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**Report on the  
Project 81  
Lucas Gold Property  
2018 Diamond Drill Program  
Lucas Township, Porcupine Mining Division,  
Northeastern Ontario  
NTS 42A/14**

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## **Summary**

A diamond drilling program of 15 NQ size diamond drillholes totaling 3,183.9 m, was completed in February and March 2018, by Noble Mineral Exploration ("Noble") on the Lucas Gold Property, Lucas Township near Timmins, Ontario, Canada. The purpose of the diamond drill program was to confirm the location of the historic ore zone, confirm historic gold values and confirm the lateral extension of the mineralized zone as previously defined in the diamond drill programs in the early 1980's by Abitibi-Price Inc., and Lucas Gold Inc., in 1987.

In the summer of 2012, Noble designed a diamond drill campaign based on Airborne Gradiometer Magnetic, VLF, Radiometric, TEM and IP surveys completed in late 2011 and early 2012. The Geophysical surveys were able to highlight several high conductive zones, and in May 2012, six (6) diamond drill holes totaling 3,059.5m, were completed. However, although anomalous gold was found in the drilled horizon, none of the holes intersected the same area drilled in the 1980's by Abitibi-Price and Lucas Gold Inc.

Noble then decided in 2017 to partner with Orix Geoscience to generate a full compilation of the historical drilling in order to verify the location of all relevant historic drillholes. In February 2018, a metal detector was used to find the historic diamond drill casings left in the ground from the Abitibi-Price Inc., and Lucas Gold Inc., drilling campaigns. Locating these historic casings was crucial to targeting the specific drillholes that needed to be twinned in this program to confirm gold grades. The 2018 drill campaign was successful in locating 37 historical drillhole casings and, using these as a reference, the drill program succeeded in testing the strike length of the zone with 12 drillholes and testing historical gold values by twinning 3 historic drillholes.

In addition to the re-discovery of the zone, Noble was able to obtain important geological data with this program. The current interpretation suggests that the gold mineralization is hosted within a mineralized sulphide-rich tuffaceous unit, which is bounded on the footwall by a NW striking, steeply dipping fault. Within the tuffaceous unit, Quartz/cherty horizons occur as discrete, flat, lens-like openings on a ladder stacked arrangement. These lens-like openings are significantly higher in gold when quartz stockworks and stringers occur in abundance.

With the current data, the ore zone has been interpreted to plunge to the NW at approximately 35°. However, the density of drilling is reduced to the NW and this interpretation could change as more drilling occurs. Also, due to the ladder-like stacking of the mineralized lenses within the tuffaceous unit, the exploration of this gold deposit is particularly sensitive to the angle of drilling, with steeper holes being preferable for the intersection of several lenses within one drillhole.

In the next phase of drilling, the down plunge extension of the zone should be tested systematically while keeping in mind the ladder stacked nature of the high-grade zones. In a more general exploration aspect, only two of the six anomalous IP (conductive) zones delineated in 2012 have been drill tested. There is potential for the remaining four to have similar characteristics.

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## **1.0 Introduction**

In October of 2011, Noble Mineral Exploration (formerly known as "Ring of Fire Resources Inc.") acquired Project 81 Property ("the Property" Figure 1) from Abitibi Bowater Canada Inc. ("Abibow" – now Resolute Forest Products Inc (RFP)) and performed an initial regional geophysical survey program consisting of Helicopter Airborne EM and Magnetic Surveys over several parts of the Property in November of 2011. Following the regional geophysical survey on the Property, an IP Survey consisting of 45 line kms, over a 1500m by 3000m grid at 100m line spacing, was performed over the Lucas Gold target in April 2012. This program outlined 6 high priority anomalous trends

Noble then drilled 6 NQ size diamond drillholes in 2012, with the aim of testing one of the high priority IP anomalous trend, believed to be related to the historical drilling along the Lucas Gold target that revealed significant assay results in drillhole 904-73-14, including 1.21 g/t over 5.3m and 1.0 g/t over 15.3m (McIntyre Porcupine Mines LTD, 1973). Other significant results came from several historical drillholes in 1980 and 1981 courtesy of Abitibi-Price Resources, such as L-80-4 which intersected 2.88 g/t over 34.4 m, L-80-13 which intersected 1.36 g/t over 33.5 m and L-81-36 which intersected 2.27 g/t over 14.6 m.

The 2018 diamond drill program consisted of 15 NQ size diamond drillholes (LUC-18-07 to LUC-18-21) completed between February 17, 2018 and March 21, 2018, totaling 3,183.9 meters. All samples collected from the drill core were analyzed for Au, using fire assay and a suite of 38 elements with Aqua Regia ICP analysis by Actlabs in Timmins, Ontario.

This report documents the results of the 2018 drilling program. Diamond Drilling on the property was carried out by NPLH Drilling ("NPLH") of Timmins, Ontario. Edwin Escarraga acted as the Project Geologist, P.Geo (ON) of Orix Geoscience Inc. under the supervision of Randy Singh, P.Geo (ON), P.Eng (ON) - V.P. Exploration and Project Development of Noble Mineral Exploration Inc. Edwin Escarraga P.Geo (ON) is responsible for the preparation of this report.

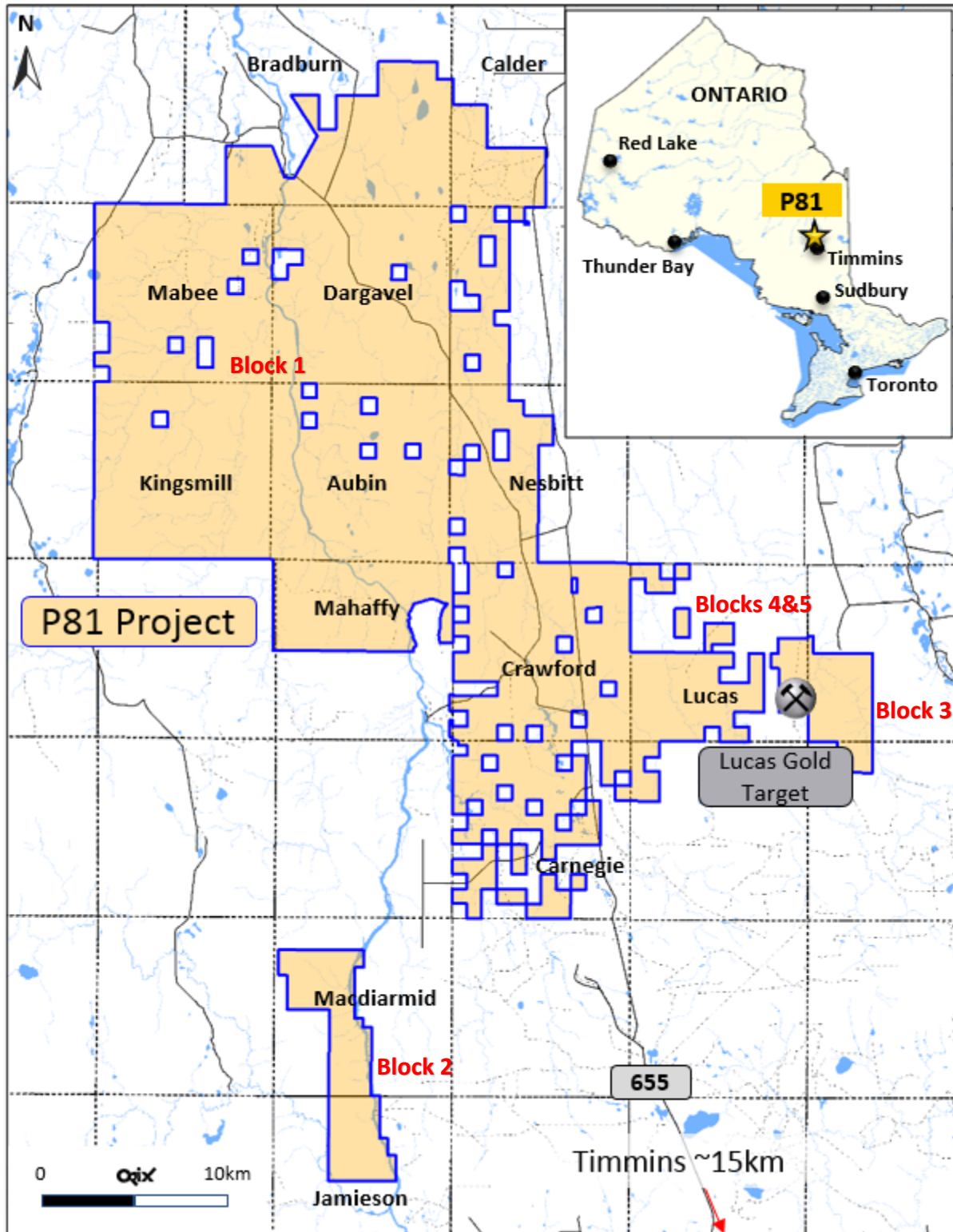


Figure 1: Location of the P81 Property.

## 2.0 Property Description, Location and Access

"Project 81" or "P81", consists of 5 main claim blocks (Figure 1), which spans approximately 79,586 hectares and is comprised of 961 patents and 1453 single cell mining claims, although the majority of the area is patented. Table 1 outlines the claim blocks, their general information, and their size. Noble's Lucas Gold Project lies within the 3<sup>rd</sup> largest block of the P81 area, located at the eastern edge, on the SE corner of Lucas township, and is located in the Porcupine Mining Division, District of Cochrane, Timmins Area, Northern Ontario, Canada (Figure 1). Timmins is the nearest major center located within 35 km of the Lucas Gold Project.

The Lucas Gold Project is situated in the NTS Sheet 42A/14 NE, centered at an approximate Longitude of 81°12'58"W, Latitude of 48°48'56"N and UTM NAD 83 Z 17N 5407100N and 484000E (Figure 2).

The Property is accessed from Timmins by travelling approximately 40 km north on highway 655, then turning east onto a winter road built and maintained by Noble. The project is located approximately 13 km along this winter road.

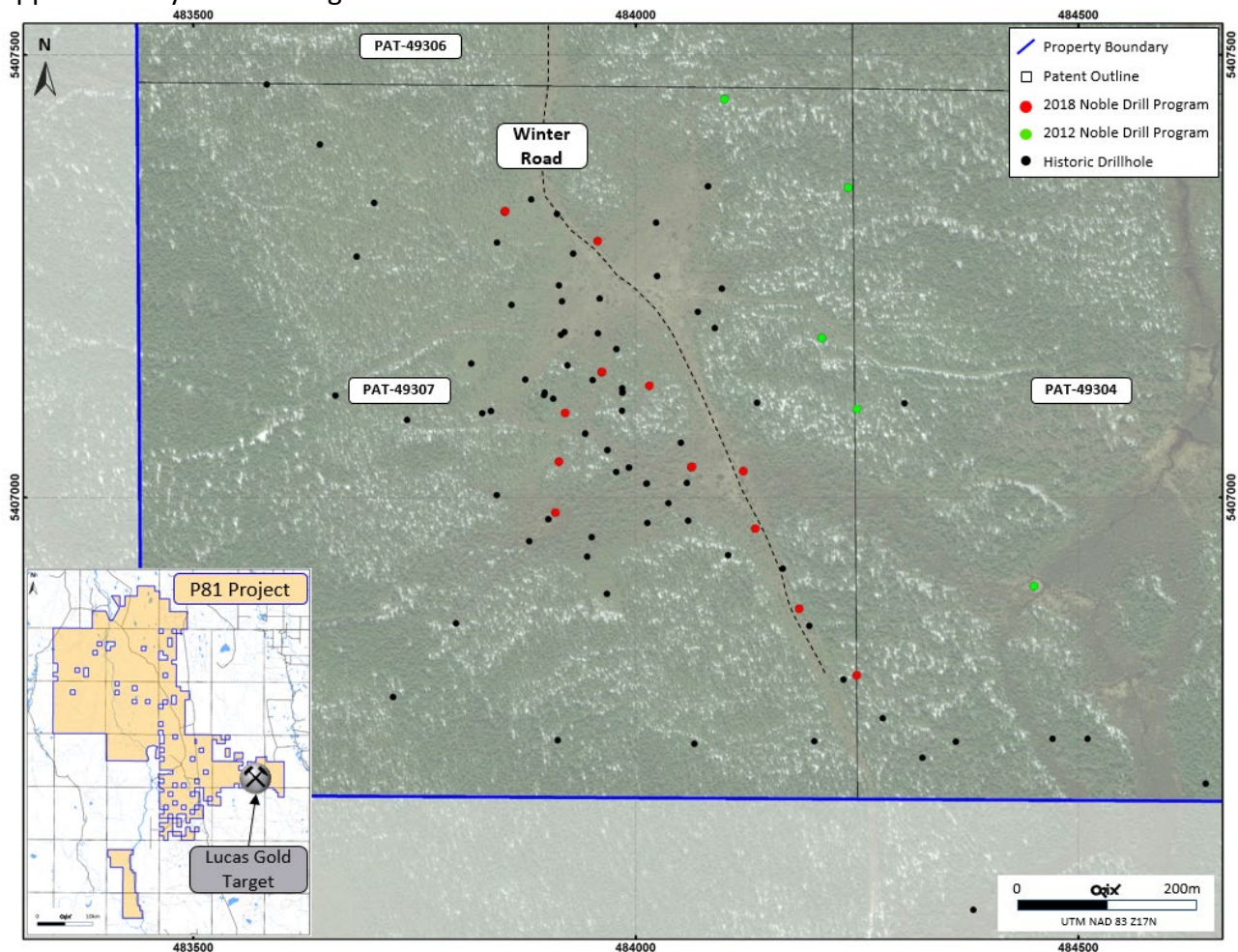


Figure 2: Lucas Gold Target, location and drilling.

**Table 1: P81 Claim Blocks.**

<b>Block</b>	<b>Cell Claims #</b>	<b>Cell Claims (Ha)</b>	<b>Patents #</b>	<b>Patents (Ha)</b>	<b>Total Area (Ha)</b>
<b>1</b>	1,124	14,534.8	955	58,359	72,893.8
<b>2</b>	176	3,753.2	0	0	3,753.2
<b>3</b>	126	2,376	5	233	2,609.7
<b>4</b>	12	203.7	0	0	203.7
<b>5</b>	15	126.2	1	0	126.2

### **3.0 Climate, Physiography, Infrastructure**

#### **3.1 Climate**

The local climate consists of cold winters and short hot summers. The temperature peaks in July with an average of 24 °C, with above 20°C temperatures from June to August. The lowest temperature of the year is in January with an average of -23°C, with below 0°C weather from November to April.

The area receives approximately 834.6 mm of precipitation annually, with 558.3 mm as rain and 311.3 mm as snow. September is the wettest month receiving an average 83.7 mm of rain, and February being the month with the least precipitation only receiving on average 1.7 mm of rain and 45.9 mm of snow. (Environment Canada, Victor Power Airport).

The property lies within the Subarctic Climate zone, with short summers and long, cold winters. Snow squalls occur from October to June, and the frost-free period hardly exceeds 90 days. Occasionally, fieldwork is not permitted due to forest fire danger and the MNR may prevent access during such times. The property is also part of the Boreal Shield eco-zone which has relatively low tree growth rates and timber volumes compared with other forested eco-zones in Canada. Tree species in the Boreal Shield eco-zone include white and black spruce, balsam fir, tamarack, trembling aspen, white pine, red pine, jack pine, maple, eastern red cedar, eastern hemlock, paper birch, speckled alder, pin cherry, mountain ash, among other plants. Mammals include moose, black bear, wolf, chipmunk, beaver, muskrat, snowshoe hare, red squirrel, mice, marten, short-tailed weasel, fisher, mink, river otter, coyote, and red fox. Garter snakes and frogs are also present. Aquatic birds are seen on lakes during the ice-free season, and fish can be abundant in some lakes and the larger perennial streams.

#### **3.2 Physiography.**

The Project lies within the Mattagami Drainage Basin. The property displays a landscape composed of forest cover and virtually no outcrops with boulder and gravel tills, as well as swampy tracts, spring-runoff stream beds and swales, beaver ponds and small lakes. It is largely a low relief, with lithologically controlled topographic highs. Locally, glacial landforms add to relief. Elevations range from 290 to 340 m above sea level.

Thick fine-grained, glaciolacustrine deposits subdue local landscape and form terrain characterized by broad, poorly drained, swampy conditions. Geological mapping indicates that outcrop comprises <1% of the property.

The areas around the drill sites were generally flat, locally covered by dense bush that was mostly second growth soft woods of spruce, balsam fir and poplars. The topography is flat with an insignificant change in elevation.

### **3.3 Infrastructure.**

North eastern Ontario, and in this case Timmins particularly, has seen a long history of mining of VMS and gold deposits dating back to the turn of the 20th century. There is a complete range of services and suppliers required for mining and exploration that are available in Timmins, including exploration supply stores, machine shops, mining equipment, motels, restaurants, and a large pool of skilled personnel.

The Lucas Gold Project Property is approximately 40km north of Timmins and Highway 655 runs just to the west of the drilling area, but as previously mentioned, road access is seasonal through the use of a winter road that leads directly into the drilling area. There is a well serviced airport with flights to Toronto and several other small communities, cities and towns in northern Ontario.

## **4.0 Exploration History**

The Porcupine Mining District of Ontario was created after the discovery of gold in the Abitibi greenstone belt near Timmins in 1908. Due to the lack of outcrop in the townships north of Timmins, exploration proved to be more difficult. The advent of airborne geophysics allowed new exploration campaigns in the Abitibi greenstone belt. Starting in the early 1960's, a number of companies including INCO Ltd. (CANICO) flew proprietary airborne magnetic and electromagnetic surveys. Exploration was carried out on the Property between 1952 and 1955 by C.C Huston and Associates. Work was limited to ground geophysical surveys and no economic mineralization was located. The discovery of the Kidd Creek mine by Texas Gulf in the early 1960's stimulated the exploration activity in the area north of Timmins. Abibow, entered into several option agreements on what is now Project 81 freehold land north of Timmins.

In 1963, Abibow and Canico entered into an agreement for exploration of 216 square miles (~560 km<sup>2</sup>), over Abibow Smooth Rock Falls Freehold lands. Airborne EM and Mag using two frequency systems was flown in two directions. Several attempts were made to locate all airborne conductors on the ground and twenty-nine holes were drilled on the Lucas property. Hole 27063 intersected 4.3g/t Au over 2.8m. Canico completed its work in July 1966 and advised Abibow that no economic mineral deposits had been found. (McCombe, 1986).

Between 1966 and 1972 Abitibi-Price Inc. and Cromarty Exploration entered into an option agreement. An airborne EM survey was flown and the results of the ground survey, encouraged Cromarty, subsequently McIntyre Porcupine Mines Ltd., to extend the agreement. In 1972, a detailed compilation of data, a new airborne survey, and several ground geophysical surveys were performed and followed up with diamond drilling. The only highlight on this drilling

campaign came from drillhole 904-73-14 including 1.21 g/t Au over 5.3m and 1.0 g/t Au over 15.3m (McIntyre Porcupine Mines LTD, 1973) (Lahti and Singh, 2016).

Overall, McIntyre concluded there were no values of economic interest so the property was returned to Abitibi-Price. After reviewing all the previous exploration data, Abitibi-Price in 1980 decided to perform a specific program on Lots 1 and 2, Concession 2 in Lucas Township which is the current location of the Lucas Gold Target. Abitibi-Price drilled several holes in the vicinity of holes 27063 and 904-73-14, trying to duplicate the favourable assay results. The drilling provided geological information that outlined a zone of gold mineralization. The most significant results came from drillhole L-80-4 which intersected 2.88 g/t Au over 34.4 m; hole L-80-13 which intersected 1.36 g/t Au over 33.5 m; and hole L-81-36 which intersected 2.27 g/t Au over 14.6 m.

In 1981, a Dighem Airborne System was flown and outlined several anomalous areas. The anomalies were tested using reverse circulation overburden drilling. However, due to the price of gold and low tonnage calculated, no further exploration was performed by Abitibi-Price.

In 1983, Chevron Canada Resources Limited completed an airborne Mag Gradiometer Survey and Mark VI Input EM and Mag Surveys over most of Lucas Township. This program assisted in the geological interpretation of Lucas Township. The Lucas Gold Target (Lots I and 2, Concession II Lucas Township) were not included in the agreement with Chevron. Based on the Abitibi-Price drilling, a drill-indicated reserve (Non NI-43-101 complaint) of about 150,000 tons grading 3.7 g/t Au was calculated by Abitibi-Price (Woolham, 1986).

In 1987, Lucas Gold Resources Inc. completed a diamond drilling campaign that totaled 2,699 ft (822 m) in 3 separate holes, although gold values were low, important geological information was collected. Several faults with significant displacement were interpreted, and the program although successful in picking up the characteristic alteration associated with gold mineralization, failed to expand or test the extension of the gold mineralization at depth due to the strong flattening and wandering of the BQ size drill rods used (Karvinen, 1987). In 1988, Lucas Gold Resources Inc, conducted an orientation survey to determine the orientation and attitude of specific historical holes drilled in 1980 & 1981 by Abitibi-Price. The survey was conducted due to a lack of understanding of the three-dimensional orientation of the holes.

The property did not see major exploration efforts from 1988 to 2011, when Ring of Fire Resources Inc., now Noble Mineral Exploration Inc., performed an airborne EM and Magnetic survey, followed by a second airborne geophysical survey that included magnetic, gradiometric and radiometric surveys. The surveys confirmed the presence of the EM conductors previously identified. A small grid was established over the Lucas Gold Target and a Ground IP Geophysical Survey was carried out over the main area of the mineralized zone identifying several well-defined conductors. In 2012, Noble drilled 6 diamond drillholes testing one of the 6 conductors, and although anomalous gold values were found, the holes didn't intersect the same mineralized horizon targeted by Abitibi-Price and Lucas Gold Resources in the 1980's (Singh and Lahti, 2013). The historical exploration on the P81 property is summarized in table 2.

Table 2: Summary of Historical Exploration on the P81 Property.

<b>Company</b>	<b>Year</b>	<b>Work Done</b>	<b>Assessment Report</b>
International Nickel Co	1963	Mag-EM Surveys	42A14SW0479
Canico	1966	Drilling - follow up	42A14SE0106
Chance Mines	1967	Drilling	42A14SW0020
McIntyre Porcupine Mines	1972	Airborne EM	42A14SW0011
Chance Mines	1972	EM and Mag	42A14SW0473
McIntyre Porcupine Mines	1973	IP Survey; Drilling;	42A14SE0131; 42A14SW0011
Duncan R Derry Ltd	1973	Turam EM and Mag	42A14SE0016
Canadian Occ. Petroleum	1975	Turam EM and Mag	42A14SW0019
Shell Canada	1977	Mag Surveys	42A14SE0080
Shell Canada	1978	Ground HLEM	42A15NW0008
Canadian Nickel Company	1980	Ground Mag	42A14SE0015
Abitibi-Price Mineral Res.	1981	RC Drilling	42A14SE0131
Home Oil Company	1981	Max Min II EM	42A14SW0022; 42A14SW0481
Abitibi-Price Mineral Res.	1981	Max Min II EM	42A14SW0013
Home Oil Company	1981	Max Min II EM	42A14SW0010
Canadian Nickel Company	1981	Geological survey	42A14SE0014
Abitibi-Price Mineral Res.	1982	Max Min II EM	42A14SW0323
Home Oil Company	1982	Drilling	42A14SW0012
Canadian Nickel Company	1982	EM and Humus survey	42A14SE8632
Home Oil Company	1982	Drilling	42A14SW0014
Abitibi-Price Mineral Res.	1983	Overburden drilling	42A14SW0008
Abitibi-Price Mineral Res.	1984	Drilling	42A14SW0009
Abitibi-Price Mineral Res.	1984	Airborne EM	42A14SE0008
Abitibi-Price Mineral Res.	1984	Drilling	42A14SE0010
Kidd Creek Mines	1985	RC Drilling	42A14SW0006; 42A14SW0007; 42A14SE0009
Kidd Creek Mines	1986	RC Drilling	42A14SE0005; 42A14SW0004
Kidd Creek Mines	1986	HLEM and Mag	42A14SW0005; 42A14SE0001
Kidd Creek Mines	1987	RC Drilling	42A14SE0004
Lucas Gold Resources Inc	1987	Drilling	42A14SW0021
Falconbridge	1987	Mag and VLF-EM	42A14SE0003
Kidd Creek Mines	1987	RC Drilling, Drilling	42A14SW0003; 42A14SE0007
Lucas Gold Resources Inc	1988	Downhole Survey Results	42A14SE0002
Placer Dome Inc	1989	HLEM, VLF-EM, Mag	42A14SW0002
Rio Algoma Exploration	1990	Ground HLEM	42A14SW0322
Dave and Sue Gamble	1995	Ground HLEM and Mag	42A14SE0036; 42A14SE0035
Inco	1997	Ground HLEM and DDH	42A14SW0053
Falconbridge	2000	Ground HLEM, Borehole EM	42A14SW2006; 42A14SE2014
Noble Mineral Exploration	2011	Geophysical Surveys	2_53773_10
Noble Mineral Exploration	2012	Drilling	20012335



## 5.0 Geological Setting

### 5.1 Regional Geology

The Lucas Gold Target is situated in a sequence of steeply-dipping, generally east-west trending felsic and mafic volcanic rocks which have been metamorphosed to greenschist facies. The volcanic rocks are Archean in age and form part of the Abitibi Greenstone Belt in the Superior Province. In the immediate Timmins area, the Abitibi subprovince is subdivided into different assemblages with ages ranging from Timiskaming assemblage sedimentary rocks that range from 2676 to 2670 Ma to Deloro assemblage rocks that range from 2730 to 2724 Ma. Timiskaming sediments were deposited unconformably on deep water turbidite sediments of the Porcupine assemblage. Coeval with the Porcupine sediments are the felsic fragmental rocks dated at 2687 Ma. The underlying Tisdale assemblage rocks have an age of 2710 -06 Ma and are predominantly mafic to felsic volcanic rocks which can be subdivided into a series of sequential formations. The Tisdale assemblage rocks, particularly mafic volcanic rocks with high iron tholeiitic affinity, are the most productive for gold mineralization. Deloro assemblage rocks immediately underlie the Tisdale assemblage and consist of mafic to felsic volcanic rocks with minor banded iron formation and clastic sediments near the top of the sequence (Figure 3).

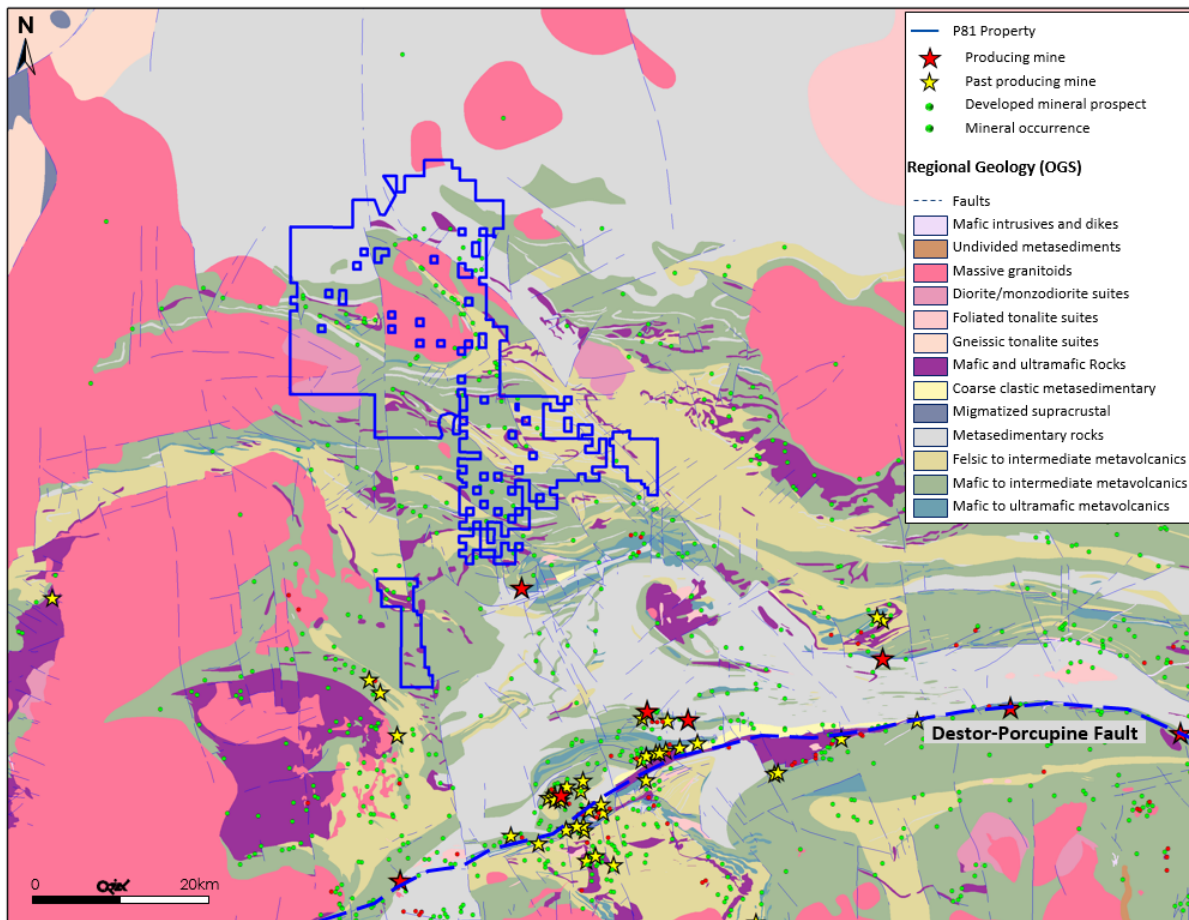


Figure 3: Regional Geology (Ontario Geological Survey)



On a regional scale, several exploration targets exist within rhyolite units, especially for volcanogenic massive sulphide (VMS) deposits. In fact the Kidd Creek deposit, one of the largest and richest VMS deposit in North America, is located within 30 km of the project area. In addition to VMS mineralization, several mineralized ultramafic sills offer the potential for nickel deposits. Historically, the Timmins district has been a major producer of both gold and base metals. In the immediate vicinity of Timmins, over 68 million ounces of gold have been mined. The komatiite-hosted Redstone Mine and the gabbro-hosted Montcalm Mine are producing nickel, copper and cobalt ([www.mndmf.gov.on.ca/mines/ogs/resgeol/geology/tim\\_e.asp](http://www.mndmf.gov.on.ca/mines/ogs/resgeol/geology/tim_e.asp)).

## **5.2 Property Geology**

Volcanic rocks in the immediate vicinity of the deposit comprise a thick sequence of felsic-intermediate tuffs and lapillistones with a few thin intercalated leucoxene-bearing mafic flows or sills. The tuffs contain varying amounts of graphite and pyrite and have a large alteration halo surrounding the mineralization. Primary layering, which is common, indicates the volcanic sequence trends 320° and dips steeply (65-70°) to the north.

Intrusive rocks are limited with a few thin dikes of fine-grained felsic rock, possibly syenite, being intersected in certain Abitibi-Price holes. Also dikes of lamprophyre, ranging from a few inches to a few feet thick are common in the vicinity of the mineralization. The lamprophyres appear to cut all rock types including mineralized quartz veins whereas the felsic dikes may be contemporaneous with the veins.

Volcaniclastic sediments consist predominantly of graphitic units, occurring in conformable lenticular masses within the felsic-intermediate volcanics. Contacts are gradational and interlaced. Primary layering in pyrite, which varies from 10% to 20%, is evident and soft-sediment deformation structures are common. The primary pyrite is fine-grained, while secondary pyrite associated with veins is coarser and shows some crystalline forms. The chert is variably grey to black probably due to the presence of graphite, the content of chert varies greatly within the graphitic units.

Quartz veins are common in and near the sulfide-chert sediments. They are predominantly irregular veins or veinlets of white quartz with some scarce pyrite, which crosscut the stratigraphy at a steep angle. The only exception is a large conformable white quartz vein at the footwall contact of the main mineralized zone, which is in turn bounded by a large fault intersected in all the drillholes. This large white quartz vein ranges in thickness from 2 to 9 m and averages roughly 4 m. The white vein had been previously traced to a vertical depth of approximately 200 m and about 600 meters along strike.

Penetrative deformation has affected all the rock types except the lamprophyre dikes. This is evident as a very strong foliation in the tuffs and zones of closely-spaced fractures in the chert sediments and quartz veins. On the other hand, brittle deformation is evident in the form of fractures and a few local faults. The most obvious fault is the Footwall Fault which follows the lower contact of the main mineralized zone. In drill core the fault is evident as a zone of

graphitic gouge up to 3 m wide. The Footwall Fault is conformable with stratigraphy and marks a sharp break between the underlying felsic to intermediate sericitic volcanic rocks with visible schistosity and the main mineralized zone of auriferous chemical sediments. Several smaller parallel faults are also present in the volcanic sequence and cross cut the footwall fault and the main mineralized zone. These parallel faults are closely-spaced with an ENE strike.

Alteration is present in all the volcanic rocks near the mineralized zone, it consists of pervasively carbonatized and sericitized sections with varying intensities. The alteration is most intense in the footwall felsic tuffs where such rocks are now a distinct waxy, greenish-yellow color. This alteration type is commonly associated with gold mineralization, with base metal, massive sulfide, affinities. The intensity and extent of the alteration could be indicative of a strong hydrothermal system that was active in the area (Karvinen, 1987).

Also, within the property are several historic gold showings, typically within tuffs that form a larger sequence of volcanic rocks. In some cases, the tuffs are a few hundred meters thick. At the Lucas Gold Target, the gold mineralization appears to have a structural control and sulphide association.

## **6.0 Mineralization and Model**

In the Lucas Gold Target, the higher grades of gold are confined to sulfide and chert-bearing rocks within a tuffaceous sequence bounded by a footwall fault. Certain beds of a meter-scale pyritic tuff with 10-30% pyrite carries minor gold (0.1-0.5 g/t Au). However, the distinct enrichment of higher grade gold is confined to the pyrite/chert lenses within the one mineralized tuffaceous unit. Although other chert-sulfide rich beds, stratigraphically above, have been sparsely drilled, there is still not enough information to categorize them as of economic interest. Their thickness and lateral extent is currently unknown, but they do correspond to conductors outlined during the 2011 geophysical surveys. As of the end of this report, the only unit of economic interest is the Main Mineralized Zone due to its continuity, size and geological controls from drilling.

The Main Mineralized Zone is predominantly a sulphide-rich zone consisting of variable amounts of chert, massive to semi-massive and disseminated pyrite, and white to smokey quartz veins as stockwork, stringers and/or veinlets. The pyrite content of the hanging wall pyritic tuffs increases to 25-50% near the Main Mineralized Zone upper contact, therefore this unit is referred to as a Mineralized tuff. This unit grades gradually into sulphide dominated rock. Downhole, the quartz content increases, with veinlets and stringers predominant across both the Mineralized tuff and the Main Mineralized Zone. Finally, near the footwall contact, a thick (average 2.5m) conformable white unmineralized quartz vein occurs.

The lower contact of the Main Mineralized Zone in most sections is defined by the Footwall Fault zone which occurs above a thick sequence of carbonate-sericite felsic tuffs. The Main Mineralized Zone varies in thickness from up to 13m in the SE to 1-2m in the NW, displaying the

lenticular nature of the zone. The stratigraphically younger Mineralized Tuff is more consistent with thicknesses that vary from around 8m in the SE up to 18m in the NW. Overall, the two units combined represent the bulk of the mineralization in the Lucas Gold target with an average thickness of 15-20m and at least a 500 m strike length. The zone has been traced to a depth of 220m below surface. The Main Mineralized Zone is conformable with the volcanic stratigraphy, striking ~330° and dipping 60° to the north.

Additional to chert mineralization, quartz in the Main Mineralized Zone appears as stringers, thin veinlets, stockwork and more rarely as quartz flooding. Glassy, smokey quartz is also present in small veinlets, but is less common. When comparing the quartz content with gold assays, there is a clear correlation between quartz-stockwork and higher gold values (>1.5 g/t Au). As summarized in Table 3, sections of the Main Mineralized Zone and/or Mineralized tuff with abundant chert and pyrite yielded better assay results if accompanied by strong quartz stockwork or stringers and veinlets. These sections often assayed above 1.5 g/t Au. On the other hand, the same sections of mineralized zone and mineralized tuff that have chert and pyrite but no quartz stockworks or stringers had overall lower values of gold (0.2-0.7 g/t Au).

**Table 3: 2018 Key features on the Lucas Gold Target, (high assays highlighted in grey)**

<b>Drillhole</b>	<b>Mineralization</b>	<b>Alteration</b>	<b>Veining</b>	<b>Assay</b>
LUC-18-07	Semi-Massive Py ~50%	Chert/Pervasive/ Strong	Qtz Veinlets/Quartz Stockworks/Strong	High (Au>1.5 g/t)
LUC-18-09	Diss/Semi- Massive Py ~25%	Chert/Pervasive/ Strong	Quartz Stringers/ Weak	Low (Au = 0.2-0.7 g/t)
LUC-18-11	Diss/Band Py ~30%	Chert/Pervasive/ Moderate	Qtz Stockworks/ Moderate	Low (Au = 0.2-0.7 g/t)
	Semi-Massive Py ~50%	Chert/Patchy/ Moderate	Quartz Stockworks/ Strong	High (Au>1.5 g/t)
LUC-18-13	Semi-Massive Py ~25%	Chert/Patchy/ Moderate	Quartz Stringers/ Weak	Low (Au = 0.2-0.7 g/t)
	Semi-Massive Py ~25%/Tr Aspy	Chert/Pervasive/ Moderate	Qtz Stringers/Quartz Stockworks/Strong	High (Au>1.5 g/t)
LUC-18-14	Diss/Patchy Py ~10%	Chert/Pervasive/ Moderate	Qtz Veinlets/Weak	Low (Au = 0.2-0.7 g/t)
	Semi-Massive Py ~50%	Chert/Pervasive/ Strong	Quartz Stringers/ Strong	High (Au>1.5 g/t)
LUC-18-15	Semi-Massive Py ~75%	Chert/Pervasive/ Strong	Quartz Stringers/ Very Weak	Low (Au = 0.2-0.7 g/t)
	Semi-Massive Py ~50%	Chert/Pervasive/ Moderate	Qtz Veinlets/ Very Weak	Low (Au = 0.2-0.7 g/t)
LUC-18-16	Semi-Massive Py ~60%	Chert/Pervasive/ Moderate	Quartz Stringers/ Moderate	Low (Au = 0.2-0.7 g/t)
LUC-18-17	Semi-Massive Py ~40%	Chert/Patchy/ Weak	Quartz Stringers/ Weak	Low (Au = 0.2-0.7 g/t)
LUC-18-19	Semi-Massive Py ~35%/Tr Aspy	Chert/Pervasive/ Moderate	Qtz Veinlets/Quartz Stockworks/Strong	High (Au>1.5 g/t)

Given the irregular nature of the quartz stockworks, sub-horizontal orientation and their association with stacked lenses that may be discontinuous laterally, this zone is very easy to miss during drilling. The Main Mineralized Zone extension along strike is well defined and remains open at depth with the zone plunging 35-45° to the northwest. No visible gold has been observed or reported in the historical logs. However, the 2018 campaign was able to identify the presence of arsenopyrite in holes LUC-18-13, LUC-18-15, LUC-18-19, LUC-18-20 and LUC-18-21 as well as the much rarer occurrence of chalcopyrite specks.

Geochemically, the chert and sulfide rich units such as the Main Mineralized zone and the Mineralized tuff are enriched in silver, arsenic, sulfur, and iron. The gold to silver ratios are erratic and there does not seem to be a specific trend. Arsenic analyses show strong enrichment and correlation with gold. The mineralized zones have much lower contents of Na, Ca, Ba and Sr, which is consistent with the lack of sericite and carbonate alteration compared to the surrounding units.

## **7.0 2018 Drill Program**

From February 17 to March 21, 2018 Noble contracted NPLH Drilling, based in Timmins, Ontario to complete a diamond drilling program totaling 3,183.9 meters over 15 drillholes on the Lucas Gold Target (Table 4, Figure 4). Drill core logging and drill management was performed by Edwin Escarraga P.Geo (ON), and the project was supervised by Randy Singh, P.Geo (ON), P.Eng (ON) - VP Exploration & Project Management for Noble. All samples collected from the drill core were submitted to Activation Laboratories Ltd (Actlabs) for analysis. 14 drillholes were completed on patent PAT-49307 and one drillhole was completed on PAT-49304.

The exploration program was designed to follow up on historical gold intersections outlined by Abitibi-Price & Lucas Gold Corp in their 1980 & 1981 drilling campaigns, test the gold values to confirm adequate analysis used during those campaigns, and gain more information about the geology and mineralization of the deposit. The drilling was focused along the hanging wall of a Footwall fault. The zone was challenging to target since the precise location of the Abitibi-Price holes was not known. Historical maps were georeferenced to give an approximate location for these drillholes but they did not provide the precision needed to execute the project with full confidence. Due to this conflict, it was decided that a hand-held heavy metal detector would be used to find historic drillhole casings. Yvan Veronneau, a prospector based out of Timmins, was able to locate 37 of the historical drillhole casings and this information was used to match it with the georeferenced maps and determine the location of the remaining drillholes.

Drilling started near the center of the deposit where drillhole density is high, and proceeded to move along strike. Nine of the drillholes were drilled at a lower angle (45-50°) with the intention of covering as much lithology as possible in order to understand the stratigraphy and marker horizons. The remaining 6 drillholes were drilled at steeper angles (60-75°) with the intention of testing the depth extension of the mineralized units. None of the drillholes encountered artesian conditions.

The azimuth and inclination of all drillholes were measured using a Reflex single-shot downhole survey instrument. Measurements were made just below the end of casing and at 50 m intervals down the hole. The Reflex survey data was summarized in the survey tab on each excel drillhole log. The drill casings were left in the ground and were capped and labelled with 1.5 m long metal flags. The final collar locations of 2018 drillholes and 37 historical drillholes were recorded using a compact SXBlue GPS/GNSS module that offers sub-meter accuracy. All coordinates are in Universal Transverse Mercator (UTM) projection using the North American Datum (NAD) 83 in Zone 17N.

**Table 4: Noble's 2018 Diamond Drillhole Summary**

<b>Drillhole</b>	<b>Azimuth</b>	<b>Dip</b>	<b>Length (m)</b>	<b>Easting</b>	<b>Northing</b>	<b>Elevation</b>	<b>Samples Taken</b>
LUC-18-07	225	-45	222.8	484062.8	5407034.3	275.9	231
LUC-18-08	225	-60	222	484063.5	5407034.7	275.8	235
LUC-18-09	225	-45	258	484121.4	5407029.6	275.3	272
LUC-18-10	228	-45	222	484135.1	5406964.8	276.4	248
LUC-18-11	225	-45	249	484015.4	5407126.2	276.8	254
LUC-18-12	225	-45	228	484184.8	5406874.3	278.5	229
LUC-18-13	225	-45	180.9	483961.6	5407141.4	277.2	192
LUC-18-14	225	-60	204	483961.8	5407142.1	277.2	240
LUC-18-15	225	-45	285	483956.8	5407289.5	277.5	324
LUC-18-16	225	-50	201	483852	5407322.9	278.6	176
LUC-18-17	225	-70	273	483852.5	5407323.6	278.6	294
LUC-18-18	225	-45	164.2	484249.8	5406799.2	277.3	205
LUC-18-19	225	-70	153	483920.4	5407095.5	277.8	161
LUC-18-20	225	-75	132	483913.3	5407040.5	278.0	111
LUC-18-21	45	-70	189	483909.4	5406982.8	278.0	250

NQ sized drill core recovered from drilling was placed in clean wooden core boxes, labeled and sealed for transfer by road to the core logging facility in Timmins. Upon delivery, the drill core was cleaned, oriented, RQD'd and magnetic susceptibility readings were taken by the geotechnician. Once this was complete, the geologist logged the core.

The logging procedure involved collecting information such as header, survey, lithology, mineralization, alteration, structure, assay, RQD and magnetic susceptibility measurements. Each of these characteristics were saved on a separate tab within the excel sheet log.

Sampling intervals were marked by the geologist depending on lithology, mineralization, and alteration. The holes were sampled from top to bottom with sample intervals ranging from 0.5-1.5m, smaller intervals were used in mineralized sections. Samples were split using a diamond core saw available in the core logging facility, all the samples were tagged with weather resistant sample tags with a unique number, one end of the tag was stapled at the beginning of the interval in the core box and the another end was placed in the plastic sample bag for analysis. Sample bags were tied securely with zip-ties and placed in rice bags for transport to

the laboratory in Timmins. In conducting the workflow set out above, Noble maintained all samples within its possession, from the moment of extraction at the drillsite all the way to the delivery to the laboratory. The half core remaining in the boxes are currently organized and stored in core racks at the laydown yard of the NPHL logging facility, in Timmins.

A total of 3,422 samples were delivered to Activation Laboratories in Timmins, Ontario for analysis. Samples were dried and crushed up to 80% passing 2 mm, riffle split (250 g) and pulverized to 95% passing 105 µm included cleaner sand (Code RX1). Samples were analyzed by an aqua regia extraction with ICP-OES finish that included 38 elements (Code 1E3). Gold was analyzed by fire assay with an AA finish, using 30 g samples and for those samples with Au results above 3.0g/t, a Gravimetric finish was requested (Codes 1A2, and 1A3). Activation Laboratories had an internal QA/QC procedure of regularly re-analyzing selected samples, as well as inserting internal standards and blanks.

Additionally, Noble conducted an analytical quality control measure to monitor the reliability of the results delivered by Activation Laboratories.

Control samples included certified blanks (made of pulverized white quartz). Certified reference material samples (OREAS 15d, 16b, 216, 217, 218, 220,221,223) that ranged between 0.338 g/t Au for the low grade and up to 6.66 g/t Au for the higher grade, and core sample duplicates.

These control samples were inserted every eight to twelve samples. In total 367 QA/QC samples were taken which corresponds to approximately 10% of the total of samples.

Cross-sections of all 15 drillholes are in Appendix I, as well as Graphic logs in Appendix II. Assay COA's can be found in Appendix III. Exported drillhole logs are on Appendix IV. Drill Map on Appendix V.

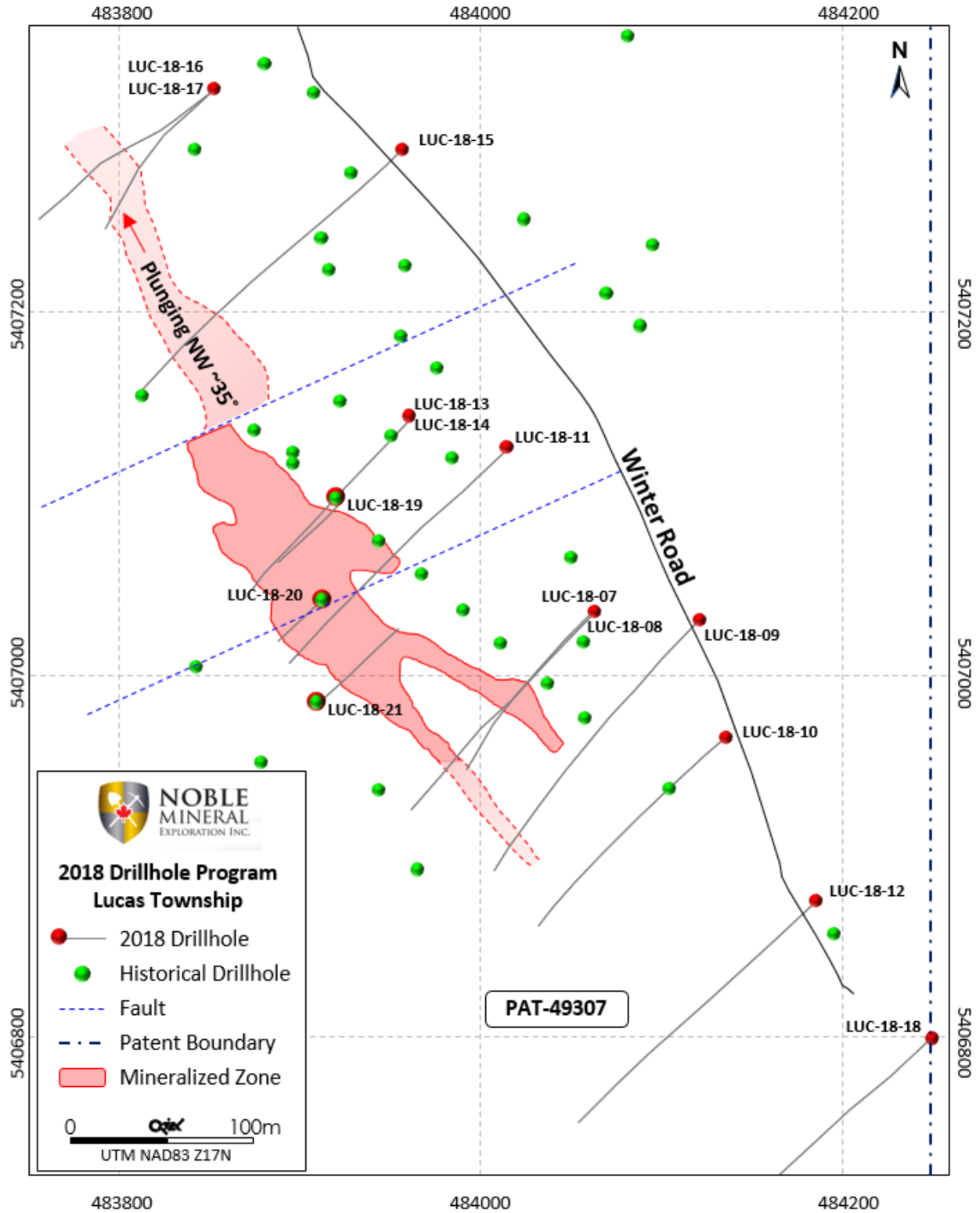


Figure 4: 2018 Drillhole Collar Locations

## 8.0 Results

The drill program was successful in intersecting the mineralized horizon tested previously by Canico, Abitibi-Price and Lucas Gold. The 2018 drill program also confirmed the strike continuity of the tuffaceous units hosting the mineralization, however, the mineralized zone itself appears to have been eroded to the SE as the trend of the mineralization is plunging to the NW. Potential for expansion to the NW and at depth still exists.

A total of 3,422 drill core samples were collected, representing 2,562 m of core. Sample results varied from 0.005 to 10.1 g/t Au. A summary of the highlights from the program can be found below (Table 5).

**Table 5: Assay Highlights from 2018 Drilling Program.**

<b>DDH</b>	<b>GOLD (g/t)</b>	<b>From (m)</b>	<b>To (m)</b>	<b>Interval (m)</b>	<b>Target</b>
LUC 18-07	0.84	82.00	88.50	6.50	Geology & Structure
<i>Incl.</i>	1.41	84.00	87.50	3.50	Geology & Structure
LUC 18-09	0.24	218.55	224.50	5.95	Geology & Structure
LUC 18-11	1.10	163.00	193.90	30.90	Geology & Structure
<i>Incl.</i>	4.33	188.75	193.90	5.15	
LUC 18-13	1.15	135.50	158.80	23.30	Au Mineralization
<i>Incl.</i>	1.72	150.75	158.8	8.05	
LUC 18-14	1.70	154.50	177.10	22.60	Au Mineralization
<i>Incl.</i>	2.43	162.00	177.10	15.10	
LUC 18-15	0.42	217.50	237.75	20.25	Geology & Structure
<i>Incl.</i>	1.40	234.00	237.75	3.75	
LUC 18-17	0.80	220.00	223.55	3.55	Geology & Structure
LUC 18-19	1.04	113.00	127.00	14.00	Au Mineralization
<i>and</i>	2.55	128.00	138.00	10.00	
LUC 18-20	1.42	57.50	62.50	5.00	Au Mineralization
<i>and</i>	3.10	82.00	91.00	9.00	
LUC 18-21	1.84	70.00	79.50	9.50	Au Mineralization
<i>and</i>	1.52	108.00	136.00	28.00	
<i>Incl.</i>	2.48	108.00	117.50	9.50	
<i>and</i>	1.83	121.00	129.00	8.00	
<i>and</i>	0.95	158.00	164.80	6.80	



The drill program successfully twinned 3 historic drillholes (L-80-4, L-80-13, L-81-36) with LUC-18-21, LUC-18-19 and LUC-18-20 respectively, and confirmed the values previously reported in those campaigns (Table 6). It also confirmed that the analysis type used in those campaigns was adequate for analyzing the mineralization and ore type. This assessment is important as some of the historical values can now be used to prepare a proper resource estimation given more diamond drill exploration and interpretation.

The most notable gold intersections occurred when sufficient quartz stringers, veinlets and/or stockworks were associated with the chert-altered sulphide-rich zones. It is important to note that sulphide abundance and chert alteration alone produce anomalous gold values but do not produce economic values. Given the strict spatial relationship between ore grade, mineralization and alteration, it is imperative to understand the structural controls of the semi-horizontal ore shoots that present themselves as stacked lenses within the Main mineralized zone and the Mineralized tuff.

Arsenopyrite was identified during the drill program and is directly correlated with alteration intensity as well as gold grade. Silver values are overall low and do not seem to present a direct relationship with gold, suggesting it may be associated with the sulphide-rich flows which predate the gold mineralization.

Structurally speaking, the stratigraphic sequence does not present any major folding, but there is some complexity due to cross cutting local faults, for which their actual displacement characteristics are not fully understood.

Table 6. Noble's 2018 Twinned Drillholes Comparison

Noble's 2018 Drilling					Historical 1980's Drilling				
DDH	Au (g/t)	Interval (meters)	Dip	Length (m)	DDH	Au (g/t)	Interval (meters)	Dip	Length (m)
LUC-18-19	1.22	36.5 (101.50-138.00)	-70	153	L-80-13	1.42	32.00 (99.06-131.06)	-70	185
<i>Incl.</i>	2.69	9.3 (128.00-137.3)			<i>Incl.</i>	3.52	9.14 (120.40-129.54)		
LUC-18-20	1.42	5 (57.50-62.50)	-75	132	L-81-36	1.66	5.19 (54.25-59.44)	-75	121.9
And	2.03	15 (76.00-91.00)			And	2.17	15.54 (75.90-91.44)		
<i>Incl.</i>	2.64	11 (80.00-91.00)			<i>Incl.</i>	3.08	9.76 (80.16-89.92)		
LUC-18-21	1.45	37.5 (98.50-136.00)	-70	189	L-80-4	2.77	35.97 (98.45-134.42)	-65	182.9
<i>Incl.</i>	2.08	16.9 (100.60-117.50)			<i>Incl.</i>	3.73	13.42 (99.97-113.39)		
<i>Incl.</i>	1.21	13.5 (118.00-131.50)			<i>Incl.</i>	3.26	13.54 (117.96-131.52)		

## 8.1 QA/QC Results

A total of 368 quality control samples were collected during the program, including 127 standards, 115 duplicates and 128 blanks. A few anomalies came from the QA/QC samples collected. Standards particularly, had 10 occurrences where the values failed to fall within the third standard deviation from the expected value (Table 7). It is recommended that a subset of samples in those intervals be submitted for re-sampling.

Three downhole samples returned high and isolated results in drillholes LUC-18-11 and LUC-18-16. After checking the drill log descriptions, as well as the core photographs, it was determined that no mineralized features were apparent in the core. It is recommended that sections of the core above and below these samples should be re-sampled as the results may have represented contamination from other areas.

Blank samples cleared the QA/QC process and all values fall within the expected values. A total of five duplicate samples returned a higher than 100% variance between the duplicate and the original. However, none of this samples are anywhere near anomalous values, on the contrary, the samples returned values lower than 0.002 g/t Au. No resampling of those intersections is needed.

**Table 7: Summary of QAQC failure and anomalous samples from the 2018 Drilling Program.**

DDH	Report #	Sample #	Au_ppm	Failure Type
LUC-18-07	A18-02063	691650	1.640	Failed 3SD OREAS 223 (1.645-1.915)
LUC-18-08	A18-02178	691882	1.230	Failed 3SD OREAS 221 (0.952-1.168)
LUC-18-10	A18-02566	692434	1.890	Failed 3SD OREAS 16b (2.000-2.420)
LUC-18-11	A18-02570	693535	1.930	Failed 3SD OREAS 16b (2.000-2.420)
LUC-18-11	A18-02849	693623	1.530	Failed 3SD OREAS 223 (1.645-1.915)
LUC-18-12	A18-02884	693788	2.460	Failed 3SD OREAS 16b (2.000-2.420)
LUC-18-12	A18-03021	693907	0.933	Failed 3SD OREAS 221 (0.952-1.168)
LUC-18-13	A18-03023	694550	1.090	Failed 3SD OREAS 220 (0.806-0.926)
LUC-18-14	A18-03162	694696	1.410	Failed 3SD OREAS 15d (1.433-1.685)
LUC-18-14	A18-03368	694851	1.610	Failed 3SD OREAS 223 (1.645-1.915)
LUC-18-11	A18-02849	693699	1.820	Isolated high value, no features described on log
LUC-18-16	A18-03400	695225	7.770	Isolated high value, no features described on log
LUC-18-16	A18-03400	695283	4.820	Isolated high value, no features described on log

## **9.0 Recommendations and Conclusions**

Due to the apparent horizontal or semi-flat disposition of the stacked ore lenses within the mineralized zones, it is of utmost importance that future efforts to target the area, use steep or vertical holes in order to intersect the stacked lenses while at the same time trying to stay within the Main Mineralized zone and Mineralized tuff.

With the current 3D compilation carried out by Orix, it has been noted that the higher grades and likely the Main Mineralized zone, are plunging approximately 35° to the NW. Future exploration efforts should utilize this information to help with the infill drilling strategy and as a mean to further understand the deposit and test this hypothesis.

Several local faults intersected in drill core and mentioned in historic reports remain relatively underexplored and their orientation is poorly understood. It is recommended that these faults be properly modelled in order to target the stacked lenses with more precision and to understand the likely displacement of the ore and hosting units.

To assist with targeting the stacked lenses, it is suggested that a preliminary model of the chert and quartz stockwork zones be created. A rough model could be achieved using the 2018 drillhole data, but ideally the model would incorporate alteration information compiled from the historic holes, as well as a preliminary interpretation of the main structures. Such preliminary model of the lenses should take approximately 3 weeks to be completed with an anticipated cost between \$8,000 and \$12,000 depending on the complexity of the resulting shapes.

IP conductors were identified and interpreted in 2011 by Steve Balch. To date, only 2 of those conductors have been tested, one of them was only intersected by a few shallow holes in 2016. It is recommended that further drilling be completed to test the remaining conductors.

A 3D drillhole compilation currently exists for the project in Leapfrog which includes 281 drillholes for the whole township. It is recommended that a geological model be created from available data to help outline and target the lithologies that represent the conductors. Due to the sparse density of data outside the Lucas Gold Target, the geological model in that area would be at a more regional scale but it would help with any drill targeting that aims to intersect the remaining conductors. An initial estimate of such model should take approximately 3 weeks to be completed and cost around \$10,000.

With a combination of a geological model and an alteration/mineralization model in place, the Lucas Gold deposit could proceed into a new phase of steeply dipping exploratory and defining drilling. A set of 8 to 10 drillholes with lengths between 200-250 meters long, could help defining the structural controls and general features of the deposit.

## **10.0 References**

1. Karvinen, W.O., 1987: Diamond Drilling of Lucas Gold Prospect, Lucas Township, Ontario. 40p. Assessment report 42A14SW0021. Prepared for Lucas God Resources.
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3. Lahti, H., and Singh R., 2016: 2016 Update on the Lucas Gold Project. Technical Report NI-43-101. Prepared for Noble Mineral Exploration Inc.
4. McCombe, D.D., 1986: Report on Abitibi Prince Inc, Mineral Holdings, Lucas Township, Ontario. 15 p. Porcupine Mining Division.
5. Singh, R., and Lahti, H., 2013: 2012 Diamond Drilling Program, Project 81-Lucas Gold Project. Technical Report. Prepared for Noble Mineral Exploration Inc.
6. Woolham, R.W., 1986: Review of Abitibi Price Inc's Lucas Township Property, Ontario. Unpublished report.

## Statement of Qualifications

I, Edwin Escarraga, MSc., P.Ge (ON), of Orix Geoscience Inc. do hereby certify that:

- 1) I am a project geologist employed by Orix Geoscience Inc., with a business address at 25 Adelaide St East. Suite 1400, Toronto ON, M5C 3A1.
- 2) I graduated with a BSc. (Honours, Geology) degree in 2007 from Universidad Nacional de Colombia, Bogota, Colombia.
- 3) I received a MSc. Geology degree in 2010 from Acadia University.
- 4) I was onsite at the Lucas Gold Target during the 2018 drill program and conducted drill management and core logging.

Dated this 27<sup>th</sup> day of March, 2019.



*Edwin Escarraga*

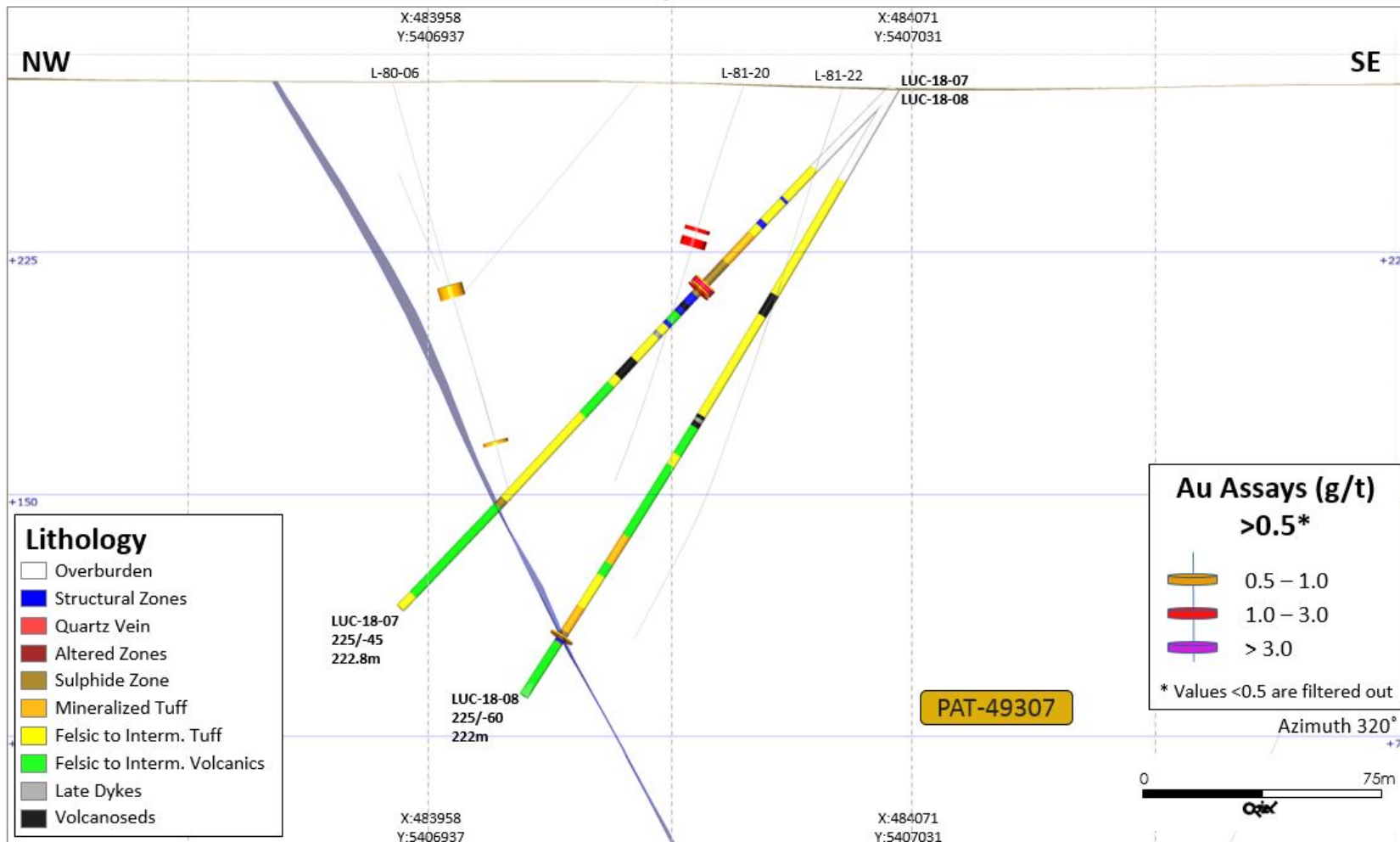
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Edwin Escarraga, BSc., M.Sc., P.Ge

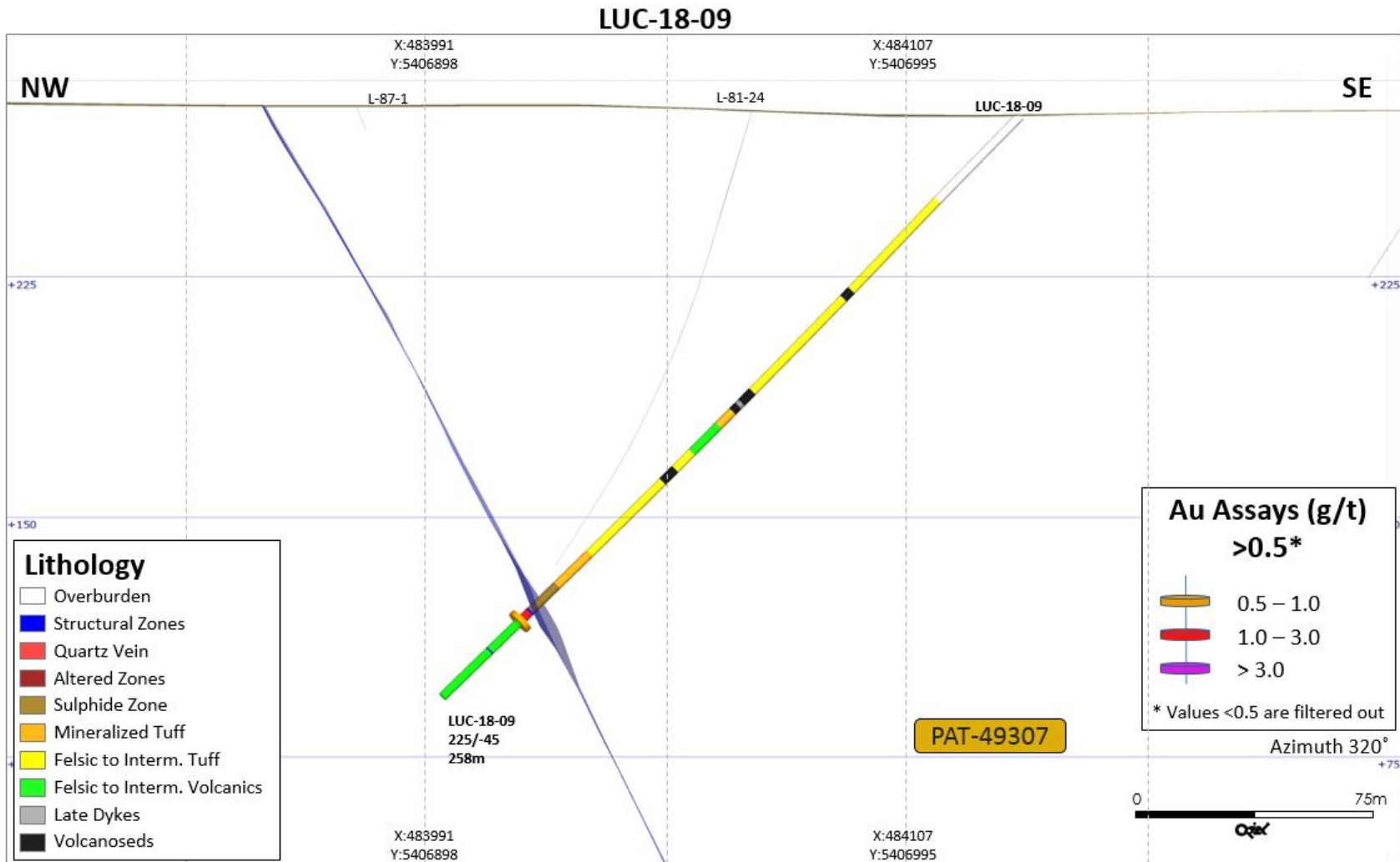
## **APPENDIX I**

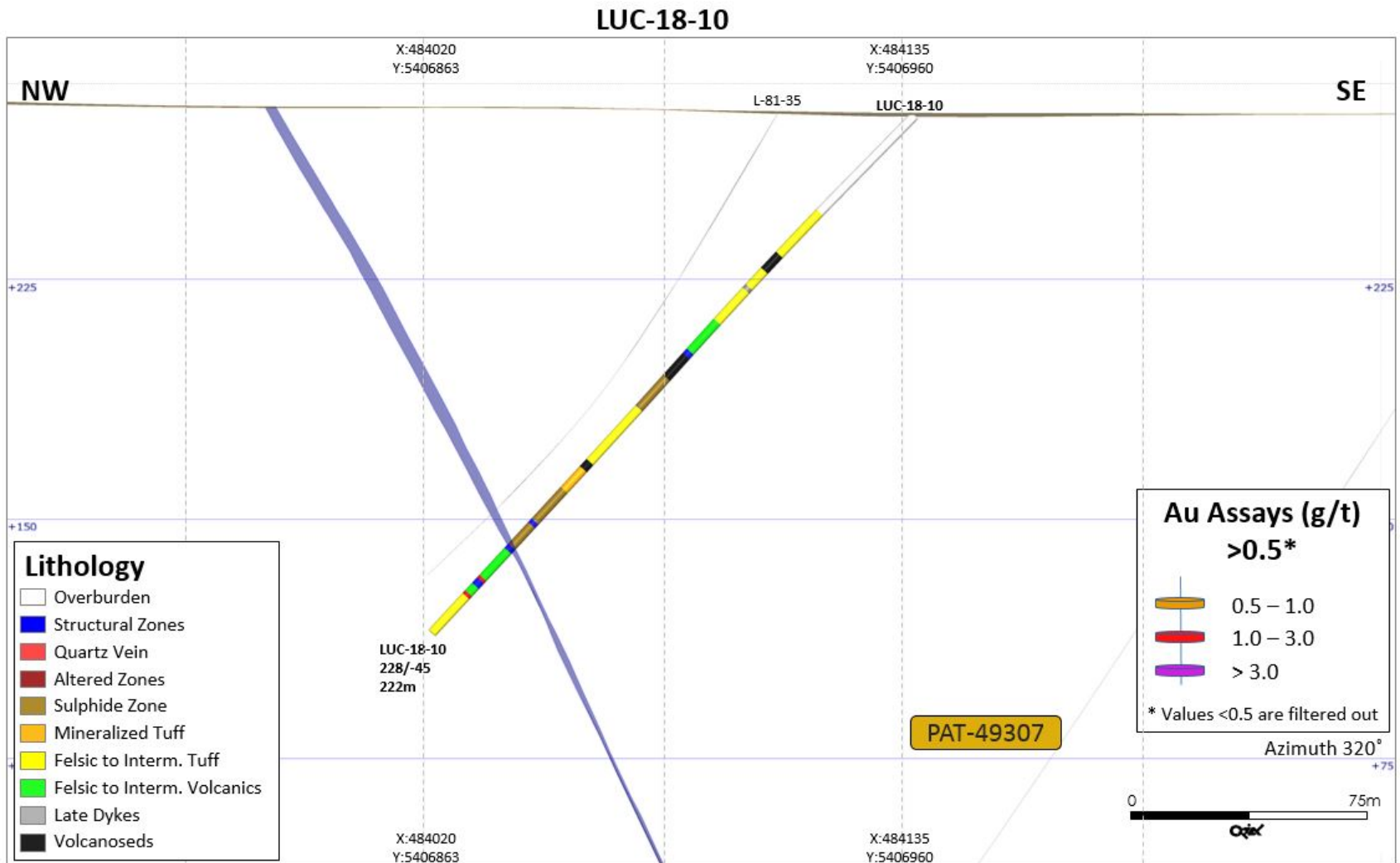
### **Cross Sections**

LUC-18-07; LUC-18-08

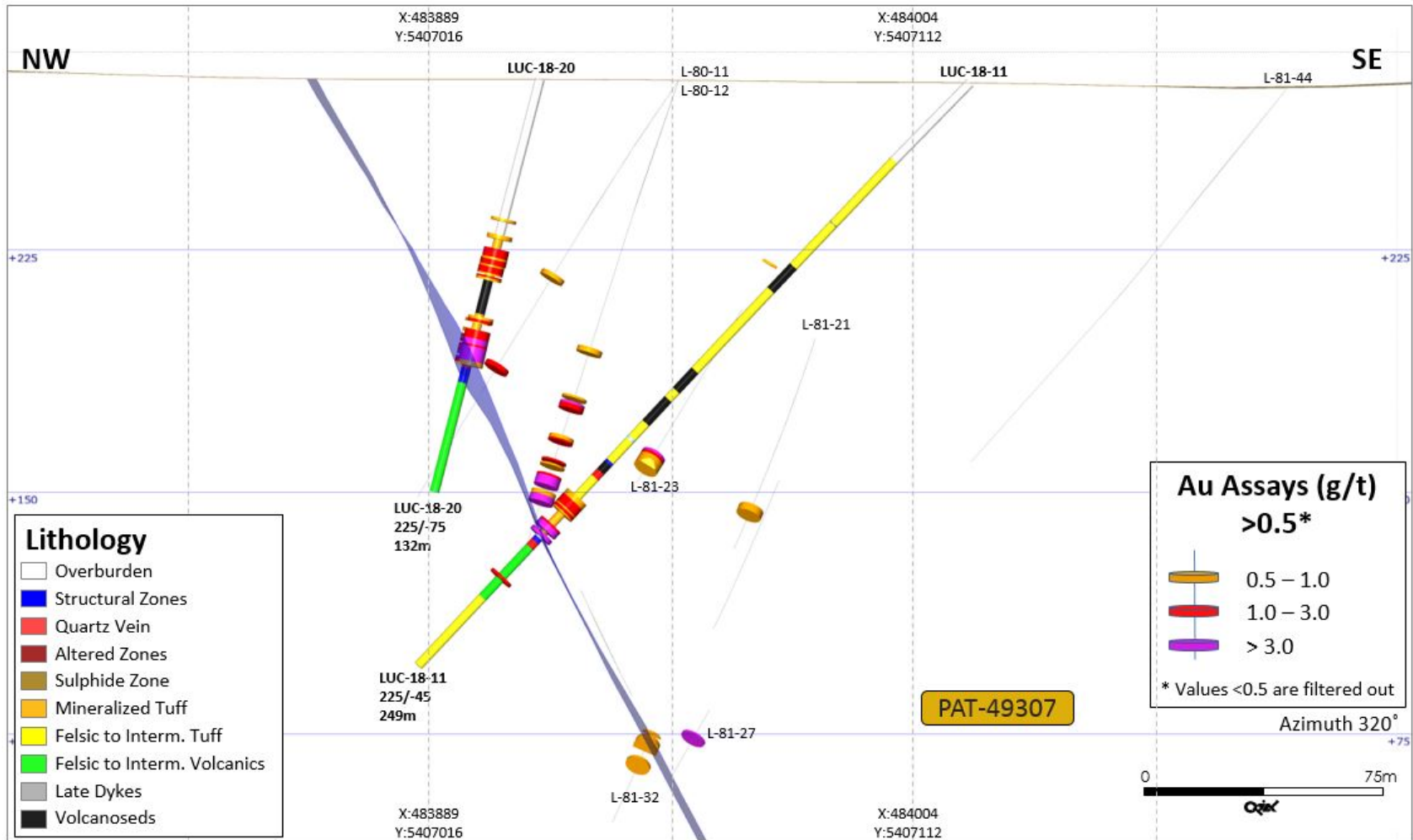


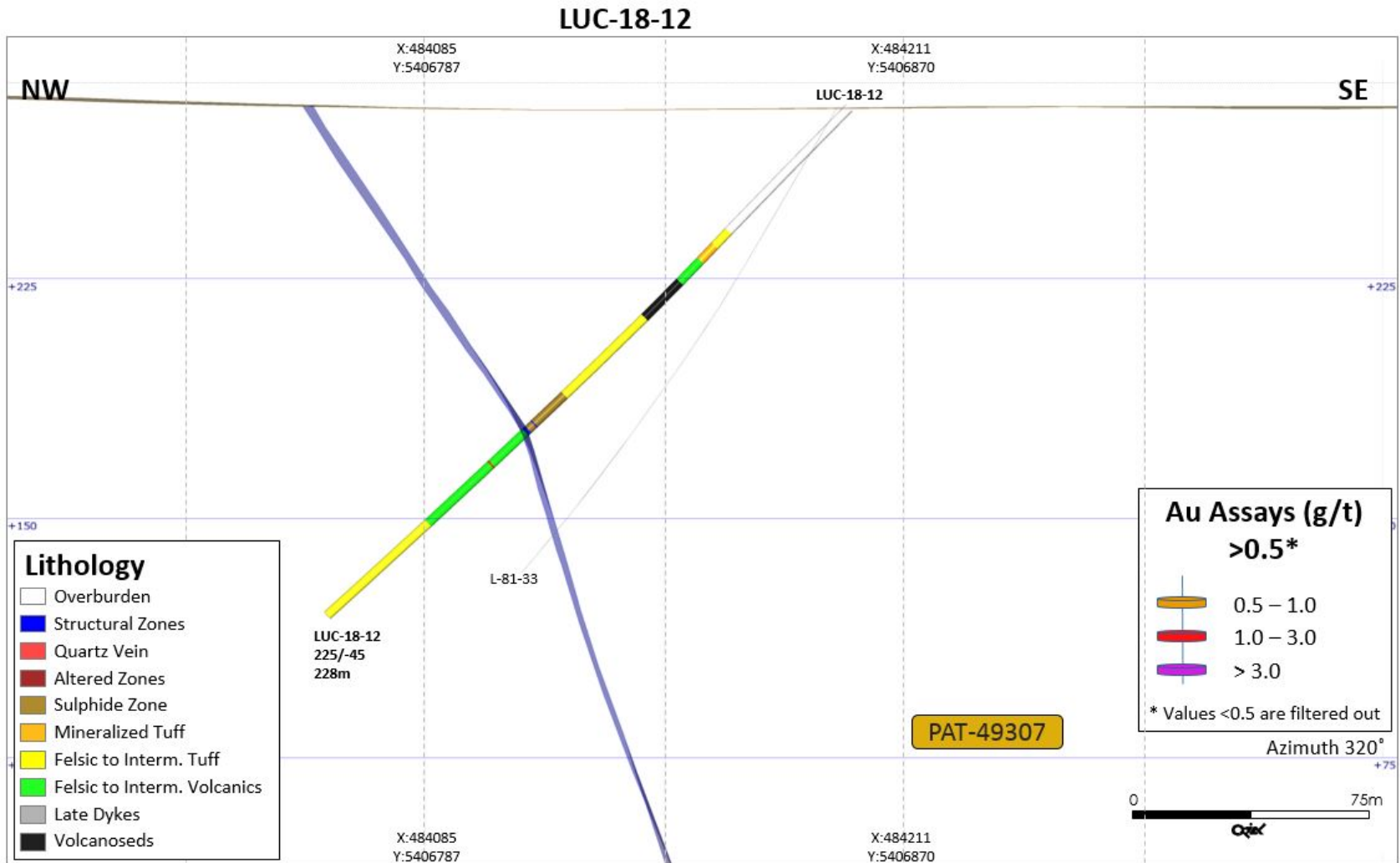




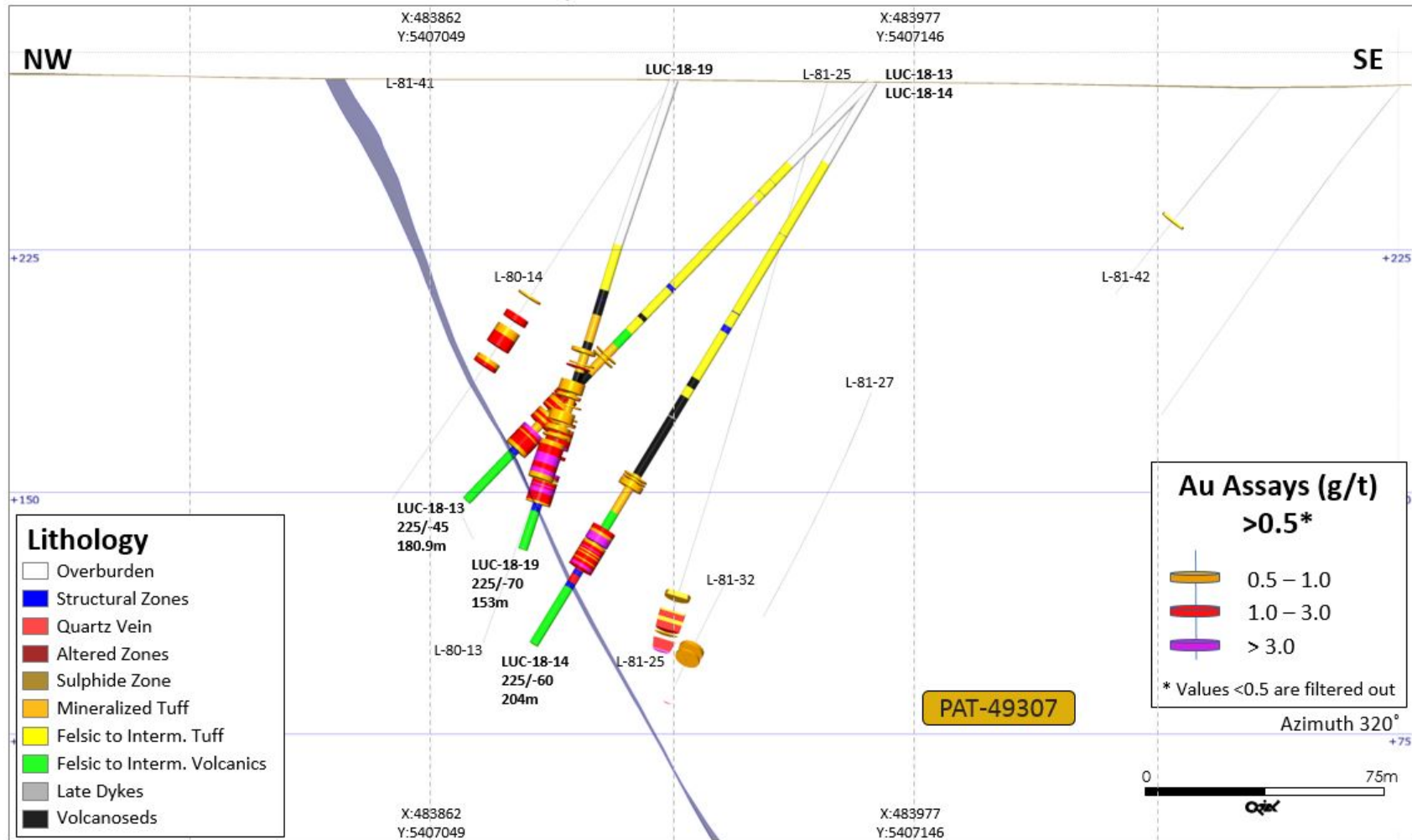


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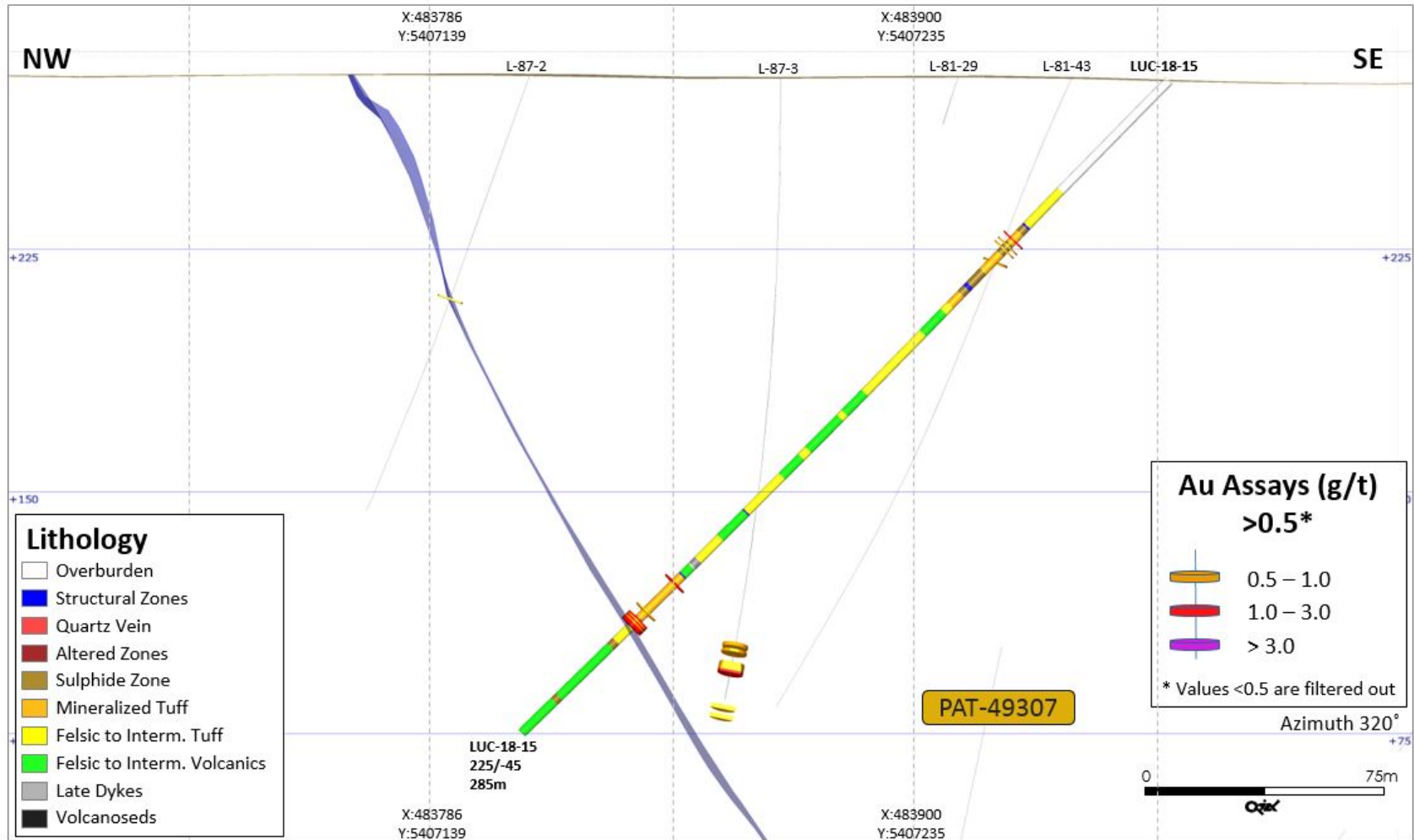




