	1.6	8.3	2.6	3.4	0.6	4.6	246
163429	114	25.4	0.2	2.5	34.7	129	61	6.5	1.23	< 0.1	< 1	< 0.1	< 0.1	21	3.2	11.3	1.7	9.7	3.5	4.8	0.9	6.7	97.9
163430	24.5	21.7	1.7	27.0	3.0	289	62	2.6	2.80	< 0.1	< 1	< 0.1	< 0.1	114	5.4	11.2	1.2	4.4	0.7	0.6	< 0.1	0.6	357
163431	19.8	3.7	1.1	3.8	18.6	25.0	17	1.5	0.89	< 0.1	< 1	< 0.1	2.2	15	14.7	24.7	2.6	10.4	2.2	2.7	0.4	3.4	908
163432	139	17.6	< 0.1	55.2	10.2	127	104	5.5	2.88	< 0.1	< 1	< 0.1	< 0.1	108	17.0	47.1	5.7	21.3	3.4	2.4	0.3	2.2	58.4
163433	294	17.9	6.1	49.0	6.3	121	90	4.2	3.76	< 0.1	< 1	< 0.1	0.2	74	12.5	29.9	3.5	13.1	2.2	1.4	0.2	1.3	106
163434	134	16.8	2.7	1.0	14.0	233	22	1.3	1.06	< 0.1	3	0.1	< 0.1	4	5.1	13.0	1.9	8.9	2.3	2.3	0.4	2.6	197
163435	18.2	8.9	2.3	46.1	1.6	74.5	31	1.9	2.46	< 0.1	< 1	< 0.1	0.2	117	3.2	7.3	0.8	2.9	0.5	0.4	< 0.1	0.3	177
163436	124	18.9	450	22.4	19.6	323	47	0.6	0.31	< 0.1	1	0.2	< 0.1	217	20.4	39.2	5.4	22.7	4.8	4.6	0.7	4.4	96.8
163437	27.6	22.3	1.6	36.5	3.2	192	101	4.8	2.14	< 0.1	< 1	< 0.1	0.3	98	10.0	21.0	2.2	7.9	1.3	0.9	0.1	0.7	355
163438	14.7	4.2	3.2	9.4	1.4	10.1	4	0.8	3.32	< 0.1	< 1	< 0.1	1.2	13	0.6	1.3	0.2	0.7	0.2	0.2	< 0.1	0.3	381
163439	13.7	3.2	23.1	13.1	1.5	17.7	3	0.6	8.83	< 0.1	< 1	0.1	2.4	39	0.8	1.6	0.2	0.9	0.2	0.2	< 0.1	0.3	128
163440	244	13.7	3.6	9.4	6.3	54.7	8	1.3	15.6	0.2	< 1	0.4	3.4	18	0.6	1.8	0.3	1.6	0.5	0.8	0.1	1.1	772
163441	122	14.9	0.7	46.0	11.3	54.3	9	1.2	2.51	< 0.1	< 1	< 0.1	0.2	70	1.1	3.6	0.6	3.3	1.1	1.5	0.3	2.1	114
163442	66.9	15.8	5.8	0.7	5.6	5.4	6	1.0	1.64	< 0.1	< 1	0.2	0.2	3	1.0	2.5	0.3	1.7	0.5	0.7	0.1	1.0	173
163443	36.8	16.4	1.7	58.3	3.8	136	79	3.4	2.14	< 0.1	< 1	< 0.1	0.2	235	7.2	15.3	1.7	6.4	1.2	0.9	0.1	0.8	70.8
163444	19.3	2.3	1.6	3.2	2.3	13.5	2	0.3	1.45	< 0.1	< 1	< 0.1	5.3	6	0.8	2.0	0.3	1.3	0.4	0.3	< 0.1	0.4	118
163445	93.5	19.5	0.9	26.2	7.4	148	78	3.5	5.87	< 0.1	< 1	0.1	1.1	96	11.5	27.6	3.3	13.6	2.4	1.7	0.2	1.5	437
163446	119	5.5	5.4	10.6	1.1	10.5	8	0.5	61.7	< 0.1	< 1	0.1	4.1	39	2.5	5.2	0.6	2.0	0.3	0.3	< 0.1	0.2	204
163447	208	3.9	3.0	13.0	0.9	13.4	7	0.4	13.1	< 0.1	< 1	0.1	13.1	44	1.0	2.1	0.2	1.0	0.2	0.2	< 0.1	0.2	179
163448	111	27.8	2.3	49.5	22.1	134	145	20.0	1.05	< 0.1	1	< 0.1	< 0.1	196	19.0	48.7	5.9	24.9	5.4	4.8	0.7	4.8	33.5
163449	8.0	4.4	3.1	18.9	0.8	13.3	11	0.6	1.01	< 0.1	< 1	0.1	< 0.1	90	2.0	4.1	0.4	1.7	0.3	0.2	< 0.1	0.2	29.1

Analyte Symbol	Zn	Ga	As	Rb	Y	Sr	Zr	Nb	Mo	In	Sn	Sb	Te	Ba	La	Ce	Pr	Nd	Sm	Gd	Tb	Dy	Cu
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	0.2	0.1	0.1	0.2	0.1	0.2	1	0.1	0.05	0.1	1	0.1	0.1	1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2
Method Code	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS
163450	6.7	5.1	6.6	16.8	1.1	18.9	4	0.7	1.95	< 0.1	< 1	0.2	< 0.1	122	1.2	2.8	0.3	1.2	0.2	0.2	< 0.1	0.2	107
163451	29.0	6.5	4.9	11.3	3.3	57.1	9	0.7	1.41	< 0.1	< 1	0.2	0.7	59	0.7	1.9	0.3	1.2	0.3	0.4	< 0.1	0.6	219
163452	8.5	7.3	1.8	5.3	0.6	28.3	< 1	0.5	0.58	< 0.1	< 1	0.1	< 0.1	18	0.5	1.1	0.1	0.5	< 0.1	< 0.1	< 0.1	0.1	36.9
163453	23.9	24.3	8.2	150	4.2	305	53	1.7	31.9	< 0.1	1	< 0.1	< 0.1	327	10.3	23.2	2.5	9.5	1.6	1.2	0.1	0.9	22.9
163454	24.7	23.5	10.7	46.0	3.5	612	56	3.2	3.99	< 0.1	< 1	0.2	< 0.1	159	6.2	14.8	1.6	6.4	1.1	0.9	0.1	0.7	109
163455	6.1	3.5	3.1	6.9	0.6	33.9	6	0.7	0.46	< 0.1	< 1	0.2	< 0.1	20	1.1	2.4	0.3	1.0	0.2	0.1	< 0.1	0.1	10.1
163456	43.6	8.5	15.4	46.3	0.6	57.4	16	1.1	3.63	< 0.1	< 1	0.7	1.0	168	2.2	4.5	0.5	1.7	0.3	0.2	< 0.1	0.1	21.1