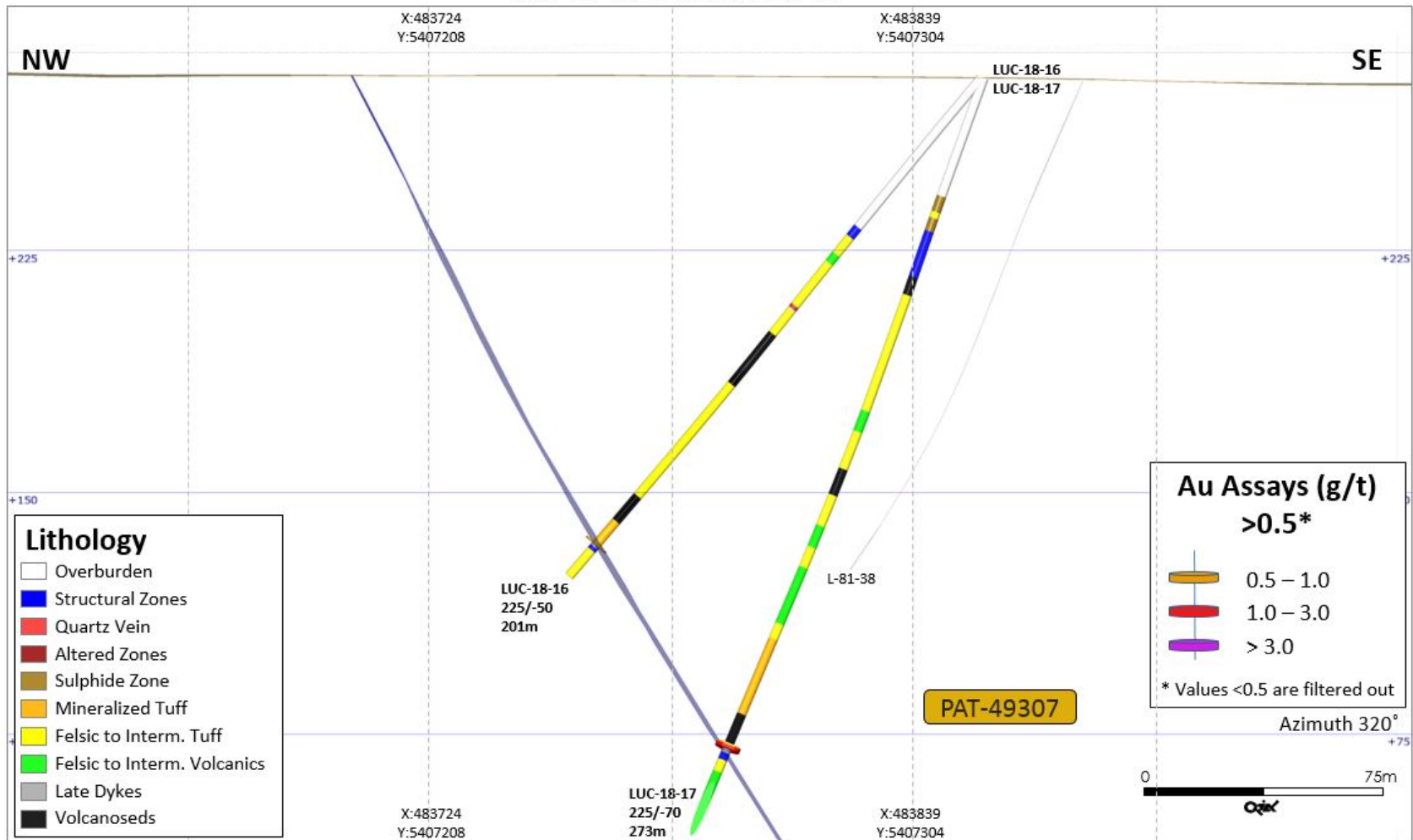
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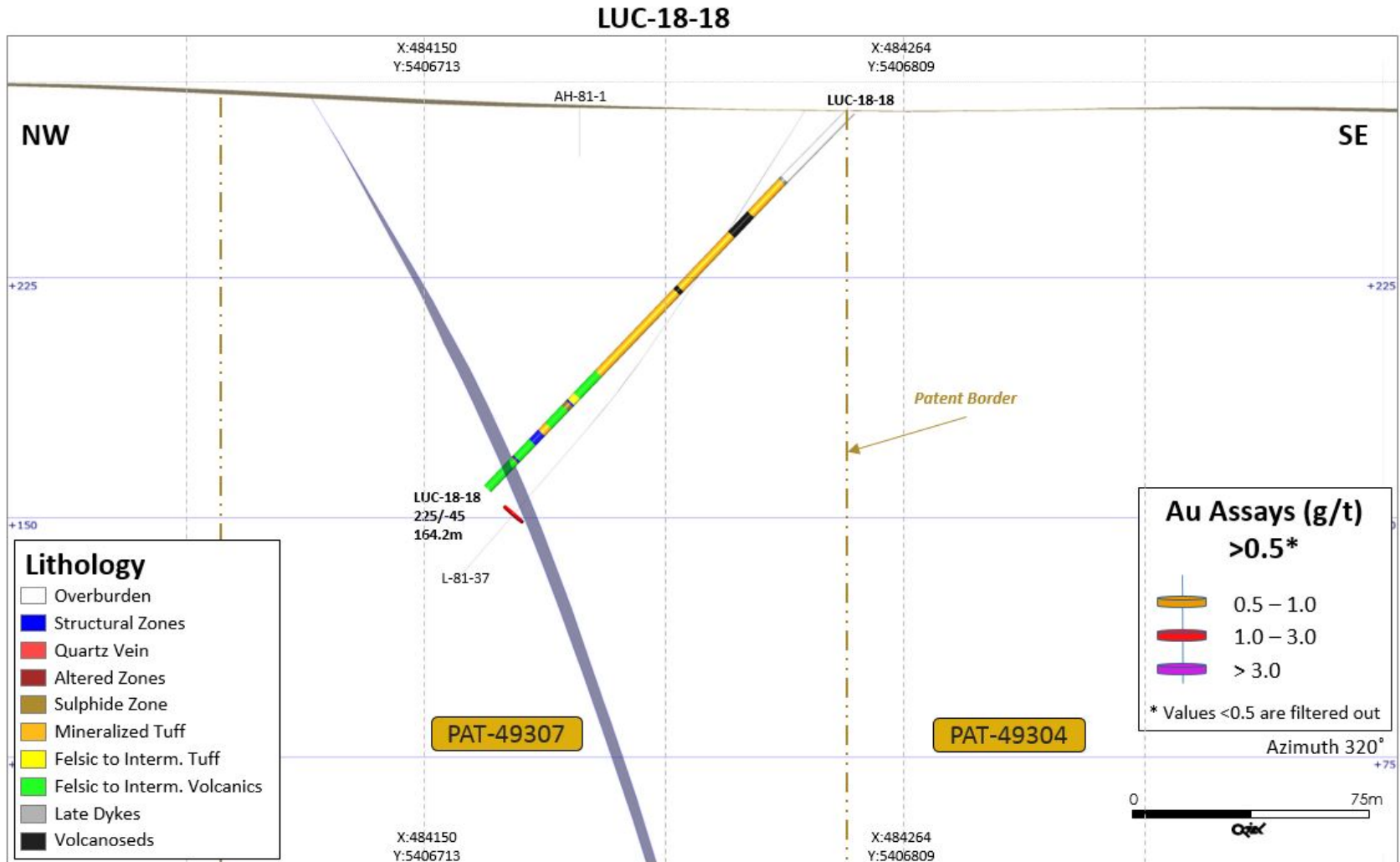
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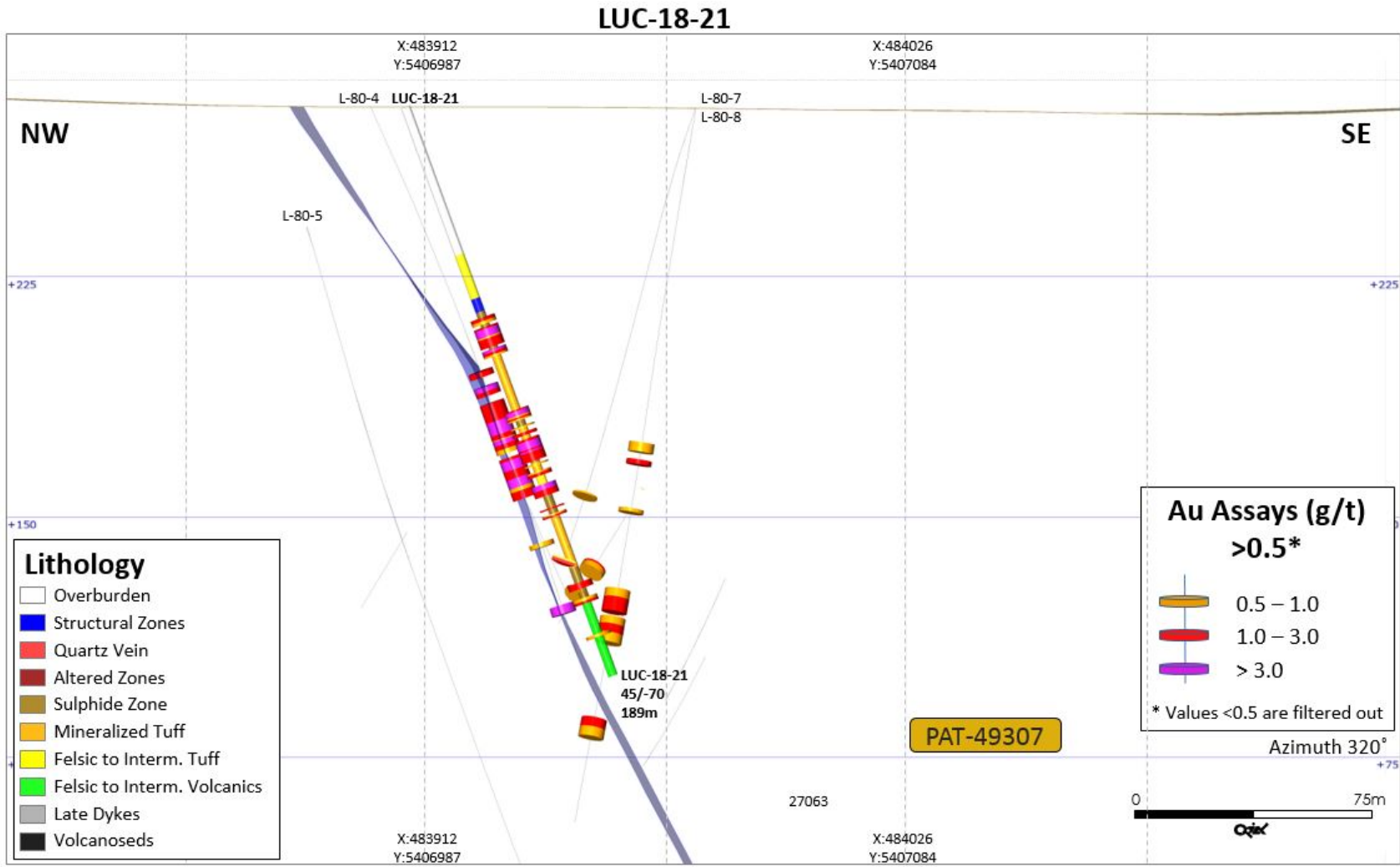
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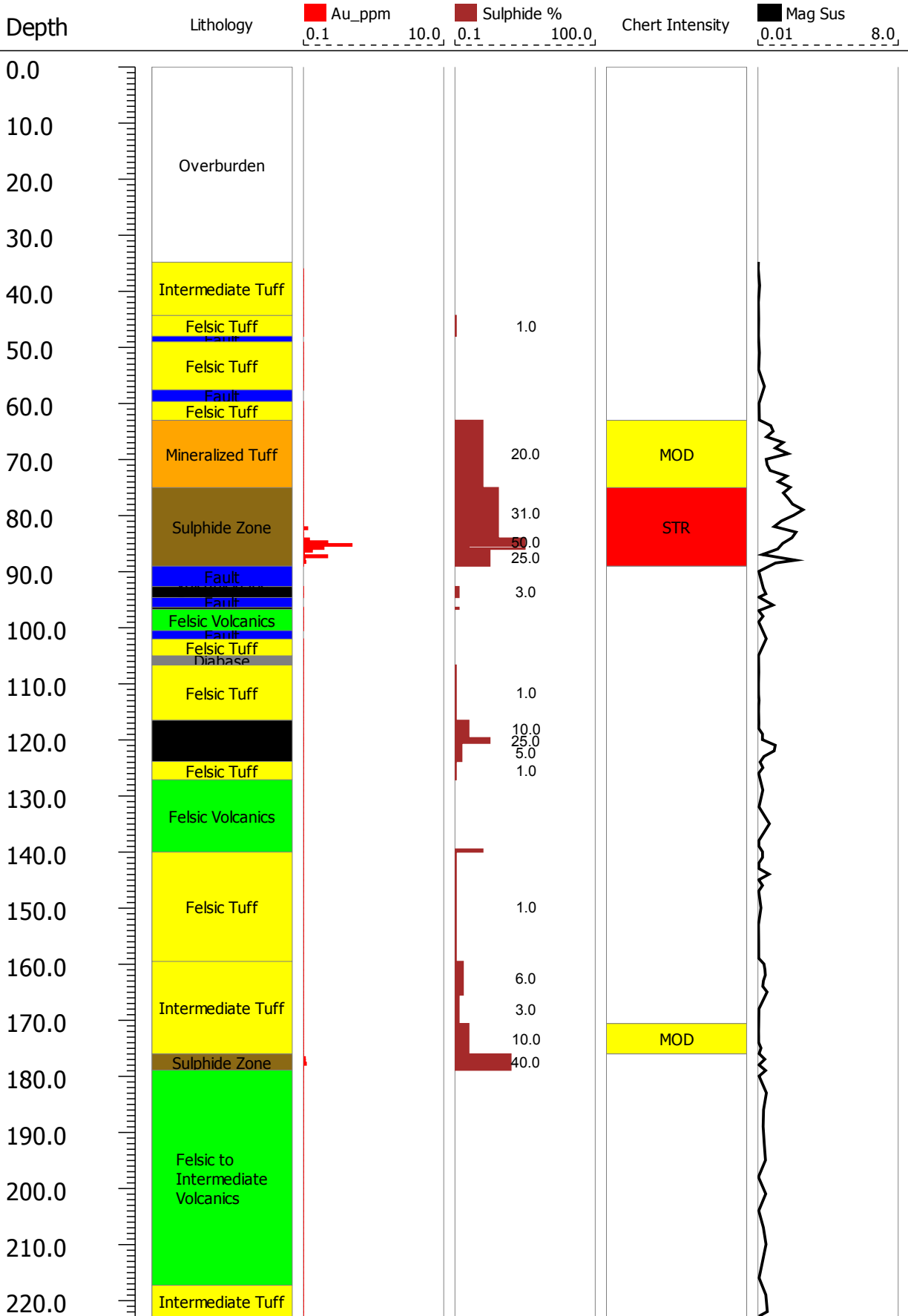




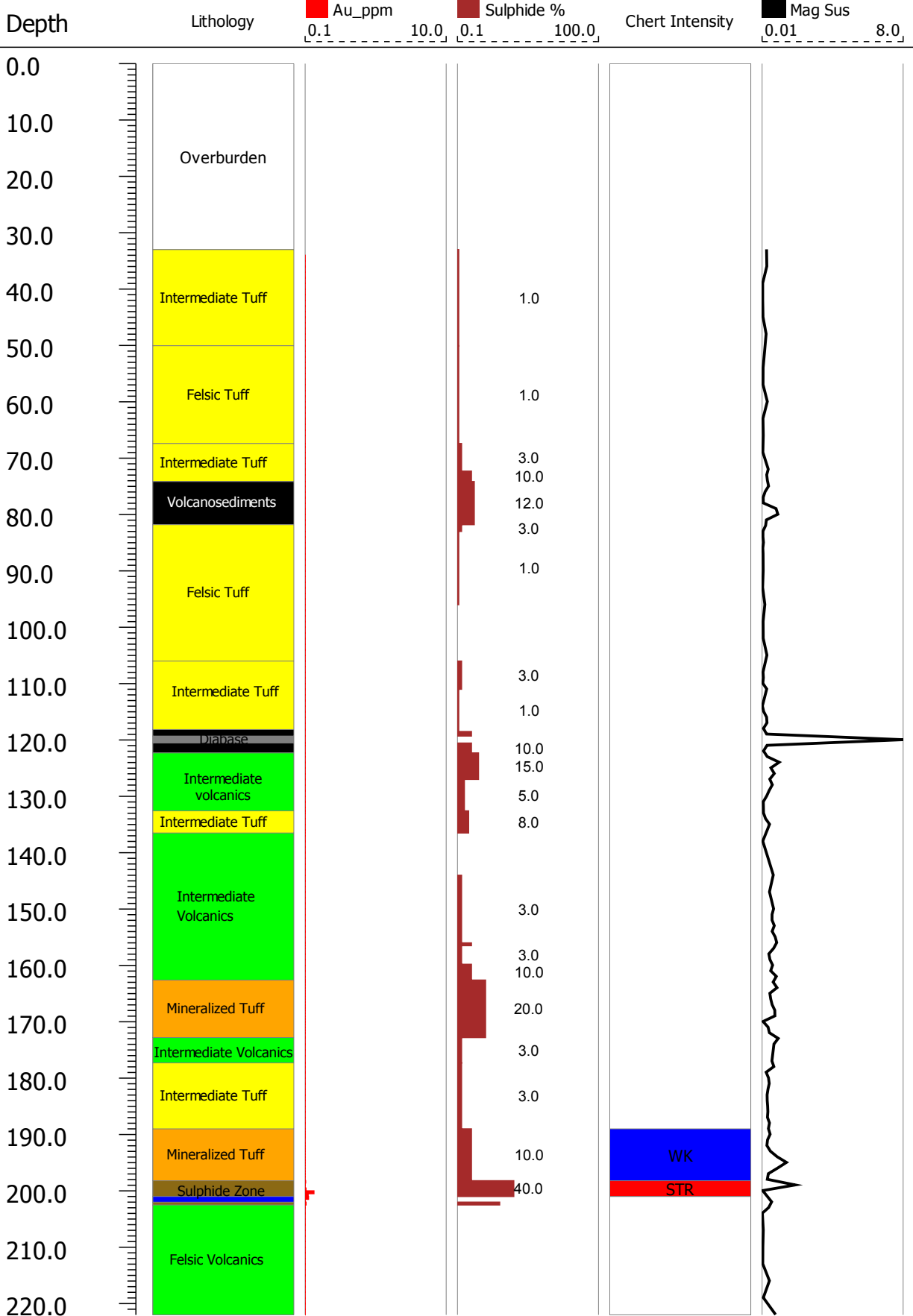
## **APPENDIX II**

### **Graphic Logs**

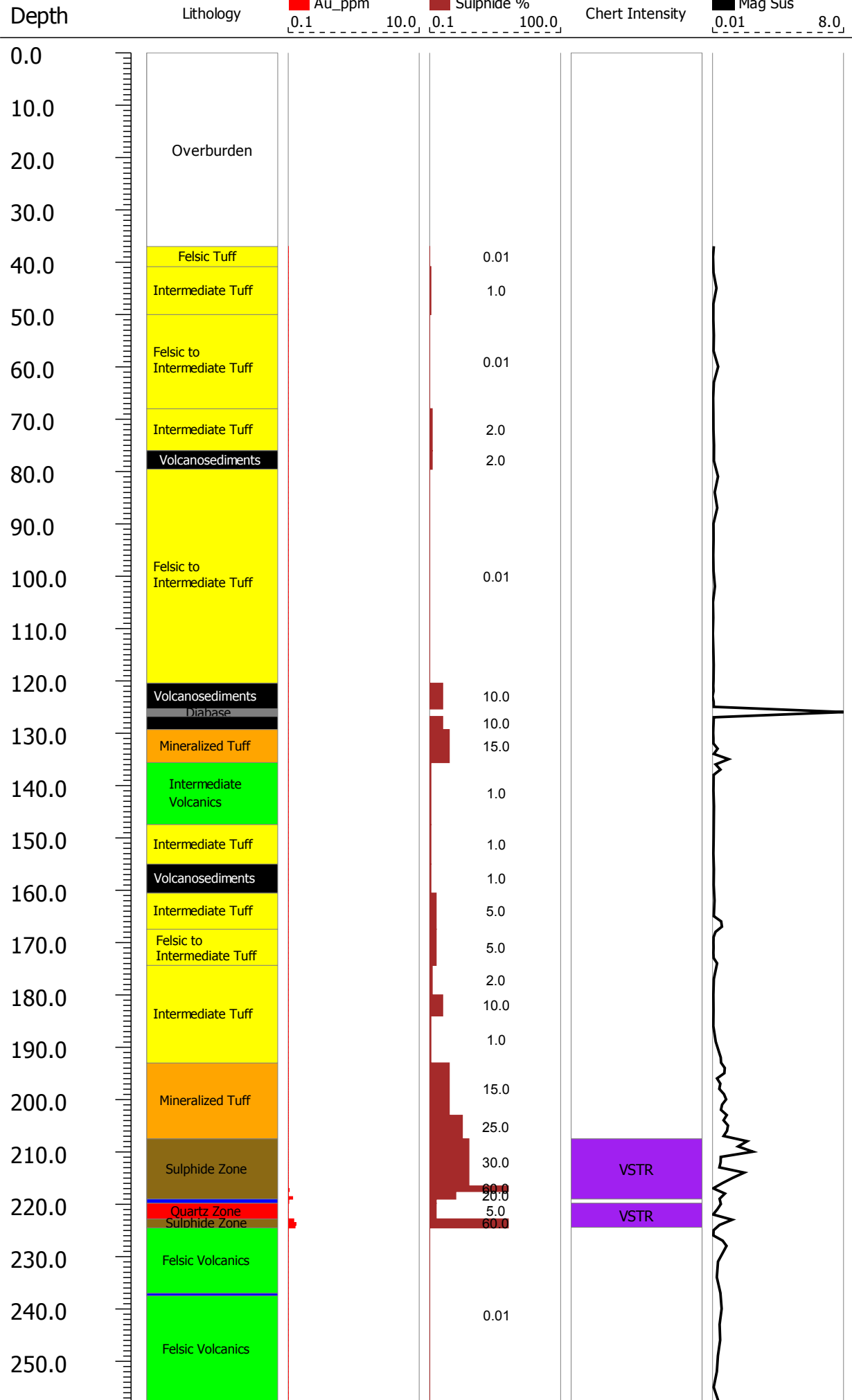
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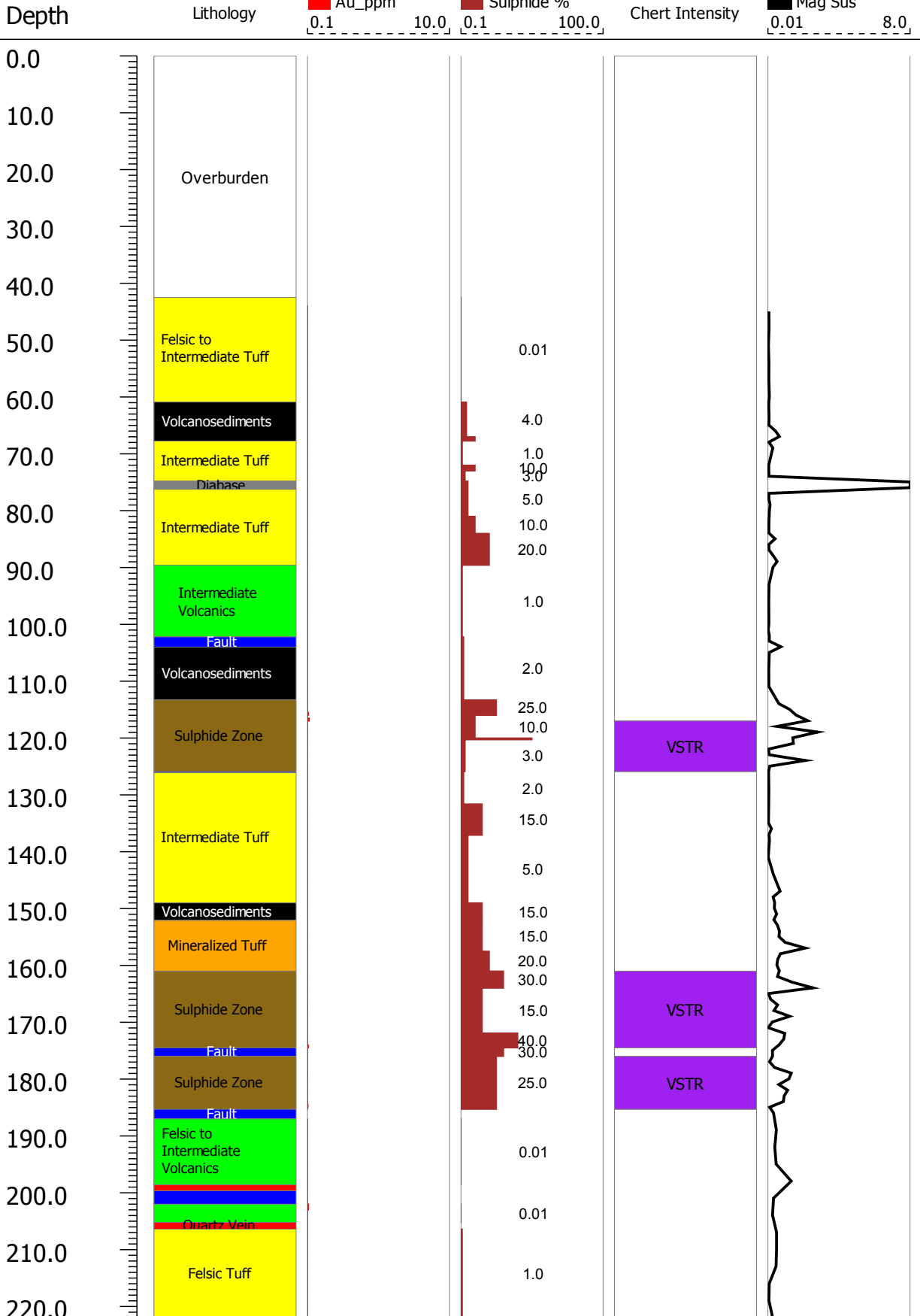
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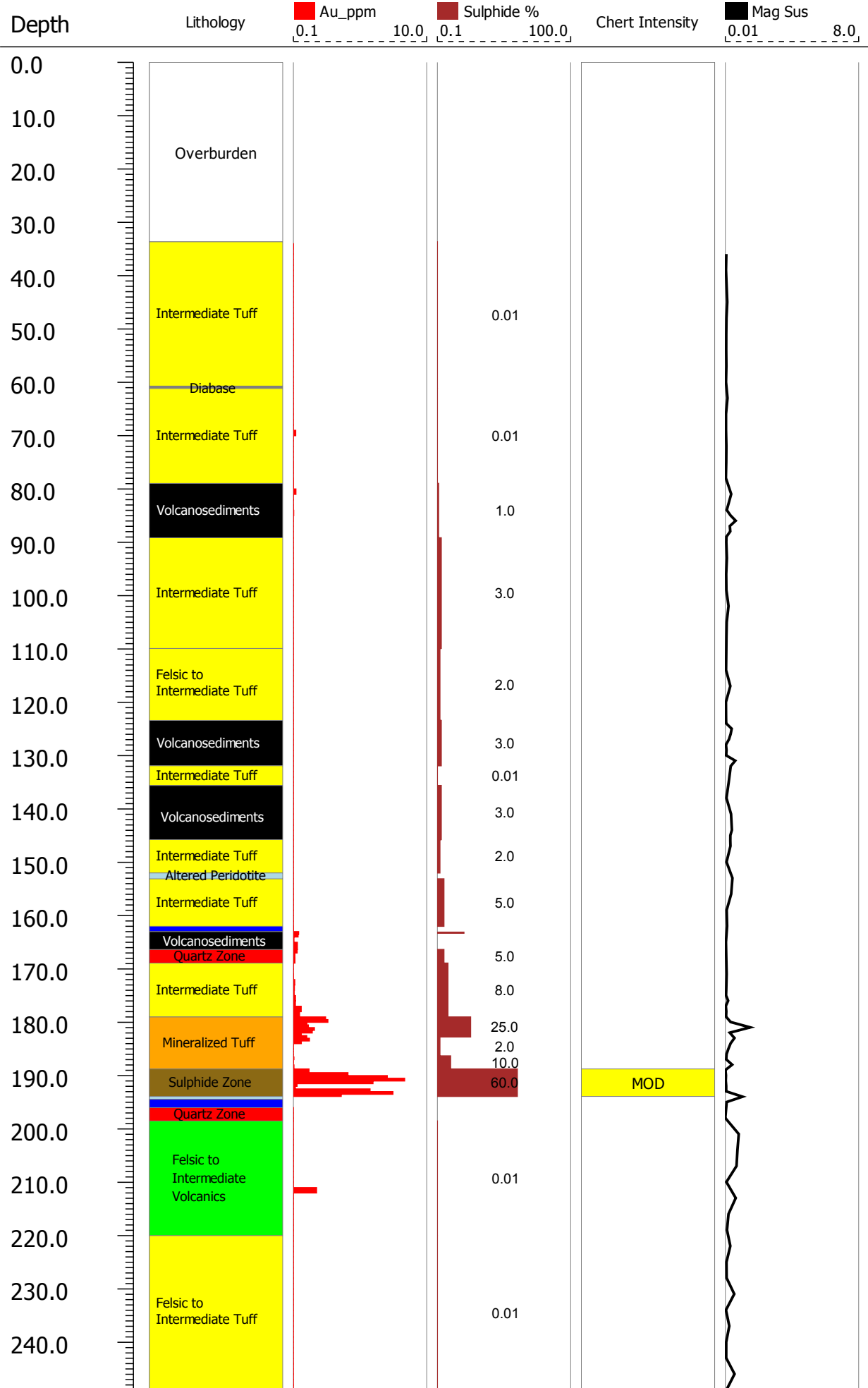
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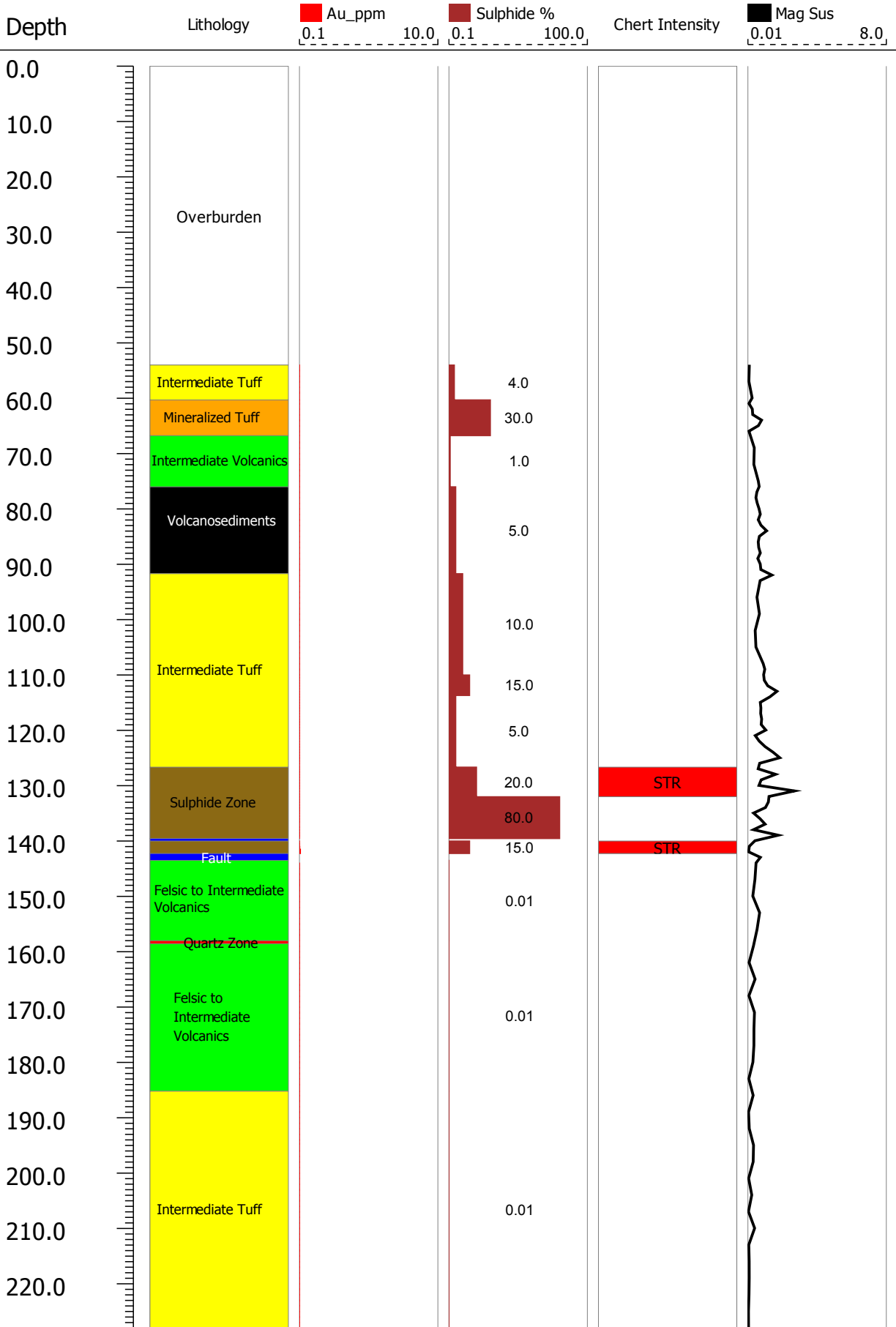
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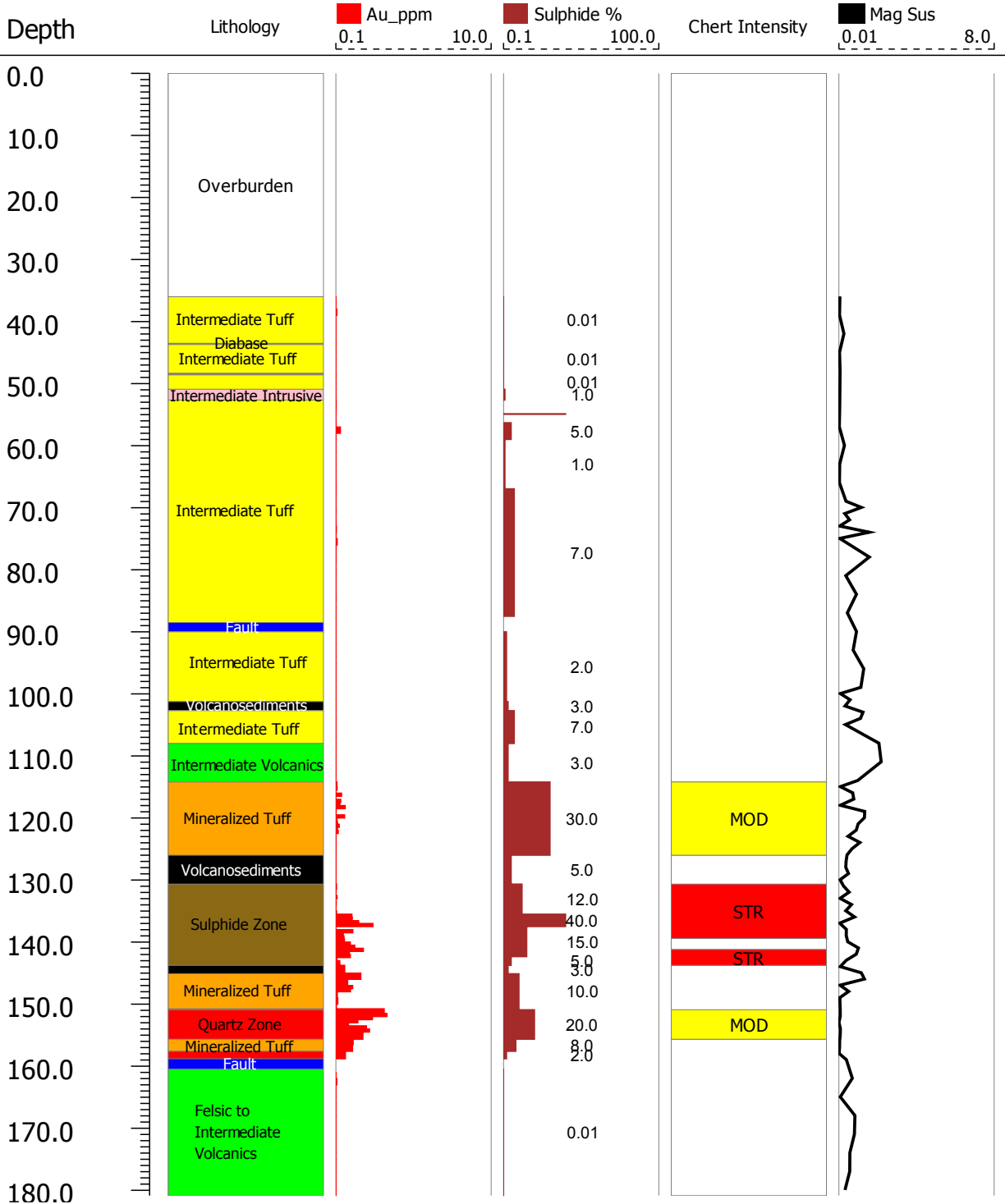


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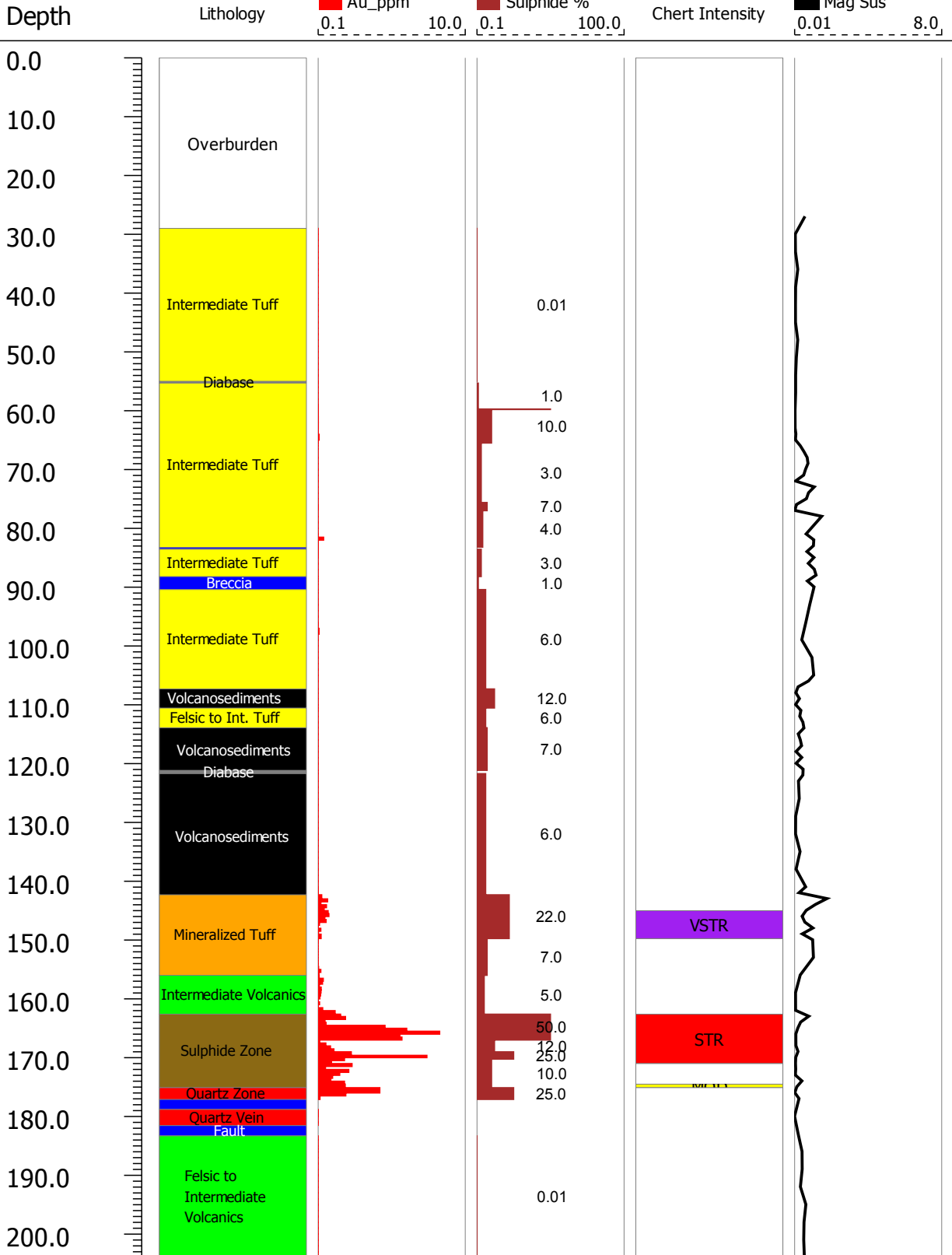




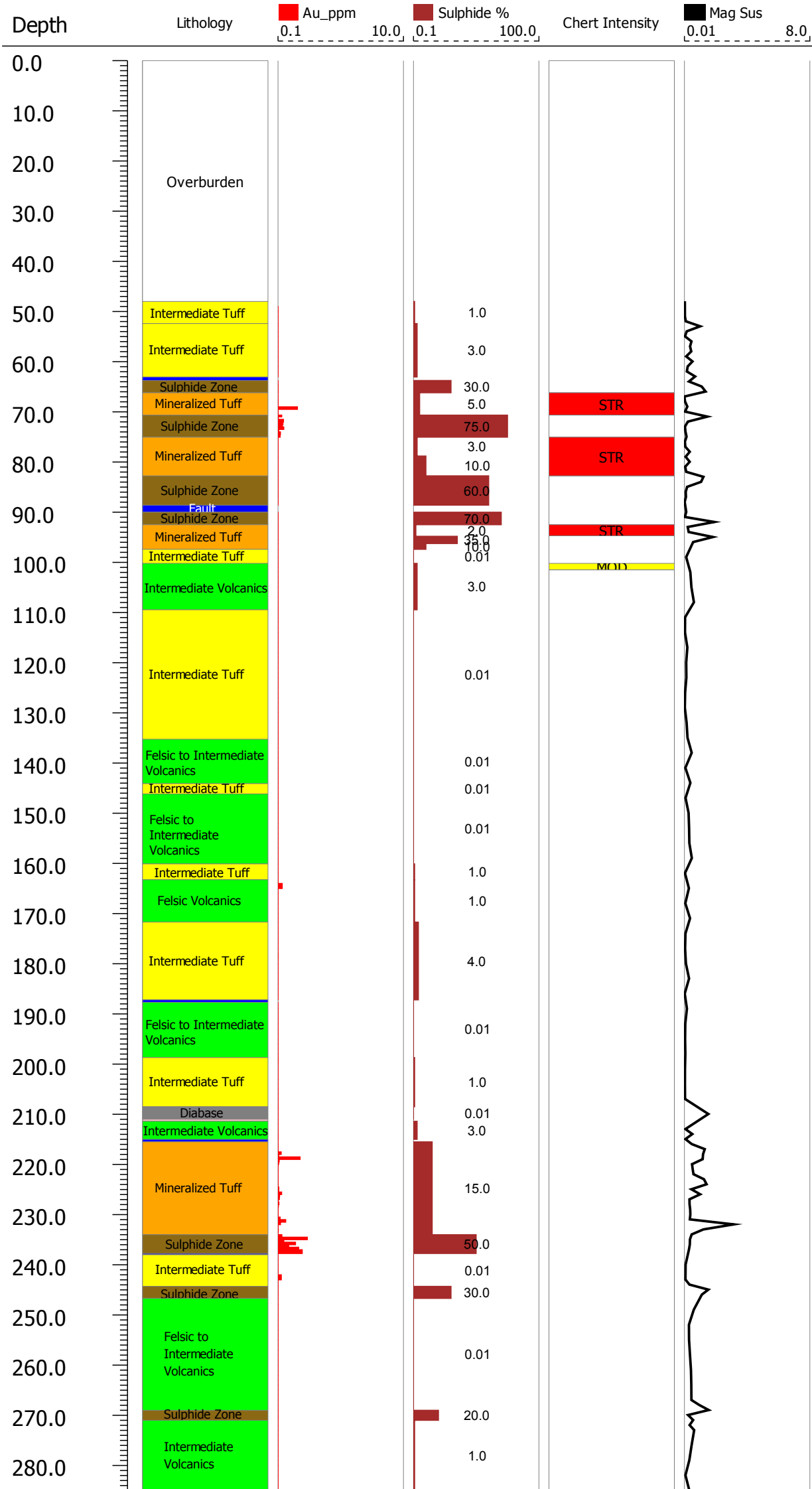
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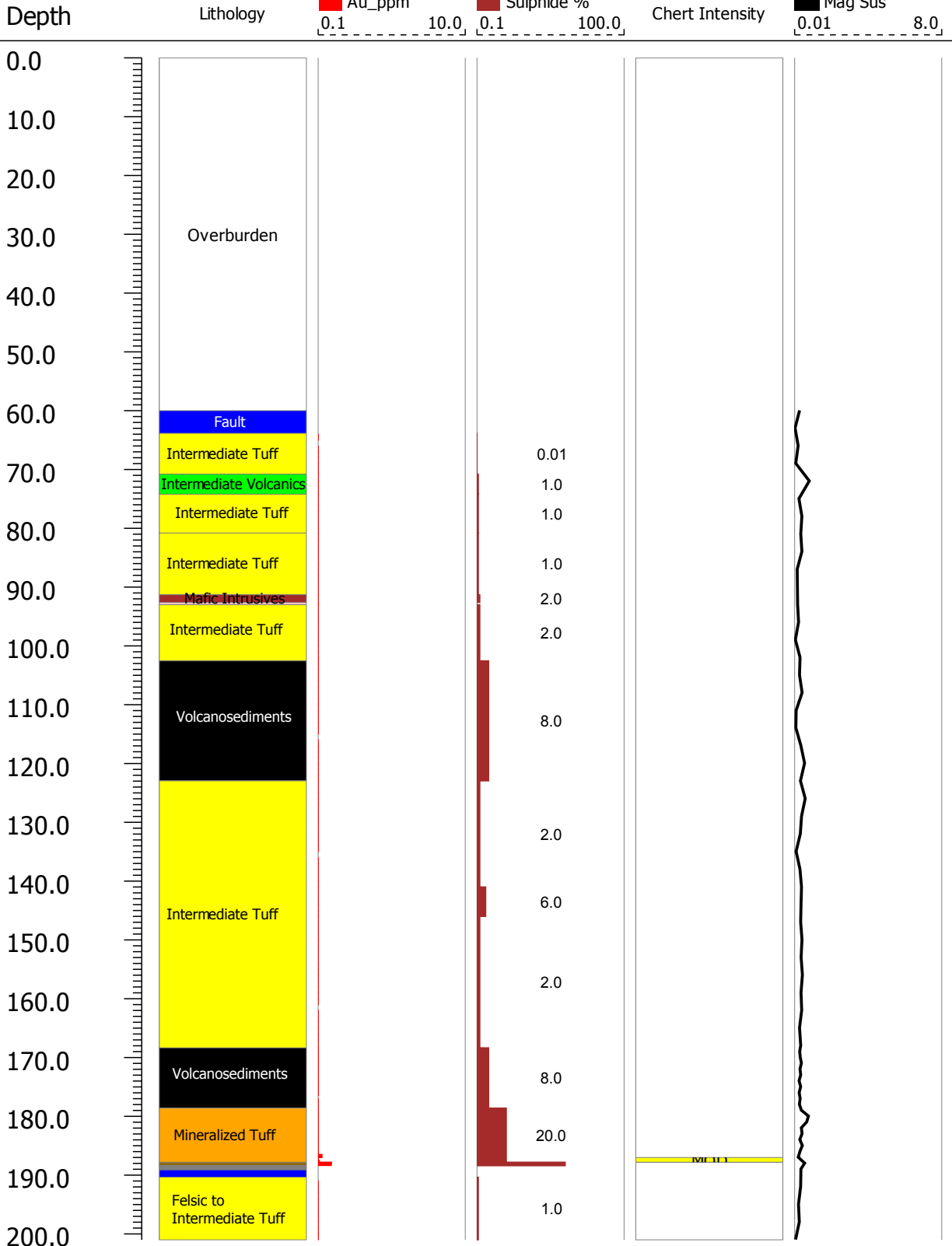
# LUC-18-14



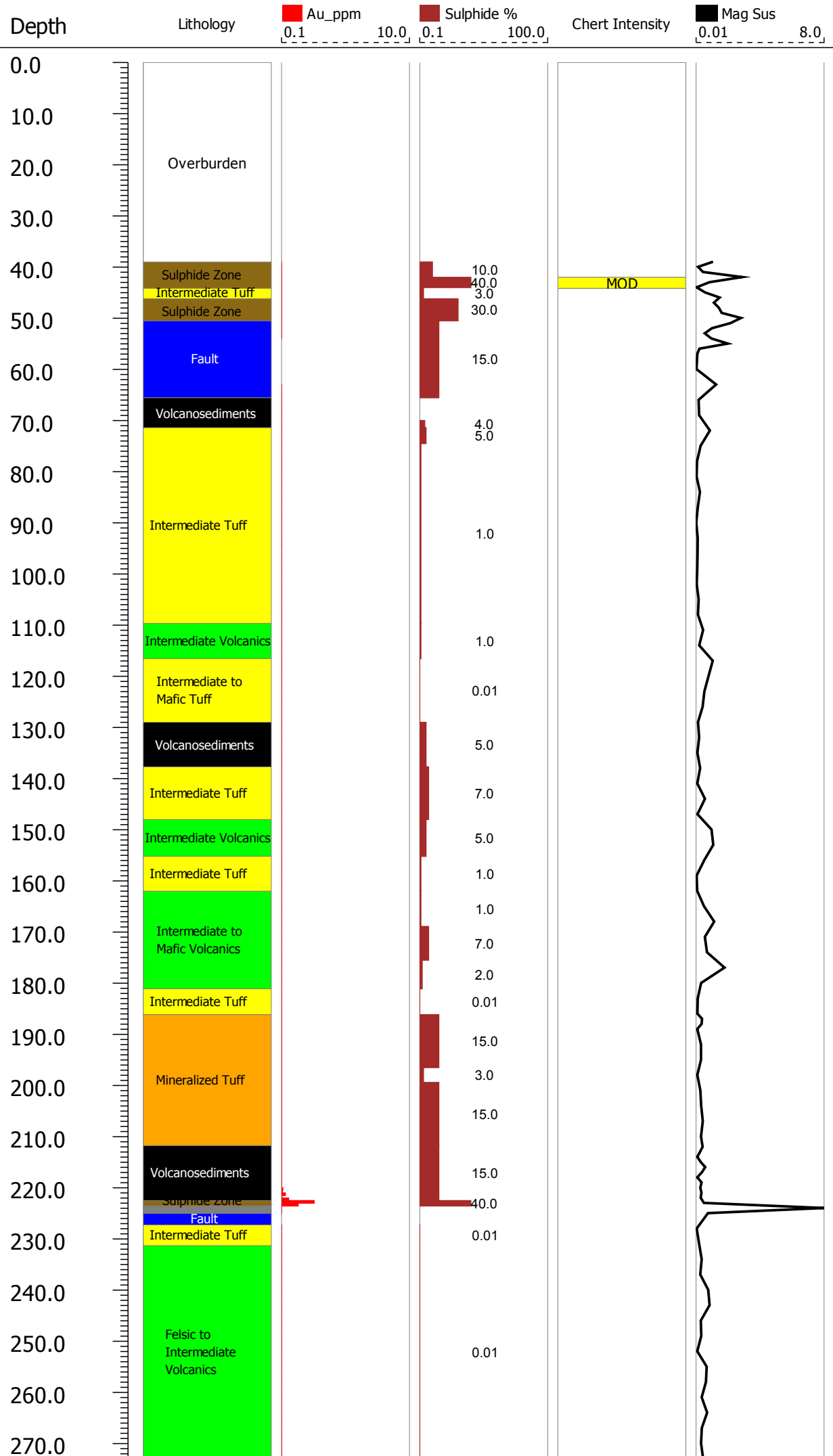
# LUC-18-15



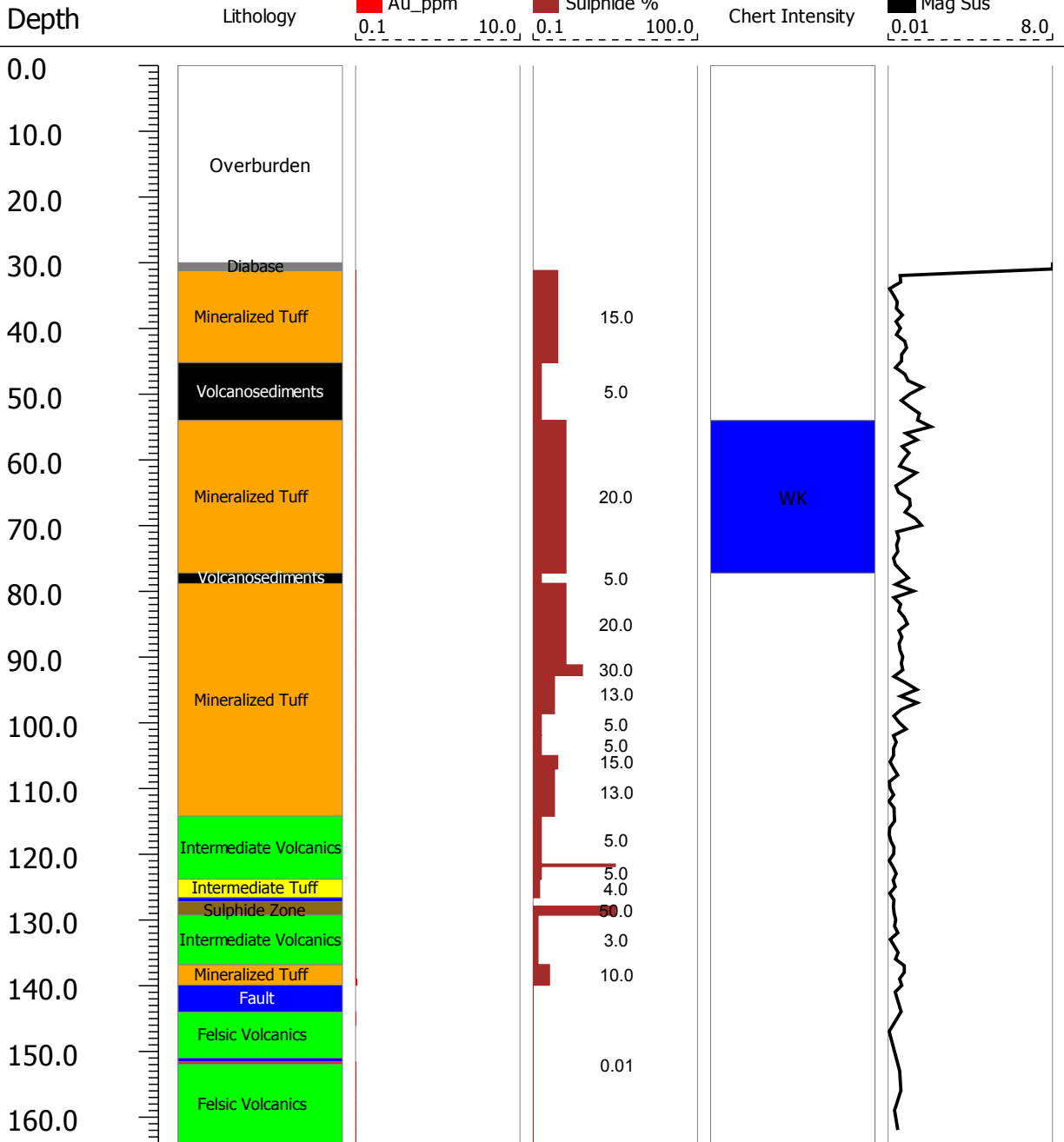
# LUC-18-16



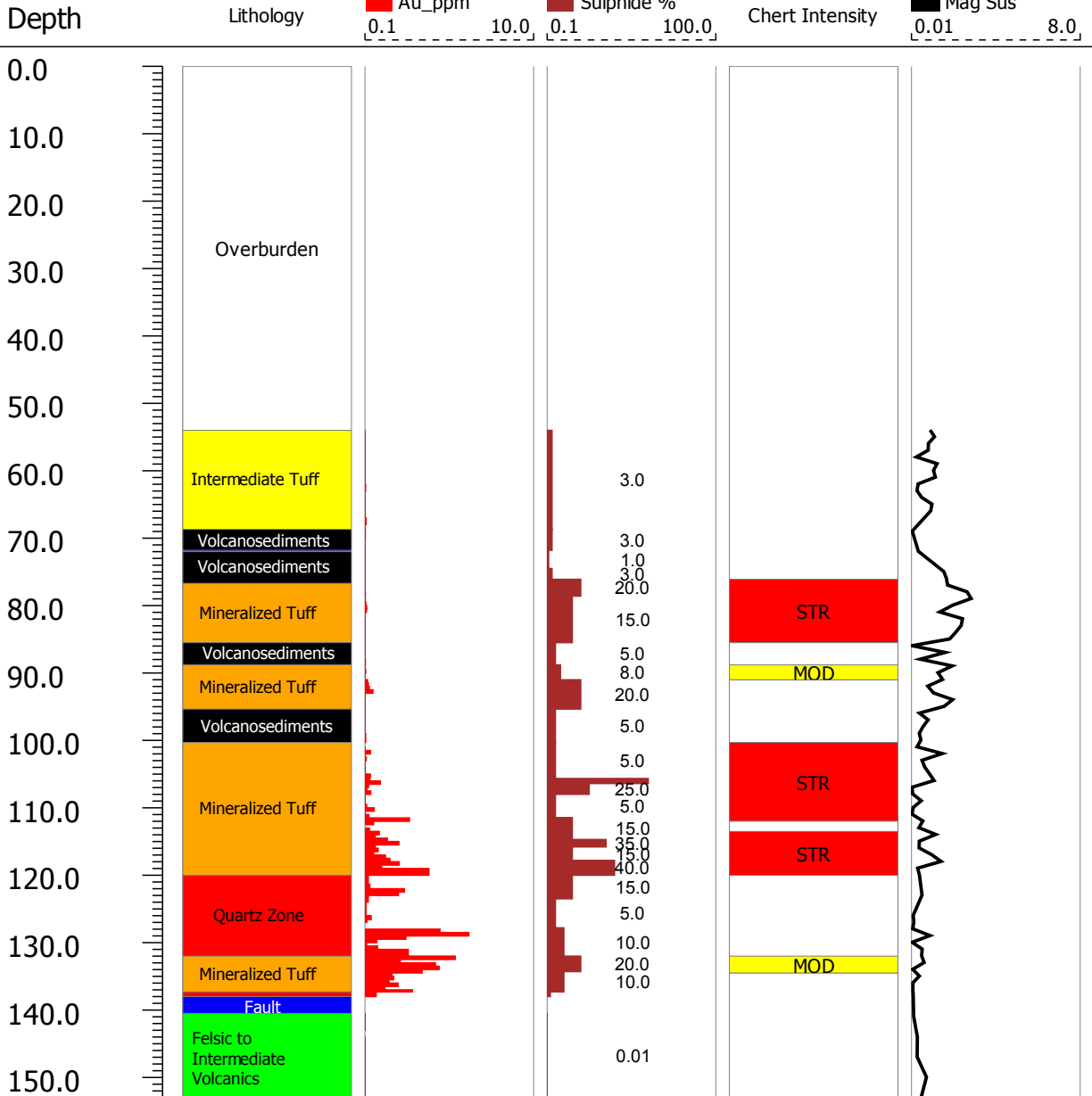
# LUC-18-17



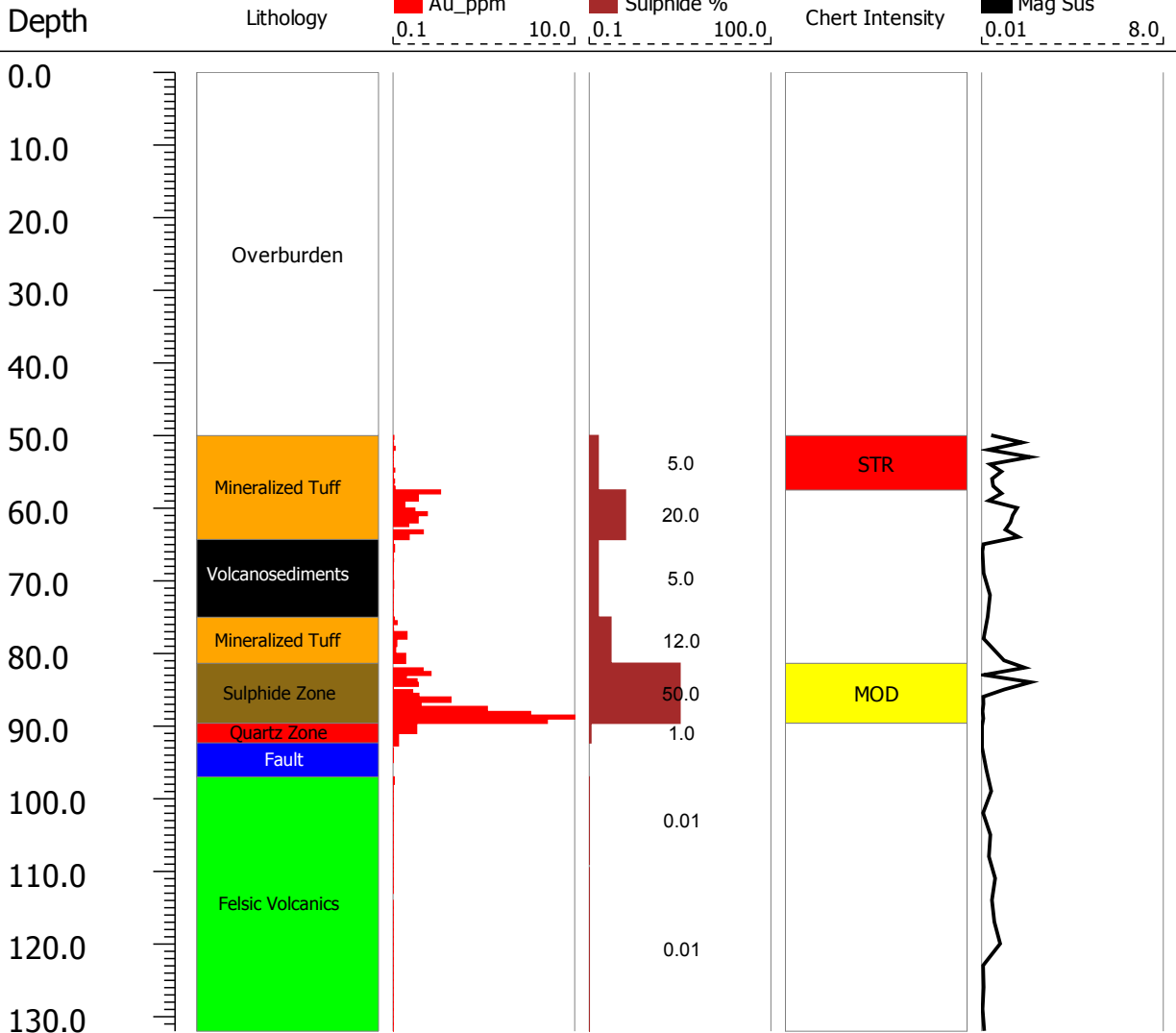
# LUC-18-18



# LUC-18-19

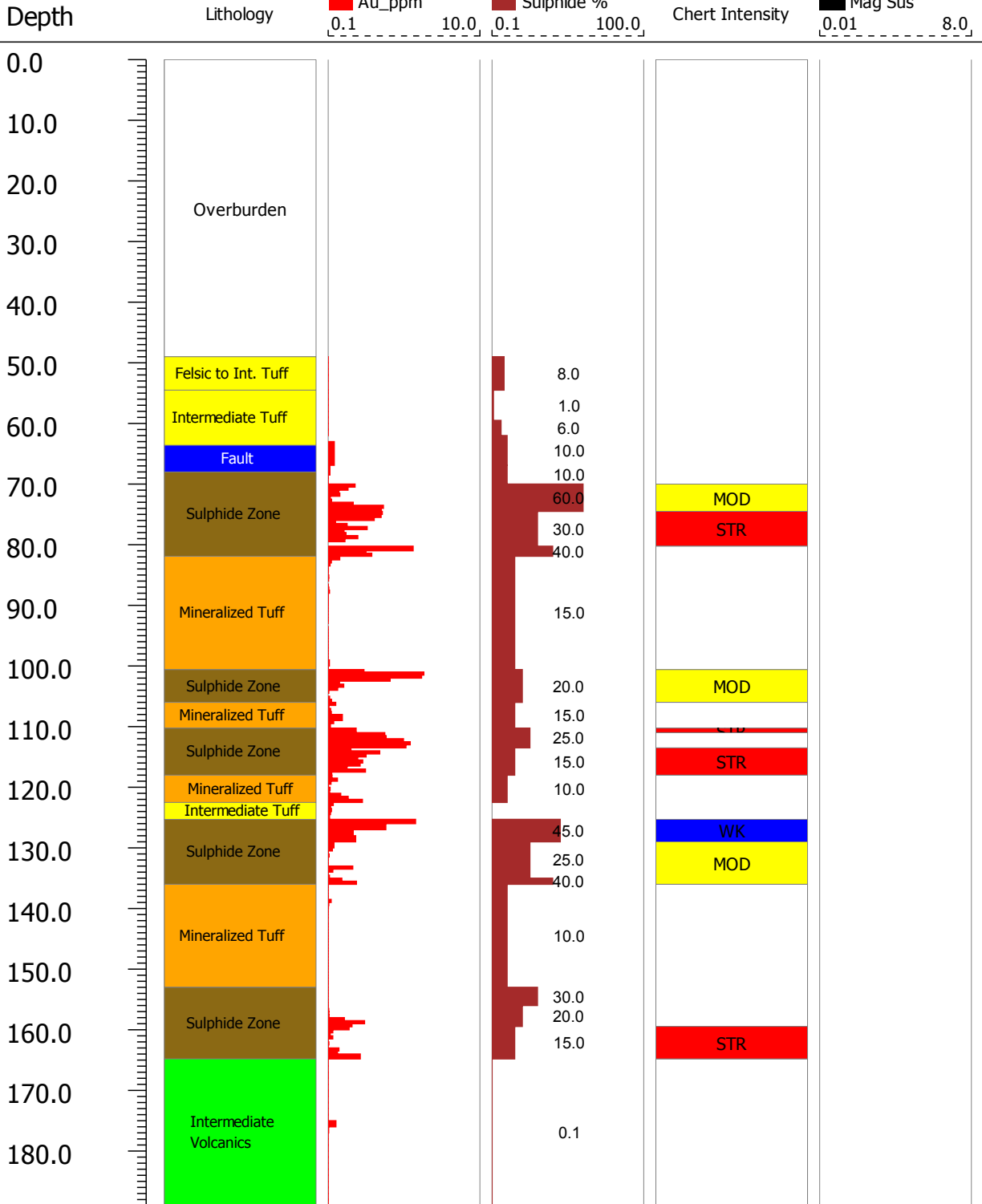


# LUC-18-20





# LUC-18-21



## **APPENDIX III**

### **Assay Certificates**



**Date Submitted:** 19-Feb-18  
**Invoice No.:** A18-01875  
**Invoice Date:** 27-Mar-18  
**Your Reference:** 81 Lucas

**Noble Mineral Exploration**  
**2500-120 Adelaide Street West**  
**Toronto ON M5H 1T1**  
**Canada**

**ATTN: Randy Singh (inv-cc)**

## CERTIFICATE OF ANALYSIS

57 Rock samples were submitted for analysis.

The following analytical package(s) were requested:

Code 1A2-Timmins Au - Fire Assay AA

Code 1A3-Timmins Au - Fire Assay Gravimetric

Code 1E3-Timmins Aqua Regia ICP(AQUAGEO)

REPORT **A18-01875**

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

Notes:

If value exceeds upper limit we recommend reassay by fire assay gravimetric-Code 1A3.

Values which exceed the upper limit should be assayed for accurate numbers.

CERTIFIED BY:

A handwritten signature in black ink, appearing to be "Emmanuel Esemé". The signature is written over a horizontal line.

Emmanuel Esemé , Ph.D.  
Quality Control

**ACTIVATION LABORATORIES LTD.**  
1752 Riverside Drive, Timmins, Ontario, Canada, P4R 1N1  
TELEPHONE +705 264-0123 or +1.888.228.5227 FAX +1.905.648.9613

## Results

## Activation Laboratories Ltd.

## Report: A18-01875

Analyte Symbol	Au	Ag	Cd	Cu	Mn	Mo	Ni	Pb	Zn	Al	As	B	Ba	Be	Bi	Ca	Co	Cr	Fe	Ga	Hg	K	La
Unit Symbol	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm
Lower Limit	5	0.2	0.5	1	5	1	1	2	2	0.01	2	10	10	0.5	2	0.01	1	1	0.01	10	1	0.01	10
Method Code	FA-AA	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
691527	15	0.7	0.5	35	2470	1	225	10	146	1.55	109	< 10	24	< 0.5	< 2	1.93	51	23	12.0	< 10	< 1	0.10	< 10
691528	10	0.3	< 0.5	38	4400	2	193	2	199	2.32	33	< 10	23	< 0.5	4	0.80	44	40	14.5	< 10	< 1	0.07	< 10
691529	9	0.3	< 0.5	48	5040	< 1	179	3	212	2.95	22	< 10	25	< 0.5	3	0.45	46	63	14.2	< 10	< 1	0.06	11
691530	9	0.3	0.8	48	3830	< 1	146	2	242	1.99	48	< 10	31	< 0.5	< 2	2.33	35	49	10.3	< 10	< 1	0.07	< 10
691531	< 5	0.2	< 0.5	< 1	96	< 1	< 1	< 2	19	5.34	< 2	12	11	0.5	< 2	0.21	< 1	< 1	0.54	10	< 1	1.55	< 10
691532	10	0.3	< 0.5	72	2680	< 1	165	5	225	2.40	71	< 10	24	< 0.5	< 2	3.30	39	44	11.6	< 10	< 1	0.06	< 10
691533	19	0.4	0.7	57	2720	< 1	174	6	275	1.80	116	< 10	18	< 0.5	< 2	3.41	39	39	12.1	< 10	< 1	0.04	< 10
691534	26	0.5	0.6	84	4200	< 1	207	10	339	1.17	152	< 10	15	< 0.5	< 2	2.49	53	36	15.9	< 10	< 1	0.05	< 10
691535	26	0.5	0.6	68	2840	< 1	205	9	475	1.37	147	< 10	15	< 0.5	2	3.67	53	30	13.6	< 10	< 1	0.04	< 10
691536	12	0.3	0.6	33	3560	< 1	139	4	284	1.43	72	< 10	26	< 0.5	< 2	4.06	25	25	10.2	< 10	< 1	0.06	< 10
691537	14	0.3	< 0.5	38	4150	< 1	162	5	271	1.80	92	< 10	24	< 0.5	< 2	1.26	42	27	13.8	< 10	< 1	0.05	< 10
691538	14	0.4	0.8	47	5260	< 1	165	6	310	1.34	101	< 10	19	< 0.5	< 2	1.15	42	24	16.9	< 10	< 1	0.04	< 10
691539	17	0.4	1.1	40	1530	< 1	211	8	381	0.99	162	< 10	22	< 0.5	< 2	2.91	57	23	10.5	< 10	< 1	0.07	< 10
691540	27	0.3	1.1	55	2570	< 1	244	8	299	0.77	206	< 10	< 10	< 0.5	< 2	2.79	62	19	13.3	< 10	< 1	0.05	< 10
691541	16	0.4	0.9	49	3880	1	271	10	554	1.43	214	< 10	< 10	< 0.5	< 2	0.34	77	23	15.5	< 10	< 1	0.11	< 10
691542	15	0.5	0.6	56	2290	1	261	12	416	1.50	208	< 10	< 10	< 0.5	3	0.30	70	27	15.8	< 10	1	0.11	< 10
691543	18	0.4	< 0.5	42	3830	< 1	232	8	269	1.23	178	< 10	11	< 0.5	< 2	0.40	63	20	16.0	< 10	< 1	0.10	< 10
691544	2270	0.5	0.5	96	1570	3	107	6	78	1.66	833	< 10	47	< 0.5	< 2	1.60	29	45	6.64	< 10	< 1	0.08	15
691545	33	0.4	0.6	36	2290	< 1	230	9	272	1.14	299	< 10	< 10	< 0.5	4	1.11	62	17	20.4	< 10	< 1	0.07	< 10
691546	30	0.5	0.7	21	2280	< 1	210	9	173	1.19	265	< 10	< 10	< 0.5	4	1.73	53	17	19.0	< 10	< 1	0.09	< 10
691547	27	0.5	< 0.5	18	4660	< 1	192	6	127	0.93	297	< 10	< 10	< 0.5	3	1.32	52	12	24.3	< 10	< 1	0.04	< 10
691548	20	0.5	< 0.5	7	5990	< 1	110	4	78	1.20	158	< 10	13	< 0.5	4	2.02	27	12	20.8	< 10	< 1	0.06	< 10
691549	24	0.4	< 0.5	8	2760	< 1	113	6	76	1.06	161	< 10	< 10	< 0.5	3	2.39	31	16	15.9	< 10	< 1	0.09	< 10
691550	42	0.4	< 0.5	14	3540	< 1	177	8	79	0.97	250	< 10	< 10	< 0.5	4	1.60	43	12	22.6	< 10	< 1	0.06	< 10
691551	38	0.5	< 0.5	9	5620	< 1	131	6	104	1.40	164	< 10	< 10	< 0.5	2	0.74	32	9	22.9	< 10	< 1	0.05	< 10
691552	49	0.5	< 0.5	5	5710	< 1	119	4	106	1.10	105	< 10	12	< 0.5	4	1.90	27	6	21.4	< 10	< 1	0.03	< 10
691553	86	0.5	< 0.5	6	6010	< 1	132	11	104	1.01	119	< 10	10	< 0.5	< 2	1.54	29	5	23.2	< 10	< 1	0.03	< 10
691554	66	0.5	< 0.5	5	7070	< 1	153	5	137	1.31	119	< 10	< 10	< 0.5	5	0.29	37	7	22.9	< 10	< 1	0.05	< 10
691555	< 5	0.2	< 0.5	2	140	< 1	< 1	< 2	27	5.34	< 2	14	< 10	0.5	< 2	0.22	< 1	2	0.80	10	< 1	1.47	< 10
691556	91	0.4	0.5	37	4600	2	197	7	168	1.65	163	< 10	< 10	< 0.5	3	0.15	51	13	22.9	< 10	< 1	0.05	< 10
691557	12	0.5	< 0.5	5	10500	4	55	2	78	0.38	39	< 10	< 10	< 0.5	4	0.41	9	3	24.2	< 10	< 1	< 0.01	< 10
691558	36	0.5	< 0.5	6	7610	5	113	6	72	0.65	133	< 10	< 10	< 0.5	3	0.81	28	4	25.4	< 10	< 1	< 0.01	< 10
691559	18	0.5	< 0.5	2	8560	5	75	4	108	1.27	68	< 10	21	< 0.5	2	1.09	18	5	24.8	< 10	< 1	0.05	< 10
691560	62	0.6	< 0.5	9	7490	2	144	7	161	0.98	144	< 10	12	< 0.5	6	0.66	32	5	25.0	< 10	< 1	0.03	< 10
691561	56	0.6	< 0.5	9	8830	1	135	5	141	1.34	133	< 10	13	< 0.5	3	0.23	30	6	26.7	< 10	< 1	0.03	< 10
691562	51	0.5	< 0.5	56	8370	< 1	183	7	186	1.38	147	< 10	< 10	< 0.5	4	0.18	36	14	26.3	< 10	< 1	0.04	< 10
691563	37	0.5	< 0.5	14	7080	< 1	161	7	207	1.56	169	< 10	12	< 0.5	3	0.19	38	18	25.6	< 10	< 1	0.03	< 10
691564	21	0.5	< 0.5	28	7340	< 1	154	5	149	1.38	129	< 10	< 10	< 0.5	2	0.18	37	14	24.3	< 10	< 1	< 0.01	< 10
691565	34	0.4	0.5	35	4820	< 1	218	3	138	2.75	99	< 10	12	< 0.5	4	0.15	38	27	19.0	< 10	< 1	0.01	< 10
691566	< 5	0.2	< 0.5	< 1	107	< 1	< 1	< 2	19	5.33	< 2	13	< 10	0.5	< 2	0.21	< 1	2	0.65	10	< 1	1.46	< 10
691567	393	0.6	0.6	23	5620	< 1	201	7	128	0.86	191	< 10	< 10	< 0.5	7	0.53	47	11	23.6	< 10	< 1	< 0.01	< 10
691568	54	0.3	< 0.5	6	6010	< 1	83	4	76	0.16	396	< 10	< 10	< 0.5	< 2	1.77	13	21	15.0	< 10	< 1	< 0.01	< 10

Analyte Symbol	Au	Ag	Cd	Cu	Mn	Mo	Ni	Pb	Zn	Al	As	B	Ba	Be	Bi	Ca	Co	Cr	Fe	Ga	Hg	K	La
Unit Symbol	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm
Lower Limit	5	0.2	0.5	1	5	1	1	2	2	0.01	2	10	10	0.5	2	0.01	1	1	0.01	10	1	0.01	10
Method Code	FA-AA	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
691569	112	0.5	< 0.5	14	6490	< 1	136	3	145	0.15	874	< 10	< 10	< 0.5	< 2	1.13	22	17	18.5	< 10	< 1	< 0.01	< 10
691570	60	0.4	< 0.5	6	4590	< 1	42	< 2	53	0.20	246	< 10	< 10	< 0.5	< 2	4.09	8	22	9.77	< 10	< 1	< 0.01	< 10
691571	516	0.8	< 0.5	7	8480	< 1	122	8	119	0.94	1820	< 10	< 10	< 0.5	4	1.22	23	7	25.9	< 10	< 1	< 0.01	< 10
691572	1100	0.5	< 0.5	164	714	< 1	68	3	65	3.75	7	41	27	< 0.5	< 2	3.18	31	121	5.80	10	< 1	0.05	< 10
691573	1810	1.4	< 0.5	21	5010	< 1	220	17	98	0.87	1400	< 10	< 10	< 0.5	3	2.21	61	11	24.2	< 10	< 1	0.01	< 10
691574	3920	1.8	< 0.5	34	4460	< 1	130	40	85	0.56	4550	< 10	< 10	< 0.5	3	0.32	49	7	22.2	< 10	< 1	0.01	< 10
691575	1540	0.6	< 0.5	13	4480	< 1	139	10	78	0.19	> 10000	< 10	< 10	< 0.5	< 2	0.54	27	24	16.7	< 10	< 1	< 0.01	< 10
691576	720	0.5	< 0.5	13	7680	< 1	96	7	103	0.30	4900	< 10	< 10	< 0.5	2	0.24	18	15	20.4	< 10	< 1	< 0.01	< 10
691577	5	< 0.2	< 0.5	< 1	112	< 1	< 1	< 2	20	5.25	7	13	< 10	0.5	< 2	0.21	< 1	< 1	0.61	< 10	< 1	1.46	< 10
691578	158	0.5	1.1	10	9520	2	113	4	131	0.72	972	< 10	14	< 0.5	3	0.22	20	12	24.8	< 10	< 1	0.02	< 10
691579	1800	1.1	0.7	41	5840	2	198	21	132	0.95	1260	< 10	< 10	< 0.5	6	0.16	54	10	25.6	< 10	< 1	0.01	< 10
691580	208	0.5	< 0.5	49	7900	< 1	139	4	171	1.61	245	< 10	14	< 0.5	4	0.21	30	10	23.7	< 10	< 1	0.02	< 10
691581	261	0.6	< 0.5	27	4910	1	227	7	173	1.57	297	< 10	< 10	< 0.5	4	0.15	53	21	25.6	< 10	< 1	0.01	< 10
691582	248	0.6	< 0.5	27	4890	1	229	8	174	1.57	295	< 10	< 10	< 0.5	6	0.15	54	19	25.3	< 10	< 1	0.01	< 10
691583	14	0.2	0.6	47	2110	< 1	226	5	153	2.30	174	< 10	16	< 0.5	4	0.26	49	30	15.9	< 10	< 1	0.03	< 10

Analyte Symbol	Mg	Na	P	S	Sb	Sc	Sr	Ti	Th	Te	Tl	U	V	W	Y	Zr	Au
Unit Symbol	%	%	%	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	g/tonne
Lower Limit	0.01	0.001	0.001	0.01	2	1	1	0.01	20	1	2	10	1	10	1	1	0.03
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	FA- GRA
691527	0.70	0.043	0.119	5.91	8	4	70	< 0.01	< 20	< 1	< 2	< 10	28	< 10	5	20	
691528	0.66	0.036	0.111	3.66	8	7	35	< 0.01	< 20	3	< 2	< 10	51	< 10	5	18	
691529	0.69	0.030	0.106	3.07	6	5	24	< 0.01	< 20	< 1	< 2	< 10	47	< 10	4	15	
691530	0.95	0.036	0.093	2.76	4	5	115	< 0.01	< 20	< 1	< 2	< 10	42	< 10	4	13	
691531	0.05	3.20	0.001	< 0.01	< 2	< 1	22	< 0.01	< 20	< 1	< 2	< 10	< 1	< 10	4	< 1	
691532	1.23	0.035	0.099	4.95	7	7	152	< 0.01	< 20	< 1	< 2	< 10	49	< 10	4	13	
691533	1.13	0.031	0.081	6.25	8	6	146	< 0.01	< 20	< 1	< 2	< 10	44	< 10	3	13	
691534	0.92	0.032	0.067	9.44	10	6	103	< 0.01	< 20	< 1	< 2	< 10	33	< 10	3	13	
691535	1.05	0.028	0.057	9.70	9	6	132	< 0.01	< 20	1	< 2	< 10	34	< 10	4	12	
691536	1.27	0.036	0.099	3.41	4	6	146	< 0.01	< 20	< 1	< 2	< 10	31	< 10	5	10	
691537	0.74	0.035	0.103	4.50	7	6	54	< 0.01	< 20	< 1	< 2	< 10	37	< 10	5	14	
691538	0.90	0.031	0.084	5.71	8	7	49	< 0.01	< 20	< 1	< 2	< 10	38	< 10	4	14	
691539	0.75	0.049	0.107	7.90	8	3	124	< 0.01	< 20	2	< 2	< 10	22	< 10	5	24	
691540	0.75	0.038	0.092	9.88	10	3	111	< 0.01	< 20	1	< 2	< 10	18	< 10	5	22	
691541	0.15	0.087	0.091	10.6	10	3	43	< 0.01	< 20	< 1	< 2	< 10	27	< 10	6	33	
691542	0.15	0.088	0.088	12.9	10	3	43	< 0.01	< 20	< 1	< 2	< 10	30	< 10	6	33	
691543	0.15	0.084	0.095	10.4	9	3	43	< 0.01	< 20	4	< 2	< 10	21	< 10	6	29	
691544	2.14	0.307	0.158	1.38	3	3	82	0.17	< 20	< 1	< 2	< 10	47	< 10	14	8	
691545	0.48	0.059	0.049	19.0	18	4	57	< 0.01	< 20	1	< 2	< 10	28	< 10	4	28	
691546	0.80	0.069	0.072	16.2	15	5	86	< 0.01	< 20	< 1	< 2	< 10	32	< 10	5	29	
691547	1.08	0.037	0.033	17.2	19	7	59	< 0.01	< 20	5	< 2	< 10	29	< 10	3	23	
691548	1.30	0.053	0.050	9.39	14	5	81	< 0.01	< 20	< 1	< 2	< 10	24	< 10	4	19	
691549	0.74	0.069	0.074	13.1	10	3	98	< 0.01	< 20	< 1	< 2	< 10	20	< 10	4	22	
691550	0.82	0.050	0.036	17.8	19	5	57	< 0.01	< 20	< 1	< 2	< 10	27	< 10	4	22	
691551	0.97	0.042	0.029	12.6	15	5	35	< 0.01	< 20	< 1	< 2	< 10	26	< 10	4	25	
691552	1.43	0.029	0.020	9.76	13	7	71	< 0.01	< 20	< 1	< 2	< 10	35	< 10	4	20	
691553	1.41	0.028	0.013	11.1	14	7	61	< 0.01	< 20	< 1	< 2	< 10	30	< 10	4	23	
691554	1.11	0.042	0.026	9.13	13	6	16	< 0.01	< 20	2	< 2	< 10	29	< 10	5	25	
691555	0.05	3.03	0.001	0.03	< 2	< 1	23	< 0.01	< 20	< 1	< 2	< 10	< 1	< 10	4	2	
691556	0.86	0.040	0.020	13.2	17	12	21	< 0.01	< 20	< 1	< 2	< 10	51	< 10	5	29	
691557	1.70	0.013	0.005	3.25	12	2	13	< 0.01	< 20	3	< 2	< 10	10	< 10	3	11	
691558	1.37	0.019	0.009	11.1	15	6	29	< 0.01	< 20	< 1	< 2	< 10	21	< 10	2	14	
691559	1.91	0.046	0.020	5.90	14	10	47	< 0.01	< 20	< 1	< 2	< 10	32	< 10	4	21	
691560	1.44	0.028	0.011	11.0	19	8	28	< 0.01	< 20	9	< 2	< 10	27	< 10	4	18	
691561	1.37	0.028	0.013	10.1	17	8	22	< 0.01	< 20	< 1	< 2	< 10	30	< 10	4	21	
691562	1.23	0.035	0.012	11.8	17	10	23	< 0.01	< 20	< 1	< 2	< 10	33	< 10	3	20	
691563	1.23	0.047	0.018	10.3	21	13	20	< 0.01	< 20	< 1	< 2	< 10	49	< 10	5	25	
691564	1.29	0.020	0.011	9.69	17	7	7	< 0.01	< 20	2	< 2	< 10	31	< 10	3	17	
691565	1.06	0.029	0.029	6.55	12	12	15	< 0.01	< 20	1	< 2	< 10	54	< 10	3	19	
691566	0.05	3.05	0.001	< 0.01	< 2	< 1	22	< 0.01	< 20	3	< 2	< 10	< 1	< 10	4	1	
691567	1.10	0.028	0.016	12.5	17	10	23	< 0.01	< 20	< 1	< 2	< 10	33	< 10	3	17	

Analyte Symbol	Mg	Na	P	S	Sb	Sc	Sr	Ti	Th	Te	Tl	U	V	W	Y	Zr	Au
Unit Symbol	%	%	%	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	g/tonne
Lower Limit	0.01	0.001	0.001	0.01	2	1	1	0.01	20	1	2	10	1	10	1	1	0.03
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	FA- GRA
691568	1.44	0.016	0.003	4.01	8	7	68	< 0.01	< 20	< 1	< 2	< 10	19	< 10	2	7	
691569	1.68	0.011	0.002	5.68	9	10	42	< 0.01	< 20	< 1	< 2	< 10	26	< 10	2	10	
691570	1.75	0.014	0.003	2.43	5	5	132	< 0.01	< 20	< 1	< 2	< 10	14	< 10	3	11	
691571	2.12	0.014	0.010	9.41	18	12	45	< 0.01	< 20	< 1	< 2	< 10	42	< 10	4	17	
691572	2.12	0.079	0.040	0.20	< 2	8	27	0.44	< 20	7	< 2	< 10	190	< 10	14	20	
691573	1.96	0.020	0.010	15.7	25	15	69	< 0.01	< 20	< 1	< 2	< 10	54	< 10	3	22	
691574	0.65	0.019	0.006	18.2	29	7	15	< 0.01	< 20	< 1	< 2	< 10	23	< 10	2	13	3.52
691575	0.63	0.015	0.002	12.1	14	7	18	< 0.01	< 20	< 1	< 2	< 10	12	< 10	2	10	
691576	1.17	0.016	0.004	8.92	13	9	8	< 0.01	< 20	< 1	< 2	< 10	18	< 10	2	10	
691577	0.05	3.00	< 0.001	0.02	< 2	< 1	24	< 0.01	< 20	2	< 2	< 10	< 1	< 10	4	1	
691578	1.63	0.024	0.009	5.79	12	10	11	< 0.01	< 20	< 1	< 2	< 10	36	< 10	3	17	
691579	0.93	0.022	0.020	17.5	23	8	20	< 0.01	< 20	< 1	< 2	< 10	29	< 10	2	18	
691580	1.38	0.027	0.026	7.12	18	13	33	< 0.01	< 20	2	< 2	< 10	44	< 10	3	17	
691581	0.94	0.032	0.026	13.8	20	11	15	< 0.01	< 20	4	< 2	< 10	45	< 10	3	17	
691582	0.94	0.032	0.026	14.1	24	11	15	< 0.01	< 20	< 1	< 2	< 10	45	< 10	3	17	
691583	0.51	0.054	0.087	8.71	10	10	45	< 0.01	< 20	< 1	< 2	< 10	46	< 10	3	15	

Analyte Symbol	Au	Ag	Cd	Cu	Mn	Mo	Ni	Pb	Zn	Al	As	B	Ba	Be	Bi	Ca	Co	Cr	Fe	Ga	Hg	K	La
Unit Symbol	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm
Lower Limit	5	0.2	0.5	1	5	1	1	2	2	0.01	2	10	10	0.5	2	0.01	1	1	0.01	10	1	0.01	10
Method Code	FA-AA	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
GXR-1 Meas		25.9	2.3	1020	735	13	26	590	623	0.47	310	< 10	416	0.7	1290	0.76	6	6	18.6	< 10	5	0.03	< 10
GXR-1 Cert		31.0	3.30	1110	852	18.0	41.0	730	760	3.52	427	15.0	750	1.22	1380	0.960	8.20	12.0	23.6	13.8	3.90	0.050	7.50
GXR-1 Meas		26.2	2.4	1020	736	13	24	597	634	0.47	312	10	398	0.7	1330	0.76	5	5	18.7	< 10	3	0.03	< 10
GXR-1 Cert		31.0	3.30	1110	852	18.0	41.0	730	760	3.52	427	15.0	750	1.22	1380	0.960	8.20	12.0	23.6	13.8	3.90	0.050	7.50
GXR-4 Meas		3.4	< 0.5	6630	134	317	30	42	67	2.72	91	< 10	39	1.3	12	0.86	13	52	2.77	10	< 1	1.60	49
GXR-4 Cert		4.0	0.860	6520	155	310	42.0	52.0	73.0	7.20	98.0	4.50	1640	1.90	19.0	1.01	14.6	64.0	3.09	20.0	0.110	4.01	64.5
GXR-4 Meas		3.4	< 0.5	6690	135	322	30	43	67	2.77	92	< 10	40	1.3	17	0.87	13	53	2.82	10	< 1	1.62	51
GXR-4 Cert		4.0	0.860	6520	155	310	42.0	52.0	73.0	7.20	98.0	4.50	1640	1.90	19.0	1.01	14.6	64.0	3.09	20.0	0.110	4.01	64.5
GXR-6 Meas		0.4	< 0.5	68	1020	1	17	97	123	7.04	227	< 10	869	0.8	< 2	0.15	13	75	5.06	20	< 1	1.02	11
GXR-6 Cert		1.30	1.00	66.0	1010	2.40	27.0	101	118	17.7	330	9.80	1300	1.40	0.290	0.180	13.8	96.0	5.58	35.0	0.0680	1.87	13.9
GXR-6 Meas		0.4	< 0.5	70	1060	< 1	19	99	123	7.32	236	< 10	896	0.9	< 2	0.15	13	79	5.27	20	< 1	1.06	11
GXR-6 Cert		1.30	1.00	66.0	1010	2.40	27.0	101	118	17.7	330	9.80	1300	1.40	0.290	0.180	13.8	96.0	5.58	35.0	0.0680	1.87	13.9
OREAS 134b (AQUA REGIA) Meas		> 100	595	1360				> 5000	> 10000		204						100		10.8				
OREAS 134b (AQUA REGIA) Cert		204	563	1360				133600.00	176900.00		221						110		12.25				
OREAS 133a (Aqua Regia) Meas		86.9	266	294				> 5000	> 10000		111		37				19		6.25				
OREAS 133a (Aqua Regia) Cert		97	297	324				48600.00	106000.00		140		59				23		7.92				
OXN117 Meas																							
OXN117 Cert																							
OxP116 Meas																							
OxP116 Cert																							
OREAS 218 Meas	521																						
OREAS 218 Cert	531																						
OREAS 218 Meas	523																						
OREAS 218 Cert	531																						
OREAS 224 Meas	2090																						
OREAS 224 Cert	2150.00																						
OREAS 224 Meas	2070																						
OREAS 224 Cert	2150.00																						
691529 Orig		0.3	< 0.5	48	5050	< 1	176	2	211	2.96	23	< 10	25	< 0.5	3	0.45	45	68	14.2	< 10	< 1	0.06	12
691529 Dup		0.3	< 0.5	47	5030	< 1	182	3	213	2.95	22	< 10	26	< 0.5	3	0.45	47	57	14.2	< 10	< 1	0.06	11
691536 Orig	12																						
691536 Dup	11																						
691537 Orig		0.3	< 0.5	37	4100	< 1	159	5	268	1.82	91	< 10	24	< 0.5	< 2	1.26	41	27	13.7	< 10	< 1	0.05	< 10
691537 Dup		0.3	< 0.5	39	4190	< 1	164	4	274	1.79	93	< 10	24	< 0.5	< 2	1.27	42	27	13.9	< 10	2	0.05	< 10
691546 Orig	33																						



Analyte Symbol	Au	Ag	Cd	Cu	Mn	Mo	Ni	Pb	Zn	Al	As	B	Ba	Be	Bi	Ca	Co	Cr	Fe	Ga	Hg	K	La
Unit Symbol	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm
Lower Limit	5	0.2	0.5	1	5	1	1	2	2	0.01	2	10	10	0.5	2	0.01	1	1	0.01	10	1	0.01	10
Method Code	FA-AA	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
691546 Dup	26																						
691556 Orig	89																						
691556 Dup	92																						
691571 Orig	533																						
691571 Dup	499																						
691576 Orig	720																						
691576 Split PREP DUP	648																						
691577 Orig		0.2	< 0.5	< 1	111	< 1	< 1	< 2	19	5.19	8	13	< 10	0.5	< 2	0.20	< 1	< 1	0.58	< 10	< 1	1.43	< 10
691577 Dup		< 0.2	< 0.5	2	114	< 1	< 1	< 2	20	5.32	7	14	< 10	0.5	< 2	0.21	< 1	1	0.64	10	< 1	1.48	< 10
691581 Orig	258																						
691581 Dup	264																						
Method Blank	< 5																						
Method Blank	< 5																						
Method Blank	< 5																						
Method Blank	5																						
Method Blank																							
Method Blank																							
Method Blank		0.3	< 0.5	< 1	< 5	< 1	< 1	< 2	< 2	< 0.01	< 2	< 10	< 10	< 0.5	< 2	< 0.01	< 1	< 1	< 0.01	< 10	< 1	< 0.01	< 10
Method Blank		< 0.2	< 0.5	< 1	< 5	< 1	< 1	< 2	< 2	< 0.01	< 2	< 10	< 10	< 0.5	< 2	< 0.01	< 1	< 1	< 0.01	< 10	< 1	< 0.01	< 10
Method Blank		< 0.2	< 0.5	< 1	< 5	< 1	< 1	< 2	< 2	< 0.01	< 2	< 10	< 10	< 0.5	< 2	< 0.01	< 1	< 1	< 0.01	< 10	< 1	< 0.01	< 10

Analyte Symbol	Mg	Na	P	S	Sb	Sc	Sr	Ti	Th	Te	Tl	U	V	W	Y	Zr	Au
Unit Symbol	%	%	%	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	g/tonne
Lower Limit	0.01	0.001	0.001	0.01	2	1	1	0.01	20	1	2	10	1	10	1	1	0.03
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	FA- GRA
GXR-1 Meas	0.13	0.058	0.035	0.17	73	< 1	144	< 0.01	< 20	12	< 2	23	72	133	22	16	
GXR-1 Cert	0.217	0.0520	0.0650	0.257	122	1.58	275	0.036	2.44	13.0	0.390	34.9	80.0	164	32.0	38.0	
GXR-1 Meas	0.13	0.057	0.034	0.17	74	< 1	141	< 0.01	< 20	11	< 2	23	73	134	22	16	
GXR-1 Cert	0.217	0.0520	0.0650	0.257	122	1.58	275	0.036	2.44	13.0	0.390	34.9	80.0	164	32.0	38.0	
GXR-4 Meas	1.49	0.118	0.124	1.65	< 2	7	68	0.13	< 20	2	2	< 10	83	11	12	9	
GXR-4 Cert	1.66	0.564	0.120	1.77	4.80	7.70	221	0.29	22.5	0.970	3.20	6.20	87.0	30.8	14.0	186	
GXR-4 Meas	1.52	0.118	0.126	1.66	3	7	69	0.13	< 20	3	3	< 10	84	12	12	9	
GXR-4 Cert	1.66	0.564	0.120	1.77	4.80	7.70	221	0.29	22.5	0.970	3.20	6.20	87.0	30.8	14.0	186	
GXR-6 Meas	0.36	0.075	0.034	0.01	5	22	30		< 20	< 1	< 2	< 10	178	< 10	6	15	
GXR-6 Cert	0.609	0.104	0.0350	0.0160	3.60	27.6	35.0		5.30	0.0180	2.20	1.54	186	1.90	14.0	110	
GXR-6 Meas	0.37	0.077	0.035	0.01	4	23	31		< 20	< 1	< 2	< 10	184	< 10	6	15	
GXR-6 Cert	0.609	0.104	0.0350	0.0160	3.60	27.6	35.0		5.30	0.0180	2.20	1.54	186	1.90	14.0	110	
OREAS 134b (AQUA REGIA) Meas				14.0	96												
OREAS 134b (AQUA REGIA) Cert				19.31	103												
OREAS 133a (Aqua Regia) Meas				6.17	118												
OREAS 133a (Aqua Regia) Cert				10.7	147												
OXN117 Meas																	7.51
OXN117 Cert																	7.679
OxP116 Meas																	14.5
OxP116 Cert																	14.92
OREAS 218 Meas																	
OREAS 218 Cert																	
OREAS 218 Meas																	
OREAS 218 Cert																	
OREAS 224 Meas																	
OREAS 224 Cert																	
OREAS 224 Meas																	
OREAS 224 Cert																	
691529 Orig	0.69	0.030	0.105	3.04	5	5	24	< 0.01	< 20	< 1	< 2	< 10	47	< 10	4	15	
691529 Dup	0.69	0.030	0.106	3.11	6	5	24	< 0.01	< 20	1	< 2	< 10	47	< 10	4	14	
691536 Orig																	
691536 Dup																	
691537 Orig	0.74	0.034	0.104	4.42	7	6	54	< 0.01	< 20	3	< 2	< 10	37	< 10	5	14	
691537 Dup	0.74	0.035	0.102	4.57	7	6	54	< 0.01	< 20	< 1	< 2	< 10	38	< 10	5	14	
691546 Orig																	
691546 Dup																	

Analyte Symbol	Mg	Na	P	S	Sb	Sc	Sr	Ti	Th	Te	Tl	U	V	W	Y	Zr	Au
Unit Symbol	%	%	%	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	g/tonne
Lower Limit	0.01	0.001	0.001	0.01	2	1	1	0.01	20	1	2	10	1	10	1	1	0.03
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	FA- GRA
691556 Orig																	
691556 Dup																	
691571 Orig																	
691571 Dup																	
691576 Orig																	
691576 Split PREP DUP																	
691577 Orig	0.05	2.95	< 0.001	0.02	< 2	< 1	23	< 0.01	< 20	3	< 2	< 10	< 1	< 10	4	1	
691577 Dup	0.05	3.06	0.001	0.02	< 2	< 1	25	< 0.01	< 20	2	< 2	< 10	< 1	< 10	4	1	
691581 Orig																	
691581 Dup																	
Method Blank																	
Method Blank																	
Method Blank																	
Method Blank																	
Method Blank																	< 0.03
Method Blank																	< 0.03
Method Blank	< 0.01	0.010	< 0.001	< 0.01	< 2	< 1	< 1	< 0.01	< 20	< 1	< 2	< 10	< 1	< 10	< 1	< 1	
Method Blank	< 0.01	0.009	< 0.001	< 0.01	< 2	< 1	< 1	< 0.01	< 20	< 1	< 2	< 10	< 1	< 10	< 1	< 1	
Method Blank	< 0.01	0.010	< 0.001	< 0.01	< 2	< 1	< 1	< 0.01	< 20	< 1	< 2	< 10	< 1	< 10	< 1	< 1	



**Date Submitted:** 21-Feb-18  
**Invoice No.:** A18-02005  
**Invoice Date:** 27-Mar-18  
**Your Reference:** 81 Lucas

**Noble Mineral Exploration**  
**2500-120 Adelaide Street West**  
**Toronto ON M5H 1T1**  
**Canada**

**ATTN: Randy Singh (inv-cc)**

## CERTIFICATE OF ANALYSIS

70 Rock samples were submitted for analysis.

The following analytical package(s) were requested:

Code 1A2-Timmins Au - Fire Assay AA

Code 1E3-Timmins Aqua Regia ICP(AQUAGEO)

REPORT      **A18-02005**

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

Notes:

If value exceeds upper limit we recommend reassay by fire assay gravimetric-Code 1A3.