163457	48.4	19.3	18.7	94.2	2.1	132	39	2.3	1.27	< 0.1	< 1	0.2	0.6	205	3.8	8.6	0.9	3.4	0.6	0.5	< 0.1	0.4	42.3
163458	10.0	4.0	6.5	28.1	0.4	31.8	9	0.5	0.78	< 0.1	< 1	0.2	0.8	42	1.0	2.2	0.2	0.9	0.2	0.1	< 0.1	< 0.1	62.5
163459	26.7	12.5	13.6	38.0	1.6	80.0	30	1.7	4.70	< 0.1	< 1	0.9	0.4	109	3.0	6.4	0.7	2.7	0.5	0.4	< 0.1	0.3	234
163460	105	18.4	6.5	69.8	13.2	439	52	8.4	527	0.6	10	1.1	0.6	136	11.6	24.3	2.9	11.9	2.4	2.3	0.3	2.5	> 10000
163461	21.0	12.4	12.4	87.7	1.9	125	23	1.5	1.00	< 0.1	< 1	1.0	0.5	201	4.3	9.1	1.1	4.0	0.7	0.5	< 0.1	0.4	19.0
163462	19.9	22.8	16.4	118	4.0	275	44	2.9	2.03	< 0.1	< 1	0.4	< 0.1	242	8.7	19.7	2.2	8.2	1.4	1.0	0.1	0.8	31.8
163463	27.4	19.8	12.1	88.1	3.5	304	48	2.9	1.12	< 0.1	1	0.2	< 0.1	493	7.1	17.7	1.8	6.5	1.2	0.9	0.1	0.7	292
163464	42.8	13.7	4.2	73.4	2.0	88.5	35	2.1	2.50	< 0.1	< 1	0.4	0.1	150	4.3	9.1	1.0	3.8	0.7	0.5	< 0.1	0.5	140
163465	6.9	17.3	19.9	88.3	2.2	102	57	2.3	4.22	< 0.1	1	0.2	0.2	143	6.0	12.9	1.5	5.7	0.9	0.7	< 0.1	0.5	36.1
163466	9.3	16.8	24.6	104	2.0	180	34	2.1	1.74	< 0.1	< 1	0.2	0.8	236	3.7	7.8	0.7	2.6	0.4	0.4	< 0.1	0.4	25.4
163467	17.7	18.4	13.9	83.3	2.6	87.7	40	2.4	2.90	< 0.1	1	0.3	0.2	217	5.7	12.4	1.3	5.0	0.9	0.6	< 0.1	0.5	46.1
163468	25.2	20.4	1.7	39.8	4.7	323	57	1.8	4.85	< 0.1	< 1	< 0.1	< 0.1	123	8.5	18.4	2.1	7.6	1.3	1.0	0.1	1.0	17.8
163469	23.7	17.6	11.9	93.7	1.8	129	38	2.8	12.5	< 0.1	1	0.1	0.3	269	3.3	8.4	0.8	3.2	0.5	0.4	< 0.1	0.4	63.6
163470	2.3	4.2	1.8	1.2	0.5	69.2	< 1	0.1	16.4	< 0.1	< 1	0.1	0.2	3	0.2	0.3	< 0.1	0.2	< 0.1	< 0.1	< 0.1	< 0.1	12.5
163471	17.5	4.5	1.7	12.8	1.8	38.1	3	0.3	0.44	< 0.1	< 1	0.1	< 0.1	31	0.2	0.6	< 0.1	0.5	0.1	0.2	< 0.1	0.3	12.7
163472	108	25.3	0.3	53.1	21.7	129	26	< 0.1	< 0.05	< 0.1	< 1	< 0.1	< 0.1	193	21.1	49.1	6.1	25.3	5.4	4.7	0.7	4.6	30.3
163473	19.3	12.5	3.0	49.7	2.5	149	41	2.2	2.26	< 0.1	1	0.2	< 0.1	178	4.8	11.2	1.2	4.5	0.8	0.6	< 0.1	0.5	89.0
163474	15.2	19.2	5.9	2.4	3.1	68.2	58	3.6	22.2	< 0.1	1	0.1	0.2	14	4.1	9.1	0.9	3.5	0.7	0.6	< 0.1	0.5	241
163475	6.1	9.6	2.7	7.2	2.5	107	32	2.9	33.8	< 0.1	< 1	< 0.1	0.2	40	7.1	15.5	1.6	5.6	0.9	0.6	< 0.1	0.5	22.8
163476	4.2	5.2	1.4	0.8	1.0	65.8	17	1.7	36.7	< 0.1	< 1	0.1	0.2	7	2.4	5.4	0.5	1.9	0.3	0.2	< 0.1	0.2	20.4
163477	30.7	20.0	1.9	14.5	3.3	277	14	1.0	906	< 0.1	1	0.2	2.6	45	1.6	2.5	0.3	1.5	0.3	0.4	< 0.1	0.6	96.0
163478	26.1	8.1	2.8	1.9	5.6	48.0	6	0.6	4.27	< 0.1	< 1	0.1	< 0.1	9	0.6	1.7	0.3	1.4	0.5	0.7	0.1	1.0	92.1
163479	40.6	2.7	6.1	0.6	2.6	31.2	3	0.3	2.12	< 0.1	< 1	0.2	0.2	5	0.5	1.1	0.2	0.8	0.3	0.3	< 0.1	0.4	938
163480	47.1	19.4	4.9	15.5	17.5	86.8	96	4.9	1.16	< 0.1	1	0.5	0.2	63	18.7	49.1	6.5	28.7	5.7	4.4	0.6	3.6	87.0
163481	87.9	15.7	3.8	8.0	13.4	54.1	16	0.8	8.59	< 0.1	1	< 0.1	< 0.1	29	1.6	5.3	0.8	4.2	1.4	1.7	0.3	2.4	156
163482	83.4	11.3	17.6	62.8	1.3	71.3	23	1.5	4.07	< 0.1	< 1	1.4	1.5	146	2.7	5.5	0.6	2.2	0.5	0.3	< 0.1	0.3	79.0

Results

Analyte Symbol	Ge	Tm	Yb	Lu	Ta	W	Re	Tl	Pb	Sc	Th	U	Ti	P	S	Cu
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%	%	%
Lower Limit	0.1	0.1	0.1	0.1	0.1	0.1	0.001	0.05	0.5	1	0.1	0.1	0.0005	0.001	0.01	0.001
Method Code	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-ICP	TD-MS	TD-MS	TD-ICP	TD-ICP	TD-ICP	ICP-OES
163401	< 0.1	< 0.1	0.1	< 0.1	0.1	2.7	< 0.001	0.20	125	2	0.6	0.3	0.0596	0.009	0.34	
163402	< 0.1	< 0.1	0.1	< 0.1	0.1	2.5	< 0.001	0.25	219	2	0.6	0.2	0.0560	0.007	0.60	
163403	< 0.1	< 0.1	0.3	< 0.1	0.3	5.3	< 0.001	0.53	605	3	1.2	0.4	0.107	0.018	1.13	
163404	< 0.1	< 0.1	0.3	< 0.1	0.3	5.5	0.001	0.42	84.9	3	1.3	0.4	0.124	0.017	0.70	
163405	< 0.1	< 0.1	0.4	< 0.1	0.3	7.0	< 0.001	0.47	7.3	5	1.5	0.7	0.184	0.030	0.56	
163406	< 0.1	< 0.1	0.3	< 0.1	0.3	7.3	< 0.001	0.54	10.8	5	1.4	1.0	0.158	0.027	0.55	
163407	< 0.1	< 0.1	0.2	< 0.1	0.2	3.3	< 0.001	0.36	412	2	0.6	0.2	0.0817	0.012	0.77	
163408	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	2.0	< 0.001	0.19	866	1	0.3	< 0.1	0.0365	0.005	0.68	
163409	< 0.1	< 0.1	0.3	< 0.1	< 0.1	1.1	0.072	0.05	510	8	< 0.1	< 0.1	0.0720	0.003	0.45	
163410	< 0.1	< 0.1	0.3	< 0.1	0.2	1.6	< 0.001	0.27	21.2	11	1.5	0.3	0.189	0.024	0.56	
163411	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	0.3	< 0.001	< 0.05	8.6	< 1	< 0.1	< 0.1	0.0219	0.002	0.10	
163412	0.4	0.4	2.4	0.4	1.7	2.0	< 0.001	0.91	23.9	15	16.0	4.3	0.511	0.099	0.34	
163413	< 0.1	< 0.1	0.3	< 0.1	0.1	0.9	< 0.001	0.22	5.5	4	1.2	0.4	0.161	0.025	0.10	
163414	< 0.1	< 0.1	0.1	< 0.1	0.2	0.5	< 0.001	< 0.05	7.5	2	1.3	0.3	0.104	0.020	0.16	
163415	< 0.1	< 0.1	0.2	< 0.1	0.1	0.2	0.075	< 0.05	14.5	1	1.4	0.7	0.0504	0.040	0.14	
163416	< 0.1	< 0.1	0.4	< 0.1	0.4	0.2	< 0.001	0.15	7.5	8	1.4	0.4	0.237	0.040	0.55	
163417	< 0.1	0.2	1.1	0.2	< 0.1	< 0.1	0.006	0.13	9.1	15	0.9	0.3	0.391	0.041	0.38	
163418	< 0.1	0.6	3.5	0.6	< 0.1	< 0.1	< 0.001	0.09	6.0	47	0.4	0.2	0.875	0.059	2.01	
163419	< 0.1	< 0.1	0.3	< 0.1	0.3	5.2	< 0.001	0.27	12.1	4	1.1	0.4	0.145	0.025	0.89	
163420	< 0.1	< 0.1	0.5	< 0.1	0.3	0.5	< 0.001	0.15	6.8	5	2.5	0.6	0.158	0.043	0.90	
163421	< 0.1	< 0.1	0.3	< 0.1	0.3	5.4	< 0.001	0.22	8.1	5	1.6	0.6	0.190	0.032	0.30	
163422	< 0.1	< 0.1	0.2	< 0.1	0.3	0.1	< 0.001	0.09	5.3	1	2.6	0.6	0.0346	0.015	0.07	
163423	< 0.1	0.7	4.2	0.7	< 0.1	< 0.1	0.010	0.05	4.2	58	0.4	0.1	0.326	0.049	0.11	
163424	0.2	0.5	2.7	0.5	< 0.1	< 0.1	< 0.001	0.18	3.9	43	1.9	0.6	0.439	0.048	0.10	
163425	< 0.1	0.2	1.4	0.2	< 0.1	< 0.1	< 0.001	< 0.05	1.4	32	0.1	< 0.1	0.358	0.016	0.06	
163426	< 0.1	< 0.1	0.4	< 0.1	0.2	1.9	< 0.001	0.33	4.1	5	1.3	0.4	0.180	0.027	0.23	
163427	< 0.1	< 0.1	0.5	< 0.1	0.2	0.2	< 0.001	0.21	14.7	6	2.3	0.5	0.214	0.040	0.32	
163428	< 0.1	0.5	3.0	0.5	< 0.1	< 0.1	< 0.001	0.09	1.7	47	0.3	< 0.1	0.653	0.032	0.47	
163429	0.3	0.7	4.4	0.7	0.5	0.3	< 0.001	0.06	5.0	35	0.4	0.1	1.18	0.058	0.25	
163430	< 0.1	< 0.1	0.4	< 0.1	0.2	1.3	< 0.001	0.17	3.9	7	1.6	0.4	0.187	0.026	0.29	
163431	< 0.1	0.4	2.1	0.3	< 0.1	0.1	0.011	0.09	2.6	9	0.1	0.5	0.158	0.018	> 20.0	
163432	< 0.1	0.2	1.3	0.2	0.6	1.2	0.002	0.46	9.3	16	6.3	1.5	0.248	0.067	1.27	
163433	< 0.1	0.1	0.7	0.1	0.4	2.0	< 0.001	0.29	8.8	9	2.0	0.6	0.189	0.033	1.58	
163434	0.7	0.3	1.7	0.3	< 0.1	< 0.1	< 0.001	0.05	3.7	32	0.5	0.4	0.431	0.093	1.31	
163435	< 0.1	< 0.1	0.2	< 0.1	< 0.1	2.1	< 0.001	0.22	5.7	7	0.7	0.2	0.0699	0.008	0.21	
163436	< 0.1	0.3	1.7	0.3	< 0.1	< 0.1	< 0.001	0.10	5.3	20	3.4	1.0	0.422	0.148	0.75	
163437	< 0.1	< 0.1	0.3	< 0.1	0.5	3.7	< 0.001	0.19	19.9	4	2.6	0.8	0.174	0.033	0.95	
163438	< 0.1	< 0.1	0.2	< 0.1	< 0.1	2.3	< 0.001	0.07	2.7	8	< 0.1	< 0.1	0.0664	0.002	0.80	
163439	< 0.1	< 0.1	0.1	< 0.1	< 0.1	18.3	< 0.001	0.09	3.0	4	< 0.1	< 0.1	0.0343	0.004	0.85	
163440	< 0.1	0.1	0.8	0.1	< 0.1	1.6	< 0.001	0.18	18.7	35	< 0.1	0.1	0.272	0.013	3.54	
163441	< 0.1	0.2	1.4	0.2	< 0.1	10.1	< 0.001	0.25	5.6	47	0.1	< 0.1	0.351	0.019	0.94	