Values which exceed the upper limit should be assayed for accurate numbers.

CERTIFIED BY:

A handwritten signature in black ink, appearing to be "Emmanuel Esemé". The signature is written in a cursive style with a horizontal line underneath.

Emmanuel Esemé , Ph.D.  
Quality Control

**ACTIVATION LABORATORIES LTD.**  
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## Results

## Activation Laboratories Ltd.

## Report: A18-02005

Analyte Symbol	Au	Ag	Cd	Cu	Mn	Mo	Ni	Pb	Zn	Al	As	B	Ba	Be	Bi	Ca	Co	Cr	Fe	Ga	Hg	K	La
Unit Symbol	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm
Lower Limit	5	0.2	0.5	1	5	1	1	2	2	0.01	2	10	10	0.5	2	0.01	1	1	0.01	10	1	0.01	10
Method Code	FA-AA	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
691501	7	< 0.2	< 0.5	25	530	< 1	170	4	124	1.66	8	< 10	77	< 0.5	< 2	3.47	26	35	2.86	< 10	< 1	0.23	18
691502	7	< 0.2	< 0.5	26	488	< 1	242	4	92	1.50	10	< 10	62	< 0.5	< 2	3.85	31	35	2.97	< 10	< 1	0.17	13
691503	8	< 0.2	< 0.5	32	441	1	271	4	80	1.83	14	< 10	79	< 0.5	< 2	3.71	37	47	3.10	< 10	< 1	0.22	15
691504	8	< 0.2	< 0.5	26	545	< 1	168	3	93	1.73	9	< 10	57	< 0.5	< 2	4.06	24	41	2.97	< 10	< 1	0.15	17
691505	6	< 0.2	< 0.5	25	565	< 1	177	4	69	1.65	8	< 10	87	< 0.5	< 2	3.84	26	34	2.98	< 10	< 1	0.27	19
691506	7	< 0.2	< 0.5	29	745	< 1	183	4	88	1.53	6	< 10	77	< 0.5	< 2	3.85	29	29	3.32	< 10	< 1	0.23	22
691507	1480	0.4	< 0.5	65	867	< 1	106	9	73	1.40	2390	< 10	69	< 0.5	< 2	1.27	28	33	5.19	< 10	< 1	0.07	14
691508	6	< 0.2	< 0.5	31	474	< 1	190	8	60	1.59	15	< 10	79	< 0.5	< 2	3.45	31	31	3.27	< 10	< 1	0.24	18
691509	< 5	< 0.2	< 0.5	22	782	< 1	158	2	79	1.09	16	< 10	53	< 0.5	< 2	5.37	31	24	2.86	< 10	< 1	0.16	19
691510	5	< 0.2	< 0.5	29	648	< 1	184	4	82	1.50	14	< 10	62	< 0.5	< 2	2.98	36	35	3.25	< 10	< 1	0.19	14
691511	< 5	< 0.2	< 0.5	1	114	< 1	< 1	< 2	19	4.73	< 2	12	< 10	< 0.5	< 2	0.20	< 1	1	0.72	< 10	< 1	1.35	< 10
691512	5	< 0.2	< 0.5	24	750	< 1	195	6	93	1.36	18	< 10	61	< 0.5	< 2	1.74	35	31	3.97	< 10	< 1	0.17	19
691513	< 5	< 0.2	< 0.5	23	652	< 1	178	4	79	1.40	21	< 10	60	< 0.5	< 2	3.03	30	29	3.38	< 10	< 1	0.18	21
691514	6	< 0.2	< 0.5	22	950	< 1	155	4	91	1.40	22	< 10	49	< 0.5	< 2	2.57	31	30	4.00	< 10	< 1	0.15	25
691515	< 5	< 0.2	< 0.5	23	1270	< 1	238	5	90	1.27	27	< 10	51	< 0.5	< 2	3.65	39	28	4.34	< 10	< 1	0.17	19
691516	5	< 0.2	< 0.5	27	731	< 1	184	4	79	1.58	38	< 10	61	< 0.5	< 2	2.32	37	34	3.52	< 10	< 1	0.21	26
691517	11	< 0.2	< 0.5	24	399	< 1	165	3	79	1.55	17	< 10	45	< 0.5	< 2	3.42	31	38	2.40	< 10	< 1	0.15	24
691518	5	< 0.2	< 0.5	32	389	< 1	177	4	76	1.43	20	< 10	47	< 0.5	< 2	3.33	32	28	2.24	< 10	< 1	0.16	21
691519	5	< 0.2	< 0.5	26	564	< 1	251	4	84	1.51	22	< 10	35	< 0.5	< 2	1.47	41	40	3.52	< 10	< 1	0.12	21
691520	6	< 0.2	< 0.5	24	549	< 1	242	4	86	1.45	21	< 10	34	< 0.5	< 2	1.42	39	37	3.42	< 10	< 1	0.11	20
691521	5	< 0.2	< 0.5	27	651	< 1	284	4	78	1.17	29	< 10	40	< 0.5	< 2	1.90	44	28	3.77	< 10	< 1	0.14	21
691522	5	< 0.2	< 0.5	26	727	< 1	342	4	84	1.04	35	< 10	37	< 0.5	< 2	1.77	47	21	4.99	< 10	< 1	0.12	15
691523	6	< 0.2	< 0.5	28	569	< 1	275	2	86	0.57	27	< 10	39	< 0.5	< 2	3.04	37	12	2.97	< 10	< 1	0.13	19
691524	5	< 0.2	< 0.5	27	576	< 1	278	< 2	89	0.58	27	< 10	40	< 0.5	< 2	3.07	37	14	2.99	< 10	< 1	0.13	19
691525	6	< 0.2	< 0.5	29	552	< 1	294	4	71	0.60	36	< 10	46	< 0.5	< 2	2.94	35	11	3.01	< 10	< 1	0.15	21
691526	7	< 0.2	< 0.5	25	778	< 1	293	5	51	0.67	62	< 10	55	< 0.5	< 2	2.63	42	11	3.60	< 10	< 1	0.19	20
691584	7	< 0.2	0.6	24	3160	1	224	4	139	1.17	45	< 10	26	< 0.5	< 2	0.70	49	18	7.83	< 10	< 1	0.05	22
691585	< 5	< 0.2	< 0.5	30	1220	< 1	235	6	93	1.01	72	< 10	39	< 0.5	< 2	3.08	47	16	7.03	< 10	< 1	0.08	14
691586	6	0.2	< 0.5	19	2210	< 1	214	4	127	1.41	47	< 10	22	< 0.5	< 2	2.39	44	17	9.59	< 10	< 1	0.04	11
691587	< 5	< 0.2	< 0.5	27	907	< 1	249	5	78	0.69	69	< 10	43	< 0.5	< 2	2.67	46	11	4.83	< 10	< 1	0.09	18
691588	15	< 0.2	< 0.5	21	572	2	225	5	67	0.42	195	< 10	35	< 0.5	< 2	3.73	38	9	3.50	< 10	< 1	0.08	19
691589	10	< 0.2	< 0.5	20	548	< 1	162	2	63	0.54	159	< 10	50	< 0.5	< 2	4.47	26	10	2.97	< 10	< 1	0.11	25
691590	7	< 0.2	< 0.5	20	641	8	106	2	52	0.47	58	< 10	45	< 0.5	< 2	3.89	22	11	2.98	< 10	< 1	0.09	27
691591	5	< 0.2	< 0.5	23	692	< 1	105	3	62	0.54	47	< 10	43	< 0.5	< 2	3.22	23	14	3.28	< 10	< 1	0.12	21
691592	6	< 0.2	< 0.5	26	562	< 1	155	3	58	0.63	30	< 10	31	< 0.5	< 2	3.44	26	19	3.23	< 10	< 1	0.08	16
691593	5	< 0.2	< 0.5	25	477	< 1	84	3	51	1.13	23	< 10	86	< 0.5	< 2	3.42	20	27	2.29	< 10	< 1	0.25	23
691594	6	< 0.2	< 0.5	162	514	< 1	45	< 2	62	3.50	< 2	< 10	23	< 0.5	< 2	2.62	24	23	4.46	< 10	< 1	0.05	< 10
691595	8	0.2	< 0.5	165	513	< 1	46	< 2	53	3.57	< 2	< 10	21	< 0.5	< 2	2.66	23	28	4.49	< 10	< 1	0.05	< 10
691596	< 5	< 0.2	< 0.5	29	394	< 1	88	2	55	1.38	12	< 10	70	< 0.5	< 2	3.19	21	37	2.49	< 10	< 1	0.20	19
691597	6	< 0.2	< 0.5	25	355	< 1	125	2	51	1.94	8	< 10	122	< 0.5	< 2	2.82	24	49	2.90	< 10	< 1	0.34	18
691598	7	< 0.2	< 0.5	34	421	1	135	4	56	1.35	14	< 10	66	< 0.5	< 2	3.44	28	35	3.34	< 10	< 1	0.18	16
691599	5	< 0.2	< 0.5	26	435	1	119	2	57	1.54	8	< 10	73	< 0.5	< 2	3.30	24	38	2.87	< 10	< 1	0.20	21

Analyte Symbol	Au	Ag	Cd	Cu	Mn	Mo	Ni	Pb	Zn	Al	As	B	Ba	Be	Bi	Ca	Co	Cr	Fe	Ga	Hg	K	La
Unit Symbol	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm
Lower Limit	5	0.2	0.5	1	5	1	1	2	2	0.01	2	10	10	0.5	2	0.01	1	1	0.01	10	1	0.01	10
Method Code	FA-AA	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
691600	6	< 0.2	< 0.5	23	497	< 1	93	3	55	1.78	10	< 10	91	< 0.5	< 2	4.22	20	39	2.74	< 10	< 1	0.26	22
691601	6	< 0.2	< 0.5	23	513	< 1	81	< 2	55	1.46	7	< 10	62	< 0.5	< 2	4.58	17	32	2.54	< 10	< 1	0.17	21
691602	8	< 0.2	< 0.5	25	410	< 1	93	3	53	1.77	7	< 10	90	< 0.5	< 2	3.04	21	45	2.67	< 10	< 1	0.24	20
691603	6	0.2	< 0.5	25	428	< 1	103	3	60	1.30	11	< 10	62	< 0.5	< 2	2.93	22	33	2.67	< 10	< 1	0.17	20
691604	< 5	< 0.2	< 0.5	24	455	< 1	115	2	58	1.23	14	< 10	60	< 0.5	< 2	3.15	23	29	3.94	< 10	< 1	0.17	14
691605	5	< 0.2	< 0.5	23	571	< 1	138	5	44	1.39	19	< 10	47	< 0.5	< 2	2.54	26	24	5.06	< 10	< 1	0.22	12
691606	< 5	< 0.2	< 0.5	< 1	99	< 1	< 1	< 2	18	4.82	< 2	15	11	< 0.5	< 2	0.19	< 1	1	0.58	< 10	< 1	1.40	< 10
691607	6	< 0.2	< 0.5	30	952	2	196	4	72	1.21	28	< 10	48	< 0.5	< 2	1.93	38	24	5.15	< 10	< 1	0.14	15
691608	8	< 0.2	< 0.5	29	722	< 1	176	6	55	1.24	39	< 10	51	< 0.5	< 2	2.74	31	23	5.52	< 10	< 1	0.17	11
691609	9	< 0.2	< 0.5	28	538	< 1	178	6	51	1.12	39	< 10	50	< 0.5	< 2	2.87	30	22	4.65	< 10	< 1	0.16	13
691610	8	0.2	< 0.5	27	1590	< 1	149	7	42	1.56	49	< 10	23	< 0.5	< 2	5.30	30	25	8.68	< 10	1	0.13	< 10
691611	17	0.4	< 0.5	28	1300	< 1	170	10	38	1.20	175	< 10	13	< 0.5	< 2	3.68	40	25	12.6	< 10	< 1	0.11	< 10
691612	28	0.8	< 0.5	49	1120	< 1	232	30	37	1.02	337	< 10	< 10	< 0.5	2	1.37	72	21	19.8	< 10	< 1	0.11	< 10
691613	9	< 0.2	< 0.5	17	3650	< 1	113	< 2	119	3.93	4	< 10	14	< 0.5	< 2	3.63	17	10	13.6	10	1	0.02	< 10
691614	11	< 0.2	0.5	30	2600	< 1	105	< 2	129	3.71	9	< 10	62	< 0.5	< 2	3.77	21	11	11.1	10	< 1	0.15	< 10
691615	13	< 0.2	< 0.5	28	1690	< 1	104	3	93	2.14	8	< 10	45	< 0.5	< 2	2.45	27	9	7.00	< 10	< 1	0.12	11
691616	13	< 0.2	< 0.5	30	1420	1	266	3	105	2.01	38	< 10	51	< 0.5	< 2	3.30	48	10	7.34	< 10	< 1	0.16	< 10
691617	5	< 0.2	< 0.5	32	511	5	119	6	110	0.97	37	< 10	52	< 0.5	< 2	3.59	26	21	4.39	< 10	< 1	0.24	14
691618	< 5	< 0.2	< 0.5	22	599	1	145	4	76	1.00	18	< 10	74	< 0.5	< 2	4.05	35	19	3.52	< 10	< 1	0.23	17
691619	< 5	< 0.2	< 0.5	22	401	< 1	135	5	41	1.15	27	< 10	74	< 0.5	< 2	3.47	32	29	3.41	< 10	< 1	0.25	16
691620	1000	0.4	< 0.5	159	684	< 1	66	3	61	3.61	5	40	25	< 0.5	< 2	3.07	29	117	5.60	10	< 1	0.05	< 10
691621	< 5	< 0.2	< 0.5	21	680	< 1	49	< 2	79	1.66	7	< 10	55	< 0.5	< 2	3.09	13	6	3.51	< 10	< 1	0.18	18
691622	< 5	< 0.2	< 0.5	20	692	< 1	34	< 2	61	1.87	2	< 10	69	< 0.5	< 2	3.97	13	5	3.29	< 10	< 1	0.23	19
691623	< 5	< 0.2	< 0.5	21	666	< 1	30	< 2	59	1.74	3	< 10	59	< 0.5	< 2	3.78	14	4	3.20	< 10	< 1	0.20	17
691624	< 5	< 0.2	< 0.5	20	673	< 1	34	< 2	61	2.32	2	< 10	79	< 0.5	< 2	3.76	12	6	3.74	< 10	< 1	0.27	19
691625	< 5	< 0.2	< 0.5	18	715	< 1	33	< 2	72	1.85	3	< 10	53	< 0.5	< 2	3.58	14	5	3.53	< 10	< 1	0.17	19
691626	32	< 0.2	< 0.5	19	709	< 1	43	3	63	1.82	6	< 10	66	< 0.5	< 2	4.24	16	4	3.27	< 10	< 1	0.24	16
691627	< 5	< 0.2	< 0.5	20	662	< 1	34	< 2	68	1.79	3	< 10	55	< 0.5	< 2	2.70	15	5	3.48	< 10	< 1	0.19	19

Analyte Symbol	Mg	Na	P	S	Sb	Sc	Sr	Ti	Th	Te	Tl	U	V	W	Y	Zr
Unit Symbol	%	%	%	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	0.01	0.001	0.001	0.01	2	1	1	0.01	20	1	2	10	1	10	1	1
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
691501	0.94	0.102	0.147	0.54	< 2	3	134	< 0.01	< 20	3	< 2	< 10	30	< 10	6	6
691502	0.90	0.079	0.144	1.02	< 2	2	147	< 0.01	< 20	< 1	< 2	< 10	24	< 10	5	7
691503	0.78	0.111	0.147	1.16	< 2	3	168	< 0.01	< 20	1	< 2	< 10	30	< 10	5	7
691504	1.00	0.080	0.149	0.57	< 2	3	176	< 0.01	< 20	< 1	< 2	< 10	31	< 10	5	6
691505	1.07	0.110	0.144	0.71	< 2	3	169	< 0.01	< 20	< 1	< 2	< 10	25	< 10	6	6
691506	1.20	0.097	0.152	0.59	< 2	3	163	< 0.01	< 20	3	< 2	< 10	24	< 10	6	6
691507	2.02	0.281	0.125	0.73	3	3	76	0.13	< 20	2	< 2	< 10	32	< 10	13	8
691508	0.65	0.099	0.146	1.31	< 2	2	165	< 0.01	< 20	< 1	< 2	< 10	23	< 10	6	8
691509	1.61	0.071	0.140	0.28	< 2	3	187	< 0.01	< 20	3	< 2	< 10	20	< 10	6	7
691510	0.85	0.079	0.148	0.40	< 2	2	168	< 0.01	< 20	< 1	< 2	< 10	23	< 10	7	7
691511	0.05	2.77	0.001	< 0.01	< 2	< 1	22	< 0.01	< 20	2	< 2	< 10	< 1	< 10	3	2
691512	0.84	0.073	0.151	0.87	2	2	77	< 0.01	< 20	2	< 2	< 10	22	< 10	6	9
691513	1.08	0.084	0.147	0.60	2	3	114	< 0.01	< 20	1	< 2	< 10	21	< 10	6	7
691514	1.10	0.067	0.146	0.28	< 2	2	90	< 0.01	< 20	2	< 2	< 10	21	< 10	6	7
691515	1.42	0.075	0.142	0.58	2	3	119	< 0.01	< 20	3	< 2	< 10	21	< 10	6	8
691516	1.05	0.060	0.161	0.50	< 2	2	85	< 0.01	< 20	< 1	< 2	< 10	22	< 10	6	7
691517	0.90	0.045	0.151	0.33	< 2	2	132	< 0.01	< 20	< 1	< 2	< 10	22	< 10	5	6
691518	0.73	0.047	0.159	0.54	< 2	2	138	< 0.01	< 20	< 1	< 2	< 10	18	< 10	5	6
691519	0.84	0.041	0.159	0.84	< 2	2	59	< 0.01	< 20	< 1	< 2	< 10	24	< 10	6	9
691520	0.82	0.040	0.155	0.82	< 2	2	56	< 0.01	< 20	< 1	< 2	< 10	23	< 10	5	8
691521	0.74	0.045	0.153	1.09	< 2	2	63	< 0.01	< 20	2	< 2	< 10	16	< 10	6	8
691522	0.68	0.057	0.148	2.17	3	2	51	< 0.01	< 20	2	< 2	< 10	15	< 10	6	10
691523	0.87	0.055	0.150	0.83	< 2	2	80	< 0.01	< 20	3	< 2	< 10	9	< 10	5	8
691524	0.88	0.056	0.150	0.82	< 2	2	82	< 0.01	< 20	3	< 2	< 10	9	< 10	5	8
691525	0.82	0.054	0.151	1.05	< 2	1	85	< 0.01	< 20	< 1	< 2	< 10	9	< 10	5	9
691526	0.66	0.059	0.153	1.34	3	1	88	< 0.01	< 20	2	< 2	< 10	9	< 10	5	8
691584	0.18	0.059	0.131	2.24	5	8	35	< 0.01	< 20	3	< 2	< 10	17	< 10	5	11
691585	0.79	0.099	0.127	3.57	4	7	103	< 0.01	< 20	< 1	< 2	< 10	20	< 10	4	14
691586	0.99	0.053	0.111	2.94	5	6	74	< 0.01	< 20	1	< 2	< 10	28	< 10	5	15
691587	0.64	0.099	0.149	1.83	3	3	95	< 0.01	< 20	< 1	< 2	< 10	11	< 10	6	10
691588	0.90	0.070	0.145	1.26	2	2	112	< 0.01	< 20	5	< 2	< 10	8	< 10	5	11
691589	1.07	0.099	0.145	0.70	< 2	2	153	< 0.01	< 20	< 1	< 2	< 10	9	< 10	6	8
691590	0.80	0.081	0.151	0.51	< 2	2	121	< 0.01	< 20	< 1	< 2	< 10	7	< 10	5	8
691591	0.83	0.078	0.154	0.49	< 2	3	115	< 0.01	< 20	1	< 2	< 10	10	< 10	5	8
691592	1.06	0.053	0.148	0.84	< 2	3	94	< 0.01	< 20	4	< 2	< 10	13	< 10	5	8
691593	0.93	0.149	0.152	0.27	< 2	3	133	< 0.01	< 20	2	< 2	< 10	19	< 10	7	5
691594	1.14	0.592	0.055	0.06	< 2	5	75	0.31	< 20	3	< 2	< 10	130	< 10	13	16
691595	1.21	0.619	0.054	0.06	< 2	4	79	0.35	< 20	2	< 2	< 10	132	< 10	13	16
691596	0.99	0.110	0.154	0.55	< 2	2	117	< 0.01	< 20	1	< 2	< 10	22	< 10	6	5
691597	0.94	0.164	0.149	1.06	< 2	3	136	< 0.01	< 20	< 1	< 2	< 10	34	< 10	6	5
691598	1.02	0.111	0.147	1.38	< 2	3	125	< 0.01	< 20	< 1	< 2	< 10	23	< 10	6	8
691599	1.05	0.129	0.149	0.65	< 2	3	134	< 0.01	< 20	1	< 2	< 10	24	< 10	6	5

Analyte Symbol	Mg	Na	P	S	Sb	Sc	Sr	Ti	Th	Te	Tl	U	V	W	Y	Zr
Unit Symbol	%	%	%	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	0.01	0.001	0.001	0.01	2	1	1	0.01	20	1	2	10	1	10	1	1
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
691600	1.23	0.193	0.141	0.50	< 2	3	177	< 0.01	< 20	6	< 2	< 10	30	< 10	6	5
691601	1.15	0.124	0.138	0.37	< 2	3	171	< 0.01	< 20	4	< 2	< 10	24	< 10	6	5
691602	1.02	0.139	0.150	0.58	< 2	3	128	< 0.01	< 20	2	< 2	< 10	27	< 10	6	4
691603	0.95	0.102	0.146	0.67	< 2	2	98	< 0.01	< 20	1	< 2	< 10	20	< 10	6	6
691604	1.06	0.104	0.144	1.81	< 2	2	80	< 0.01	< 20	< 1	< 2	< 10	18	< 10	6	9
691605	0.91	0.157	0.149	3.04	2	2	80	< 0.01	< 20	< 1	< 2	< 10	19	< 10	7	13
691606	0.05	2.80	0.001	< 0.01	< 2	< 1	21	< 0.01	< 20	3	< 2	< 10	< 1	< 10	3	2
691607	0.74	0.114	0.148	2.10	< 2	2	60	< 0.01	< 20	3	< 2	< 10	17	< 10	7	11
691608	0.91	0.135	0.135	3.20	3	3	74	< 0.01	< 20	2	< 2	< 10	17	< 10	6	14
691609	0.88	0.118	0.149	2.95	2	2	80	< 0.01	< 20	< 1	< 2	< 10	15	< 10	6	12
691610	0.74	0.118	0.105	6.17	3	3	152	< 0.01	< 20	< 1	< 2	< 10	22	< 10	4	15
691611	0.53	0.081	0.086	11.8	8	2	122	< 0.01	< 20	< 1	< 2	< 10	17	< 10	4	16
691612	0.38	0.059	0.056	18.8	16	3	50	< 0.01	< 20	< 1	< 2	< 10	20	< 10	2	18
691613	1.57	0.029	0.060	2.96	5	10	169	< 0.01	< 20	1	< 2	< 10	69	< 10	3	19
691614	1.61	0.068	0.097	1.60	4	8	201	< 0.01	< 20	5	< 2	< 10	64	< 10	5	18
691615	0.99	0.059	0.084	1.36	3	3	108	< 0.01	< 20	< 1	< 2	< 10	30	< 10	4	12
691616	1.16	0.089	0.081	2.50	3	3	125	< 0.01	< 20	2	< 2	< 10	27	< 10	4	15
691617	0.74	0.097	0.134	2.59	2	2	125	< 0.01	< 20	4	< 2	< 10	17	< 10	5	10
691618	0.97	0.091	0.131	1.50	< 2	3	127	< 0.01	< 20	< 1	< 2	< 10	21	< 10	5	7
691619	0.74	0.117	0.142	1.71	3	2	131	< 0.01	< 20	4	< 2	< 10	18	< 10	5	8
691620	2.05	0.076	0.038	0.19	< 2	7	26	0.42	< 20	3	< 2	< 10	184	< 10	14	20
691621	1.02	0.086	0.105	0.13	< 2	3	102	< 0.01	< 20	4	< 2	< 10	23	< 10	5	8
691622	0.92	0.106	0.101	0.07	< 2	3	158	< 0.01	< 20	< 1	< 2	< 10	28	< 10	6	8
691623	0.84	0.084	0.102	0.16	< 2	2	127	< 0.01	< 20	2	< 2	< 10	22	< 10	5	7
691624	0.84	0.107	0.103	0.11	< 2	3	149	< 0.01	< 20	2	< 2	< 10	32	< 10	5	8
691625	0.93	0.075	0.101	0.08	< 2	3	113	< 0.01	< 20	< 1	< 2	< 10	25	< 10	5	8
691626	0.85	0.088	0.093	0.17	< 2	3	163	< 0.01	< 20	3	< 2	< 10	24	< 10	6	8
691627	0.94	0.070	0.102	0.11	< 2	3	89	< 0.01	< 20	1	< 2	< 10	25	< 10	5	8



Analyte Symbol	Au	Ag	Cd	Cu	Mn	Mo	Ni	Pb	Zn	Al	As	B	Ba	Be	Bi	Ca	Co	Cr	Fe	Ga	Hg	K	La
Unit Symbol	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm
Lower Limit	5	0.2	0.5	1	5	1	1	2	2	0.01	2	10	10	0.5	2	0.01	1	1	0.01	10	1	0.01	10
Method Code	FA-AA	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
GXR-1 Meas		25.9	2.3	1020	735	13	26	590	623	0.47	310	< 10	416	0.7	1290	0.76	6	6	18.6	< 10	5	0.03	< 10
GXR-1 Cert		31.0	3.30	1110	852	18.0	41.0	730	760	3.52	427	15.0	750	1.22	1380	0.960	8.20	12.0	23.6	13.8	3.90	0.050	7.50
GXR-1 Meas		26.2	2.4	1020	736	13	24	597	634	0.47	312	10	398	0.7	1330	0.76	5	5	18.7	< 10	3	0.03	< 10
GXR-1 Cert		31.0	3.30	1110	852	18.0	41.0	730	760	3.52	427	15.0	750	1.22	1380	0.960	8.20	12.0	23.6	13.8	3.90	0.050	7.50
GXR-4 Meas		3.4	< 0.5	6630	134	317	30	42	67	2.72	91	< 10	39	1.3	12	0.86	13	52	2.77	10	< 1	1.60	49
GXR-4 Cert		4.0	0.860	6520	155	310	42.0	52.0	73.0	7.20	98.0	4.50	1640	1.90	19.0	1.01	14.6	64.0	3.09	20.0	0.110	4.01	64.5
GXR-4 Meas		3.4	< 0.5	6690	135	322	30	43	67	2.77	92	< 10	40	1.3	17	0.87	13	53	2.82	10	< 1	1.62	51
GXR-4 Cert		4.0	0.860	6520	155	310	42.0	52.0	73.0	7.20	98.0	4.50	1640	1.90	19.0	1.01	14.6	64.0	3.09	20.0	0.110	4.01	64.5
GXR-6 Meas		0.4	< 0.5	68	1020	1	17	97	123	7.04	227	< 10	869	0.8	< 2	0.15	13	75	5.06	20	< 1	1.02	11
GXR-6 Cert		1.30	1.00	66.0	1010	2.40	27.0	101	118	17.7	330	9.80	1300	1.40	0.290	0.180	13.8	96.0	5.58	35.0	0.0680	1.87	13.9
GXR-6 Meas		0.4	< 0.5	70	1060	< 1	19	99	123	7.32	236	< 10	896	0.9	< 2	0.15	13	79	5.27	20	< 1	1.06	11
GXR-6 Cert		1.30	1.00	66.0	1010	2.40	27.0	101	118	17.7	330	9.80	1300	1.40	0.290	0.180	13.8	96.0	5.58	35.0	0.0680	1.87	13.9
OREAS 134b (AQUA REGIA) Meas		> 100	595	1360				> 5000	> 10000		204						100		10.8				
OREAS 134b (AQUA REGIA) Cert		204	563	1360				133600.00	176900.00		221						110		12.25				
OREAS 133a (Aqua Regia) Meas		86.9	266	294				> 5000	> 10000		111		37				19		6.25				
OREAS 133a (Aqua Regia) Cert		97	297	324				48600.00	106000.00		140		59				23		7.92				
OREAS 218 Meas	522																						
OREAS 218 Cert	531																						
OREAS 218 Meas	505																						
OREAS 218 Cert	531																						
OREAS 218 Meas	522																						
OREAS 218 Cert	531																						
OREAS 224 Meas	2060																						
OREAS 224 Cert	2150.00																						
OREAS 224 Meas	2080																						
OREAS 224 Cert	2150.00																						
OREAS 224 Meas	2050																						
OREAS 224 Cert	2150.00																						
691507 Orig		0.4	< 0.5	65	872	< 1	107	10	73	1.41	2400	< 10	70	< 0.5	< 2	1.28	28	33	5.23	< 10	< 1	0.07	14
691507 Dup		0.4	< 0.5	64	862	< 1	106	9	72	1.39	2370	< 10	68	< 0.5	< 2	1.26	28	33	5.16	< 10	< 1	0.07	14
691510 Orig	5	< 0.2	< 0.5	28	646	< 1	184	3	82	1.49	14	< 10	62	< 0.5	< 2	2.97	36	37	3.23	< 10	< 1	0.19	14
691510 Dup	5	< 0.2	< 0.5	29	650	< 1	183	4	82	1.52	14	< 10	63	< 0.5	< 2	2.99	37	34	3.27	< 10	< 1	0.19	14
691520 Orig	6																						
691520 Dup	5																						

Analyte Symbol	Au	Ag	Cd	Cu	Mn	Mo	Ni	Pb	Zn	Al	As	B	Ba	Be	Bi	Ca	Co	Cr	Fe	Ga	Hg	K	La
Unit Symbol	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm
Lower Limit	5	0.2	0.5	1	5	1	1	2	2	0.01	2	10	10	0.5	2	0.01	1	1	0.01	10	1	0.01	10
Method Code	FA-AA	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
691523 Orig		< 0.2	< 0.5	27	568	< 1	279	3	85	0.57	28	< 10	39	< 0.5	< 2	3.04	37	12	2.96	< 10	< 1	0.13	19
691523 Dup		< 0.2	< 0.5	29	570	< 1	271	2	86	0.58	27	< 10	40	< 0.5	< 2	3.03	37	12	2.97	< 10	< 1	0.13	19
691587 Orig	< 5																						
691587 Dup	< 5																						
691592 Orig		< 0.2	< 0.5	26	564	< 1	158	2	59	0.63	30	< 10	31	< 0.5	< 2	3.45	26	19	3.24	< 10	< 1	0.08	16
691592 Dup		< 0.2	< 0.5	26	561	< 1	153	4	58	0.63	30	< 10	31	< 0.5	< 2	3.44	26	19	3.22	< 10	< 1	0.08	16
691602 Orig	8																						
691602 Dup	7																						
691606 Orig		< 0.2	< 0.5	< 1	99	< 1	< 1	< 2	18	4.79	< 2	15	11	< 0.5	< 2	0.19	< 1	1	0.58	< 10	< 1	1.38	< 10
691606 Dup		< 0.2	< 0.5	2	99	< 1	< 1	< 2	18	4.84	< 2	14	10	< 0.5	< 2	0.19	< 1	1	0.59	< 10	< 1	1.41	< 10
691607 Orig	6																						
691607 Split PREP DUP	< 5																						
691612 Orig	26																						
691612 Dup	29																						
691622 Orig	< 5																						
691622 Dup	< 5																						
Method Blank	< 5																						
Method Blank	< 5																						
Method Blank	< 5																						
Method Blank	< 5																						
Method Blank	< 5																						
Method Blank	< 5																						
Method Blank		0.3	< 0.5	< 1	< 5	< 1	< 1	< 2	< 2	< 0.01	< 2	< 10	< 10	< 0.5	< 2	< 0.01	< 1	< 1	< 0.01	< 10	< 1	< 0.01	< 10
Method Blank		< 0.2	< 0.5	< 1	< 5	< 1	< 1	< 2	< 2	< 0.01	< 2	< 10	< 10	< 0.5	< 2	< 0.01	< 1	< 1	< 0.01	< 10	< 1	< 0.01	< 10
Method Blank		< 0.2	< 0.5	< 1	< 5	< 1	< 1	< 2	< 2	< 0.01	< 2	< 10	< 10	< 0.5	< 2	< 0.01	< 1	< 1	< 0.01	< 10	< 1	< 0.01	< 10

Analyte Symbol	Mg	Na	P	S	Sb	Sc	Sr	Ti	Th	Te	Tl	U	V	W	Y	Zr
Unit Symbol	%	%	%	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	0.01	0.001	0.001	0.01	2	1	1	0.01	20	1	2	10	1	10	1	1
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
GXR-1 Meas	0.13	0.058	0.035	0.17	73	< 1	144	< 0.01	< 20	12	< 2	23	72	133	22	16
GXR-1 Cert	0.217	0.0520	0.0650	0.257	122	1.58	275	0.036	2.44	13.0	0.390	34.9	80.0	164	32.0	38.0
GXR-1 Meas	0.13	0.057	0.034	0.17	74	< 1	141	< 0.01	< 20	11	< 2	23	73	134	22	16
GXR-1 Cert	0.217	0.0520	0.0650	0.257	122	1.58	275	0.036	2.44	13.0	0.390	34.9	80.0	164	32.0	38.0
GXR-4 Meas	1.49	0.118	0.124	1.65	< 2	7	68	0.13	< 20	2	2	< 10	83	11	12	9
GXR-4 Cert	1.66	0.564	0.120	1.77	4.80	7.70	221	0.29	22.5	0.970	3.20	6.20	87.0	30.8	14.0	186
GXR-4 Meas	1.52	0.118	0.126	1.66	3	7	69	0.13	< 20	3	3	< 10	84	12	12	9
GXR-4 Cert	1.66	0.564	0.120	1.77	4.80	7.70	221	0.29	22.5	0.970	3.20	6.20	87.0	30.8	14.0	186
GXR-6 Meas	0.36	0.075	0.034	0.01	5	22	30		< 20	< 1	< 2	< 10	178	< 10	6	15
GXR-6 Cert	0.609	0.104	0.0350	0.0160	3.60	27.6	35.0		5.30	0.0180	2.20	1.54	186	1.90	14.0	110
GXR-6 Meas	0.37	0.077	0.035	0.01	4	23	31		< 20	< 1	< 2	< 10	184	< 10	6	15
GXR-6 Cert	0.609	0.104	0.0350	0.0160	3.60	27.6	35.0		5.30	0.0180	2.20	1.54	186	1.90	14.0	110
OREAS 134b (AQUA REGIA) Meas				14.0	96											
OREAS 134b (AQUA REGIA) Cert				19.31	103											
OREAS 133a (Aqua Regia) Meas				6.17	118											
OREAS 133a (Aqua Regia) Cert				10.7	147											
OREAS 218 Meas																
OREAS 218 Cert																
OREAS 218 Meas																
OREAS 218 Cert																
OREAS 218 Meas																
OREAS 218 Cert																
OREAS 224 Meas																
OREAS 224 Cert																
OREAS 224 Meas																
OREAS 224 Cert																
OREAS 224 Meas																
OREAS 224 Cert																
691507 Orig	2.03	0.282	0.126	0.73	3	3	77	0.13	< 20	2	< 2	< 10	32	< 10	13	8
691507 Dup	2.00	0.279	0.124	0.72	3	3	76	0.13	< 20	1	< 2	< 10	32	< 10	13	8
691510 Orig	0.84	0.078	0.148	0.40	< 2	2	167	< 0.01	< 20	< 1	< 2	< 10	23	< 10	7	7
691510 Dup	0.85	0.080	0.149	0.40	< 2	2	169	< 0.01	< 20	< 1	< 2	< 10	23	< 10	7	7
691520 Orig																
691520 Dup																
691523 Orig	0.87	0.055	0.150	0.82	< 2	2	80	< 0.01	< 20	3	< 2	< 10	9	< 10	5	8
691523 Dup	0.87	0.056	0.149	0.84	< 2	2	81	< 0.01	< 20	3	< 2	< 10	9	< 10	5	8
691587 Orig																

Analyte Symbol	Mg	Na	P	S	Sb	Sc	Sr	Ti	Th	Te	Tl	U	V	W	Y	Zr
Unit Symbol	%	%	%	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	0.01	0.001	0.001	0.01	2	1	1	0.01	20	1	2	10	1	10	1	1
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
691587 Dup																
691592 Orig	1.06	0.053	0.149	0.84	< 2	3	94	< 0.01	< 20	2	< 2	< 10	13	< 10	5	8
691592 Dup	1.06	0.053	0.147	0.84	< 2	3	94	< 0.01	< 20	5	< 2	< 10	13	< 10	5	8
691602 Orig																
691602 Dup																
691606 Orig	0.05	2.77	0.001	< 0.01	< 2	< 1	21	< 0.01	< 20	2	< 2	< 10	< 1	< 10	3	2
691606 Dup	0.05	2.83	0.001	< 0.01	< 2	< 1	22	< 0.01	< 20	3	< 2	< 10	< 1	< 10	3	2
691607 Orig																
691607 Split PREP DUP																
691612 Orig																
691612 Dup																
691622 Orig																
691622 Dup																
Method Blank																
Method Blank																
Method Blank																
Method Blank																
Method Blank																
Method Blank	< 0.01	0.010	< 0.001	< 0.01	< 2	< 1	< 1	< 0.01	< 20	< 1	< 2	< 10	< 1	< 10	< 1	< 1
Method Blank	< 0.01	0.009	< 0.001	< 0.01	< 2	< 1	< 1	< 0.01	< 20	< 1	< 2	< 10	< 1	< 10	< 1	< 1
Method Blank	< 0.01	0.010	< 0.001	< 0.01	< 2	< 1	< 1	< 0.01	< 20	< 1	< 2	< 10	< 1	< 10	< 1	< 1



**Date Submitted:** 22-Feb-18  
**Invoice No.:** A18-02063  
**Invoice Date:** 25-Apr-18  
**Your Reference:** 81 Lucas

**Noble Mineral Exploration**  
**2500-120 Adelaide Street West**  
**Toronto ON M5H 1T1**  
**Canada**

**ATTN: Randy Singh (inv-cc)**

## CERTIFICATE OF ANALYSIS

105 Rock samples were submitted for analysis.

The following analytical package(s) were requested:

Code 1A2-Timmins Au - Fire Assay AA

Code 1E3-Timmins Aqua Regia ICP(AQUAGEO)

REPORT      **A18-02063**

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

Notes:

If value exceeds upper limit we recommend reassay by fire assay gravimetric-Code 1A3.

Values which exceed the upper limit should be assayed for accurate numbers.

CERTIFIED BY:

A handwritten signature in black ink, appearing to be "Emmanuel Esemé".

Emmanuel Esemé , Ph.D.  
Quality Control

**ACTIVATION LABORATORIES LTD.**  
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## Results

## Activation Laboratories Ltd.

## Report: A18-02063

Analyte Symbol	Au	Ag	Cd	Cu	Mn	Mo	Ni	Pb	Zn	Al	As	B	Ba	Be	Bi	Ca	Co	Cr	Fe	Ga	Hg	K	La
Unit Symbol	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm
Lower Limit	5	0.2	0.5	1	5	1	1	2	2	0.01	2	10	10	0.5	2	0.01	1	1	0.01	10	1	0.01	10
Method Code	FA-AA	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
691628	< 5	< 0.2	< 0.5	16	933	< 1	43	< 2	90	2.59	4	< 10	39	< 0.5	< 2	3.64	16	7	5.23	< 10	< 1	0.12	16
691629	< 5	< 0.2	0.6	14	1270	< 1	58	< 2	119	3.90	3	< 10	18	< 0.5	< 2	3.96	18	7	8.11	10	< 1	0.04	16
691630	< 5	< 0.2	< 0.5	21	796	< 1	39	3	67	1.58	5	< 10	48	< 0.5	< 2	3.21	16	3	3.63	< 10	< 1	0.16	19
691631	< 5	< 0.2	< 0.5	17	695	< 1	35	< 2	56	1.21	6	< 10	41	< 0.5	< 2	2.73	14	3	3.33	< 10	< 1	0.14	18
691632	< 5	< 0.2	< 0.5	20	536	< 1	59	< 2	52	0.81	40	< 10	50	< 0.5	< 2	2.90	19	2	2.42	< 10	< 1	0.16	18
691633	5	< 0.2	< 0.5	13	1630	< 1	111	2	51	1.09	39	< 10	30	< 0.5	< 2	6.33	29	12	6.54	< 10	< 1	0.10	< 10
691634	< 5	< 0.2	0.7	14	1630	< 1	112	4	50	1.07	38	< 10	31	< 0.5	< 2	5.92	27	12	6.35	< 10	< 1	0.09	< 10
691635	10	< 0.2	< 0.5	26	699	1	126	3	33	0.63	99	< 10	50	< 0.5	< 2	3.28	37	10	4.53	< 10	< 1	0.17	16
691636	8	< 0.2	< 0.5	30	652	< 1	104	2	33	0.77	81	< 10	67	< 0.5	2	3.15	29	10	3.76	< 10	< 1	0.23	19
691637	6	< 0.2	< 0.5	21	793	< 1	113	2	93	0.69	95	< 10	54	< 0.5	< 2	3.54	25	11	3.64	< 10	< 1	0.17	20
691638	6	< 0.2	< 0.5	23	1680	< 1	96	< 2	49	1.38	54	< 10	44	< 0.5	< 2	3.58	25	23	5.93	< 10	< 1	0.13	19
691639	6	< 0.2	0.7	18	1430	< 1	61	3	28	0.83	31	< 10	48	< 0.5	< 2	3.80	18	14	4.55	< 10	< 1	0.15	15
691640	5	< 0.2	< 0.5	28	625	< 1	90	4	41	0.54	36	< 10	54	< 0.5	< 2	2.83	26	11	3.03	< 10	< 1	0.17	18
691641	< 5	< 0.2	< 0.5	34	641	< 1	88	3	54	0.55	22	< 10	51	< 0.5	< 2	3.52	29	12	3.43	< 10	< 1	0.15	16
691642	5	< 0.2	< 0.5	24	474	< 1	52	3	41	0.54	21	< 10	56	< 0.5	< 2	3.43	18	10	2.16	< 10	< 1	0.17	23
691643	< 5	< 0.2	< 0.5	20	467	< 1	55	< 2	46	0.65	18	< 10	59	< 0.5	< 2	3.33	15	14	2.12	< 10	< 1	0.18	29
691644	5	< 0.2	< 0.5	24	486	< 1	57	< 2	40	0.53	27	< 10	52	< 0.5	2	3.16	17	11	2.12	< 10	< 1	0.16	22
691645	6	< 0.2	< 0.5	26	404	< 1	68	< 2	50	0.48	49	< 10	49	< 0.5	< 2	3.03	20	9	2.06	< 10	< 1	0.14	23
691646	6	< 0.2	< 0.5	22	539	< 1	55	< 2	48	0.47	41	< 10	45	< 0.5	< 2	3.83	16	8	2.04	< 10	< 1	0.13	25
691647	< 5	< 0.2	< 0.5	22	542	< 1	67	< 2	66	0.51	52	< 10	48	< 0.5	< 2	4.07	18	9	2.24	< 10	< 1	0.15	23
691648	5	< 0.2	< 0.5	22	582	< 1	77	2	53	0.54	47	< 10	50	< 0.5	< 2	4.10	19	8	2.38	< 10	< 1	0.16	19
691649	5	< 0.2	< 0.5	21	458	< 1	85	2	44	0.56	28	< 10	58	< 0.5	< 2	3.45	20	8	2.13	< 10	< 1	0.17	26
691650	1640	0.4	< 0.5	156	702	< 1	68	5	56	3.84	11	15	27	< 0.5	< 2	3.32	29	111	5.22	< 10	< 1	0.08	< 10
691651	6	< 0.2	< 0.5	30	478	< 1	111	2	57	0.56	36	< 10	60	< 0.5	< 2	3.48	30	9	2.56	< 10	< 1	0.17	26
691652	6	< 0.2	< 0.5	24	497	< 1	90	3	54	0.57	27	< 10	57	< 0.5	2	3.41	23	7	2.16	< 10	< 1	0.17	28
691653	6	< 0.2	< 0.5	25	371	< 1	86	3	55	0.58	32	< 10	60	< 0.5	< 2	2.82	24	9	2.09	< 10	< 1	0.18	27
691654	< 5	< 0.2	< 0.5	27	488	< 1	99	3	60	0.65	37	< 10	64	< 0.5	< 2	3.46	26	10	2.61	< 10	< 1	0.20	22
691655	< 5	< 0.2	< 0.5	17	895	< 1	76	< 2	46	1.00	27	< 10	38	< 0.5	< 2	4.07	19	3	5.00	< 10	< 1	0.13	< 10
691656	6	< 0.2	< 0.5	25	1010	< 1	83	3	49	1.13	17	< 10	33	< 0.5	< 2	3.93	21	2	6.65	< 10	< 1	0.12	< 10
691657	5	< 0.2	< 0.5	25	1020	< 1	82	3	49	1.11	16	< 10	32	< 0.5	< 2	3.97	21	2	6.63	< 10	< 1	0.11	< 10
691658	7	< 0.2	< 0.5	26	970	< 1	84	5	45	1.05	32	< 10	28	< 0.5	< 2	3.63	22	2	7.82	< 10	< 1	0.11	< 10
691659	5	< 0.2	< 0.5	18	676	< 1	33	3	31	0.80	12	< 10	46	< 0.5	< 2	3.36	16	2	3.77	< 10	< 1	0.16	11
691660	5	< 0.2	0.6	15	1240	2	78	< 2	84	0.87	104	< 10	36	< 0.5	< 2	4.69	20	2	6.22	< 10	< 1	0.13	< 10
691661	6	< 0.2	< 0.5	26	664	< 1	58	4	47	0.91	41	< 10	41	< 0.5	< 2	3.25	24	2	5.21	< 10	< 1	0.15	< 10
691662	6	< 0.2	< 0.5	19	468	< 1	26	3	30	0.74	11	< 10	46	< 0.5	< 2	3.07	14	1	3.12	< 10	< 1	0.16	13
691663	7	< 0.2	< 0.5	13	475	< 1	25	2	25	0.58	8	< 10	38	< 0.5	< 2	3.03	10	15	3.03	< 10	< 1	0.12	11
691664	6	< 0.2	< 0.5	18	507	< 1	27	4	31	0.57	17	< 10	35	< 0.5	< 2	2.91	14	12	3.77	< 10	< 1	0.12	< 10
691665	8	< 0.2	< 0.5	18	457	< 1	30	2	25	0.58	15	< 10	41	< 0.5	< 2	2.68	14	8	3.26	< 10	< 1	0.14	< 10
691666	15	< 0.2	< 0.5	23	442	< 1	33	4	31	0.62	42	< 10	36	< 0.5	< 2	2.58	18	8	3.76	< 10	< 1	0.13	< 10
691667	13	< 0.2	< 0.5	21	453	< 1	34	4	29	0.63	43	< 10	37	< 0.5	< 2	2.64	18	10	3.88	< 10	< 1	0.13	< 10
691668	13	< 0.2	< 0.5	13	352	< 1	79	6	33	0.77	91	< 10	27	< 0.5	< 2	1.85	21	7	7.31	< 10	< 1	0.13	< 10
691669	10	< 0.2	< 0.5	14	344	< 1	75	6	32	0.76	90	< 10	27	< 0.5	< 2	1.90	20	6	7.12	< 10	< 1	0.13	< 10

## Results

## Activation Laboratories Ltd.

## Report: A18-02063

Analyte Symbol	Au	Ag	Cd	Cu	Mn	Mo	Ni	Pb	Zn	Al	As	B	Ba	Be	Bi	Ca	Co	Cr	Fe	Ga	Hg	K	La
Unit Symbol	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm
Lower Limit	5	0.2	0.5	1	5	1	1	2	2	0.01	2	10	10	0.5	2	0.01	1	1	0.01	10	1	0.01	10
Method Code	FA-AA	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
691670	8	< 0.2	< 0.5	19	287	< 1	89	7	34	0.75	109	< 10	13	< 0.5	< 2	1.28	21	8	9.85	< 10	< 1	0.13	< 10
691671	< 5	< 0.2	< 0.5	< 1	96	< 1	< 1	< 2	16	4.54	< 2	11	11	< 0.5	< 2	0.18	< 1	< 1	0.60	< 10	< 1	1.24	< 10
691672	9	0.2	< 0.5	16	429	< 1	83	5	34	0.56	107	< 10	19	< 0.5	< 2	1.74	21	10	10.0	< 10	< 1	0.10	< 10
691673	12	0.4	< 0.5	16	423	< 1	82	8	34	0.52	102	< 10	17	< 0.5	< 2	1.61	21	8	9.73	< 10	< 1	0.09	< 10
691674	8	< 0.2	< 0.5	15	581	< 1	55	4	29	0.49	64	< 10	25	< 0.5	< 2	2.82	16	12	7.15	< 10	< 1	0.09	< 10
691675	5	< 0.2	< 0.5	14	560	< 1	52	3	28	0.46	62	< 10	23	< 0.5	< 2	2.97	15	11	6.87	< 10	< 1	0.09	< 10
691676	6	< 0.2	< 0.5	12	648	1	55	4	31	0.52	65	< 10	28	< 0.5	< 2	2.91	16	20	7.14	< 10	< 1	0.11	< 10
691677	15	0.2	< 0.5	13	639	< 1	58	5	26	0.40	78	< 10	22	< 0.5	< 2	2.26	16	11	7.63	< 10	< 1	0.08	< 10
691678	28	0.2	< 0.5	18	581	< 1	72	8	31	0.38	120	< 10	21	< 0.5	< 2	2.18	20	13	8.56	< 10	< 1	0.08	< 10
691679	25	< 0.2	< 0.5	16	558	< 1	68	8	30	0.36	114	< 10	21	< 0.5	< 2	2.29	19	14	8.19	< 10	< 1	0.08	< 10
691680	28	< 0.2	< 0.5	11	1020	< 1	63	7	31	0.49	189	< 10	24	< 0.5	< 2	2.90	20	7	7.64	< 10	< 1	0.09	< 10
691681	225	1.3	0.7	42	1770	3	84	48	99	0.22	466	< 10	< 10	< 0.5	4	0.85	34	25	21.2	< 10	< 1	0.04	< 10
691682	228	1.2	< 0.5	40	1650	3	77	45	93	0.20	448	< 10	< 10	< 0.5	4	0.86	32	27	20.3	< 10	< 1	0.04	< 10
691683	296	0.8	< 0.5	28	874	7	74	37	103	0.32	302	< 10	19	< 0.5	4	1.92	30	12	14.9	< 10	< 1	0.08	< 10
691684	87	0.3	< 0.5	21	903	1	51	14	55	1.33	104	< 10	22	< 0.5	< 2	1.94	18	59	6.70	< 10	< 1	0.09	< 10
691685	5	< 0.2	< 0.5	6	1390	< 1	81	< 2	36	1.21	112	< 10	35	< 0.5	< 2	3.59	26	65	4.70	< 10	< 1	0.11	< 10
691686	1030	0.3	< 0.5	159	698	< 1	66	4	58	3.72	6	43	30	< 0.5	< 2	3.22	31	120	5.85	10	< 1	0.05	< 10
691687	7	< 0.2	< 0.5	5	1330	< 1	78	< 2	33	1.16	107	< 10	33	< 0.5	< 2	3.43	25	72	4.46	< 10	< 1	0.11	< 10
691688	5	< 0.2	< 0.5	5	1650	< 1	36	< 2	40	1.30	22	< 10	24	< 0.5	< 2	3.52	12	50	4.89	< 10	< 1	0.08	< 10
691689	6	< 0.2	< 0.5	7	2050	< 1	46	< 2	49	1.66	28	< 10	28	< 0.5	< 2	4.37	16	64	6.14	< 10	< 1	0.09	11
691690	6	< 0.2	< 0.5	3	2060	< 1	60	< 2	58	1.79	48	< 10	30	< 0.5	< 2	4.40	23	57	6.69	< 10	< 1	0.10	15
691691	6	< 0.2	< 0.5	4	1800	< 1	51	< 2	51	1.57	40	< 10	26	< 0.5	< 2	3.85	20	47	5.88	< 10	< 1	0.09	13
691692	6	< 0.2	< 0.5	28	1360	< 1	54	< 2	49	1.49	41	< 10	28	< 0.5	< 2	3.24	19	55	5.14	< 10	< 1	0.09	12
691693	6	< 0.2	< 0.5	27	1410	< 1	56	< 2	51	1.57	41	< 10	29	< 0.5	< 2	3.36	19	45	5.38	< 10	< 1	0.10	13
691694	6	< 0.2	< 0.5	38	1330	< 1	55	< 2	64	1.78	20	< 10	28	< 0.5	< 2	3.16	21	53	5.75	< 10	< 1	0.08	15
691695	6	< 0.2	< 0.5	39	1300	< 1	55	< 2	63	1.75	19	< 10	25	< 0.5	< 2	3.09	21	51	5.63	< 10	< 1	0.08	14
691696	5	< 0.2	< 0.5	28	2310	< 1	63	< 2	68	2.11	5	< 10	22	< 0.5	< 2	3.79	20	57	7.25	< 10	< 1	0.06	14
691697	< 5	< 0.2	< 0.5	18	1440	< 1	36	< 2	42	1.28	4	< 10	18	< 0.5	< 2	2.35	12	35	4.38	< 10	< 1	0.04	< 10
691698	< 5	< 0.2	< 0.5	< 1	90	< 1	< 1	< 2	15	4.19	< 2	< 10	10	< 0.5	< 2	0.18	< 1	< 1	0.54	< 10	< 1	1.24	< 10
691699	6	< 0.2	0.5	33	1840	< 1	62	< 2	62	1.79	< 2	< 10	33	< 0.5	< 2	3.35	23	49	6.09	< 10	< 1	0.09	19
691700	5	< 0.2	< 0.5	34	1820	< 1	62	< 2	64	1.78	< 2	< 10	32	< 0.5	< 2	3.32	21	48	6.07	< 10	< 1	0.09	18
691701	5	< 0.2	< 0.5	36	1310	< 1	47	< 2	63	1.47	< 2	< 10	33	< 0.5	< 2	2.91	20	48	4.76	< 10	< 1	0.09	19
691702	5	< 0.2	< 0.5	37	1340	< 1	49	< 2	71	1.52	< 2	< 10	32	< 0.5	< 2	2.99	20	49	4.92	< 10	< 1	0.09	20
691703	6	< 0.2	< 0.5	21	708	< 1	33	< 2	28	0.83	7	< 10	21	< 0.5	< 2	1.72	14	27	2.67	< 10	< 1	0.05	10
691704	5	< 0.2	< 0.5	37	1220	< 1	61	< 2	49	1.47	14	< 10	30	< 0.5	< 2	2.98	24	47	4.77	< 10	< 1	0.08	16
691705	5	< 0.2	< 0.5	29	1620	< 1	128	< 2	48	1.77	33	< 10	26	< 0.5	< 2	3.03	39	47	5.76	< 10	< 1	0.06	14
691706	1030	0.2	< 0.5	152	670	< 1	62	4	57	3.55	6	40	27	< 0.5	< 2	3.06	29	115	5.58	10	< 1	0.05	< 10
691707	6	< 0.2	< 0.5	29	1670	< 1	125	< 2	49	1.81	31	< 10	28	< 0.5	< 2	3.12	38	49	5.94	< 10	< 1	0.07	15
691708	6	< 0.2	< 0.5	37	1480	< 1	114	< 2	46	1.45	20	< 10	28	< 0.5	< 2	3.15	29	48	5.01	< 10	< 1	0.07	16
691709	5	< 0.2	< 0.5	36	1430	< 1	104	< 2	44	1.39	18	< 10	27	< 0.5	< 2	3.04	28	47	4.80	< 10	< 1	0.07	16
691710	< 5	< 0.2	< 0.5	38	2310	< 1	77	< 2	63	2.40	3	< 10	18	< 0.5	< 2	4.01	22	70	7.86	< 10	< 1	0.04	10
691711	6	< 0.2	< 0.5	37	2310	< 1	75	< 2	64	2.40	2	< 10	18	< 0.5	< 2	4.03	22	68	7.91	< 10	< 1	0.04	10

Analyte Symbol	Au	Ag	Cd	Cu	Mn	Mo	Ni	Pb	Zn	Al	As	B	Ba	Be	Bi	Ca	Co	Cr	Fe	Ga	Hg	K	La
Unit Symbol	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm
Lower Limit	5	0.2	0.5	1	5	1	1	2	2	0.01	2	10	10	0.5	2	0.01	1	1	0.01	10	1	0.01	10
Method Code	FA-AA	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
691712	< 5	< 0.2	< 0.5	36	1460	< 1	68	< 2	63	1.80	10	< 10	25	< 0.5	< 2	3.26	25	54	5.92	< 10	< 1	0.08	11
691713	19	< 0.2	< 0.5	28	1050	< 1	59	< 2	72	1.63	11	< 10	21	< 0.5	< 2	2.31	20	58	4.66	< 10	< 1	0.06	< 10
691714	11	< 0.2	< 0.5	28	1050	< 1	58	< 2	67	1.60	10	< 10	21	< 0.5	< 2	2.30	20	52	4.61	< 10	< 1	0.06	< 10
691715	7	< 0.2	< 0.5	52	1520	< 1	60	< 2	69	2.01	8	< 10	35	< 0.5	< 2	3.36	19	65	6.10	< 10	< 1	0.10	< 10
691716	6	< 0.2	< 0.5	< 1	102	< 1	< 1	< 2	17	4.98	< 2	12	11	0.5	< 2	0.20	< 1	1	0.60	< 10	< 1	1.38	< 10
691717	7	< 0.2	< 0.5	41	1280	< 1	95	< 2	56	1.71	27	< 10	24	< 0.5	< 2	4.11	27	60	5.03	< 10	< 1	0.07	< 10
691718	7	< 0.2	< 0.5	42	1320	< 1	99	< 2	58	1.77	32	< 10	24	< 0.5	< 2	4.25	28	63	5.19	< 10	< 1	0.07	< 10
691719	6	< 0.2	< 0.5	85	1200	< 1	115	< 2	43	1.50	30	< 10	22	< 0.5	< 2	4.17	27	55	4.43	< 10	< 1	0.05	< 10
691720	5	< 0.2	< 0.5	84	1160	< 1	111	< 2	42	1.46	29	< 10	21	< 0.5	< 2	4.05	26	52	4.27	< 10	< 1	0.05	< 10
691721	6	< 0.2	< 0.5	42	1010	1	122	< 2	38	1.22	50	< 10	28	< 0.5	2	3.16	34	42	3.51	< 10	< 1	0.08	< 10
691722	17	< 0.2	< 0.5	41	1020	1	120	2	38	1.26	47	< 10	31	< 0.5	< 2	3.18	33	46	3.51	< 10	< 1	0.08	< 10
691723	7	< 0.2	< 0.5	27	1080	< 1	86	< 2	43	1.14	27	< 10	36	< 0.5	2	4.20	18	45	3.87	< 10	< 1	0.09	21
691724	16	< 0.2	< 0.5	27	1080	< 1	86	< 2	41	1.10	25	< 10	31	< 0.5	< 2	4.17	17	45	3.86	< 10	< 1	0.08	20
691725	7	< 0.2	< 0.5	39	815	1	87	3	51	1.40	25	< 10	34	< 0.5	< 2	2.78	21	86	3.99	< 10	< 1	0.08	19
691726	8	< 0.2	< 0.5	31	1320	3	214	< 2	102	2.25	47	< 10	33	< 0.5	< 2	3.59	33	74	7.03	< 10	< 1	0.09	20
691727	7	< 0.2	< 0.5	28	1230	1	76	< 2	45	1.32	14	< 10	38	< 0.5	< 2	3.39	15	46	3.93	< 10	< 1	0.11	27
691728	12	< 0.2	< 0.5	28	1300	< 1	73	< 2	45	1.32	15	< 10	34	< 0.5	< 2	3.87	15	46	3.92	< 10	< 1	0.10	26
691729	6	< 0.2	< 0.5	38	1290	1	74	< 2	54	1.42	8	< 10	32	< 0.5	< 2	3.58	15	54	4.14	< 10	< 1	0.09	23
691730	7	< 0.2	< 0.5	35	1280	1	72	< 2	50	1.42	8	< 10	33	< 0.5	< 2	3.56	16	52	4.10	< 10	< 1	0.09	23
691731	7	0.2	< 0.5	29	737	< 1	144	2	104	0.96	7	< 10	38	< 0.5	< 2	3.68	25	25	3.07	< 10	< 1	0.10	19
691732	< 5	< 0.2	< 0.5	28	722	< 1	154	3	101	0.95	8	< 10	40	< 0.5	< 2	3.60	26	25	3.02	< 10	< 1	0.10	18



Analyte Symbol	Mg	Na	P	S	Sb	Sc	Sr	Ti	Th	Te	Tl	U	V	W	Y	Zr
Unit Symbol	%	%	%	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	0.01	0.001	0.001	0.01	2	1	1	0.01	20	1	2	10	1	10	1	1
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
691628	1.08	0.043	0.084	0.12	< 2	6	139	< 0.01	< 20	< 1	< 2	< 10	50	< 10	5	8
691629	1.56	0.032	0.079	0.15	4	11	150	< 0.01	< 20	< 1	< 2	< 10	81	< 10	5	11
691630	0.97	0.062	0.099	0.16	< 2	3	116	< 0.01	< 20	< 1	< 2	< 10	21	< 10	5	7
691631	0.93	0.059	0.095	0.12	< 2	2	85	< 0.01	< 20	< 1	< 2	< 10	17	< 10	5	7
691632	0.76	0.067	0.098	0.26	< 2	1	90	< 0.01	< 20	1	< 2	< 10	9	< 10	4	7
691633	1.13	0.058	0.080	2.70	3	3	239	< 0.01	< 20	< 1	< 2	< 10	23	< 10	5	13
691634	1.09	0.057	0.082	2.16	3	3	239	< 0.01	< 20	< 1	< 2	< 10	23	< 10	5	13
691635	0.73	0.067	0.145	2.61	3	1	115	< 0.01	< 20	3	< 2	< 10	9	< 10	5	10
691636	0.68	0.084	0.142	1.90	< 2	1	114	< 0.01	< 20	< 1	< 2	< 10	11	< 10	5	8
691637	0.79	0.067	0.144	1.19	< 2	2	122	< 0.01	< 20	< 1	< 2	< 10	13	< 10	5	8
691638	0.92	0.063	0.136	1.34	3	2	117	< 0.01	< 20	< 1	< 2	< 10	23	< 10	5	9
691639	0.97	0.064	0.132	1.37	< 2	2	120	< 0.01	< 20	1	< 2	< 10	14	< 10	5	9
691640	0.63	0.059	0.146	1.27	< 2	1	94	< 0.01	< 20	3	< 2	< 10	9	< 10	5	8
691641	0.87	0.062	0.145	1.21	< 2	2	116	< 0.01	< 20	2	< 2	< 10	10	< 10	5	8
691642	0.79	0.079	0.154	0.29	< 2	1	129	< 0.01	< 20	2	< 2	< 10	10	< 10	5	6
691643	0.81	0.090	0.159	0.09	< 2	2	118	< 0.01	< 20	3	< 2	< 10	12	< 10	5	4
691644	0.80	0.078	0.147	0.32	< 2	2	109	< 0.01	< 20	< 1	< 2	< 10	10	< 10	5	6
691645	0.75	0.083	0.152	0.33	< 2	2	126	< 0.01	< 20	< 1	< 2	< 10	10	< 10	5	5
691646	1.16	0.073	0.134	0.16	< 2	2	128	< 0.01	< 20	< 1	< 2	< 10	9	< 10	5	6
691647	1.23	0.075	0.137	0.22	< 2	2	147	< 0.01	< 20	2	< 2	< 10	9	< 10	5	5
691648	1.15	0.077	0.141	0.25	< 2	2	151	< 0.01	< 20	2	< 2	< 10	10	< 10	5	5
691649	0.81	0.080	0.145	0.37	< 2	2	118	< 0.01	< 20	3	< 2	< 10	9	< 10	5	6
691650	2.09	0.055	0.033	0.24	< 2	7	38	0.37	< 20	3	< 2	< 10	157	< 10	11	17
691651	0.84	0.080	0.154	0.65	< 2	2	108	< 0.01	< 20	< 1	< 2	< 10	10	< 10	5	6
691652	0.87	0.082	0.154	0.38	< 2	2	107	< 0.01	< 20	5	< 2	< 10	9	< 10	5	5
691653	0.68	0.081	0.158	0.58	< 2	2	110	< 0.01	< 20	2	< 2	< 10	9	< 10	5	6
691654	0.86	0.093	0.147	0.57	2	2	135	< 0.01	< 20	2	< 2	< 10	12	< 10	5	6
691655	1.08	0.074	0.098	0.92	< 2	4	143	< 0.01	< 20	< 1	< 2	< 10	14	< 10	4	9
691656	1.00	0.081	0.087	2.58	3	4	124	< 0.01	< 20	2	< 2	< 10	16	< 10	4	16
691657	1.01	0.075	0.086	2.63	4	4	125	< 0.01	< 20	4	< 2	< 10	15	< 10	4	17
691658	1.01	0.071	0.076	3.48	4	4	117	< 0.01	< 20	3	< 2	< 10	16	< 10	4	19
691659	0.78	0.102	0.101	1.03	3	2	118	< 0.01	< 20	< 1	< 2	< 10	10	< 10	4	9
691660	1.22	0.078	0.082	1.44	2	4	142	< 0.01	< 20	2	< 2	< 10	13	< 10	4	13
691661	0.88	0.097	0.092	1.98	2	3	122	< 0.01	< 20	< 1	< 2	< 10	14	< 10	4	13
691662	0.85	0.090	0.100	0.81	< 2	2	125	< 0.01	< 20	1	< 2	< 10	10	< 10	4	8
691663	0.78	0.068	0.098	0.80	2	2	118	< 0.01	< 20	< 1	< 2	< 10	8	< 10	3	8
691664	0.81	0.059	0.093	1.84	3	2	103	< 0.01	< 20	< 1	< 2	< 10	8	< 10	3	12
691665	0.69	0.060	0.097	1.41	< 2	2	105	< 0.01	< 20	2	< 2	< 10	7	< 10	4	10
691666	0.69	0.057	0.107	2.02	3	1	103	< 0.01	< 20	1	< 2	< 10	7	< 10	4	12
691667	0.71	0.058	0.109	2.03	3	2	105	< 0.01	< 20	2	< 2	< 10	7	< 10	4	13
691668	0.59	0.057	0.095	6.51	5	1	81	< 0.01	< 20	< 1	< 2	< 10	7	< 10	3	22
691669	0.58	0.057	0.094	6.43	6	1	80	< 0.01	< 20	2	< 2	< 10	7	< 10	3	21

Analyte Symbol	Mg	Na	P	S	Sb	Sc	Sr	Ti	Th	Te	Tl	U	V	W	Y	Zr
Unit Symbol	%	%	%	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	0.01	0.001	0.001	0.01	2	1	1	0.01	20	1	2	10	1	10	1	1
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
691670	0.49	0.058	0.081	9.75	9	1	64	< 0.01	< 20	< 1	< 2	< 10	7	< 10	3	21
691671	0.04	2.59	0.001	0.01	< 2	< 1	19	< 0.01	< 20	< 1	< 2	< 10	< 1	< 10	4	2
691672	0.65	0.048	0.078	9.19	9	1	80	< 0.01	< 20	< 1	< 2	< 10	5	< 10	3	19
691673	0.63	0.045	0.076	9.12	9	1	77	< 0.01	< 20	1	< 2	< 10	5	< 10	3	18
691674	0.87	0.046	0.072	5.38	5	2	109	< 0.01	< 20	< 1	< 2	< 10	6	< 10	3	14
691675	0.84	0.042	0.070	5.36	6	2	106	< 0.01	< 20	< 1	< 2	< 10	6	< 10	3	14
691676	0.89	0.054	0.073	5.23	5	2	115	< 0.01	< 20	3	< 2	< 10	7	< 10	3	15
691677	0.74	0.040	0.079	5.96	8	1	96	< 0.01	< 20	< 1	< 2	< 10	4	< 10	3	14
691678	0.68	0.038	0.079	7.46	9	1	93	< 0.01	< 20	< 1	< 2	< 10	3	< 10	3	14
691679	0.65	0.037	0.076	7.34	9	1	91	< 0.01	< 20	< 1	< 2	< 10	3	< 10	3	14
691680	0.72	0.043	0.086	5.93	6	2	105	< 0.01	< 20	2	< 2	< 10	4	< 10	4	17
691681	0.49	0.022	0.022	> 20.0	28	1	32	< 0.01	< 20	< 1	< 2	< 10	4	< 10	1	18
691682	0.46	0.020	0.021	> 20.0	28	1	32	< 0.01	< 20	< 1	< 2	< 10	4	< 10	1	16
691683	0.46	0.032	0.058	15.6	12	2	79	< 0.01	< 20	< 1	< 2	< 10	4	< 10	3	23
691684	0.73	0.032	0.058	3.38	5	4	55	< 0.01	< 20	< 1	< 2	< 10	21	< 10	4	16
691685	1.01	0.049	0.134	0.22	< 2	6	100	< 0.01	< 20	< 1	< 2	< 10	30	< 10	6	4
691686	2.11	0.083	0.039	0.20	< 2	8	28	0.44	< 20	4	< 2	< 10	188	< 10	14	21
691687	0.96	0.047	0.128	0.20	< 2	5	96	< 0.01	< 20	< 1	< 2	< 10	29	< 10	6	4
691688	1.04	0.038	0.105	0.02	2	5	80	< 0.01	< 20	3	< 2	< 10	35	< 10	5	4
691689	1.33	0.046	0.130	0.02	2	7	100	< 0.01	< 20	5	< 2	< 10	44	< 10	6	4
691690	1.23	0.052	0.139	0.01	< 2	7	124	< 0.01	< 20	< 1	< 2	< 10	37	< 10	6	4
691691	1.05	0.046	0.120	0.01	< 2	6	108	< 0.01	< 20	< 1	< 2	< 10	32	< 10	6	4
691692	0.92	0.042	0.119	0.02	2	5	90	< 0.01	< 20	< 1	< 2	< 10	32	< 10	5	4
691693	0.96	0.044	0.125	0.02	2	6	93	< 0.01	< 20	1	< 2	< 10	34	< 10	6	4
691694	0.97	0.044	0.122	0.02	< 2	6	83	< 0.01	< 20	< 1	< 2	< 10	40	< 10	5	4
691695	0.95	0.041	0.121	0.03	< 2	5	81	< 0.01	< 20	5	< 2	< 10	40	< 10	5	4
691696	1.19	0.034	0.105	0.04	3	9	105	< 0.01	< 20	< 1	< 2	< 10	56	< 10	5	5
691697	0.71	0.026	0.064	0.03	< 2	5	64	< 0.01	< 20	< 1	< 2	< 10	34	< 10	3	11
691698	0.04	2.61	< 0.001	< 0.01	< 2	< 1	17	< 0.01	< 20	< 1	< 2	< 10	< 1	< 10	3	1
691699	0.92	0.047	0.121	0.05	3	6	93	< 0.01	< 20	< 1	< 2	< 10	42	< 10	5	4
691700	0.90	0.044	0.118	0.05	2	6	91	< 0.01	< 20	< 1	< 2	< 10	41	< 10	5	4
691701	0.65	0.051	0.129	0.05	2	5	72	< 0.01	< 20	2	< 2	< 10	37	< 10	5	4
691702	0.67	0.050	0.132	0.05	< 2	5	73	< 0.01	< 20	< 1	< 2	< 10	38	< 10	5	4
691703	0.38	0.035	0.076	0.05	< 2	3	48	< 0.01	< 20	2	< 2	< 10	21	< 10	3	10
691704	0.68	0.054	0.131	0.08	< 2	5	84	< 0.01	< 20	< 1	< 2	< 10	36	< 10	5	4
691705	0.80	0.047	0.124	0.10	2	6	76	< 0.01	< 20	< 1	< 2	< 10	40	< 10	5	4
691706	2.00	0.077	0.038	0.18	3	8	27	0.41	< 20	2	< 2	< 10	179	< 10	14	20
691707	0.82	0.051	0.127	0.09	< 2	6	78	< 0.01	< 20	< 1	< 2	< 10	42	< 10	5	4
691708	0.77	0.053	0.132	0.06	2	5	80	< 0.01	< 20	< 1	< 2	< 10	37	< 10	5	4
691709	0.74	0.051	0.126	0.05	< 2	5	76	< 0.01	< 20	< 1	< 2	< 10	35	< 10	5	3
691710	1.31	0.035	0.105	0.19	4	8	93	< 0.01	< 20	< 1	< 2	< 10	64	< 10	5	6
691711	1.32	0.035	0.106	0.18	2	8	93	< 0.01	< 20	< 1	< 2	< 10	64	< 10	5	6

Analyte Symbol	Mg	Na	P	S	Sb	Sc	Sr	Ti	Th	Te	Tl	U	V	W	Y	Zr
Unit Symbol	%	%	%	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	0.01	0.001	0.001	0.01	2	1	1	0.01	20	1	2	10	1	10	1	1
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
691712	1.04	0.049	0.110	0.06	2	6	86	< 0.01	< 20	2	< 2	< 10	46	< 10	5	6
691713	0.71	0.039	0.099	0.04	< 2	5	63	< 0.01	< 20	< 1	< 2	< 10	42	< 10	4	9
691714	0.70	0.038	0.098	0.04	2	5	63	< 0.01	< 20	< 1	< 2	< 10	41	< 10	4	9
691715	0.94	0.062	0.124	0.07	< 2	7	89	< 0.01	< 20	< 1	< 2	< 10	55	< 10	6	5
691716	0.05	2.89	0.001	< 0.01	< 2	< 1	21	< 0.01	< 20	< 1	< 2	< 10	< 1	< 10	3	2
691717	0.69	0.048	0.122	0.20	< 2	5	101	< 0.01	< 20	< 1	< 2	< 10	44	< 10	7	5
691718	0.71	0.048	0.125	0.20	2	6	104	< 0.01	< 20	< 1	< 2	< 10	46	< 10	7	6
691719	0.70	0.041	0.117	0.09	< 2	6	77	< 0.01	< 20	< 1	< 2	< 10	38	< 10	7	6
691720	0.68	0.040	0.113	0.09	< 2	6	73	< 0.01	< 20	3	< 2	< 10	37	< 10	7	6
691721	0.55	0.044	0.122	0.16	< 2	4	71	< 0.01	< 20	4	< 2	< 10	22	< 10	6	5
691722	0.55	0.049	0.123	0.14	< 2	4	72	< 0.01	< 20	2	< 2	< 10	22	< 10	6	4
691723	0.88	0.055	0.141	0.02	< 2	4	111	< 0.01	< 20	2	< 2	< 10	19	< 10	7	3
691724	0.88	0.048	0.138	0.02	< 2	4	107	< 0.01	< 20	< 1	< 2	< 10	18	< 10	7	3
691725	0.55	0.054	0.133	0.02	< 2	4	90	< 0.01	< 20	5	< 2	< 10	30	< 10	5	4
691726	1.10	0.055	0.109	0.03	3	9	114	< 0.01	< 20	4	< 2	< 10	45	< 10	6	5
691727	0.70	0.055	0.152	0.01	< 2	3	111	< 0.01	< 20	2	< 2	< 10	20	< 10	7	5
691728	0.70	0.048	0.155	0.02	< 2	3	123	< 0.01	< 20	< 1	< 2	< 10	20	< 10	7	6
691729	0.69	0.041	0.153	0.02	< 2	4	101	< 0.01	< 20	1	< 2	< 10	25	< 10	6	7
691730	0.69	0.042	0.152	0.02	< 2	4	99	< 0.01	< 20	3	< 2	< 10	24	< 10	6	7
691731	0.72	0.050	0.132	0.18	< 2	3	99	< 0.01	< 20	2	< 2	< 10	15	< 10	6	4
691732	0.71	0.052	0.128	0.18	< 2	3	95	< 0.01	< 20	2	< 2	< 10	15	< 10	6	4