163442	< 0.1	0.1	0.7	0.1	< 0.1	4.4	0.014	< 0.05	5.3	18	0.1	< 0.1	0.191	0.011	1.25	
163443	< 0.1	< 0.1	0.3	< 0.1	0.4	4.0	< 0.001	0.31	6.7	4	1.6	0.6	0.146	0.027	0.47	
163444	< 0.1	< 0.1	0.3	< 0.1	< 0.1	2.1	< 0.001	< 0.05	1.7	4	< 0.1	< 0.1	0.0283	0.004	0.34	
163445	< 0.1	0.1	0.8	0.1	0.2	2.2	< 0.001	0.14	38.9	18	2.5	1.4	0.277	0.032	2.25	
163446	< 0.1	< 0.1	0.1	< 0.1	< 0.1	6.6	< 0.001	0.09	355	6	0.3	< 0.1	0.0519	0.004	0.64	
163447	< 0.1	< 0.1	0.1	< 0.1	< 0.1	87.7	< 0.001	0.21	550	4	0.4	< 0.1	0.0393	0.004	0.92	
163448	< 0.1	0.4	2.2	0.4	1.7	1.3	< 0.001	0.32	7.9	24	5.9	1.9	1.74	0.099	0.18	
163449	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	0.5	0.008	0.10	1.5	1	0.3	0.1	0.0373	0.005	0.02	

Analyte Symbol	Ge	Tm	Yb	Lu	Ta	W	Re	Tl	Pb	Sc	Th	U	Ti	P	S	Cu
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%	%	%
Lower Limit	0.1	0.1	0.1	0.1	0.1	0.1	0.001	0.05	0.5	1	0.1	0.1	0.0005	0.001	0.01	0.001
Method Code	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-ICP	TD-MS	TD-MS	TD-ICP	TD-ICP	TD-ICP	ICP-OES
163450	< 0.1	< 0.1	0.1	< 0.1	< 0.1	1.0	0.010	0.08	2.0	2	0.4	0.2	0.0523	0.012	0.06	
163451	< 0.1	< 0.1	0.4	< 0.1	< 0.1	1.0	< 0.001	0.07	1.7	17	0.1	< 0.1	0.139	0.008	0.51	
163452	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	0.2	< 0.001	< 0.05	1.9	1	< 0.1	0.3	0.0228	0.002	0.12	
163453	< 0.1	< 0.1	0.4	< 0.1	< 0.1	3.1	0.024	0.88	3.6	5	1.6	0.4	0.193	0.030	0.06	
163454	< 0.1	< 0.1	0.4	< 0.1	0.3	3.6	< 0.001	0.28	11.8	5	1.3	0.4	0.176	0.029	0.64	
163455	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	0.6	< 0.001	< 0.05	1.0	< 1	0.2	< 0.1	0.0399	0.010	0.04	
163456	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	4.2	0.009	0.22	17.9	1	0.5	0.1	0.0522	0.007	0.27	
163457	< 0.1	< 0.1	0.2	< 0.1	0.2	10.8	< 0.001	0.49	18.3	4	1.1	0.3	0.146	0.026	0.40	
163458	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	1.3	0.002	0.20	4.7	< 1	0.2	< 0.1	0.0253	0.003	0.16	
163459	< 0.1	< 0.1	0.2	< 0.1	0.2	3.4	< 0.001	0.24	15.9	3	0.7	0.2	0.104	0.017	0.42	
163460	< 0.1	0.2	1.5	0.2	0.7	3.1	0.014	0.30	22.1	17	3.4	1.2	0.369	0.096	1.36	1.11
163461	< 0.1	< 0.1	0.2	< 0.1	0.1	6.1	< 0.001	0.50	10.4	3	0.8	0.2	0.0982	0.014	0.47	
163462	< 0.1	< 0.1	0.4	< 0.1	0.3	9.2	0.015	0.64	7.8	5	1.4	0.6	0.181	0.031	0.59	
163463	< 0.1	< 0.1	0.3	< 0.1	0.3	8.4	< 0.001	0.48	8.5	5	1.3	0.6	0.187	0.031	0.37	
163464	< 0.1	< 0.1	0.2	< 0.1	0.2	2.3	0.007	0.42	20.9	3	0.8	0.3	0.107	0.020	0.19	
163465	< 0.1	< 0.1	0.2	< 0.1	0.2	6.0	< 0.001	0.53	8.9	4	1.0	0.4	0.145	0.022	1.01	
163466	< 0.1	< 0.1	0.2	< 0.1	0.2	8.6	0.004	0.54	13.0	4	1.0	0.3	0.125	0.025	0.47	
163467	< 0.1	< 0.1	0.2	< 0.1	0.1	4.7	< 0.001	0.46	9.9	4	1.1	0.2	0.145	0.026	0.20	
163468	< 0.1	< 0.1	0.5	< 0.1	0.2	0.6	< 0.001	0.20	5.3	11	1.5	0.4	0.208	0.028	0.03	
163469	< 0.1	< 0.1	0.2	< 0.1	0.3	5.4	0.003	0.51	8.8	3	1.1	0.3	0.133	0.021	0.19	
163470	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	0.1	< 0.001	< 0.05	4.3	1	< 0.1	< 0.1	0.0097	0.001	< 0.01	
163471	< 0.1	< 0.1	0.2	< 0.1	< 0.1	0.3	< 0.001	0.07	1.1	10	< 0.1	< 0.1	0.0627	0.008	< 0.01	
163472	< 0.1	0.4	2.1	0.3	< 0.1	< 0.1	0.005	0.30	5.6	34	6.4	1.8	0.227	0.080	0.18	
163473	< 0.1	< 0.1	0.3	< 0.1	0.2	1.4	< 0.001	0.29	6.8	3	0.9	0.3	0.127	0.025	0.18	
163474	< 0.1	< 0.1	0.3	< 0.1	0.4	2.0	0.004	< 0.05	4.2	3	1.7	0.9	0.121	0.016	0.20	
163475	< 0.1	< 0.1	0.3	< 0.1	0.4	0.5	0.010	< 0.05	5.8	2	1.9	0.7	0.0664	0.011	0.21	
163476	< 0.1	< 0.1	0.1	< 0.1	0.2	0.4	0.003	< 0.05	5.7	< 1	1.1	0.3	0.0436	0.007	0.04	
163477	< 0.1	< 0.1	0.3	< 0.1	< 0.1	0.8	0.013	0.17	88.1	12	0.2	< 0.1	0.110	0.007	0.03	
163478	< 0.1	0.1	0.7	0.1	< 0.1	1.1	< 0.001	< 0.05	1.7	17	< 0.1	< 0.1	0.139	0.009	0.05	
163479	< 0.1	< 0.1	0.3	< 0.1	< 0.1	0.3	< 0.001	< 0.05	10.5	4	< 0.1	< 0.1	0.0310	0.005	0.30	
163480	< 0.1	0.3	1.8	0.3	0.3	1.6	< 0.001	0.13	10.2	20	2.9	1.0	0.522	0.198	1.41	
163481	< 0.1	0.3	1.6	0.3	< 0.1	26.4	< 0.001	< 0.05	2.8	29	0.3	< 0.1	0.487	0.027	0.92	
163482	< 0.1	< 0.1	0.1	< 0.1	0.1	6.0	< 0.001	0.31	63.5	3	0.6	0.2	0.0910	0.014	0.48	

QC

Analyte Symbol	Li	Na	Mg	Al	K	Ca	Cd	V	Cr	Mn	Fe	Hf	Hg	Ni	Er	Be	Ho	Ag	Cs	Co	Eu	Bi	Se
Unit Symbol	ppm	%	%	%	%	%	ppm	ppm	ppm	ppm	%	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	0.5	0.01	0.01	0.01	0.01	0.01	0.1	1	0.5	1	0.01	0.1	10	0.5	0.1	0.1	0.1	0.05	0.05	0.1	0.05	0.02	0.1
Method Code	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS
GXR-1 Meas	8.8	0.07	0.30	2.91	0.07	0.93	2.7	85	17.4	776	24.1	0.8	3560	39.7		1.2		25.6	2.24	7.7	0.51	1390	13.1
GXR-1 Cert	8.20	0.0520	0.217	3.52	0.050	0.960	3.30	80.0	12.0	852	23.6	0.960	3900	41.0		1.22		31.0	3.00	8.20	0.690	1380	16.6
DH-1a Meas																							
DH-1a Cert																							
GXR-4 Meas	10.9	0.66	1.96	8.05	4.59	0.95	0.3	81	71.2	147	2.74	2.1	110	36.5		2.1		2.83	2.07	13.0	1.13	19.2	3.7
GXR-4 Cert	11.1	0.564	1.66	7.20	4.01	1.01	0.860	87.0	64.0	155	3.09	6.30	110	42.0		1.90		4.00	2.80	14.6	1.63	19.0	5.60
SDC-1 Meas	31.2	1.88	1.11	8.30	3.92	0.81		90	71.1	706	4.16	2.4	< 10	32.1	3.2	2.9	0.9		2.91	16.5	1.02		
SDC-1 Cert	34.00	1.52	1.02	8.34	2.72	1.00		102.00	64.00	880.00	4.82	8.30	200.00	38.0	4.10	3.00	1.50		4.00	18.0	1.70		
GXR-6 Meas	34.5	0.13	0.73	> 10.0	2.93	0.18	< 0.1	183	93.5	913	5.23	4.9	60	23.7		1.1		0.32	3.53	13.3	0.51	0.19	< 0.1
GXR-6 Cert	32.0	0.104	0.609	17.7	1.87	0.180	1.00	186	96.0	1010	5.58	4.30	68.0	27.0		1.40		1.30	4.20	13.8	0.760	0.290	0.940
MP-1b Meas																							
MP-1b Cert																							
DNC-1a Meas	4.3							134	292					249						53.5	0.46		
DNC-1a Cert	5.20							148.0000	270					247						57.0	0.59		
CCU-1d Meas																							
CCU-1d Cert																							
CZN-4 Meas																							
CZN-4 Cert																							
SBC-1 Meas	150						0.3	200	95.7			5.2		78.5	3.5	3.4	1.1		6.41	20.7	1.42	0.67	
SBC-1 Cert	163.0						0.40	220.0	109			3.7		82.8	3.80	3.20	1.40		8.2	22.7	1.98	0.70	
OREAS 45d (4-Acid) Meas	20.1	0.12	0.23	8.82	0.55	0.17		135	547	401	12.8	5.3		214	1.3	0.8	0.4		2.85	27.2	0.44	0.36	
OREAS 45d (4-Acid) Cert	21.50	0.101	0.245	8.150	0.412	0.185		235.0	549.0	490.000	14.520	3.830		231.0	1.38	0.79	0.46		3.910	29.50	0.57	0.31	
PTC-1b Meas																							
PTC-1b Cert																							
SdAR-M2 (U.S.G.S.) Meas	16.0						4.7	21	51.7			5.7	1150	45.8	2.9	7.2	0.9		1.39	12.5	1.05	1.05	
SdAR-M2 (U.S.G.S.) Cert	17.9						5.1	25.2	49.6			7.29	1440.00	48.8	3.58	6.6	1.21		1.82	12.4	1.44	1.05	
163401 Orig	7.8	2.39	0.29	5.45	1.19	0.98	< 0.1	19	40.0	146	1.40	1.5	< 10	8.9	0.2	0.8	< 0.1	3.78	0.26	4.3	0.17	7.00	< 0.1
163401 Dup	7.5	2.33	0.28	5.31	1.15	0.98	< 0.1	19	37.2	143	1.37	1.5	< 10	8.6	0.2	0.7	< 0.1	4.08	0.25	4.0	0.15	6.68	< 0.1
163439 Orig	4.5	0.23	0.74	1.43	0.27	2.16	< 0.1	26	82.1	479	3.16	0.1	< 10	35.4	0.2	0.2	< 0.1	5.39	0.22	12.3	0.13	5.20	0.5