Analyte Symbol	Au	Ag	Cd	Cu	Mn	Mo	Ni	Pb	Zn	Al	As	B	Ba	Be	Bi	Ca	Co	Cr	Fe	Ga	Hg	K	La
Unit Symbol	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm
Lower Limit	5	0.2	0.5	1	5	1	1	2	2	0.01	2	10	10	0.5	2	0.01	1	1	0.01	10	1	0.01	10
Method Code	FA-AA	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
GXR-4 Meas		3.1	< 0.5	6320	131	306	31	43	63	2.62	92	< 10	34	1.3	10	0.84	12	50	2.72	< 10	< 1	1.55	47
GXR-4 Cert		4.0	0.860	6520	155	310	42.0	52.0	73.0	7.20	98.0	4.50	1640	1.90	19.0	1.01	14.6	64.0	3.09	20.0	0.110	4.01	64.5
GXR-6 Meas		0.3	< 0.5	71	1030	2	18	98	124	7.18	238	< 10	911	0.9	< 2	0.15	13	76	5.20	20	< 1	1.06	11
GXR-6 Cert		1.30	1.00	66.0	1010	2.40	27.0	101	118	17.7	330	9.80	1300	1.40	0.290	0.180	13.8	96.0	5.58	35.0	0.0680	1.87	13.9
OREAS 134b (AQUA REGIA) Meas		> 100	633	1480				> 5000	> 10000		229						109		11.9				
OREAS 134b (AQUA REGIA) Cert		204	563	1360				133000	177000		221						106		12.25				
OREAS 134b (AQUA REGIA) Meas		> 100	515	1220				> 5000	> 10000		192						87		10.1				
OREAS 134b (AQUA REGIA) Cert		204	563	1360				133000	177000		221						110		12.25				
OREAS 133a (Aqua Regia) Meas		89.5	304	342				> 5000	> 10000		128		13				22		7.13				
OREAS 133a (Aqua Regia) Cert		97	297	324				48600.00	106000.00		140		59				23		7.92				
OREAS 133a (Aqua Regia) Meas		89.3	288	322				> 5000	> 10000		126		45				20		7.13				
OREAS 133a (Aqua Regia) Cert		97	297	324				48600.00	106000.00		140		59				23		7.92				
OREAS 218 Meas	531																						
OREAS 218 Cert	531																						
OREAS 218 Meas	525																						
OREAS 218 Cert	531																						
OREAS 218 Meas	532																						
OREAS 218 Cert	531																						
OREAS 218 Meas	524																						
OREAS 218 Cert	531																						
OREAS 224 Meas	2170																						
OREAS 224 Cert	2150.00																						
OREAS 224 Meas	2140																						
OREAS 224 Cert	2150.00																						
OREAS 224 Meas	2060																						
OREAS 224 Cert	2150.00																						
OREAS 224 Meas	2050																						
OREAS 224 Cert	2150.00																						

Analyte Symbol	Au	Ag	Cd	Cu	Mn	Mo	Ni	Pb	Zn	Al	As	B	Ba	Be	Bi	Ca	Co	Cr	Fe	Ga	Hg	K	La
Unit Symbol	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm
Lower Limit	5	0.2	0.5	1	5	1	1	2	2	0.01	2	10	10	0.5	2	0.01	1	1	0.01	10	1	0.01	10
Method Code	FA-AA	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
691630 Orig		< 0.2	< 0.5	21	798	< 1	39	3	68	1.59	5	< 10	48	< 0.5	< 2	3.22	16	3	3.65	< 10	< 1	0.16	19
691630 Dup		< 0.2	< 0.5	21	795	< 1	39	3	66	1.58	4	< 10	47	< 0.5	< 2	3.19	16	3	3.62	< 10	< 1	0.16	19
691637 Orig	6																						
691637 Dup	6																						
691638 Orig		< 0.2	< 0.5	23	1700	< 1	97	< 2	50	1.40	54	< 10	45	< 0.5	< 2	3.63	25	23	6.00	< 10	< 1	0.13	20
691638 Dup		< 0.2	< 0.5	23	1650	< 1	95	< 2	48	1.35	54	< 10	43	< 0.5	< 2	3.53	24	22	5.87	< 10	< 1	0.13	19
691647 Orig	5																						
691647 Dup	< 5																						
691657 Orig	5																						
691657 Dup	5																						
691672 Orig	8																						
691672 Dup	10																						
691677 Orig	15	0.2	< 0.5	13	639	< 1	58	5	26	0.40	78	< 10	22	< 0.5	< 2	2.26	16	11	7.63	< 10	< 1	0.08	< 10
691677 Split PREP DUP	8	< 0.2	< 0.5	12	621	< 1	56	4	26	0.39	76	< 10	22	< 0.5	< 2	2.39	15	20	7.46	< 10	< 1	0.08	< 10
691678 Orig		0.3	< 0.5	17	576	< 1	70	9	30	0.38	118	< 10	21	< 0.5	< 2	2.19	20	14	8.38	< 10	< 1	0.08	< 10
691678 Dup		0.2	< 0.5	18	587	< 1	74	8	32	0.39	122	< 10	21	< 0.5	< 2	2.17	20	12	8.73	< 10	< 1	0.08	< 10
691682 Orig	229																						
691682 Dup	227																						
691691 Orig		< 0.2	< 0.5	4	1800	< 1	51	< 2	52	1.56	40	< 10	26	< 0.5	< 2	3.83	20	45	5.85	< 10	< 1	0.09	13
691691 Dup		< 0.2	< 0.5	3	1810	< 1	52	< 2	50	1.58	40	< 10	26	< 0.5	< 2	3.86	20	48	5.92	< 10	< 1	0.09	13
691692 Orig	6																						
691692 Dup	5																						
691694 Orig		< 0.2	< 0.5	36	1310	< 1	54	< 2	63	1.76	19	< 10	27	< 0.5	< 2	3.11	21	52	5.66	< 10	< 1	0.08	15
691694 Dup		< 0.2	< 0.5	40	1350	< 1	55	< 2	64	1.81	21	< 10	28	< 0.5	< 2	3.21	22	54	5.83	< 10	< 1	0.08	15
691707 Orig	6	< 0.2	< 0.5	30	1660	< 1	122	< 2	49	1.81	30	< 10	27	< 0.5	< 2	3.10	38	48	5.90	< 10	< 1	0.07	15
691707 Dup	6	< 0.2	< 0.5	29	1680	< 1	128	< 2	50	1.81	32	< 10	28	< 0.5	< 2	3.14	38	49	5.99	< 10	< 1	0.07	15
691717 Orig	7																						
691717 Dup	7																						
691719 Orig		< 0.2	< 0.5	91	1210	< 1	116	< 2	43	1.51	29	< 10	22	< 0.5	< 2	4.20	27	54	4.46	< 10	< 1	0.05	< 10
691719 Dup		< 0.2	< 0.5	79	1200	< 1	115	< 2	43	1.50	31	< 10	22	< 0.5	3	4.14	27	56	4.40	< 10	< 1	0.05	< 10
691727 Orig	7	< 0.2	< 0.5	28	1230	1	76	< 2	45	1.32	14	< 10	38	< 0.5	< 2	3.39	15	46	3.93	< 10	< 1	0.11	27
691727 Split PREP DUP	< 5	< 0.2	< 0.5	30	1240	< 1	76	< 2	45	1.32	13	< 10	38	< 0.5	< 2	3.37	14	46	3.94	< 10	< 1	0.11	27
691727 Orig	8																						
691727 Dup	6																						
691728 Orig		< 0.2	< 0.5	28	1290	< 1	72	< 2	46	1.30	14	< 10	33	< 0.5	< 2	3.83	15	44	3.88	< 10	< 1	0.09	25
691728 Dup		< 0.2	< 0.5	27	1320	< 1	73	< 2	44	1.35	15	< 10	35	< 0.5	< 2	3.91	16	47	3.97	< 10	< 1	0.10	26
Method Blank	< 5																						
Method Blank	< 5																						
Method Blank	< 5																						
Method Blank	5																						
Method Blank	< 5																						

Analyte Symbol	Au	Ag	Cd	Cu	Mn	Mo	Ni	Pb	Zn	Al	As	B	Ba	Be	Bi	Ca	Co	Cr	Fe	Ga	Hg	K	La
Unit Symbol	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm
Lower Limit	5	0.2	0.5	1	5	1	1	2	2	0.01	2	10	10	0.5	2	0.01	1	1	0.01	10	1	0.01	10
Method Code	FA-AA	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
Method Blank	5																						
Method Blank	5																						
Method Blank	< 5																						
Method Blank		< 0.2	< 0.5	< 1	< 5	< 1	< 1	< 2	< 2	< 0.01	< 2	< 10	< 10	< 0.5	< 2	< 0.01	< 1	< 1	< 0.01	< 10	< 1	< 0.01	< 10
Method Blank		1.1	< 0.5	< 1	< 5	< 1	< 1	< 2	< 2	< 0.01	< 2	< 10	< 10	< 0.5	< 2	< 0.01	< 1	< 1	< 0.01	< 10	< 1	< 0.01	< 10
Method Blank		< 0.2	< 0.5	< 1	< 5	< 1	< 1	< 2	< 2	< 0.01	< 2	< 10	< 10	< 0.5	< 2	< 0.01	< 1	< 1	< 0.01	< 10	< 1	< 0.01	< 10

Analyte Symbol	Mg	Na	P	S	Sb	Sc	Sr	Ti	Th	Te	Tl	U	V	W	Y	Zr
Unit Symbol	%	%	%	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	0.01	0.001	0.001	0.01	2	1	1	0.01	20	1	2	10	1	10	1	1
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
GXR-4 Meas	1.43	0.115	0.119	1.65	3	6	66	0.13	< 20	< 1	< 2	< 10	78	12	11	9
GXR-4 Cert	1.66	0.564	0.120	1.77	4.80	7.70	221	0.29	22.5	0.970	3.20	6.20	87.0	30.8	14.0	186
GXR-6 Meas	0.37	0.078	0.034	0.02	4	23	30		< 20	< 1	< 2	< 10	180	< 10	6	15
GXR-6 Cert	0.609	0.104	0.0350	0.0160	3.60	27.6	35.0		5.30	0.0180	2.20	1.54	186	1.90	14.0	110
OREAS 134b (AQUA REGIA) Meas				16.7												
OREAS 134b (AQUA REGIA) Cert				19.31												
OREAS 134b (AQUA REGIA) Meas				12.1												
OREAS 134b (AQUA REGIA) Cert				19.31												
OREAS 133a (Aqua Regia) Meas				10.2	130											
OREAS 133a (Aqua Regia) Cert				10.7	147											
OREAS 133a (Aqua Regia) Meas				7.31	113											
OREAS 133a (Aqua Regia) Cert				10.7	147											
OREAS 218 Meas																
OREAS 218 Cert																
OREAS 218 Meas																
OREAS 218 Cert																
OREAS 218 Meas																
OREAS 218 Cert																
OREAS 218 Meas																
OREAS 218 Cert																
OREAS 224 Meas																
OREAS 224 Cert																
OREAS 224 Meas																
OREAS 224 Cert																
OREAS 224 Meas																
OREAS 224 Cert																
OREAS 224 Meas																
OREAS 224 Cert																
691630 Orig	0.97	0.063	0.099	0.16	< 2	3	116	< 0.01	< 20	< 1	< 2	< 10	21	< 10	5	7
691630 Dup	0.96	0.061	0.099	0.16	< 2	3	116	< 0.01	< 20	2	< 2	< 10	21	< 10	5	7
691637 Orig																

Analyte Symbol	Mg	Na	P	S	Sb	Sc	Sr	Ti	Th	Te	Tl	U	V	W	Y	Zr
Unit Symbol	%	%	%	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	0.01	0.001	0.001	0.01	2	1	1	0.01	20	1	2	10	1	10	1	1
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
691637 Dup																
691638 Orig	0.94	0.064	0.138	1.34	3	2	119	< 0.01	< 20	< 1	< 2	< 10	23	< 10	5	9
691638 Dup	0.91	0.061	0.133	1.33	3	2	116	< 0.01	< 20	< 1	< 2	< 10	22	< 10	5	8
691647 Orig																
691647 Dup																
691657 Orig																
691657 Dup																
691672 Orig																
691672 Dup																
691677 Orig	0.74	0.040	0.079	5.96	8	1	96	< 0.01	< 20	< 1	< 2	< 10	4	< 10	3	14
691677 Split PREP DUP	0.73	0.040	0.076	5.92	6	1	95	< 0.01	< 20	< 1	< 2	< 10	4	< 10	3	14
691678 Orig	0.66	0.039	0.078	7.48	9	1	93	< 0.01	< 20	2	< 2	< 10	4	< 10	3	14
691678 Dup	0.69	0.038	0.080	7.44	8	1	93	< 0.01	< 20	< 1	< 2	< 10	3	< 10	3	15
691682 Orig																
691682 Dup																
691691 Orig	1.05	0.046	0.120	0.01	3	6	107	< 0.01	< 20	< 1	< 2	< 10	32	< 10	6	4
691691 Dup	1.06	0.045	0.121	0.01	< 2	6	109	< 0.01	< 20	< 1	< 2	< 10	32	< 10	6	4
691692 Orig																
691692 Dup																
691694 Orig	0.96	0.044	0.121	0.02	< 2	5	82	< 0.01	< 20	< 1	< 2	< 10	40	< 10	5	4
691694 Dup	0.99	0.044	0.124	0.02	2	6	85	< 0.01	< 20	< 1	< 2	< 10	41	< 10	5	4
691707 Orig	0.82	0.050	0.126	0.09	< 2	6	78	< 0.01	< 20	< 1	< 2	< 10	42	< 10	5	4
691707 Dup	0.83	0.051	0.128	0.09	< 2	6	79	< 0.01	< 20	1	< 2	< 10	42	< 10	5	4
691717 Orig																
691717 Dup																
691719 Orig	0.71	0.042	0.118	0.10	< 2	6	78	< 0.01	< 20	< 1	< 2	< 10	39	< 10	7	7
691719 Dup	0.70	0.041	0.116	0.09	< 2	6	76	< 0.01	< 20	< 1	< 2	< 10	38	< 10	7	6
691727 Orig	0.70	0.055	0.152	0.01	< 2	3	111	< 0.01	< 20	2	< 2	< 10	20	< 10	7	5
691727 Split PREP DUP	0.70	0.055	0.153	0.01	< 2	3	110	< 0.01	< 20	2	< 2	< 10	20	< 10	7	4
691727 Orig																
691727 Dup																
691728 Orig	0.69	0.046	0.153	0.02	< 2	3	121	< 0.01	< 20	< 1	< 2	< 10	20	< 10	7	6
691728 Dup	0.71	0.049	0.157	0.01	2	4	124	< 0.01	< 20	< 1	< 2	< 10	21	< 10	7	6
Method Blank																
Method Blank																
Method Blank																
Method Blank																
Method Blank																
Method Blank																
Method Blank																



Analyte Symbol	Mg	Na	P	S	Sb	Sc	Sr	Ti	Th	Te	Tl	U	V	W	Y	Zr
Unit Symbol	%	%	%	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	0.01	0.001	0.001	0.01	2	1	1	0.01	20	1	2	10	1	10	1	1
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
Method Blank	< 0.01	0.011	< 0.001	< 0.01	< 2	< 1	< 1	< 0.01	< 20	< 1	< 2	< 10	< 1	< 10	< 1	< 1
Method Blank	< 0.01	0.010	< 0.001	< 0.01	< 2	< 1	< 1	< 0.01	< 20	< 1	< 2	< 10	< 1	< 10	< 1	< 1
Method Blank	< 0.01	0.010	< 0.001	< 0.01	< 2	< 1	< 1	< 0.01	< 20	< 1	< 2	< 10	< 1	< 10	< 1	< 1



**Date Submitted:** 23-Feb-18  
**Invoice No.:** A18-02177  
**Invoice Date:** 06-Apr-18  
**Your Reference:**

**Noble Mineral Exploration**  
**2500-120 Adelaide Street West**  
**Toronto ON M5H 1T1**  
**Canada**

**ATTN: Randy Singh (inv-cc)**

## CERTIFICATE OF ANALYSIS

105 Rock samples were submitted for analysis.

The following analytical package(s) were requested:

Code 1A2-Timmins Au - Fire Assay AA

Code 1E3-Timmins Aqua Regia ICP(AQUAGEO)

REPORT **A18-02177**

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

Notes:

If value exceeds upper limit we recommend reassay by fire assay gravimetric-Code 1A3.

Values which exceed the upper limit should be assayed for accurate numbers.

CERTIFIED BY:

A handwritten signature in black ink, appearing to be "Emmanuel Esemé". The signature is written in a cursive, somewhat stylized font with some loops and flourishes.

Emmanuel Esemé , Ph.D.  
Quality Control

**ACTIVATION LABORATORIES LTD.**  
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## Results

## Activation Laboratories Ltd.

## Report: A18-02177

Analyte Symbol	Au	Ag	Cd	Cu	Mn	Mo	Ni	Pb	Zn	Al	As	B	Ba	Be	Bi	Ca	Co	Cr	Fe	Ga	Hg	K	La
Unit Symbol	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm
Lower Limit	5	0.2	0.5	1	5	1	1	2	2	0.01	2	10	10	0.5	2	0.01	1	1	0.01	10	1	0.01	10
Method Code	FA-AA	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
691733	< 5	< 0.2	< 0.5	27	560	< 1	201	3	188	0.79	13	< 10	48	< 0.5	< 2	3.24	44	16	2.75	< 10	< 1	0.14	19
691734	< 5	< 0.2	< 0.5	27	617	< 1	250	< 2	233	0.70	17	< 10	42	< 0.5	< 2	3.17	42	14	2.99	< 10	< 1	0.12	22
691735	< 5	< 0.2	< 0.5	27	615	< 1	253	< 2	229	0.71	17	< 10	42	< 0.5	< 2	3.15	42	15	2.99	< 10	< 1	0.12	22
691736	< 5	< 0.2	< 0.5	28	693	< 1	211	< 2	297	0.82	20	< 10	53	< 0.5	< 2	3.40	34	14	3.21	< 10	< 1	0.15	18
691737	5	< 0.2	< 0.5	25	551	1	266	4	201	0.67	19	< 10	44	< 0.5	< 2	3.77	35	14	3.14	< 10	< 1	0.14	14
691738	5	< 0.2	< 0.5	25	520	1	215	4	90	0.82	12	< 10	45	< 0.5	< 2	2.91	33	19	3.04	< 10	< 1	0.13	14
691739	6	< 0.2	< 0.5	30	763	2	277	3	162	1.09	17	< 10	55	< 0.5	< 2	2.21	37	29	4.32	< 10	< 1	0.14	12
691740	7	< 0.2	< 0.5	29	760	< 1	221	3	137	1.09	19	< 10	62	< 0.5	2	1.93	32	30	4.09	< 10	< 1	0.16	14
691741	< 5	< 0.2	< 0.5	21	471	< 1	210	3	121	1.19	17	< 10	60	< 0.5	< 2	3.18	26	31	3.03	< 10	< 1	0.18	14
691742	6	< 0.2	< 0.5	28	812	< 1	252	6	73	1.19	15	< 10	58	< 0.5	< 2	1.45	36	35	4.86	< 10	< 1	0.15	13
691743	5	< 0.2	< 0.5	26	480	< 1	195	4	58	1.53	8	< 10	70	< 0.5	< 2	1.91	28	40	3.23	< 10	< 1	0.17	18
691744	< 5	< 0.2	< 0.5	26	427	< 1	188	< 2	61	1.41	7	< 10	70	< 0.5	< 2	3.56	26	35	2.64	< 10	< 1	0.19	17
691745	< 5	< 0.2	< 0.5	28	437	25	183	< 2	66	1.35	6	< 10	46	< 0.5	4	3.62	27	35	2.91	< 10	< 1	0.12	16
691746	< 5	< 0.2	< 0.5	28	790	< 1	181	< 2	108	1.37	12	< 10	50	< 0.5	< 2	3.77	30	28	4.04	< 10	< 1	0.14	18
691747	< 5	< 0.2	< 0.5	26	547	< 1	235	< 2	118	0.88	35	< 10	54	< 0.5	< 2	4.01	40	20	2.60	< 10	< 1	0.15	24
691748	< 5	< 0.2	< 0.5	26	514	< 1	145	< 2	79	0.75	31	< 10	49	< 0.5	< 2	4.70	31	18	2.54	< 10	< 1	0.15	25
691749	< 5	< 0.2	< 0.5	27	339	< 1	149	< 2	65	1.03	26	< 10	76	< 0.5	< 2	2.97	34	20	2.25	< 10	< 1	0.21	28
691750	< 5	< 0.2	< 0.5	< 1	93	< 1	< 1	< 2	17	4.61	< 2	13	11	< 0.5	< 2	0.19	< 1	2	0.56	< 10	< 1	1.27	< 10
691751	< 5	< 0.2	< 0.5	24	524	< 1	140	< 2	72	0.77	29	< 10	63	< 0.5	< 2	4.62	29	15	2.45	< 10	< 1	0.18	25
691752	< 5	< 0.2	< 0.5	26	551	< 1	164	< 2	65	0.85	37	< 10	59	< 0.5	< 2	4.10	33	18	2.67	< 10	< 1	0.18	24
691753	< 5	< 0.2	< 0.5	24	504	< 1	145	< 2	68	0.63	33	< 10	50	< 0.5	< 2	4.38	27	13	2.51	< 10	< 1	0.16	20
691754	< 5	< 0.2	< 0.5	24	618	< 1	178	3	71	0.70	40	< 10	50	< 0.5	< 2	3.90	34	14	2.89	< 10	< 1	0.16	23
691755	< 5	< 0.2	< 0.5	27	434	< 1	199	3	69	0.90	37	< 10	60	< 0.5	< 2	2.98	36	23	2.69	< 10	< 1	0.18	20
691756	< 5	< 0.2	< 0.5	26	564	< 1	206	4	76	0.81	36	< 10	56	< 0.5	< 2	2.96	38	20	3.16	< 10	< 1	0.15	20
691757	< 5	< 0.2	< 0.5	30	608	< 1	173	3	79	0.96	29	< 10	64	< 0.5	< 2	3.82	35	23	3.19	< 10	< 1	0.18	22
691758	< 5	< 0.2	< 0.5	28	357	< 1	192	3	57	0.92	21	< 10	66	< 0.5	< 2	3.35	34	25	2.53	< 10	< 1	0.19	18
691759	< 5	< 0.2	< 0.5	27	646	< 1	169	3	78	0.87	21	< 10	54	< 0.5	< 2	4.26	32	23	3.34	< 10	< 1	0.15	16
691760	< 5	< 0.2	< 0.5	25	456	< 1	144	3	67	1.05	17	< 10	72	< 0.5	< 2	3.87	28	24	2.51	< 10	< 1	0.21	19
691761	1120	0.3	< 0.5	158	682	< 1	65	3	61	3.61	6	43	26	< 0.5	< 2	3.13	29	120	5.51	10	< 1	0.05	< 10
691762	< 5	< 0.2	0.6	30	461	< 1	213	4	69	0.82	27	< 10	60	< 0.5	< 2	2.96	38	19	3.08	< 10	< 1	0.17	14
691763	< 5	< 0.2	< 0.5	25	624	< 1	244	3	87	0.89	32	< 10	52	< 0.5	< 2	3.02	39	22	3.79	< 10	< 1	0.14	12
691764	< 5	< 0.2	< 0.5	30	796	< 1	343	5	86	0.88	39	< 10	45	< 0.5	< 2	2.55	52	23	5.09	< 10	< 1	0.14	11
691765	< 5	< 0.2	< 0.5	31	435	< 1	326	4	65	1.06	56	< 10	50	< 0.5	< 2	2.91	48	26	4.51	< 10	< 1	0.18	10
691766	< 5	< 0.2	< 0.5	24	473	< 1	219	< 2	72	0.86	25	< 10	59	< 0.5	< 2	3.58	31	25	3.11	< 10	< 1	0.18	16
691767	< 5	< 0.2	< 0.5	31	402	1	245	4	64	0.74	34	< 10	43	< 0.5	3	3.24	39	19	3.65	< 10	< 1	0.13	13
691768	< 5	< 0.2	< 0.5	23	562	1	236	3	50	0.75	33	< 10	40	< 0.5	< 2	5.04	33	19	3.47	< 10	< 1	0.12	12
691769	< 5	< 0.2	< 0.5	36	579	< 1	288	3	59	0.83	54	< 10	47	< 0.5	< 2	2.93	46	21	4.39	< 10	< 1	0.15	13
691770	5	< 0.2	< 0.5	28	537	< 1	256	3	61	0.77	51	< 10	53	< 0.5	< 2	2.85	36	18	3.57	< 10	< 1	0.15	18
691771	6	< 0.2	< 0.5	24	771	< 1	304	2	70	0.81	62	< 10	49	< 0.5	< 2	2.72	39	20	4.42	< 10	< 1	0.14	19
691772	8	< 0.2	< 0.5	28	1200	< 1	340	3	77	0.99	74	< 10	49	< 0.5	< 2	2.35	48	20	5.77	< 10	< 1	0.16	17
691773	12	< 0.2	< 0.5	38	1950	< 1	320	6	119	1.03	73	< 10	26	< 0.5	< 2	1.40	55	24	9.65	< 10	< 1	0.09	13
691774	13	< 0.2	< 0.5	38	1930	< 1	315	5	118	1.01	70	< 10	26	< 0.5	< 2	1.39	56	21	9.50	< 10	1	0.08	13

## Results

## Activation Laboratories Ltd.

## Report: A18-02177

Analyte Symbol	Au	Ag	Cd	Cu	Mn	Mo	Ni	Pb	Zn	Al	As	B	Ba	Be	Bi	Ca	Co	Cr	Fe	Ga	Hg	K	La
Unit Symbol	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm
Lower Limit	5	0.2	0.5	1	5	1	1	2	2	0.01	2	10	10	0.5	2	0.01	1	1	0.01	10	1	0.01	10
Method Code	FA-AA	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
691775	13	< 0.2	< 0.5	38	1650	< 1	329	6	130	1.54	68	< 10	24	< 0.5	< 2	1.77	58	28	10.2	< 10	< 1	0.12	11
691776	16	< 0.2	< 0.5	59	1190	< 1	340	8	152	1.73	63	< 10	23	< 0.5	< 2	1.98	55	36	9.05	< 10	< 1	0.13	12
691777	13	< 0.2	0.5	50	1330	1	336	6	159	1.74	94	< 10	26	< 0.5	< 2	3.08	59	39	9.00	< 10	< 1	0.09	< 10
691778	8	< 0.2	0.9	42	1360	< 1	307	5	149	1.76	90	< 10	27	< 0.5	< 2	3.26	51	43	8.89	< 10	< 1	0.08	< 10
691779	5	< 0.2	< 0.5	33	657	< 1	313	5	107	1.18	98	< 10	51	< 0.5	< 2	2.52	48	36	5.10	< 10	< 1	0.13	17
691780	< 5	< 0.2	< 0.5	< 1	102	< 1	< 1	< 2	17	4.54	< 2	11	< 10	< 0.5	< 2	0.19	< 1	4	0.61	< 10	< 1	1.24	< 10
691781	10	0.2	< 0.5	33	1190	< 1	249	7	128	1.38	76	< 10	33	< 0.5	< 2	2.81	45	37	7.25	< 10	< 1	0.11	11
691782	7	< 0.2	0.6	27	2950	< 1	211	< 2	135	2.92	21	< 10	14	< 0.5	< 2	3.34	32	49	11.9	< 10	< 1	0.02	< 10
691783	10	< 0.2	0.6	35	1840	< 1	257	2	138	1.96	49	< 10	39	< 0.5	< 2	3.51	45	38	7.63	< 10	< 1	0.08	12
691784	5	< 0.2	0.5	33	1000	< 1	300	< 2	124	1.64	60	< 10	50	< 0.5	< 2	3.37	48	37	5.94	< 10	< 1	0.11	15
691785	< 5	< 0.2	< 0.5	24	940	1	333	5	81	1.24	53	< 10	36	< 0.5	< 2	3.85	50	28	7.21	< 10	< 1	0.09	11
691786	< 5	< 0.2	< 0.5	22	755	< 1	282	2	70	0.74	29	< 10	51	< 0.5	< 2	3.92	34	20	3.71	< 10	< 1	0.10	21
691787	< 5	< 0.2	< 0.5	23	608	< 1	185	< 2	84	1.09	27	< 10	66	< 0.5	< 2	3.46	30	23	3.61	< 10	< 1	0.13	25
691788	< 5	< 0.2	< 0.5	< 1	105	< 1	< 1	< 2	18	4.95	< 2	14	11	0.5	< 2	0.22	< 1	3	0.61	< 10	< 1	1.38	< 10
691789	< 5	< 0.2	< 0.5	28	500	1	289	3	64	0.86	37	< 10	64	< 0.5	< 2	3.46	42	17	3.76	< 10	< 1	0.14	20
691790	< 5	< 0.2	< 0.5	27	527	< 1	307	5	80	0.94	35	< 10	53	< 0.5	< 2	3.18	39	18	4.56	< 10	< 1	0.14	19
691791	< 5	< 0.2	< 0.5	28	599	< 1	282	3	66	0.78	35	< 10	63	< 0.5	< 2	3.28	38	17	3.84	< 10	< 1	0.12	24
691792	< 5	< 0.2	< 0.5	32	471	< 1	269	4	65	0.82	37	< 10	63	< 0.5	< 2	3.14	39	23	3.76	< 10	< 1	0.13	22
691793	< 5	< 0.2	< 0.5	29	444	< 1	209	3	60	0.79	48	< 10	65	< 0.5	< 2	3.34	35	16	2.97	< 10	< 1	0.13	24
691794	< 5	< 0.2	< 0.5	32	416	< 1	155	< 2	67	0.83	42	< 10	71	< 0.5	< 2	3.12	28	17	2.83	< 10	< 1	0.14	25
691795	< 5	< 0.2	< 0.5	27	881	< 1	196	3	78	0.66	70	< 10	54	< 0.5	< 2	2.97	34	14	4.55	< 10	< 1	0.11	23
691796	5	< 0.2	< 0.5	25	586	< 1	139	3	61	0.68	62	< 10	57	< 0.5	< 2	3.69	28	16	2.88	< 10	< 1	0.13	25
691797	10	< 0.2	< 0.5	22	731	< 1	142	4	76	0.46	142	< 10	37	< 0.5	< 2	3.83	30	14	3.69	< 10	< 1	0.09	22
691798	10	< 0.2	< 0.5	26	615	< 1	126	3	72	0.79	155	< 10	63	< 0.5	< 2	3.16	28	16	3.28	< 10	< 1	0.16	29
691799	1880	0.4	< 0.5	159	713	< 1	70	5	62	3.86	10	16	28	< 0.5	< 2	3.36	29	114	5.13	< 10	< 1	0.08	< 10
691800	11	< 0.2	< 0.5	23	631	8	109	2	50	0.60	160	< 10	52	< 0.5	< 2	4.55	21	15	2.83	< 10	< 1	0.13	26
691801	< 5	< 0.2	< 0.5	27	476	< 1	76	< 2	61	0.78	42	< 10	63	< 0.5	< 2	3.50	21	16	2.51	< 10	< 1	0.14	34
691802	< 5	< 0.2	< 0.5	26	529	< 1	85	< 2	63	1.03	45	< 10	70	< 0.5	< 2	3.29	23	19	2.70	< 10	< 1	0.18	30
691803	< 5	< 0.2	< 0.5	27	553	< 1	74	< 2	58	0.89	27	< 10	61	< 0.5	< 2	3.56	19	22	2.60	< 10	< 1	0.15	32
691804	< 5	< 0.2	< 0.5	23	430	< 1	64	< 2	80	0.89	22	< 10	69	< 0.5	< 2	3.20	18	25	2.27	< 10	< 1	0.19	32
691805	< 5	< 0.2	< 0.5	25	431	< 1	69	< 2	52	1.02	23	< 10	72	< 0.5	< 2	3.30	20	26	2.37	< 10	< 1	0.20	31
691806	< 5	< 0.2	< 0.5	31	387	< 1	64	< 2	54	1.06	25	< 10	63	< 0.5	< 2	3.11	19	34	2.33	< 10	< 1	0.18	31
691807	< 5	< 0.2	< 0.5	23	449	< 1	59	< 2	52	1.06	14	< 10	75	< 0.5	< 2	3.67	16	23	2.34	< 10	< 1	0.22	28
691808	< 5	< 0.2	< 0.5	23	443	< 1	79	< 2	72	1.32	10	< 10	70	< 0.5	< 2	3.79	17	25	2.97	< 10	< 1	0.21	26
691809	< 5	< 0.2	< 0.5	21	560	< 1	83	3	69	0.93	10	< 10	56	< 0.5	< 2	4.79	20	20	2.98	< 10	< 1	0.16	20
691810	< 5	< 0.2	< 0.5	29	526	< 1	62	2	69	1.32	6	< 10	64	< 0.5	< 2	4.42	17	27	2.82	< 10	< 1	0.19	23
691811	< 5	< 0.2	< 0.5	< 1	104	< 1	< 1	< 2	19	4.91	< 2	12	11	< 0.5	< 2	0.20	< 1	2	0.62	< 10	< 1	1.37	< 10
691812	< 5	< 0.2	< 0.5	27	453	< 1	80	< 2	52	1.22	12	< 10	68	< 0.5	< 2	3.79	19	31	2.35	< 10	< 1	0.18	25
691813	< 5	< 0.2	< 0.5	29	393	< 1	108	< 2	53	1.37	15	< 10	79	< 0.5	< 2	3.32	24	35	2.59	< 10	< 1	0.22	22
691814	< 5	< 0.2	< 0.5	26	452	< 1	140	3	56	1.10	18	< 10	62	< 0.5	< 2	3.82	25	29	3.68	< 10	< 1	0.18	13
691815	< 5	< 0.2	< 0.5	31	399	2	157	5	61	0.99	38	< 10	60	< 0.5	< 2	4.10	31	23	3.73	< 10	< 1	0.18	11
691816	< 5	< 0.2	< 0.5	26	444	1	127	4	52	1.22	25	< 10	56	< 0.5	< 2	3.90	26	31	4.18	< 10	< 1	0.17	11

Analyte Symbol	Au	Ag	Cd	Cu	Mn	Mo	Ni	Pb	Zn	Al	As	B	Ba	Be	Bi	Ca	Co	Cr	Fe	Ga	Hg	K	La
Unit Symbol	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm
Lower Limit	5	0.2	0.5	1	5	1	1	2	2	0.01	2	10	10	0.5	2	0.01	1	1	0.01	10	1	0.01	10
Method Code	FA-AA	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
691817	< 5	< 0.2	< 0.5	35	509	< 1	78	< 2	79	1.54	21	< 10	55	< 0.5	< 2	3.52	22	38	2.83	< 10	< 1	0.15	24
691818	< 5	< 0.2	< 0.5	25	402	< 1	84	< 2	66	1.66	9	< 10	53	< 0.5	2	2.79	20	41	2.60	< 10	< 1	0.14	25
691819	< 5	< 0.2	< 0.5	27	399	< 1	92	< 2	55	1.84	7	< 10	66	< 0.5	< 2	3.23	23	47	2.57	< 10	< 1	0.18	24
691820	< 5	< 0.2	< 0.5	26	458	< 1	79	< 2	55	1.53	10	< 10	61	< 0.5	< 2	3.71	20	34	2.46	< 10	< 1	0.17	25
691821	< 5	< 0.2	< 0.5	24	549	< 1	122	4	63	1.68	25	< 10	70	< 0.5	< 2	4.20	24	42	3.16	< 10	< 1	0.20	18
691822	< 5	< 0.2	< 0.5	28	548	2	117	< 2	60	1.87	9	< 10	71	< 0.5	< 2	4.47	23	44	3.17	< 10	< 1	0.21	18
691823	< 5	< 0.2	< 0.5	23	495	< 1	82	< 2	65	1.88	8	< 10	59	< 0.5	< 2	3.35	17	46	2.86	< 10	< 1	0.17	25
691824	1110	0.3	< 0.5	159	689	< 1	65	< 2	65	3.66	8	42	29	< 0.5	< 2	3.17	30	118	5.57	10	< 1	0.05	< 10
691825	< 5	< 0.2	< 0.5	27	432	1	260	4	31	1.19	39	< 10	28	< 0.5	< 2	2.89	33	24	6.80	< 10	< 1	0.12	< 10
691826	< 5	< 0.2	< 0.5	165	563	< 1	98	< 2	72	3.95	< 2	< 10	22	< 0.5	< 2	3.15	25	32	4.50	< 10	< 1	0.05	< 10
691827	32	< 0.2	< 0.5	34	359	2	296	5	37	1.26	78	< 10	18	< 0.5	< 2	2.03	39	19	8.53	< 10	< 1	0.15	< 10
691828	< 5	0.3	0.8	47	714	2	349	8	65	1.11	85	< 10	17	< 0.5	< 2	2.41	48	21	10.3	< 10	< 1	0.13	< 10
691829	< 5	< 0.2	< 0.5	2	122	< 1	3	< 2	22	5.05	< 2	13	11	0.5	< 2	0.23	< 1	4	0.83	< 10	< 1	1.38	< 10
691830	13	< 0.2	< 0.5	26	1440	< 1	245	2	40	1.72	47	< 10	18	< 0.5	< 2	3.09	42	32	9.13	< 10	< 1	0.23	< 10
691831	< 5	< 0.2	< 0.5	19	2790	< 1	215	< 2	62	2.53	49	< 10	15	< 0.5	< 2	2.58	34	43	13.7	< 10	< 1	0.11	< 10
691832	< 5	< 0.2	< 0.5	22	3130	1	271	< 2	110	2.92	26	< 10	18	< 0.5	4	2.95	36	10	14.9	< 10	< 1	0.04	< 10
691833	10	0.2	< 0.5	18	1710	2	671	7	145	2.72	53	< 10	21	< 0.5	3	2.40	78	9	14.6	< 10	< 1	0.05	< 10
691834	< 5	0.2	< 0.5	18	1700	2	669	2	147	2.74	52	< 10	20	< 0.5	3	2.52	77	9	14.7	< 10	< 1	0.05	< 10
691835	< 5	< 0.2	< 0.5	17	1690	1	529	4	140	2.66	28	< 10	29	< 0.5	< 2	2.95	69	11	11.2	< 10	< 1	0.08	< 10
691836	< 5	< 0.2	0.6	19	1460	1	421	5	137	2.59	21	< 10	41	< 0.5	< 2	3.12	53	7	9.27	< 10	< 1	0.11	< 10
691837	< 5	< 0.2	< 0.5	33	1140	1	453	< 2	106	2.19	25	< 10	54	< 0.5	< 2	3.10	61	7	7.01	< 10	< 1	0.16	10

Analyte Symbol	Mg	Na	P	S	Sb	Sc	Sr	Ti	Th	Te	Tl	U	V	W	Y	Zr
Unit Symbol	%	%	%	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	0.01	0.001	0.001	0.01	2	1	1	0.01	20	1	2	10	1	10	1	1
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
691733	0.86	0.081	0.146	0.40	< 2	2	99	< 0.01	< 20	1	< 2	< 10	13	< 10	5	6
691734	0.88	0.069	0.149	0.41	< 2	2	97	< 0.01	< 20	1	< 2	< 10	12	< 10	5	7
691735	0.88	0.069	0.148	0.41	< 2	2	97	< 0.01	< 20	< 1	< 2	< 10	12	< 10	5	7
691736	0.96	0.080	0.143	0.35	< 2	3	116	< 0.01	< 20	< 1	< 2	< 10	14	< 10	6	6
691737	0.76	0.068	0.150	1.17	< 2	2	138	< 0.01	< 20	< 1	< 2	< 10	11	< 10	6	9
691738	0.66	0.070	0.146	0.91	< 2	3	95	< 0.01	< 20	< 1	< 2	< 10	15	< 10	6	8
691739	0.73	0.075	0.146	1.39	< 2	3	80	< 0.01	< 20	4	< 2	< 10	21	< 10	6	10
691740	0.67	0.088	0.145	1.26	< 2	2	79	< 0.01	< 20	< 1	< 2	< 10	17	< 10	6	9
691741	0.71	0.079	0.155	0.98	< 2	2	135	< 0.01	< 20	3	< 2	< 10	19	< 10	7	8
691742	0.69	0.067	0.150	1.65	2	2	62	< 0.01	< 20	3	< 2	< 10	20	< 10	7	11
691743	0.68	0.085	0.157	0.76	< 2	2	73	< 0.01	< 20	3	< 2	< 10	23	< 10	7	8
691744	0.94	0.095	0.159	0.62	< 2	2	140	< 0.01	< 20	1	< 2	< 10	21	< 10	7	6
691745	0.83	0.070	0.145	0.67	< 2	3	157	< 0.01	< 20	< 1	< 2	< 10	24	< 10	6	7
691746	1.19	0.091	0.131	0.58	< 2	5	135	< 0.01	< 20	2	< 2	< 10	27	< 10	6	9
691747	1.03	0.094	0.150	0.35	< 2	3	134	< 0.01	< 20	< 1	< 2	< 10	15	< 10	6	6
691748	1.17	0.093	0.151	0.28	< 2	3	146	< 0.01	< 20	< 1	< 2	< 10	12	< 10	7	6
691749	0.69	0.119	0.160	0.39	< 2	2	129	< 0.01	< 20	< 1	< 2	< 10	15	< 10	6	5
691750	0.04	2.66	0.001	< 0.01	< 2	< 1	21	< 0.01	< 20	< 1	< 2	< 10	< 1	< 10	3	2
691751	1.10	0.111	0.145	0.29	< 2	3	163	< 0.01	< 20	2	< 2	< 10	13	< 10	7	5
691752	0.96	0.101	0.150	0.40	< 2	2	130	< 0.01	< 20	1	< 2	< 10	13	< 10	7	6
691753	0.96	0.084	0.131	0.48	< 2	2	123	< 0.01	< 20	2	< 2	< 10	10	< 10	6	7
691754	1.08	0.081	0.150	0.49	< 2	2	132	< 0.01	< 20	< 1	< 2	< 10	10	< 10	6	6
691755	0.80	0.104	0.152	0.74	< 2	2	102	< 0.01	< 20	4	< 2	< 10	15	< 10	6	7
691756	0.88	0.082	0.155	0.72	< 2	2	93	< 0.01	< 20	1	< 2	< 10	13	< 10	7	7
691757	0.99	0.112	0.153	0.65	< 2	3	125	< 0.01	< 20	1	< 2	< 10	16	< 10	7	6
691758	0.66	0.103	0.156	0.96	< 2	2	115	< 0.01	< 20	5	< 2	< 10	14	< 10	6	7
691759	1.19	0.097	0.149	0.65	< 2	3	124	< 0.01	< 20	< 1	< 2	< 10	15	< 10	7	6
691760	0.87	0.119	0.153	0.52	< 2	2	134	< 0.01	< 20	1	< 2	< 10	17	< 10	6	5
691761	2.04	0.081	0.038	0.19	< 2	8	27	0.42	< 20	4	< 2	< 10	184	< 10	14	22
691762	0.75	0.089	0.152	1.14	< 2	2	96	< 0.01	< 20	3	< 2	< 10	13	< 10	6	8
691763	0.86	0.073	0.141	1.25	< 2	2	79	< 0.01	< 20	< 1	< 2	< 10	14	< 10	6	10
691764	0.80	0.083	0.153	2.14	3	3	72	< 0.01	< 20	< 1	< 2	< 10	16	< 10	7	11
691765	0.90	0.106	0.146	2.52	3	2	84	< 0.01	< 20	< 1	< 2	< 10	18	< 10	6	11
691766	1.01	0.116	0.143	1.12	< 2	2	88	< 0.01	< 20	< 1	< 2	< 10	14	< 10	6	7
691767	0.79	0.086	0.141	1.96	< 2	2	72	< 0.01	< 20	4	< 2	< 10	12	< 10	6	11
691768	0.87	0.091	0.125	1.57	< 2	2	121	< 0.01	< 20	< 1	< 2	< 10	12	< 10	6	9
691769	0.85	0.105	0.148	2.51	3	2	82	< 0.01	< 20	< 1	< 2	< 10	14	< 10	6	11
691770	0.78	0.100	0.146	1.54	< 2	2	79	< 0.01	< 20	< 1	< 2	< 10	12	< 10	6	9
691771	0.72	0.096	0.154	1.57	< 2	2	89	< 0.01	< 20	< 1	< 2	< 10	12	< 10	6	9
691772	0.64	0.106	0.144	2.42	4	2	97	< 0.01	< 20	1	< 2	< 10	15	< 10	5	10
691773	0.38	0.065	0.139	5.26	6	2	60	< 0.01	< 20	4	< 2	< 10	16	< 10	5	17
691774	0.37	0.062	0.138	5.25	7	2	60	< 0.01	< 20	< 1	< 2	< 10	15	< 10	5	17

Analyte Symbol	Mg	Na	P	S	Sb	Sc	Sr	Ti	Th	Te	Tl	U	V	W	Y	Zr
Unit Symbol	%	%	%	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	0.01	0.001	0.001	0.01	2	1	1	0.01	20	1	2	10	1	10	1	1
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
691775	0.63	0.093	0.116	5.59	5	4	82	< 0.01	< 20	< 1	< 2	< 10	28	< 10	5	21
691776	0.72	0.100	0.119	5.86	7	5	95	< 0.01	< 20	2	< 2	< 10	30	< 10	5	24
691777	1.30	0.072	0.111	5.22	6	5	124	< 0.01	< 20	< 1	< 2	< 10	33	< 10	4	21
691778	1.28	0.081	0.117	4.72	6	8	125	< 0.01	< 20	< 1	< 2	< 10	43	< 10	4	20
691779	0.85	0.090	0.147	2.57	3	3	104	< 0.01	< 20	< 1	< 2	< 10	22	< 10	5	12
691780	0.04	2.59	0.002	0.01	< 2	< 1	21	< 0.01	< 20	< 1	< 2	< 10	< 1	< 10	3	2
691781	0.95	0.086	0.126	4.44	6	3	114	< 0.01	< 20	1	< 2	< 10	26	< 10	4	19
691782	1.63	0.030	0.096	4.33	5	9	121	< 0.01	< 20	< 1	< 2	< 10	66	< 10	3	17
691783	1.44	0.084	0.121	2.76	3	6	132	< 0.01	< 20	< 1	< 2	< 10	39	< 10	5	16
691784	1.27	0.118	0.129	2.26	2	5	131	< 0.01	< 20	< 1	< 2	< 10	31	< 10	5	12
691785	1.18	0.107	0.129	3.83	4	8	114	< 0.01	< 20	< 1	< 2	< 10	28	< 10	5	18
691786	1.13	0.108	0.148	1.26	< 2	4	109	< 0.01	< 20	< 1	< 2	< 10	18	< 10	6	9
691787	1.05	0.139	0.147	0.92	< 2	4	106	< 0.01	< 20	< 1	< 2	< 10	22	< 10	6	8
691788	0.05	2.80	0.002	0.01	< 2	< 1	25	< 0.01	< 20	1	< 2	< 10	< 1	< 10	3	2
691789	0.99	0.146	0.147	1.80	3	3	112	< 0.01	< 20	< 1	< 2	< 10	16	< 10	6	11
691790	0.86	0.150	0.148	2.54	3	3	100	< 0.01	< 20	3	< 2	< 10	17	< 10	5	12
691791	0.89	0.136	0.161	1.45	2	2	95	< 0.01	< 20	< 1	< 2	< 10	15	< 10	6	9
691792	0.85	0.145	0.163	1.88	< 2	2	95	< 0.01	< 20	< 1	< 2	< 10	15	< 10	6	11
691793	0.91	0.137	0.159	0.95	< 2	2	96	< 0.01	< 20	< 1	< 2	< 10	14	< 10	6	7
691794	0.80	0.150	0.161	0.88	< 2	2	102	< 0.01	< 20	2	< 2	< 10	14	< 10	5	7
691795	0.79	0.123	0.151	0.86	< 2	2	99	< 0.01	< 20	< 1	< 2	< 10	11	< 10	6	8
691796	1.03	0.133	0.150	0.63	< 2	2	133	< 0.01	< 20	< 1	< 2	< 10	11	< 10	6	7
691797	1.06	0.085	0.141	0.75	< 2	2	127	< 0.01	< 20	< 1	< 2	< 10	9	< 10	5	9
691798	0.81	0.138	0.154	0.45	< 2	2	122	< 0.01	< 20	1	< 2	< 10	12	< 10	6	5
691799	2.09	0.059	0.033	0.24	< 2	7	39	0.38	< 20	< 1	< 2	< 10	161	< 10	11	19
691800	1.11	0.121	0.141	0.34	< 2	3	138	< 0.01	< 20	< 1	< 2	< 10	13	< 10	5	7
691801	0.97	0.115	0.160	0.16	< 2	3	135	< 0.01	< 20	< 1	< 2	< 10	12	< 10	5	5
691802	0.93	0.144	0.151	0.29	< 2	3	134	< 0.01	< 20	< 1	< 2	< 10	18	< 10	5	3
691803	1.06	0.122	0.153	0.22	< 2	2	127	< 0.01	< 20	< 1	< 2	< 10	15	< 10	5	3
691804	0.89	0.122	0.157	0.29	< 2	2	111	< 0.01	< 20	< 1	< 2	< 10	15	< 10	6	4
691805	1.00	0.136	0.158	0.22	< 2	2	113	< 0.01	< 20	< 1	< 2	< 10	18	< 10	7	3
691806	1.01	0.124	0.154	0.15	< 2	2	97	< 0.01	< 20	< 1	< 2	< 10	20	< 10	7	3
691807	1.00	0.129	0.151	0.18	< 2	3	120	< 0.01	< 20	< 1	< 2	< 10	18	< 10	7	3
691808	1.15	0.120	0.153	0.26	< 2	3	118	< 0.01	< 20	< 1	< 2	< 10	22	< 10	7	3
691809	1.32	0.107	0.137	0.55	< 2	4	124	< 0.01	< 20	< 1	< 2	< 10	17	< 10	6	5
691810	1.08	0.101	0.148	0.29	< 2	5	130	< 0.01	< 20	< 1	< 2	< 10	24	< 10	6	3
691811	0.05	2.81	0.001	< 0.01	< 2	< 1	22	< 0.01	< 20	< 1	< 2	< 10	< 1	< 10	3	3
691812	0.93	0.102	0.155	0.30	< 2	2	124	< 0.01	< 20	< 1	< 2	< 10	19	< 10	7	3
691813	1.00	0.114	0.156	0.66	< 2	2	123	< 0.01	< 20	< 1	< 2	< 10	22	< 10	7	3
691814	1.07	0.105	0.147	1.88	2	2	129	< 0.01	< 20	2	< 2	< 10	19	< 10	6	10
691815	0.86	0.100	0.142	2.22	2	2	138	< 0.01	< 20	< 1	< 2	< 10	16	< 10	5	12
691816	1.06	0.090	0.145	2.29	2	2	126	< 0.01	< 20	< 1	< 2	< 10	21	< 10	5	12

Analyte Symbol	Mg	Na	P	S	Sb	Sc	Sr	Ti	Th	Te	Tl	U	V	W	Y	Zr
Unit Symbol	%	%	%	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	0.01	0.001	0.001	0.01	2	1	1	0.01	20	1	2	10	1	10	1	1
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
691817	1.26	0.097	0.145	0.27	< 2	3	126	< 0.01	< 20	< 1	< 2	< 10	29	< 10	6	4
691818	1.15	0.075	0.152	0.32	< 2	2	110	< 0.01	< 20	2	< 2	< 10	26	< 10	6	4
691819	1.02	0.094	0.150	0.46	< 2	2	136	< 0.01	< 20	< 1	< 2	< 10	28	< 10	6	4
691820	1.15	0.087	0.151	0.29	< 2	2	139	< 0.01	< 20	< 1	< 2	< 10	21	< 10	6	3
691821	1.18	0.099	0.142	0.95	< 2	3	147	< 0.01	< 20	< 1	< 2	< 10	29	< 10	6	5
691822	1.08	0.106	0.146	0.88	< 2	3	183	< 0.01	< 20	3	< 2	< 10	32	< 10	6	5
691823	1.36	0.103	0.148	0.18	< 2	3	100	< 0.01	< 20	< 1	< 2	< 10	30	< 10	7	3
691824	2.05	0.083	0.039	0.18	< 2	8	28	0.43	< 20	3	< 2	< 10	186	< 10	14	24
691825	0.91	0.086	0.129	5.36	3	2	75	< 0.01	< 20	< 1	< 2	< 10	17	< 10	5	17
691826	1.28	0.668	0.053	0.09	< 2	7	85	0.35	< 20	< 1	< 2	< 10	141	< 10	14	17
691827	0.69	0.106	0.129	7.39	4	2	70	< 0.01	< 20	< 1	< 2	< 10	18	< 10	5	20
691828	0.76	0.084	0.125	9.68	5	2	82	< 0.01	< 20	< 1	< 2	< 10	15	< 10	5	25
691829	0.06	2.85	0.003	0.09	< 2	< 1	23	< 0.01	< 20	2	< 2	< 10	< 1	< 10	4	3
691830	0.72	0.148	0.122	6.99	4	2	111	< 0.01	< 20	< 1	< 2	< 10	23	< 10	5	22
691831	1.03	0.067	0.099	8.64	5	5	112	< 0.01	< 20	< 1	< 2	< 10	47	< 10	4	24
691832	1.69	0.028	0.064	7.37	4	6	163	< 0.01	< 20	< 1	< 2	< 10	51	< 10	3	22
691833	1.37	0.030	0.071	8.47	7	8	143	< 0.01	< 20	< 1	< 2	< 10	65	< 10	3	25
691834	1.37	0.030	0.071	8.60	8	8	146	< 0.01	< 20	< 1	< 2	< 10	65	< 10	3	24
691835	1.32	0.045	0.079	4.54	5	8	156	< 0.01	< 20	< 1	< 2	< 10	68	< 10	4	25
691836	1.39	0.048	0.078	2.96	4	7	153	< 0.01	< 20	< 1	< 2	< 10	58	< 10	4	22
691837	1.30	0.086	0.086	1.95	3	5	138	< 0.01	< 20	< 1	< 2	< 10	40	< 10	4	19



Analyte Symbol	Au	Ag	Cd	Cu	Mn	Mo	Ni	Pb	Zn	Al	As	B	Ba	Be	Bi	Ca	Co	Cr	Fe	Ga	Hg	K	La
Unit Symbol	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm
Lower Limit	5	0.2	0.5	1	5	1	1	2	2	0.01	2	10	10	0.5	2	0.01	1	1	0.01	10	1	0.01	10
Method Code	FA-AA	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
GXR-4 Meas		3.3	< 0.5	6780	138	330	32	42	68	2.84	92	< 10	47	1.4	6	0.89	13	54	2.86	10	< 1	1.68	51
GXR-4 Cert		4.0	0.860	6520	155	310	42.0	52.0	73.0	7.20	98.0	4.50	1640	1.90	19.0	1.01	14.6	64.0	3.09	20.0	0.110	4.01	64.5
GXR-6 Meas		0.3	< 0.5	76	1080	2	18	100	122	7.57	244	< 10	948	0.9	< 2	0.15	13	80	5.43	20	< 1	1.12	11
GXR-6 Cert		1.30	1.00	66.0	1010	2.40	27.0	101	118	17.7	330	9.80	1300	1.40	0.290	0.180	13.8	96.0	5.58	35.0	0.0680	1.87	13.9
OREAS 134b (AQUA REGIA) Meas		> 100	574	1230				> 5000	> 10000		183						89		9.58				
OREAS 134b (AQUA REGIA) Cert		204	563	1360				133000	177000		221						110		12.25				
OREAS 218 Meas	546																						
OREAS 218 Cert	531																						
OREAS 218 Meas	544																						
OREAS 218 Cert	531																						
OREAS 218 Meas	547																						
OREAS 218 Cert	531																						
OREAS 218 Meas	518																						
OREAS 218 Cert	531																						
OREAS 224 Meas	2140																						
OREAS 224 Cert	2150.000																						
OREAS 224 Meas	2190																						
OREAS 224 Cert	2150.000																						
OREAS 224 Meas	2160																						
OREAS 224 Cert	2150.000																						
OREAS 224 Meas	2070																						
OREAS 224 Cert	2150.000																						
691735 Orig		< 0.2	< 0.5	27	613	< 1	251	2	228	0.70	16	< 10	42	< 0.5	< 2	3.13	42	15	2.98	< 10	< 1	0.12	22
691735 Dup		< 0.2	< 0.5	26	618	< 1	256	< 2	229	0.71	17	< 10	41	< 0.5	< 2	3.17	42	15	3.00	< 10	< 1	0.12	22
691742 Orig	5																						
691742 Dup	6																						
691743 Orig		< 0.2	< 0.5	26	480	< 1	195	3	58	1.53	8	< 10	70	< 0.5	< 2	1.91	29	40	3.23	< 10	< 1	0.17	18
691743 Dup		< 0.2	< 0.5	26	480	< 1	195	4	58	1.53	8	< 10	70	< 0.5	< 2	1.92	28	39	3.23	< 10	< 1	0.17	18
691752 Orig	< 5																						
691752 Dup	< 5																						
691762 Orig	< 5																						
691762 Dup	< 5																						
691777 Orig	13																						
691777 Dup	13																						
691782 Orig	7																						
691782 Split	< 5																						

Analyte Symbol	Au	Ag	Cd	Cu	Mn	Mo	Ni	Pb	Zn	Al	As	B	Ba	Be	Bi	Ca	Co	Cr	Fe	Ga	Hg	K	La
Unit Symbol	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm
Lower Limit	5	0.2	0.5	1	5	1	1	2	2	0.01	2	10	10	0.5	2	0.01	1	1	0.01	10	1	0.01	10
Method Code	FA-AA	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
PREP DUP																							
691783 Orig		< 0.2	0.6	34	1830	< 1	257	2	137	1.95	49	< 10	39	< 0.5	< 2	3.49	45	37	7.59	< 10	< 1	0.08	12
691783 Dup		< 0.2	0.6	35	1850	< 1	256	2	138	1.97	50	< 10	40	< 0.5	< 2	3.52	44	38	7.67	< 10	< 1	0.09	12
691787 Orig	< 5																						
691787 Dup	< 5																						
691796 Orig		< 0.2	< 0.5	26	589	< 1	139	2	62	0.69	62	< 10	59	< 0.5	< 2	3.70	27	16	2.89	< 10	< 1	0.13	25
691796 Dup		< 0.2	< 0.5	25	583	< 1	138	3	60	0.67	62	< 10	56	< 0.5	< 2	3.68	28	15	2.88	< 10	< 1	0.12	24
691797 Orig	10																						
691797 Dup	10																						
691799 Orig		0.5	< 0.5	160	714	< 1	71	5	61	3.88	10	16	27	< 0.5	< 2	3.37	29	113	5.15	< 10	< 1	0.08	< 10
691799 Dup		0.4	< 0.5	158	712	< 1	70	5	63	3.84	11	16	28	< 0.5	< 2	3.34	29	114	5.11	< 10	< 1	0.08	< 10
691812 Orig	< 5	< 0.2	< 0.5	27	460	< 1	79	< 2	52	1.24	12	< 10	68	< 0.5	< 2	3.84	19	32	2.39	< 10	< 1	0.18	25
691812 Dup	< 5	< 0.2	< 0.5	26	446	< 1	80	< 2	51	1.20	12	< 10	68	< 0.5	< 2	3.74	19	30	2.30	< 10	< 1	0.18	25
691822 Orig	< 5																						
691822 Dup	< 5																						
691824 Orig		0.3	< 0.5	158	693	< 1	65	5	65	3.68	7	42	28	< 0.5	< 2	3.18	30	118	5.58	10	< 1	0.05	< 10
691824 Dup		0.3	< 0.5	159	686	< 1	65	< 2	64	3.65	8	42	29	< 0.5	< 2	3.15	29	118	5.56	10	< 1	0.05	< 10
691832 Orig	< 5																						
691832 Split	< 5																						
PREP DUP																							
691832 Orig	< 5																						
691832 Dup	< 5																						
Method Blank	< 5																						
Method Blank	< 5																						
Method Blank	< 5																						
Method Blank	< 5																						
Method Blank	< 5																						
Method Blank	< 5																						
Method Blank	< 5																						
Method Blank		< 0.2	< 0.5	< 1	< 5	< 1	< 1	< 2	< 2	< 0.01	< 2	< 10	< 10	< 0.5	< 2	< 0.01	< 1	< 1	< 0.01	< 10	< 1	< 0.01	< 10
Method Blank		< 0.2	< 0.5	< 1	< 5	< 1	< 1	< 2	< 2	< 0.01	< 2	< 10	< 10	< 0.5	< 2	< 0.01	< 1	< 1	< 0.01	< 10	< 1	< 0.01	< 10

Analyte Symbol	Mg	Na	P	S	Sb	Sc	Sr	Ti	Th	Te	Tl	U	V	W	Y	Zr
Unit Symbol	%	%	%	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	0.01	0.001	0.001	0.01	2	1	1	0.01	20	1	2	10	1	10	1	1
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
GXR-4 Meas	1.55	0.125	0.127	1.68	3	7	70	0.14	< 20	2	< 2	< 10	85	12	12	10
GXR-4 Cert	1.66	0.564	0.120	1.77	4.80	7.70	221	0.29	22.5	0.970	3.20	6.20	87.0	30.8	14.0	186
GXR-6 Meas	0.39	0.082	0.036	0.01	4	23	32		< 20	< 1	< 2	< 10	186	< 10	6	16
GXR-6 Cert	0.609	0.104	0.0350	0.0160	3.60	27.6	35.0		5.30	0.0180	2.20	1.54	186	1.90	14.0	110
OREAS 134b (AQUA REGIA) Meas				11.7												
OREAS 134b (AQUA REGIA) Cert				19.31												
OREAS 218 Meas																
OREAS 218 Cert																
OREAS 218 Meas																
OREAS 218 Cert																
OREAS 218 Meas																
OREAS 218 Cert																
OREAS 218 Meas																
OREAS 218 Cert																
OREAS 218 Meas																
OREAS 218 Cert																
OREAS 224 Meas																
OREAS 224 Cert																
OREAS 224 Meas																
OREAS 224 Cert																
OREAS 224 Meas																
OREAS 224 Cert																
OREAS 224 Meas																
OREAS 224 Cert																
691735 Orig	0.87	0.069	0.148	0.41	< 2	2	97	< 0.01	< 20	2	< 2	< 10	12	< 10	5	7
691735 Dup	0.88	0.069	0.148	0.40	< 2	2	98	< 0.01	< 20	< 1	< 2	< 10	12	< 10	5	7
691742 Orig																
691742 Dup																
691743 Orig	0.68	0.084	0.157	0.76	< 2	2	73	< 0.01	< 20	1	< 2	< 10	24	< 10	7	8
691743 Dup	0.68	0.085	0.158	0.75	< 2	2	73	< 0.01	< 20	5	< 2	< 10	23	< 10	7	8
691752 Orig																
691752 Dup																
691762 Orig																
691762 Dup																
691777 Orig																
691777 Dup																
691782 Orig																
691782 Split PREP DUP																
691783 Orig	1.43	0.083	0.120	2.76	3	6	132	< 0.01	< 20	< 1	< 2	< 10	39	< 10	5	16
691783 Dup	1.46	0.085	0.121	2.76	3	6	133	< 0.01	< 20	< 1	< 2	< 10	40	< 10	5	16

Analyte Symbol	Mg	Na	P	S	Sb	Sc	Sr	Ti	Th	Te	Tl	U	V	W	Y	Zr
Unit Symbol	%	%	%	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	0.01	0.001	0.001	0.01	2	1	1	0.01	20	1	2	10	1	10	1	1
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
691787 Orig																
691787 Dup																
691796 Orig	1.04	0.135	0.151	0.63	< 2	2	134	< 0.01	< 20	1	< 2	< 10	11	< 10	6	7
691796 Dup	1.03	0.130	0.149	0.63	< 2	2	131	< 0.01	< 20	< 1	< 2	< 10	11	< 10	5	7
691797 Orig																
691797 Dup																
691799 Orig	2.10	0.059	0.034	0.24	< 2	7	40	0.38	< 20	5	< 2	< 10	162	< 10	11	19
691799 Dup	2.08	0.059	0.033	0.24	< 2	6	39	0.38	< 20	< 1	< 2	< 10	160	< 10	11	19
691812 Orig	0.94	0.103	0.157	0.30	< 2	2	126	< 0.01	< 20	< 1	< 2	< 10	19	< 10	7	3
691812 Dup	0.91	0.102	0.153	0.30	< 2	2	122	< 0.01	< 20	2	< 2	< 10	19	< 10	7	3
691822 Orig																
691822 Dup																
691824 Orig	2.06	0.084	0.039	0.19	< 2	8	28	0.44	< 20	5	< 2	< 10	187	< 10	14	24
691824 Dup	2.05	0.083	0.038	0.18	< 2	8	28	0.43	< 20	2	< 2	< 10	186	< 10	14	24
691832 Orig																
691832 Split PREP DUP																
691832 Orig																
691832 Dup																
Method Blank																
Method Blank																
Method Blank																
Method Blank																
Method Blank																
Method Blank																
Method Blank																
Method Blank																
Method Blank	< 0.01	0.009	< 0.001	< 0.01	< 2	< 1	< 1	< 0.01	< 20	< 1	< 2	< 10	< 1	< 10	< 1	< 1
Method Blank	< 0.01	0.010	< 0.001	< 0.01	< 2	< 1	< 1	< 0.01	< 20	< 1	< 2	< 10	< 1	< 10	< 1	< 1



**Date Submitted:** 24-Feb-18  
**Invoice No.:** A18-02178  
**Invoice Date:** 16-Apr-18  
**Your Reference:**

**Noble Mineral Exploration**  
**2500-120 Adelaide Street West**  
**Toronto ON M5H 1T1**  
**Canada**

**ATTN: Randy Singh (inv-cc)**

## CERTIFICATE OF ANALYSIS

105 Rock samples were submitted for analysis.

The following analytical package(s) were requested:

Code 1A2-Timmins Au - Fire Assay AA

Code 1E3-Timmins Aqua Regia ICP(AQUAGEO)

REPORT      **A18-02178**

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

Notes:

If value exceeds upper limit we recommend reassay by fire assay gravimetric-Code 1A3.

Values which exceed the upper limit should be assayed for accurate numbers.

CERTIFIED BY:

A handwritten signature in black ink, appearing to be "Emmanuel Esemé". The signature is written in a cursive, somewhat stylized font.

Emmanuel Esemé , Ph.D.  
Quality Control

**ACTIVATION LABORATORIES LTD.**  
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## Results

## Activation Laboratories Ltd.

## Report: A18-02178

Analyte Symbol	Au	Ag	Cd	Cu	Mn	Mo	Ni	Pb	Zn	Al	As	B	Ba	Be	Bi	Ca	Co	Cr	Fe	Ga	Hg	K	La
Unit Symbol	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm
Lower Limit	5	0.2	0.5	1	5	1	1	2	2	0.01	2	10	10	0.5	2	0.01	1	1	0.01	10	1	0.01	10
Method Code	FA-AA	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
691838	9	< 0.2	< 0.5	28	774	2	640	8	68	1.17	34	< 10	29	< 0.5	< 2	2.80	78	8	6.90	< 10	< 1	0.12	< 10
691839	7	< 0.2	< 0.5	28	522	2	806	8	50	0.87	59	< 10	20	< 0.5	< 2	2.94	88	9	8.43	< 10	< 1	0.14	< 10
691840	6	< 0.2	< 0.5	27	513	2	530	11	48	1.01	40	< 10	22	< 0.5	< 2	2.97	68	6	7.59	< 10	< 1	0.14	< 10
691841	< 5	< 0.2	0.5	25	511	2	325	4	50	1.03	26	< 10	29	< 0.5	< 2	3.65	46	7	5.41	< 10	< 1	0.14	< 10
691842	< 5	< 0.2	< 0.5	28	444	< 1	190	5	53	1.24	15	< 10	39	< 0.5	< 2	3.21	33	16	4.61	< 10	< 1	0.18	< 10
691843	< 5	< 0.2	< 0.5	28	637	< 1	163	4	54	1.27	10	< 10	55	< 0.5	< 2	3.42	35	28	4.31	< 10	< 1	0.18	15
691844	< 5	< 0.2	< 0.5	23	811	< 1	150	5	53	1.41	14	< 10	35	< 0.5	< 2	2.97	32	33	5.64	< 10	< 1	0.14	12
691845	< 5	< 0.2	< 0.5	26	1150	< 1	145	< 2	50	1.44	13	< 10	38	< 0.5	< 2	3.94	35	36	6.09	< 10	< 1	0.13	11
691846	< 5	< 0.2	< 0.5	20	1240	< 1	139	< 2	65	1.81	24	< 10	29	< 0.5	< 2	3.34	33	40	7.49	< 10	< 1	0.12	10
691847	< 5	< 0.2	< 0.5	14	2030	< 1	70	< 2	153	2.56	< 2	< 10	27	< 0.5	< 2	3.89	17	9	7.21	< 10	< 1	0.07	12
691848	1640	0.2	< 0.5	65	842	< 1	103	10	73	1.27	2420	< 10	68	< 0.5	< 2	1.18	27	31	5.28	< 10	< 1	0.06	13
691849	< 5	< 0.2	< 0.5	17	1450	< 1	66	< 2	135	2.14	3	< 10	39	< 0.5	< 2	4.01	18	7	5.75	< 10	< 1	0.13	12
691850	< 5	< 0.2	< 0.5	20	818	< 1	60	< 2	87	1.21	8	< 10	36	< 0.5	< 2	4.00	19	18	3.87	< 10	< 1	0.15	11
691851	< 5	< 0.2	< 0.5	19	771	< 1	65	2	102	1.42	6	< 10	47	< 0.5	< 2	3.28	21	7	4.44	< 10	< 1	0.20	14
691852	< 5	< 0.2	< 0.5	20	977	1	86	3	115	1.77	8	< 10	38	< 0.5	< 2	3.41	24	6	5.84	< 10	< 1	0.15	13
691853	< 5	< 0.2	< 0.5	14	1110	< 1	75	2	114	2.18	3	< 10	37	< 0.5	< 2	3.44	18	4	6.43	< 10	< 1	0.15	13
691854	< 5	< 0.2	< 0.5	16	1240	< 1	81	3	96	1.81	< 2	< 10	31	< 0.5	< 2	3.63	20	4	6.36	< 10	< 1	0.12	11
691855	< 5	< 0.2	< 0.5	18	1340	< 1	117	4	119	2.44	6	< 10	27	< 0.5	< 2	3.19	28	4	7.79	< 10	< 1	0.09	11
691856	< 5	< 0.2	< 0.5	17	1250	< 1	82	< 2	134	2.33	< 2	< 10	29	< 0.5	< 2	3.35	23	6	7.22	< 10	< 1	0.10	11
691857	< 5	< 0.2	< 0.5	16	1010	< 1	63	< 2	102	2.01	< 2	< 10	38	< 0.5	< 2	3.04	18	7	6.04	< 10	< 1	0.15	14
691858	< 5	< 0.2	< 0.5	19	986	< 1	94	< 2	112	2.11	< 2	< 10	38	< 0.5	< 2	2.91	26	5	6.33	< 10	< 1	0.14	13
691859	< 5	< 0.2	< 0.5	19	1030	< 1	94	2	116	2.11	3	< 10	39	< 0.5	< 2	2.96	25	5	6.55	< 10	< 1	0.14	13
691860	< 5	< 0.2	< 0.5	19	983	< 1	86	< 2	96	2.05	3	< 10	39	< 0.5	< 2	2.94	21	5	6.12	< 10	< 1	0.14	13
691861	< 5	< 0.2	< 0.5	19	1220	2	95	3	97	2.10	< 2	< 10	37	< 0.5	< 2	3.19	21	6	7.50	< 10	< 1	0.13	< 10
691862	< 5	< 0.2	< 0.5	18	1460	< 1	109	< 2	96	2.08	< 2	< 10	41	< 0.5	< 2	3.90	23	5	7.81	< 10	< 1	0.14	< 10
691863	< 5	< 0.2	< 0.5	18	1080	2	93	3	105	1.85	4	< 10	64	< 0.5	< 2	3.28	20	4	6.24	< 10	< 1	0.16	11
691864	< 5	< 0.2	< 0.5	18	1350	1	81	< 2	118	2.36	< 2	< 10	42	< 0.5	< 2	3.56	19	4	7.92	< 10	< 1	0.14	10
691865	< 5	< 0.2	0.5	19	1290	< 1	58	3	106	2.38	< 2	< 10	29	< 0.5	< 2	3.27	18	6	8.10	< 10	< 1	0.09	< 10
691866	< 5	< 0.2	< 0.5	15	1120	< 1	52	< 2	109	2.18	< 2	< 10	37	< 0.5	< 2	3.07	17	5	7.11	< 10	< 1	0.13	10
691867	< 5	< 0.2	< 0.5	16	1230	< 1	53	< 2	91	2.16	< 2	< 10	36	< 0.5	< 2	3.12	16	6	7.10	< 10	< 1	0.11	10
691868	< 5	< 0.2	0.7	18	1410	< 1	53	< 2	92	2.21	3	< 10	36	< 0.5	< 2	3.20	17	8	8.16	< 10	< 1	0.11	< 10
691869	< 5	< 0.2	< 0.5	16	1970	< 1	68	6	99	2.61	9	< 10	25	< 0.5	< 2	3.30	15	6	11.7	< 10	< 1	0.09	< 10
691870	< 5	< 0.2	< 0.5	10	1790	< 1	37	< 2	109	2.31	< 2	< 10	32	< 0.5	< 2	3.25	11	6	7.54	< 10	< 1	0.09	11
691871	< 5	< 0.2	0.5	17	1540	13	50	2	82	2.32	6	< 10	35	< 0.5	< 2	2.96	14	6	9.32	< 10	< 1	0.10	< 10
691872	< 5	< 0.2	< 0.5	15	1520	< 1	31	< 2	66	2.08	< 2	< 10	40	< 0.5	< 2	3.15	11	6	6.82	< 10	< 1	0.11	11
691873	< 5	< 0.2	< 0.5	21	1910	< 1	38	3	65	2.39	4	< 10	21	< 0.5	< 2	3.52	11	8	9.99	< 10	1	0.06	< 10
691874	< 5	< 0.2	< 0.5	19	1410	1	54	5	59	1.90	8	< 10	22	< 0.5	< 2	2.84	14	9	9.92	< 10	< 1	0.08	< 10
691875	< 5	< 0.2	0.5	14	1810	< 1	48	3	73	2.29	6	< 10	21	< 0.5	< 2	3.25	13	10	11.2	< 10	< 1	0.06	< 10
691876	< 5	< 0.2	< 0.5	7	1930	1	52	4	55	2.40	13	< 10	16	< 0.5	< 2	3.21	12	10	14.0	< 10	< 1	0.05	< 10
691877	10	0.3	< 0.5	15	2190	< 1	92	11	55	2.63	66	< 10	< 10	< 0.5	3	2.07	32	27	20.3	< 10	< 1	0.04	< 10
691878	< 5	< 0.2	< 0.5	5	2870	< 1	76	2	46	2.34	42	< 10	10	< 0.5	2	2.93	20	23	17.8	< 10	< 1	0.03	< 10
691879	< 5	< 0.2	< 0.5	11	2480	< 1	102	5	33	1.55	98	< 10	< 10	< 0.5	2	1.95	30	18	19.3	< 10	1	0.03	< 10

## Results

## Activation Laboratories Ltd.

## Report: A18-02178

Analyte Symbol	Au	Ag	Cd	Cu	Mn	Mo	Ni	Pb	Zn	Al	As	B	Ba	Be	Bi	Ca	Co	Cr	Fe	Ga	Hg	K	La
Unit Symbol	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm
Lower Limit	5	0.2	0.5	1	5	1	1	2	2	0.01	2	10	10	0.5	2	0.01	1	1	0.01	10	1	0.01	10
Method Code	FA-AA	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
691880	5	< 0.2	0.8	5	2470	< 1	91	3	51	2.35	62	< 10	< 10	< 0.5	2	2.94	25	36	17.2	< 10	< 1	0.04	< 10
691881	< 5	< 0.2	< 0.5	10	1020	< 1	98	4	19	0.74	99	< 10	< 10	< 0.5	< 2	2.18	32	19	13.7	< 10	< 1	0.11	< 10
691882	1230	0.2	< 0.5	158	659	< 1	61	3	61	3.41	6	37	24	< 0.5	< 2	2.91	29	113	5.59	10	< 1	0.05	< 10
691883	< 5	< 0.2	0.8	12	1020	< 1	109	3	29	0.94	95	< 10	< 10	< 0.5	< 2	2.05	33	23	15.3	< 10	< 1	0.09	< 10
691884	8	< 0.2	0.9	11	1210	< 1	98	5	30	0.96	79	< 10	< 10	< 0.5	< 2	2.17	35	24	13.6	< 10	< 1	0.09	< 10
691885	5	0.2	< 0.5	11	4610	< 1	101	4	49	1.55	89	< 10	< 10	< 0.5	5	3.08	29	20	21.3	< 10	< 1	0.04	< 10
691886	12	< 0.2	< 0.5	13	2350	< 1	74	9	73	2.53	50	< 10	13	< 0.5	< 2	2.84	27	20	16.4	< 10	< 1	0.04	< 10
691887	8	< 0.2	0.6	10	1880	< 1	32	< 2	92	2.58	< 2	< 10	14	< 0.5	< 2	2.92	10	9	7.87	10	< 1	0.03	< 10
691888	< 5	< 0.2	< 0.5	13	2180	< 1	40	3	107	2.67	3	< 10	18	< 0.5	< 2	3.75	12	10	8.92	< 10	< 1	0.04	< 10
691889	< 5	< 0.2	0.7	6	2360	< 1	42	2	95	2.62	5	< 10	16	< 0.5	< 2	4.41	10	8	9.59	< 10	< 1	0.04	< 10
691890	< 5	0.2	< 0.5	15	1570	< 1	104	8	39	1.43	89	< 10	< 10	< 0.5	2	1.97	29	23	16.4	< 10	< 1	0.08	< 10
691891	< 5	0.2	< 0.5	15	2290	< 1	93	5	44	1.88	93	< 10	< 10	< 0.5	< 2	1.76	32	29	19.1	< 10	< 1	0.03	< 10
691892	< 5	< 0.2	1.0	18	1430	< 1	118	9	36	1.16	92	< 10	< 10	< 0.5	3	2.69	39	22	16.6	< 10	< 1	0.06	< 10
691893	< 5	< 0.2	< 0.5	13	755	1	132	2	33	0.73	39	< 10	11	< 0.5	< 2	2.65	30	23	10.3	< 10	< 1	0.11	< 10
691894	< 5	< 0.2	< 0.5	23	733	1	150	6	21	0.67	120	< 10	< 10	< 0.5	< 2	2.40	42	24	16.7	< 10	< 1	0.11	< 10
691895	< 5	< 0.2	< 0.5	14	1030	1	134	5	28	0.85	93	< 10	< 10	< 0.5	3	2.28	37	23	16.7	< 10	1	0.09	< 10
691896	5	0.2	0.9	8	1450	< 1	118	7	38	1.29	72	< 10	< 10	< 0.5	3	2.36	32	28	17.3	< 10	< 1	0.07	< 10
691897	< 5	< 0.2	< 0.5	10	1670	< 1	107	5	32	1.21	77	< 10	< 10	< 0.5	5	2.04	30	24	17.9	< 10	< 1	0.07	< 10
691898	< 5	< 0.2	< 0.5	4	2190	< 1	62	6	61	2.61	29	< 10	16	< 0.5	< 2	2.71	16	14	14.5	< 10	< 1	0.06	< 10
691899	< 5	< 0.2	< 0.5	< 1	94	< 1	< 1	< 2	18	4.91	< 2	12	< 10	< 0.5	< 2	0.20	< 1	2	0.57	< 10	< 1	1.39	< 10
691900	< 5	< 0.2	0.6	8	2470	< 1	38	2	113	2.73	6	< 10	12	< 0.5	< 2	3.19	10	7	11.4	< 10	< 1	0.02	< 10
691901	< 5	< 0.2	< 0.5	12	1970	< 1	36	3	61	2.24	6	< 10	20	< 0.5	< 2	2.98	11	6	10.7	< 10	1	0.05	< 10
691902	< 5	< 0.2	< 0.5	12	1770	< 1	35	< 2	62	2.02	4	< 10	28	< 0.5	< 2	4.70	12	7	7.69	< 10	< 1	0.08	< 10
691903	< 5	< 0.2	< 0.5	20	917	< 1	42	< 2	51	1.17	3	< 10	36	< 0.5	2	3.27	14	9	5.21	< 10	< 1	0.13	< 10
691904	6	< 0.2	0.5	27	939	< 1	44	7	54	0.79	17	< 10	25	< 0.5	< 2	3.58	19	6	7.43	< 10	< 1	0.11	< 10
691905	< 5	< 0.2	< 0.5	17	739	< 1	30	5	29	0.57	14	< 10	36	< 0.5	< 2	2.95	14	8	4.84	< 10	< 1	0.13	< 10
691906	6	< 0.2	< 0.5	22	606	1	25	3	45	0.80	7	< 10	43	< 0.5	2	3.05	15	5	3.64	< 10	< 1	0.15	10
691907	< 5	< 0.2	< 0.5	23	773	< 1	30	3	61	1.20	5	< 10	35	< 0.5	< 2	3.42	15	5	5.29	< 10	< 1	0.12	< 10
691908	< 5	< 0.2	< 0.5	17	864	< 1	34	< 2	54	1.09	2	< 10	38	< 0.5	< 2	3.35	15	5	4.65	< 10	< 1	0.13	11
691909	< 5	< 0.2	< 0.5	19	774	< 1	35	3	50	1.00	5	< 10	37	< 0.5	< 2	3.21	14	4	4.92	< 10	< 1	0.12	< 10
691910	< 5	< 0.2	< 0.5	20	673	< 1	27	< 2	57	1.16	6	< 10	30	< 0.5	< 2	2.79	14	4	4.81	< 10	< 1	0.10	< 10
691911	< 5	< 0.2	< 0.5	20	699	< 1	28	2	58	1.22	6	< 10	31	< 0.5	< 2	2.91	15	4	5.06	< 10	< 1	0.10	< 10
691912	< 5	< 0.2	< 0.5	15	888	< 1	25	< 2	55	1.21	3	< 10	47	< 0.5	< 2	3.14	12	4	5.04	< 10	< 1	0.09	< 10
691913	< 5	< 0.2	< 0.5	14	961	< 1	28	< 2	46	0.96	3	< 10	31	< 0.5	< 2	3.44	12	3	4.98	< 10	< 1	0.11	< 10
691914	< 5	< 0.2	< 0.5	17	1010	< 1	26	2	47	1.18	3	< 10	27	< 0.5	< 2	3.38	12	3	6.53	< 10	< 1	0.10	< 10
691915	< 5	< 0.2	< 0.5	17	811	< 1	38	< 2	50	1.05	6	< 10	31	< 0.5	< 2	3.50	15	2	5.31	< 10	< 1	0.11	< 10
691916	< 5	< 0.2	< 0.5	21	863	< 1	37	< 2	60	1.15	8	< 10	32	< 0.5	< 2	3.60	17	2	5.67	< 10	< 1	0.11	< 10
691917	> 5000	1.4	< 0.5	132	605	4	134	30	63	2.94	48	11	49	< 0.5	< 2	3.11	28	407	4.23	< 10	< 1	0.18	< 10
691918	< 5	< 0.2	< 0.5	28	798	< 1	46	2	67	1.22	18	< 10	28	< 0.5	< 2	3.24	18	4	7.41	< 10	< 1	0.11	< 10
691919	< 5	< 0.2	0.7	29	1050	< 1	68	3	70	0.95	24	< 10	20	< 0.5	< 2	3.49	27	5	8.41	< 10	< 1	0.10	< 10
691920	< 5	< 0.2	0.6	24	915	< 1	62	5	87	0.98	37	< 10	20	< 0.5	< 2	3.03	27	5	8.48	< 10	< 1	0.10	< 10
691921	< 5	< 0.2	< 0.5	13	814	< 1	46	3	51	0.90	30	< 10	23	< 0.5	< 2	3.02	16	4	7.02	< 10	< 1	0.10	< 10

Analyte Symbol	Au	Ag	Cd	Cu	Mn	Mo	Ni	Pb	Zn	Al	As	B	Ba	Be	Bi	Ca	Co	Cr	Fe	Ga	Hg	K	La
Unit Symbol	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm
Lower Limit	5	0.2	0.5	1	5	1	1	2	2	0.01	2	10	10	0.5	2	0.01	1	1	0.01	10	1	0.01	10
Method Code	FA-AA	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
691922	< 5	< 0.2	< 0.5	16	913	< 1	56	4	60	0.97	48	< 10	20	< 0.5	< 2	2.99	20	4	8.77	< 10	< 1	0.11	< 10
691923	< 5	< 0.2	< 0.5	22	1100	< 1	77	5	78	0.95	67	< 10	15	< 0.5	< 2	2.92	23	5	11.4	< 10	< 1	0.10	< 10
691924	< 5	< 0.2	< 0.5	31	1330	< 1	73	6	82	1.01	61	< 10	15	< 0.5	< 2	2.94	23	5	12.1	< 10	< 1	0.09	< 10
691925	< 5	< 0.2	< 0.5	6	3870	< 1	32	2	67	1.00	13	< 10	25	< 0.5	< 2	2.93	11	4	10.9	< 10	< 1	0.10	< 10
691926	< 5	< 0.2	< 0.5	8	4110	< 1	32	< 2	69	0.99	10	< 10	22	< 0.5	< 2	3.03	11	3	12.6	< 10	< 1	0.09	< 10
691927	< 5	< 0.2	0.7	16	4970	< 1	33	3	81	0.89	15	< 10	21	< 0.5	< 2	2.39	14	4	14.4	< 10	< 1	0.08	< 10
691928	< 5	< 0.2	0.5	9	4850	< 1	24	< 2	61	0.75	3	< 10	22	< 0.5	< 2	3.12	8	5	12.0	< 10	< 1	0.08	< 10
691929	< 5	< 0.2	< 0.5	16	3450	< 1	27	< 2	59	0.69	11	< 10	26	< 0.5	< 2	3.15	11	5	9.19	< 10	< 1	0.10	< 10
691930	< 5	< 0.2	< 0.5	< 1	113	< 1	< 1	< 2	14	3.85	< 2	< 10	< 10	< 0.5	< 2	0.17	< 1	3	0.49	< 10	< 1	1.28	< 10
691931	< 5	< 0.2	< 0.5	17	3920	< 1	37	< 2	77	1.04	28	< 10	30	< 0.5	< 2	4.24	15	6	11.0	< 10	< 1	0.10	< 10
691932	< 5	< 0.2	0.5	15	2290	< 1	45	3	65	0.70	50	< 10	21	< 0.5	< 2	2.47	17	7	8.39	< 10	< 1	0.10	< 10
691933	< 5	< 0.2	< 0.5	16	2550	< 1	58	4	70	0.86	70	< 10	17	< 0.5	< 2	3.08	21	6	10.5	< 10	< 1	0.10	< 10
691934	< 5	< 0.2	< 0.5	14	2040	< 1	51	7	60	0.81	122	< 10	14	< 0.5	< 2	2.60	24	4	11.8	< 10	< 1	0.10	< 10
691935	132	0.3	< 0.5	10	3490	< 1	54	12	58	0.32	144	< 10	< 10	< 0.5	< 2	3.24	20	5	15.1	< 10	< 1	0.01	< 10
691936	108	0.4	< 0.5	13	5890	< 1	74	14	59	0.36	201	< 10	< 10	< 0.5	6	2.00	23	5	23.6	< 10	< 1	< 0.01	< 10
691937	54	0.5	< 0.5	16	2730	< 1	56	15	56	0.09	197	< 10	< 10	< 0.5	3	1.11	15	24	17.9	< 10	< 1	< 0.01	< 10
691938	156	0.6	0.6	27	2720	< 1	71	20	89	0.15	225	< 10	< 10	< 0.5	4	1.03	23	8	18.4	< 10	< 1	< 0.01	< 10
691939	716	0.7	0.7	28	757	< 1	93	37	165	0.23	304	< 10	< 10	< 0.5	4	1.06	63	11	14.5	< 10	< 1	0.03	< 10
691940	1810	0.3	< 0.5	147	639	< 1	62	6	56	3.28	10	13	24	< 0.5	< 2	2.84	27	102	4.76	< 10	< 1	0.07	< 10
691941	311	0.5	0.8	25	2150	2	82	25	173	0.33	287	< 10	< 10	< 0.5	3	0.76	34	9	18.3	< 10	< 1	0.07	< 10
691942	334	0.8	0.6	44	180	3	120	98	70	2.34	316	< 10	10	1.0	< 2	0.45	44	30	12.9	< 10	< 1	0.10	< 10



Analyte Symbol	Mg	Na	P	S	Sb	Sc	Sr	Ti	Th	Te	Tl	U	V	W	Y	Zr	Au
Unit Symbol	%	%	%	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	g/tonne
Lower Limit	0.01	0.001	0.001	0.01	2	1	1	0.01	20	1	2	10	1	10	1	1	0.03
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	FA- GRA
691838	0.93	0.064	0.094	3.59	4	2	106	< 0.01	< 20	< 1	< 2	< 10	18	< 10	4	18	
691839	0.65	0.067	0.093	6.90	4	2	110	< 0.01	< 20	2	< 2	< 10	12	< 10	5	21	
691840	0.78	0.076	0.092	6.04	4	2	98	< 0.01	< 20	< 1	< 2	< 10	15	< 10	5	19	
691841	0.70	0.067	0.096	3.74	3	1	135	< 0.01	< 20	2	< 2	< 10	12	< 10	5	18	
691842	0.75	0.077	0.126	2.51	3	2	121	< 0.01	< 20	2	< 2	< 10	17	< 10	6	13	
691843	0.98	0.080	0.148	1.69	< 2	2	111	< 0.01	< 20	< 1	< 2	< 10	18	< 10	6	7	
691844	0.84	0.061	0.139	2.86	2	2	98	< 0.01	< 20	< 1	< 2	< 10	23	< 10	5	14	
691845	0.86	0.053	0.138	3.03	2	2	121	< 0.01	< 20	3	< 2	< 10	25	< 10	5	14	
691846	1.01	0.055	0.135	3.70	3	4	115	< 0.01	< 20	< 1	< 2	< 10	38	< 10	5	14	
691847	1.54	0.045	0.084	0.25	2	6	127	< 0.01	< 20	3	< 2	< 10	50	< 10	5	9	
691848	1.94	0.270	0.120	0.71	2	2	71	0.12	< 20	7	< 2	< 10	30	< 10	13	5	
691849	1.21	0.046	0.089	0.24	3	4	164	< 0.01	< 20	< 1	< 2	< 10	33	< 10	5	9	
691850	1.17	0.044	0.085	0.33	< 2	2	109	< 0.01	< 20	1	< 2	< 10	13	< 10	4	8	
691851	1.12	0.058	0.098	0.37	< 2	2	107	< 0.01	< 20	1	< 2	< 10	16	< 10	5	8	
691852	1.27	0.048	0.094	0.60	3	3	109	< 0.01	< 20	2	< 2	< 10	24	< 10	4	10	
691853	1.34	0.073	0.088	0.28	4	3	130	< 0.01	< 20	1	< 2	< 10	29	< 10	5	10	
691854	1.35	0.034	0.080	0.39	2	3	159	< 0.01	< 20	4	< 2	< 10	28	< 10	4	10	
691855	1.52	0.040	0.084	0.64	3	4	153	< 0.01	< 20	2	< 2	< 10	41	< 10	4	11	
691856	1.50	0.040	0.081	0.37	3	5	142	< 0.01	< 20	5	< 2	< 10	44	< 10	4	10	
691857	1.25	0.051	0.086	0.37	< 2	4	123	< 0.01	< 20	3	< 2	< 10	35	< 10	4	10	
691858	1.33	0.051	0.093	0.68	2	4	122	< 0.01	< 20	3	< 2	< 10	36	< 10	4	10	
691859	1.31	0.050	0.090	0.66	3	4	125	< 0.01	< 20	5	< 2	< 10	36	< 10	4	11	
691860	1.27	0.053	0.096	0.59	4	3	126	< 0.01	< 20	3	< 2	< 10	30	< 10	4	11	
691861	1.34	0.046	0.082	1.46	3	4	150	< 0.01	< 20	< 1	< 2	< 10	32	< 10	4	14	
691862	1.37	0.045	0.082	1.04	3	4	190	< 0.01	< 20	3	< 2	< 10	32	< 10	4	14	
691863	1.18	0.046	0.090	0.70	3	3	161	< 0.01	< 20	2	< 2	< 10	25	< 10	5	11	
691864	1.47	0.043	0.085	0.92	3	4	175	< 0.01	< 20	3	< 2	< 10	32	< 10	4	12	
691865	1.47	0.040	0.083	1.02	3	4	153	< 0.01	< 20	4	< 2	< 10	38	< 10	4	12	
691866	1.25	0.047	0.084	0.66	2	4	146	< 0.01	< 20	5	< 2	< 10	36	< 10	4	11	
691867	1.32	0.043	0.081	0.81	3	5	152	< 0.01	< 20	< 1	< 2	< 10	39	< 10	4	11	
691868	1.31	0.041	0.084	1.47	4	5	159	< 0.01	< 20	3	< 2	< 10	38	< 10	4	11	
691869	1.39	0.031	0.069	3.76	4	6	173	< 0.01	< 20	5	< 2	< 10	50	< 10	4	13	
691870	1.28	0.041	0.074	0.40	3	5	174	< 0.01	< 20	3	< 2	< 10	43	< 10	4	10	
691871	1.26	0.042	0.076	2.54	4	5	159	< 0.01	< 20	2	< 2	< 10	42	< 10	4	13	
691872	1.25	0.057	0.081	0.53	3	5	167	< 0.01	< 20	2	< 2	< 10	40	< 10	5	10	
691873	1.39	0.034	0.066	2.53	4	7	173	< 0.01	< 20	< 1	< 2	< 10	53	< 10	4	11	
691874	1.06	0.045	0.074	4.83	3	4	129	< 0.01	< 20	1	< 2	< 10	38	< 10	4	12	
691875	1.23	0.033	0.068	4.56	4	6	156	< 0.01	< 20	8	< 2	< 10	48	< 10	4	12	
691876	1.30	0.034	0.062	7.19	7	6	147	< 0.01	< 20	4	< 2	< 10	53	< 10	3	13	
691877	0.92	0.025	0.067	14.1	10	8	106	< 0.01	< 20	7	< 2	< 10	64	< 10	3	14	
691878	1.10	0.025	0.062	10.9	9	7	148	< 0.01	< 20	5	< 2	< 10	52	< 10	3	13	

Analyte Symbol	Mg	Na	P	S	Sb	Sc	Sr	Ti	Th	Te	Tl	U	V	W	Y	Zr	Au
Unit Symbol	%	%	%	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	g/tonne
Lower Limit	0.01	0.001	0.001	0.01	2	1	1	0.01	20	1	2	10	1	10	1	1	0.03
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	FA- GRA
691879	0.91	0.022	0.040	13.7	8	7	105	< 0.01	< 20	< 1	< 2	< 10	50	< 10	2	12	
691880	1.13	0.030	0.081	10.7	8	9	140	< 0.01	< 20		2	< 2	< 10	69	< 10	3	12
691881	0.48	0.038	0.082	13.3	6	1	99	< 0.01	< 20		4	< 2	< 10	14	< 10	3	12
691882	1.95	0.072	0.037	0.19	< 2	7	24	0.40	< 20		6	< 2	< 10	172	< 10	13	17
691883	0.51	0.033	0.079	14.4	7	2	86	< 0.01	< 20		3	< 2	< 10	18	< 10	3	12
691884	0.57	0.034	0.087	12.1	5	2	93	< 0.01	< 20		1	< 2	< 10	20	< 10	3	11
691885	1.16	0.023	0.054	12.5	8	8	152	< 0.01	< 20		2	< 2	< 10	48	< 10	3	12
691886	1.18	0.027	0.064	9.19	7	8	147	< 0.01	< 20	< 1	< 2	< 10	65	< 10	3	12	
691887	1.39	0.028	0.077	0.47	3	7	152	< 0.01	< 20		1	< 2	< 10	59	< 10	3	8
691888	1.64	0.039	0.070	0.75	4	7	176	< 0.01	< 20		3	< 2	< 10	60	< 10	4	10
691889	1.68	0.031	0.063	0.96	3	6	210	< 0.01	< 20		1	< 2	< 10	54	< 10	4	10
691890	0.74	0.035	0.063	12.7	10	4	87	< 0.01	< 20		4	< 2	< 10	36	< 10	2	13
691891	0.81	0.021	0.057	14.1	11	7	74	< 0.01	< 20		2	< 2	< 10	56	< 10	2	11
691892	0.58	0.031	0.080	14.0	8	3	160	< 0.01	< 20		2	< 2	< 10	29	< 10	3	15
691893	0.48	0.043	0.107	9.79	6	1	100	< 0.01	< 20	< 1	< 2	< 10	13	< 10	4	16	
691894	0.33	0.041	0.080	16.1	9	< 1	110	< 0.01	< 20		4	< 2	< 10	11	< 10	3	17
691895	0.44	0.037	0.081	16.1	8	1	89	< 0.01	< 20		3	< 2	< 10	14	< 10	3	16
691896	0.71	0.031	0.082	15.1	7	3	70	< 0.01	< 20		6	< 2	< 10	26	< 10	3	13
691897	0.70	0.030	0.072	14.9	8	3	76	< 0.01	< 20		3	< 2	< 10	24	< 10	3	13
691898	1.25	0.034	0.082	6.67	7	7	133	< 0.01	< 20	< 1	< 2	< 10	60	< 10	3	12	
691899	0.05	2.89	< 0.001	0.01	< 2	< 1	21	< 0.01	< 20	< 1	< 2	< 10	< 1	< 10	3	< 1	
691900	1.32	0.030	0.067	2.73	5	8	174	< 0.01	< 20		9	< 2	< 10	67	< 10	3	11
691901	1.15	0.031	0.072	3.82	6	5	144	< 0.01	< 20		2	< 2	< 10	45	< 10	3	12
691902	1.21	0.050	0.074	1.44	4	5	245	< 0.01	< 20		3	< 2	< 10	41	< 10	4	11
691903	0.94	0.054	0.083	1.06	2	3	125	< 0.01	< 20		3	< 2	< 10	17	< 10	4	10
691904	0.86	0.067	0.080	4.26	5	2	120	< 0.01	< 20	< 1	< 2	< 10	11	< 10	3	13	
691905	0.60	0.070	0.085	2.66	3	1	92	< 0.01	< 20		5	< 2	< 10	7	< 10	3	11
691906	0.84	0.074	0.096	0.93	< 2	2	101	< 0.01	< 20	< 1	< 2	< 10	11	< 10	4	9	
691907	0.90	0.067	0.093	1.31	2	2	104	< 0.01	< 20		4	< 2	< 10	18	< 10	4	10
691908	0.83	0.068	0.093	0.88	2	2	97	< 0.01	< 20		2	< 2	< 10	17	< 10	4	9
691909	0.77	0.058	0.091	1.49	< 2	2	97	< 0.01	< 20		3	< 2	< 10	13	< 10	4	9
691910	0.90	0.050	0.090	1.30	< 2	2	87	< 0.01	< 20		3	< 2	< 10	17	< 10	4	9
691911	0.95	0.052	0.094	1.34	< 2	2	90	< 0.01	< 20		2	< 2	< 10	17	< 10	4	10
691912	1.04	0.049	0.091	1.12	< 2	3	90	< 0.01	< 20		3	< 2	< 10	19	< 10	3	9
691913	0.89	0.065	0.085	1.16	< 2	3	108	< 0.01	< 20		3	< 2	< 10	16	< 10	3	10
691914	0.85	0.065	0.080	1.57	3	4	112	< 0.01	< 20		2	< 2	< 10	19	< 10	3	10
691915	0.90	0.071	0.085	1.34	< 2	3	125	< 0.01	< 20	< 1	< 2	< 10	14	< 10	4	11	
691916	1.02	0.079	0.089	1.42	2	3	124	< 0.01	< 20		2	< 2	< 10	17	< 10	4	12
691917	2.92	0.058	0.028	0.67	3	9	41	0.22	< 20	< 1	< 2	< 10	112	< 10	9	15	6.81
691918	0.91	0.070	0.084	3.11	3	3	105	< 0.01	< 20		3	< 2	< 10	16	< 10	3	12
691919	0.87	0.065	0.068	4.12	4	3	104	< 0.01	< 20		4	< 2	< 10	16	< 10	3	14
691920	0.82	0.064	0.072	4.47	5	3	100	< 0.01	< 20		3	< 2	< 10	16	< 10	3	13

Analyte Symbol	Mg	Na	P	S	Sb	Sc	Sr	Ti	Th	Te	Tl	U	V	W	Y	Zr	Au
Unit Symbol	%	%	%	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	g/tonne
Lower Limit	0.01	0.001	0.001	0.01	2	1	1	0.01	20	1	2	10	1	10	1	1	0.03
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	FA- GRA
691921	0.77	0.063	0.071	3.85	4	2	105	< 0.01	< 20	5	< 2	< 10	11	< 10	3	13	
691922	0.80	0.067	0.064	5.26	5	3	105	< 0.01	< 20	2	< 2	< 10	13	< 10	3	14	
691923	0.86	0.061	0.059	7.50	7	3	100	< 0.01	< 20	2	< 2	< 10	17	< 10	3	15	
691924	0.88	0.056	0.060	7.54	7	3	103	< 0.01	< 20	2	< 2	< 10	17	< 10	3	16	
691925	1.15	0.062	0.064	1.71	6	3	103	< 0.01	< 20	< 1	< 2	< 10	18	< 10	3	12	
691926	1.21	0.060	0.060	2.35	7	4	106	< 0.01	< 20	7	< 2	< 10	21	< 10	3	13	
691927	1.15	0.053	0.053	3.19	8	3	87	< 0.01	< 20	3	< 2	< 10	21	< 10	3	12	
691928	1.19	0.049	0.055	1.52	5	3	110	< 0.01	< 20	6	< 2	< 10	17	< 10	3	11	
691929	1.06	0.045	0.050	1.31	5	4	114	< 0.01	< 20	9	< 2	< 10	19	< 10	3	10	
691930	0.04	2.61	< 0.001	0.01	< 2	< 1	17	< 0.01	< 20	1	< 2	< 10	< 1	< 10	3	< 1	
691931	1.34	0.046	0.057	1.78	4	4	149	< 0.01	< 20	6	< 2	< 10	20	< 10	4	13	
691932	0.70	0.045	0.062	4.01	6	2	88	< 0.01	< 20	3	< 2	< 10	9	< 10	3	10	
691933	0.88	0.039	0.061	5.65	8	2	111	< 0.01	< 20	1	< 2	< 10	12	< 10	3	11	
691934	0.76	0.035	0.062	7.98	13	2	98	< 0.01	< 20	< 1	< 2	< 10	9	< 10	3	12	
691935	1.07	0.014	0.007	10.2	20	2	113	< 0.01	< 20	3	< 2	< 10	15	< 10	2	8	
691936	1.24	0.011	0.004	13.5	31	3	63	< 0.01	< 20	3	< 2	< 10	20	< 10	2	9	
691937	0.63	0.013	0.002	13.7	31	2	39	< 0.01	< 20	4	< 2	< 10	15	< 10	< 1	7	
691938	0.67	0.011	0.003	13.8	26	2	36	< 0.01	< 20	5	< 2	< 10	14	< 10	< 1	6	
691939	0.31	0.017	0.008	14.7	24	1	41	< 0.01	< 20	3	< 2	< 10	10	< 10	< 1	8	
691940	1.83	0.049	0.030	0.25	< 2	5	31	0.32	< 20	4	< 2	< 10	137	< 10	9	13	
691941	0.25	0.024	0.032	15.3	15	3	40	< 0.01	< 20	4	< 2	< 10	7	< 10	3	17	
691942	0.44	0.020	0.051	9.28	14	3	21	< 0.01	< 20	< 1	< 2	< 10	31	< 10	4	15	

Analyte Symbol	Au	Ag	Cd	Cu	Mn	Mo	Ni	Pb	Zn	Al	As	B	Ba	Be	Bi	Ca	Co	Cr	Fe	Ga	Hg	K	La
Unit Symbol	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm
Lower Limit	5	0.2	0.5	1	5	1	1	2	2	0.01	2	10	10	0.5	2	0.01	1	1	0.01	10	1	0.01	10
Method Code	FA-AA	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
GXR-1 Meas		28.7	3.0	1200	771	14	22	635	678	0.31	332	< 10	260	0.7	1380	0.74	5	5	22.0	< 10	3	0.03	< 10
GXR-1 Cert		31.0	3.30	1110	852	18.0	41.0	730	760	3.52	427	15.0	750	1.22	1380	0.960	8.20	12.0	23.6	13.8	3.90	0.050	7.50
GXR-6 Meas		0.3	< 0.5	73	1030	1	18	93	126	7.02	237	< 10	879	0.8	< 2	0.14	13	74	5.42	20	1	1.03	< 10
GXR-6 Cert		1.30	1.00	66.0	1010	2.40	27.0	101	118	17.7	330	9.80	1300	1.40	0.290	0.180	13.8	96.0	5.58	35.0	0.0680	1.87	13.9
OREAS 134b (AQUA REGIA) Meas		> 100	537	1240				> 5000	> 10000		187						91		9.93				
OREAS 134b (AQUA REGIA) Cert		204	563	1360				133000	177000		221						110		12.25				
OREAS 133a (Aqua Regia) Meas		84.8	275	303				> 5000	> 10000		112		13				18		6.51				
OREAS 133a (Aqua Regia) Cert		97	297	324				48600.00	106000.00		140		59				23		7.92				
OXN117 Meas																							
OXN117 Cert																							
OxP116 Meas																							
OxP116 Cert																							
OREAS 218 Meas	538																						
OREAS 218 Cert	531																						
OREAS 218 Meas	561																						
OREAS 218 Cert	531																						
OREAS 218 Meas	557																						
OREAS 218 Cert	531																						
OREAS 218 Meas	551																						
OREAS 218 Cert	531																						
OREAS 224 Meas	2180																						
OREAS 224 Cert	2150.00																						
OREAS 224 Meas	2230																						
OREAS 224 Cert	2150.00																						
OREAS 224 Meas	2180																						
OREAS 224 Cert	2150.00																						
OREAS 224 Meas	2240																						
OREAS 224 Cert	2150.00																						
691838 Orig		< 0.2	< 0.5	29	776	2	643	8	70	1.18	34	< 10	32	< 0.5	< 2	2.81	79	8	6.87	< 10	< 1	0.13	< 10
691838 Dup		< 0.2	< 0.5	28	772	2	637	8	67	1.16	35	< 10	26	< 0.5	< 2	2.79	77	8	6.93	< 10	< 1	0.12	< 10
691846 Orig		< 0.2	< 0.5	20	1250	< 1	139	< 2	65	1.82	23	< 10	30	< 0.5	< 2	3.35	33	41	7.55	< 10	< 1	0.13	11
691846 Dup		< 0.2	0.6	19	1230	< 1	139	3	64	1.80	24	< 10	27	< 0.5	< 2	3.34	33	40	7.43	< 10	< 1	0.12	10
691847 Orig	< 5																						
691847 Dup	< 5																						

Analyte Symbol	Au	Ag	Cd	Cu	Mn	Mo	Ni	Pb	Zn	Al	As	B	Ba	Be	Bi	Ca	Co	Cr	Fe	Ga	Hg	K	La
Unit Symbol	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm
Lower Limit	5	0.2	0.5	1	5	1	1	2	2	0.01	2	10	10	0.5	2	0.01	1	1	0.01	10	1	0.01	10
Method Code	FA-AA	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
691857 Orig	< 5																						
691857 Dup	< 5																						
691867 Orig	< 5																						
691867 Dup	< 5																						
691883 Orig	5																						
691883 Dup	< 5																						
691886 Orig		0.2	< 0.5	13	2340	< 1	74	9	71	2.52	50	< 10	13	< 0.5	< 2	2.83	26	20	16.4	< 10	< 1	0.04	< 10
691886 Dup		< 0.2	0.9	14	2360	< 1	74	8	74	2.54	51	< 10	12	< 0.5	< 2	2.86	27	20	16.4	< 10	< 1	0.04	< 10
691887 Orig	8	< 0.2	0.6	10	1880	< 1	32	< 2	92	2.58	< 2	< 10	14	< 0.5	< 2	2.92	10	9	7.87	10	< 1	0.03	< 10
691887 Split PREP DUP	< 5	< 0.2	0.6	11	2050	< 1	35	< 2	101	2.65	< 2	< 10	15	< 0.5	< 2	3.03	11	9	8.81	< 10	< 1	0.03	< 10
691892 Orig	< 5																						
691892 Dup	< 5																						
691899 Orig		< 0.2	< 0.5	1	96	< 1	< 1	3	21	5.05	< 2	13	< 10	0.5	< 2	0.20	< 1	2	0.60	< 10	< 1	1.38	< 10
691899 Dup		< 0.2	< 0.5	< 1	91	< 1	< 1	< 2	16	4.77	< 2	12	< 10	< 0.5	< 2	0.19	< 1	2	0.55	< 10	< 1	1.39	< 10
691902 Orig	< 5	< 0.2	0.5	13	1800	< 1	36	< 2	62	2.06	4	< 10	29	< 0.5	< 2	4.77	12	7	7.85	< 10	< 1	0.08	< 10
691902 Dup	< 5	< 0.2	< 0.5	12	1750	< 1	34	3	61	1.98	4	< 10	27	< 0.5	< 2	4.63	12	6	7.53	< 10	< 1	0.08	< 10
691915 Orig		< 0.2	< 0.5	17	799	< 1	37	< 2	50	1.04	6	< 10	31	< 0.5	< 2	3.46	14	2	5.23	< 10	< 1	0.11	< 10
691915 Dup		< 0.2	< 0.5	18	824	< 1	39	< 2	51	1.06	7	< 10	32	< 0.5	< 2	3.55	15	2	5.40	< 10	< 1	0.12	< 10
691918 Orig	< 5																						
691918 Dup	< 5																						
691927 Orig	< 5	< 0.2	0.7	16	4990	< 1	32	3	81	0.89	15	< 10	20	< 0.5	< 2	2.41	15	4	14.5	< 10	< 1	0.08	< 10
691927 Dup	< 5	< 0.2	0.8	16	4950	< 1	33	3	81	0.89	15	< 10	21	< 0.5	2	2.38	13	4	14.3	< 10	< 1	0.08	< 10
691937 Orig	54	0.5	< 0.5	16	2730	< 1	56	15	56	0.09	197	< 10	< 10	< 0.5	3	1.11	15	24	17.9	< 10	< 1	< 0.01	< 10
691937 Split PREP DUP	58	0.7	0.5	19	2830	< 1	64	14	56	0.10	219	< 10	< 10	< 0.5	3	1.12	16	15	19.7	< 10	< 1	< 0.01	< 10
691937 Orig	55																						
691937 Dup	52																						
691941 Orig		0.5	0.9	24	2140	2	77	25	173	0.33	269	< 10	< 10	< 0.5	3	0.75	33	10	17.5	< 10	< 1	0.07	< 10
691941 Dup		0.5	0.8	26	2170	2	87	26	173	0.33	305	< 10	< 10	< 0.5	4	0.77	34	8	19.1	< 10	< 1	0.07	< 10
Method Blank	< 5																						
Method Blank	< 5																						
Method Blank	< 5																						
Method Blank	< 5																						
Method Blank	< 5																						
Method Blank	< 5																						
Method Blank	< 5																						
Method Blank	< 5																						
Method Blank		< 0.2	< 0.5	< 1	< 5	< 1	< 1	< 2	< 2	< 0.01	< 2	< 10	< 10	< 0.5	< 2	< 0.01	< 1	< 1	< 0.01	< 10	< 1	< 0.01	< 10
Method Blank		< 0.2	< 0.5	< 1	< 5	< 1	< 1	< 2	< 2	< 0.01	< 2	< 10	< 10	< 0.5	< 2	< 0.01	< 1	< 1	< 0.01	< 10	< 1	< 0.01	< 10

Analyte Symbol	Mg	Na	P	S	Sb	Sc	Sr	Ti	Th	Te	Tl	U	V	W	Y	Zr	Au
Unit Symbol	%	%	%	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	g/tonne
Lower Limit	0.01	0.001	0.001	0.01	2	1	1	0.01	20	1	2	10	1	10	1	1	0.03
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	FA- GRA
GXR-1 Meas	0.11	0.048	0.036	0.18	84	< 1	138	< 0.01	< 20	13	< 2	26	75	132	24	13	
GXR-1 Cert	0.217	0.0520	0.0650	0.257	122	1.58	275	0.036	2.44	13.0	0.390	34.9	80.0	164	32.0	38.0	
GXR-6 Meas	0.35	0.079	0.033	0.01	5	20	28		< 20	2	< 2	< 10	178	< 10	5	14	
GXR-6 Cert	0.609	0.104	0.0350	0.0160	3.60	27.6	35.0		5.30	0.0180	2.20	1.54	186	1.90	14.0	110	
OREAS 134b (AQUA REGIA) Meas				11.7													
OREAS 134b (AQUA REGIA) Cert				19.31													
OREAS 133a (Aqua Regia) Meas				8.81	125												
OREAS 133a (Aqua Regia) Cert				10.7	147												
OXN117 Meas																	7.70
OXN117 Cert																	7.679
OxP116 Meas																	15.0
OxP116 Cert																	14.92
OREAS 218 Meas																	
OREAS 218 Cert																	
OREAS 218 Meas																	
OREAS 218 Cert																	
OREAS 218 Meas																	
OREAS 218 Cert																	
OREAS 218 Meas																	
OREAS 218 Cert																	
OREAS 224 Meas																	
OREAS 224 Cert																	
OREAS 224 Meas																	
OREAS 224 Cert																	
OREAS 224 Meas																	
OREAS 224 Cert																	
OREAS 224 Meas																	
OREAS 224 Cert																	
691838 Orig	0.94	0.063	0.095	3.63	4	2	107	< 0.01	< 20	< 1	< 2	< 10	18	< 10	4	18	
691838 Dup	0.92	0.064	0.094	3.55	4	2	104	< 0.01	< 20	< 1	< 2	< 10	18	< 10	4	18	
691846 Orig	1.02	0.056	0.136	3.72	4	4	116	< 0.01	< 20	< 1	< 2	< 10	38	< 10	5	14	
691846 Dup	1.00	0.053	0.134	3.68	3	4	114	< 0.01	< 20	< 1	< 2	< 10	37	< 10	5	14	
691847 Orig																	
691847 Dup																	
691857 Orig																	
691857 Dup																	

Analyte Symbol	Mg	Na	P	S	Sb	Sc	Sr	Ti	Th	Te	Tl	U	V	W	Y	Zr	Au
Unit Symbol	%	%	%	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	g/tonne
Lower Limit	0.01	0.001	0.001	0.01	2	1	1	0.01	20	1	2	10	1	10	1	1	0.03
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	FA- GRA
691867 Orig																	
691867 Dup																	
691883 Orig																	
691883 Dup																	
691886 Orig	1.17	0.027	0.064	9.01	8	8	146	< 0.01	< 20	< 1	< 2	< 10	65	< 10	3	12	
691886 Dup	1.18	0.028	0.064	9.37	7	8	149	< 0.01	< 20	6	< 2	< 10	65	< 10	3	12	
691887 Orig	1.39	0.028	0.077	0.47	3	7	152	< 0.01	< 20	1	< 2	< 10	59	< 10	3	8	
691887 Split PREP DUP	1.43	0.032	0.080	0.51	2	7	160	< 0.01	< 20	< 1	< 2	< 10	61	< 10	4	9	
691892 Orig																	
691892 Dup																	
691899 Orig	0.05	2.94	0.001	0.01	< 2	< 1	22	< 0.01	< 20	1	< 2	< 10	< 1	< 10	3	1	
691899 Dup	0.04	2.85	< 0.001	0.01	< 2	< 1	21	< 0.01	< 20	< 1	< 2	< 10	< 1	< 10	3	< 1	
691902 Orig	1.24	0.051	0.075	1.44	4	5	249	< 0.01	< 20	2	< 2	< 10	41	< 10	4	11	
691902 Dup	1.18	0.048	0.073	1.45	4	5	240	< 0.01	< 20	4	< 2	< 10	40	< 10	4	10	
691915 Orig	0.89	0.069	0.084	1.36	< 2	3	124	< 0.01	< 20	< 1	< 2	< 10	14	< 10	4	11	
691915 Dup	0.91	0.072	0.086	1.31	< 2	3	126	< 0.01	< 20	< 1	< 2	< 10	14	< 10	4	11	
691918 Orig																	
691918 Dup																	
691927 Orig	1.16	0.053	0.053	3.20	9	3	87	< 0.01	< 20	4	< 2	< 10	22	< 10	3	12	
691927 Dup	1.15	0.053	0.053	3.18	6	3	86	< 0.01	< 20	3	< 2	< 10	21	< 10	3	12	
691937 Orig	0.63	0.013	0.002	13.7	31	2	39	< 0.01	< 20	4	< 2	< 10	15	< 10	< 1	7	
691937 Split PREP DUP	0.65	0.013	0.002	15.5	33	3	39	< 0.01	< 20	10	< 2	< 10	16	< 10	< 1	7	
691937 Orig																	
691937 Dup																	
691941 Orig	0.24	0.024	0.031	14.7	16	3	39	< 0.01	< 20	5	< 2	< 10	7	< 10	3	17	
691941 Dup	0.25	0.025	0.032	16.0	14	3	40	< 0.01	< 20	2	< 2	< 10	6	< 10	3	17	
Method Blank																	
Method Blank																	
Method Blank																	
Method Blank																	
Method Blank																	
Method Blank																	
Method Blank																	
Method Blank																	< 0.03
Method Blank																	< 0.03
Method Blank	< 0.01	0.009	< 0.001	< 0.01	< 2	< 1	< 1	< 0.01	< 20	1	< 2	< 10	< 1	< 10	< 1	< 1	
Method Blank	< 0.01	0.010	< 0.001	< 0.01	< 2	< 1	< 1	< 0.01	< 20	< 1	< 2	< 10	< 1	< 10	< 1	< 1	



**Date Submitted:** 26-Feb-18  
**Invoice No.:** A18-02270  
**Invoice Date:** 25-Apr-18  
**Your Reference:** 81 Lucas

**Noble Mineral Exploration**  
**2500-120 Adelaide Street West**  
**Toronto ON M5H 1T1**  
**Canada**

**ATTN: Randy Singh (inv-cc)**

## CERTIFICATE OF ANALYSIS

105 Rock samples were submitted for analysis.

The following analytical package(s) were requested:

Code 1A2-Timmins Au - Fire Assay AA

Code 1E3-Timmins Aqua Regia ICP(AQUAGEO)

REPORT      **A18-02270**

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

Notes:

If value exceeds upper limit we recommend reassay by fire assay gravimetric-Code 1A3.

Values which exceed the upper limit should be assayed for accurate numbers.

CERTIFIED BY:

A handwritten signature in black ink, appearing to be "Emmanuel Esemé". The signature is written in a cursive style with a large, stylized 'E' and 'S'.

Emmanuel Esemé , Ph.D.  
Quality Control

**ACTIVATION LABORATORIES LTD.**  
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## Results

## Activation Laboratories Ltd.

## Report: A18-02270

Analyte Symbol	Au	Ag	Cd	Cu	Mn	Mo	Ni	Pb	Zn	Al	As	B	Ba	Be	Bi	Ca	Co	Cr	Fe	Ga	Hg	K	La
Unit Symbol	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm
Lower Limit	5	0.2	0.5	1	5	1	1	2	2	0.01	2	10	10	0.5	2	0.01	1	1	0.01	10	1	0.01	10
Method Code	FA-AA	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
691943	100	1.1	< 0.5	14	2110	< 1	78	9	61	1.62	202	< 10	23	< 0.5	< 2	3.41	26	43	9.78	< 10	< 1	0.12	< 10
691944	162	1.4	< 0.5	33	2190	< 1	148	13	72	1.60	350	< 10	12	< 0.5	2	2.87	37	21	15.0	< 10	< 1	0.07	< 10
691945	7	1.1	< 0.5	18	1380	< 1	64	< 2	35	1.04	84	< 10	48	< 0.5	< 2	4.32	23	39	4.80	< 10	< 1	0.17	< 10
691946	23	0.9	< 0.5	29	1190	< 1	84	< 2	60	1.31	164	< 10	53	< 0.5	< 2	4.66	26	38	5.47	< 10	< 1	0.19	< 10
691947	< 5	1.1	< 0.5	< 1	74	< 1	< 1	< 2	15	4.81	< 2	12	< 10	< 0.5	< 2	0.20	< 1	< 1	0.47	< 10	< 1	1.39	< 10
691948	5	1.0	< 0.5	59	675	< 1	111	< 2	22	0.78	172	< 10	48	< 0.5	< 2	3.47	33	24	3.01	< 10	< 1	0.17	10
691949	5	0.9	< 0.5	48	515	< 1	101	< 2	15	0.79	152	< 10	53	< 0.5	< 2	2.86	33	23	2.39	< 10	< 1	0.19	16
691950	5	1.0	< 0.5	32	613	< 1	117	< 2	16	0.78	79	< 10	52	< 0.5	< 2	2.86	31	24	2.55	< 10	< 1	0.17	19
691951	6	1.0	< 0.5	31	587	< 1	103	< 2	19	0.79	50	< 10	61	< 0.5	< 2	2.68	29	17	2.16	< 10	< 1	0.20	20
691952	7	0.8	< 0.5	36	1300	< 1	78	< 2	60	2.27	8	< 10	48	< 0.5	< 2	2.98	20	40	5.91	< 10	< 1	0.15	19
691953	6	0.9	< 0.5	31	851	< 1	72	< 2	40	1.54	16	< 10	45	< 0.5	< 2	3.06	21	31	4.27	< 10	< 1	0.14	20
691954	< 5	0.8	< 0.5	29	994	< 1	78	< 2	34	1.24	31	< 10	43	< 0.5	< 2	3.74	24	34	4.12	< 10	< 1	0.14	17
691955	< 5	0.8	< 0.5	34	948	< 1	130	< 2	40	1.14	79	< 10	38	< 0.5	< 2	4.16	29	34	4.32	< 10	< 1	0.14	12
691956	< 5	0.9	< 0.5	40	540	< 1	75	< 2	13	0.76	101	< 10	55	< 0.5	< 2	2.53	25	26	1.79	< 10	< 1	0.20	18
691957	7	0.9	< 0.5	28	1400	< 1	84	< 2	58	1.99	34	< 10	42	< 0.5	< 2	3.60	25	55	5.21	< 10	< 1	0.15	< 10
691958	6	0.9	< 0.5	23	1630	2	78	< 2	60	2.46	2	< 10	38	< 0.5	< 2	3.01	21	64	6.40	< 10	< 1	0.12	< 10
691959	5	0.8	< 0.5	30	1720	1	102	< 2	74	2.58	10	< 10	40	< 0.5	< 2	3.80	27	47	7.11	< 10	< 1	0.14	12
691960	< 5	0.8	< 0.5	30	1230	< 1	119	< 2	59	2.12	14	< 10	40	< 0.5	< 2	3.58	38	40	5.96	< 10	< 1	0.13	14
691961	< 5	0.9	< 0.5	32	850	< 1	59	< 2	35	1.35	6	< 10	54	< 0.5	< 2	2.67	20	44	3.61	< 10	< 1	0.17	17
691962	5	0.9	0.5	34	1090	< 1	56	< 2	398	1.81	< 2	< 10	54	< 0.5	< 2	2.87	17	41	5.08	< 10	< 1	0.16	15
691963	< 5	0.8	< 0.5	37	1210	< 1	63	< 2	62	1.76	4	< 10	52	< 0.5	< 2	3.33	24	51	5.11	< 10	< 1	0.16	20
691964	7	0.8	< 0.5	33	1570	< 1	85	< 2	92	2.85	< 2	< 10	47	< 0.5	< 2	3.13	32	73	7.42	< 10	< 1	0.14	18
691965	< 5	1.0	< 0.5	< 1	80	< 1	< 1	< 2	15	4.94	< 2	12	< 10	< 0.5	< 2	0.20	< 1	1	0.52	< 10	< 1	1.37	< 10
691966	< 5	0.9	< 0.5	31	1700	< 1	87	< 2	70	2.16	7	< 10	50	< 0.5	< 2	3.77	31	70	6.32	< 10	< 1	0.14	17
691967	8	1.0	< 0.5	17	269	< 1	99	< 2	128	0.65	183	< 10	53	< 0.5	< 2	2.16	38	36	1.61	< 10	< 1	0.17	14
691968	17	1.0	< 0.5	14	214	< 1	96	3	72	0.70	196	< 10	63	< 0.5	< 2	1.88	30	34	1.18	< 10	< 1	0.21	16
691969	13	1.0	< 0.5	22	338	< 1	40	2	42	0.64	74	< 10	54	< 0.5	< 2	2.53	18	23	1.60	< 10	< 1	0.18	16
691970	14	1.0	< 0.5	17	477	< 1	47	< 2	75	0.67	71	< 10	52	< 0.5	< 2	2.09	19	12	2.28	< 10	< 1	0.16	16
691971	8	0.9	< 0.5	29	920	< 1	183	< 2	148	1.36	192	< 10	43	< 0.5	< 2	3.88	34	19	4.81	< 10	< 1	0.14	12
691972	6	0.9	< 0.5	18	688	< 1	186	< 2	291	0.77	370	< 10	61	< 0.5	< 2	4.12	37	30	2.74	< 10	< 1	0.21	16
691973	42	0.9	0.5	58	993	< 1	165	3	480	0.75	270	< 10	46	< 0.5	< 2	4.12	30	18	4.54	< 10	< 1	0.15	< 10
691974	7	0.9	< 0.5	6	733	< 1	206	5	152	0.68	421	< 10	51	< 0.5	< 2	3.52	49	49	3.49	< 10	< 1	0.15	13
691975	7	0.9	< 0.5	23	698	< 1	208	< 2	194	1.08	249	< 10	47	< 0.5	< 2	4.10	41	32	4.19	< 10	< 1	0.14	12
691976	5	0.9	< 0.5	28	678	< 1	204	2	139	0.97	262	< 10	50	< 0.5	< 2	4.06	38	30	3.78	< 10	< 1	0.15	15
691977	7	0.9	2.8	24	518	< 1	230	< 2	2810	0.66	376	< 10	57	< 0.5	< 2	3.62	41	24	2.43	< 10	< 1	0.15	17
691978	10	0.9	1.1	37	671	< 1	276	< 2	1470	0.91	401	< 10	66	< 0.5	< 2	3.39	59	25	3.09	< 10	< 1	0.16	17
691979	12	0.9	< 0.5	24	620	< 1	186	< 2	113	0.99	130	< 10	49	< 0.5	< 2	3.56	33	35	3.55	< 10	< 1	0.13	15
691980	10	0.9	< 0.5	23	697	< 1	175	< 2	96	0.67	202	< 10	56	< 0.5	< 2	2.76	33	14	2.95	< 10	< 1	0.15	20
691981	26	1.0	< 0.5	13	582	< 1	109	3	78	0.78	111	< 10	44	< 0.5	< 2	2.82	18	10	3.51	< 10	< 1	0.12	< 10
691982	10	1.0	< 0.5	10	403	< 1	63	4	47	0.66	53	< 10	53	< 0.5	< 2	2.25	18	10	1.99	< 10	< 1	0.15	16
691983	33	1.0	< 0.5	11	468	< 1	73	< 2	33	0.63	105	< 10	54	< 0.5	< 2	1.74	23	13	2.25	< 10	< 1	0.16	14
691984	14	0.9	0.6	21	1240	< 1	175	< 2	490	0.82	83	< 10	45	< 0.5	< 2	1.88	37	23	4.98	< 10	< 1	0.14	17

## Results

## Activation Laboratories Ltd.

## Report: A18-02270

Analyte Symbol	Au	Ag	Cd	Cu	Mn	Mo	Ni	Pb	Zn	Al	As	B	Ba	Be	Bi	Ca	Co	Cr	Fe	Ga	Hg	K	La
Unit Symbol	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm
Lower Limit	5	0.2	0.5	1	5	1	1	2	2	0.01	2	10	10	0.5	2	0.01	1	1	0.01	10	1	0.01	10
Method Code	FA-AA	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
691985	13	0.9	< 0.5	20	591	< 1	99	< 2	202	0.84	72	< 10	50	< 0.5	< 2	2.02	26	15	2.71	< 10	< 1	0.15	17
691986	7	0.8	< 0.5	17	394	< 1	50	< 2	87	0.78	32	< 10	54	< 0.5	< 2	2.15	18	12	2.00	< 10	< 1	0.17	23
691987	19	0.9	< 0.5	14	520	< 1	48	< 2	94	0.72	24	< 10	53	< 0.5	< 2	2.31	16	19	2.54	< 10	< 1	0.17	21
691988	7	0.8	< 0.5	21	432	< 1	128	2	80	0.68	35	< 10	54	< 0.5	< 2	3.38	20	12	2.21	< 10	< 1	0.18	22
691989	12	0.8	< 0.5	23	571	< 1	143	< 2	83	0.70	34	< 10	55	< 0.5	< 2	3.66	25	13	2.68	< 10	< 1	0.17	28
691990	6	0.8	< 0.5	25	591	< 1	145	3	102	0.83	42	< 10	52	< 0.5	< 2	4.65	29	25	3.08	< 10	< 1	0.17	22
691991	13	0.7	< 0.5	20	815	< 1	179	< 2	104	1.17	36	< 10	41	< 0.5	< 2	4.33	25	24	4.10	< 10	< 1	0.14	22
691992	1650	1.0	< 0.5	61	800	1	105	10	69	1.42	2370	< 10	71	< 0.5	< 2	1.26	28	33	5.16	< 10	< 1	0.07	14
691993	6	0.9	< 0.5	24	660	< 1	133	3	114	0.71	53	< 10	36	< 0.5	< 2	4.61	29	13	3.50	< 10	< 1	0.12	22
691994	7	0.9	< 0.5	24	543	< 1	160	4	172	0.58	75	< 10	45	< 0.5	< 2	4.24	31	9	2.97	< 10	< 1	0.14	24
691995	7	0.9	< 0.5	24	544	< 1	161	4	173	0.58	75	< 10	45	< 0.5	< 2	4.25	32	9	3.00	< 10	< 1	0.14	23
691996	8	0.9	< 0.5	25	464	< 1	171	3	264	0.56	79	< 10	43	< 0.5	< 2	3.61	35	12	2.56	< 10	< 1	0.14	27
691997	7	0.7	< 0.5	25	456	< 1	168	2	244	0.56	77	< 10	44	< 0.5	< 2	3.57	35	9	2.54	< 10	< 1	0.14	26
691998	< 5	0.8	< 0.5	26	491	< 1	244	5	108	0.71	58	< 10	41	< 0.5	< 2	3.66	43	13	3.36	< 10	< 1	0.12	21
691999	14	0.9	< 0.5	26	486	< 1	246	4	108	0.69	57	< 10	40	< 0.5	2	3.63	43	13	3.35	< 10	< 1	0.12	20
692000	13	0.8	< 0.5	22	655	< 1	234	3	114	0.86	46	< 10	43	< 0.5	< 2	4.06	36	15	4.14	< 10	< 1	0.12	18
692001	15	0.7	< 0.5	22	658	< 1	238	3	112	0.88	46	< 10	44	< 0.5	< 2	4.04	38	16	4.14	< 10	< 1	0.12	19
692002	< 5	0.7	< 0.5	< 1	78	< 1	< 1	< 2	15	4.55	< 2	10	< 10	< 0.5	< 2	0.19	< 1	< 1	0.51	< 10	< 1	1.34	< 10
692003	10	0.7	< 0.5	22	438	< 1	214	5	78	1.02	14	< 10	48	< 0.5	< 2	3.77	34	25	3.16	< 10	< 1	0.13	14
692004	6	1.3	< 0.5	22	432	< 1	214	5	70	1.00	12	< 10	47	< 0.5	< 2	3.73	33	25	3.13	< 10	< 1	0.13	13
692005	5	0.7	< 0.5	21	503	< 1	236	3	81	1.78	15	< 10	42	< 0.5	< 2	3.49	36	45	3.61	< 10	< 1	0.11	12
692006	< 5	0.7	< 0.5	22	501	< 1	236	4	87	1.78	16	< 10	41	< 0.5	< 2	3.51	36	45	3.65	< 10	< 1	0.11	12
692007	6	0.4	< 0.5	23	448	< 1	208	4	61	1.27	23	< 10	35	< 0.5	< 2	3.58	35	28	3.05	< 10	< 1	0.10	12
692008	14	0.4	< 0.5	24	470	< 1	214	4	63	1.33	23	< 10	36	< 0.5	< 2	3.77	37	29	3.22	< 10	< 1	0.10	13
692009	5	0.4	< 0.5	26	421	< 1	216	< 2	55	1.12	12	< 10	44	< 0.5	< 2	3.60	38	29	2.61	< 10	< 1	0.12	17
692010	5	0.2	< 0.5	27	420	< 1	217	2	55	1.10	12	< 10	43	< 0.5	< 2	3.57	37	29	2.55	< 10	< 1	0.12	17
692011	5	< 0.2	< 0.5	28	438	< 1	206	3	70	0.97	23	< 10	39	< 0.5	< 2	3.19	37	20	2.69	< 10	< 1	0.12	22
692012	5	< 0.2	< 0.5	28	444	< 1	208	< 2	70	1.00	26	< 10	41	< 0.5	< 2	3.28	39	21	2.80	< 10	< 1	0.12	23
692013	5	< 0.2	< 0.5	30	589	< 1	239	3	76	1.17	23	< 10	38	< 0.5	< 2	3.15	40	29	3.65	< 10	< 1	0.11	20
692014	5	< 0.2	< 0.5	34	633	< 1	264	3	79	1.29	23	< 10	42	< 0.5	< 2	3.43	43	31	4.02	< 10	< 1	0.12	22
692015	6	< 0.2	< 0.5	32	613	< 1	192	5	80	1.49	17	< 10	47	< 0.5	< 2	2.79	37	35	3.82	< 10	< 1	0.13	18
692016	5	< 0.2	< 0.5	28	598	< 1	183	5	73	1.41	16	< 10	43	< 0.5	< 2	2.68	35	33	3.58	< 10	< 1	0.12	17
692017	11	< 0.2	< 0.5	29	470	< 1	148	4	61	1.33	14	< 10	47	< 0.5	< 2	2.37	30	32	3.13	< 10	< 1	0.13	18
692018	20	< 0.2	< 0.5	27	458	< 1	144	4	61	1.31	14	< 10	45	< 0.5	2	2.33	30	33	3.11	< 10	< 1	0.13	18
692019	15	< 0.2	< 0.5	26	414	< 1	150	4	57	0.96	26	< 10	45	< 0.5	< 2	3.37	29	21	2.65	< 10	< 1	0.15	20
692020	14	< 0.2	< 0.5	27	413	< 1	151	4	58	0.97	25	< 10	45	< 0.5	< 2	3.39	29	22	2.66	< 10	< 1	0.15	21
692021	19	< 0.2	< 0.5	26	478	< 1	155	4	56	1.16	10	< 10	51	< 0.5	< 2	3.66	28	31	2.66	< 10	< 1	0.14	17
692022	17	< 0.2	< 0.5	22	795	< 1	136	< 2	79	1.19	12	< 10	44	< 0.5	< 2	3.97	27	26	3.76	< 10	< 1	0.11	22
692023	1120	0.3	< 0.5	155	678	< 1	67	< 2	62	3.83	7	43	29	< 0.5	< 2	3.15	31	119	5.60	10	< 1	0.05	< 10
692024	14	< 0.2	< 0.5	23	788	< 1	136	2	78	1.19	11	< 10	44	< 0.5	< 2	3.95	27	26	3.74	< 10	< 1	0.11	21
692025	13	< 0.2	< 0.5	24	412	< 1	127	2	70	1.56	13	< 10	48	< 0.5	< 2	3.06	26	36	3.00	< 10	< 1	0.11	22
692026	11	< 0.2	< 0.5	24	414	< 1	125	3	73	1.53	12	< 10	45	< 0.5	< 2	3.03	26	37	2.94	< 10	< 1	0.10	21

Analyte Symbol	Au	Ag	Cd	Cu	Mn	Mo	Ni	Pb	Zn	Al	As	B	Ba	Be	Bi	Ca	Co	Cr	Fe	Ga	Hg	K	La
Unit Symbol	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm
Lower Limit	5	0.2	0.5	1	5	1	1	2	2	0.01	2	10	10	0.5	2	0.01	1	1	0.01	10	1	0.01	10
Method Code	FA-AA	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
692027	14	< 0.2	< 0.5	24	400	< 1	126	3	53	1.56	18	< 10	73	< 0.5	< 2	3.61	25	33	2.40	< 10	< 1	0.17	23
692028	13	< 0.2	< 0.5	21	552	< 1	120	2	55	1.60	11	< 10	85	< 0.5	< 2	5.31	22	32	2.74	< 10	< 1	0.21	21
692029	5	< 0.2	< 0.5	25	374	< 1	184	4	57	1.71	16	< 10	93	< 0.5	< 2	3.23	31	39	3.00	< 10	< 1	0.22	21
692030	5	< 0.2	< 0.5	25	444	< 1	181	4	61	1.96	20	< 10	106	< 0.5	< 2	4.03	30	37	2.96	< 10	< 1	0.29	21
692031	6	< 0.2	< 0.5	24	432	< 1	134	3	59	2.02	15	< 10	130	< 0.5	< 2	3.69	26	39	2.62	< 10	< 1	0.31	28
692032	< 5	< 0.2	< 0.5	23	358	< 1	127	3	55	1.82	13	< 10	113	< 0.5	< 2	3.05	25	33	2.42	< 10	< 1	0.28	24
692033	16	< 0.2	< 0.5	26	341	< 1	122	3	59	2.04	12	< 10	117	< 0.5	< 2	3.32	26	36	2.57	< 10	< 1	0.31	25
692034	6	< 0.2	< 0.5	43	452	< 1	160	3	60	1.72	26	< 10	82	< 0.5	< 2	4.34	36	32	2.65	< 10	< 1	0.23	22
692035	6	< 0.2	< 0.5	24	431	< 1	162	4	62	1.75	21	< 10	88	< 0.5	< 2	3.74	29	32	2.95	< 10	< 1	0.24	22
692036	< 5	< 0.2	< 0.5	< 1	89	< 1	< 1	< 2	17	4.94	< 2	12	11	< 0.5	< 2	0.21	< 1	1	0.58	< 10	< 1	1.42	< 10
692037	6	< 0.2	< 0.5	24	583	1	101	2	68	1.65	17	< 10	79	< 0.5	< 2	4.45	24	29	2.90	< 10	< 1	0.24	24
692038	< 5	< 0.2	< 0.5	24	663	< 1	46	< 2	110	0.91	12	< 10	44	< 0.5	< 2	> 10.0	11	16	1.55	< 10	< 1	0.14	13
692039	7	< 0.2	< 0.5	32	594	< 1	84	3	55	1.31	56	< 10	84	< 0.5	< 2	3.94	20	18	3.00	< 10	< 1	0.25	24
692040	7	< 0.2	< 0.5	22	616	< 1	98	2	66	1.67	64	< 10	97	< 0.5	< 2	4.51	22	21	3.36	< 10	< 1	0.30	26
692041	5	< 0.2	< 0.5	23	460	< 1	78	2	51	1.31	33	< 10	91	< 0.5	< 2	3.87	19	18	2.36	< 10	< 1	0.27	29
692042	12	< 0.2	< 0.5	26	376	< 1	76	2	52	1.26	26	< 10	74	< 0.5	< 2	3.28	21	20	2.40	< 10	< 1	0.19	33
692043	14	< 0.2	< 0.5	21	577	< 1	92	2	64	1.75	9	< 10	71	< 0.5	< 2	4.97	20	29	2.97	< 10	< 1	0.22	26
692044	11	< 0.2	< 0.5	23	408	< 1	147	4	56	1.98	8	< 10	70	< 0.5	< 2	3.95	26	42	3.41	< 10	< 1	0.21	19
692045	< 5	< 0.2	< 0.5	26	406	< 1	79	3	50	1.77	3	< 10	75	< 0.5	< 2	3.79	20	37	2.35	< 10	< 1	0.23	24
692046	10	< 0.2	< 0.5	24	465	< 1	83	2	58	1.87	3	< 10	63	< 0.5	< 2	4.56	18	38	2.55	< 10	< 1	0.19	26
692047	16	< 0.2	< 0.5	22	444	< 1	114	4	56	1.75	7	< 10	69	< 0.5	< 2	3.84	22	37	2.77	< 10	< 1	0.20	21

Analyte Symbol	Mg	Na	P	S	Sb	Sc	Sr	Ti	Th	Te	Tl	U	V	W	Y	Zr
Unit Symbol	%	%	%	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	0.01	0.001	0.001	0.01	2	1	1	0.01	20	1	2	10	1	10	1	1
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
691943	1.22	0.038	0.049	5.78	6	4	108	< 0.01	< 20	3	< 2	< 10	22	< 10	4	16
691944	1.42	0.032	0.039	10.7	13	4	68	< 0.01	< 20	< 1	< 2	< 10	31	< 10	4	17
691945	1.24	0.082	0.085	1.04	< 2	7	123	< 0.01	< 20	< 1	< 2	< 10	28	< 10	5	11
691946	1.47	0.097	0.102	1.58	< 2	7	127	< 0.01	< 20	< 1	< 2	< 10	36	< 10	6	10
691947	0.05	2.84	0.001	< 0.01	< 2	< 1	21	< 0.01	< 20	< 1	< 2	< 10	< 1	< 10	3	1
691948	0.88	0.084	0.131	0.39	< 2	4	86	< 0.01	< 20	< 1	< 2	< 10	18	< 10	5	6
691949	0.61	0.094	0.154	0.19	< 2	3	78	< 0.01	< 20	< 1	< 2	< 10	16	< 10	6	4
691950	0.56	0.085	0.160	0.08	< 2	3	82	< 0.01	< 20	< 1	< 2	< 10	14	< 10	5	4
691951	0.53	0.093	0.153	0.05	< 2	3	72	< 0.01	< 20	< 1	< 2	< 10	13	< 10	5	4
691952	1.04	0.071	0.124	0.02	2	5	85	< 0.01	< 20	< 1	< 2	< 10	36	< 10	5	5
691953	0.85	0.080	0.139	0.05	< 2	4	87	< 0.01	< 20	< 1	< 2	< 10	25	< 10	5	5
691954	0.96	0.075	0.144	0.03	< 2	4	108	< 0.01	< 20	< 1	< 2	< 10	20	< 10	6	4
691955	1.09	0.071	0.138	0.06	< 2	5	113	< 0.01	< 20	< 1	< 2	< 10	27	< 10	6	5
691956	0.40	0.102	0.169	0.05	< 2	3	82	< 0.01	< 20	< 1	< 2	< 10	14	< 10	6	4
691957	1.00	0.073	0.130	0.04	2	6	104	< 0.01	< 20	< 1	< 2	< 10	40	< 10	6	5
691958	1.02	0.059	0.107	0.03	2	6	84	< 0.01	< 20	2	< 2	< 10	42	< 10	5	7
691959	1.18	0.076	0.114	0.06	3	7	106	< 0.01	< 20	< 1	< 2	< 10	40	< 10	6	6
691960	1.14	0.083	0.127	0.09	3	6	96	< 0.01	< 20	< 1	< 2	< 10	36	< 10	6	6
691961	0.65	0.093	0.109	0.04	< 2	4	81	< 0.01	< 20	< 1	< 2	< 10	21	< 10	5	5
691962	0.78	0.087	0.092	0.08	< 2	6	81	< 0.01	< 20	< 1	< 2	< 10	31	< 10	5	8
691963	0.93	0.092	0.137	0.05	< 2	6	98	< 0.01	< 20	< 1	< 2	< 10	42	< 10	5	7
691964	1.21	0.077	0.115	0.08	3	9	94	< 0.01	< 20	< 1	< 2	< 10	67	< 10	5	8
691965	0.05	2.80	0.001	< 0.01	< 2	< 1	20	< 0.01	< 20	< 1	< 2	< 10	< 1	< 10	3	1
691966	1.19	0.075	0.111	0.04	2	7	105	< 0.01	< 20	2	< 2	< 10	52	< 10	5	8
691967	0.35	0.101	0.095	0.47	< 2	2	86	< 0.01	< 20	1	< 2	< 10	8	< 10	4	9
691968	0.29	0.111	0.102	0.28	< 2	2	93	< 0.01	< 20	< 1	< 2	< 10	9	< 10	4	6
691969	0.33	0.102	0.102	0.33	< 2	2	123	< 0.01	< 20	2	< 2	< 10	8	< 10	5	7
691970	0.39	0.108	0.106	0.38	< 2	2	83	< 0.01	< 20	2	< 2	< 10	9	< 10	5	9
691971	1.03	0.093	0.125	0.54	< 2	10	120	< 0.01	< 20	< 1	< 2	< 10	40	< 10	5	8
691972	0.82	0.116	0.183	0.14	< 2	3	127	< 0.01	< 20	< 1	< 2	< 10	13	< 10	7	5
691973	1.02	0.098	0.119	1.30	< 2	5	124	< 0.01	< 20	1	< 2	< 10	12	< 10	5	11
691974	0.85	0.101	0.140	0.51	< 2	4	114	< 0.01	< 20	< 1	< 2	< 10	13	< 10	6	8
691975	1.13	0.110	0.139	0.60	< 2	8	125	< 0.01	< 20	< 1	< 2	< 10	29	< 10	5	7
691976	1.08	0.113	0.146	0.42	2	7	126	< 0.01	< 20	1	< 2	< 10	24	< 10	5	7
691977	0.87	0.118	0.152	0.26	< 2	3	121	< 0.01	< 20	< 1	< 2	< 10	12	< 10	5	6
691978	0.80	0.119	0.154	0.41	< 2	5	120	< 0.01	< 20	< 1	< 2	< 10	17	< 10	5	6
691979	1.00	0.111	0.143	0.35	< 2	7	120	< 0.01	< 20	2	< 2	< 10	23	< 10	5	7
691980	0.63	0.100	0.154	0.21	< 2	2	95	< 0.01	< 20	< 1	< 2	< 10	9	< 10	6	6
691981	0.82	0.088	0.064	1.38	< 2	4	100	< 0.01	< 20	1	< 2	< 10	14	< 10	4	14
691982	0.53	0.100	0.080	0.27	< 2	2	88	< 0.01	< 20	1	< 2	< 10	7	< 10	4	9
691983	0.39	0.095	0.089	0.56	< 2	2	70	< 0.01	< 20	1	< 2	< 10	7	< 10	4	10
691984	0.47	0.080	0.127	0.32	< 2	3	63	< 0.01	< 20	< 1	< 2	< 10	16	< 10	7	8

Analyte Symbol	Mg	Na	P	S	Sb	Sc	Sr	Ti	Th	Te	Tl	U	V	W	Y	Zr
Unit Symbol	%	%	%	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	0.01	0.001	0.001	0.01	2	1	1	0.01	20	1	2	10	1	10	1	1
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
691985	0.42	0.092	0.113	0.37	< 2	3	67	< 0.01	< 20	2	< 2	< 10	14	< 10	4	7
691986	0.39	0.106	0.110	0.17	< 2	2	76	< 0.01	< 20	< 1	< 2	< 10	10	< 10	4	7
691987	0.52	0.090	0.095	0.25	< 2	2	85	< 0.01	< 20	2	< 2	< 10	8	< 10	5	8
691988	0.76	0.088	0.132	0.34	< 2	2	118	< 0.01	< 20	< 1	< 2	< 10	10	< 10	5	6
691989	0.88	0.093	0.153	0.15	< 2	2	123	< 0.01	< 20	< 1	< 2	< 10	10	< 10	6	6
691990	1.08	0.087	0.142	0.40	< 2	3	147	< 0.01	< 20	< 1	< 2	< 10	14	< 10	7	6
691991	1.33	0.073	0.135	0.26	< 2	6	127	< 0.01	< 20	< 1	< 2	< 10	25	< 10	5	6
691992	2.06	0.278	0.123	0.73	3	2	77	0.13	< 20	2	< 2	< 10	31	< 10	13	6
691993	1.23	0.065	0.142	0.31	< 2	4	119	< 0.01	< 20	< 1	< 2	< 10	15	< 10	6	9
691994	1.13	0.074	0.148	0.42	< 2	3	119	< 0.01	< 20	< 1	< 2	< 10	11	< 10	6	7
691995	1.13	0.073	0.149	0.42	< 2	3	119	< 0.01	< 20	< 1	< 2	< 10	11	< 10	7	7
691996	0.80	0.071	0.162	0.40	< 2	2	109	< 0.01	< 20	< 1	< 2	< 10	9	< 10	6	7
691997	0.79	0.072	0.160	0.40	< 2	2	106	< 0.01	< 20	< 1	< 2	< 10	9	< 10	6	6
691998	1.03	0.065	0.151	0.69	2	3	110	< 0.01	< 20	< 1	< 2	< 10	14	< 10	5	7
691999	1.02	0.063	0.150	0.69	< 2	3	110	< 0.01	< 20	< 1	< 2	< 10	13	< 10	5	7
692000	1.27	0.067	0.147	0.88	< 2	4	119	< 0.01	< 20	< 1	< 2	< 10	17	< 10	6	10
692001	1.26	0.069	0.148	0.90	< 2	4	122	< 0.01	< 20	< 1	< 2	< 10	17	< 10	6	10
692002	0.04	2.69	0.001	< 0.01	< 2	< 1	18	< 0.01	< 20	< 1	< 2	< 10	< 1	< 10	3	1
692003	1.06	0.077	0.149	0.99	< 2	2	113	< 0.01	< 20	< 1	< 2	< 10	17	< 10	6	9
692004	1.05	0.070	0.148	1.00	< 2	2	113	< 0.01	< 20	< 1	< 2	< 10	17	< 10	6	9
692005	1.11	0.049	0.152	0.90	< 2	3	131	< 0.01	< 20	< 1	< 2	< 10	31	< 10	5	7
692006	1.12	0.048	0.151	0.92	< 2	3	131	< 0.01	< 20	< 1	< 2	< 10	31	< 10	5	7
692007	1.04	0.045	0.137	0.91	< 2	2	142	< 0.01	< 20	< 1	< 2	< 10	19	< 10	6	7
692008	1.10	0.047	0.145	0.98	< 2	2	147	< 0.01	< 20	< 1	< 2	< 10	20	< 10	6	7
692009	0.81	0.057	0.145	0.80	< 2	3	125	< 0.01	< 20	< 1	< 2	< 10	18	< 10	5	6
692010	0.80	0.055	0.144	0.77	< 2	3	125	< 0.01	< 20	2	< 2	< 10	18	< 10	5	6
692011	0.84	0.049	0.149	0.63	< 2	2	99	< 0.01	< 20	< 1	< 2	< 10	15	< 10	5	6
692012	0.87	0.051	0.153	0.67	< 2	2	101	< 0.01	< 20	< 1	< 2	< 10	15	< 10	5	7
692013	1.07	0.051	0.146	0.90	< 2	3	96	< 0.01	< 20	< 1	< 2	< 10	21	< 10	6	7
692014	1.18	0.057	0.158	0.96	< 2	3	105	< 0.01	< 20	< 1	< 2	< 10	22	< 10	6	7
692015	0.87	0.050	0.159	0.89	< 2	3	111	< 0.01	< 20	1	< 2	< 10	25	< 10	6	8
692016	0.82	0.046	0.152	0.84	< 2	3	108	< 0.01	< 20	1	< 2	< 10	24	< 10	6	8
692017	0.75	0.047	0.162	0.67	< 2	4	97	< 0.01	< 20	< 1	< 2	< 10	20	< 10	6	7
692018	0.75	0.046	0.159	0.68	< 2	4	93	< 0.01	< 20	< 1	< 2	< 10	19	< 10	5	7
692019	0.71	0.047	0.158	0.68	< 2	3	119	< 0.01	< 20	< 1	< 2	< 10	13	< 10	5	7
692020	0.71	0.047	0.158	0.69	< 2	3	121	< 0.01	< 20	< 1	< 2	< 10	13	< 10	5	7
692021	1.00	0.059	0.156	0.68	< 2	2	129	< 0.01	< 20	5	< 2	< 10	19	< 10	6	4
692022	1.31	0.063	0.153	0.42	< 2	3	117	< 0.01	< 20	< 1	< 2	< 10	19	< 10	7	7
692023	2.16	0.079	0.040	0.20	3	8	26	0.40	< 20	4	< 2	< 10	187	< 10	14	22
692024	1.30	0.063	0.154	0.42	< 2	3	119	< 0.01	< 20	2	< 2	< 10	19	< 10	6	6
692025	0.98	0.060	0.166	0.53	< 2	2	114	< 0.01	< 20	< 1	< 2	< 10	24	< 10	6	6
692026	0.96	0.058	0.163	0.51	< 2	2	112	< 0.01	< 20	< 1	< 2	< 10	24	< 10	6	7

Analyte Symbol	Mg	Na	P	S	Sb	Sc	Sr	Ti	Th	Te	Tl	U	V	W	Y	Zr
Unit Symbol	%	%	%	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	0.01	0.001	0.001	0.01	2	1	1	0.01	20	1	2	10	1	10	1	1
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
692027	0.83	0.102	0.154	0.50	< 2	2	135	< 0.01	< 20	< 1	< 2	< 10	23	< 10	5	5
692028	1.24	0.139	0.146	0.57	< 2	3	196	< 0.01	< 20	2	< 2	< 10	26	< 10	6	6
692029	0.89	0.134	0.157	1.06	2	3	123	< 0.01	< 20	2	< 2	< 10	28	< 10	6	6
692030	1.05	0.176	0.151	0.87	< 2	3	156	< 0.01	< 20	< 1	< 2	< 10	33	< 10	6	4
692031	1.06	0.171	0.163	0.49	< 2	3	144	< 0.01	< 20	< 1	< 2	< 10	32	< 10	7	3
692032	0.98	0.142	0.159	0.54	< 2	3	125	< 0.01	< 20	< 1	< 2	< 10	27	< 10	7	3
692033	0.87	0.142	0.164	0.54	< 2	3	166	< 0.01	< 20	2	< 2	< 10	31	< 10	7	3
692034	0.99	0.104	0.148	0.47	< 2	3	193	< 0.01	< 20	< 1	< 2	< 10	30	< 10	7	5
692035	1.14	0.107	0.158	0.68	< 2	3	144	< 0.01	< 20	< 1	< 2	< 10	27	< 10	7	4
692036	0.05	2.87	0.002	< 0.01	< 2	< 1	20	< 0.01	< 20	< 1	< 2	< 10	< 1	< 10	3	1
692037	1.25	0.099	0.159	0.31	< 2	8	149	< 0.01	< 20	< 1	< 2	< 10	27	< 10	6	5
692038	0.52	0.068	0.096	0.13	< 2	3	492	< 0.01	< 20	< 1	< 2	< 10	13	< 10	11	6
692039	0.93	0.139	0.147	0.20	< 2	2	174	< 0.01	< 20	< 1	< 2	< 10	18	< 10	6	4
692040	1.16	0.177	0.143	0.30	< 2	4	213	< 0.01	< 20	2	< 2	< 10	25	< 10	6	4
692041	0.93	0.144	0.156	0.29	< 2	2	179	< 0.01	< 20	< 1	< 2	< 10	18	< 10	6	4
692042	0.94	0.100	0.164	0.28	< 2	2	135	< 0.01	< 20	3	< 2	< 10	17	< 10	5	5
692043	1.53	0.090	0.144	0.27	< 2	3	177	< 0.01	< 20	< 1	< 2	< 10	27	< 10	6	5
692044	1.05	0.076	0.157	1.13	< 2	4	178	< 0.01	< 20	< 1	< 2	< 10	33	< 10	6	7
692045	0.90	0.084	0.158	0.44	< 2	2	183	< 0.01	< 20	< 1	< 2	< 10	26	< 10	6	4
692046	1.05	0.075	0.156	0.21	< 2	3	184	< 0.01	< 20	< 1	< 2	< 10	29	< 10	6	5
692047	1.10	0.096	0.157	0.50	< 2	3	165	< 0.01	< 20	< 1	< 2	< 10	28	< 10	6	5

Analyte Symbol	Au	Ag	Cd	Cu	Mn	Mo	Ni	Pb	Zn	Al	As	B	Ba	Be	Bi	Ca	Co	Cr	Fe	Ga	Hg	K	La
Unit Symbol	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm
Lower Limit	5	0.2	0.5	1	5	1	1	2	2	0.01	2	10	10	0.5	2	0.01	1	1	0.01	10	1	0.01	10
Method Code	FA-AA	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
GXR-4 Meas		3.5	< 0.5	6640	132	338	37	48	70	2.96	96	< 10	39	1.4	16	0.91	14	56	2.99	10	< 1	1.70	50
GXR-4 Cert		4.0	0.860	6520	155	310	42.0	52.0	73.0	7.20	98.0	4.50	1640	1.90	19.0	1.01	14.6	64.0	3.09	20.0	0.110	4.01	64.5
GXR-6 Meas		0.4	< 0.5	76	1040	1	22	108	128	8.26	255	< 10	1010	1.0	< 2	0.17	15	86	5.69	20	1	1.16	11
GXR-6 Cert		1.30	1.00	66.0	1010	2.40	27.0	101	118	17.7	330	9.80	1300	1.40	0.290	0.180	13.8	96.0	5.58	35.0	0.0680	1.87	13.9
OREAS 134b (AQUA REGIA) Meas		> 100	591	1280				> 5000	> 10000		207						100		10.7				
OREAS 134b (AQUA REGIA) Cert		204	563	1360				133000	177000		221						110		12.25				
OREAS 133a (Aqua Regia) Meas		91.7	339	308				> 5000	> 10000		130		11				22		6.99				
OREAS 133a (Aqua Regia) Cert		97	297	324				48600.00	106000.00		140		59				23		7.92				
OREAS 218 Meas	503																						
OREAS 218 Cert	531																						
OREAS 218 Meas	554																						
OREAS 218 Cert	531																						
OREAS 218 Meas	534																						
OREAS 218 Cert	531																						
OREAS 218 Meas	557																						
OREAS 218 Cert	531																						
OREAS 224 Meas	2180																						
OREAS 224 Cert	2150.00																						
OREAS 224 Meas	2160																						
OREAS 224 Cert	2150.00																						
OREAS 224 Meas	2160																						
OREAS 224 Cert	2150.00																						
OREAS 224 Meas	2220																						
OREAS 224 Cert	2150.00																						
691945 Orig		1.0	< 0.5	18	1380	< 1	64	< 2	35	1.03	83	< 10	47	< 0.5	< 2	4.30	23	38	4.74	< 10	< 1	0.16	< 10
691945 Dup		1.1	< 0.5	18	1370	< 1	65	< 2	35	1.06	85	< 10	48	< 0.5	< 2	4.34	23	39	4.86	< 10	< 1	0.17	< 10
691952 Orig	8																						
691952 Dup	6																						
691953 Orig		0.9	< 0.5	31	849	< 1	73	< 2	40	1.55	17	< 10	46	< 0.5	< 2	3.07	21	31	4.32	< 10	< 1	0.14	20
691953 Dup		0.8	< 0.5	31	853	< 1	71	< 2	40	1.53	15	< 10	44	< 0.5	< 2	3.04	20	31	4.23	< 10	< 1	0.14	20
691962 Orig	5																						
691962 Dup	5																						
691972 Orig	7																						
691972 Dup	5																						

Analyte Symbol	Au	Ag	Cd	Cu	Mn	Mo	Ni	Pb	Zn	Al	As	B	Ba	Be	Bi	Ca	Co	Cr	Fe	Ga	Hg	K	La
Unit Symbol	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm
Lower Limit	5	0.2	0.5	1	5	1	1	2	2	0.01	2	10	10	0.5	2	0.01	1	1	0.01	10	1	0.01	10
Method Code	FA-AA	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
691987 Orig	19																						
691987 Dup	19																						
691993 Orig	6	0.9	< 0.5	24	660	< 1	133	3	114	0.71	53	< 10	36	< 0.5	< 2	4.61	29	13	3.50	< 10	< 1	0.12	22
691993 Split PREP DUP	6	< 0.2	< 0.5	23	665	< 1	132	3	110	0.70	50	< 10	35	< 0.5	< 2	4.54	28	14	3.46	< 10	< 1	0.12	22
691993 Orig		0.8	< 0.5	23	657	< 1	133	3	111	0.70	56	< 10	36	< 0.5	< 2	4.58	29	13	3.47	< 10	< 1	0.12	22
691993 Dup		0.9	< 0.5	25	662	< 1	134	3	117	0.73	50	< 10	37	< 0.5	< 2	4.63	28	14	3.52	< 10	< 1	0.12	23
691993 Split PREP DUP		< 0.2	< 0.5	23	665	< 1	132	3	110	0.70	50	< 10	35	< 0.5	< 2	4.54	28	14	3.46	< 10	< 1	0.12	22
691997 Orig	7																						
691997 Dup	6																						
692006 Orig		0.8	< 0.5	23	509	< 1	239	4	89	1.80	17	< 10	42	< 0.5	< 2	3.57	36	46	3.72	< 10	< 1	0.11	12
692006 Dup		0.7	< 0.5	22	493	< 1	234	4	84	1.76	15	< 10	41	< 0.5	< 2	3.45	36	45	3.58	< 10	< 1	0.11	12
692007 Orig	6																						
692007 Dup	6																						
692009 Orig		0.4	< 0.5	26	426	< 1	217	3	56	1.13	13	< 10	44	< 0.5	< 2	3.64	38	29	2.64	< 10	< 1	0.12	17
692009 Dup		0.3	< 0.5	26	415	< 1	214	< 2	55	1.11	11	< 10	45	< 0.5	< 2	3.56	38	29	2.58	< 10	< 1	0.12	17
692022 Orig	20	< 0.2	< 0.5	22	800	< 1	138	< 2	79	1.20	11	< 10	44	< 0.5	< 2	3.99	27	26	3.78	< 10	< 1	0.11	22
692022 Dup	14	< 0.2	< 0.5	23	790	< 1	135	< 2	79	1.18	13	< 10	44	< 0.5	< 2	3.95	27	25	3.73	< 10	< 1	0.11	21
692032 Orig	< 5																						
692032 Dup	< 5																						
692034 Orig		< 0.2	< 0.5	41	448	< 1	156	3	59	1.69	27	< 10	79	< 0.5	< 2	4.27	35	32	2.59	< 10	< 1	0.22	22
692034 Dup		< 0.2	< 0.5	44	457	< 1	164	4	61	1.75	26	< 10	85	< 0.5	< 2	4.41	36	33	2.70	< 10	< 1	0.24	23
692042 Orig	12	< 0.2	< 0.5	26	376	< 1	76	2	52	1.26	26	< 10	74	< 0.5	< 2	3.28	21	20	2.40	< 10	< 1	0.19	33
692042 Split PREP DUP	13	< 0.2	< 0.5	27	376	< 1	76	3	51	1.39	26	< 10	84	< 0.5	< 2	3.28	20	21	2.39	< 10	< 1	0.23	33
692042 Orig	12																						
692042 Dup	12																						
Method Blank	< 5																						
Method Blank	< 5																						
Method Blank	< 5																						
Method Blank	< 5																						
Method Blank	< 5																						
Method Blank	< 5																						
Method Blank	< 5																						
Method Blank	< 5																						
Method Blank		0.5	< 0.5	< 1	< 5	< 1	< 1	< 2	< 2	< 0.01	< 2	< 10	< 10	< 0.5	< 2	< 0.01	< 1	< 1	< 0.01	< 10	< 1	< 0.01	< 10
Method Blank		1.0	< 0.5	< 1	< 5	< 1	< 1	< 2	< 2	< 0.01	< 2	< 10	< 10	< 0.5	< 2	< 0.01	< 1	< 1	< 0.01	< 10	< 1	< 0.01	< 10



Analyte Symbol	Mg	Na	P	S	Sb	Sc	Sr	Ti	Th	Te	Tl	U	V	W	Y	Zr
Unit Symbol	%	%	%	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	0.01	0.001	0.001	0.01	2	1	1	0.01	20	1	2	10	1	10	1	1
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
GXR-4 Meas	1.59	0.122	0.131	1.78	3	7	71	0.14	< 20	1	< 2	< 10	88	14	13	10
GXR-4 Cert	1.66	0.564	0.120	1.77	4.80	7.70	221	0.29	22.5	0.970	3.20	6.20	87.0	30.8	14.0	186
GXR-6 Meas	0.42	0.087	0.038	0.02	4	24	34	< 20	< 1	3	< 10	202	< 10	7	14	
GXR-6 Cert	0.609	0.104	0.0350	0.0160	3.60	27.6	35.0	5.30	0.0180	2.20	1.54	186	1.90	14.0	110	
OREAS 134b (AQUA REGIA) Meas				13.2												
OREAS 134b (AQUA REGIA) Cert				19.31												
OREAS 133a (Aqua Regia) Meas				10.4	142											
OREAS 133a (Aqua Regia) Cert				10.7	147											
OREAS 218 Meas																
OREAS 218 Cert																
OREAS 218 Meas																
OREAS 218 Cert																
OREAS 218 Meas																
OREAS 218 Cert																
OREAS 218 Meas																
OREAS 218 Cert																
OREAS 224 Meas																
OREAS 224 Cert																
OREAS 224 Meas																
OREAS 224 Cert																
OREAS 224 Meas																
OREAS 224 Cert																
OREAS 224 Meas																
OREAS 224 Cert																
691945 Orig	1.22	0.081	0.084	1.03	< 2	7	123	< 0.01	< 20	1	< 2	< 10	28	< 10	5	11
691945 Dup	1.27	0.084	0.085	1.04	3	7	124	< 0.01	< 20	< 1	< 2	< 10	28	< 10	6	11
691952 Orig																
691952 Dup																
691953 Orig	0.86	0.081	0.140	0.05	2	4	87	< 0.01	< 20	< 1	< 2	< 10	25	< 10	5	4
691953 Dup	0.84	0.078	0.139	0.04	< 2	4	87	< 0.01	< 20	< 1	< 2	< 10	24	< 10	5	5
691962 Orig																
691962 Dup																
691972 Orig																
691972 Dup																
691987 Orig																
691987 Dup																
691993 Orig	1.23	0.065	0.142	0.31	< 2	4	119	< 0.01	< 20	< 1	< 2	< 10	15	< 10	6	9

Analyte Symbol	Mg	Na	P	S	Sb	Sc	Sr	Ti	Th	Te	Tl	U	V	W	Y	Zr
Unit Symbol	%	%	%	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	0.01	0.001	0.001	0.01	2	1	1	0.01	20	1	2	10	1	10	1	1
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
691993 Split PREP DUP	1.21	0.064	0.140	0.32	< 2	4	119	< 0.01	< 20	< 1	< 2	< 10	15	< 10	6	9
691993 Orig	1.22	0.065	0.140	0.32	< 2	4	117	< 0.01	< 20	< 1	< 2	< 10	15	< 10	6	8
691993 Dup	1.23	0.066	0.143	0.29	< 2	4	120	< 0.01	< 20	< 1	< 2	< 10	16	< 10	6	9
691993 Split PREP DUP	1.21	0.064	0.140	0.32	< 2	4	119	< 0.01	< 20	< 1	< 2	< 10	15	< 10	6	9
691997 Orig																
691997 Dup																
692006 Orig	1.14	0.049	0.153	0.92	< 2	3	132	< 0.01	< 20	< 1	< 2	< 10	31	< 10	5	7
692006 Dup	1.09	0.047	0.149	0.91	< 2	3	129	< 0.01	< 20	< 1	< 2	< 10	30	< 10	5	7
692007 Orig																
692007 Dup																
692009 Orig	0.82	0.057	0.147	0.81	< 2	3	126	< 0.01	< 20	< 1	< 2	< 10	18	< 10	6	6
692009 Dup	0.81	0.057	0.143	0.78	< 2	3	124	< 0.01	< 20	< 1	< 2	< 10	18	< 10	5	6
692022 Orig	1.33	0.063	0.154	0.42	< 2	3	116	< 0.01	< 20	< 1	< 2	< 10	19	< 10	7	7
692022 Dup	1.30	0.064	0.153	0.43	< 2	3	117	< 0.01	< 20	< 1	< 2	< 10	19	< 10	6	7
692032 Orig																
692032 Dup																
692034 Orig	0.97	0.101	0.146	0.46	< 2	3	190	< 0.01	< 20	1	< 2	< 10	30	< 10	7	5
692034 Dup	1.00	0.108	0.150	0.47	< 2	3	195	< 0.01	< 20	< 1	< 2	< 10	31	< 10	7	5
692042 Orig	0.94	0.100	0.164	0.28	< 2	2	135	< 0.01	< 20	3	< 2	< 10	17	< 10	5	5
692042 Split PREP DUP	0.94	0.116	0.163	0.29	< 2	2	145	< 0.01	< 20	< 1	< 2	< 10	18	< 10	6	4
692042 Orig																
692042 Dup																
Method Blank																
Method Blank																
Method Blank																
Method Blank																
Method Blank																
Method Blank																
Method Blank																
Method Blank																
Method Blank	< 0.01	0.010	< 0.001	< 0.01	< 2	< 1	< 1	< 0.01	< 20	< 1	< 2	< 10	< 1	< 10	< 1	< 1
Method Blank	< 0.01	0.010	< 0.001	< 0.01	< 2	< 1	< 1	< 0.01	< 20	< 1	< 2	< 10	< 1	< 10	< 1	< 1



**Date Submitted:** 28-Feb-18  
**Invoice No.:** A18-02397  
**Invoice Date:** 22-Apr-18  
**Your Reference:** 81 Lucas

**Noble Mineral Exploration**  
**2500-120 Adelaide Street West**  
**Toronto ON M5H 1T1**  
**Canada**

**ATTN: Randy Singh (inv-cc)**

## CERTIFICATE OF ANALYSIS

175 Rock samples were submitted for analysis.

The following analytical package(s) were requested:

Code 1A2-Timmins Au - Fire Assay AA

Code 1E3-Timmins Aqua Regia ICP(AQUAGEO)

REPORT **A18-02397**

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Notes:

If value exceeds upper limit we recommend reassay by fire assay gravimetric-Code 1A3.

Values which exceed the upper limit should be assayed for accurate numbers.

Note: Sample 692180 INS for AR-ICP

CERTIFIED BY:

A handwritten signature in black ink, appearing to read "Emmanuel Esemé". The signature is stylized and somewhat cursive.