163439 Dup	4.1	0.22	0.69	1.34	0.24	2.05	< 0.1	24	77.4	436	2.94	0.1	20	32.6	0.2	< 0.1	< 0.1	4.61	0.22	11.3	0.13	4.45	< 0.1
163441 Orig	30.6	1.61	7.92	9.03	1.27	7.68	0.5	215	394	1540	7.09	0.6	20	144	1.6	0.4	0.4	1.22	0.76	45.7	0.38	0.91	< 0.1
163441 Dup	31.3	1.67	8.04	9.15	1.29	7.76	0.6	219	354	1590	7.20	0.6	< 10	145	1.6	0.5	0.4	0.91	0.73	46.9	0.37	0.92	< 0.1
163450 Split Orig	4.7	0.43	0.14	2.13	0.87	0.38	< 0.1	16	29.6	109	1.33	0.1	< 10	7.7	0.1	0.1	< 0.1	0.25	0.15	4.5	0.07	0.15	< 0.1
163450 Split	4.1	0.39	0.12	1.92	0.77	0.34	< 0.1	14	23.5	111	1.29	0.1	< 10	8.0	0.1	0.3	< 0.1	1.00	0.16	4.4	0.07	0.16	< 0.1
163460 Orig																							
163460 Dup																							
163477 Orig	8.6	0.83	1.28	5.29	0.57	3.63	0.5	87	91.5	352	3.23	0.7	< 10	23.5	0.4	0.3	0.1	1.93	0.20	11.2	0.12	20.1	< 0.1
163477 Dup	8.9	0.84	1.32	5.42	0.58	3.65	0.5	88	89.0	357	3.27	0.7	20	23.7	0.4	0.4	0.1	2.19	0.21	11.6	0.12	20.3	< 0.1
163482 Orig	13.1	0.67	0.27	4.83	2.80	0.37	0.5	19	15.8	117	1.44	1.4	< 10	7.0	0.2	0.4	< 0.1	10.1	0.58	3.4	0.09	4.47	< 0.1
163482 Dup	11.5	0.58	0.25	4.29	2.46	0.34	0.5	18	16.8	116	1.34	1.3	< 10	6.5	0.1	0.4	< 0.1	7.01	0.54	3.3	0.08	4.06	< 0.1
Method Blank	< 0.5	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.1	< 1	< 0.5	< 1	< 0.01	< 0.1	< 10	< 0.5	< 0.1	< 0.1	< 0.1	< 0.05	< 0.05	< 0.1	< 0.05	< 0.02	< 0.1
Method Blank	< 0.5	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.1	< 1	< 0.5	< 1	< 0.01	< 0.1	< 10	< 0.5	< 0.1	< 0.1	< 0.1	< 0.05	< 0.05	< 0.1	< 0.05	< 0.02	< 0.1
Method Blank	< 0.5	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.1	< 1	< 0.5	< 1	< 0.01	< 0.1	< 10	< 0.5	< 0.1	< 0.1	< 0.1	< 0.05	< 0.05	< 0.1	< 0.05	< 0.02	< 0.1
Method Blank																							

QC

Analyte Symbol	Zn	Ga	As	Rb	Y	Sr	Zr	Nb	Mo	In	Sn	Sb	Te	Ba	La	Ce	Pr	Nd	Sm	Gd	Tb	Dy	Cu
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	0.2	0.1	0.1	0.2	0.1	0.2	1	0.1	0.05	0.1	1	0.1	0.1	1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2
Method Code	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS
GXR-1 Meas	769	11.1	437	2.8	26.1	277	19	0.7	15.8	0.7	26	26.7	11.4	385	7.1	15.0		8.3	2.7	3.5	0.6	4.5	1120
GXR-1 Cert	760	13.8	427	14.0	32.0	275	38.0	0.800	18.0	0.770	54.0	122	13.0	750	7.50	17.0		18.0	2.70	4.20	0.830	4.30	1110
DH-1a Meas																							
DH-1a Cert																							
GXR-4 Meas	66.2	20.2	99.8	120	11.3	181	39	10.4	257	0.2	6	4.2	1.1	50	51.1	101		39.1	5.7	3.4	0.4	2.5	5780
GXR-4 Cert	73.0	20.0	98.0	160	14.0	221	186	10.0	310	0.270	5.60	4.80	0.970	1640	64.5	102		45.0	6.60	5.25	0.360	2.60	6520
SDC-1 Meas	102	22.1	1.6	103		138	46	22.5			3	0.6		322	27.0	70.9		31.7	6.1	4.8	0.7	5.0	34.6
SDC-1 Cert	103.00	21.00	0.220	127.00		180.00	290.00	21.00			3.00	0.54		630	42.00	93.00		40.00	8.20	7.00	1.20	6.70	30.000
GXR-6 Meas	132	30.3	323	81.8	10.3	36.0	91	4.5	1.76	< 0.1	1	1.7	< 0.1	776	11.5	33.9		12.0	2.4	1.9	0.3	2.2	79.7
GXR-6 Cert	118	35.0	330	90.0	14.0	35.0	110	7.50	2.40	0.260	1.70	3.60	0.0180	1300	13.9	36.0		13.0	2.67	2.97	0.415	2.80	66.0
MP-1b Meas																							
MP-1b Cert																							
DNC-1a Meas	63.7	15.3		3.4	13.7	124	31	1.8				0.8		54	3.4			4.7					104
DNC-1a Cert	70.0	15		5	18.0	144.0	38.0	3				0.96		118	3.6			5.20					100.00
CCU-1d Meas																							
CCU-1d Cert																							
CZN-4 Meas																							