Emmanuel Esemé, Ph.D.  
Quality Control

**ACTIVATION LABORATORIES LTD.**  
1752 Riverside Drive, Timmins, Ontario, Canada, P4R 1N1  
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## Results

## Activation Laboratories Ltd.

## Report: A18-02397

Analyte Symbol	Au	Ag	Cd	Cu	Mn	Mo	Ni	Pb	Zn	Al	As	B	Ba	Be	Bi	Ca	Co	Cr	Fe	Ga	Hg	K	La
Unit Symbol	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm
Lower Limit	5	0.2	0.5	1	5	1	1	2	2	0.01	2	10	10	0.5	2	0.01	1	1	0.01	10	1	0.01	10
Method Code	FA-AA	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
692048	< 5	0.3	< 0.5	42	320	< 1	77	2	57	1.35	12	< 10	58	< 0.5	< 2	2.93	21	32	2.42	< 10	< 1	0.17	22
692049	9	0.3	< 0.5	25	452	< 1	98	3	54	1.22	11	< 10	43	< 0.5	< 2	4.13	21	31	2.88	< 10	< 1	0.12	17
692050	9	0.3	< 0.5	25	450	< 1	98	3	57	1.20	12	< 10	42	< 0.5	< 2	4.12	21	31	2.89	< 10	< 1	0.12	16
692051	< 5	0.3	< 0.5	28	464	< 1	137	5	60	1.36	14	< 10	51	< 0.5	< 2	3.73	29	41	3.76	< 10	< 1	0.15	14
692052	< 5	0.3	< 0.5	28	403	2	122	5	60	1.55	11	< 10	53	< 0.5	< 2	3.26	30	45	4.18	< 10	< 1	0.17	14
692053	< 5	0.3	< 0.5	33	422	< 1	109	4	61	1.68	8	< 10	64	< 0.5	2	3.02	26	44	3.33	< 10	< 1	0.20	21
692054	< 5	< 0.2	< 0.5	23	600	< 1	86	< 2	59	1.58	5	< 10	58	< 0.5	< 2	4.93	20	44	2.85	< 10	< 1	0.18	26
692055	< 5	0.2	< 0.5	19	553	5	67	< 2	59	1.51	6	< 10	57	< 0.5	< 2	5.07	17	37	2.74	< 10	< 1	0.17	24
692056	< 5	0.3	< 0.5	26	531	< 1	89	4	67	1.62	10	< 10	54	< 0.5	< 2	4.33	25	40	3.41	< 10	< 1	0.16	21
692057	< 5	0.2	< 0.5	28	390	< 1	86	2	56	1.44	9	< 10	56	< 0.5	< 2	3.24	24	48	2.98	< 10	< 1	0.15	19
692058	6	0.4	< 0.5	34	378	2	286	11	50	1.13	32	< 10	17	< 0.5	< 2	2.55	37	26	6.43	< 10	< 1	0.17	11
692059	5	0.3	< 0.5	35	391	2	282	7	66	1.12	22	< 10	32	< 0.5	< 2	2.78	35	23	5.28	< 10	< 1	0.14	11
692060	< 5	0.2	< 0.5	38	449	3	236	< 2	56	1.10	11	< 10	54	< 0.5	2	3.08	34	26	3.58	< 10	< 1	0.16	15
692061	5	0.4	< 0.5	39	512	2	236	6	65	1.13	30	< 10	25	< 0.5	< 2	3.23	28	20	6.37	< 10	< 1	0.17	< 10
692062	1100	0.5	< 0.5	167	716	< 1	69	3	64	3.85	6	48	29	< 0.5	< 2	3.27	32	123	6.18	10	< 1	0.05	< 10
692063	< 5	0.4	< 0.5	33	383	2	262	6	38	1.03	47	< 10	14	< 0.5	< 2	2.90	30	21	9.53	< 10	< 1	0.13	< 10
692064	< 5	0.2	< 0.5	184	533	< 1	73	< 2	83	3.83	< 2	< 10	20	< 0.5	< 2	2.97	26	33	4.90	< 10	< 1	0.04	< 10
692065	< 5	0.4	< 0.5	32	361	2	378	6	35	1.02	51	< 10	13	< 0.5	< 2	2.57	39	18	11.1	< 10	1	0.13	< 10
692066	21	0.4	< 0.5	42	345	2	524	6	58	0.97	59	< 10	14	< 0.5	< 2	2.37	55	23	10.5	< 10	< 1	0.13	< 10
692067	< 5	0.4	< 0.5	29	461	1	571	6	65	0.92	46	< 10	19	< 0.5	< 2	2.94	52	20	9.13	< 10	< 1	0.13	< 10
692068	7	0.4	< 0.5	28	375	< 1	507	3	57	0.91	104	< 10	14	< 0.5	< 2	2.41	66	29	12.2	< 10	< 1	0.11	< 10
692069	9	0.3	< 0.5	30	429	< 1	419	3	69	0.99	89	< 10	13	< 0.5	< 2	2.84	63	29	11.2	< 10	< 1	0.15	< 10
692070	< 5	0.3	< 0.5	26	527	< 1	417	5	75	1.07	57	< 10	13	< 0.5	< 2	2.63	65	28	10.9	< 10	< 1	0.17	< 10
692071	< 5	0.3	< 0.5	2	104	< 1	< 1	< 2	19	5.35	3	15	12	0.5	< 2	0.23	< 1	3	0.64	10	< 1	1.50	< 10
692072	< 5	0.4	< 0.5	16	796	< 1	427	9	59	1.21	122	< 10	< 10	< 0.5	3	3.38	76	30	17.4	< 10	< 1	0.17	< 10
692073	< 5	0.4	< 0.5	18	1970	< 1	307	4	112	2.19	145	< 10	< 10	< 0.5	3	2.27	64	45	22.2	< 10	< 1	0.08	< 10
692074	< 5	0.3	0.5	9	1790	< 1	185	< 2	78	2.16	26	< 10	25	< 0.5	< 2	2.64	31	31	11.0	< 10	< 1	0.08	< 10
692075	< 5	0.2	< 0.5	17	824	1	101	< 2	89	1.85	4	< 10	55	< 0.5	< 2	3.47	20	9	4.69	< 10	< 1	0.15	14
692076	< 5	0.3	0.6	21	827	< 1	181	3	111	2.17	11	< 10	51	< 0.5	< 2	3.59	33	10	5.83	< 10	< 1	0.14	11
692077	< 5	0.3	< 0.5	18	514	< 1	202	2	66	1.64	11	< 10	56	< 0.5	< 2	2.51	35	7	4.24	< 10	< 1	0.17	12
692078	< 5	0.3	< 0.5	17	559	< 1	205	3	49	1.48	15	< 10	52	< 0.5	< 2	3.50	33	11	4.29	< 10	< 1	0.17	< 10
692079	< 5	0.3	< 0.5	14	447	< 1	343	5	46	1.35	35	< 10	16	< 0.5	< 2	2.36	48	12	6.51	< 10	< 1	0.19	< 10
692080	< 5	0.4	< 0.5	19	607	< 1	337	9	44	1.02	92	< 10	27	< 0.5	< 2	2.93	56	10	5.96	< 10	< 1	0.18	< 10
692081	< 5	0.3	< 0.5	18	539	< 1	224	2	89	1.53	24	< 10	47	< 0.5	< 2	2.47	40	8	4.57	< 10	< 1	0.15	13
692082	< 5	0.2	< 0.5	22	518	< 1	209	< 2	71	1.48	20	< 10	44	< 0.5	< 2	2.77	48	9	3.60	< 10	< 1	0.14	12
692083	< 5	0.3	< 0.5	22	474	< 1	177	3	70	1.55	13	< 10	42	< 0.5	< 2	2.83	37	8	3.78	< 10	< 1	0.13	13
692084	2010	0.5	< 0.5	96	1530	2	106	4	77	1.73	828	< 10	36	< 0.5	< 2	1.64	29	45	7.04	< 10	< 1	0.08	15
692085	< 5	0.2	< 0.5	21	529	< 1	260	2	64	1.47	19	< 10	37	< 0.5	< 2	3.35	50	7	4.19	< 10	< 1	0.12	12
692086	< 5	0.3	< 0.5	22	539	< 1	253	4	72	1.14	21	< 10	33	< 0.5	< 2	3.72	55	7	3.89	< 10	< 1	0.11	10
692087	< 5	0.4	< 0.5	22	716	2	326	7	68	0.89	54	< 10	35	< 0.5	< 2	4.56	75	7	5.75	< 10	< 1	0.12	< 10
692088	< 5	0.3	< 0.5	28	812	< 1	182	4	50	0.82	40	< 10	47	< 0.5	< 2	4.76	40	26	4.56	< 10	< 1	0.16	10
692089	< 5	0.2	< 0.5	31	770	< 1	135	2	41	1.08	17	< 10	50	< 0.5	< 2	3.22	33	31	4.28	< 10	< 1	0.17	17

## Results

## Activation Laboratories Ltd.

## Report: A18-02397

Analyte Symbol	Au	Ag	Cd	Cu	Mn	Mo	Ni	Pb	Zn	Al	As	B	Ba	Be	Bi	Ca	Co	Cr	Fe	Ga	Hg	K	La
Unit Symbol	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm
Lower Limit	5	0.2	0.5	1	5	1	1	2	2	0.01	2	10	10	0.5	2	0.01	1	1	0.01	10	1	0.01	10
Method Code	FA-AA	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
692090	< 5	0.2	< 0.5	31	453	< 1	121	< 2	33	0.96	12	< 10	44	< 0.5	< 2	2.84	30	28	2.95	< 10	< 1	0.12	24
692091	< 5	0.2	< 0.5	30	445	< 1	117	< 2	33	0.93	12	< 10	44	< 0.5	< 2	2.76	29	28	2.85	< 10	< 1	0.12	23
692092	< 5	0.2	< 0.5	27	432	< 1	152	< 2	59	1.02	17	< 10	50	< 0.5	< 2	3.10	34	33	2.75	< 10	< 1	0.15	26
692093	< 5	0.2	< 0.5	24	505	< 1	133	< 2	35	0.98	9	< 10	49	< 0.5	< 2	3.38	33	29	2.78	< 10	< 1	0.14	24
692094	< 5	0.2	< 0.5	25	734	< 1	111	< 2	52	1.20	7	< 10	49	< 0.5	< 2	3.90	26	30	3.27	< 10	< 1	0.15	24
692095	< 5	0.3	< 0.5	25	724	< 1	112	< 2	41	0.70	24	< 10	42	< 0.5	< 2	6.40	31	17	3.16	< 10	< 1	0.15	13
692096	< 5	0.3	< 0.5	23	628	< 1	208	2	56	1.02	30	< 10	36	< 0.5	< 2	4.66	52	6	3.98	< 10	< 1	0.11	< 10
692097	< 5	0.3	< 0.5	24	478	2	173	< 2	58	1.13	20	< 10	33	< 0.5	< 2	4.12	43	9	3.17	< 10	< 1	0.09	10
692098	< 5	0.3	< 0.5	18	554	< 1	163	< 2	59	0.91	18	< 10	35	< 0.5	< 2	5.51	35	6	3.65	< 10	< 1	0.10	< 10
692099	< 5	0.3	< 0.5	17	574	< 1	201	< 2	54	0.77	25	< 10	33	< 0.5	< 2	5.67	45	8	3.37	< 10	< 1	0.09	< 10
692100	< 5	0.2	< 0.5	< 1	81	< 1	< 1	< 2	16	5.22	< 2	11	11	0.5	< 2	0.22	< 1	< 1	0.43	< 10	< 1	1.40	< 10
692101	< 5	0.3	< 0.5	18	492	< 1	197	< 2	58	0.97	24	< 10	30	< 0.5	< 2	5.11	45	9	3.36	< 10	< 1	0.09	< 10
692102	< 5	0.3	< 0.5	18	541	< 1	224	< 2	50	0.97	20	< 10	30	< 0.5	< 2	5.65	47	6	3.18	< 10	< 1	0.09	< 10
692103	< 5	0.3	< 0.5	19	488	< 1	270	4	77	1.12	24	< 10	33	< 0.5	< 2	5.35	55	6	3.68	< 10	< 1	0.09	< 10
692104	< 5	0.2	< 0.5	19	433	< 1	298	3	106	1.37	18	< 10	41	< 0.5	< 2	3.53	56	6	3.46	< 10	< 1	0.10	14
692105	< 5	0.3	< 0.5	21	393	< 1	324	5	149	1.33	30	< 10	27	< 0.5	< 2	1.91	61	16	6.14	< 10	< 1	0.08	10
692106	< 5	0.3	< 0.5	27	409	< 1	296	3	149	1.46	25	< 10	47	< 0.5	< 2	2.48	60	14	4.54	< 10	< 1	0.13	12
692107	< 5	0.4	< 0.5	22	705	< 1	379	5	194	1.47	40	< 10	22	< 0.5	< 2	3.42	78	15	7.40	< 10	< 1	0.11	< 10
692108	< 5	0.4	0.8	18	1340	< 1	332	6	150	1.91	44	< 10	16	< 0.5	< 2	3.23	66	11	11.5	< 10	< 1	0.09	< 10
692109	< 5	0.3	< 0.5	19	1490	< 1	253	4	126	2.19	35	< 10	22	< 0.5	< 2	3.28	50	15	10.9	< 10	< 1	0.10	< 10
692110	< 5	0.3	< 0.5	23	545	< 1	108	3	38	0.73	25	< 10	26	< 0.5	< 2	4.71	28	22	6.37	< 10	< 1	0.13	< 10
692111	1480	0.5	< 0.5	69	905	1	110	9	77	1.64	2440	< 10	76	< 0.5	< 2	1.41	28	36	5.84	< 10	< 1	0.07	15
692112	< 5	0.3	< 0.5	24	525	< 1	122	3	46	1.12	20	< 10	36	< 0.5	< 2	3.66	27	32	5.72	< 10	< 1	0.18	15
692113	< 5	0.3	< 0.5	24	528	< 1	134	2	51	1.31	18	< 10	41	< 0.5	< 2	2.86	30	37	5.45	< 10	< 1	0.17	14
692114	< 5	0.3	< 0.5	24	515	< 1	142	3	47	1.21	18	< 10	38	< 0.5	< 2	2.93	33	40	5.29	< 10	< 1	0.16	13
692115	< 5	0.3	< 0.5	21	534	< 1	139	3	45	1.18	18	< 10	26	< 0.5	< 2	2.60	31	35	6.33	< 10	< 1	0.15	10
692116	< 5	0.2	< 0.5	22	739	< 1	114	2	46	1.25	12	< 10	30	< 0.5	< 2	3.54	25	31	5.88	< 10	< 1	0.14	< 10
692117	< 5	0.2	< 0.5	22	752	< 1	121	5	33	0.81	33	< 10	18	< 0.5	< 2	2.61	29	27	7.22	< 10	< 1	0.13	< 10
692118	< 5	0.2	< 0.5	13	1230	< 1	30	< 2	59	2.03	6	< 10	37	< 0.5	< 2	3.11	11	6	6.89	< 10	< 1	0.13	< 10
692119	< 5	0.3	< 0.5	< 1	83	< 1	< 1	< 2	18	4.28	< 2	12	10	< 0.5	< 2	0.18	< 1	1	0.48	< 10	< 1	1.23	< 10
692120	< 5	< 0.2	< 0.5	13	1110	< 1	28	< 2	62	2.36	< 2	< 10	40	< 0.5	< 2	3.41	9	6	6.80	< 10	< 1	0.16	12
692121	< 5	0.2	< 0.5	17	1010	< 1	42	< 2	58	2.26	< 2	< 10	41	< 0.5	< 2	3.06	13	11	6.64	< 10	< 1	0.17	12
692122	< 5	0.2	< 0.5	13	369	< 1	33	< 2	44	0.99	3	< 10	61	< 0.5	< 2	2.58	10	18	2.36	< 10	< 1	0.27	14
692123	< 5	0.2	< 0.5	14	335	< 1	40	< 2	43	0.86	5	< 10	55	< 0.5	< 2	2.37	11	17	2.53	< 10	< 1	0.22	13
692124	< 5	0.3	< 0.5	18	374	< 1	41	3	45	0.81	6	< 10	40	< 0.5	< 2	2.29	16	9	3.04	< 10	< 1	0.16	< 10
692125	< 5	0.3	< 0.5	16	301	< 1	79	3	49	1.19	12	< 10	30	< 0.5	< 2	1.69	19	5	4.52	< 10	< 1	0.25	< 10
692126	< 5	0.2	< 0.5	14	417	< 1	59	2	50	1.17	8	< 10	40	< 0.5	< 2	2.22	15	9	4.27	< 10	< 1	0.18	< 10
692127	< 5	0.3	< 0.5	15	284	3	70	5	44	1.32	21	< 10	14	< 0.5	< 2	1.27	19	8	7.02	< 10	< 1	0.24	< 10
692128	< 5	0.4	< 0.5	20	246	4	113	8	39	1.32	28	< 10	< 10	< 0.5	< 2	0.96	27	13	9.84	< 10	< 1	0.25	< 10
692129	< 5	0.2	< 0.5	20	412	< 1	50	2	45	1.31	8	< 10	40	< 0.5	< 2	2.22	15	8	4.28	< 10	< 1	0.26	10
692130	< 5	0.2	< 0.5	15	419	< 1	38	< 2	52	1.13	3	< 10	44	< 0.5	< 2	2.63	11	6	2.86	< 10	< 1	0.16	12
692131	< 5	0.2	< 0.5	14	418	< 1	32	< 2	51	1.10	3	< 10	42	< 0.5	< 2	2.62	11	5	2.82	< 10	< 1	0.15	11

## Results

## Activation Laboratories Ltd.

## Report: A18-02397

Analyte Symbol	Au	Ag	Cd	Cu	Mn	Mo	Ni	Pb	Zn	Al	As	B	Ba	Be	Bi	Ca	Co	Cr	Fe	Ga	Hg	K	La
Unit Symbol	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm
Lower Limit	5	0.2	0.5	1	5	1	1	2	2	0.01	2	10	10	0.5	2	0.01	1	1	0.01	10	1	0.01	10
Method Code	FA-AA	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
692132	< 5	0.3	< 0.5	19	379	< 1	33	< 2	58	1.43	3	< 10	61	< 0.5	< 2	2.54	14	10	3.05	< 10	< 1	0.23	13
692133	< 5	0.2	< 0.5	18	375	< 1	55	4	53	1.32	8	< 10	66	< 0.5	< 2	2.24	18	7	3.33	< 10	< 1	0.25	11
692134	< 5	0.2	< 0.5	20	340	< 1	43	< 2	58	1.19	6	< 10	60	< 0.5	< 2	2.51	17	7	2.82	< 10	< 1	0.23	15
692135	< 5	0.3	< 0.5	19	385	< 1	26	3	49	1.00	8	< 10	55	< 0.5	< 2	2.54	14	8	2.83	< 10	< 1	0.21	14
692136	< 5	0.2	< 0.5	24	594	< 1	29	< 2	67	1.34	10	< 10	62	< 0.5	< 2	3.23	16	4	3.86	< 10	< 1	0.27	17
692137	< 5	0.2	< 0.5	18	1080	< 1	35	< 2	92	1.93	2	< 10	36	< 0.5	< 2	4.00	15	4	6.39	< 10	< 1	0.16	16
692138	< 5	< 0.2	< 0.5	14	1250	< 1	30	< 2	103	2.34	< 2	< 10	45	< 0.5	< 2	3.70	12	4	6.66	< 10	< 1	0.21	16
692139	< 5	0.3	< 0.5	13	2370	< 1	31	< 2	72	2.86	< 2	< 10	28	< 0.5	< 2	3.77	11	5	9.85	< 10	< 1	0.11	< 10
692140	< 5	0.4	0.6	15	1980	1	34	4	54	2.86	17	< 10	15	< 0.5	2	2.72	20	8	13.7	< 10	< 1	0.13	< 10
692141	6	0.4	< 0.5	23	1870	< 1	41	6	63	2.72	24	< 10	16	< 0.5	6	2.32	17	8	14.2	< 10	< 1	0.10	< 10
692142	1020	0.4	< 0.5	152	659	< 1	63	3	60	3.50	4	44	27	< 0.5	< 2	3.06	30	114	5.71	10	< 1	0.05	< 10
692143	< 5	0.4	< 0.5	20	2130	1	35	2	51	1.95	16	< 10	27	< 0.5	< 2	3.19	15	6	9.66	< 10	< 1	0.15	< 10
692144	5	0.4	0.6	17	1540	< 1	37	4	45	1.71	25	< 10	14	< 0.5	< 2	2.78	18	5	9.57	< 10	< 1	0.21	< 10
692145	< 5	0.2	< 0.5	9	1260	< 1	24	< 2	46	1.39	5	< 10	51	< 0.5	< 2	2.78	11	4	5.43	< 10	< 1	0.18	10
692146	< 5	0.3	< 0.5	11	1390	< 1	30	< 2	60	1.72	2	< 10	43	< 0.5	< 2	2.79	13	5	6.37	< 10	< 1	0.15	< 10
692147	< 5	0.2	< 0.5	16	1140	< 1	33	< 2	55	1.57	5	< 10	33	< 0.5	< 2	2.42	15	5	6.63	< 10	< 1	0.15	< 10
692148	7	0.3	< 0.5	22	1480	< 1	41	2	60	1.68	18	< 10	23	< 0.5	< 2	2.80	19	8	9.05	< 10	< 1	0.14	< 10
692149	7	0.3	< 0.5	21	1540	< 1	48	5	69	2.06	33	< 10	14	< 0.5	< 2	2.48	24	5	11.7	< 10	< 1	0.12	< 10
692150	17	0.4	< 0.5	20	1480	< 1	47	5	85	2.31	33	< 10	15	< 0.5	< 2	2.21	20	8	11.9	< 10	< 1	0.13	< 10
692151	6	0.2	0.5	19	1950	< 1	50	< 2	77	2.31	20	< 10	21	< 0.5	< 2	2.81	17	8	11.5	< 10	< 1	0.10	< 10
692152	8	0.3	0.7	32	2120	< 1	58	4	60	1.97	25	< 10	15	< 0.5	< 2	3.06	21	10	12.2	< 10	< 1	0.12	< 10
692153	< 5	0.3	< 0.5	21	1980	< 1	38	< 2	47	1.81	16	< 10	17	< 0.5	< 2	2.87	17	8	10.3	< 10	< 1	0.15	< 10
692154	< 5	0.3	< 0.5	< 1	128	< 1	< 1	< 2	18	4.52	< 2	13	12	< 0.5	< 2	0.25	< 1	2	0.71	< 10	< 1	1.24	< 10
692155	5	0.3	< 0.5	24	2740	< 1	45	2	61	2.49	13	< 10	27	< 0.5	2	3.32	16	9	13.2	< 10	< 1	0.15	< 10
692156	5	0.3	0.5	23	2360	1	42	3	55	2.32	18	< 10	26	< 0.5	< 2	2.84	17	12	11.7	< 10	< 1	0.16	< 10
692157	5	0.3	0.6	23	2780	< 1	43	< 2	63	2.16	16	< 10	26	< 0.5	< 2	3.46	18	9	12.1	< 10	< 1	0.15	< 10
692158	< 5	0.2	< 0.5	22	2690	< 1	47	< 2	84	2.55	2	< 10	31	< 0.5	< 2	2.67	13	9	12.1	< 10	< 1	0.12	< 10
692159	6	0.3	< 0.5	29	3900	< 1	51	< 2	75	2.38	3	< 10	25	< 0.5	3	2.99	13	7	15.0	< 10	< 1	0.10	< 10
692160	9	0.4	< 0.5	19	3540	< 1	48	3	78	2.13	27	< 10	21	< 0.5	3	2.62	18	10	15.5	< 10	< 1	0.11	< 10
692161	23	0.5	< 0.5	29	2570	< 1	78	12	82	1.90	83	< 10	< 10	< 0.5	3	1.98	34	17	19.7	< 10	< 1	0.11	< 10
692162	13	0.3	< 0.5	19	2650	< 1	56	4	77	1.84	59	< 10	17	< 0.5	< 2	2.16	22	19	14.4	< 10	< 1	0.09	< 10
692163	8	0.4	< 0.5	18	5110	< 1	45	7	68	1.46	40	< 10	20	< 0.5	3	2.63	17	13	16.9	< 10	< 1	0.12	< 10
692164	7	0.3	< 0.5	16	5810	< 1	37	3	64	1.20	26	< 10	22	< 0.5	3	2.69	17	6	17.8	< 10	< 1	0.09	< 10
692165	18	0.4	< 0.5	19	3530	< 1	62	7	65	0.99	126	< 10	< 10	< 0.5	3	1.91	29	10	20.9	< 10	< 1	0.08	< 10
692166	9	0.3	< 0.5	14	4160	< 1	49	5	58	0.89	97	< 10	13	< 0.5	4	2.09	24	13	18.8	< 10	< 1	0.08	< 10
692167	5	0.4	< 0.5	11	3510	< 1	42	5	61	0.86	79	< 10	11	< 0.5	3	1.74	22	11	17.0	< 10	< 1	0.08	< 10
692168	< 5	0.4	< 0.5	15	3840	< 1	46	9	73	0.98	88	< 10	13	< 0.5	3	1.89	24	17	19.1	< 10	< 1	0.10	< 10
692169	5	0.3	< 0.5	8	5280	< 1	45	6	45	0.68	85	< 10	14	< 0.5	5	2.12	21	8	20.4	< 10	< 1	0.08	< 10
692170	< 5	0.5	< 0.5	9	5890	< 1	70	7	54	0.36	107	< 10	< 10	< 0.5	5	1.25	29	16	28.8	< 10	< 1	0.04	< 10
692171	7	0.4	< 0.5	4	8310	< 1	53	4	54	0.15	75	< 10	< 10	< 0.5	3	0.61	20	18	28.4	< 10	< 1	< 0.01	< 10
692172	9	0.3	< 0.5	6	5700	< 1	55	5	61	0.15	65	< 10	< 10	< 0.5	3	1.00	21	34	20.3	< 10	< 1	< 0.01	< 10
692173	11	0.3	< 0.5	4	5220	< 1	40	5	66	0.09	43	< 10	< 10	< 0.5	2	0.66	14	27	17.6	< 10	< 1	< 0.01	< 10

## Results

## Activation Laboratories Ltd.

## Report: A18-02397

Analyte Symbol	Au	Ag	Cd	Cu	Mn	Mo	Ni	Pb	Zn	Al	As	B	Ba	Be	Bi	Ca	Co	Cr	Fe	Ga	Hg	K	La
Unit Symbol	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm
Lower Limit	5	0.2	0.5	1	5	1	1	2	2	0.01	2	10	10	0.5	2	0.01	1	1	0.01	10	1	0.01	10
Method Code	FA-AA	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
692174	5	0.4	< 0.5	7	5590	< 1	45	4	44	0.13	53	< 10	< 10	< 0.5	6	0.84	14	28	20.1	< 10	< 1	< 0.01	< 10
692175	8	0.5	< 0.5	9	6350	< 1	49	6	46	0.13	114	< 10	< 10	< 0.5	6	1.10	20	24	26.5	< 10	< 1	< 0.01	< 10
692176	12	0.3	< 0.5	6	5110	< 1	29	5	39	0.17	67	< 10	< 10	< 0.5	3	0.58	13	31	18.9	< 10	< 1	< 0.01	< 10
692177	11	0.3	< 0.5	7	6180	< 1	26	5	64	0.14	52	< 10	< 10	< 0.5	3	0.59	12	24	19.4	< 10	< 1	< 0.01	< 10
692178	< 5	0.2	< 0.5	3	3720	< 1	13	< 2	72	0.08	16	< 10	< 10	< 0.5	< 2	0.60	7	55	9.51	< 10	< 1	< 0.01	< 10
692179	11	0.2	< 0.5	7	1090	< 1	24	2	49	0.05	53	< 10	< 10	< 0.5	< 2	0.31	16	43	9.48	< 10	< 1	< 0.01	< 10
692180	> 5000																						
692181	16	0.3	< 0.5	8	1160	< 1	27	4	52	0.17	38	< 10	< 10	< 0.5	< 2	0.31	16	58	9.10	< 10	< 1	< 0.01	< 10
692182	16	0.3	< 0.5	8	1970	< 1	25	4	45	0.18	45	< 10	< 10	< 0.5	< 2	0.44	16	58	12.0	< 10	< 1	< 0.01	< 10
692183	24	0.3	< 0.5	7	1550	< 1	29	3	39	0.12	69	< 10	< 10	< 0.5	2	0.28	19	36	15.9	< 10	< 1	< 0.01	< 10
692184	21	< 0.2	< 0.5	8	5000	< 1	40	3	47	0.17	56	< 10	< 10	< 0.5	4	1.02	16	20	24.1	< 10	< 1	< 0.01	< 10
692185	17	< 0.2	< 0.5	17	5060	< 1	57	6	80	0.31	66	< 10	< 10	< 0.5	3	1.04	24	25	25.0	< 10	< 1	< 0.01	< 10
692186	25	< 0.2	< 0.5	19	2250	< 1	41	7	77	0.25	110	< 10	< 10	< 0.5	5	0.44	30	25	22.7	< 10	< 1	< 0.01	< 10
692187	62	0.2	< 0.5	26	2210	< 1	39	9	79	0.13	98	< 10	< 10	< 0.5	3	0.56	23	27	19.8	< 10	< 1	0.01	< 10
692188	< 5	0.2	< 0.5	1	90	< 1	< 1	< 2	18	4.43	< 2	12	< 10	< 0.5	< 2	0.19	< 1	1	0.55	< 10	< 1	1.24	< 10
692189	46	0.3	< 0.5	28	2120	< 1	54	18	110	0.21	140	< 10	< 10	< 0.5	< 2	0.67	30	18	20.9	< 10	< 1	0.02	< 10
692190	85	0.4	< 0.5	15	1210	< 1	38	22	64	0.28	191	< 10	< 10	< 0.5	3	0.63	31	16	20.9	< 10	< 1	0.02	< 10
692191	167	0.7	< 0.5	16	160	< 1	56	33	70	0.19	233	< 10	< 10	< 0.5	4	0.16	61	26	19.0	< 10	< 1	0.03	< 10
692192	46	0.5	< 0.5	12	3450	< 1	94	14	168	1.55	138	< 10	17	< 0.5	6	0.70	33	22	18.1	< 10	< 1	0.09	< 10
692193	77	0.6	< 0.5	17	2420	< 1	59	20	105	0.65	131	< 10	< 10	< 0.5	< 2	0.32	24	28	13.5	< 10	< 1	0.02	< 10
692194	427	0.9	< 0.5	58	2120	< 1	69	44	155	0.38	271	< 10	< 10	< 0.5	4	0.41	36	16	21.6	< 10	< 1	0.02	< 10
692195	1040	0.4	< 0.5	146	641	< 1	59	3	59	3.34	6	42	24	< 0.5	< 2	2.92	28	110	5.46	10	< 1	0.05	< 10
692196	134	0.9	0.5	27	1340	2	88	75	79	1.43	173	< 10	12	0.5	< 2	0.34	40	51	11.1	< 10	< 1	0.07	< 10
692197	57	0.3	< 0.5	9	1490	< 1	33	4	24	0.25	128	< 10	< 10	< 0.5	< 2	1.91	10	74	5.72	< 10	< 1	< 0.01	< 10
692198	53	0.3	0.8	11	5030	< 1	33	4	39	0.20	390	< 10	< 10	< 0.5	< 2	0.97	9	42	12.3	< 10	< 1	< 0.01	< 10
692199	25	0.2	< 0.5	6	2290	< 1	33	3	29	0.14	225	< 10	< 10	< 0.5	< 2	0.52	8	74	5.58	< 10	< 1	< 0.01	< 10
692200	513	1.3	1.0	46	4930	< 1	76	25	85	0.37	379	< 10	< 10	< 0.5	3	0.60	28	19	25.8	< 10	< 1	0.01	< 10
692201	< 5	0.2	< 0.5	< 1	89	< 1	< 1	< 2	18	4.40	< 2	12	< 10	< 0.5	< 2	0.18	< 1	< 1	0.52	< 10	< 1	1.22	< 10
692202	684	1.6	< 0.5	43	3960	< 1	68	35	84	0.35	367	< 10	< 10	< 0.5	7	0.19	31	18	24.1	< 10	< 1	< 0.01	< 10
692203	609	1.4	< 0.5	77	2850	< 1	69	41	169	0.32	324	< 10	< 10	< 0.5	6	1.03	39	17	21.8	< 10	< 1	0.02	< 10
692204	10	0.2	< 0.5	29	1670	< 1	82	3	66	1.39	85	< 10	30	< 0.5	< 2	3.94	24	39	5.95	< 10	< 1	0.10	< 10
692205	< 5	< 0.2	< 0.5	36	1120	< 1	63	< 2	59	1.32	54	< 10	37	< 0.5	< 2	2.90	23	35	4.22	< 10	< 1	0.13	< 10
692206	< 5	< 0.2	< 0.5	33	2320	< 1	84	< 2	105	2.86	14	< 10	28	< 0.5	< 2	3.87	24	63	8.95	< 10	< 1	0.09	11
692207	< 5	0.3	< 0.5	29	1190	< 1	68	< 2	75	1.74	31	< 10	36	< 0.5	< 2	2.91	21	44	5.24	< 10	< 1	0.12	< 10
692208	< 5	< 0.2	< 0.5	28	1150	< 1	39	< 2	43	1.33	9	< 10	36	< 0.5	< 2	3.11	16	37	4.51	< 10	< 1	0.12	13
692209	< 5	< 0.2	< 0.5	27	1410	< 1	57	< 2	69	2.18	3	< 10	44	< 0.5	< 2	2.75	20	63	6.11	< 10	< 1	0.17	< 10
692210	< 5	< 0.2	< 0.5	35	1590	< 1	55	< 2	74	1.92	9	< 10	45	< 0.5	< 2	3.02	21	53	5.74	< 10	< 1	0.16	< 10
692211	< 5	0.2	< 0.5	27	1740	< 1	86	< 2	67	1.85	24	< 10	39	< 0.5	< 2	3.82	31	50	5.99	< 10	< 1	0.15	< 10
692212	< 5	< 0.2	< 0.5	33	1220	< 1	77	< 2	38	1.33	23	< 10	36	< 0.5	< 2	2.73	29	54	3.86	< 10	< 1	0.12	< 10
692213	< 5	< 0.2	< 0.5	30	1310	< 1	61	< 2	54	1.78	28	< 10	48	< 0.5	< 2	2.64	25	60	4.75	< 10	< 1	0.17	< 10
692214	< 5	< 0.2	< 0.5	29	1500	< 1	51	< 2	53	1.87	18	< 10	48	< 0.5	< 2	3.65	20	58	5.35	< 10	< 1	0.18	< 10
692215	< 5	< 0.2	< 0.5	31	1330	< 1	41	< 2	55	2.09	7	< 10	38	< 0.5	< 2	2.89	16	69	5.71	< 10	< 1	0.13	< 10

Results

Activation Laboratories Ltd.

Report: A18-02397

Analyte Symbol	Au	Ag	Cd	Cu	Mn	Mo	Ni	Pb	Zn	Al	As	B	Ba	Be	Bi	Ca	Co	Cr	Fe	Ga	Hg	K	La
Unit Symbol	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm
Lower Limit	5	0.2	0.5	1	5	1	1	2	2	0.01	2	10	10	0.5	2	0.01	1	1	0.01	10	1	0.01	10
Method Code	FA-AA	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
692216	< 5	0.2	< 0.5	26	1540	< 1	80	< 2	71	1.54	48	< 10	34	< 0.5	< 2	3.48	28	55	5.17	< 10	< 1	0.11	< 10
692217	< 5	0.2	< 0.5	25	1570	< 1	83	< 2	51	1.60	47	< 10	34	< 0.5	< 2	3.55	29	57	5.28	< 10	< 1	0.11	< 10
692218	< 5	0.2	< 0.5	24	1520	< 1	79	< 2	49	1.51	46	< 10	32	< 0.5	< 2	3.42	28	51	5.04	< 10	< 1	0.11	< 10
692219	< 5	< 0.2	< 0.5	37	1220	2	141	< 2	51	1.88	96	< 10	45	< 0.5	< 2	2.30	52	67	5.25	< 10	< 1	0.15	< 10
692220	< 5	0.2	< 0.5	30	1410	< 1	119	< 2	83	2.30	67	< 10	58	< 0.5	< 2	2.26	39	86	5.89	< 10	< 1	0.19	< 10
692221	14	< 0.2	< 0.5	21	841	< 1	53	< 2	43	1.44	20	< 10	53	< 0.5	< 2	1.91	14	65	3.43	< 10	< 1	0.17	< 10
692222	< 5	< 0.2	< 0.5	28	813	< 1	60	< 2	47	1.42	22	< 10	51	< 0.5	< 2	2.25	16	86	3.45	< 10	< 1	0.16	< 10



Analyte Symbol	Mg	Na	P	S	Sb	Sc	Sr	Ti	Th	Te	Tl	U	V	W	Y	Zr	Au
Unit Symbol	%	%	%	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	g/tonne
Lower Limit	0.01	0.001	0.001	0.01	2	1	1	0.01	20	1	2	10	1	10	1	1	0.03
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	FA- GRA
692048	0.75	0.081	0.153	0.59	< 2	2	122	< 0.01	< 20	4	< 2	< 10	19	< 10	5	3	
692049	1.04	0.056	0.149	0.70	< 2	2	136	< 0.01	< 20	< 1	< 2	< 10	18	< 10	5	4	
692050	1.03	0.055	0.148	0.70	< 2	2	134	< 0.01	< 20	< 1	< 2	< 10	18	< 10	5	4	
692051	1.07	0.063	0.153	1.54	2	2	132	< 0.01	< 20	4	< 2	< 10	25	< 10	5	5	
692052	0.88	0.065	0.150	2.02	< 2	3	135	< 0.01	< 20	< 1	< 2	< 10	30	< 10	5	7	
692053	0.86	0.062	0.151	0.98	2	3	126	< 0.01	< 20	< 1	< 2	< 10	32	< 10	6	4	
692054	1.06	0.065	0.149	0.30	< 2	3	193	< 0.01	< 20	< 1	< 2	< 10	33	< 10	6	4	
692055	0.97	0.067	0.145	0.30	< 2	3	188	< 0.01	< 20	4	< 2	< 10	28	< 10	6	3	
692056	1.22	0.062	0.147	0.59	< 2	3	160	< 0.01	< 20	< 1	< 2	< 10	31	< 10	6	4	
692057	0.85	0.063	0.158	0.79	< 2	2	123	< 0.01	< 20	< 1	< 2	< 10	23	< 10	6	3	
692058	0.85	0.075	0.141	4.87	3	1	87	< 0.01	< 20	< 1	< 2	< 10	15	< 10	5	16	
692059	0.86	0.077	0.147	3.43	3	2	88	< 0.01	< 20	< 1	< 2	< 10	16	< 10	5	12	
692060	0.88	0.094	0.144	1.70	< 2	2	91	< 0.01	< 20	1	< 2	< 10	17	< 10	5	5	
692061	0.99	0.101	0.131	4.39	2	2	84	< 0.01	< 20	< 1	< 2	< 10	17	< 10	5	18	
692062	2.16	0.081	0.041	0.20	3	8	28	0.44	< 20	3	< 2	< 10	192	< 10	15	21	
692063	0.78	0.084	0.120	8.51	5	2	66	< 0.01	< 20	3	< 2	< 10	18	< 10	6	18	
692064	1.22	0.608	0.059	0.11	< 2	7	83	0.38	< 20	5	< 2	< 10	158	< 10	15	13	
692065	0.78	0.085	0.115	10.2	5	2	68	< 0.01	< 20	< 1	< 2	< 10	15	< 10	5	19	
692066	0.80	0.087	0.128	9.82	3	2	67	< 0.01	< 20	< 1	< 2	< 10	15	< 10	6	25	
692067	0.99	0.081	0.133	7.69	3	2	64	< 0.01	< 20	3	< 2	< 10	13	< 10	6	23	
692068	0.77	0.068	0.118	11.5	5	1	51	< 0.01	< 20	< 1	< 2	< 10	12	< 10	5	23	
692069	0.65	0.079	0.123	10.5	5	1	72	< 0.01	< 20	2	< 2	< 10	13	< 10	6	21	
692070	0.67	0.075	0.126	9.64	5	1	81	< 0.01	< 20	2	< 2	< 10	14	< 10	5	22	
692071	0.06	3.00	0.002	0.03	< 2	< 1	24	< 0.01	< 20	< 1	< 2	< 10	< 1	< 10	4	2	
692072	0.50	0.065	0.094	17.5	6	2	137	< 0.01	< 20	1	< 2	< 10	17	< 10	4	21	
692073	0.99	0.038	0.084	18.3	13	7	101	< 0.01	< 20	3	< 2	< 10	47	< 10	3	18	
692074	1.14	0.041	0.097	5.57	5	5	122	< 0.01	< 20	< 1	< 2	< 10	42	< 10	4	16	
692075	0.98	0.050	0.100	0.89	< 2	4	176	< 0.01	< 20	< 1	< 2	< 10	30	< 10	5	6	
692076	1.28	0.052	0.092	1.60	< 2	4	149	< 0.01	< 20	< 1	< 2	< 10	36	< 10	5	11	
692077	0.75	0.058	0.094	1.66	< 2	2	97	< 0.01	< 20	< 1	< 2	< 10	22	< 10	5	8	
692078	0.69	0.056	0.094	2.05	< 2	2	161	< 0.01	< 20	1	< 2	< 10	19	< 10	5	9	
692079	0.65	0.068	0.089	4.93	3	2	103	< 0.01	< 20	< 1	< 2	< 10	18	< 10	4	18	
692080	0.87	0.080	0.093	3.69	3	2	99	< 0.01	< 20	2	< 2	< 10	16	< 10	5	18	
692081	0.87	0.061	0.104	1.83	2	2	73	< 0.01	< 20	< 1	< 2	< 10	21	< 10	5	7	
692082	0.69	0.065	0.092	1.31	< 2	2	109	< 0.01	< 20	< 1	< 2	< 10	20	< 10	4	6	
692083	0.73	0.061	0.096	1.28	< 2	2	102	< 0.01	< 20	1	< 2	< 10	20	< 10	5	6	
692084	2.15	0.318	0.157	1.36	3	3	80	0.16	< 20	< 1	< 2	< 10	47	< 10	14	7	
692085	0.84	0.062	0.098	1.56	< 2	2	110	< 0.01	< 20	< 1	< 2	< 10	18	< 10	7	8	
692086	0.81	0.055	0.094	1.57	< 2	2	109	< 0.01	< 20	< 1	< 2	< 10	14	< 10	6	9	
692087	1.04	0.064	0.084	3.27	2	2	125	< 0.01	< 20	4	< 2	< 10	13	< 10	5	14	
692088	1.40	0.070	0.119	1.64	3	2	154	< 0.01	< 20	< 1	< 2	< 10	12	< 10	5	7	

Analyte Symbol	Mg	Na	P	S	Sb	Sc	Sr	Ti	Th	Te	Tl	U	V	W	Y	Zr	Au
Unit Symbol	%	%	%	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	g/tonne
Lower Limit	0.01	0.001	0.001	0.01	2	1	1	0.01	20	1	2	10	1	10	1	1	0.03
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	FA- GRA
692089	0.93	0.071	0.144	1.74	2	2	107	< 0.01	< 20	2	< 2	< 10	15	< 10	5	6	
692090	0.70	0.055	0.158	0.97	< 2	1	74	< 0.01	< 20	< 1	< 2	< 10	14	< 10	5	4	
692091	0.68	0.055	0.154	0.93	< 2	1	68	< 0.01	< 20	< 1	< 2	< 10	13	< 10	5	4	
692092	0.79	0.070	0.156	0.78	< 2	1	78	< 0.01	< 20	< 1	< 2	< 10	15	< 10	5	4	
692093	0.85	0.079	0.155	0.74	< 2	1	82	< 0.01	< 20	< 1	< 2	< 10	14	< 10	5	4	
692094	1.08	0.078	0.151	0.74	< 2	2	124	< 0.01	< 20	< 1	< 2	< 10	16	< 10	6	4	
692095	1.36	0.070	0.121	0.98	< 2	2	187	< 0.01	< 20	2	< 2	< 10	10	< 10	6	6	
692096	1.63	0.074	0.084	1.32	< 2	2	106	< 0.01	< 20	< 1	< 2	< 10	13	< 10	5	11	
692097	1.32	0.062	0.092	0.92	< 2	2	86	< 0.01	< 20	< 1	< 2	< 10	13	< 10	5	8	
692098	2.20	0.082	0.084	0.95	< 2	2	110	< 0.01	< 20	< 1	< 2	< 10	14	< 10	5	8	
692099	2.20	0.079	0.072	0.80	< 2	2	114	< 0.01	< 20	< 1	< 2	< 10	12	< 10	5	8	
692100	0.05	2.87	0.001	< 0.01	< 2	< 1	23	< 0.01	< 20	< 1	< 2	< 10	< 1	< 10	4	< 1	
692101	1.85	0.079	0.075	0.96	< 2	2	96	< 0.01	< 20	< 1	< 2	< 10	12	< 10	4	9	
692102	1.99	0.078	0.068	0.84	< 2	2	125	< 0.01	< 20	< 1	< 2	< 10	12	< 10	5	8	
692103	1.53	0.086	0.078	1.59	< 2	2	98	< 0.01	< 20	1	< 2	< 10	13	< 10	5	10	
692104	1.07	0.102	0.094	1.28	< 2	2	82	< 0.01	< 20	< 1	< 2	< 10	14	< 10	5	8	
692105	0.67	0.091	0.088	4.29	3	1	57	< 0.01	< 20	< 1	< 2	< 10	15	< 10	4	15	
692106	0.65	0.126	0.090	2.59	2	2	82	< 0.01	< 20	< 1	< 2	< 10	16	< 10	4	13	
692107	0.79	0.091	0.079	4.83	< 2	2	79	< 0.01	< 20	< 1	< 2	< 10	20	< 10	4	15	
692108	1.15	0.073	0.069	7.86	4	4	80	< 0.01	< 20	< 1	< 2	< 10	34	< 10	4	18	
692109	1.33	0.061	0.079	6.58	4	4	88	< 0.01	< 20	< 1	< 2	< 10	35	< 10	4	18	
692110	0.89	0.067	0.114	4.97	2	2	136	< 0.01	< 20	< 1	< 2	< 10	13	< 10	5	12	
692111	2.14	0.323	0.130	0.76	3	3	87	0.14	< 20	4	< 2	< 10	34	< 10	14	6	
692112	0.91	0.089	0.147	3.76	2	2	111	< 0.01	< 20	2	< 2	< 10	17	< 10	5	12	
692113	0.87	0.088	0.153	3.30	2	2	97	< 0.01	< 20	< 1	< 2	< 10	20	< 10	6	12	
692114	0.79	0.081	0.144	3.25	< 2	2	108	< 0.01	< 20	< 1	< 2	< 10	19	< 10	5	12	
692115	0.83	0.072	0.137	4.11	3	1	85	< 0.01	< 20	1	< 2	< 10	18	< 10	5	16	
692116	0.72	0.062	0.125	3.50	< 2	2	119	< 0.01	< 20	< 1	< 2	< 10	22	< 10	5	12	
692117	0.65	0.053	0.120	5.44	3	1	90	< 0.01	< 20	< 1	< 2	< 10	12	< 10	4	15	
692118	1.17	0.064	0.081	1.25	3	4	118	< 0.01	< 20	2	< 2	< 10	34	< 10	4	7	
692119	0.04	2.38	0.001	< 0.01	< 2	< 1	19	< 0.01	< 20	< 1	< 2	< 10	< 1	< 10	3	1	
692120	1.06	0.076	0.083	0.57	2	5	112	< 0.01	< 20	< 1	< 2	< 10	37	< 10	4	8	
692121	1.01	0.067	0.083	0.95	< 2	4	98	< 0.01	< 20	3	< 2	< 10	35	< 10	4	9	
692122	0.57	0.078	0.090	0.48	< 2	1	84	< 0.01	< 20	1	< 2	< 10	11	< 10	4	4	
692123	0.52	0.078	0.091	0.71	< 2	1	81	< 0.01	< 20	< 1	< 2	< 10	11	< 10	4	6	
692124	0.58	0.050	0.088	1.18	< 2	1	62	< 0.01	< 20	< 1	< 2	< 10	9	< 10	4	8	
692125	0.49	0.060	0.095	2.75	< 2	1	50	< 0.01	< 20	< 1	< 2	< 10	11	< 10	4	13	
692126	0.58	0.049	0.090	2.13	< 2	1	59	< 0.01	< 20	< 1	< 2	< 10	11	< 10	4	11	
692127	0.46	0.063	0.091	5.67	3	1	52	< 0.01	< 20	< 1	< 2	< 10	12	< 10	3	15	
692128	0.43	0.068	0.089	8.82	4	1	44	< 0.01	< 20	< 1	< 2	< 10	12	< 10	3	19	
692129	0.66	0.093	0.096	2.34	< 2	2	71	< 0.01	< 20	< 1	< 2	< 10	15	< 10	4	11	
692130	0.71	0.061	0.106	0.61	< 2	1	82	< 0.01	< 20	< 1	< 2	< 10	12	< 10	5	5	

Analyte Symbol	Mg	Na	P	S	Sb	Sc	Sr	Ti	Th	Te	Tl	U	V	W	Y	Zr	Au
Unit Symbol	%	%	%	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	g/tonne
Lower Limit	0.01	0.001	0.001	0.01	2	1	1	0.01	20	1	2	10	1	10	1	1	0.03
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	FA- GRA
692131	0.70	0.058	0.106	0.59	< 2	1	82	< 0.01	< 20	5	< 2	< 10	12	< 10	5	5	
692132	0.66	0.091	0.098	0.72	< 2	2	93	< 0.01	< 20	2	< 2	< 10	17	< 10	5	4	
692133	0.60	0.080	0.094	1.24	< 2	2	78	< 0.01	< 20	< 1	< 2	< 10	14	< 10	4	6	
692134	0.64	0.101	0.099	0.51	< 2	1	96	< 0.01	< 20	2	< 2	< 10	13	< 10	4	5	
692135	0.70	0.091	0.101	0.55	< 2	2	95	< 0.01	< 20	2	< 2	< 10	13	< 10	5	4	
692136	0.85	0.095	0.100	0.44	2	2	111	< 0.01	< 20	< 1	< 2	< 10	18	< 10	4	5	
692137	1.31	0.062	0.090	0.22	< 2	4	109	< 0.01	< 20	< 1	< 2	< 10	28	< 10	4	7	
692138	1.35	0.067	0.089	0.19	2	3	103	< 0.01	< 20	< 1	< 2	< 10	26	< 10	5	6	
692139	1.43	0.065	0.074	1.45	4	5	122	< 0.01	< 20	< 1	< 2	< 10	41	< 10	4	13	
692140	1.09	0.072	0.067	6.81	6	8	99	< 0.01	< 20	< 1	< 2	< 10	57	< 10	3	20	
692141	1.00	0.052	0.069	7.68	7	5	87	< 0.01	< 20	2	< 2	< 10	42	< 10	3	17	
692142	1.97	0.075	0.038	0.18	< 2	7	26	0.41	< 20	3	< 2	< 10	177	< 10	14	20	
692143	1.06	0.064	0.082	4.68	6	3	101	< 0.01	< 20	1	< 2	< 10	26	< 10	4	16	
692144	0.84	0.079	0.078	5.74	5	2	103	< 0.01	< 20	1	< 2	< 10	20	< 10	4	18	
692145	0.79	0.066	0.094	1.54	< 2	2	95	< 0.01	< 20	2	< 2	< 10	15	< 10	4	8	
692146	0.99	0.056	0.079	1.70	< 2	3	101	< 0.01	< 20	3	< 2	< 10	23	< 10	3	11	
692147	0.82	0.052	0.080	2.64	< 2	2	87	< 0.01	< 20	3	< 2	< 10	18	< 10	3	13	
692148	0.96	0.053	0.071	4.44	4	3	105	< 0.01	< 20	1	< 2	< 10	24	< 10	3	15	
692149	0.94	0.045	0.071	6.54	5	3	95	< 0.01	< 20	< 1	< 2	< 10	28	< 10	3	16	
692150	0.99	0.051	0.073	6.42	4	5	88	< 0.01	< 20	2	< 2	< 10	38	< 10	3	18	
692151	1.09	0.044	0.065	5.26	5	6	120	< 0.01	< 20	2	< 2	< 10	49	< 10	3	17	
692152	0.94	0.043	0.060	6.65	5	5	123	< 0.01	< 20	< 1	< 2	< 10	39	< 10	3	16	
692153	0.84	0.062	0.068	5.08	5	4	114	< 0.01	< 20	2	< 2	< 10	32	< 10	3	17	
692154	0.06	2.45	0.002	0.05	< 2	< 1	21	< 0.01	< 20	1	< 2	< 10	1	< 10	4	2	
692155	1.09	0.052	0.071	5.39	5	5	146	< 0.01	< 20	< 1	< 2	< 10	39	< 10	3	20	
692156	0.95	0.060	0.080	5.19	5	4	125	< 0.01	< 20	< 1	< 2	< 10	36	< 10	3	19	
692157	1.05	0.057	0.071	5.19	4	5	154	< 0.01	< 20	< 1	< 2	< 10	37	< 10	3	19	
692158	0.99	0.040	0.070	3.90	6	5	118	< 0.01	< 20	< 1	< 2	< 10	38	< 10	3	16	
692159	1.11	0.044	0.062	5.44	7	4	143	< 0.01	< 20	< 1	< 2	< 10	36	< 10	3	17	
692160	1.05	0.041	0.060	6.40	7	5	120	< 0.01	< 20	3	< 2	< 10	38	< 10	3	16	
692161	0.85	0.037	0.046	13.2	8	5	93	< 0.01	< 20	1	< 2	< 10	35	< 10	3	19	
692162	0.87	0.033	0.045	7.13	6	6	95	< 0.01	< 20	2	< 2	< 10	43	< 10	3	16	
692163	1.08	0.040	0.055	6.09	7	3	102	< 0.01	< 20	4	< 2	< 10	20	< 10	3	14	
692164	1.14	0.031	0.053	5.46	8	3	105	< 0.01	< 20	< 1	< 2	< 10	16	< 10	3	12	
692165	0.86	0.031	0.032	14.0	12	3	84	< 0.01	< 20	< 1	< 2	< 10	20	< 10	2	16	
692166	0.93	0.031	0.034	10.8	8	3	87	< 0.01	< 20	< 1	< 2	< 10	18	< 10	3	14	
692167	0.80	0.030	0.042	9.06	7	3	68	< 0.01	< 20	2	< 2	< 10	22	< 10	3	12	
692168	0.89	0.038	0.046	10.8	8	4	77	< 0.01	< 20	< 1	< 2	< 10	24	< 10	3	14	
692169	1.04	0.033	0.037	9.88	10	2	83	< 0.01	< 20	< 1	< 2	< 10	12	< 10	3	11	
692170	1.05	0.022	0.014	17.1	16	2	45	< 0.01	< 20	< 1	< 2	< 10	17	< 10	3	12	
692171	1.30	0.013	0.004	11.2	11	3	18	< 0.01	< 20	< 1	< 2	< 10	16	< 10	3	10	

Analyte Symbol	Mg	Na	P	S	Sb	Sc	Sr	Ti	Th	Te	Tl	U	V	W	Y	Zr	Au
Unit Symbol	%	%	%	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	g/tonne
Lower Limit	0.01	0.001	0.001	0.01	2	1	1	0.01	20	1	2	10	1	10	1	1	0.03
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	FA- GRA
692172	1.29	0.014	0.003	7.68	12	7	36	< 0.01	< 20	2	< 2	< 10	53	< 10	2	9	
692173	0.88	0.014	0.002	7.69	9	4	20	< 0.01	< 20	1	< 2	< 10	28	< 10	2	7	
692174	0.90	0.018	0.003	9.19	10	3	21	< 0.01	< 20	< 1	< 2	< 10	27	< 10	2	7	
692175	1.04	0.013	0.003	14.1	12	2	32	< 0.01	< 20	< 1	< 2	< 10	17	< 10	2	10	
692176	0.78	0.011	0.003	9.93	12	3	19	< 0.01	< 20	< 1	< 2	< 10	23	< 10	2	7	
692177	0.80	0.011	0.005	7.29	10	2	30	< 0.01	< 20	< 1	< 2	< 10	11	< 10	3	7	
692178	0.57	0.011	0.002	2.72	5	2	19	< 0.01	< 20	< 1	< 2	< 10	15	< 10	1	4	
692179	0.21	0.011	< 0.001	7.57	6	< 1	10	< 0.01	< 20	< 1	< 2	< 10	6	< 10	< 1	3	
692180																	6.86
692181	0.26	0.012	0.002	6.69	7	2	11	< 0.01	< 20	< 1	< 2	< 10	17	< 10	< 1	4	
692182	0.37	0.012	0.003	8.57	8	2	14	< 0.01	< 20	2	< 2	< 10	19	< 10	< 1	5	
692183	0.24	0.014	0.002	14.4	8	1	9	< 0.01	< 20	2	< 2	< 10	7	< 10	< 1	6	
692184	0.84	0.012	0.003	14.4	14	3	35	< 0.01	< 20	< 1	< 2	< 10	18	< 10	1	9	
692185	0.90	0.012	0.004	15.2	14	3	35	< 0.01	< 20	< 1	< 2	< 10	24	< 10	1	10	
692186	0.38	0.014	0.003	19.6	18	2	14	< 0.01	< 20	< 1	< 2	< 10	17	< 10	< 1	8	
692187	0.36	0.016	0.002	16.9	13	2	18	< 0.01	< 20	< 1	< 2	< 10	9	< 10	< 1	7	
692188	0.05	2.50	< 0.001	0.07	< 2	< 1	20	< 0.01	< 20	3	< 2	< 10	< 1	< 10	3	1	
692189	0.52	0.019	0.004	18.7	22	3	23	< 0.01	< 20	1	< 2	< 10	17	< 10	< 1	9	
692190	0.37	0.018	0.005	19.8	22	4	23	< 0.01	< 20	4	< 2	< 10	19	< 10	< 1	10	
692191	0.06	0.017	0.007	19.2	22	< 1	7	< 0.01	< 20	< 1	2	< 10	4	< 10	< 1	9	
692192	0.37	0.029	0.050	8.52	11	7	35	< 0.01	< 20	4	< 2	< 10	29	< 10	5	15	
692193	0.26	0.014	0.008	7.59	8	3	16	< 0.01	< 20	< 1	< 2	< 10	19	< 10	2	7	
692194	0.09	0.014	0.013	17.2	21	2	26	< 0.01	< 20	< 1	< 2	< 10	8	< 10	3	8	
692195	1.89	0.068	0.036	0.19	< 2	7	24	0.40	< 20	6	< 2	< 10	173	< 10	13	19	
692196	0.28	0.017	0.027	6.25	10	3	47	< 0.01	< 20	1	< 2	< 10	20	< 10	4	10	
692197	0.72	0.014	0.005	3.26	3	< 1	21	< 0.01	< 20	< 1	< 2	< 10	5	< 10	3	3	
692198	0.81	0.015	0.018	3.41	7	< 1	23	< 0.01	< 20	2	< 2	< 10	6	< 10	3	5	
692199	0.33	0.013	0.006	1.69	3	< 1	12	< 0.01	< 20	2	< 2	< 10	4	< 10	1	3	
692200	0.70	0.016	0.004	18.4	24	2	19	< 0.01	< 20	< 1	< 2	< 10	8	< 10	2	11	
692201	0.04	2.44	0.001	0.04	< 2	< 1	18	< 0.01	< 20	2	< 2	< 10	< 1	< 10	3	2	
692202	0.46	0.017	0.003	19.1	33	2	6	< 0.01	< 20	< 1	< 2	< 10	8	< 10	2	10	
692203	0.42	0.017	0.004	19.4	26	2	34	< 0.01	< 20	< 1	< 2	< 10	7	< 10	1	10	
692204	1.12	0.047	0.114	0.67	3	5	99	< 0.01	< 20	3	< 2	< 10	30	< 10	5	5	
692205	0.82	0.055	0.128	0.12	< 2	5	78	< 0.01	< 20	< 1	< 2	< 10	30	< 10	5	3	
692206	1.46	0.038	0.098	0.09	3	11	98	< 0.01	< 20	< 1	< 2	< 10	65	< 10	4	8	
692207	0.90	0.055	0.118	0.05	2	6	72	< 0.01	< 20	1	< 2	< 10	36	< 10	4	4	
692208	0.76	0.059	0.121	0.05	< 2	4	78	< 0.01	< 20	< 1	< 2	< 10	29	< 10	4	4	
692209	0.90	0.065	0.107	0.05	3	6	76	< 0.01	< 20	< 1	< 2	< 10	50	< 10	5	5	
692210	0.95	0.065	0.105	0.06	2	6	76	< 0.01	< 20	< 1	< 2	< 10	42	< 10	5	5	
692211	1.23	0.065	0.106	0.06	3	7	94	< 0.01	< 20	1	< 2	< 10	47	< 10	5	5	
692212	0.87	0.077	0.112	0.06	2	4	49	< 0.01	< 20	2	< 2	< 10	35	< 10	5	4	
692213	0.80	0.084	0.125	0.02	< 2	6	69	< 0.01	< 20	< 1	< 2	< 10	47	< 10	5	3	

Analyte Symbol	Mg	Na	P	S	Sb	Sc	Sr	Ti	Th	Te	Tl	U	V	W	Y	Zr	Au
Unit Symbol	%	%	%	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	g/tonne
Lower Limit	0.01	0.001	0.001	0.01	2	1	1	0.01	20	1	2	10	1	10	1	1	0.03
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	FA- GRA
692214	1.18	0.089	0.114	0.04	3	6	85	< 0.01	< 20	< 1	< 2	< 10	47	< 10	6	4	
692215	1.08	0.083	0.106	0.03	3	6	65	< 0.01	< 20	< 1	< 2	< 10	57	< 10	5	5	
692216	1.05	0.058	0.114	0.04	2	7	88	< 0.01	< 20	2	< 2	< 10	40	< 10	6	4	
692217	1.07	0.058	0.117	0.04	< 2	7	88	< 0.01	< 20	< 1	< 2	< 10	42	< 10	6	4	
692218	1.02	0.054	0.113	0.04	2	6	85	< 0.01	< 20	2	< 2	< 10	40	< 10	6	5	
692219	0.70	0.081	0.128	0.17	2	5	75	< 0.01	< 20	2	< 2	< 10	48	< 10	5	4	
692220	0.77	0.097	0.117	0.09	3	6	80	< 0.01	< 20	1	< 2	< 10	51	< 10	6	5	
692221	0.51	0.089	0.113	0.03	< 2	4	62	< 0.01	< 20	3	< 2	< 10	26	< 10	5	3	
692222	0.55	0.092	0.107	0.04	< 2	4	62	< 0.01	< 20	< 1	< 2	< 10	28	< 10	5	3	

Analyte Symbol	Au	Ag	Cd	Cu	Mn	Mo	Ni	Pb	Zn	Al	As	B	Ba	Be	Bi	Ca	Co	Cr	Fe	Ga	Hg	K	La
Unit Symbol	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm
Lower Limit	5	0.2	0.5	1	5	1	1	2	2	0.01	2	10	10	0.5	2	0.01	1	1	0.01	10	1	0.01	10
Method Code	FA-AA	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
GXR-1 Meas		25.4	2.7	1070	742	13	25	622	631	0.31	326	< 10	272	0.7	1360	0.73	6	6	20.7	< 10	4	0.03	< 10
GXR-1 Cert		31.0	3.30	1110	852	18.0	41.0	730	760	3.52	427	15.0	750	1.22	1380	0.960	8.20	12.0	23.6	13.8	3.90	0.050	7.50
GXR-1 Meas		25.9	2.4	1100	754	14	19	631	635	0.32	333	< 10	294	0.7	1390	0.74	6	5	21.3	< 10	3	0.03	< 10
GXR-1 Cert		31.0	3.30	1110	852	18.0	41.0	730	760	3.52	427	15.0	750	1.22	1380	0.960	8.20	12.0	23.6	13.8	3.90	0.050	7.50
GXR-6 Meas		0.4	< 0.5	60	945	< 1	16	87	113	6.37	206	< 10	786	0.8	< 2	0.14	12	69	4.85	10	< 1	0.92	< 10
GXR-6 Cert		1.30	1.00	66.0	1010	2.40	27.0	101	118	17.7	330	9.80	1300	1.40	0.290	0.180	13.8	96.0	5.58	35.0	0.0680	1.87	13.9
GXR-6 Meas		0.4	< 0.5	64	989	< 1	16	91	118	6.71	220	< 10	829	0.8	< 2	0.15	12	73	5.12	10	1	0.98	< 10
GXR-6 Cert		1.30	1.00	66.0	1010	2.40	27.0	101	118	17.7	330	9.80	1300	1.40	0.290	0.180	13.8	96.0	5.58	35.0	0.0680	1.87	13.9
OXN117 Meas																							
OXN117 Cert																							
OxP116 Meas																							
OxP116 Cert																							
OREAS 218 Meas	527																						
OREAS 218 Cert	531																						
OREAS 218 Meas	508																						
OREAS 218 Cert	531																						
OREAS 218 Meas	504																						
OREAS 218 Cert	531																						
OREAS 218 Meas	497																						
OREAS 218 Cert	531																						
OREAS 218 Meas	550																						
OREAS 218 Cert	531																						
OREAS 224 Meas	2090																						
OREAS 224 Cert	2150.000																						
OREAS 224 Meas	2050																						
OREAS 224 Cert	2150.000																						
OREAS 224 Meas	2220																						
OREAS 224 Cert	2150.000																						
OREAS 224 Meas	2190																						
OREAS 224 Cert	2150.000																						
OREAS 224 Meas	2100																						
OREAS 224 Cert	2150.000																						
692050 Orig		0.3	< 0.5	25	452	< 1	99	4	58	1.22	12	< 10	43	< 0.5	< 2	4.14	21	32	2.91	< 10	< 1	0.13	16
692050 Dup		0.3	< 0.5	25	449	< 1	98	3	55	1.19	12	< 10	41	< 0.5	< 2	4.10	21	29	2.87	< 10	< 1	0.12	15
692057 Orig	< 5																						
692057 Dup	5																						
692058 Orig		0.4	< 0.5	34	386	2	286	12	49	1.16	33	< 10	17	< 0.5	< 2	2.60	37	27	6.50	< 10	< 1	0.18	11
692058 Dup		0.4	0.5	33	370	2	286	11	50	1.10	31	< 10	18	< 0.5	< 2	2.51	37	25	6.36	< 10	< 1	0.17	10

Analyte Symbol	Au	Ag	Cd	Cu	Mn	Mo	Ni	Pb	Zn	Al	As	B	Ba	Be	Bi	Ca	Co	Cr	Fe	Ga	Hg	K	La
Unit Symbol	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm
Lower Limit	5	0.2	0.5	1	5	1	1	2	2	0.01	2	10	10	0.5	2	0.01	1	1	0.01	10	1	0.01	10
Method Code	FA-AA	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
692067 Orig	< 5																						
692067 Dup	< 5																						
692077 Orig	< 5																						
692077 Dup	< 5																						
692092 Orig	< 5																						
692092 Dup	< 5																						
692097 Orig	< 5	0.3	< 0.5	24	478	2	173	< 2	58	1.13	20	< 10	33	< 0.5	< 2	4.12	43	9	3.17	< 10	< 1	0.09	10
692097 Split PREP DUP	< 5	0.2	< 0.5	20	404	2	142	< 2	49	0.89	16	< 10	24	< 0.5	3	3.50	38	6	2.60	< 10	< 1	0.07	< 10
692098 Orig		0.3	< 0.5	18	561	< 1	164	2	58	0.92	18	< 10	36	< 0.5	< 2	5.64	36	6	3.70	< 10	< 1	0.10	< 10
692098 Dup		0.3	< 0.5	19	546	< 1	162	< 2	59	0.89	18	< 10	34	< 0.5	< 2	5.38	35	5	3.61	< 10	< 1	0.10	< 10
692102 Orig	< 5																						
692102 Dup	< 5																						
692111 Orig		0.5	< 0.5	68	884	1	106	9	77	1.60	2360	< 10	75	< 0.5	< 2	1.39	28	35	5.67	< 10	< 1	0.07	14
692111 Dup		0.5	< 0.5	71	926	1	115	9	78	1.67	2520	< 10	77	< 0.5	< 2	1.44	29	36	6.00	< 10	< 1	0.07	15
692112 Orig	< 5																						
692112 Dup	< 5																						
692114 Orig		0.2	< 0.5	24	519	< 1	143	3	47	1.23	18	< 10	39	< 0.5	< 2	2.96	33	39	5.36	< 10	< 1	0.16	13
692114 Dup		0.3	< 0.5	24	511	< 1	140	3	46	1.18	17	< 10	38	< 0.5	< 2	2.90	33	40	5.21	< 10	< 1	0.16	13
692126 Orig	< 5																						
692126 Dup	< 5																						
692127 Orig		0.3	< 0.5	14	275	2	68	4	43	1.27	20	< 10	13	< 0.5	< 2	1.23	19	8	6.79	< 10	< 1	0.23	< 10
692127 Dup		0.3	< 0.5	15	293	3	72	5	45	1.36	21	< 10	16	< 0.5	< 2	1.31	19	7	7.24	< 10	< 1	0.25	< 10
692136 Orig	< 5																						
692136 Dup	< 5																						
692139 Orig		0.2	< 0.5	13	2310	< 1	30	< 2	71	2.77	3	< 10	28	< 0.5	< 2	3.67	11	5	9.58	< 10	< 1	0.11	< 10
692139 Dup		0.3	< 0.5	13	2440	< 1	32	< 2	74	2.94	< 2	< 10	28	< 0.5	< 2	3.86	10	5	10.1	< 10	< 1	0.11	< 10
692146 Orig	< 5																						
692146 Dup	< 5																						
692147 Orig	< 5	0.2	< 0.5	16	1140	< 1	33	< 2	55	1.57	5	< 10	33	< 0.5	< 2	2.42	15	5	6.63	< 10	< 1	0.15	< 10
692147 Split PREP DUP	< 5	0.2	0.6	17	1190	< 1	36	< 2	61	1.66	4	< 10	34	< 0.5	< 2	2.54	14	5	6.83	< 10	< 1	0.14	< 10
692153 Orig		0.3	< 0.5	22	2020	< 1	40	3	48	1.82	16	< 10	18	< 0.5	< 2	2.92	17	7	10.4	< 10	< 1	0.15	< 10
692153 Dup		0.3	< 0.5	20	1940	< 1	37	< 2	47	1.79	16	< 10	17	< 0.5	2	2.82	17	9	10.1	< 10	< 1	0.15	< 10
692160 Orig	8																						
692160 Dup	10																						
692170 Orig	< 5																						
692170 Dup	6																						
692181 Orig	18																						
692181 Dup	13																						
692184 Orig		< 0.2	< 0.5	8	4910	< 1	38	2	47	0.17	54	< 10	< 10	< 0.5	2	1.01	16	20	23.9	< 10	< 1	< 0.01	< 10
692184 Dup		< 0.2	< 0.5	8	5090	< 1	42	3	47	0.17	58	< 10	< 10	< 0.5	5	1.03	17	20	24.4	< 10	< 1	< 0.01	< 10
692185 Orig		0.2	< 0.5	17	5030	< 1	58	5	82	0.32	65	< 10	< 10	< 0.5	3	1.06	25	27	25.4	< 10	< 1	< 0.01	< 10

Analyte Symbol	Au	Ag	Cd	Cu	Mn	Mo	Ni	Pb	Zn	Al	As	B	Ba	Be	Bi	Ca	Co	Cr	Fe	Ga	Hg	K	La
Unit Symbol	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm
Lower Limit	5	0.2	0.5	1	5	1	1	2	2	0.01	2	10	10	0.5	2	0.01	1	1	0.01	10	1	0.01	10
Method Code	FA-AA	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
692185 Dup		< 0.2	< 0.5	17	5100	< 1	57	6	78	0.31	67	< 10	< 10	< 0.5	4	1.03	24	23	24.6	< 10	< 1	< 0.01	< 10
692196 Orig	133																						
692196 Dup	134																						
692197 Orig	57	0.3	< 0.5	9	1490	< 1	33	4	24	0.25	128	< 10	< 10	< 0.5	< 2	1.91	10	74	5.72	< 10	< 1	< 0.01	< 10
692197 Split PREP DUP	58	0.2	< 0.5	7	1440	< 1	31	4	20	0.25	121	< 10	< 10	< 0.5	< 2	1.88	9	58	5.46	< 10	< 1	< 0.01	< 10
692205 Orig	< 5																						
692205 Dup	< 5																						
692215 Orig	< 5																						
692215 Dup	< 5																						
Method Blank	< 5																						
Method Blank	< 5																						
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Method Blank																							
Method Blank		0.3	< 0.5	< 1	< 5	< 1	< 1	< 2	< 2	< 0.01	< 2	< 10	< 10	< 0.5	< 2	< 0.01	< 1	< 1	< 0.01	< 10	< 1	< 0.01	< 10
Method Blank		0.3	< 0.5	< 1	< 5	< 1	< 1	< 2	< 2	< 0.01	< 2	< 10	< 10	< 0.5	< 2	< 0.01	< 1	< 1	< 0.01	< 10	< 1	< 0.01	< 10
Method Blank		0.3	< 0.5	< 1	< 5	< 1	< 1	< 2	< 2	< 0.01	< 2	< 10	< 10	< 0.5	< 2	< 0.01	< 1	< 1	< 0.01	< 10	< 1	< 0.01	< 10



Analyte Symbol	Mg	Na	P	S	Sb	Sc	Sr	Ti	Th	Te	Tl	U	V	W	Y	Zr	Au
Unit Symbol	%	%	%	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	g/tonne
Lower Limit	0.01	0.001	0.001	0.01	2	1	1	0.01	20	1	2	10	1	10	1	1	0.03
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	FA- GRA
GXR-1 Meas	0.12	0.043	0.037	0.18	74	< 1	144	< 0.01	< 20	10	< 2	29	74	131	23	13	
GXR-1 Cert	0.217	0.0520	0.0650	0.257	122	1.58	275	0.036	2.44	13.0	0.390	34.9	80.0	164	32.0	38.0	
GXR-1 Meas	0.12	0.044	0.038	0.18	74	< 1	146	< 0.01	< 20	9	< 2	31	74	129	23	13	
GXR-1 Cert	0.217	0.0520	0.0650	0.257	122	1.58	275	0.036	2.44	13.0	0.390	34.9	80.0	164	32.0	38.0	
GXR-6 Meas	0.33	0.068	0.031	0.02	4	20	26	< 20	< 1	< 2	< 10	159	< 10	6	13		
GXR-6 Cert	0.609	0.104	0.0350	0.0160	3.60	27.6	35.0	5.30	0.0180	2.20	1.54	186	1.90	14.0	110		
GXR-6 Meas	0.35	0.070	0.033	0.02	4	21	28	< 20	< 1	< 2	< 10	165	< 10	6	14		
GXR-6 Cert	0.609	0.104	0.0350	0.0160	3.60	27.6	35.0	5.30	0.0180	2.20	1.54	186	1.90	14.0	110		
OXN117 Meas																	7.76
OXN117 Cert																	7.679
OxP116 Meas																	14.8
OxP116 Cert																	14.92
OREAS 218 Meas																	
OREAS 218 Cert																	
OREAS 218 Meas																	
OREAS 218 Cert																	
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OREAS 224 Meas																	
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OREAS 224 Meas																	
OREAS 224 Cert																	
OREAS 224 Meas																	
OREAS 224 Cert																	
OREAS 224 Meas																	
OREAS 224 Cert																	
692050 Orig	1.04	0.056	0.148	0.70	< 2	2	134	< 0.01	< 20	< 1	< 2	< 10	18	< 10	5	4	
692050 Dup	1.03	0.054	0.147	0.70	< 2	2	134	< 0.01	< 20	1	< 2	< 10	18	< 10	5	4	
692057 Orig																	
692057 Dup																	
692058 Orig	0.87	0.078	0.144	4.89	3	1	88	< 0.01	< 20	< 1	< 2	< 10	16	< 10	5	16	
692058 Dup	0.83	0.072	0.138	4.86	4	1	86	< 0.01	< 20	< 1	< 2	< 10	15	< 10	5	16	
692067 Orig																	
692067 Dup																	
692077 Orig																	

Analyte Symbol	Mg	Na	P	S	Sb	Sc	Sr	Ti	Th	Te	Tl	U	V	W	Y	Zr	Au
Unit Symbol	%	%	%	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	g/tonne
Lower Limit	0.01	0.001	0.001	0.01	2	1	1	0.01	20	1	2	10	1	10	1	1	0.03
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	FA- GRA
692077 Dup																	
692092 Orig																	
692092 Dup																	
692097 Orig	1.32	0.062	0.092	0.92	< 2	2	86	< 0.01	< 20	< 1	< 2	< 10	13	< 10	5	8	
692097 Split PREP DUP	1.09	0.046	0.076	0.77	< 2	1	70	< 0.01	< 20	< 1	< 2	< 10	11	< 10	4	7	
692098 Orig	2.23	0.084	0.085	0.96	2	2	112	< 0.01	< 20	3	< 2	< 10	14	< 10	5	9	
692098 Dup	2.17	0.081	0.083	0.95	< 2	2	108	< 0.01	< 20	< 1	< 2	< 10	14	< 10	5	8	
692102 Orig																	
692102 Dup																	
692111 Orig	2.07	0.320	0.126	0.74	3	3	85	0.14	< 20	2	< 2	< 10	34	< 10	13	7	
692111 Dup	2.20	0.327	0.134	0.79	3	3	88	0.14	< 20	5	< 2	< 10	35	< 10	14	6	
692112 Orig																	
692112 Dup																	
692114 Orig	0.79	0.083	0.146	3.31	2	2	111	< 0.01	< 20	2	< 2	< 10	19	< 10	5	13	
692114 Dup	0.78	0.079	0.143	3.19	< 2	2	105	< 0.01	< 20	< 1	< 2	< 10	19	< 10	5	11	
692126 Orig																	
692126 Dup																	
692127 Orig	0.44	0.061	0.088	5.57	3	1	50	< 0.01	< 20	< 1	< 2	< 10	12	< 10	3	14	
692127 Dup	0.47	0.065	0.094	5.77	3	1	53	< 0.01	< 20	< 1	< 2	< 10	13	< 10	3	15	
692136 Orig																	
692136 Dup																	
692139 Orig	1.40	0.064	0.072	1.42	3	5	119	< 0.01	< 20	< 1	< 2	< 10	40	< 10	4	12	
692139 Dup	1.46	0.066	0.076	1.48	4	5	125	< 0.01	< 20	< 1	< 2	< 10	42	< 10	4	13	
692146 Orig																	
692146 Dup																	
692147 Orig	0.82	0.052	0.080	2.64	< 2	2	87	< 0.01	< 20	3	< 2	< 10	18	< 10	3	13	
692147 Split PREP DUP	0.87	0.051	0.082	2.51	3	2	92	< 0.01	< 20	< 1	< 2	< 10	19	< 10	3	13	
692153 Orig	0.86	0.062	0.069	5.15	5	4	117	< 0.01	< 20	2	< 2	< 10	33	< 10	3	17	
692153 Dup	0.82	0.061	0.067	5.01	5	4	111	< 0.01	< 20	1	< 2	< 10	32	< 10	3	17	
692160 Orig																	
692160 Dup																	
692170 Orig																	
692170 Dup																	
692181 Orig																	
692181 Dup																	
692184 Orig	0.83	0.012	0.003	14.0	16	3	35	< 0.01	< 20	< 1	< 2	< 10	18	< 10	1	8	
692184 Dup	0.85	0.011	0.003	14.9	12	3	34	< 0.01	< 20	< 1	< 2	< 10	19	< 10	1	9	
692185 Orig	0.91	0.012	0.004	15.3	15	3	35	< 0.01	< 20	< 1	< 2	< 10	24	< 10	1	10	
692185 Dup	0.88	0.011	0.004	15.0	14	3	34	< 0.01	< 20	< 1	< 2	< 10	24	< 10	1	9	
692196 Orig																	

Analyte Symbol	Mg	Na	P	S	Sb	Sc	Sr	Ti	Th	Te	Tl	U	V	W	Y	Zr	Au
Unit Symbol	%	%	%	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	g/tonne
Lower Limit	0.01	0.001	0.001	0.01	2	1	1	0.01	20	1	2	10	1	10	1	1	0.03
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	FA- GRA
692196 Dup																	
692197 Orig	0.72	0.014	0.005	3.26	3	< 1	21	< 0.01	< 20	< 1	< 2	< 10	5	< 10	3	3	
692197 Split PREP DUP	0.70	0.016	0.005	3.02	4	< 1	20	< 0.01	< 20	4	< 2	< 10	6	< 10	3	3	
692205 Orig																	
692205 Dup																	
692215 Orig																	
692215 Dup																	
Method Blank																	
Method Blank																	
Method Blank																	
Method Blank																	
Method Blank																	
Method Blank																	
Method Blank																	
Method Blank																	
Method Blank																	
Method Blank																	< 0.03
Method Blank																	
Method Blank																	< 0.03
Method Blank	< 0.01	0.010	< 0.001	< 0.01	< 2	< 1	< 1	< 0.01	< 20	< 1	< 2	< 10	< 1	< 10	< 1	< 1	
Method Blank	< 0.01	0.012	< 0.001	< 0.01	< 2	< 1	< 1	< 0.01	< 20	< 1	< 2	< 10	< 1	< 10	< 1	< 1	
Method Blank	< 0.01	0.011	< 0.001	< 0.01	< 2	< 1	< 1	< 0.01	< 20	< 1	< 2	< 10	< 1	< 10	< 1	< 1	



**Date Submitted:** 02-Mar-18  
**Invoice No.:** A18-02502  
**Invoice Date:** 14-May-18  
**Your Reference:** 81 Lucas

**Noble Mineral Exploration**  
**2500-120 Adelaide Street West**  
**Toronto ON M5H 1T1**  
**Canada**

**ATTN: Randy Singh (inv-cc)**

## CERTIFICATE OF ANALYSIS

105 Rock samples were submitted for analysis.

The following analytical package(s) were requested:

Code 1A2-Timmins Au - Fire Assay AA

Code 1E3-Timmins Aqua Regia ICP(AQUAGEO)

REPORT      **A18-02502**

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Notes:

If value exceeds upper limit we recommend reassay by fire assay gravimetric-Code 1A3.

Values which exceed the upper limit should be assayed for accurate numbers.

CERTIFIED BY:

A handwritten signature in black ink, appearing to be "Emmanuel Esemé", written over a horizontal line.

Emmanuel Esemé , Ph.D.  
Quality Control

**ACTIVATION LABORATORIES LTD.**  
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## Results

## Activation Laboratories Ltd.

## Report: A18-02502

Analyte Symbol	Au	Ag	Cd	Cu	Mn	Mo	Ni	Pb	Zn	Al	As	B	Ba	Be	Bi	Ca	Co	Cr	Fe	Ga	Hg	K	La
Unit Symbol	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm
Lower Limit	5	0.2	0.5	1	5	1	1	2	2	0.01	2	10	10	0.5	2	0.01	1	1	0.01	10	1	0.01	10
Method Code	FA-AA	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
692223	< 5	0.3	< 0.5	39	991	< 1	105	< 2	51	1.71	43	< 10	51	< 0.5	< 2	2.62	28	84	4.28	< 10	< 1	0.15	14
692224	< 5	0.3	< 0.5	37	962	< 1	104	< 2	49	1.68	44	< 10	50	< 0.5	< 2	2.57	29	91	4.19	< 10	< 1	0.15	13
692225	7	0.4	< 0.5	24	2290	29	102	< 2	89	2.24	24	< 10	28	< 0.5	< 2	3.73	23	33	7.45	< 10	< 1	0.08	< 10
692226	5	0.4	< 0.5	25	2300	30	101	< 2	92	2.24	26	< 10	27	< 0.5	< 2	3.74	23	34	7.50	< 10	< 1	0.08	< 10
692227	6	0.3	< 0.5	49	618	1	109	< 2	35	1.23	76	< 10	46	< 0.5	2	2.79	31	34	3.15	< 10	< 1	0.13	17
692228	< 5	0.3	< 0.5	51	610	1	109	< 2	34	1.19	76	< 10	43	< 0.5	< 2	2.78	31	34	3.14	< 10	< 1	0.12	16
692229	< 5	0.3	< 0.5	42	856	1	94	< 2	54	1.65	20	< 10	44	< 0.5	< 2	3.49	19	33	4.58	< 10	< 1	0.13	18
692230	1110	0.6	< 0.5	166	689	< 1	71	3	63	4.00	6	45	29	< 0.5	< 2	3.32	31	125	5.84	10	< 1	0.05	< 10
692231	< 5	0.3	< 0.5	44	865	< 1	95	< 2	54	1.68	19	< 10	44	< 0.5	< 2	3.54	19	34	4.65	< 10	< 1	0.13	18
692232	6	0.3	< 0.5	23	705	< 1	58	< 2	52	1.59	4	< 10	52	< 0.5	< 2	2.71	15	26	3.96	< 10	< 1	0.15	19
692233	< 5	0.3	< 0.5	22	703	< 1	59	< 2	52	1.59	4	< 10	52	< 0.5	< 2	2.72	15	25	3.99	< 10	< 1	0.15	19
692234	< 5	0.3	< 0.5	25	920	< 1	37	< 2	37	1.04	< 2	< 10	54	< 0.5	< 2	3.60	10	19	3.15	< 10	< 1	0.15	21
692235	< 5	0.3	< 0.5	25	929	< 1	38	< 2	37	1.07	< 2	< 10	56	< 0.5	< 2	3.63	11	20	3.20	< 10	< 1	0.16	21
692236	< 5	0.3	< 0.5	29	815	< 1	56	< 2	58	1.49	< 2	< 10	54	< 0.5	< 2	2.61	13	30	3.50	< 10	< 1	0.17	24
692237	< 5	0.3	< 0.5	30	838	< 1	57	< 2	59	1.56	< 2	< 10	58	< 0.5	3	2.67	14	32	3.56	< 10	< 1	0.19	25
692238	11	0.3	< 0.5	25	849	< 1	82	< 2	64	1.75	4	< 10	55	< 0.5	< 2	3.97	18	30	3.26	< 10	< 1	0.15	20
692239	< 5	0.3	< 0.5	24	850	< 1	80	2	64	1.71	4	< 10	54	< 0.5	< 2	3.94	18	30	3.22	< 10	< 1	0.15	20
692240	< 5	0.3	< 0.5	23	549	< 1	135	3	62	1.82	9	< 10	54	< 0.5	< 2	3.05	23	35	3.48	< 10	< 1	0.14	26
692241	< 5	0.4	< 0.5	22	528	< 1	131	3	59	1.76	8	< 10	55	< 0.5	< 2	2.97	23	34	3.37	< 10	< 1	0.14	25
692242	< 5	0.3	< 0.5	25	486	< 1	111	4	58	1.79	5	< 10	64	< 0.5	< 2	3.14	24	36	2.92	< 10	< 1	0.16	27
692243	< 5	0.3	< 0.5	26	490	< 1	86	3	47	1.50	7	< 10	74	< 0.5	< 2	4.11	18	51	2.63	< 10	< 1	0.19	23
692244	< 5	0.3	< 0.5	22	471	< 1	124	4	38	1.78	9	< 10	106	< 0.5	< 2	3.58	22	35	2.69	< 10	< 1	0.29	24
692245	< 5	0.3	< 0.5	25	562	< 1	118	4	59	2.17	4	< 10	88	< 0.5	< 2	2.08	26	45	3.76	< 10	< 1	0.24	27
692246	< 5	0.3	< 0.5	31	437	< 1	103	3	47	2.34	7	< 10	100	< 0.5	2	4.08	22	43	2.69	< 10	< 1	0.30	30
692247	< 5	0.3	< 0.5	23	542	< 1	114	3	48	2.33	11	< 10	105	< 0.5	< 2	4.18	21	42	2.99	< 10	< 1	0.30	26
692248	1130	0.6	< 0.5	167	693	< 1	70	< 2	63	4.05	8	46	30	< 0.5	< 2	3.36	33	126	5.94	10	< 1	0.06	< 10
692249	< 5	0.3	< 0.5	26	706	< 1	145	4	52	2.25	18	< 10	95	< 0.5	< 2	2.52	28	43	4.41	< 10	< 1	0.28	24
692250	< 5	0.3	< 0.5	27	691	< 1	122	2	41	1.79	25	< 10	75	< 0.5	< 2	3.85	22	35	3.28	< 10	< 1	0.21	20
692251	< 5	0.3	< 0.5	20	453	< 1	155	3	41	1.94	10	< 10	80	< 0.5	< 2	4.00	27	41	2.80	< 10	< 1	0.22	16
692252	< 5	0.3	< 0.5	21	499	< 1	159	4	53	2.19	16	< 10	80	< 0.5	< 2	1.24	28	49	3.95	< 10	< 1	0.21	15
692253	< 5	0.4	< 0.5	30	387	2	171	4	55	1.91	36	< 10	89	< 0.5	< 2	3.19	32	40	2.97	< 10	< 1	0.26	19
692254	< 5	0.3	< 0.5	25	465	< 1	149	2	72	2.22	13	< 10	90	< 0.5	2	3.79	27	45	3.01	< 10	< 1	0.26	22
692255	< 5	0.4	< 0.5	27	501	1	179	4	69	2.48	11	< 10	51	< 0.5	< 2	4.21	30	46	4.04	< 10	< 1	0.31	15
692256	< 5	0.4	< 0.5	26	519	< 1	191	3	61	2.48	8	< 10	44	< 0.5	2	3.96	29	46	4.13	< 10	< 1	0.30	15
692257	< 5	0.4	< 0.5	< 1	95	< 1	< 1	< 2	17	5.28	< 2	15	14	0.5	< 2	0.22	< 1	1	0.60	< 10	< 1	1.45	< 10
692258	< 5	0.3	< 0.5	32	490	3	142	3	49	2.21	6	< 10	86	< 0.5	< 2	4.07	31	41	3.02	< 10	< 1	0.27	17
692259	12	0.4	< 0.5	27	427	< 1	170	4	49	2.14	9	< 10	68	< 0.5	< 2	3.56	30	49	3.25	< 10	< 1	0.29	16
692260	< 5	0.3	< 0.5	27	529	< 1	198	4	55	2.34	12	< 10	56	< 0.5	< 2	3.60	32	53	3.99	< 10	< 1	0.30	15
692261	< 5	0.3	< 0.5	30	482	< 1	142	5	53	2.18	10	< 10	85	< 0.5	< 2	3.38	26	44	3.33	< 10	< 1	0.31	20
692262	< 5	0.4	< 0.5	23	1180	< 1	138	4	43	2.46	17	< 10	32	< 0.5	< 2	3.69	30	40	6.46	< 10	< 1	0.26	12
692263	5	0.4	< 0.5	18	1950	1	118	3	37	2.40	22	< 10	28	< 0.5	< 2	3.55	31	42	7.48	< 10	< 1	0.29	12
692264	15	0.5	< 0.5	20	1040	1	152	12	34	1.75	107	< 10	< 10	< 0.5	2	2.51	45	34	11.5	< 10	< 1	0.27	< 10

## Results

## Activation Laboratories Ltd.

## Report: A18-02502

Analyte Symbol	Au	Ag	Cd	Cu	Mn	Mo	Ni	Pb	Zn	Al	As	B	Ba	Be	Bi	Ca	Co	Cr	Fe	Ga	Hg	K	La
Unit Symbol	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm
Lower Limit	5	0.2	0.5	1	5	1	1	2	2	0.01	2	10	10	0.5	2	0.01	1	1	0.01	10	1	0.01	10
Method Code	FA-AA	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
692265	17	0.6	< 0.5	22	1060	1	156	12	33	1.70	115	< 10	10	< 0.5	3	2.62	46	33	12.5	< 10	< 1	0.25	< 10
692266	< 5	0.3	< 0.5	21	504	< 1	68	< 2	46	1.77	4	< 10	108	< 0.5	< 2	4.03	16	33	2.75	< 10	< 1	0.34	23
692267	< 5	0.3	< 0.5	22	474	< 1	115	3	48	2.02	9	< 10	53	< 0.5	2	4.83	23	43	3.48	< 10	< 1	0.34	15
692268	< 5	0.3	< 0.5	25	298	< 1	115	< 2	64	2.49	3	< 10	106	< 0.5	< 2	2.38	21	48	3.02	< 10	< 1	0.31	23
692269	< 5	0.3	< 0.5	27	486	3	171	3	59	2.23	10	< 10	38	< 0.5	< 2	2.06	26	42	5.10	< 10	< 1	0.27	13
692270	< 5	0.8	< 0.5	27	404	2	184	3	49	2.31	11	< 10	20	< 0.5	< 2	2.85	24	46	6.32	< 10	< 1	0.26	< 10
692271	< 5	0.3	< 0.5	26	309	1	178	3	46	2.24	6	< 10	42	< 0.5	< 2	2.42	23	47	4.41	< 10	< 1	0.27	13
692272	< 5	0.4	< 0.5	21	340	2	240	4	31	1.82	24	< 10	23	< 0.5	< 2	2.55	25	38	7.36	< 10	< 1	0.17	< 10
692273	5	0.4	< 0.5	185	616	< 1	138	< 2	80	4.35	4	< 10	36	< 0.5	< 2	3.41	28	30	5.12	< 10	< 1	0.05	< 10
692274	< 5	0.4	< 0.5	25	405	< 1	399	7	57	2.23	22	< 10	30	< 0.5	< 2	2.97	34	51	5.86	< 10	< 1	0.21	< 10
692275	< 5	0.5	< 0.5	21	329	1	323	3	45	1.92	16	< 10	25	< 0.5	< 2	2.84	30	39	6.25	< 10	< 1	0.22	< 10
692276	< 5	0.4	< 0.5	22	334	1	455	5	42	1.71	34	< 10	16	< 0.5	< 2	2.53	44	38	8.78	< 10	< 1	0.19	< 10
692277	< 5	0.5	< 0.5	23	349	1	552	6	46	1.87	42	< 10	14	< 0.5	< 2	2.45	57	40	9.03	< 10	1	0.21	< 10
692278	1660	0.6	< 0.5	63	844	< 1	107	9	70	1.53	2420	< 10	74	< 0.5	< 2	1.33	29	34	5.21	< 10	< 1	0.07	14
692279	< 5	0.4	< 0.5	25	383	< 1	362	4	51	2.10	30	< 10	22	< 0.5	< 2	3.02	47	43	6.06	< 10	< 1	0.26	< 10
692280	< 5	0.4	< 0.5	27	361	< 1	405	7	47	1.90	47	< 10	18	< 0.5	< 2	2.76	55	39	7.74	< 10	< 1	0.26	< 10
692281	< 5	0.4	< 0.5	25	373	< 1	355	4	47	1.89	29	< 10	20	< 0.5	< 2	2.48	42	40	6.44	< 10	< 1	0.27	< 10
692282	< 5	0.4	< 0.5	23	314	1	352	6	46	1.65	27	< 10	16	< 0.5	< 2	2.17	39	34	7.46	< 10	< 1	0.21	< 10
692283	< 5	0.5	< 0.5	20	421	< 1	347	7	43	1.77	42	< 10	13	< 0.5	< 2	2.47	46	38	10.4	< 10	< 1	0.22	< 10
692284	< 5	0.4	< 0.5	23	439	< 1	316	4	44	1.52	70	< 10	14	< 0.5	< 2	3.06	50	33	10.9	< 10	< 1	0.19	< 10
692285	< 5	0.5	0.5	20	476	< 1	283	3	45	1.46	66	< 10	15	< 0.5	< 2	3.04	47	32	10.3	< 10	< 1	0.15	< 10
692286	< 5	0.4	< 0.5	20	481	< 1	284	< 2	47	1.48	67	< 10	15	< 0.5	< 2	3.17	47	31	10.5	< 10	< 1	0.15	< 10
692287	< 5	1.0	< 0.5	15	634	< 1	210	2	48	1.59	117	< 10	< 10	< 0.5	2	1.78	44	32	13.5	< 10	< 1	0.15	< 10
692288	< 5	1.0	< 0.5	16	1250	1	345	5	121	2.26	110	< 10	< 10	< 0.5	3	1.11	66	30	16.4	< 10	< 1	0.10	< 10
692289	< 5	1.0	< 0.5	17	1080	3	396	6	160	2.60	43	< 10	16	< 0.5	< 2	3.43	76	25	11.0	< 10	< 1	0.09	< 10
692290	< 5	1.0	< 0.5	17	783	< 1	136	< 2	180	2.08	15	< 10	56	< 0.5	< 2	3.58	28	13	4.90	< 10	< 1	0.18	11
692291	< 5	1.0	< 0.5	16	597	< 1	90	2	85	1.75	11	< 10	69	< 0.5	< 2	3.24	19	8	3.20	< 10	< 1	0.21	15
692292	< 5	1.1	< 0.5	17	496	< 1	81	3	68	1.76	15	< 10	68	< 0.5	< 2	2.79	19	9	3.15	< 10	< 1	0.21	16
692293	5	0.4	< 0.5	20	458	< 1	96	3	57	1.77	17	< 10	77	< 0.5	< 2	2.79	23	11	2.85	< 10	< 1	0.23	15
692294	< 5	1.2	< 0.5	< 1	87	< 1	< 1	< 2	15	4.76	< 2	14	16	< 0.5	< 2	0.21	< 1	< 1	0.48	< 10	< 1	1.43	< 10
692295	< 5	1.0	< 0.5	15	491	< 1	78	< 2	64	3.18	6	14	194	< 0.5	< 2	3.23	15	14	2.56	< 10	< 1	0.62	17
692296	< 5	1.1	< 0.5	15	619	< 1	101	2	71	2.18	13	< 10	75	< 0.5	< 2	3.87	24	11	3.38	< 10	< 1	0.29	13
692297	8	1.0	< 0.5	21	374	< 1	94	< 2	63	2.19	7	< 10	99	< 0.5	< 2	2.41	25	12	2.82	< 10	< 1	0.31	16
692298	< 5	1.0	< 0.5	20	589	< 1	120	< 2	56	2.36	12	< 10	68	< 0.5	< 2	3.55	31	14	3.39	< 10	< 1	0.35	12
692299	< 5	1.0	< 0.5	20	608	1	109	< 2	57	2.29	7	< 10	98	< 0.5	< 2	4.13	28	12	3.05	< 10	< 1	0.32	13
692300	< 5	1.0	< 0.5	21	550	< 1	142	3	62	1.92	16	< 10	50	< 0.5	< 2	2.71	35	10	3.99	< 10	< 1	0.28	12
692301	< 5	1.1	< 0.5	21	536	1	239	6	104	1.59	51	< 10	18	< 0.5	< 2	2.18	57	10	7.12	< 10	< 1	0.23	< 10
692302	< 5	1.1	< 0.5	23	1060	< 1	202	5	86	1.66	55	< 10	21	< 0.5	< 2	2.90	52	10	7.99	< 10	< 1	0.20	< 10
692303	< 5	1.2	< 0.5	36	2060	< 1	250	4	94	2.11	80	< 10	< 10	< 0.5	3	2.21	44	28	16.4	< 10	< 1	0.10	< 10
692304	10	1.1	< 0.5	27	1420	1	220	5	82	1.88	105	< 10	10	< 0.5	3	2.15	50	27	13.3	< 10	< 1	0.17	< 10
692305	< 5	0.9	< 0.5	19	1420	< 1	112	2	75	1.94	30	< 10	19	< 0.5	< 2	3.16	26	9	7.90	< 10	< 1	0.17	< 10
692306	1600	1.2	< 0.5	65	866	1	111	9	71	1.58	2430	< 10	75	< 0.5	< 2	1.37	29	34	5.23	< 10	< 1	0.07	14

Analyte Symbol	Au	Ag	Cd	Cu	Mn	Mo	Ni	Pb	Zn	Al	As	B	Ba	Be	Bi	Ca	Co	Cr	Fe	Ga	Hg	K	La
Unit Symbol	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm
Lower Limit	5	0.2	0.5	1	5	1	1	2	2	0.01	2	10	10	0.5	2	0.01	1	1	0.01	10	1	0.01	10
Method Code	FA-AA	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
692307	< 5	1.1	< 0.5	31	687	3	114	5	84	1.59	28	< 10	44	< 0.5	< 2	3.15	33	7	4.54	< 10	< 1	0.24	< 10
692308	< 5	1.1	< 0.5	28	455	2	94	< 2	74	1.86	13	< 10	61	< 0.5	2	3.06	27	7	3.84	< 10	< 1	0.25	13
692309	< 5	1.0	< 0.5	25	489	2	103	< 2	64	1.66	14	< 10	57	< 0.5	2	2.95	31	8	4.07	< 10	< 1	0.22	12
692310	5	1.1	< 0.5	28	547	1	119	< 2	78	1.63	60	< 10	45	< 0.5	< 2	2.72	34	8	4.64	< 10	< 1	0.26	11
692311	< 5	1.0	< 0.5	35	613	1	114	< 2	96	1.65	69	< 10	42	< 0.5	< 2	3.40	35	10	4.95	< 10	< 1	0.22	< 10
692312	< 5	1.1	< 0.5	30	564	1	111	2	133	1.51	51	< 10	69	< 0.5	< 2	2.84	32	13	3.68	< 10	< 1	0.20	14
692313	< 5	1.1	< 0.5	31	532	< 1	124	< 2	141	1.47	32	< 10	52	< 0.5	< 2	2.30	36	12	3.87	< 10	< 1	0.20	11
692314	7	1.0	< 0.5	30	746	< 1	142	3	132	1.33	67	< 10	32	< 0.5	< 2	2.90	36	9	5.03	< 10	< 1	0.14	< 10
692315	< 5	< 0.2	< 0.5	2	106	< 1	< 1	< 2	19	5.32	2	13	12	0.5	< 2	0.21	< 1	1	0.64	< 10	< 1	1.52	< 10
692316	6	1.0	< 0.5	20	2160	< 1	178	< 2	95	2.66	115	< 10	18	< 0.5	3	2.86	34	10	12.5	< 10	< 1	0.08	< 10
692317	12	1.1	< 0.5	16	2560	< 1	223	4	83	2.53	162	< 10	13	< 0.5	4	2.82	47	7	14.5	< 10	< 1	0.10	< 10
692318	10	1.1	< 0.5	11	4590	< 1	158	3	77	1.50	143	< 10	12	< 0.5	4	2.31	40	11	18.4	< 10	< 1	0.04	< 10
692319	9	1.1	< 0.5	11	4650	< 1	158	3	83	1.48	145	< 10	12	< 0.5	5	2.27	41	8	18.3	< 10	< 1	0.04	< 10
692320	25	1.0	< 0.5	7	4540	< 1	104	< 2	81	1.36	136	< 10	13	< 0.5	5	2.39	27	7	17.7	< 10	< 1	0.04	< 10
692321	155	1.1	< 0.5	10	4930	< 1	110	3	57	1.53	204	< 10	11	< 0.5	4	1.70	29	8	19.2	< 10	< 1	0.11	< 10
692322	37	1.0	< 0.5	4	7370	< 1	47	< 2	51	0.22	164	< 10	< 10	< 0.5	3	1.93	8	11	18.3	< 10	< 1	< 0.01	< 10
692323	221	1.1	< 0.5	6	6810	< 1	80	5	66	0.47	668	< 10	12	< 0.5	4	1.53	17	13	21.7	< 10	< 1	0.02	< 10
692324	24	1.0	< 0.5	4	8190	< 1	63	3	142	0.16	117	< 10	< 10	< 0.5	7	0.65	9	18	21.0	< 10	< 1	< 0.01	< 10
692325	< 5	1.0	< 0.5	1	4900	< 1	53	< 2	90	0.10	73	< 10	< 10	< 0.5	4	0.60	9	59	12.2	< 10	< 1	< 0.01	< 10
692326	2300	1.2	0.7	93	1490	3	107	5	74	1.75	823	< 10	48	< 0.5	< 2	1.66	28	46	6.69	< 10	< 1	0.08	15
692327	14	1.0	< 0.5	4	6980	< 1	103	< 2	84	0.21	69	< 10	< 10	< 0.5	4	0.76	16	24	18.7	< 10	< 1	< 0.01	< 10

Analyte Symbol	Mg	Na	P	S	Sb	Sc	Sr	Ti	Th	Te	Tl	U	V	W	Y	Zr
Unit Symbol	%	%	%	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	0.01	0.001	0.001	0.01	2	1	1	0.01	20	1	2	10	1	10	1	1
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
692223	0.69	0.078	0.134	0.14	2	4	80	< 0.01	< 20	< 1	< 2	< 10	27	< 10	7	4
692224	0.67	0.076	0.130	0.14	3	4	79	< 0.01	< 20	4	< 2	< 10	26	< 10	7	5
692225	1.21	0.048	0.071	0.44	4	7	113	< 0.01	< 20	3	< 2	< 10	39	< 10	5	15
692226	1.22	0.047	0.070	0.44	3	7	113	< 0.01	< 20	4	< 2	< 10	39	< 10	5	16
692227	0.55	0.066	0.125	0.14	< 2	3	94	< 0.01	< 20	2	< 2	< 10	17	< 10	6	4
692228	0.54	0.063	0.123	0.14	< 2	3	92	< 0.01	< 20	2	< 2	< 10	16	< 10	6	4
692229	0.90	0.055	0.095	0.02	3	3	110	< 0.01	< 20	< 1	< 2	< 10	21	< 10	5	7
692230	2.26	0.083	0.039	0.20	3	8	29	0.42	< 20	6	< 2	< 10	195	< 10	15	21
692231	0.92	0.055	0.096	0.02	2	3	112	< 0.01	< 20	< 1	< 2	< 10	21	< 10	5	7
692232	0.76	0.052	0.099	0.01	< 2	2	89	< 0.01	< 20	< 1	< 2	< 10	16	< 10	5	6
692233	0.76	0.051	0.100	0.01	< 2	2	89	< 0.01	< 20	< 1	< 2	< 10	16	< 10	5	7
692234	0.79	0.051	0.094	0.02	< 2	2	132	< 0.01	< 20	3	< 2	< 10	13	< 10	5	7
692235	0.80	0.053	0.095	0.02	< 2	2	130	< 0.01	< 20	< 1	< 2	< 10	13	< 10	5	8
692236	0.73	0.053	0.097	< 0.01	< 2	2	86	< 0.01	< 20	2	< 2	< 10	17	< 10	5	7
692237	0.74	0.059	0.101	< 0.01	< 2	3	89	< 0.01	< 20	3	< 2	< 10	18	< 10	5	7
692238	1.40	0.044	0.123	0.28	< 2	3	103	< 0.01	< 20	4	< 2	< 10	25	< 10	6	6
692239	1.39	0.043	0.122	0.28	< 2	3	102	< 0.01	< 20	2	< 2	< 10	24	< 10	6	5
692240	0.99	0.055	0.155	0.59	2	3	144	< 0.01	< 20	< 1	< 2	< 10	33	< 10	6	6
692241	0.96	0.055	0.151	0.58	< 2	3	142	< 0.01	< 20	< 1	< 2	< 10	31	< 10	6	6
692242	1.00	0.062	0.150	0.54	2	2	134	< 0.01	< 20	< 1	< 2	< 10	28	< 10	6	6
692243	1.03	0.110	0.145	0.42	< 2	4	194	< 0.01	< 20	3	< 2	< 10	37	< 10	6	4
692244	0.92	0.100	0.146	0.71	< 2	3	185	< 0.01	< 20	3	< 2	< 10	28	< 10	6	5
692245	1.04	0.081	0.147	0.50	2	4	118	< 0.01	< 20	< 1	< 2	< 10	36	< 10	6	5
692246	1.14	0.102	0.150	0.31	< 2	3	206	< 0.01	< 20	< 1	< 2	< 10	37	< 10	6	4
692247	1.25	0.114	0.148	0.53	< 2	4	224	< 0.01	< 20	3	< 2	< 10	38	< 10	7	4
692248	2.29	0.083	0.040	0.20	2	8	29	0.43	< 20	5	< 2	< 10	197	< 10	15	21
692249	1.28	0.117	0.150	1.08	2	4	118	< 0.01	< 20	< 1	< 2	< 10	39	< 10	6	6
692250	1.29	0.086	0.143	0.47	< 2	3	163	< 0.01	< 20	1	< 2	< 10	27	< 10	7	5
692251	0.97	0.090	0.142	0.80	< 2	3	170	< 0.01	< 20	< 1	< 2	< 10	29	< 10	8	6
692252	1.08	0.089	0.151	0.84	< 2	3	75	< 0.01	< 20	< 1	< 2	< 10	39	< 10	6	5
692253	0.97	0.099	0.154	1.05	2	3	159	< 0.01	< 20	< 1	< 2	< 10	30	< 10	6	6
692254	1.23	0.099	0.156	0.68	< 2	3	166	< 0.01	< 20	1	< 2	< 10	34	< 10	6	5
692255	1.15	0.130	0.146	1.81	3	3	196	< 0.01	< 20	2	< 2	< 10	39	< 10	6	8
692256	1.20	0.137	0.140	2.02	< 2	3	196	< 0.01	< 20	< 1	< 2	< 10	35	< 10	6	8
692257	0.05	2.89	0.001	0.01	< 2	< 1	24	< 0.01	< 20	< 1	< 2	< 10	< 1	< 10	3	2
692258	1.02	0.121	0.138	1.10	< 2	3	206	< 0.01	< 20	4	< 2	< 10	30	< 10	6	5
692259	0.93	0.115	0.140	1.43	< 2	3	171	< 0.01	< 20	2	< 2	< 10	34	< 10	6	5
692260	0.99	0.112	0.138	1.80	< 2	4	172	< 0.01	< 20	< 1	< 2	< 10	39	< 10	6	8
692261	0.95	0.128	0.144	1.17	< 2	3	178	< 0.01	< 20	3	< 2	< 10	33	< 10	6	6
692262	0.92	0.129	0.126	3.85	3	3	201	< 0.01	< 20	< 1	< 2	< 10	32	< 10	5	19
692263	0.95	0.119	0.131	4.19	3	3	176	< 0.01	< 20	2	< 2	< 10	34	< 10	5	21
692264	0.71	0.096	0.117	10.8	10	2	125	< 0.01	< 20	3	< 2	< 10	28	< 10	4	26



Analyte Symbol	Mg	Na	P	S	Sb	Sc	Sr	Ti	Th	Te	Tl	U	V	W	Y	Zr
Unit Symbol	%	%	%	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	0.01	0.001	0.001	0.01	2	1	1	0.01	20	1	2	10	1	10	1	1
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
692265	0.74	0.085	0.110	11.7	8	2	123	< 0.01	< 20	< 1	< 2	< 10	25	< 10	4	25
692266	0.98	0.108	0.140	0.36	< 2	3	202	< 0.01	< 20	2	< 2	< 10	24	< 10	6	4
692267	0.83	0.114	0.134	1.67	< 2	3	242	< 0.01	< 20	< 1	< 2	< 10	34	< 10	6	7
692268	1.11	0.119	0.157	0.59	< 2	3	112	< 0.01	< 20	< 1	< 2	< 10	36	< 10	6	3
692269	0.91	0.116	0.142	2.82	3	2	113	< 0.01	< 20	< 1	< 2	< 10	30	< 10	5	11
692270	0.97	0.137	0.140	4.88	5	3	116	< 0.01	< 20	< 1	< 2	< 10	34	< 10	5	21
692271	0.92	0.124	0.146	2.52	2	2	94	< 0.01	< 20	< 1	< 2	< 10	30	< 10	5	9
692272	0.86	0.077	0.126	6.00	4	2	75	< 0.01	< 20	1	< 2	< 10	28	< 10	4	18
692273	1.09	0.685	0.057	0.10	< 2	10	90	0.39	< 20	4	< 2	< 10	174	< 10	16	12
692274	1.10	0.096	0.142	3.73	3	3	82	< 0.01	< 20	2	< 2	< 10	38	< 10	5	16
692275	0.87	0.094	0.131	5.22	< 2	2	93	< 0.01	< 20	2	< 2	< 10	29	< 10	5	19
692276	0.81	0.082	0.126	8.84	3	2	88	< 0.01	< 20	4	< 2	< 10	26	< 10	4	24
692277	0.86	0.086	0.131	8.67	5	2	89	< 0.01	< 20	1	< 2	< 10	29	< 10	5	25
692278	2.10	0.299	0.121	0.75	4	3	81	0.13	< 20	< 1	< 2	< 10	32	< 10	13	7
692279	0.88	0.113	0.139	4.77	< 2	2	119	< 0.01	< 20	< 1	< 2	< 10	32	< 10	5	22
692280	0.75	0.101	0.133	6.86	4	2	124	< 0.01	< 20	< 1	< 2	< 10	27	< 10	5	24
692281	0.85	0.115	0.137	5.30	< 2	2	105	< 0.01	< 20	2	< 2	< 10	27	< 10	5	23
692282	0.70	0.088	0.121	7.13	3	2	100	< 0.01	< 20	3	< 2	< 10	24	< 10	5	24
692283	0.74	0.099	0.122	10.8	5	2	107	< 0.01	< 20	5	2	< 10	25	< 10	5	25
692284	0.70	0.080	0.122	11.5	5	2	117	< 0.01	< 20	2	< 2	< 10	20	< 10	4	23
692285	0.71	0.058	0.121	10.7	5	2	121	< 0.01	< 20	3	< 2	< 10	21	< 10	4	20
692286	0.72	0.057	0.121	10.8	5	2	124	< 0.01	< 20	< 1	< 2	< 10	21	< 10	4	20
692287	0.66	0.051	0.095	13.3	7	2	63	< 0.01	< 20	4	< 2	< 10	26	< 10	3	18
692288	0.90	0.044	0.073	14.0	7	4	60	< 0.01	< 20	6	< 2	< 10	42	< 10	4	20
692289	1.10	0.047	0.078	7.73	5	8	166	< 0.01	< 20	5	< 2	< 10	63	< 10	4	19
692290	1.11	0.069	0.094	1.90	2	4	131	< 0.01	< 20	3	< 2	< 10	36	< 10	5	15
692291	1.10	0.066	0.090	0.67	< 2	2	111	< 0.01	< 20	3	< 2	< 10	21	< 10	4	10
692292	0.95	0.074	0.097	0.78	< 2	2	112	< 0.01	< 20	1	< 2	< 10	21	< 10	5	11
692293	0.78	0.078	0.093	0.86	< 2	2	120	< 0.01	< 20	< 1	< 2	< 10	20	< 10	4	10
692294	0.05	2.78	< 0.001	< 0.01	< 2	< 1	25	< 0.01	< 20	2	< 2	< 10	< 1	< 10	3	1
692295	0.88	0.187	0.089	0.34	< 2	4	182	< 0.01	< 20	2	< 2	< 10	38	< 10	5	8
692296	1.07	0.134	0.087	1.21	< 2	3	132	< 0.01	< 20	1	< 2	< 10	27	< 10	5	12
692297	0.82	0.131	0.095	0.71	< 2	2	104	< 0.01	< 20	< 1	< 2	< 10	24	< 10	5	9
692298	0.98	0.156	0.090	1.20	< 2	3	138	< 0.01	< 20	2	< 2	< 10	30	< 10	5	12
692299	0.85	0.148	0.089	0.89	< 2	2	171	< 0.01	< 20	< 1	< 2	< 10	24	< 10	5	10
692300	0.99	0.133	0.093	1.97	< 2	2	97	< 0.01	< 20	3	< 2	< 10	20	< 10	5	15
692301	0.85	0.120	0.094	6.33	4	2	74	< 0.01	< 20	< 1	< 2	< 10	18	< 10	4	21
692302	1.26	0.111	0.089	5.77	5	3	88	< 0.01	< 20	2	< 2	< 10	24	< 10	4	19
692303	1.29	0.054	0.086	13.2	10	3	45	< 0.01	< 20	6	< 2	< 10	36	< 10	4	18
692304	1.04	0.084	0.100	12.1	9	3	58	< 0.01	< 20	4	< 2	< 10	32	< 10	4	20
692305	1.41	0.106	0.076	4.90	6	3	76	< 0.01	< 20	< 1	< 2	< 10	25	< 10	4	19
692306	2.13	0.311	0.126	0.76	4	3	83	0.13	< 20	3	< 2	< 10	33	< 10	13	6

Analyte Symbol	Mg	Na	P	S	Sb	Sc	Sr	Ti	Th	Te	Tl	U	V	W	Y	Zr
Unit Symbol	%	%	%	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	0.01	0.001	0.001	0.01	2	1	1	0.01	20	1	2	10	1	10	1	1
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
692307	1.12	0.132	0.088	2.35	< 2	2	88	< 0.01	< 20	2	< 2	< 10	16	< 10	5	15
692308	0.87	0.154	0.103	1.63	< 2	2	118	< 0.01	< 20	3	< 2	< 10	20	< 10	5	13
692309	0.86	0.143	0.099	1.83	< 2	2	78	< 0.01	< 20	5	< 2	< 10	18	< 10	5	15
692310	0.84	0.170	0.099	2.36	< 2	2	81	< 0.01	< 20	4	< 2	< 10	17	< 10	5	17
692311	1.01	0.154	0.088	2.33	3	3	94	< 0.01	< 20	3	< 2	< 10	19	< 10	5	16
692312	0.90	0.174	0.092	1.28	< 2	2	77	< 0.01	< 20	2	< 2	< 10	18	< 10	5	11
692313	0.84	0.175	0.086	1.82	2	2	72	< 0.01	< 20	3	< 2	< 10	18	< 10	4	12
692314	1.22	0.125	0.085	2.79	3	2	62	< 0.01	< 20	< 1	< 2	< 10	18	< 10	6	14
692315	0.05	3.26	0.001	0.02	< 2	< 1	23	< 0.01	< 20	< 1	< 2	< 10	< 1	< 10	4	2
692316	1.21	0.090	0.070	6.64	7	7	87	< 0.01	< 20	2	< 2	< 10	50	< 10	3	23
692317	1.20	0.111	0.060	8.66	9	8	97	< 0.01	< 20	3	< 2	< 10	61	< 10	4	24
692318	1.34	0.051	0.042	10.3	13	7	74	< 0.01	< 20	6	< 2	< 10	49	< 10	3	20
692319	1.31	0.047	0.043	10.4	11	7	74	< 0.01	< 20	8	< 2	< 10	49	< 10	3	19
692320	1.45	0.045	0.029	8.78	13	8	73	< 0.01	< 20	6	< 2	< 10	42	< 10	3	18
692321	1.29	0.083	0.051	9.14	14	5	77	< 0.01	< 20	8	< 2	< 10	34	< 10	4	23
692322	1.56	0.015	0.007	4.10	9	6	79	< 0.01	< 20	2	< 2	< 10	23	< 10	3	9
692323	1.63	0.032	0.013	8.55	19	11	72	< 0.01	< 20	5	< 2	< 10	50	< 10	4	16
692324	1.87	0.016	0.004	3.55	13	10	19	< 0.01	< 20	3	< 2	< 10	55	< 10	4	13
692325	1.20	0.018	0.002	1.29	6	8	19	< 0.01	< 20	1	< 2	< 10	50	< 10	3	8
692326	2.21	0.332	0.151	1.35	4	3	85	0.16	< 20	4	< 2	< 10	47	< 10	14	8
692327	1.54	0.019	0.003	3.87	11	7	21	< 0.01	< 20	6	< 2	< 10	38	< 10	4	11

Analyte Symbol	Au	Ag	Cd	Cu	Mn	Mo	Ni	Pb	Zn	Al	As	B	Ba	Be	Bi	Ca	Co	Cr	Fe	Ga	Hg	K	La
Unit Symbol	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm
Lower Limit	5	0.2	0.5	1	5	1	1	2	2	0.01	2	10	10	0.5	2	0.01	1	1	0.01	10	1	0.01	10
Method Code	FA-AA	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
GXR-1 Meas		28.3	1.7	1190	823	14	27	689	679	0.35	357	< 10	305	0.8	1520	0.82	5	6	21.6	< 10	5	0.03	< 10
GXR-1 Cert		31.0	3.30	1110	852	18.0	41.0	730	760	3.52	427	15.0	750	1.22	1380	0.960	8.20	12.0	23.6	13.8	3.90	0.050	7.50
GXR-1 Meas		29.2	2.6	1190	833	15	32	673	690	0.36	360	< 10	259	0.8	1470	0.80	6	6	22.0	< 10	3	0.03	< 10
GXR-1 Cert		31.0	3.30	1110	852	18.0	41.0	730	760	3.52	427	15.0	750	1.22	1380	0.960	8.20	12.0	23.6	13.8	3.90	0.050	7.50
GXR-6 Meas		0.2	< 0.5	73	1060	2	17	102	123	7.60	240	< 10	1030	0.9	< 2	0.16	13	80	5.41	20	< 1	1.10	11
GXR-6 Cert		1.30	1.00	66.0	1010	2.40	27.0	101	118	17.7	330	9.80	1300	1.40	0.290	0.180	13.8	96.0	5.58	35.0	0.0680	1.87	13.9
GXR-6 Meas		1.3	< 0.5	73	1110	1	21	101	127	7.92	243	< 10	959	0.9	< 2	0.16	14	82	5.49	20	< 1	1.16	11
GXR-6 Cert		1.30	1.00	66.0	1010	2.40	27.0	101	118	17.7	330	9.80	1300	1.40	0.290	0.180	13.8	96.0	5.58	35.0	0.0680	1.87	13.9
OREAS 134b (AQUA REGIA) Meas		> 100	592	1480				> 5000	> 10000		222						104		11.8				
OREAS 134b (AQUA REGIA) Cert		204	563	1360				133000	177000		221						106		12.25				
OREAS 134b (AQUA REGIA) Meas		> 100	582	1250				> 5000	> 10000		202						96		10.4				
OREAS 134b (AQUA REGIA) Cert		204	563	1360				133000	177000		221						110		12.25				
OREAS 133a (Aqua Regia) Meas		86.9	289	317				> 5000	> 10000		123		20				21		7.22				
OREAS 133a (Aqua Regia) Cert		97	297	324				48600.00	106000.00		140		59				23		7.92				
OREAS 218 Meas	552																						
OREAS 218 Cert	531																						
OREAS 218 Meas	557																						
OREAS 218 Cert	531																						
OREAS 218 Meas	564																						
OREAS 218 Cert	531																						
OREAS 218 Meas	564																						
OREAS 218 Cert	531																						
OREAS 224 Meas	2070																						
OREAS 224 Cert	2150.00																						
OREAS 224 Meas	2070																						
OREAS 224 Cert	2150.00																						
OREAS 224 Meas	2110																						
OREAS 224 Cert	2150.00																						
OREAS 224 Meas	2090																						
OREAS 224 Cert	2150.00																						

Analyte Symbol	Au	Ag	Cd	Cu	Mn	Mo	Ni	Pb	Zn	Al	As	B	Ba	Be	Bi	Ca	Co	Cr	Fe	Ga	Hg	K	La
Unit Symbol	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm
Lower Limit	5	0.2	0.5	1	5	1	1	2	2	0.01	2	10	10	0.5	2	0.01	1	1	0.01	10	1	0.01	10
Method Code	FA-AA	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
692225 Orig		0.4	< 0.5	24	2280	29	103	< 2	90	2.23	26	< 10	28	< 0.5	< 2	3.72	24	33	7.44	< 10	< 1	0.08	< 10
692225 Dup		0.4	< 0.5	24	2310	29	101	2	88	2.25	23	< 10	28	< 0.5	< 2	3.75	23	34	7.47	< 10	< 1	0.08	< 10
692232 Orig	6																						
692232 Dup	6																						
692233 Orig		0.3	< 0.5	22	695	< 1	58	< 2	52	1.58	4	< 10	52	< 0.5	< 2	2.70	15	25	3.97	< 10	< 1	0.15	19
692233 Dup		0.3	< 0.5	23	711	< 1	59	< 2	52	1.61	4	< 10	52	< 0.5	< 2	2.73	15	25	4.00	< 10	< 1	0.15	20
692242 Orig	< 5																						
692242 Dup	< 5																						
692252 Orig	< 5																						
692252 Dup	< 5																						
692267 Orig	< 5																						
692267 Dup	< 5																						
692272 Orig	< 5																						
692272 Split PREP DUP	< 5																						
692273 Orig		0.4	< 0.5	181	611	< 1	135	< 2	78	4.26	4	< 10	35	< 0.5	< 2	3.35	28	30	5.01	< 10	< 1	0.05	< 10
692273 Dup		0.4	< 0.5	189	621	< 1	141	< 2	81	4.45	5	< 10	36	< 0.5	< 2	3.47	29	31	5.24	< 10	< 1	0.06	< 10
692277 Orig	< 5																						
692277 Dup	< 5																						
692286 Orig		0.4	< 0.5	20	479	< 1	283	< 2	48	1.49	67	< 10	16	< 0.5	< 2	3.15	46	30	10.5	< 10	< 1	0.16	< 10
692286 Dup		0.4	< 0.5	20	482	< 1	285	6	45	1.47	67	< 10	15	< 0.5	< 2	3.19	47	31	10.5	< 10	< 1	0.15	< 10
692287 Orig	13																						
692287 Dup	< 5																						
692289 Orig		1.0	0.5	17	1070	3	394	7	160	2.59	43	< 10	15	< 0.5	2	3.41	77	24	10.9	< 10	< 1	0.09	< 10
692289 Dup		1.0	< 0.5	17	1080	3	399	5	161	2.61	43	< 10	17	< 0.5	< 2	3.45	76	25	11.1	< 10	< 1	0.09	< 10
692302 Orig	< 5	1.1	< 0.5	23	1060	< 1	202	5	85	1.65	54	< 10	21	< 0.5	< 2	2.90	52	10	7.93	< 10	< 1	0.20	< 10
692302 Dup	< 5	1.1	< 0.5	23	1050	< 1	202	4	86	1.66	55	< 10	22	< 0.5	< 2	2.91	52	10	8.05	< 10	< 1	0.20	< 10
692312 Orig	< 5																						
692312 Dup	< 5																						
692314 Orig		1.0	< 0.5	29	734	< 1	139	3	129	1.31	65	< 10	29	< 0.5	< 2	2.86	36	9	4.94	< 10	< 1	0.13	< 10
692314 Dup		1.0	< 0.5	30	759	< 1	145	3	135	1.36	68	< 10	36	< 0.5	< 2	2.95	36	10	5.11	< 10	< 1	0.14	< 10
692322 Orig	37																						
692322 Split PREP DUP	40																						
692322 Orig	38																						
692322 Dup	36																						
Method Blank	< 5																						
Method Blank	< 5																						
Method Blank	< 5																						
Method Blank	< 5																						
Method Blank	< 5																						
Method Blank	< 5																						
Method Blank	< 5																						

Analyte Symbol	Au	Ag	Cd	Cu	Mn	Mo	Ni	Pb	Zn	Al	As	B	Ba	Be	Bi	Ca	Co	Cr	Fe	Ga	Hg	K	La
Unit Symbol	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm
Lower Limit	5	0.2	0.5	1	5	1	1	2	2	0.01	2	10	10	0.5	2	0.01	1	1	0.01	10	1	0.01	10
Method Code	FA-AA	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
Method Blank	< 5																						
Method Blank		0.4	< 0.5	< 1	< 5	< 1	< 1	< 2	< 2	< 0.01	< 2	< 10	< 10	< 0.5	< 2	< 0.01	< 1	< 1	< 0.01	< 10	< 1	< 0.01	< 10
Method Blank		1.1	< 0.5	< 1	< 5	< 1	< 1	< 2	< 2	< 0.01	< 2	< 10	< 10	< 0.5	< 2	< 0.01	< 1	< 1	< 0.01	< 10	< 1	< 0.01	< 10
Method Blank		< 0.2	< 0.5	< 1	< 5	< 1	< 1	< 2	< 2	< 0.01	< 2	< 10	< 10	< 0.5	< 2	< 0.01	< 1	< 1	< 0.01	< 10	< 1	< 0.01	< 10
Method Blank		< 0.2	< 0.5	< 1	< 5	< 1	< 1	< 2	< 2	< 0.01	< 2	< 10	< 10	< 0.5	< 2	< 0.01	< 1	< 1	< 0.01	< 10	< 1	< 0.01	< 10

Analyte Symbol	Mg	Na	P	S	Sb	Sc	Sr	Ti	Th	Te	Tl	U	V	W	Y	Zr
Unit Symbol	%	%	%	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	0.01	0.001	0.001	0.01	2	1	1	0.01	20	1	2	10	1	10	1	1
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
GXR-1 Meas	0.13	0.049	0.040	0.20	81	1	152	< 0.01	< 20	14	< 2	25	79	140	25	14
GXR-1 Cert	0.217	0.0520	0.0650	0.257	122	1.58	275	0.036	2.44	13.0	0.390	34.9	80.0	164	32.0	38.0
GXR-1 Meas	0.13	0.050	0.043	0.20	90	1	156	< 0.01	< 20	18	< 2	31	85	148	26	16
GXR-1 Cert	0.217	0.0520	0.0650	0.257	122	1.58	275	0.036	2.44	13.0	0.390	34.9	80.0	164	32.0	38.0
GXR-6 Meas	0.38	0.084	0.036	0.02	5	23	32		< 20	< 1	2	< 10	181	< 10	7	14
GXR-6 Cert	0.609	0.104	0.0350	0.0160	3.60	27.6	35.0		5.30	0.0180	2.20	1.54	186	1.90	14.0	110
GXR-6 Meas	0.41	0.087	0.037	0.02	6	23	32		< 20	4	< 2	< 10	196	< 10	6	15
GXR-6 Cert	0.609	0.104	0.0350	0.0160	3.60	27.6	35.0		5.30	0.0180	2.20	1.54	186	1.90	14.0	110
OREAS 134b (AQUA REGIA) Meas				17.3												
OREAS 134b (AQUA REGIA) Cert				19.31												
OREAS 134b (AQUA REGIA) Meas				14.8												
OREAS 134b (AQUA REGIA) Cert				19.31												
OREAS 133a (Aqua Regia) Meas				9.14	130											
OREAS 133a (Aqua Regia) Cert				10.7	147											
OREAS 218 Meas																
OREAS 218 Cert																
OREAS 218 Meas																
OREAS 218 Cert																
OREAS 218 Meas																
OREAS 218 Cert																
OREAS 218 Meas																
OREAS 218 Cert																
OREAS 224 Meas																
OREAS 224 Cert																
OREAS 224 Meas																
OREAS 224 Cert																
OREAS 224 Meas																
OREAS 224 Cert																
OREAS 224 Meas																
OREAS 224 Cert																
692225 Orig	1.21	0.048	0.070	0.45	4	7	112	< 0.01	< 20	3	< 2	< 10	39	< 10	5	15
692225 Dup	1.21	0.048	0.071	0.43	3	7	114	< 0.01	< 20	3	< 2	< 10	40	< 10	5	15
692232 Orig																
692232 Dup																

Analyte Symbol	Mg	Na	P	S	Sb	Sc	Sr	Ti	Th	Te	Tl	U	V	W	Y	Zr
Unit Symbol	%	%	%	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	0.01	0.001	0.001	0.01	2	1	1	0.01	20	1	2	10	1	10	1	1
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
692233 Orig	0.76	0.052	0.098	0.01	< 2	2	87	< 0.01	< 20	< 1	< 2	< 10	16	< 10	5	6
692233 Dup	0.76	0.051	0.102	0.01	< 2	2	91	< 0.01	< 20	< 1	< 2	< 10	17	< 10	5	7
692242 Orig																
692242 Dup																
692252 Orig																
692252 Dup																
692267 Orig																
692267 Dup																
692272 Orig																
692272 Split PREP DUP																
692273 Orig	1.06	0.668	0.057	0.10	< 2	10	88	0.38	< 20	3	< 2	< 10	171	< 10	16	11
692273 Dup	1.11	0.701	0.058	0.10	< 2	10	91	0.39	< 20	6	< 2	< 10	177	< 10	17	12
692277 Orig																
692277 Dup																
692286 Orig	0.72	0.059	0.120	10.7	5	2	123	< 0.01	< 20	6	< 2	< 10	21	< 10	4	20
692286 Dup	0.71	0.056	0.121	10.8	6	2	125	< 0.01	< 20	< 1	2	< 10	21	< 10	4	20
692287 Orig																
692287 Dup																
692289 Orig	1.09	0.047	0.077	7.80	5	8	166	< 0.01	< 20	5	< 2	< 10	63	< 10	4	19
692289 Dup	1.11	0.047	0.079	7.66	5	8	165	< 0.01	< 20	5	< 2	< 10	63	< 10	4	19
692302 Orig	1.25	0.111	0.089	5.81	5	3	89	< 0.01	< 20	2	< 2	< 10	23	< 10	4	19
692302 Dup	1.27	0.111	0.088	5.73	5	3	88	< 0.01	< 20	2	< 2	< 10	24	< 10	4	19
692312 Orig																
692312 Dup																
692314 Orig	1.20	0.122	0.083	2.78	3	2	61	< 0.01	< 20	2	< 2	< 10	18	< 10	5	14
692314 Dup	1.24	0.128	0.087	2.81	3	2	63	< 0.01	< 20	< 1	< 2	< 10	18	< 10	6	15
692322 Orig																
692322 Split PREP DUP																
692322 Orig																
692322 Dup																
Method Blank																
Method Blank																
Method Blank																
Method Blank																
Method Blank																
Method Blank																
Method Blank																
Method Blank	< 0.01	0.010	< 0.001	< 0.01	< 2	< 1	< 1	< 0.01	< 20	< 1	< 2	< 10	< 1	< 10	< 1	< 1
Method Blank	< 0.01	0.012	< 0.001	< 0.01	< 2	< 1	< 1	< 0.01	< 20	< 1	< 2	< 10	< 1	< 10	< 1	< 1
Method Blank	< 0.01	0.011	< 0.001	< 0.01	< 2	< 1	< 1	< 0.01	< 20	1	< 2	< 10	< 1	< 10	< 1	< 1

Analyte Symbol	Mg	Na	P	S	Sb	Sc	Sr	Ti	Th	Te	Tl	U	V	W	Y	Zr
Unit Symbol	%	%	%	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	0.01	0.001	0.001	0.01	2	1	1	0.01	20	1	2	10	1	10	1	1
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
Method Blank	< 0.01	0.010	< 0.001	< 0.01	< 2	< 1	< 1	< 0.01	< 20	1	< 2	< 10	< 1	< 10	< 1	< 1





**Date Submitted:** 03-Mar-18  
**Invoice No.:** A18-02549  
**Invoice Date:** 04-Mar-18  
**Your Reference:** 81 Lucas

**Noble Mineral Exploration**  
**2500-120 Adelaide Street West**  
**Toronto ON M5H 1T1**  
**Canada**

**ATTN: Randy Singh (inv-cc)**

## CERTIFICATE OF ANALYSIS

2 Rock samples were submitted for analysis.

The following analytical package(s) were requested:

Code 1A2-Timmins Au - Fire Assay AA

REPORT **A18-02549**

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Notes:

If value exceeds upper limit we recommend reassay by fire assay gravimetric-Code 1A3.

CERTIFIED BY:

A handwritten signature in black ink, appearing to be "Emmanuel Esemé". The signature is written over a horizontal line.

Emmanuel Esemé , Ph.D.  
Quality Control

**ACTIVATION LABORATORIES LTD.**  
1752 Riverside Drive, Timmins, Ontario, Canada, P4R 1N1  
TELEPHONE +705 264-0123 or +1.888.228.5227 FAX +1.905.648.9613  
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Analyte Symbol	Au
Unit Symbol	ppb
Lower Limit	5
Method Code	FA-AA
542014	84
542015	91

Analyte Symbol	Au
Unit Symbol	ppb
Lower Limit	5
Method Code	FA-AA
OREAS 218 Meas	524
OREAS 218 Cert	531
OREAS 224 Meas	2080
OREAS 224 Cert	2150.0 00
542014 Orig	85
542014 Dup	82
542015 Orig	92
542015 Dup	90
Method Blank	< 5
Method Blank	< 5



**Date Submitted:** 05-Mar-18  
**Invoice No.:** A18-02566  
**Invoice Date:** 25-Apr-18  
**Your Reference:** 81 Lucas

**Noble Mineral Exploration**  
**2500-120 Adelaide Street West**  
**Toronto ON M5H 1T1**  
**Canada**

**ATTN: Randy Singh (inv-cc)**

## CERTIFICATE OF ANALYSIS

175 Rock samples were submitted for analysis.

The following analytical package(s) were requested:

Code 1A2-Timmins Au - Fire Assay AA

Code 1E3-Timmins Aqua Regia ICP(AQUAGEO)

REPORT      **A18-02566**

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Notes:

If value exceeds upper limit we recommend reassay by fire assay gravimetric-Code 1A3.

Values which exceed the upper limit should be assayed for accurate numbers.

CERTIFIED BY:

A handwritten signature in black ink, appearing to be "Emmanuel Esemé", written over a horizontal line.

Emmanuel Esemé , Ph.D.  
Quality Control

**ACTIVATION LABORATORIES LTD.**  
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E-MAIL Timmins@actlabs.com ACTLABS GROUP WEBSITE www.actlabs.com

Analyte Symbol	Au	Ag	Cd	Cu	Mn	Mo	Ni	Pb	Zn	Al	As	B	Ba	Be	Bi	Ca	Co	Cr	Fe	Ga	Hg	K	La
Unit Symbol	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm
Lower Limit	5	0.2	0.5	1	5	1	1	2	2	0.01	2	10	10	0.5	2	0.01	1	1	0.01	10	1	0.01	10
Method Code	FA-AA	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
692328	< 5	< 0.2	< 0.5	< 1	2280	1	31	5	51	0.15	24	< 10	< 10	< 0.5	< 2	1.65	7	21	5.87	< 10	< 1	< 0.01	< 10
692329	< 5	0.3	< 0.5	4	7690	< 1	150	6	75	0.29	98	< 10	< 10	< 0.5	7	0.71	34	7	23.5	< 10	< 1	< 0.01	< 10
692330	< 5	0.2	< 0.5	4	6830	< 1	89	4	68	0.20	40	< 10	< 10	< 0.5	4	1.04	17	10	18.9	< 10	< 1	< 0.01	< 10
692331	22	0.4	< 0.5	14	5460	< 1	128	12	53	0.14	181	< 10	< 10	< 0.5	4	0.76	20	6	22.9	< 10	< 1	< 0.01	< 10
692332	< 5	< 0.2	< 0.5	< 1	124	< 1	< 1	< 2	17	5.21	< 2	10	< 10	0.5	< 2	0.21	< 1	1	0.73	< 10	< 1	1.43	< 10
692333	< 5	< 0.2	< 0.5	5	3010	< 1	52	2	50	0.09	13	< 10	< 10	< 0.5	< 2	0.57	9	14	8.19	< 10	< 1	< 0.01	< 10
692334	< 5	< 0.2	< 0.5	6	1310	2	67	4	89	0.09	29	< 10	< 10	< 0.5	< 2	0.53	16	30	5.55	< 10	< 1	< 0.01	< 10
692335	< 5	< 0.2	< 0.5	5	3990	2	52	4	112	0.11	18	< 10	< 10	< 0.5	< 2	0.75	12	21	9.52	< 10	< 1	< 0.01	< 10
692336	< 5	< 0.2	< 0.5	2	2850	3	43	3	113	0.06	14	< 10	< 10	< 0.5	< 2	1.13	7	26	7.41	< 10	< 1	< 0.01	< 10
692337	< 5	< 0.2	< 0.5	2	1080	2	27	< 2	37	0.09	11	< 10	< 10	< 0.5	< 2	2.24	6	24	3.36	< 10	< 1	< 0.01	< 10
692338	< 5	< 0.2	< 0.5	2	1250	3	27	< 2	83	0.04	7	< 10	< 10	< 0.5	< 2	1.15	6	28	4.48	< 10	< 1	< 0.01	< 10
692339	< 5	< 0.2	< 0.5	3	1600	3	51	3	78	0.05	19	< 10	< 10	< 0.5	< 2	1.34	11	26	5.63	< 10	< 1	< 0.01	< 10
692340	< 5	< 0.2	< 0.5	3	1990	2	65	4	74	0.06	21	< 10	< 10	< 0.5	< 2	1.60	14	19	6.73	< 10	< 1	< 0.01	< 10
692341	< 5	< 0.2	< 0.5	8	1840	3	60	3	75	0.27	26	< 10	14	< 0.5	< 2	2.46	15	19	5.85	< 10	< 1	0.04	< 10
692342	< 5	< 0.2	< 0.5	7	1860	3	60	3	76	0.28	26	< 10	15	< 0.5	< 2	2.49	14	18	5.94	< 10	< 1	0.04	< 10
692343	5	< 0.2	< 0.5	20	811	< 1	101	3	39	0.88	41	< 10	32	< 0.5	< 2	3.07	27	14	4.92	< 10	< 1	0.18	< 10
692344	< 5	< 0.2	< 0.5	16	959	< 1	56	3	52	1.35	20	< 10	49	< 0.5	< 2	3.00	16	7	4.64	< 10	< 1	0.16	< 10
692345	< 5	< 0.2	< 0.5	18	589	< 1	41	< 2	30	0.73	21	< 10	61	< 0.5	< 2	3.36	19	2	2.39	< 10	< 1	0.20	15
692346	< 5	< 0.2	< 0.5	15	812	< 1	30	< 2	35	0.77	12	< 10	57	< 0.5	< 2	3.44	13	2	2.62	< 10	< 1	0.18	16
692347	< 5	0.2	< 0.5	12	1510	< 1	57	3	52	1.72	11	< 10	35	< 0.5	< 2	4.23	14	5	7.18	< 10	< 1	0.11	< 10
692348	< 5	< 0.2	< 0.5	16	690	< 1	72	3	33	0.89	15	< 10	39	< 0.5	< 2	3.44	18	3	4.19	< 10	< 1	0.19	< 10
692349	< 5	0.3	< 0.5	22	416	2	151	7	41	1.19	30	< 10	11	< 0.5	< 2	1.84	25	4	8.81	< 10	< 1	0.18	< 10
692350	< 5	0.2	< 0.5	14	437	1	141	6	36	1.21	26	< 10	15	< 0.5	< 2	2.13	23	4	6.81	< 10	1	0.15	< 10
692351	< 5	< 0.2	< 0.5	14	379	< 1	141	4	47	1.38	25	< 10	19	< 0.5	< 2	1.81	28	4	5.95	< 10	< 1	0.18	< 10
692352	7	0.3	< 0.5	20	278	2	246	7	41	1.54	41	< 10	10	< 0.5	< 2	1.49	40	4	10.8	< 10	< 1	0.16	< 10
692353	< 5	0.3	< 0.5	16	427	1	111	4	49	1.54	14	< 10	27	< 0.5	< 2	2.55	20	4	5.55	< 10	< 1	0.16	< 10
692354	< 5	< 0.2	< 0.5	19	457	1	104	6	46	1.45	15	< 10	22	< 0.5	< 2	3.14	20	4	6.61	< 10	< 1	0.13	< 10
692355	< 5	< 0.2	< 0.5	17	414	< 1	69	< 2	53	1.66	4	< 10	38	< 0.5	< 2	2.38	16	4	3.57	< 10	< 1	0.12	11
692356	1090	0.4	< 0.5	158	722	< 1	72	3	58	3.91	8	45	28	< 0.5	< 2	3.31	32	124	5.72	10	< 1	0.05	< 10
692357	< 5	< 0.2	< 0.5	19	478	< 1	70	3	53	1.64	6	< 10	44	< 0.5	< 2	3.08	18	5	3.62	< 10	< 1	0.15	< 10
692358	< 5	< 0.2	< 0.5	20	362	1	77	4	45	1.55	12	< 10	31	< 0.5	< 2	2.17	20	4	4.61	< 10	< 1	0.14	< 10
692359	< 5	< 0.2	< 0.5	20	377	< 1	32	3	51	1.61	5	< 10	52	< 0.5	< 2	2.54	15	3	2.89	< 10	< 1	0.18	13
692360	< 5	< 0.2	< 0.5	16	423	< 1	26	< 2	44	1.38	3	< 10	49	< 0.5	< 2	3.38	12	4	2.08	< 10	< 1	0.15	14
692361	< 5	< 0.2	< 0.5	18	477	1	41	4	47	1.50	14	< 10	38	< 0.5	< 2	2.61	17	3	4.21	< 10	< 1	0.14	< 10
692362	< 5	< 0.2	< 0.5	15	538	1	50	4	46	1.45	19	< 10	31	< 0.5	< 2	2.23	15	3	4.82	< 10	< 1	0.13	< 10
692363	< 5	0.2	< 0.5	21	430	2	53	4	46	1.17	21	< 10	33	< 0.5	< 2	1.90	18	3	4.16	< 10	< 1	0.12	10
692364	< 5	< 0.2	< 0.5	19	723	1	53	< 2	79	2.69	4	< 10	23	< 0.5	< 2	1.78	17	6	6.02	< 10	< 1	0.07	13
692365	< 5	< 0.2	< 0.5	19	1160	1	48	< 2	70	2.55	< 2	< 10	21	< 0.5	< 2	2.61	16	8	7.09	< 10	< 1	0.07	< 10
692366	< 5	0.2	< 0.5	18	1120	1	29	< 2	59	2.22	3	< 10	22	< 0.5	< 2	2.81	16	6	7.58	< 10	< 1	0.08	< 10
692367	< 5	< 0.2	< 0.5	< 1	103	< 1	< 1	< 2	21	5.00	< 2	11	< 10	< 0.5	< 2	0.20	< 1	2	0.61	< 10	< 1	1.36	< 10
692368	6	< 0.2	< 0.5	20	982	1	24	2	39	1.72	4	< 10	37	< 0.5	< 2	3.67	13	4	6.02	< 10	< 1	0.19	11
692369	11	0.2	< 0.5	25	858	1	39	6	42	1.48	42	< 10	15	< 0.5	< 2	2.94	23	5	8.92	< 10	< 1	0.19	< 10

## Results

## Activation Laboratories Ltd.

## Report: A18-02566

Analyte Symbol	Au	Ag	Cd	Cu	Mn	Mo	Ni	Pb	Zn	Al	As	B	Ba	Be	Bi	Ca	Co	Cr	Fe	Ga	Hg	K	La
Unit Symbol	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm
Lower Limit	5	0.2	0.5	1	5	1	1	2	2	0.01	2	10	10	0.5	2	0.01	1	1	0.01	10	1	0.01	10
Method Code	FA-AA	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
692370	8	0.2	< 0.5	22	1070	1	46	5	42	1.52	56	< 10	< 10	< 0.5	5	2.80	22	4	13.2	< 10	< 1	0.13	< 10
692371	10	< 0.2	< 0.5	25	1290	1	53	5	46	1.58	36	< 10	17	< 0.5	< 2	3.31	28	5	10.2	< 10	< 1	0.13	< 10
692372	9	0.2	< 0.5	25	1330	1	57	6	51	2.28	52	< 10	11	< 0.5	3	1.85	32	7	13.8	< 10	< 1	0.10	< 10
692373	8	0.2	< 0.5	25	1330	1	57	6	52	2.26	51	< 10	10	< 0.5	2	1.92	33	6	13.6	< 10	< 1	0.10	< 10
692374	6	0.3	< 0.5	27	2640	< 1	62	4	57	2.87	46	< 10	< 10	< 0.5	2	2.67	25	10	16.1	< 10	< 1	0.09	< 10
692375	< 5	< 0.2	< 0.5	6	2300	< 1	36	< 2	53	2.69	14	< 10	30	< 0.5	< 2	2.41	13	8	8.82	< 10	< 1	0.14	11
692376	9	0.2	< 0.5	25	2960	< 1	60	5	55	3.08	31	< 10	14	< 0.5	3	2.66	20	9	14.6	< 10	< 1	0.11	< 10
692377	8	< 0.2	< 0.5	18	2110	1	60	5	39	1.89	38	< 10	14	< 0.5	< 2	2.74	30	8	11.3	< 10	< 1	0.13	< 10
692378	10	< 0.2	< 0.5	17	2130	1	55	5	37	1.85	29	< 10	15	< 0.5	< 2	3.12	23	7	9.40	< 10	< 1	0.16	< 10
692379	10	0.2	< 0.5	22	2730	< 1	62	4	67	3.27	33	< 10	15	< 0.5	3	3.00	22	7	13.3	< 10	< 1	0.17	< 10
692380	8	0.3	0.6	14	5440	< 1	51	2	51	1.85	7	< 10	45	< 0.5	3	3.29	15	7	13.3	< 10	< 1	0.18	< 10
692381	26	0.2	< 0.5	21	4250	< 1	53	3	47	1.90	18	< 10	23	< 0.5	3	3.03	16	7	13.8	< 10	< 1	0.16	< 10
692382	12	0.2	< 0.5	20	5160	< 1	44	4	48	1.63	27	< 10	19	< 0.5	4	2.89	26	6	16.3	< 10	< 1	0.17	< 10
692383	1840	0.5	< 0.5	165	803	1	85	6	61	4.41	13	18	30	< 0.5	< 2	3.79	34	129	5.68	10	< 1	0.09	< 10
692384	14	0.2	< 0.5	24	4230	< 1	63	6	69	1.14	44	< 10	18	< 0.5	4	2.74	25	10	15.6	< 10	< 1	0.19	< 10
692385	7	0.3	< 0.5	22	2190	< 1	78	8	74	1.46	91	< 10	12	< 0.5	< 2	2.40	33	11	14.5	< 10	< 1	0.18	< 10
692386	11	0.2	< 0.5	39	2340	< 1	77	6	90	1.12	62	< 10	13	< 0.5	2	2.84	29	18	13.8	< 10	< 1	0.16	< 10
692387	12	< 0.2	< 0.5	22	3750	1	46	4	88	0.94	31	< 10	17	< 0.5	3	2.73	19	11	12.3	< 10	< 1	0.15	< 10
692388	10	< 0.2	0.6	20	2210	< 1	50	7	96	0.84	55	< 10	14	< 0.5	3	2.21	21	16	10.4	< 10	< 1	0.15	< 10
692389	12	0.3	< 0.5	32	1680	< 1	62	12	87	0.87	110	< 10	< 10	< 0.5	3	1.92	26	12	14.7	< 10	< 1	0.14	< 10
692390	10	< 0.2	< 0.5	28	3100	< 1	64	4	110	1.07	51	< 10	14	< 0.5	3	1.37	26	13	13.4	< 10	< 1	0.13	< 10
692391	14	< 0.2	< 0.5	29	5670	3	48	2	125	0.57	17	< 10	22	< 0.5	5	2.03	16	14	16.1	< 10	< 1	0.10	< 10
692392	11	0.3	< 0.5	16	2260	< 1	69	10	113	0.93	117	< 10	< 10	< 0.5	5	1.41	35	13	19.0	< 10	< 1	0.14	< 10
692393	< 5	< 0.2	< 0.5	< 1	98	< 1	< 1	< 2	17	4.99	< 2	11	< 10	< 0.5	< 2	0.21	< 1	< 1	0.51	< 10	< 1	1.37	< 10
692394	7	0.3	< 0.5	16	2640	< 1	70	8	81	0.53	148	< 10	< 10	< 0.5	5	1.03	36	11	21.9	< 10	< 1	0.11	< 10
692395	5	0.3	< 0.5	11	3130	< 1	74	10	64	0.66	132	< 10	< 10	< 0.5	5	1.31	40	12	22.6	< 10	< 1	0.11	< 10
692396	5	< 0.2	< 0.5	7	2700	< 1	59	8	40	0.85	121	< 10	< 10	< 0.5	< 2	1.63	27	11	19.7	< 10	< 1	0.20	< 10
692397	5	0.3	< 0.5	9	5710	< 1	57	11	69	0.85	80	< 10	< 10	< 0.5	4	1.75	28	8	22.6	< 10	< 1	0.10	< 10
692398	5	0.3	< 0.5	3	6380	< 1	39	9	44	0.21	42	< 10	< 10	< 0.5	4	0.67	15	36	20.1	< 10	< 1	< 0.01	< 10
692399	8	< 0.2	< 0.5	2	7930	< 1	34	7	52	0.26	30	< 10	< 10	< 0.5	5	0.56	9	30	20.8	< 10	< 1	< 0.01	< 10
692400	6	0.3	< 0.5	5	6450	< 1	47	10	42	0.38	64	< 10	< 10	< 0.5	4	0.52	15	13	22.1	< 10	< 1	0.01	< 10
692401	9	0.3	< 0.5	7	7130	< 1	43	13	42	0.24	61	< 10	< 10	< 0.5	3	0.68	14	23	23.8	< 10	< 1	0.01	< 10
692402	7	0.3	< 0.5	6	6540	< 1	35	9	39	0.22	48	< 10	< 10	< 0.5	4	0.69	13	37	20.4	< 10	< 1	< 0.01	< 10
692403	5	< 0.2	< 0.5	4	4100	1	16	10	29	0.10	19	< 10	< 10	< 0.5	3	0.72	8	48	11.1	< 10	< 1	< 0.01	< 10
692404	< 5	< 0.2	< 0.5	< 1	4800	< 1	9	3	24	0.12	4	< 10	< 10	< 0.5	< 2	0.78	3	38	10.3	< 10	< 1	< 0.01	< 10
692405	< 5	< 0.2	< 0.5	3	2380	< 1	17	4	20	0.12	15	< 10	< 10	< 0.5	< 2	0.64	6	68	7.08	< 10	< 1	< 0.01	< 10
692406	6	< 0.2	< 0.5	2	4040	< 1	27	6	30	0.12	18	< 10	< 10	< 0.5	< 2	2.01	8	74	11.9	< 10	< 1	< 0.01	< 10
692407	6	< 0.2	< 0.5	2	4340	< 1	23	7	26	0.09	14	< 10	< 10	< 0.5	2	0.95	7	71	12.2	< 10	< 1	< 0.01	< 10
692408	13	0.3	< 0.5	17	2510	< 1	40	10	41	0.15	106	< 10	< 10	< 0.5	3	0.47	30	97	14.4	< 10	< 1	< 0.01	< 10
692409	6	< 0.2	< 0.5	1	4100	< 1	13	4	22	0.11	5	< 10	< 10	< 0.5	< 2	0.88	3	70	9.45	< 10	< 1	< 0.01	< 10
692410	1090	0.4	< 0.5	163	758	< 1	74	4	62	4.07	8	46	28	< 0.5	< 2	3.48	35	130	5.93	10	1	0.06	< 10
692411	14	0.2	< 0.5	12	2280	< 1	35	8	40	0.20	74	< 10	< 10	< 0.5	4	0.43	21	63	14.6	< 10	< 1	< 0.01	< 10

## Results

## Activation Laboratories Ltd.

## Report: A18-02566

Analyte Symbol	Au	Ag	Cd	Cu	Mn	Mo	Ni	Pb	Zn	Al	As	B	Ba	Be	Bi	Ca	Co	Cr	Fe	Ga	Hg	K	La
Unit Symbol	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm
Lower Limit	5	0.2	0.5	1	5	1	1	2	2	0.01	2	10	10	0.5	2	0.01	1	1	0.01	10	1	0.01	10
Method Code	FA-AA	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
692412	15	0.3	< 0.5	10	2390	2	32	11	36	0.11	77	< 10	< 10	< 0.5	3	0.62	22	53	14.5	< 10	< 1	< 0.01	< 10
692413	12	< 0.2	< 0.5	7	2030	1	39	9	28	0.15	47	< 10	< 10	< 0.5	< 2	0.54	15	127	10.2	< 10	< 1	< 0.01	< 10
692414	5	< 0.2	< 0.5	1	1790	< 1	13	3	14	0.10	9	< 10	< 10	< 0.5	< 2	0.47	4	102	4.89	< 10	< 1	< 0.01	< 10
692415	< 5	< 0.2	< 0.5	1	1080	< 1	11	2	8	0.05	6	< 10	< 10	< 0.5	< 2	0.30	3	123	2.96	< 10	< 1	< 0.01	< 10
692416	21	0.4	< 0.5	10	4160	< 1	41	10	39	0.14	51	< 10	< 10	< 0.5	3	0.84	17	45	19.1	< 10	< 1	< 0.01	< 10
692417	20	0.4	< 0.5	7	7200	< 1	47	10	62	0.45	52	< 10	< 10	< 0.5	5	1.23	20	33	27.2	< 10	< 1	< 0.01	< 10
692418	< 5	< 0.2	< 0.5	< 1	118	< 1	< 1	< 2	18	5.52	< 2	12	11	0.5	< 2	0.23	< 1	< 1	0.59	< 10	< 1	1.43	< 10
692419	32	0.3	< 0.5	14	4990	2	47	12	83	0.40	63	< 10	< 10	< 0.5	6	0.35	23	53	21.3	< 10	< 1	< 0.01	< 10
692420	31	0.3	< 0.5	33	4070	< 1	54	18	80	0.26	88	< 10	< 10	< 0.5	5	0.67	34	36	24.2	< 10	< 1	< 0.01	< 10
692421	46	0.4	0.5	34	4940	< 1	79	23	126	0.42	126	< 10	< 10	< 0.5	5	0.43	29	32	25.6	< 10	< 1	0.02	< 10
692422	154	0.3	< 0.5	41	1300	< 1	63	34	82	0.22	157	< 10	< 10	< 0.5	5	0.45	44	40	20.7	< 10	< 1	0.02	< 10
692423	155	0.3	< 0.5	40	1230	< 1	62	33	81	0.22	149	< 10	< 10	< 0.5	5	0.44	42	40	20.2	< 10	< 1	0.02	< 10
692424	30	< 0.2	< 0.5	15	2400	< 1	47	14	151	0.75	59	< 10	11	< 0.5	3	1.03	25	53	14.5	< 10	< 1	0.07	< 10
692425	26	0.2	< 0.5	21	2910	< 1	43	15	64	0.55	75	< 10	< 10	< 0.5	2	2.62	20	51	16.3	< 10	< 1	0.03	< 10
692426	34	0.2	< 0.5	25	1690	< 1	48	17	124	0.85	92	< 10	< 10	< 0.5	2	1.27	20	39	15.3	< 10	< 1	0.06	< 10
692427	16	0.2	< 0.5	30	2330	< 1	50	20	85	0.68	75	< 10	< 10	< 0.5	4	1.40	18	40	17.9	< 10	< 1	0.05	< 10
692428	7	< 0.2	< 0.5	13	3290	< 1	33	10	63	0.67	44	< 10	< 10	< 0.5	4	1.24	17	39	15.2	< 10	< 1	0.11	< 10
692429	12	0.3	< 0.5	27	3000	< 1	40	15	64	0.56	89	< 10	< 10	< 0.5	6	1.17	24	33	20.1	< 10	< 1	0.09	< 10
692430	11	0.2	< 0.5	20	2150	< 1	43	17	66	0.61	67	< 10	< 10	< 0.5	3	0.90	23	48	17.5	< 10	< 1	0.08	< 10
692431	8	0.3	< 0.5	29	1360	< 1	49	15	83	0.71	80	< 10	< 10	< 0.5	4	0.94	26	53	18.4	< 10	< 1	0.08	< 10
692432	6	0.2	< 0.5	22	2410	< 1	50	12	74	0.68	72	< 10	< 10	< 0.5	4	1.44	21	49	15.5	< 10	< 1	0.07	< 10
692433	10	0.3	< 0.5	30	3080	< 1	61	12	111	0.83	81	< 10	< 10	< 0.5	< 2	1.45	25	36	19.3	< 10	< 1	0.06	< 10
692434	1890	0.3	< 0.5	88	1570	3	107	7	76	1.76	822	< 10	25	< 0.5	< 2	1.72	30	49	6.49	< 10	< 1	0.08	15
692435	14	< 0.2	< 0.5	19	2320	< 1	43	9	116	0.74	56	< 10	< 10	< 0.5	3	1.68	20	41	13.8	< 10	< 1	0.06	< 10
692436	14	0.2	< 0.5	34	1420	< 1	52	17	123	0.71	101	< 10	< 10	< 0.5	< 2	1.10	28	35	16.5	< 10	< 1	0.09	< 10
692437	12	< 0.2	< 0.5	22	3490	< 1	68	9	160	0.87	73	< 10	< 10	< 0.5	3	1.34	27	37	15.9	< 10	1	0.10	< 10
692438	11	< 0.2	< 0.5	27	2680	< 1	50	9	110	0.43	92	< 10	< 10	< 0.5	4	1.58	17	67	13.3	< 10	< 1	0.07	< 10
692439	8	< 0.2	< 0.5	20	2500	< 1	58	9	108	0.60	102	< 10	< 10	< 0.5	4	1.45	24	38	15.8	< 10	< 1	0.07	< 10
692440	11	0.3	0.6	28	2960	< 1	71	16	170	0.82	161	< 10	< 10	< 0.5	4	1.30	32	38	22.4	< 10	< 1	0.11	< 10
692441	17	0.3	0.6	27	1790	< 1	46	17	83	0.70	171	< 10	< 10	< 0.5	3	1.29	24	33	20.2	< 10	< 1	0.07	< 10
692442	11	0.4	0.5	20	2640	< 1	44	15	94	0.69	144	< 10	< 10	< 0.5	5	1.43	24	44	19.6	< 10	< 1	0.08	< 10
692443	26	0.6	< 0.5	23	2400	< 1	73	16	84	0.69	165	< 10	< 10	< 0.5	< 2	1.77	24	33	18.9	< 10	< 1	0.08	< 10
692444	111	0.6	< 0.5	24	3800	< 1	90	20	91	0.66	177	< 10	< 10	< 0.5	4	2.18	29	39	20.4	< 10	< 1	0.10	< 10
692445	< 5	< 0.2	< 0.5	< 1	109	< 1	< 1	< 2	18	5.29	< 2	13	10	0.5	< 2	0.23	< 1	< 1	0.54	< 10	< 1	1.39	< 10
692446	132	0.6	< 0.5	36	3380	3	60	28	93	0.65	138	< 10	11	< 0.5	3	2.70	22	28	14.4	< 10	< 1	0.12	< 10
692447	20	< 0.2	< 0.5	10	2300	1	24	9	23	1.00	62	< 10	53	< 0.5	< 2	4.11	13	17	4.48	< 10	< 1	0.19	< 10
692448	9	< 0.2	< 0.5	40	1540	< 1	71	2	56	2.08	42	< 10	52	< 0.5	< 2	3.76	26	72	5.46	< 10	< 1	0.21	< 10
692449	< 5	< 0.2	< 0.5	34	1380	< 1	64	< 2	50	2.10	38	< 10	59	< 0.5	< 2	3.80	23	71	5.17	< 10	< 1	0.24	< 10
692450	< 5	< 0.2	< 0.5	31	1520	< 1	54	< 2	61	2.44	28	< 10	49	< 0.5	< 2	3.45	20	80	5.98	< 10	< 1	0.20	< 10
692451	< 5	< 0.2	< 0.5	41	1680	< 1	56	< 2	55	1.93	28	< 10	48	< 0.5	< 2	4.21	22	71	5.07	< 10	< 1	0.21	< 10
692452	6	< 0.2	< 0.5	22	1360	< 1	70	< 2	64	2.31	18	< 10	49	< 0.5	< 2	3.34	25	63	5.64	< 10	< 1	0.20	< 10
692453	8	< 0.2	< 0.5	22	1910	2	76	< 2	74	2.57	9	< 10	46	< 0.5	< 2	3.25	27	62	6.70	< 10	< 1	0.18	12

## Results

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## Report: A18-02566

Analyte Symbol	Au	Ag	Cd	Cu	Mn	Mo	Ni	Pb	Zn	Al	As	B	Ba	Be	Bi	Ca	Co	Cr	Fe	Ga	Hg	K	La
Unit Symbol	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm
Lower Limit	5	0.2	0.5	1	5	1	1	2	2	0.01	2	10	10	0.5	2	0.01	1	1	0.01	10	1	0.01	10
Method Code	FA-AA	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
692454	8	< 0.2	< 0.5	27	1570	< 1	61	2	64	2.49	3	< 10	48	< 0.5	< 2	2.95	24	65	6.31	< 10	< 1	0.19	11
692455	7	< 0.2	< 0.5	27	1940	< 1	64	< 2	57	2.15	6	< 10	37	< 0.5	< 2	3.54	21	53	6.35	< 10	< 1	0.14	11
692456	7	< 0.2	< 0.5	30	1960	< 1	63	< 2	57	2.16	6	< 10	36	< 0.5	< 2	3.56	21	53	6.42	< 10	< 1	0.14	11
692457	9	< 0.2	< 0.5	32	1680	< 1	52	< 2	56	1.89	17	< 10	45	< 0.5	< 2	3.73	22	50	5.47	< 10	< 1	0.17	13
692458	8	< 0.2	< 0.5	36	1470	< 1	69	< 2	64	2.30	20	< 10	45	< 0.5	< 2	3.28	24	57	6.23	< 10	< 1	0.17	15
692459	10	< 0.2	< 0.5	29	2160	< 1	103	< 2	90	3.53	27	< 10	38	< 0.5	< 2	3.93	31	66	9.38	10	< 1	0.15	13
692460	< 5	< 0.2	< 0.5	28	2320	< 1	59	< 2	59	2.08	21	< 10	44	< 0.5	< 2	4.71	21	54	6.60	< 10	< 1	0.18	13
692461	< 5	< 0.2	< 0.5	15	986	< 1	40	< 2	35	1.27	23	< 10	29	< 0.5	< 2	2.58	15	59	3.25	< 10	< 1	0.11	< 10
692462	< 5	< 0.2	< 0.5	28	937	< 1	71	< 2	28	1.45	73	< 10	53	< 0.5	< 2	2.43	23	52	3.15	< 10	< 1	0.19	16
692463	< 5	< 0.2	< 0.5	30	1350	< 1	41	< 2	45	1.76	22	< 10	42	< 0.5	< 2	3.25	17	61	4.73	< 10	< 1	0.14	14
692464	161	< 0.2	< 0.5	43	1120	< 1	71	< 2	65	2.25	42	< 10	59	< 0.5	< 2	2.66	26	97	5.19	< 10	< 1	0.20	22
692465	7	< 0.2	< 0.5	39	1560	6	118	< 2	129	2.55	76	< 10	65	< 0.5	< 2	2.83	34	114	6.11	< 10	< 1	0.21	20
692466	< 5	0.2	< 0.5	29	1380	2	130	< 2	64	2.17	109	< 10	101	< 0.5	< 2	2.38	33	84	4.24	< 10	< 1	0.32	23
692467	1110	0.4	< 0.5	160	737	< 1	71	4	61	4.04	6	44	31	< 0.5	< 2	3.35	32	126	5.93	10	1	0.06	< 10
692468	< 5	< 0.2	< 0.5	10	1040	< 1	27	3	37	0.69	28	< 10	38	< 0.5	2	2.88	10	19	2.81	< 10	< 1	0.11	17
692469	22	< 0.2	< 0.5	19	1750	< 1	97	9	48	1.43	67	< 10	29	< 0.5	< 2	3.02	35	21	7.39	< 10	< 1	0.09	< 10
692470	< 5	< 0.2	< 0.5	41	877	< 1	85	< 2	49	1.56	35	< 10	37	< 0.5	< 2	2.51	29	105	4.63	< 10	< 1	0.10	18
692471	< 5	< 0.2	< 0.5	48	807	< 1	146	< 2	32	1.10	56	< 10	47	< 0.5	< 2	2.70	44	88	3.39	< 10	< 1	0.13	11
692472	< 5	< 0.2	< 0.5	40	813	< 1	69	< 2	30	1.20	26	< 10	44	< 0.5	< 2	2.84	24	76	3.34	< 10	< 1	0.13	19
692473	< 5	< 0.2	< 0.5	45	1050	< 1	82	< 2	35	1.43	30	< 10	52	< 0.5	2	4.03	26	74	3.50	< 10	< 1	0.15	26
692474	< 5	< 0.2	< 0.5	35	1120	< 1	72	< 2	61	1.69	17	< 10	45	< 0.5	< 2	3.42	21	85	4.95	< 10	< 1	0.13	20
692475	< 5	< 0.2	< 0.5	36	909	< 1	56	< 2	71	1.61	9	< 10	49	< 0.5	< 2	3.03	19	87	4.44	< 10	< 1	0.13	22
692476	< 5	< 0.2	< 0.5	36	967	2	95	< 2	85	1.86	15	< 10	48	< 0.5	< 2	2.91	27	99	4.85	< 10	< 1	0.13	19
692477	< 5	< 0.2	< 0.5	1	104	< 1	< 1	< 2	21	5.47	< 2	11	11	0.5	< 2	0.23	< 1	1	0.60	< 10	< 1	1.44	< 10
692478	< 5	< 0.2	< 0.5	28	1260	80	84	< 2	94	1.77	10	< 10	41	< 0.5	< 2	3.51	20	65	5.20	< 10	< 1	0.12	14
692479	< 5	< 0.2	< 0.5	31	1120	4	59	< 2	77	1.56	3	< 10	52	< 0.5	< 2	3.11	16	60	4.41	< 10	< 1	0.15	21
692480	5	< 0.2	< 0.5	38	1090	1	57	< 2	70	1.36	4	< 10	50	< 0.5	< 2	3.11	13	46	3.57	< 10	< 1	0.15	29
692481	< 5	< 0.2	< 0.5	46	592	1	37	< 2	45	1.07	8	< 10	65	< 0.5	< 2	2.20	11	33	2.16	< 10	< 1	0.18	33
692482	< 5	< 0.2	< 0.5	38	683	< 1	38	2	41	1.00	6	< 10	47	< 0.5	< 2	2.04	11	35	2.36	< 10	< 1	0.12	28
692483	< 5	< 0.2	< 0.5	41	906	< 1	53	3	38	1.02	9	< 10	55	< 0.5	< 2	2.40	12	38	2.42	< 10	< 1	0.16	32
692484	< 5	< 0.2	< 0.5	39	807	< 1	67	< 2	58	1.45	5	< 10	44	< 0.5	< 2	2.74	14	46	3.29	< 10	< 1	0.12	30
692485	6	< 0.2	< 0.5	39	801	< 1	67	< 2	58	1.43	7	< 10	43	< 0.5	< 2	2.72	14	49	3.26	< 10	< 1	0.11	29
692486	< 5	< 0.2	< 0.5	52	881	< 1	56	< 2	57	1.28	7	< 10	53	< 0.5	< 2	2.69	14	35	3.21	< 10	< 1	0.16	29
692487	66	0.3	< 0.5	22	329	< 1	31	7	76	0.52	20	< 10	45	< 0.5	< 2	2.11	13	13	1.72	< 10	< 1	0.14	11
692488	13	0.2	< 0.5	24	451	< 1	41	4	93	0.60	11	< 10	42	< 0.5	< 2	2.14	15	23	2.15	< 10	< 1	0.13	13
692489	11	< 0.2	< 0.5	17	343	< 1	39	4	93	0.66	16	< 10	42	< 0.5	< 2	2.05	15	23	1.89	< 10	< 1	0.12	13
692490	9	< 0.2	< 0.5	15	316	< 1	31	3	75	0.58	14	< 10	44	< 0.5	< 2	2.07	12	19	1.50	< 10	< 1	0.13	15
692491	10	0.3	< 0.5	17	443	< 1	42	5	81	0.69	18	< 10	48	< 0.5	< 2	1.95	16	14	2.15	< 10	< 1	0.14	13
692492	12	< 0.2	< 0.5	14	400	< 1	32	4	87	0.73	15	< 10	51	< 0.5	< 2	2.13	13	16	1.76	< 10	< 1	0.16	14
692493	9	0.2	< 0.5	14	362	< 1	34	4	82	0.70	14	< 10	50	< 0.5	< 2	2.21	13	23	1.71	< 10	< 1	0.15	14
692494	10	< 0.2	< 0.5	16	317	< 1	27	4	68	0.71	12	< 10	47	< 0.5	< 2	2.22	10	27	1.70	< 10	< 1	0.13	15
692495	10	< 0.2	< 0.5	16	314	< 1	26	4	68	0.69	12	< 10	45	< 0.5	< 2	2.18	10	30	1.68	< 10	< 1	0.13	15



Results

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Analyte Symbol	Au	Ag	Cd	Cu	Mn	Mo	Ni	Pb	Zn	Al	As	B	Ba	Be	Bi	Ca	Co	Cr	Fe	Ga	Hg	K	La
Unit Symbol	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm
Lower Limit	5	0.2	0.5	1	5	1	1	2	2	0.01	2	10	10	0.5	2	0.01	1	1	0.01	10	1	0.01	10
Method Code	FA-AA	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
692496	< 5	< 0.2	< 0.5	5	381	< 1	23	12	92	0.79	11	< 10	47	< 0.5	< 2	2.89	9	11	1.86	< 10	< 1	0.15	16
692497	< 5	< 0.2	< 0.5	7	268	< 1	20	< 2	69	0.72	6	< 10	51	< 0.5	< 2	1.97	7	11	1.47	< 10	< 1	0.16	15
692498	< 5	< 0.2	< 0.5	5	325	< 1	19	3	66	0.67	6	< 10	48	< 0.5	< 2	2.20	7	10	1.67	< 10	< 1	0.14	14
692499	9	< 0.2	< 0.5	10	538	< 1	38	27	79	0.56	22	< 10	49	< 0.5	< 2	2.54	16	7	2.26	< 10	< 1	0.15	15
692500	5	< 0.2	< 0.5	7	462	< 1	34	4	79	0.59	24	< 10	51	< 0.5	< 2	2.63	14	11	1.93	< 10	< 1	0.16	16
692501	8	< 0.2	< 0.5	19	505	< 1	47	3	118	0.66	24	< 10	47	< 0.5	< 2	2.13	18	7	2.46	< 10	< 1	0.14	13
692502	9	< 0.2	< 0.5	19	350	< 1	35	3	65	0.56	20	< 10	47	< 0.5	< 2	2.05	13	6	1.70	< 10	< 1	0.14	16

Analyte Symbol	Mg	Na	P	S	Sb	Sc	Sr	Ti	Th	Te	Tl	U	V	W	Y	Zr
Unit Symbol	%	%	%	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	0.01	0.001	0.001	0.01	2	1	1	0.01	20	1	2	10	1	10	1	1
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
692328	0.97	0.014	0.002	0.59	2	4	41	< 0.01	< 20	< 1	< 2	< 10	23	< 10	2	5
692329	1.74	0.015	0.005	7.11	12	7	24	< 0.01	< 20	< 1	< 2	< 10	38	< 10	4	13
692330	1.76	0.014	0.003	3.46	7	7	34	< 0.01	< 20	< 1	< 2	< 10	37	< 10	4	11
692331	1.33	0.015	0.003	12.2	17	5	32	< 0.01	< 20	< 1	< 2	< 10	25	< 10	3	11
692332	0.05	2.99	0.001	0.02	< 2	< 1	21	< 0.01	< 20	< 1	< 2	< 10	< 1	< 10	4	1
692333	1.04	0.015	0.001	1.28	4	3	21	< 0.01	< 20	< 1	< 2	< 10	20	< 10	2	6
692334	0.76	0.013	0.001	1.50	4	3	20	< 0.01	< 20	< 1	< 2	< 10	19	< 10	1	5
692335	1.09	0.014	0.002	1.64	4	3	23	< 0.01	< 20	< 1	< 2	< 10	16	< 10	3	7
692336	1.06	0.014	0.001	1.35	3	2	33	< 0.01	< 20	< 1	< 2	< 10	12	< 10	2	7
692337	1.04	0.014	0.002	0.74	< 2	1	67	< 0.01	< 20	< 1	< 2	< 10	8	< 10	2	5
692338	0.94	0.012	< 0.001	0.68	< 2	1	29	< 0.01	< 20	< 1	< 2	< 10	8	< 10	2	6
692339	0.94	0.012	< 0.001	1.59	3	1	53	< 0.01	< 20	< 1	< 2	< 10	11	< 10	2	7
692340	1.19	0.011	< 0.001	1.58	4	2	43	< 0.01	< 20	< 1	< 2	< 10	13	< 10	2	7
692341	1.07	0.024	0.019	1.95	2	2	72	< 0.01	< 20	< 1	< 2	< 10	9	< 10	3	8
692342	1.09	0.026	0.019	1.92	3	2	73	< 0.01	< 20	< 1	< 2	< 10	9	< 10	3	8
692343	0.87	0.072	0.124	2.95	3	2	113	< 0.01	< 20	< 1	< 2	< 10	12	< 10	5	8
692344	0.94	0.082	0.097	1.21	2	3	98	< 0.01	< 20	2	< 2	< 10	21	< 10	4	6
692345	0.72	0.082	0.094	0.33	< 2	1	104	< 0.01	< 20	< 1	< 2	< 10	9	< 10	4	4
692346	0.74	0.083	0.097	0.23	< 2	2	110	< 0.01	< 20	3	< 2	< 10	11	< 10	4	4
692347	1.21	0.078	0.079	2.34	2	4	119	< 0.01	< 20	< 1	< 2	< 10	40	< 10	4	12
692348	0.72	0.085	0.084	2.55	< 2	2	102	< 0.01	< 20	2	< 2	< 10	13	< 10	4	9
692349	0.61	0.080	0.080	8.46	4	1	58	< 0.01	< 20	< 1	< 2	< 10	14	< 10	4	20
692350	0.64	0.061	0.083	5.91	2	1	73	< 0.01	< 20	< 1	< 2	< 10	13	< 10	4	15
692351	0.56	0.073	0.081	4.95	2	1	64	< 0.01	< 20	< 1	< 2	< 10	14	< 10	4	16
692352	0.56	0.069	0.077	10.9	4	1	57	< 0.01	< 20	< 1	< 2	< 10	15	< 10	3	20
692353	0.63	0.066	0.084	4.11	< 2	1	81	< 0.01	< 20	< 1	< 2	< 10	15	< 10	4	14
692354	0.68	0.058	0.083	5.43	3	1	100	< 0.01	< 20	< 1	< 2	< 10	16	< 10	4	14
692355	0.79	0.058	0.101	1.20	< 2	2	72	< 0.01	< 20	< 1	< 2	< 10	18	< 10	4	6
692356	2.24	0.080	0.037	0.20	3	8	28	0.42	< 20	1	< 2	< 10	200	< 10	15	22
692357	0.74	0.067	0.092	1.45	< 2	2	100	< 0.01	< 20	< 1	< 2	< 10	19	< 10	4	6
692358	0.61	0.056	0.099	2.84	2	1	72	< 0.01	< 20	< 1	< 2	< 10	16	< 10	4	12
692359	0.61	0.057	0.093	0.81	< 2	1	82	< 0.01	< 20	1	< 2	< 10	16	< 10	4	5
692360	0.50	0.055	0.085	0.22	< 2	1	109	< 0.01	< 20	< 1	< 2	< 10	14	< 10	4	4
692361	0.88	0.044	0.102	2.13	< 2	1	60	< 0.01	< 20	< 1	< 2	< 10	13	< 10	5	9
692362	1.05	0.046	0.096	2.62	2	1	36	< 0.01	< 20	< 1	< 2	< 10	13	< 10	5	11
692363	0.83	0.044	0.104	2.09	< 2	1	38	< 0.01	< 20	< 1	< 2	< 10	10	< 10	4	10
692364	1.14	0.040	0.096	0.71	< 2	6	30	< 0.01	< 20	< 1	< 2	< 10	56	< 10	4	7
692365	1.02	0.034	0.086	1.44	3	5	47	< 0.01	< 20	< 1	< 2	< 10	50	< 10	4	9
692366	1.13	0.044	0.084	2.36	2	4	48	< 0.01	< 20	3	< 2	< 10	37	< 10	4	11
692367	0.05	2.81	0.001	< 0.01	< 2	< 1	19	< 0.01	< 20	2	< 2	< 10	< 1	< 10	3	1
692368	1.06	0.124	0.082	2.27	< 2	3	76	< 0.01	< 20	< 1	< 2	< 10	21	< 10	4	10
692369	0.90	0.109	0.077	7.11	4	2	64	< 0.01	< 20	2	< 2	< 10	15	< 10	4	17