CZN-4 Cert																							
SBC-1 Meas	184	27.8	25.1	132	26.3	152	103	12.0	1.83		2	1.3		269	44.7	97.6	11.6	44.7	8.4	6.3	0.9	5.8	36.8
SBC-1 Cert	186.0	27.0	25.7	147	36.5	178.0	134.0	15.3	2.40		3.3	1.01		788.0	52.5	108.0	12.6	49.2	9.6	8.5	1.20	7.10	31.0000
OREAS 45d (4-Acid) Meas	42.7	22.8	7.8	36.6	9.0	25.5	108	0.7	0.23	< 0.1	< 1	< 0.1		93	14.2	33.3	3.5	12.7	2.4	1.8	0.3	2.1	376
OREAS 45d (4-Acid) Cert	45.7	21.20	13.80	42.1	9.53	31.30	141	14.50	2.500	0.096	2.78	0.82		183.0	16.9	37.20	3.70	13.4	2.80	2.42	0.400	2.26	371.0
PTC-1b Meas																							
PTC-1b Cert																							
SdAR-M2 (U.S.G.S.) Meas	734	16.2		118	21.4	122	98	5.9	10.0					519	41.5	92.5	10.0	36.9	6.2	4.4	0.7	4.5	250
SdAR-M2 (U.S.G.S.) Cert	760	17.6		149	32.7	144	259	26.2	13.3					990	46.6	98.8	11.0	39.4	7.18	6.28	0.97	5.88	236.0000
163401 Orig	24.6	14.4	10.8	30.2	1.5	129	28	1.5	2.77	< 0.1	< 1	0.2	2.0	68	3.0	6.7	0.7	2.7	0.4	0.4	< 0.1	0.3	68.9
163401 Dup	28.4	14.3	8.2	30.2	1.5	129	29	1.6	2.41	< 0.1	< 1	0.2	2.1	65	2.9	6.5	0.7	2.6	0.5	0.4	< 0.1	0.3	69.2
163439 Orig	13.2	3.4	22.3	13.6	1.6	18.4	2	0.7	9.10	< 0.1	< 1	0.1	2.6	41	0.8	1.7	0.2	1.0	0.2	0.3	< 0.1	0.3	132
163439 Dup	14.1	3.1	24.0	12.7	1.5	17.1	3	0.5	8.56	< 0.1	< 1	0.1	2.3	38	0.7	1.5	0.2	0.9	0.2	0.2	< 0.1	0.3	124
163441 Orig	119	14.8	0.8	45.4	11.1	53.4	10	1.2	2.86	< 0.1	< 1	< 0.1	0.2	69	1.1	3.6	0.6	3.3	1.1	1.5	0.3	2.1	117
163441 Dup	125	14.9	0.7	46.6	11.4	55.1	9	1.2	2.16	< 0.1	< 1	< 0.1	0.2	71	1.1	3.7	0.6	3.3	1.1	1.5	0.3	2.1	110
163450 Split Orig	6.7	5.1	6.6	16.8	1.1	18.9	4	0.7	1.95	< 0.1	< 1	0.2	< 0.1	122	1.2	2.8	0.3	1.2	0.2	0.2	< 0.1	0.2	107
163450 Split	7.1	5.0	8.0	16.5	1.1	18.6	5	0.7	1.36	< 0.1	< 1	0.2	< 0.1	125	1.1	2.7	0.3	1.2	0.2	0.2	< 0.1	0.2	98.0
163460 Orig																							
163460 Dup																							
163477 Orig	30.2	19.9	2.0	14.4	3.3	275	14	1.1	898	< 0.1	1	0.2	2.6	45	1.6	2.5	0.3	1.5	0.3	0.4	< 0.1	0.5	104
163477 Dup	31.2	20.0	1.7	14.5	3.3	278	14	1.0	913	< 0.1	1	0.2	2.6	46	1.6	2.5	0.3	1.5	0.3	0.4	< 0.1	0.6	88.1
163482 Orig	86.5	11.7	18.1	65.2	1.4	74.2	23	1.5	4.16	< 0.1	< 1	1.5	1.4	151	2.7	5.6	0.6	2.3	0.5	0.3	< 0.1	0.3	82.6
163482 Dup	80.4	10.8	17.2	60.3	1.3	68.4	23	1.5	3.97	< 0.1	< 1	1.4	1.5	142	2.7	5.4	0.6	2.1	0.5	0.3	< 0.1	0.2	75.4
Method Blank	< 0.2	< 0.1	< 0.1	< 0.2	< 0.1	< 0.2	< 1	< 0.1	< 0.05	< 0.1	< 1	< 0.1	< 0.1	< 1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.2
Method Blank	< 0.2	< 0.1	< 0.1	< 0.2	< 0.1	< 0.2	< 1	< 0.1	< 0.05	< 0.1	< 1	< 0.1	< 0.1	< 1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.2
Method Blank	< 0.2	< 0.1	< 0.1	< 0.2	< 0.1	< 0.2	< 1	< 0.1	< 0.05	< 0.1	< 1	< 0.1	< 0.1	< 1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.2

Analyte Symbol	Zn	Ga	As	Rb	Y	Sr	Zr	Nb	Mo	In	Sn	Sb	Te	Ba	La	Ce	Pr	Nd	Sm	Gd	Tb	Dy	Cu
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	0.2	0.1	0.1	0.2	0.1	0.2	1	0.1	0.05	0.1	1	0.1	0.1	1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2
Method Code	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS
Method Blank																							

QC

Analyte Symbol	Ge	Tm	Yb	Lu	Ta	W	Re	Tl	Pb	Sc	Th	U	Ti	P	S	Cu
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%	%	%
Lower Limit	0.1	0.1	0.1	0.1	0.1	0.1	0.001	0.05	0.5	1	0.1	0.1	0.0005	0.001	0.01	0.001
Method Code	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-ICP	TD-MS	TD-MS	TD-ICP	TD-ICP	TD-ICP	ICP-OES
GXR-1 Meas		0.4	2.0	0.3	< 0.1	136		0.37	675	2	2.3	30.2	0.0293	0.062	0.26	
GXR-1 Cert		0.430	1.90	0.280	0.175	164		0.390	730	1.58	2.44	34.9	0.036	0.0650	0.257	
DH-1a Meas											> 500	1710				
DH-1a Cert											910	2629				
GXR-4 Meas		0.2	0.9	0.2	0.8	35.2		2.91	45.3	8	16.0	4.9	0.290	0.125	1.77	
GXR-4 Cert		0.210	1.60	0.170	0.790	30.8		3.20	52.0	7.70	22.5	6.20	0.29	0.120	1.77	
SDC-1 Meas		0.5	2.8		1.8	0.7		0.54	53.4		8.4	2.3				
SDC-1 Cert		0.65	4.00		1.20	0.80		0.70	25.00		12.00	3.10				
GXR-6 Meas			1.6	0.3	0.3	0.9		2.07	98.7	29	4.5	1.4		0.036	0.02	
GXR-6 Cert			2.40	0.330	0.485	1.90		2.20	101	27.6	5.30	1.54		0.0350	0.0160	
MP-1b Meas																3.10
MP-1b Cert																3.069
DNC-1a Meas			1.7						5.9	35			0.320			
DNC-1a Cert			2.0						6.3	31			0.29			
CCU-1d Meas																24.1
CCU-1d Cert																23.93
CZN-4 Meas																0.403
CZN-4 Cert																0.403
SBC-1 Meas		0.5	3.0	0.5	0.8	1.4		0.82	34.4	21	13.1	4.9	0.454			
SBC-1 Cert		0.56	3.64	0.54	1.10	1.60		0.89	35.0	20.0	15.8	5.76	0.51			
OREAS 45d (4-Acid) Meas			1.2	0.2	< 0.1	< 0.1		0.24	19.5	51	12.3	2.3	0.498	0.034	0.05	
OREAS 45d (4-Acid) Cert			1.33	0.18	1.02	1.62		0.27	21.8	49.30	14.5	2.63	0.773	0.042	0.049	
PTC-1b Meas																7.96
PTC-1b Cert																7.97
SdAR-M2 (U.S.G.S.) Meas		0.4	2.6	0.4	0.3	0.2			683	4	12.6	2.3				
SdAR-M2 (U.S.G.S.) Cert		0.54	3.63	0.54	1.8	2.8			808	4.1	14.2	2.53				
163401 Orig	< 0.1	< 0.1	0.1	< 0.1	0.1	2.8	< 0.001	0.21	126	2	0.7	0.2	0.0607	0.009	0.34	
163401 Dup	< 0.1	< 0.1	0.1	< 0.1	0.1	2.7	< 0.001	0.19	125	2	0.6	0.4	0.0585	0.009	0.34	
163439 Orig	< 0.1	< 0.1	0.2	< 0.1	< 0.1	19.2	< 0.001	0.09	3.3	4	< 0.1	< 0.1	0.0342	0.004	0.87	
163439 Dup	< 0.1	< 0.1	0.1	< 0.1	< 0.1	17.4	< 0.001	0.08	2.6	4	< 0.1	< 0.1	0.0344	0.004	0.83	
163441 Orig	< 0.1	0.2	1.4	0.2	< 0.1	9.6	0.005	0.26	5.5	47	0.1	0.8	0.351	0.019	0.95	
163441 Dup	0.2	0.2	1.4	0.2	< 0.1	10.6	< 0.001	0.25	5.6	47	0.1	< 0.1	0.351	0.019	0.94	
163450 Split Orig	< 0.1	< 0.1	0.1	< 0.1	< 0.1	1.0	0.010	0.08	2.0	2	0.4	0.2	0.0523	0.012	0.06	
163450 Split	< 0.1	< 0.1	0.1	< 0.1	< 0.1	1.0	< 0.001	0.08	2.0	2	0.4	0.3	0.0541	0.012	0.06	
163460 Orig																1.12
163460 Dup																1.11
163477 Orig	< 0.1	< 0.1	0.3	< 0.1	< 0.1	0.8	0.016	0.16	87.7	12	0.2	0.1	0.111	0.007	0.03	
163477 Dup	< 0.1	< 0.1	0.3	< 0.1	< 0.1	0.8	0.011	0.18	88.5	12	0.2	< 0.1	0.109	0.007	0.02	

Analyte Symbol	Ge	Tm	Yb	Lu	Ta	W	Re	Tl	Pb	Sc	Th	U	Ti	P	S	Cu
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%	%	%
Lower Limit	0.1	0.1	0.1	0.1	0.1	0.1	0.001	0.05	0.5	1	0.1	0.1	0.0005	0.001	0.01	0.001
Method Code	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-ICP	TD-MS	TD-MS	TD-ICP	TD-ICP	TD-ICP	ICP-OES
163482 Orig	< 0.1	< 0.1	0.1	< 0.1	0.2	6.1	< 0.001	0.32	65.9	3	0.6	0.2	0.0925	0.014	0.48	
163482 Dup	< 0.1	< 0.1	0.1	< 0.1	0.1	5.8	< 0.001	0.30	61.2	2	0.6	0.2	0.0895	0.013	0.47	
Method Blank	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.001	< 0.05	< 0.5	< 1	< 0.1	< 0.1	< 0.0005	< 0.001	< 0.01	
Method Blank	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.001	< 0.05	< 0.5	< 1	< 0.1	< 0.1	< 0.0005	< 0.001	< 0.01	
Method Blank	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.001	< 0.05	< 0.5	< 1	< 0.1	< 0.1	< 0.0005	0.001	< 0.01	
Method Blank																< 0.001