Analyte Symbol	Mg	Na	P	S	Sb	Sc	Sr	Ti	Th	Te	Tl	U	V	W	Y	Zr
Unit Symbol	%	%	%	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	0.01	0.001	0.001	0.01	2	1	1	0.01	20	1	2	10	1	10	1	1
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
692370	0.91	0.094	0.064	10.8	5	3	62	< 0.01	< 20	< 1	< 2	< 10	19	< 10	3	20
692371	0.93	0.088	0.068	6.37	5	3	91	< 0.01	< 20	< 1	< 2	< 10	19	< 10	4	17
692372	0.78	0.055	0.062	9.64	6	3	60	< 0.01	< 20	< 1	< 2	< 10	31	< 10	3	19
692373	0.77	0.056	0.062	10.2	7	3	62	< 0.01	< 20	< 1	< 2	< 10	32	< 10	3	19
692374	1.06	0.055	0.061	10.5	8	4	85	< 0.01	< 20	< 1	< 2	< 10	43	< 10	3	21
692375	0.97	0.060	0.086	2.90	4	4	85	< 0.01	< 20	< 1	< 2	< 10	41	< 10	4	16
692376	1.04	0.041	0.065	8.00	6	5	102	< 0.01	< 20	< 1	< 2	< 10	48	< 10	3	20
692377	0.80	0.047	0.070	7.51	5	3	104	< 0.01	< 20	< 1	< 2	< 10	29	< 10	3	17
692378	0.79	0.056	0.090	5.23	4	3	119	< 0.01	< 20	1	< 2	< 10	23	< 10	3	16
692379	1.00	0.047	0.074	6.79	7	4	122	< 0.01	< 20	< 1	< 2	< 10	38	< 10	4	20
692380	1.19	0.049	0.064	2.74	6	4	142	< 0.01	< 20	< 1	< 2	< 10	24	< 10	3	14
692381	1.11	0.048	0.061	5.24	5	3	129	< 0.01	< 20	< 1	< 2	< 10	26	< 10	3	16
692382	1.20	0.059	0.066	5.66	6	3	125	< 0.01	< 20	< 1	< 2	< 10	19	< 10	3	19
692383	2.44	0.060	0.035	0.27	2	7	41	0.40	< 20	2	< 2	< 10	183	< 10	12	19
692384	1.10	0.063	0.062	6.55	6	3	118	< 0.01	< 20	< 1	< 2	< 10	19	< 10	3	17
692385	0.85	0.062	0.065	10.2	6	3	107	< 0.01	< 20	< 1	< 2	< 10	25	< 10	3	17
692386	0.79	0.062	0.050	9.65	6	3	115	< 0.01	< 20	< 1	< 2	< 10	21	< 10	3	16
692387	0.95	0.056	0.055	5.91	5	2	113	< 0.01	< 20	< 1	< 2	< 10	14	< 10	3	13
692388	0.67	0.048	0.058	6.83	4	2	81	< 0.01	< 20	< 1	< 2	< 10	11	< 10	3	12
692389	0.60	0.045	0.053	11.6	8	2	72	< 0.01	< 20	2	< 2	< 10	12	< 10	3	15
692390	0.69	0.039	0.050	6.94	6	3	49	< 0.01	< 20	< 1	< 2	< 10	14	< 10	3	14
692391	1.30	0.034	0.031	4.00	10	3	79	< 0.01	< 20	< 1	< 2	< 10	14	< 10	2	12
692392	0.76	0.045	0.041	15.5	9	3	58	< 0.01	< 20	< 1	< 2	< 10	19	< 10	2	16
692393	0.05	2.77	< 0.001	0.02	< 2	< 1	21	< 0.01	< 20	2	< 2	< 10	< 1	< 10	3	< 1
692394	0.69	0.045	0.025	19.9	12	3	45	< 0.01	< 20	< 1	< 2	< 10	17	< 10	2	14
692395	0.76	0.040	0.030	19.6	10	2	55	< 0.01	< 20	< 1	< 2	< 10	17	< 10	2	15
692396	0.72	0.064	0.040	17.7	9	2	70	< 0.01	< 20	< 1	< 2	< 10	15	< 10	2	16
692397	1.24	0.037	0.033	12.4	12	3	68	< 0.01	< 20	< 1	< 2	< 10	20	< 10	3	14
692398	1.18	0.020	0.003	8.52	11	4	15	< 0.01	< 20	< 1	< 2	< 10	30	< 10	2	10
692399	1.37	0.015	0.004	5.19	10	4	14	< 0.01	< 20	< 1	< 2	< 10	31	< 10	3	11
692400	1.06	0.015	0.003	10.4	11	3	17	< 0.01	< 20	< 1	< 2	< 10	22	< 10	2	10
692401	1.20	0.024	0.003	11.1	12	2	24	< 0.01	< 20	< 1	< 2	< 10	14	< 10	2	10
692402	1.13	0.018	0.003	9.35	10	2	24	< 0.01	< 20	4	< 2	< 10	13	< 10	2	9
692403	0.76	0.014	0.002	3.44	5	2	25	< 0.01	< 20	< 1	< 2	< 10	11	< 10	1	5
692404	0.89	0.013	0.002	1.29	4	2	25	< 0.01	< 20	< 1	< 2	< 10	11	< 10	1	5
692405	0.49	0.016	0.002	2.41	4	3	17	< 0.01	< 20	< 1	< 2	< 10	18	< 10	1	4
692406	0.99	0.016	0.002	3.87	6	3	28	< 0.01	< 20	< 1	< 2	< 10	18	< 10	5	6
692407	0.91	0.015	0.002	3.73	7	2	28	< 0.01	< 20	< 1	< 2	< 10	15	< 10	2	6
692408	0.52	0.016	0.002	11.3	13	2	17	< 0.01	< 20	1	< 2	< 10	18	< 10	< 1	6
692409	0.75	0.013	0.002	1.56	4	2	28	< 0.01	< 20	3	< 2	< 10	14	< 10	2	5
692410	2.32	0.082	0.039	0.20	3	9	29	0.44	< 20	4	< 2	< 10	204	< 10	15	22
692411	0.53	0.014	0.003	11.0	10	3	16	< 0.01	< 20	< 1	< 2	< 10	26	< 10	1	7

Analyte Symbol	Mg	Na	P	S	Sb	Sc	Sr	Ti	Th	Te	Tl	U	V	W	Y	Zr
Unit Symbol	%	%	%	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	0.01	0.001	0.001	0.01	2	1	1	0.01	20	1	2	10	1	10	1	1
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
692412	0.46	0.014	0.002	11.3	11	3	23	< 0.01	< 20	< 1	< 2	< 10	18	< 10	< 1	6
692413	0.42	0.012	0.002	6.88	9	3	14	< 0.01	< 20	< 1	< 2	< 10	25	< 10	1	6
692414	0.35	0.015	0.001	1.29	3	2	10	< 0.01	< 20	< 1	< 2	< 10	16	< 10	1	3
692415	0.21	0.013	< 0.001	0.69	3	2	10	< 0.01	< 20	< 1	< 2	< 10	10	< 10	< 1	3
692416	0.79	0.014	0.002	13.0	11	4	25	< 0.01	< 20	< 1	< 2	< 10	29	< 10	2	8
692417	1.35	0.014	0.004	14.2	13	6	39	< 0.01	< 20	< 1	< 2	< 10	39	< 10	2	12
692418	0.05	3.00	0.001	0.02	< 2	< 1	22	< 0.01	< 20	< 1	< 2	< 10	< 1	< 10	4	1
692419	0.83	0.018	0.003	12.1	14	5	15	< 0.01	< 20	< 1	< 2	< 10	36	< 10	2	11
692420	0.79	0.016	0.003	17.7	17	5	23	< 0.01	< 20	< 1	< 2	< 10	40	< 10	1	11
692421	0.65	0.019	0.010	18.6	15	6	35	< 0.01	< 20	< 1	< 2	< 10	41	< 10	3	13
692422	0.24	0.016	0.003	> 20.0	24	2	17	< 0.01	< 20	< 1	< 2	< 10	14	< 10	< 1	9
692423	0.22	0.015	0.003	> 20.0	21	2	17	< 0.01	< 20	< 1	< 2	< 10	14	< 10	< 1	9
692424	0.34	0.031	0.017	11.4	9	2	43	< 0.01	< 20	< 1	< 2	< 10	12	< 10	3	11
692425	0.77	0.026	0.011	13.9	11	2	88	< 0.01	< 20	< 1	< 2	< 10	14	< 10	2	10
692426	0.42	0.023	0.014	14.6	12	3	46	< 0.01	< 20	2	< 2	< 10	14	< 10	1	11
692427	0.56	0.024	0.013	16.5	11	3	46	< 0.01	< 20	3	< 2	< 10	13	< 10	1	11
692428	0.65	0.037	0.015	11.4	8	2	39	< 0.01	< 20	< 1	< 2	< 10	10	< 10	2	11
692429	0.61	0.037	0.017	18.1	10	2	37	< 0.01	< 20	< 1	< 2	< 10	9	< 10	1	11
692430	0.48	0.034	0.012	16.7	10	1	30	< 0.01	< 20	3	< 2	< 10	9	< 10	1	11
692431	0.41	0.031	0.015	19.3	10	1	34	< 0.01	< 20	< 1	< 2	< 10	11	< 10	1	12
692432	0.70	0.030	0.011	12.8	8	3	49	< 0.01	< 20	2	< 2	< 10	18	< 10	2	12
692433	0.90	0.029	0.017	13.9	10	5	50	< 0.01	< 20	< 1	< 2	< 10	33	< 10	2	14
692434	2.16	0.315	0.147	1.47	< 2	3	84	0.17	< 20	< 1	< 2	< 10	48	< 10	14	4
692435	0.75	0.038	0.015	10.1	6	4	54	< 0.01	< 20	< 1	< 2	< 10	25	< 10	2	11
692436	0.50	0.034	0.016	16.0	9	3	39	< 0.01	< 20	< 1	< 2	< 10	16	< 10	1	13
692437	1.07	0.035	0.013	8.35	11	6	46	< 0.01	< 20	< 1	< 2	< 10	34	< 10	2	14
692438	0.80	0.030	0.017	9.34	7	3	57	< 0.01	< 20	2	< 2	< 10	15	< 10	2	10
692439	0.86	0.029	0.011	12.1	13	5	52	< 0.01	< 20	3	< 2	< 10	24	< 10	1	12
692440	0.99	0.043	0.014	17.9	14	5	47	< 0.01	< 20	4	< 2	< 10	26	< 10	2	16
692441	0.74	0.031	0.012	18.3	19	3	45	< 0.01	< 20	< 1	< 2	< 10	18	< 10	1	13
692442	0.96	0.037	0.012	15.0	13	4	51	< 0.01	< 20	< 1	< 2	< 10	24	< 10	2	14
692443	0.98	0.036	0.015	14.6	16	4	65	< 0.01	< 20	< 1	< 2	< 10	27	< 10	2	13
692444	1.19	0.043	0.018	14.6	15	5	81	< 0.01	< 20	< 1	< 2	< 10	24	< 10	2	14
692445	0.06	2.85	0.001	0.09	< 2	< 1	22	< 0.01	< 20	3	< 2	< 10	< 1	< 10	4	< 1
692446	1.06	0.050	0.033	10.1	10	3	103	< 0.01	< 20	4	< 2	< 10	12	< 10	3	17
692447	0.96	0.080	0.079	1.53	3	4	163	< 0.01	< 20	1	< 2	< 10	8	< 10	5	6
692448	1.26	0.068	0.111	0.07	3	8	107	< 0.01	< 20	1	< 2	< 10	49	< 10	6	3
692449	1.26	0.084	0.122	0.11	< 2	7	104	< 0.01	< 20	< 1	< 2	< 10	48	< 10	7	3
692450	1.28	0.078	0.122	0.05	3	9	89	< 0.01	< 20	< 1	< 2	< 10	58	< 10	6	3
692451	1.49	0.076	0.107	0.07	< 2	8	84	< 0.01	< 20	1	< 2	< 10	42	< 10	7	4
692452	1.12	0.083	0.126	0.02	2	6	93	< 0.01	< 20	1	< 2	< 10	49	< 10	6	3
692453	1.07	0.066	0.119	0.03	2	9	96	< 0.01	< 20	3	< 2	< 10	55	< 10	6	3

Analyte Symbol	Mg	Na	P	S	Sb	Sc	Sr	Ti	Th	Te	Tl	U	V	W	Y	Zr
Unit Symbol	%	%	%	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	0.01	0.001	0.001	0.01	2	1	1	0.01	20	1	2	10	1	10	1	1
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
692454	0.97	0.070	0.113	0.05	2	7	86	< 0.01	< 20	< 1	< 2	< 10	52	< 10	6	3
692455	1.00	0.051	0.115	0.09	2	7	100	< 0.01	< 20	2	< 2	< 10	47	< 10	5	4
692456	1.00	0.050	0.115	0.08	3	7	100	< 0.01	< 20	< 1	< 2	< 10	47	< 10	5	4
692457	1.07	0.083	0.112	0.03	2	7	110	< 0.01	< 20	< 1	< 2	< 10	42	< 10	5	3
692458	0.94	0.090	0.117	0.06	2	8	100	< 0.01	< 20	1	< 2	< 10	55	< 10	5	3
692459	1.51	0.077	0.110	0.05	5	12	107	< 0.01	< 20	< 1	< 2	< 10	73	< 10	6	4
692460	1.40	0.080	0.113	0.05	3	8	130	< 0.01	< 20	< 1	< 2	< 10	48	< 10	6	3
692461	1.02	0.059	0.074	0.08	< 2	4	50	< 0.01	< 20	< 1	< 2	< 10	27	< 10	5	6
692462	0.65	0.121	0.124	0.04	< 2	4	85	< 0.01	< 20	< 1	< 2	< 10	31	< 10	6	2
692463	1.03	0.078	0.109	0.01	< 2	5	91	< 0.01	< 20	< 1	< 2	< 10	37	< 10	5	3
692464	0.83	0.102	0.152	0.02	2	5	100	< 0.01	< 20	< 1	< 2	< 10	47	< 10	6	3
692465	0.93	0.084	0.144	0.05	2	6	98	< 0.01	< 20	< 1	< 2	< 10	46	< 10	7	3
692466	0.80	0.103	0.075	0.07	< 2	3	102	< 0.01	< 20	< 1	< 2	< 10	25	< 10	6	5
692467	2.29	0.083	0.039	0.20	< 2	8	29	0.42	< 20	1	< 2	< 10	201	< 10	15	22
692468	0.65	0.052	0.059	0.04	< 2	2	96	< 0.01	< 20	< 1	< 2	< 10	9	< 10	4	8
692469	0.85	0.046	0.060	3.22	4	2	97	< 0.01	< 20	< 1	< 2	< 10	17	< 10	4	14
692470	0.62	0.052	0.174	0.07	3	4	91	< 0.01	< 20	3	< 2	< 10	35	< 10	6	3
692471	0.47	0.057	0.139	0.15	< 2	3	84	< 0.01	< 20	2	< 2	< 10	25	< 10	6	3
692472	0.45	0.055	0.171	0.06	< 2	3	91	< 0.01	< 20	< 1	< 2	< 10	25	< 10	6	3
692473	0.48	0.065	0.192	0.02	< 2	3	165	< 0.01	< 20	1	< 2	< 10	24	< 10	7	2
692474	0.66	0.057	0.172	0.11	< 2	5	119	< 0.01	< 20	4	< 2	< 10	36	< 10	6	3
692475	0.61	0.058	0.172	0.05	< 2	4	127	< 0.01	< 20	1	< 2	< 10	34	< 10	6	3
692476	0.64	0.049	0.161	0.06	2	5	109	< 0.01	< 20	< 1	< 2	< 10	38	< 10	6	3
692477	0.05	2.91	0.001	< 0.01	< 2	< 1	22	< 0.01	< 20	< 1	< 2	< 10	< 1	< 10	4	1
692478	1.02	0.047	0.114	0.07	< 2	4	116	< 0.01	< 20	< 1	< 2	< 10	32	< 10	6	3
692479	1.04	0.051	0.125	0.07	2	3	100	< 0.01	< 20	1	< 2	< 10	26	< 10	6	3
692480	0.98	0.048	0.110	0.05	< 2	2	94	< 0.01	< 20	< 1	< 2	< 10	17	< 10	6	3
692481	0.44	0.055	0.128	0.02	4	1	90	< 0.01	< 20	3	< 2	< 10	11	< 10	6	2
692482	0.51	0.048	0.115	0.02	< 2	2	73	< 0.01	< 20	< 1	< 2	< 10	13	< 10	5	2
692483	0.60	0.052	0.120	< 0.01	< 2	2	92	< 0.01	< 20	1	< 2	< 10	14	< 10	6	2
692484	0.69	0.041	0.116	< 0.01	< 2	2	109	< 0.01	< 20	< 1	< 2	< 10	16	< 10	6	3
692485	0.68	0.039	0.114	< 0.01	< 2	2	108	< 0.01	< 20	< 1	< 2	< 10	16	< 10	6	3
692486	0.84	0.045	0.118	0.03	< 2	2	96	< 0.01	< 20	< 1	< 2	< 10	14	< 10	6	3
692487	0.34	0.075	0.079	0.66	< 2	2	69	< 0.01	< 20	1	< 2	< 10	7	< 10	4	6
692488	0.42	0.082	0.080	0.43	< 2	2	58	< 0.01	< 20	1	< 2	< 10	10	< 10	4	6
692489	0.37	0.083	0.077	0.41	< 2	2	57	< 0.01	< 20	3	< 2	< 10	11	< 10	3	5
692490	0.32	0.082	0.080	0.30	< 2	2	61	< 0.01	< 20	2	< 2	< 10	9	< 10	3	5
692491	0.32	0.092	0.083	0.37	< 2	2	61	< 0.01	< 20	4	< 2	< 10	10	< 10	3	4
692492	0.32	0.098	0.079	0.31	< 2	2	69	< 0.01	< 20	2	< 2	< 10	11	< 10	3	4
692493	0.29	0.102	0.081	0.35	< 2	2	75	< 0.01	< 20	< 1	< 2	< 10	10	< 10	3	4
692494	0.32	0.098	0.078	0.24	< 2	2	72	< 0.01	< 20	2	< 2	< 10	10	< 10	3	4
692495	0.32	0.095	0.076	0.25	< 2	2	71	< 0.01	< 20	2	< 2	< 10	9	< 10	3	5

Analyte Symbol	Mg	Na	P	S	Sb	Sc	Sr	Ti	Th	Te	Tl	U	V	W	Y	Zr
Unit Symbol	%	%	%	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	0.01	0.001	0.001	0.01	2	1	1	0.01	20	1	2	10	1	10	1	1
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
692496	0.48	0.093	0.075	0.06	< 2	2	92	< 0.01	< 20	< 1	< 2	< 10	9	< 10	3	4
692497	0.36	0.102	0.079	0.12	< 2	2	67	< 0.01	< 20	< 1	< 2	< 10	8	< 10	3	4
692498	0.42	0.095	0.076	0.10	< 2	2	70	< 0.01	< 20	2	< 2	< 10	7	< 10	3	4
692499	0.65	0.087	0.088	0.24	< 2	2	71	< 0.01	< 20	< 1	< 2	< 10	8	< 10	4	4
692500	0.64	0.091	0.090	0.18	< 2	2	71	< 0.01	< 20	< 1	< 2	< 10	9	< 10	4	4
692501	0.51	0.076	0.096	0.44	< 2	2	56	< 0.01	< 20	< 1	< 2	< 10	9	< 10	4	4
692502	0.46	0.078	0.099	0.27	< 2	2	55	< 0.01	< 20	2	< 2	< 10	6	< 10	4	4

Analyte Symbol	Au	Ag	Cd	Cu	Mn	Mo	Ni	Pb	Zn	Al	As	B	Ba	Be	Bi	Ca	Co	Cr	Fe	Ga	Hg	K	La
Unit Symbol	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm
Lower Limit	5	0.2	0.5	1	5	1	1	2	2	0.01	2	10	10	0.5	2	0.01	1	1	0.01	10	1	0.01	10
Method Code	FA-AA	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
GXR-6 Meas		0.4	< 0.5	68	1090	< 1	20	103	121	7.82	237	< 10	978	0.9	< 2	0.16	14	82	5.34	20	< 1	1.10	11
GXR-6 Cert		1.30	1.00	66.0	1010	2.40	27.0	101	118	17.7	330	9.80	1300	1.40	0.290	0.180	13.8	96.0	5.58	35.0	0.0680	1.87	13.9
GXR-6 Meas		0.3	0.6	59	971	2	18	86	116	6.72	230	< 10	858	0.8	< 2	0.17	14	75	4.62	20	2	1.00	< 10
GXR-6 Cert		1.30	1.00	66.0	1010	2.40	27.0	101	118	17.7	330	9.80	1300	1.40	0.290	0.180	13.8	96.0	5.58	35.0	0.0680	1.87	13.9
OREAS 134b (AQUA REGIA) Meas		> 100	530	1250				> 5000	> 10000		200						99		10.3				
OREAS 134b (AQUA REGIA) Cert		204	563	1360				133000	177000		221						110		12.25				
OREAS 133a (Aqua Regia) Meas		91.1	287	310				> 5000	> 10000		126		< 10				22		7.00				
OREAS 133a (Aqua Regia) Cert		97	297	324				48600.00	106000.00		140		59				23		7.92				
OREAS 218 Meas	554																						
OREAS 218 Cert	531																						
OREAS 218 Meas	559																						
OREAS 218 Cert	531																						
OREAS 218 Meas	540																						
OREAS 218 Cert	531																						
OREAS 218 Meas	555																						
OREAS 218 Cert	531																						
OREAS 218 Meas	556																						
OREAS 218 Cert	531																						
OREAS 218 Meas	549																						
OREAS 218 Cert	531																						
OREAS 224 Meas	2090																						
OREAS 224 Cert	2150.00																						
OREAS 224 Meas	2170																						
OREAS 224 Cert	2150.00																						
OREAS 224 Meas	2200																						
OREAS 224 Cert	2150.00																						
OREAS 224 Meas	2080																						
OREAS 224 Cert	2150.00																						
OREAS 224 Meas	2100																						
OREAS 224 Cert	2150.00																						
OREAS 224 Meas	2110																						
OREAS 224 Cert	2150.00																						

Analyte Symbol	Au	Ag	Cd	Cu	Mn	Mo	Ni	Pb	Zn	Al	As	B	Ba	Be	Bi	Ca	Co	Cr	Fe	Ga	Hg	K	La
Unit Symbol	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm
Lower Limit	5	0.2	0.5	1	5	1	1	2	2	0.01	2	10	10	0.5	2	0.01	1	1	0.01	10	1	0.01	10
Method Code	FA-AA	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
692330 Orig		0.2	< 0.5	5	6740	< 1	89	5	69	0.20	40	< 10	< 10	< 0.5	3	1.03	17	9	18.7	< 10	< 1	< 0.01	< 10
692330 Dup		0.2	< 0.5	4	6910	< 1	90	3	68	0.20	40	< 10	< 10	< 0.5	5	1.05	17	10	19.1	< 10	< 1	< 0.01	< 10
692337 Orig	< 5																						
692337 Dup	< 5																						
692338 Orig		< 0.2	< 0.5	2	1240	2	27	< 2	82	0.04	8	< 10	< 10	< 0.5	< 2	1.14	6	26	4.46	< 10	< 1	< 0.01	< 10
692338 Dup		< 0.2	< 0.5	2	1260	3	28	< 2	84	0.04	7	< 10	< 10	< 0.5	< 2	1.15	6	31	4.51	< 10	< 1	< 0.01	< 10
692347 Orig	< 5																						
692347 Dup	< 5																						
692357 Orig	< 5																						
692357 Dup	< 5																						
692372 Orig	8																						
692372 Dup	10																						
692377 Orig	8	< 0.2	< 0.5	18	2110	1	60	5	39	1.89	38	< 10	14	< 0.5	< 2	2.74	30	8	11.3	< 10	< 1	0.13	< 10
692377 Split PREP DUP	7	0.2	< 0.5	20	2280	1	64	6	42	2.07	43	< 10	13	< 0.5	3	3.02	32	8	12.4	< 10	< 1	0.14	< 10
692377 Split PREP DUP		0.2	< 0.5	20	2280	1	64	6	42	2.07	43	< 10	13	< 0.5	3	3.02	32	8	12.4	< 10	< 1	0.14	< 10
692382 Orig	10																						
692382 Dup	13																						
692390 Orig		0.2	< 0.5	29	3160	< 1	68	5	116	1.10	52	< 10	15	< 0.5	3	1.40	27	12	13.6	< 10	< 1	0.14	< 10
692390 Dup		< 0.2	< 0.5	27	3030	< 1	60	4	104	1.04	49	< 10	14	< 0.5	3	1.34	25	14	13.2	< 10	< 1	0.13	< 10
692392 Orig	11																						
692392 Dup	10																						
692393 Orig		< 0.2	< 0.5	< 1	95	< 1	< 1	< 2	17	4.86	< 2	11	< 10	< 0.5	< 2	0.20	< 1	< 1	0.50	< 10	< 1	1.35	< 10
692393 Dup		< 0.2	< 0.5	< 1	100	< 1	< 1	2	17	5.11	< 2	11	10	0.5	< 2	0.21	< 1	< 1	0.52	< 10	< 1	1.39	< 10
692406 Orig		0.3	< 0.5	2	4040	< 1	28	5	30	0.12	17	< 10	< 10	< 0.5	< 2	1.99	8	74	11.7	< 10	< 1	< 0.01	< 10
692406 Dup		< 0.2	< 0.5	2	4050	< 1	26	6	30	0.12	18	< 10	< 10	< 0.5	4	2.03	8	73	12.1	< 10	< 1	< 0.01	< 10
692407 Orig	5																						
692407 Dup	7																						
692417 Orig	20																						
692417 Dup	20																						
692418 Orig		< 0.2	< 0.5	< 1	119	< 1	< 1	< 2	16	5.41	< 2	12	11	0.5	< 2	0.23	< 1	< 1	0.58	< 10	< 1	1.42	< 10
692418 Dup		< 0.2	< 0.5	< 1	117	< 1	< 1	< 2	19	5.64	< 2	12	11	0.5	< 2	0.23	< 1	< 1	0.59	< 10	< 1	1.44	< 10
692427 Orig	16	0.2	< 0.5	30	2330	< 1	50	20	85	0.68	75	< 10	< 10	< 0.5	4	1.40	18	40	17.9	< 10	< 1	0.05	< 10
692427 Split PREP DUP	16	0.2	< 0.5	29	2260	< 1	42	17	85	0.65	78	< 10	< 10	< 0.5	2	1.35	17	31	17.2	< 10	< 1	0.05	< 10
692427 Orig	16																						
692427 Dup	16																						
692431 Orig		0.3	< 0.5	23	1340	< 1	47	15	68	0.69	78	< 10	< 10	< 0.5	4	0.93	25	59	17.9	< 10	< 1	0.07	< 10
692431 Dup		0.3	< 0.5	34	1370	< 1	51	15	99	0.73	82	< 10	< 10	< 0.5	3	0.95	27	48	18.8	< 10	< 1	0.08	< 10
692442 Orig	11																						
692442 Dup	11																						
692452 Orig	5																						



Analyte Symbol	Au	Ag	Cd	Cu	Mn	Mo	Ni	Pb	Zn	Al	As	B	Ba	Be	Bi	Ca	Co	Cr	Fe	Ga	Hg	K	La
Unit Symbol	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm
Lower Limit	5	0.2	0.5	1	5	1	1	2	2	0.01	2	10	10	0.5	2	0.01	1	1	0.01	10	1	0.01	10
Method Code	FA-AA	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
692452 Dup	7																						
692462 Orig	< 5	< 0.2	< 0.5	28	932	< 1	71	< 2	28	1.43	73	< 10	52	< 0.5	< 2	2.43	23	52	3.15	< 10	< 1	0.19	16
692462 Dup	< 5	< 0.2	< 0.5	28	941	< 1	71	< 2	28	1.46	73	< 10	54	< 0.5	< 2	2.44	23	53	3.16	< 10	< 1	0.20	16
692463 Orig		< 0.2	< 0.5	30	1360	< 1	41	< 2	46	1.78	22	< 10	42	< 0.5	< 2	3.27	17	59	4.76	< 10	< 1	0.14	14
692463 Dup		< 0.2	< 0.5	30	1340	< 1	41	< 2	44	1.75	21	< 10	41	< 0.5	< 2	3.23	17	63	4.70	< 10	< 1	0.14	15
692477 Orig	< 5																						
692477 Dup	< 5																						
692478 Orig	< 5	< 0.2	< 0.5	28	1260	80	84	< 2	94	1.77	10	< 10	41	< 0.5	< 2	3.51	20	65	5.20	< 10	< 1	0.12	14
692478 Split PREP DUP	< 5	< 0.2	0.6	28	1260	79	83	2	99	1.77	8	< 10	40	< 0.5	< 2	3.51	21	66	5.19	< 10	< 1	0.12	15
692486 Orig	6																						
692486 Dup	< 5																						
692496 Orig	< 5																						
692496 Dup	< 5																						
Method Blank	< 5																						
Method Blank	< 5																						
Method Blank	< 5																						
Method Blank	< 5																						
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Method Blank	< 5																						
Method Blank	< 5																						
Method Blank	< 5																						
Method Blank		< 0.2	< 0.5	< 1	< 5	< 1	< 1	< 2	< 2	< 0.01	< 2	< 10	< 10	< 0.5	< 2	< 0.01	< 1	< 1	< 0.01	< 10	< 1	< 0.01	< 10
Method Blank		< 0.2	< 0.5	< 1	< 5	< 1	< 1	< 2	< 2	< 0.01	< 2	< 10	< 10	< 0.5	< 2	< 0.01	< 1	< 1	< 0.01	< 10	< 1	< 0.01	< 10
Method Blank		< 0.2	< 0.5	< 1	< 5	< 1	< 1	< 2	< 2	< 0.01	< 2	< 10	< 10	< 0.5	< 2	< 0.01	< 1	< 1	< 0.01	< 10	< 1	< 0.01	< 10



Analyte Symbol	Mg	Na	P	S	Sb	Sc	Sr	Ti	Th	Te	Tl	U	V	W	Y	Zr
Unit Symbol	%	%	%	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	0.01	0.001	0.001	0.01	2	1	1	0.01	20	1	2	10	1	10	1	1
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
692338 Dup	0.94	0.012	< 0.001	0.68	< 2	1	29	< 0.01	< 20	< 1	< 2	< 10	8	< 10	2	6
692347 Orig																
692347 Dup																
692357 Orig																
692357 Dup																
692372 Orig																
692372 Dup																
692377 Orig	0.80	0.047	0.070	7.51	5	3	104	< 0.01	< 20	< 1	< 2	< 10	29	< 10	3	17
692377 Split PREP DUP	0.89	0.051	0.076	7.87	5	3	113	< 0.01	< 20	< 1	< 2	< 10	31	< 10	3	19
692377 Split PREP DUP	0.89	0.051	0.076	7.87	5	3	113	< 0.01	< 20	< 1	< 2	< 10	31	< 10	3	19
692382 Orig																
692382 Dup																
692390 Orig	0.70	0.040	0.051	7.41	6	3	50	< 0.01	< 20	3	< 2	< 10	14	< 10	3	14
692390 Dup	0.67	0.037	0.049	6.47	6	3	48	< 0.01	< 20	< 1	< 2	< 10	13	< 10	3	13
692392 Orig																
692392 Dup																
692393 Orig	0.05	2.70	< 0.001	0.02	< 2	< 1	20	< 0.01	< 20	2	< 2	< 10	< 1	< 10	3	< 1
692393 Dup	0.05	2.83	0.001	0.01	< 2	< 1	21	< 0.01	< 20	2	< 2	< 10	< 1	< 10	4	< 1
692406 Orig	0.98	0.016	0.002	3.94	5	3	27	< 0.01	< 20	< 1	< 2	< 10	18	< 10	5	6
692406 Dup	1.01	0.015	0.002	3.80	7	3	29	< 0.01	< 20	< 1	< 2	< 10	18	< 10	5	6
692407 Orig																
692407 Dup																
692417 Orig																
692417 Dup																
692418 Orig	0.05	2.98	0.001	0.03	< 2	< 1	23	< 0.01	< 20	3	< 2	< 10	< 1	< 10	4	1
692418 Dup	0.05	3.01	0.002	0.02	< 2	< 1	21	< 0.01	< 20	< 1	< 2	< 10	< 1	< 10	4	1
692427 Orig	0.56	0.024	0.013	16.5	11	3	46	< 0.01	< 20	3	< 2	< 10	13	< 10	1	11
692427 Split PREP DUP	0.54	0.024	0.013	15.9	11	3	45	< 0.01	< 20	< 1	< 2	< 10	13	< 10	1	11
692427 Orig																
692427 Dup																
692431 Orig	0.40	0.030	0.015	18.9	11	1	34	< 0.01	< 20	4	< 2	< 10	11	< 10	1	12
692431 Dup	0.42	0.032	0.015	19.8	10	2	35	< 0.01	< 20	< 1	< 2	< 10	11	< 10	1	12
692442 Orig																
692442 Dup																
692452 Orig																
692452 Dup																
692462 Orig	0.65	0.118	0.124	0.04	< 2	4	83	< 0.01	< 20	< 1	< 2	< 10	31	< 10	6	2
692462 Dup	0.65	0.123	0.124	0.04	< 2	4	86	< 0.01	< 20	< 1	< 2	< 10	32	< 10	6	2
692463 Orig	1.04	0.078	0.109	0.01	< 2	5	92	< 0.01	< 20	< 1	< 2	< 10	37	< 10	5	3
692463 Dup	1.03	0.077	0.108	0.01	2	5	91	< 0.01	< 20	< 1	< 2	< 10	37	< 10	5	3

Analyte Symbol	Mg	Na	P	S	Sb	Sc	Sr	Ti	Th	Te	Tl	U	V	W	Y	Zr
Unit Symbol	%	%	%	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	0.01	0.001	0.001	0.01	2	1	1	0.01	20	1	2	10	1	10	1	1
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
692477 Orig																
692477 Dup																
692478 Orig	1.02	0.047	0.114	0.07	< 2	4	116	< 0.01	< 20	< 1	< 2	< 10	32	< 10	6	3
692478 Split PREP DUP	1.01	0.048	0.114	0.07	< 2	4	117	< 0.01	< 20	4	< 2	< 10	32	< 10	5	3
692486 Orig																
692486 Dup																
692496 Orig																
692496 Dup																
Method Blank																
Method Blank																
Method Blank																
Method Blank																
Method Blank																
Method Blank																
Method Blank																
Method Blank																
Method Blank																
Method Blank	< 0.01	0.009	< 0.001	< 0.01	< 2	< 1	< 1	< 0.01	< 20	< 1	< 2	< 10	< 1	< 10	< 1	< 1
Method Blank	< 0.01	0.012	< 0.001	< 0.01	< 2	< 1	< 1	< 0.01	< 20	< 1	< 2	< 10	< 1	< 10	< 1	< 1
Method Blank	< 0.01	0.012	< 0.001	< 0.01	< 2	< 1	< 1	< 0.01	< 20	< 1	< 2	< 10	< 1	< 10	< 1	< 1



**Date Submitted:** 05-Mar-18  
**Invoice No.:** A18-02570  
**Invoice Date:** 04-Jun-18  
**Your Reference:** 81 Lucas

**Noble Mineral Exploration**  
**2500-120 Adelaide Street West**  
**Toronto ON M5H 1T1**  
**Canada**

**ATTN: Randy Singh (inv-cc)**

## CERTIFICATE OF ANALYSIS

70 Rock samples were submitted for analysis.

The following analytical package(s) were requested:

Code 1A2-Timmins Au - Fire Assay AA

Code 1E3-Timmins Aqua Regia ICP(AQUAGEO)

REPORT **A18-02570**

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

Notes:

If value exceeds upper limit we recommend reassay by fire assay gravimetric-Code 1A3.

Values which exceed the upper limit should be assayed for accurate numbers.

CERTIFIED BY:

A handwritten signature in black ink, appearing to be "Emmanuel Esemé". The signature is written in a cursive, somewhat stylized font.

Emmanuel Esemé , Ph.D.  
Quality Control

**ACTIVATION LABORATORIES LTD.**  
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## Results

## Activation Laboratories Ltd.

## Report: A18-02570

Analyte Symbol	Au	Ag	Cd	Cu	Mn	Mo	Ni	Pb	Zn	Al	As	B	Ba	Be	Bi	Ca	Co	Cr	Fe	Ga	Hg	K	La
Unit Symbol	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm
Lower Limit	5	0.2	0.5	1	5	1	1	2	2	0.01	2	10	10	0.5	2	0.01	1	1	0.01	10	1	0.01	10
Method Code	FA-AA	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
693503	< 5	< 0.2	< 0.5	9	372	< 1	36	3	59	0.78	26	< 10	79	< 0.5	< 2	2.10	14	8	1.75	< 10	< 1	0.23	23
693504	< 5	< 0.2	< 0.5	10	359	< 1	44	2	64	0.88	24	< 10	82	< 0.5	< 2	2.12	16	7	1.95	< 10	< 1	0.24	24
693505	1130	< 0.2	< 0.5	163	720	< 1	77	3	63	3.39	4	45	33	< 0.5	< 2	3.06	37	143	6.04	10	< 1	0.06	< 10
693506	< 5	< 0.2	< 0.5	11	431	< 1	40	< 2	71	0.84	18	< 10	82	< 0.5	< 2	2.06	15	7	1.95	< 10	< 1	0.24	23
693507	< 5	< 0.2	< 0.5	17	455	< 1	38	3	60	1.48	16	< 10	124	< 0.5	< 2	2.75	15	14	2.05	< 10	< 1	0.40	20
693508	5	< 0.2	< 0.5	18	344	< 1	54	3	77	1.62	15	< 10	144	< 0.5	< 2	2.50	18	17	1.80	< 10	< 1	0.45	20
693509	9	< 0.2	< 0.5	19	525	< 1	60	3	98	0.91	16	< 10	92	< 0.5	< 2	2.58	19	15	2.17	< 10	< 1	0.28	19
693510	10	< 0.2	< 0.5	24	538	< 1	76	4	120	0.87	20	< 10	77	< 0.5	< 2	1.52	23	14	2.55	< 10	< 1	0.22	20
693511	14	< 0.2	< 0.5	24	436	< 1	65	5	111	1.19	12	< 10	110	< 0.5	< 2	1.51	21	24	2.36	< 10	< 1	0.32	22
693512	20	< 0.2	< 0.5	15	452	< 1	52	8	96	0.97	13	< 10	94	< 0.5	< 2	1.59	17	21	2.10	< 10	< 1	0.27	22
693513	13	< 0.2	< 0.5	15	412	< 1	53	3	93	0.87	22	< 10	88	< 0.5	< 2	2.49	20	16	1.95	< 10	< 1	0.25	20
693514	< 5	< 0.2	< 0.5	< 1	81	< 1	< 1	< 2	16	4.06	< 2	12	11	0.5	< 2	0.17	< 1	< 1	0.48	10	< 1	1.37	< 10
693515	< 5	< 0.2	< 0.5	11	366	< 1	43	2	75	1.11	10	< 10	107	< 0.5	< 2	1.67	14	21	1.95	< 10	< 1	0.31	22
693516	< 5	< 0.2	< 0.5	14	827	< 1	77	7	78	1.24	10	< 10	124	< 0.5	< 2	1.27	21	18	3.11	< 10	< 1	0.36	22
693517	< 5	< 0.2	< 0.5	183	696	< 1	205	< 2	85	3.79	3	< 10	38	< 0.5	< 2	2.97	51	40	5.57	< 10	< 1	0.06	< 10
693518	< 5	< 0.2	< 0.5	7	824	< 1	52	3	77	0.94	9	< 10	89	< 0.5	< 2	3.18	16	12	2.94	< 10	< 1	0.26	20
693519	< 5	< 0.2	< 0.5	21	302	< 1	44	2	75	0.91	11	< 10	90	< 0.5	< 2	2.34	14	13	1.74	< 10	< 1	0.25	20
693520	< 5	< 0.2	< 0.5	8	395	< 1	28	< 2	71	0.93	11	< 10	97	< 0.5	< 2	3.25	10	15	1.82	< 10	< 1	0.28	21
693521	5	< 0.2	< 0.5	16	363	< 1	42	3	76	0.89	18	< 10	89	< 0.5	< 2	2.71	14	18	1.94	< 10	< 1	0.26	19
693522	< 5	< 0.2	< 0.5	20	636	< 1	51	2	91	0.71	15	< 10	82	< 0.5	< 2	2.29	16	12	2.54	< 10	< 1	0.23	20
693523	12	< 0.2	< 0.5	12	645	< 1	44	2	148	0.81	23	< 10	90	< 0.5	< 2	2.51	16	9	2.57	< 10	< 1	0.26	18
693524	11	< 0.2	< 0.5	11	502	< 1	39	3	105	0.50	20	< 10	60	< 0.5	< 2	2.50	13	9	2.08	< 10	< 1	0.18	21
693525	< 5	< 0.2	< 0.5	10	491	< 1	38	< 2	106	0.49	20	< 10	58	< 0.5	< 2	2.43	13	7	2.03	< 10	< 1	0.17	20
693526	6	< 0.2	< 0.5	16	598	< 1	48	4	107	0.78	26	< 10	93	< 0.5	< 2	2.25	16	11	2.36	< 10	< 1	0.26	21
693527	272	4.1	< 0.5	9	432	< 1	34	2	87	0.82	27	< 10	91	< 0.5	< 2	3.01	11	11	1.88	< 10	< 1	0.27	23
693528	40	< 0.2	< 0.5	11	568	< 1	41	2	122	0.77	26	< 10	81	< 0.5	< 2	1.96	13	15	2.51	< 10	< 1	0.24	21
693529	53	< 0.2	< 0.5	8	549	< 1	47	2	99	0.78	42	< 10	87	< 0.5	< 2	1.54	14	11	1.95	< 10	< 1	0.26	25
693530	19	< 0.2	< 0.5	9	508	< 1	46	4	88	0.80	59	< 10	93	< 0.5	< 2	1.30	16	8	1.91	< 10	< 1	0.27	25
693531	39	< 0.2	< 0.5	10	612	< 1	75	6	162	0.78	99	< 10	90	< 0.5	< 2	1.60	29	12	2.59	< 10	< 1	0.27	21
693532	47	< 0.2	< 0.5	14	794	< 1	107	5	218	0.85	96	< 10	88	< 0.5	< 2	1.54	41	10	3.43	< 10	< 1	0.27	20
693533	62	< 0.2	< 0.5	14	587	< 1	89	< 2	145	0.78	76	< 10	78	< 0.5	< 2	1.98	34	13	2.22	< 10	< 1	0.23	23
693534	59	< 0.2	< 0.5	11	709	< 1	108	< 2	133	0.90	90	< 10	80	< 0.5	< 2	2.32	35	9	2.58	< 10	< 1	0.24	23
693535	1930	< 0.2	0.6	98	1560	2	132	5	78	1.71	926	< 10	38	< 0.5	< 2	1.64	33	56	7.31	< 10	< 1	0.09	18
693536	31	< 0.2	< 0.5	11	758	< 1	95	2	144	0.92	84	< 10	76	< 0.5	< 2	2.54	27	7	3.08	< 10	< 1	0.23	23
693537	81	< 0.2	1.1	20	692	< 1	191	9	2470	0.93	256	< 10	74	< 0.5	3	3.03	37	14	4.00	< 10	< 1	0.25	19
693538	92	< 0.2	0.8	46	880	2	486	9	1820	0.88	661	< 10	69	< 0.5	< 2	3.64	70	18	4.12	< 10	< 1	0.23	22
693539	286	< 0.2	< 0.5	35	1160	< 1	419	12	142	0.95	541	< 10	49	< 0.5	< 2	3.50	64	24	5.67	< 10	< 1	0.20	16
693540	49	< 0.2	< 0.5	42	1140	1	466	8	126	0.82	563	< 10	62	< 0.5	3	4.55	63	22	4.97	< 10	< 1	0.21	15
693541	30	< 0.2	0.6	48	594	2	476	6	145	0.92	435	< 10	83	< 0.5	< 2	2.96	66	21	3.09	< 10	< 1	0.25	26
693542	60	< 0.2	< 0.5	45	688	< 1	472	9	97	0.75	470	< 10	68	< 0.5	< 2	2.90	69	18	3.57	< 10	< 1	0.22	19
693543	122	< 0.2	0.6	49	1510	1	585	13	140	1.23	630	< 10	30	< 0.5	< 2	3.20	78	27	8.19	< 10	< 1	0.22	10
693544	< 5	< 0.2	< 0.5	< 1	91	< 1	< 1	< 2	17	4.50	< 2	13	12	0.6	< 2	0.19	< 1	< 1	0.53	10	2	1.50	< 10

## Results

## Activation Laboratories Ltd.

## Report: A18-02570

Analyte Symbol	Au	Ag	Cd	Cu	Mn	Mo	Ni	Pb	Zn	Al	As	B	Ba	Be	Bi	Ca	Co	Cr	Fe	Ga	Hg	K	La
Unit Symbol	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm
Lower Limit	5	0.2	0.5	1	5	1	1	2	2	0.01	2	10	10	0.5	2	0.01	1	1	0.01	10	1	0.01	10
Method Code	FA-AA	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
693545	57	< 0.2	0.7	43	1450	1	538	7	130	1.31	319	< 10	38	< 0.5	< 2	3.23	73	28	7.78	< 10	< 1	0.20	10
693546	10	< 0.2	< 0.5	34	1120	< 1	368	< 2	93	1.07	227	< 10	61	< 0.5	2	3.47	50	22	4.90	< 10	< 1	0.19	17
693547	37	< 0.2	0.7	43	830	< 1	492	7	117	0.90	469	< 10	54	< 0.5	< 2	3.43	62	23	4.72	< 10	< 1	0.22	14
693548	41	< 0.2	0.6	40	885	4	468	6	107	1.01	425	< 10	53	< 0.5	< 2	3.91	65	21	5.55	< 10	< 1	0.18	13
693549	19	< 0.2	0.5	31	540	< 1	664	8	151	1.02	288	< 10	50	< 0.5	4	2.92	69	23	4.22	< 10	< 1	0.27	17
693550	17	< 0.2	< 0.5	25	522	< 1	409	3	91	0.76	288	< 10	72	< 0.5	< 2	3.23	49	17	3.47	< 10	< 1	0.22	20
693551	24	< 0.2	< 0.5	21	472	< 1	607	6	80	0.68	635	< 10	71	< 0.5	< 2	3.45	57	18	3.44	< 10	< 1	0.22	16
693552	18	< 0.2	< 0.5	21	713	< 1	390	2	105	0.49	540	< 10	56	< 0.5	< 2	4.65	43	13	3.67	< 10	< 1	0.16	18
693553	19	< 0.2	< 0.5	27	598	< 1	559	6	127	0.75	503	< 10	74	< 0.5	< 2	4.06	56	16	3.90	< 10	< 1	0.23	16
693554	52	< 0.2	1.3	27	465	< 1	836	14	85	0.59	960	< 10	52	< 0.5	< 2	3.12	77	16	4.20	< 10	< 1	0.19	12
693555	48	< 0.2	0.7	27	468	< 1	832	13	83	0.60	977	< 10	52	< 0.5	< 2	3.11	75	18	4.20	< 10	< 1	0.20	12
693556	37	< 0.2	< 0.5	23	531	< 1	533	10	98	0.71	649	< 10	51	< 0.5	< 2	3.14	46	17	4.32	< 10	< 1	0.24	12
693557	19	< 0.2	< 0.5	24	482	< 1	458	5	70	0.67	468	< 10	65	< 0.5	< 2	3.31	43	18	3.90	< 10	< 1	0.22	14
693558	< 5	< 0.2	< 0.5	24	537	< 1	373	3	85	0.76	188	< 10	81	< 0.5	2	4.61	36	16	3.80	< 10	< 1	0.25	14
693559	< 5	< 0.2	< 0.5	28	471	< 1	326	< 2	67	0.77	147	< 10	91	< 0.5	< 2	3.27	38	19	3.33	< 10	< 1	0.24	20
693560	15	< 0.2	< 0.5	27	422	< 1	389	5	80	0.80	208	< 10	62	< 0.5	< 2	3.15	44	23	4.10	< 10	< 1	0.22	15
693561	36	< 0.2	< 0.5	25	439	< 1	488	4	52	0.71	536	< 10	52	< 0.5	< 2	3.22	48	24	4.11	< 10	< 1	0.21	13
693562	32	< 0.2	< 0.5	22	412	< 1	436	6	56	0.76	395	< 10	52	< 0.5	< 2	3.16	49	23	4.43	< 10	< 1	0.21	11
693563	17	< 0.2	< 0.5	26	448	2	373	5	61	0.81	190	< 10	51	< 0.5	< 2	3.22	43	22	4.43	< 10	< 1	0.22	11
693564	26	< 0.2	< 0.5	27	369	< 1	340	4	55	0.94	133	< 10	34	< 0.5	< 2	2.70	42	26	4.82	< 10	< 1	0.25	11
693565	12	< 0.2	< 0.5	29	390	< 1	245	5	67	0.79	59	< 10	38	< 0.5	< 2	2.84	35	21	4.87	< 10	< 1	0.19	11
693566	1120	< 0.2	< 0.5	167	726	< 1	79	2	63	3.43	6	47	32	< 0.5	< 2	3.09	37	144	6.06	10	< 1	0.06	< 10
693567	< 5	< 0.2	< 0.5	30	465	< 1	242	4	65	0.74	30	< 10	58	< 0.5	< 2	2.86	37	21	3.98	< 10	< 1	0.19	13
693568	< 5	< 0.2	< 0.5	28	392	< 1	438	3	81	0.98	23	< 10	69	< 0.5	< 2	3.03	39	31	3.77	< 10	< 1	0.20	15
693569	< 5	< 0.2	< 0.5	26	447	< 1	409	3	65	0.93	23	< 10	57	< 0.5	2	3.48	39	34	4.12	< 10	< 1	0.18	11
693570	< 5	< 0.2	< 0.5	23	559	< 1	236	3	69	1.15	14	< 10	77	< 0.5	< 2	3.13	31	38	3.89	< 10	< 1	0.20	14
693571	< 5	< 0.2	< 0.5	27	850	< 1	272	5	70	1.38	15	< 10	42	< 0.5	< 2	1.44	44	48	5.63	< 10	< 1	0.18	12
693572	< 5	< 0.2	< 0.5	27	454	< 1	285	6	62	1.65	12	< 10	50	< 0.5	< 2	2.19	39	53	4.62	< 10	< 1	0.22	11

Analyte Symbol	Mg	Na	P	S	Sb	Sc	Sr	Ti	Th	Te	Tl	U	V	W	Y	Zr
Unit Symbol	%	%	%	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	0.01	0.001	0.001	0.01	2	1	1	0.01	20	1	2	10	1	10	1	1
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
693503	0.61	0.145	0.100	0.09	< 2	2	91	< 0.01	< 20	5	< 2	< 10	8	< 10	4	2
693504	0.60	0.158	0.098	0.13	< 2	3	93	< 0.01	< 20	3	< 2	< 10	9	< 10	4	2
693505	2.39	0.096	0.040	0.20	< 2	9	32	0.43	< 20	7	< 2	< 10	174	< 10	15	24
693506	0.60	0.147	0.094	0.11	< 2	2	92	< 0.01	< 20	5	< 2	< 10	8	< 10	4	2
693507	0.73	0.282	0.088	0.25	< 2	3	157	< 0.01	< 20	2	< 2	< 10	16	< 10	5	3
693508	0.43	0.268	0.091	0.29	< 2	4	166	< 0.01	< 20	2	< 2	< 10	19	< 10	4	3
693509	0.70	0.158	0.091	0.29	< 2	2	119	< 0.01	< 20	< 1	< 2	< 10	11	< 10	4	2
693510	0.46	0.135	0.097	0.42	< 2	3	80	< 0.01	< 20	< 1	< 2	< 10	13	< 10	4	3
693511	0.42	0.182	0.105	0.46	< 2	3	99	< 0.01	< 20	< 1	< 2	< 10	16	< 10	5	2
693512	0.39	0.155	0.094	0.26	< 2	2	95	< 0.01	< 20	2	< 2	< 10	13	< 10	4	3
693513	0.56	0.149	0.085	0.36	< 2	2	117	< 0.01	< 20	< 1	< 2	< 10	12	< 10	4	4
693514	0.05	3.24	0.001	0.01	< 2	< 1	23	< 0.01	< 20	< 1	< 2	< 10	< 1	< 10	4	1
693515	0.39	0.184	0.089	0.21	< 2	2	109	< 0.01	< 20	2	< 2	< 10	13	< 10	4	3
693516	0.41	0.210	0.088	0.20	< 2	3	113	< 0.01	< 20	3	< 2	< 10	14	< 10	5	3
693517	1.77	0.822	0.053	0.08	< 2	10	106	0.36	< 20	3	< 2	< 10	130	< 10	14	27
693518	1.05	0.175	0.074	0.09	< 2	3	135	< 0.01	< 20	5	< 2	< 10	11	< 10	5	4
693519	0.45	0.159	0.085	0.25	< 2	2	105	< 0.01	< 20	4	< 2	< 10	11	< 10	4	3
693520	0.73	0.171	0.088	0.16	< 2	2	142	< 0.01	< 20	1	< 2	< 10	11	< 10	4	2
693521	0.62	0.164	0.080	0.24	< 2	2	111	< 0.01	< 20	4	< 2	< 10	11	< 10	4	4
693522	0.64	0.143	0.084	0.20	< 2	2	96	< 0.01	< 20	1	< 2	< 10	9	< 10	4	4
693523	0.75	0.163	0.080	0.33	< 2	2	107	< 0.01	< 20	2	< 2	< 10	9	< 10	4	5
693524	0.76	0.093	0.087	0.12	< 2	2	89	< 0.01	< 20	2	< 2	< 10	5	< 10	4	4
693525	0.74	0.089	0.085	0.12	< 2	2	87	< 0.01	< 20	3	< 2	< 10	5	< 10	4	5
693526	0.56	0.158	0.085	0.33	< 2	2	111	< 0.01	< 20	1	< 2	< 10	9	< 10	4	3
693527	0.75	0.167	0.084	0.12	< 2	2	137	< 0.01	< 20	2	< 2	< 10	9	< 10	4	3
693528	0.46	0.153	0.092	0.27	< 2	2	109	< 0.01	< 20	3	< 2	< 10	8	< 10	5	4
693529	0.34	0.152	0.090	0.12	< 2	2	98	< 0.01	< 20	3	< 2	< 10	7	< 10	4	3
693530	0.30	0.156	0.088	0.26	< 2	2	91	< 0.01	< 20	2	< 2	< 10	8	< 10	4	4
693531	0.41	0.149	0.083	0.79	< 2	2	100	< 0.01	< 20	< 1	< 2	< 10	10	< 10	4	5
693532	0.36	0.157	0.082	1.05	2	3	98	< 0.01	< 20	4	< 2	< 10	13	< 10	4	8
693533	0.45	0.138	0.087	0.37	< 2	2	104	< 0.01	< 20	2	< 2	< 10	9	< 10	4	4
693534	0.57	0.148	0.087	0.40	< 2	3	117	< 0.01	< 20	< 1	< 2	< 10	10	< 10	4	3
693535	2.47	0.404	0.163	1.44	3	4	104	0.16	< 20	3	< 2	< 10	45	< 10	15	8
693536	0.66	0.143	0.089	0.57	< 2	2	123	< 0.01	< 20	< 1	< 2	< 10	9	< 10	4	3
693537	0.82	0.162	0.109	1.60	2	4	142	< 0.01	< 20	2	< 2	< 10	14	< 10	5	5
693538	1.16	0.136	0.155	1.47	2	4	155	< 0.01	< 20	2	< 2	< 10	14	< 10	6	3
693539	1.16	0.131	0.132	2.61	< 2	4	156	< 0.01	< 20	4	< 2	< 10	16	< 10	6	7
693540	1.61	0.127	0.133	1.75	2	5	180	< 0.01	< 20	4	< 2	< 10	18	< 10	6	5
693541	0.92	0.127	0.153	0.88	3	3	146	< 0.01	< 20	2	< 2	< 10	15	< 10	6	3
693542	0.91	0.095	0.144	1.57	< 2	3	138	< 0.01	< 20	< 1	< 2	< 10	13	< 10	5	5
693543	1.32	0.103	0.123	4.46	5	5	177	< 0.01	< 20	< 1	< 2	< 10	22	< 10	5	16
693544	0.05	3.50	0.001	0.01	< 2	< 1	24	< 0.01	< 20	< 1	< 2	< 10	< 1	< 10	3	1



Analyte Symbol	Mg	Na	P	S	Sb	Sc	Sr	Ti	Th	Te	Tl	U	V	W	Y	Zr
Unit Symbol	%	%	%	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	0.01	0.001	0.001	0.01	2	1	1	0.01	20	1	2	10	1	10	1	1
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
693545	1.33	0.112	0.125	3.46	3	5	181	< 0.01	< 20	< 1	< 2	< 10	24	< 10	5	12
693546	1.21	0.118	0.135	1.58	< 2	5	169	< 0.01	< 20	< 1	< 2	< 10	22	< 10	5	4
693547	1.16	0.125	0.131	2.23	3	4	160	< 0.01	< 20	3	< 2	< 10	16	< 10	5	6
693548	1.45	0.116	0.130	2.38	2	5	171	< 0.01	< 20	< 1	< 2	< 10	19	< 10	5	7
693549	1.04	0.139	0.136	2.29	3	3	144	< 0.01	< 20	4	< 2	< 10	16	< 10	5	4
693550	1.07	0.122	0.143	1.42	< 2	3	144	< 0.01	< 20	3	< 2	< 10	13	< 10	5	3
693551	1.00	0.122	0.135	1.68	3	2	146	< 0.01	< 20	5	< 2	< 10	12	< 10	5	5
693552	1.54	0.094	0.139	0.91	< 2	3	181	< 0.01	< 20	4	< 2	< 10	11	< 10	5	3
693553	1.28	0.135	0.138	1.33	4	4	194	< 0.01	< 20	6	< 2	< 10	15	< 10	5	3
693554	0.94	0.102	0.141	2.48	4	2	145	< 0.01	< 20	6	< 2	< 10	11	< 10	5	4
693555	0.94	0.103	0.141	2.49	4	2	145	< 0.01	< 20	1	< 2	< 10	11	< 10	5	5
693556	0.89	0.120	0.135	2.50	5	3	155	< 0.01	< 20	7	< 2	< 10	12	< 10	5	6
693557	0.96	0.115	0.145	1.91	3	2	161	< 0.01	< 20	4	< 2	< 10	12	< 10	5	6
693558	1.03	0.142	0.134	1.65	< 2	3	202	< 0.01	< 20	4	< 2	< 10	15	< 10	5	5
693559	0.90	0.149	0.152	1.24	< 2	3	139	< 0.01	< 20	4	< 2	< 10	14	< 10	6	2
693560	0.97	0.151	0.155	2.18	< 2	3	144	< 0.01	< 20	4	< 2	< 10	15	< 10	6	4
693561	1.00	0.141	0.144	2.41	< 2	3	135	< 0.01	< 20	6	2	< 10	14	< 10	5	5
693562	0.98	0.144	0.157	2.60	< 2	3	130	< 0.01	< 20	< 1	< 2	< 10	14	< 10	6	5
693563	0.91	0.150	0.141	2.55	< 2	3	140	< 0.01	< 20	< 1	< 2	< 10	14	< 10	6	4
693564	0.85	0.167	0.143	3.23	3	2	131	< 0.01	< 20	4	< 2	< 10	15	< 10	6	4
693565	0.92	0.135	0.142	3.10	3	2	122	< 0.01	< 20	< 1	< 2	< 10	13	< 10	6	5
693566	2.40	0.095	0.040	0.20	< 2	9	32	0.43	< 20	3	< 2	< 10	178	< 10	15	24
693567	0.92	0.116	0.138	2.05	< 2	2	122	< 0.01	< 20	2	< 2	< 10	13	< 10	6	4
693568	0.98	0.115	0.143	1.72	< 2	3	119	< 0.01	< 20	< 1	< 2	< 10	18	< 10	6	3
693569	1.01	0.098	0.140	2.29	< 2	3	138	< 0.01	< 20	8	< 2	< 10	16	< 10	7	4
693570	1.09	0.108	0.140	1.36	< 2	3	133	< 0.01	< 20	1	< 2	< 10	20	< 10	7	3
693571	0.92	0.081	0.140	2.34	2	3	70	< 0.01	< 20	< 1	< 2	< 10	23	< 10	6	6
693572	0.92	0.094	0.145	2.48	< 2	2	110	< 0.01	< 20	2	< 2	< 10	26	< 10	5	6

Analyte Symbol	Au	Ag	Cd	Cu	Mn	Mo	Ni	Pb	Zn	Al	As	B	Ba	Be	Bi	Ca	Co	Cr	Fe	Ga	Hg	K	La
Unit Symbol	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm
Lower Limit	5	0.2	0.5	1	5	1	1	2	2	0.01	2	10	10	0.5	2	0.01	1	1	0.01	10	1	0.01	10
Method Code	FA-AA	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
GXR-1 Meas		29.0	1.8	1110	758	14	26	682	649	0.29	363	< 10	319	0.9	1420	0.71	7	6	21.2	< 10	3	0.03	< 10
GXR-1 Cert		31.0	3.30	1110	852	18.0	41.0	730	760	3.52	427	15.0	750	1.22	1380	0.960	8.20	12.0	23.6	13.8	3.90	0.050	7.50
GXR-1 Meas		31.3	2.8	1230	827	15	32	751	710	0.33	411	10	244	0.9	1550	0.78	6	7	23.8	< 10	6	0.03	< 10
GXR-1 Cert		31.0	3.30	1110	852	18.0	41.0	730	760	3.52	427	15.0	750	1.22	1380	0.960	8.20	12.0	23.6	13.8	3.90	0.050	7.50
GXR-6 Meas		< 0.2	< 0.5	66	970	1	19	98	114	6.21	243	< 10	1090	1.0	< 2	0.15	14	84	5.22	20	< 1	1.05	11
GXR-6 Cert		1.30	1.00	66.0	1010	2.40	27.0	101	118	17.7	330	9.80	1300	1.40	0.290	0.180	13.8	96.0	5.58	35.0	0.0680	1.87	13.9
GXR-6 Meas		< 0.2	< 0.5	71	1050	3	20	106	122	6.68	252	< 10	1170	1.0	< 2	0.15	15	92	5.60	20	< 1	1.14	12
GXR-6 Cert		1.30	1.00	66.0	1010	2.40	27.0	101	118	17.7	330	9.80	1300	1.40	0.290	0.180	13.8	96.0	5.58	35.0	0.0680	1.87	13.9
OREAS 134b (AQUA REGIA) Meas		> 100	596	1490				> 5000	> 10000		245						127		12.5				
OREAS 134b (AQUA REGIA) Cert		204	563	1360				133000	177000		221						106		12.25				
OREAS 133a (Aqua Regia) Meas		> 100	291	334				> 5000	> 10000		139		18				24		7.84				
OREAS 133a (Aqua Regia) Cert		97	297	324				48600.00	106000.00		140		59				23		7.92				
OREAS 218 Meas	529																						
OREAS 218 Cert	531																						
OREAS 218 Meas	546																						
OREAS 218 Cert	531																						
OREAS 218 Meas	547																						
OREAS 218 Cert	531																						
OREAS 224 Meas	2110																						
OREAS 224 Cert	2150.00																						
OREAS 224 Meas	2080																						
OREAS 224 Cert	2150.00																						
OREAS 224 Meas	2070																						
OREAS 224 Cert	2150.00																						
693505 Orig		0.3	< 0.5	167	727	< 1	77	4	64	3.43	3	46	34	< 0.5	< 2	3.09	37	144	6.09	10	< 1	0.06	< 10
693505 Dup		< 0.2	< 0.5	159	714	< 1	78	2	62	3.35	6	45	32	< 0.5	< 2	3.03	37	143	5.99	10	< 1	0.06	< 10
693513 Orig		< 0.2	< 0.5	16	416	< 1	52	3	94	0.89	22	< 10	89	< 0.5	< 2	2.51	20	16	1.97	< 10	< 1	0.26	20
693513 Dup		< 0.2	< 0.5	14	408	< 1	53	4	91	0.85	22	< 10	87	< 0.5	< 2	2.47	20	16	1.93	< 10	< 1	0.25	20
693522 Orig	< 5																						
693522 Dup	< 5																						
693532 Orig	50																						
693532 Dup	44																						
693547 Orig	35																						
693547 Dup	38																						

Analyte Symbol	Au	Ag	Cd	Cu	Mn	Mo	Ni	Pb	Zn	Al	As	B	Ba	Be	Bi	Ca	Co	Cr	Fe	Ga	Hg	K	La
Unit Symbol	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm
Lower Limit	5	0.2	0.5	1	5	1	1	2	2	0.01	2	10	10	0.5	2	0.01	1	1	0.01	10	1	0.01	10
Method Code	FA-AA	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
693552 Orig		< 0.2	< 0.5	21	713	< 1	390	2	105	0.49	540	< 10	56	< 0.5	< 2	4.65	43	13	3.67	< 10	< 1	0.16	18
693552 Split PREP DUP		< 0.2	< 0.5	18	719	< 1	391	4	104	0.50	532	< 10	56	< 0.5	< 2	4.70	42	13	3.71	< 10	< 1	0.16	18
693552 Split PREP DUP		< 0.2	< 0.5	18	719	< 1	391	4	104	0.50	532	< 10	56	< 0.5	< 2	4.70	42	13	3.71	< 10	< 1	0.16	18
693557 Orig	17																						
693557 Dup	20																						
693565 Orig		< 0.2	< 0.5	31	390	< 1	243	4	68	0.80	60	< 10	40	< 0.5	3	2.85	34	20	4.85	< 10	< 1	0.20	12
693565 Dup		< 0.2	< 0.5	27	390	< 1	246	5	66	0.77	57	< 10	37	< 0.5	< 2	2.83	35	22	4.88	< 10	< 1	0.19	11
693567 Orig	< 5																						
693567 Dup	< 5																						
693568 Orig		< 0.2	< 0.5	29	396	< 1	448	4	83	1.01	24	< 10	69	< 0.5	< 2	3.06	39	31	3.81	< 10	< 1	0.20	15
693568 Dup		< 0.2	< 0.5	28	387	< 1	428	3	79	0.96	23	< 10	69	< 0.5	< 2	2.99	39	31	3.73	< 10	< 1	0.19	14
Method Blank	< 5																						
Method Blank	< 5																						
Method Blank	< 5																						
Method Blank	< 5																						
Method Blank	< 5																						
Method Blank	< 5																						
Method Blank		< 0.2	< 0.5	< 1	< 5	< 1	< 1	< 2	< 2	< 0.01	< 2	< 10	< 10	< 0.5	< 2	< 0.01	< 1	< 1	< 0.01	< 10	< 1	< 0.01	< 10
Method Blank		< 0.2	< 0.5	< 1	< 5	< 1	< 1	< 2	< 2	< 0.01	< 2	< 10	< 10	< 0.5	< 2	< 0.01	< 1	< 1	< 0.01	< 10	< 1	< 0.01	< 10
Method Blank		< 0.2	< 0.5	< 1	< 5	< 1	< 1	< 2	< 2	< 0.01	< 2	< 10	< 10	< 0.5	< 2	< 0.01	< 1	< 1	< 0.01	< 10	< 1	< 0.01	< 10
Method Blank		< 0.2	< 0.5	< 1	< 5	< 1	< 1	< 2	< 2	< 0.01	< 2	< 10	< 10	< 0.5	< 2	< 0.01	< 1	< 1	< 0.01	< 10	< 1	< 0.01	< 10

Analyte Symbol	Mg	Na	P	S	Sb	Sc	Sr	Ti	Th	Te	Tl	U	V	W	Y	Zr
Unit Symbol	%	%	%	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	0.01	0.001	0.001	0.01	2	1	1	0.01	20	1	2	10	1	10	1	1
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
GXR-1 Meas	0.13	0.052	0.038	0.20	80	1	166	< 0.01	< 20	10	< 2	24	71	134	24	14
GXR-1 Cert	0.217	0.0520	0.0650	0.257	122	1.58	275	0.036	2.44	13.0	0.390	34.9	80.0	164	32.0	38.0
GXR-1 Meas	0.14	0.053	0.042	0.21	86	1	179	< 0.01	< 20	14	< 2	27	78	152	27	16
GXR-1 Cert	0.217	0.0520	0.0650	0.257	122	1.58	275	0.036	2.44	13.0	0.390	34.9	80.0	164	32.0	38.0
GXR-6 Meas	0.39	0.086	0.034	0.02	3	23	34		< 20	< 1	< 2	< 10	155	< 10	6	15
GXR-6 Cert	0.609	0.104	0.0350	0.0160	3.60	27.6	35.0		5.30	0.0180	2.20	1.54	186	1.90	14.0	110
GXR-6 Meas	0.42	0.093	0.036	0.02	2	25	36		< 20	2	< 2	< 10	168	< 10	6	16
GXR-6 Cert	0.609	0.104	0.0350	0.0160	3.60	27.6	35.0		5.30	0.0180	2.20	1.54	186	1.90	14.0	110
OREAS 134b (AQUA REGIA) Meas				14.8												
OREAS 134b (AQUA REGIA) Cert				19.31												
OREAS 133a (Aqua Regia) Meas				10.3	149											
OREAS 133a (Aqua Regia) Cert				10.7	147											
OREAS 218 Meas																
OREAS 218 Cert																
OREAS 218 Meas																
OREAS 218 Cert																
OREAS 218 Meas																
OREAS 218 Cert																
OREAS 224 Meas																
OREAS 224 Cert																
OREAS 224 Meas																
OREAS 224 Cert																
OREAS 224 Meas																
OREAS 224 Cert																
693505 Orig	2.42	0.098	0.040	0.20	< 2	9	33	0.44	< 20	8	< 2	< 10	179	< 10	15	25
693505 Dup	2.37	0.094	0.040	0.20	< 2	9	32	0.43	< 20	6	< 2	< 10	169	< 10	15	24
693513 Orig	0.57	0.151	0.086	0.37	< 2	2	120	< 0.01	< 20	< 1	< 2	< 10	12	< 10	4	3
693513 Dup	0.56	0.147	0.084	0.34	< 2	2	114	< 0.01	< 20	3	< 2	< 10	11	< 10	4	4
693522 Orig																
693522 Dup																
693532 Orig																
693532 Dup																
693547 Orig																
693547 Dup																
693552 Orig	1.54	0.094	0.139	0.91	< 2	3	181	< 0.01	< 20	4	< 2	< 10	11	< 10	5	3
693552 Split PREP DUP	1.56	0.093	0.139	0.93	< 2	3	183	< 0.01	< 20	< 1	< 2	< 10	12	< 10	5	3

Analyte Symbol	Mg	Na	P	S	Sb	Sc	Sr	Ti	Th	Te	Tl	U	V	W	Y	Zr
Unit Symbol	%	%	%	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	0.01	0.001	0.001	0.01	2	1	1	0.01	20	1	2	10	1	10	1	1
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
693552 Split PREP DUP	1.56	0.093	0.139	0.93	< 2	3	183	< 0.01	< 20	< 1	< 2	< 10	12	< 10	5	3
693557 Orig																
693557 Dup																
693565 Orig	0.91	0.136	0.142	3.04	2	2	121	< 0.01	< 20	3	< 2	< 10	14	< 10	6	5
693565 Dup	0.92	0.133	0.143	3.15	3	2	124	< 0.01	< 20	< 1	< 2	< 10	13	< 10	6	5
693567 Orig																
693567 Dup																
693568 Orig	0.99	0.117	0.145	1.74	< 2	3	121	< 0.01	< 20	9	< 2	< 10	18	< 10	6	3
693568 Dup	0.97	0.113	0.141	1.70	< 2	3	118	< 0.01	< 20	< 1	< 2	< 10	18	< 10	6	3
Method Blank																
Method Blank																
Method Blank																
Method Blank																
Method Blank																
Method Blank	< 0.01	0.010	< 0.001	< 0.01	< 2	< 1	< 1	< 0.01	< 20	< 1	< 2	< 10	< 1	< 10	< 1	< 1
Method Blank	< 0.01	0.012	< 0.001	< 0.01	< 2	< 1	< 1	< 0.01	< 20	1	< 2	< 10	< 1	< 10	< 1	< 1
Method Blank	< 0.01	0.012	< 0.001	< 0.01	< 2	< 1	< 1	< 0.01	< 20	1	< 2	< 10	< 1	< 10	< 1	< 1
Method Blank	< 0.01	0.010	< 0.001	< 0.01	< 2	< 1	< 1	< 0.01	< 20	2	< 2	< 10	< 1	< 10	< 1	< 1



**Date Submitted:** 07-Mar-18  
**Invoice No.:** A18-02849  
**Invoice Date:** 26-Apr-18  
**Your Reference:** 81 Lucas

**Noble Mineral Exploration**  
**2500-120 Adelaide Street West**  
**Toronto ON M5H 1T1**  
**Canada**

**ATTN: Randy Singh (inv-cc)**

## CERTIFICATE OF ANALYSIS

175 Rock samples were submitted for analysis.

The following analytical package(s) were requested:

Code 1A2-Timmins Au - Fire Assay AA

Code 1E3-Timmins Aqua Regia ICP(AQUAGEO)

REPORT **A18-02849**

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

Notes:

If value exceeds upper limit we recommend reassay by fire assay gravimetric-Code 1A3.

Values which exceed the upper limit should be assayed for accurate numbers.

CERTIFIED BY:

A handwritten signature in black ink, appearing to be "Emmanuel Esemé". The signature is written in a cursive, somewhat stylized font.

Emmanuel Esemé , Ph.D.  
Quality Control

**ACTIVATION LABORATORIES LTD.**  
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## Results

## Activation Laboratories Ltd.

## Report: A18-02849

Analyte Symbol	Au	Ag	Cd	Cu	Mn	Mo	Ni	Pb	Zn	Al	As	B	Ba	Be	Bi	Ca	Co	Cr	Fe	Ga	Hg	K	La
Unit Symbol	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm
Lower Limit	5	0.2	0.5	1	5	1	1	2	2	0.01	2	10	10	0.5	2	0.01	1	1	0.01	10	1	0.01	10
Method Code	FA-AA	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
693573	< 5	< 0.2	< 0.5	25	387	< 1	213	5	75	2.06	11	< 10	77	< 0.5	< 2	3.16	30	50	3.69	< 10	< 1	0.22	12
693574	< 5	< 0.2	< 0.5	26	473	< 1	228	4	100	2.26	11	< 10	79	< 0.5	< 2	4.25	30	55	3.90	< 10	< 1	0.24	11
693575	< 5	< 0.2	< 0.5	25	391	< 1	262	7	79	2.03	12	< 10	71	< 0.5	< 2	3.27	34	55	3.99	< 10	< 1	0.23	11
693576	< 5	< 0.2	< 0.5	< 1	97	< 1	< 1	< 2	20	5.20	< 2	12	< 10	0.5	< 2	0.20	< 1	1	0.60	< 10	< 1	1.42	< 10
693577	< 5	< 0.2	< 0.5	30	395	1	275	5	107	2.01	18	< 10	46	< 0.5	< 2	3.13	37	54	5.00	< 10	< 1	0.20	< 10
693578	< 5	< 0.2	< 0.5	22	357	< 1	223	3	83	1.90	11	< 10	64	< 0.5	< 2	3.10	31	52	3.78	< 10	< 1	0.19	11
693579	< 5	< 0.2	< 0.5	24	449	< 1	197	4	95	2.20	9	< 10	67	< 0.5	2	3.88	29	56	3.58	< 10	< 1	0.19	12
693580	< 5	< 0.2	< 0.5	25	438	< 1	191	5	95	2.29	11	< 10	72	< 0.5	< 2	4.27	29	54	3.47	< 10	< 1	0.20	12
693581	< 5	< 0.2	< 0.5	25	491	< 1	193	4	104	2.28	11	< 10	57	< 0.5	< 2	4.63	28	52	4.04	< 10	< 1	0.17	< 10
693582	< 5	< 0.2	< 0.5	25	431	< 1	186	6	94	2.04	15	< 10	59	< 0.5	< 2	4.04	30	54	4.39	< 10	< 1	0.18	10
693583	< 5	< 0.2	< 0.5	23	421	< 1	186	5	106	2.16	13	< 10	74	< 0.5	< 2	3.59	28	52	3.45	< 10	< 1	0.21	14
693584	< 5	< 0.2	< 0.5	24	406	< 1	181	4	117	2.07	14	< 10	65	< 0.5	< 2	3.46	29	57	3.38	< 10	< 1	0.18	13
693585	< 5	< 0.2	< 0.5	25	397	< 1	174	4	128	2.09	13	< 10	71	< 0.5	< 2	3.51	28	48	3.34	< 10	< 1	0.19	13
693586	< 5	< 0.2	< 0.5	27	515	< 1	187	4	123	1.72	16	< 10	58	< 0.5	< 2	3.44	28	41	3.76	< 10	< 1	0.16	10
693587	< 5	< 0.2	< 0.5	29	939	< 1	170	4	81	1.43	30	< 10	54	< 0.5	< 2	5.21	31	31	3.71	< 10	< 1	0.15	12
693588	< 5	< 0.2	< 0.5	41	1850	< 1	188	3	95	2.67	12	< 10	46	< 0.5	< 2	4.12	28	54	7.58	< 10	1	0.13	11
693589	< 5	< 0.2	< 0.5	41	947	< 1	144	4	112	2.18	15	< 10	73	< 0.5	< 2	2.84	35	56	4.12	< 10	< 1	0.20	24
693590	< 5	< 0.2	< 0.5	44	1030	< 1	132	3	83	1.89	22	< 10	70	< 0.5	< 2	3.69	31	65	4.15	< 10	< 1	0.19	19
693591	7	< 0.2	< 0.5	27	872	< 1	125	5	80	1.96	14	< 10	75	< 0.5	< 2	3.66	26	58	4.22	< 10	< 1	0.22	19
693592	6	< 0.2	< 0.5	32	576	< 1	104	< 2	78	1.72	14	< 10	61	< 0.5	< 2	2.99	26	64	3.04	< 10	< 1	0.17	24
693593	6	< 0.2	< 0.5	32	497	2	98	< 2	65	1.36	22	< 10	72	< 0.5	< 2	3.66	25	43	2.18	< 10	< 1	0.21	27
693594	1750	0.4	< 0.5	167	732	1	73	7	65	3.94	10	17	26	< 0.5	< 2	3.31	30	118	5.35	< 10	< 1	0.08	< 10
693595	5	< 0.2	< 0.5	35	654	< 1	104	2	56	1.75	24	< 10	77	< 0.5	< 2	2.83	29	48	2.64	< 10	< 1	0.22	28
693596	7	< 0.2	< 0.5	25	1090	< 1	99	< 2	62	2.35	11	< 10	80	< 0.5	< 2	3.18	23	54	4.00	< 10	< 1	0.23	26
693597	< 5	< 0.2	< 0.5	28	1150	< 1	94	3	71	2.52	11	< 10	91	< 0.5	< 2	3.32	24	52	4.43	< 10	< 1	0.28	24
693598	5	< 0.2	< 0.5	27	689	< 1	107	3	56	1.49	12	< 10	86	< 0.5	< 2	3.09	25	37	2.46	< 10	< 1	0.26	26
693599	6	< 0.2	< 0.5	23	837	< 1	55	2	63	1.22	5	< 10	70	< 0.5	< 2	3.69	16	27	2.55	< 10	< 1	0.21	24
693600	5	< 0.2	< 0.5	26	916	< 1	75	< 2	55	1.40	18	< 10	83	< 0.5	< 2	3.16	25	37	2.48	< 10	< 1	0.25	28
693601	10	< 0.2	< 0.5	27	1580	< 1	98	4	62	1.90	10	< 10	57	< 0.5	< 2	3.47	28	46	4.74	< 10	< 1	0.17	21
693602	8	< 0.2	< 0.5	35	1420	< 1	100	< 2	63	1.84	10	< 10	66	< 0.5	< 2	3.63	24	48	4.35	< 10	< 1	0.19	22
693603	6	< 0.2	< 0.5	30	1090	< 1	108	< 2	56	1.61	13	< 10	88	< 0.5	< 2	3.13	26	39	3.32	< 10	< 1	0.25	25
693604	< 5	< 0.2	< 0.5	< 1	100	< 1	< 1	< 2	18	5.32	2	15	11	0.5	< 2	0.21	< 1	2	0.57	< 10	< 1	1.48	< 10
693605	9	< 0.2	< 0.5	26	1660	< 1	96	4	65	1.82	11	< 10	72	< 0.5	< 2	3.69	23	46	4.45	< 10	< 1	0.20	25
693606	8	< 0.2	< 0.5	32	1850	< 1	82	< 2	46	1.81	10	< 10	75	< 0.5	< 2	3.29	23	46	4.42	< 10	< 1	0.20	24
693607	10	< 0.2	< 0.5	26	1590	< 1	88	3	70	1.85	7	< 10	75	< 0.5	< 2	3.27	22	45	5.01	< 10	< 1	0.19	22
693608	< 5	< 0.2	< 0.5	30	1230	< 1	81	< 2	61	1.43	14	< 10	83	< 0.5	< 2	3.11	23	38	3.51	< 10	< 1	0.21	26
693609	< 5	< 0.2	< 0.5	29	1010	< 1	90	< 2	70	1.16	20	< 10	86	< 0.5	< 2	3.50	24	38	2.84	< 10	< 1	0.21	29
693610	< 5	< 0.2	< 0.5	23	2110	< 1	86	< 2	84	2.18	3	< 10	89	< 0.5	< 2	3.62	20	46	6.02	< 10	< 1	0.20	19
693611	< 5	< 0.2	< 0.5	28	1450	< 1	96	< 2	91	1.81	11	< 10	80	< 0.5	< 2	2.98	21	41	5.35	< 10	< 1	0.16	17
693612	21	< 0.2	< 0.5	37	1240	1	201	4	91	1.27	72	< 10	64	< 0.5	< 2	4.34	35	48	5.60	< 10	< 1	0.13	11
693613	19	< 0.2	< 0.5	38	1240	1	192	3	92	1.38	69	< 10	72	< 0.5	< 2	4.10	35	43	5.65	< 10	< 1	0.15	13
693614	19	< 0.2	< 0.5	15	853	3	170	3	61	0.62	152	< 10	51	< 0.5	< 2	6.98	21	7	5.29	< 10	< 1	0.12	< 10

Results

Activation Laboratories Ltd.

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Analyte Symbol	Au	Ag	Cd	Cu	Mn	Mo	Ni	Pb	Zn	Al	As	B	Ba	Be	Bi	Ca	Co	Cr	Fe	Ga	Hg	K	La
Unit Symbol	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm
Lower Limit	5	0.2	0.5	1	5	1	1	2	2	0.01	2	10	10	0.5	2	0.01	1	1	0.01	10	1	0.01	10
Method Code	FA-AA	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
693615	< 5	< 0.2	< 0.5	17	552	< 1	58	3	74	0.88	34	< 10	56	< 0.5	< 2	3.79	15	10	3.60	< 10	< 1	0.13	< 10
693616	< 5	< 0.2	< 0.5	30	415	< 1	92	4	55	1.10	45	< 10	47	< 0.5	< 2	2.89	20	6	5.57	< 10	< 1	0.13	< 10
693617	7	< 0.2	< 0.5	30	364	< 1	95	5	74	1.18	52	< 10	43	< 0.5	< 2	2.46	19	6	5.30	< 10	< 1	0.09	< 10
693618	< 5	< 0.2	< 0.5	22	430	< 1	75	4	70	1.22	47	< 10	47	< 0.5	< 2	2.58	17	7	4.43	< 10	< 1	0.10	< 10
693619	< 5	< 0.2	0.6	80	591	< 1	131	8	133	2.23	111	17	31	0.5	< 2	3.66	32	71	9.30	< 10	< 1	0.13	< 10
693620	< 5	< 0.2	< 0.5	25	397	< 1	82	4	45	1.00	50	< 10	44	< 0.5	< 2	2.84	20	7	5.00	< 10	< 1	0.10	< 10
693621	< 5	< 0.2	< 0.5	30	438	< 1	78	5	50	0.54	54	< 10	26	< 0.5	< 2	3.09	18	7	5.51	< 10	< 1	0.06	< 10
693622	< 5	< 0.2	< 0.5	24	477	< 1	50	4	44	0.54	36	< 10	30	< 0.5	< 2	3.30	14	3	4.09	< 10	< 1	0.06	< 10
693623	1530	0.4	< 0.5	168	742	1	76	8	66	4.02	12	17	27	< 0.5	< 2	3.38	30	119	5.41	< 10	< 1	0.09	< 10
693624	7	< 0.2	< 0.5	31	448	< 1	80	5	52	0.56	55	< 10	27	< 0.5	< 2	3.15	18	7	5.66	< 10	< 1	0.06	< 10
693625	6	< 0.2	< 0.5	27	402	< 1	44	3	46	0.65	38	< 10	31	< 0.5	< 2	2.83	16	6	3.72	< 10	< 1	0.07	11
693626	< 5	< 0.2	< 0.5	26	399	< 1	43	2	44	0.63	36	< 10	31	< 0.5	< 2	2.82	15	5	3.69	< 10	< 1	0.07	11
693627	54	< 0.2	< 0.5	18	559	< 1	56	4	61	0.43	116	< 10	25	< 0.5	< 2	2.98	16	14	3.49	< 10	< 1	0.06	10
693628	56	< 0.2	< 0.5	19	554	< 1	57	3	56	0.43	116	< 10	25	< 0.5	< 2	2.96	16	14	3.46	< 10	< 1	0.06	10
693629	100	< 0.2	< 0.5	42	585	< 1	137	3	94	0.96	224	< 10	28	< 0.5	< 2	2.63	24	25	4.45	< 10	< 1	0.09	< 10
693630	92	< 0.2	< 0.5	44	598	< 1	140	3	94	0.99	237	< 10	28	< 0.5	< 2	2.70	25	26	4.60	< 10	< 1	0.09	< 10
693631	488	0.3	< 0.5	18	693	< 1	74	9	60	0.39	206	< 10	28	< 0.5	< 2	2.55	18	11	5.17	< 10	< 1	0.08	< 10
693632	446	0.3	< 0.5	19	685	< 1	73	8	58	0.38	207	< 10	26	< 0.5	< 2	2.53	18	12	5.11	< 10	< 1	0.08	< 10
693633	< 5	< 0.2	< 0.5	< 1	85	< 1	< 1	< 2	23	4.53	< 2	11	< 10	< 0.5	< 2	0.19	< 1	< 1	0.48	< 10	< 1	1.28	< 10
693634	141	< 0.2	< 0.5	21	444	< 1	111	4	57	0.56	208	< 10	38	< 0.5	3	2.54	18	6	4.58	< 10	< 1	0.11	< 10
693635	395	0.3	< 0.5	14	787	< 1	87	8	49	0.30	1490	< 10	24	< 0.5	< 2	2.09	19	19	5.55	< 10	< 1	0.07	< 10
693636	378	0.3	< 0.5	15	785	< 1	86	9	50	0.29	1470	< 10	23	< 0.5	< 2	2.07	19	21	5.46	< 10	< 1	0.07	< 10
693637	211	0.3	< 0.5	13	1100	< 1	175	6	94	0.37	670	< 10	34	< 0.5	< 2	3.26	31	38	4.27	< 10	< 1	0.12	< 10
693638	214	0.2	0.5	12	1100	< 1	172	6	105	0.38	678	< 10	34	< 0.5	< 2	3.24	30	33	4.28	< 10	< 1	0.12	< 10
693639	34	< 0.2	< 0.5	18	803	< 1	147	< 2	45	0.41	193	< 10	32	< 0.5	< 2	3.87	26	22	3.13	< 10	< 1	0.10	< 10
693640	32	< 0.2	< 0.5	18	799	< 1	146	3	46	0.42	195	< 10	33	< 0.5	< 2	3.85	26	20	3.11	< 10	< 1	0.11	< 10
693641	99	0.2	< 0.5	24	561	1	235	5	72	0.42	275	< 10	34	< 0.5	< 2	2.93	34	29	3.58	< 10	< 1	0.12	< 10
693642	199	< 0.2	< 0.5	24	588	2	249	6	101	0.52	378	< 10	42	< 0.5	< 2	2.55	38	29	4.10	< 10	< 1	0.15	< 10
693643	172	< 0.2	< 0.5	24	595	2	250	8	103	0.54	383	< 10	43	< 0.5	< 2	2.61	39	30	4.19	< 10	< 1	0.16	< 10
693644	157	< 0.2	< 0.5	22	427	< 1	38	5	36	0.35	144	< 10	30	< 0.5	< 2	2.49	22	12	4.72	< 10	< 1	0.11	< 10
693645	252	0.2	< 0.5	22	531	< 1	37	6	33	0.37	99	< 10	28	< 0.5	3	2.49	19	40	4.13	< 10	< 1	0.11	< 10
693646	162	< 0.2	< 0.5	24	439	< 1	40	5	38	0.35	157	< 10	30	< 0.5	< 2	2.53	22	11	4.88	< 10	< 1	0.11	< 10
693647	248	0.2	< 0.5	19	530	< 1	36	4	28	0.37	101	< 10	28	< 0.5	< 2	2.49	19	24	4.17	< 10	< 1	0.11	< 10
693648	679	0.4	< 0.5	20	729	< 1	55	8	37	0.45	481	< 10	21	< 0.5	< 2	2.44	32	19	9.45	< 10	1	0.11	< 10
693649	557	0.4	< 0.5	20	714	< 1	55	9	34	0.45	485	< 10	21	< 0.5	< 2	2.40	31	19	9.34	< 10	< 1	0.10	< 10
693650	2490	0.7	< 0.5	24	2310	< 1	37	12	68	0.10	4290	< 10	< 10	< 0.5	< 2	2.16	13	39	10.6	< 10	< 1	0.01	< 10
693651	2660	0.8	< 0.5	24	2270	< 1	35	13	66	0.09	4170	< 10	< 10	< 0.5	< 2	2.11	13	25	10.3	< 10	< 1	0.01	< 10
693652	1100	0.5	< 0.5	16	3650	< 1	57	11	61	0.12	1740	< 10	< 10	< 0.5	< 2	2.37	12	42	13.1	< 10	< 1	< 0.01	< 10
693653	1210	0.5	< 0.5	16	3660	< 1	57	10	60	0.12	1780	< 10	< 10	< 0.5	4	2.38	12	41	13.2	< 10	< 1	< 0.01	< 10
693654	1660	0.8	< 0.5	29	2890	< 1	81	15	58	0.34	977	< 10	13	< 0.5	4	2.01	28	27	17.3	< 10	< 1	0.06	< 10
693655	1500	0.8	< 0.5	28	2850	< 1	79	16	59	0.33	962	< 10	13	< 0.5	3	1.92	26	22	17.1	< 10	< 1	0.06	< 10
693656	1060	0.3	< 0.5	157	687	< 1	66	5	62	3.58	7	41	27	< 0.5	< 2	3.05	30	117	5.55	10	< 1	0.05	< 10



## Results

## Activation Laboratories Ltd.

## Report: A18-02849

Analyte Symbol	Au	Ag	Cd	Cu	Mn	Mo	Ni	Pb	Zn	Al	As	B	Ba	Be	Bi	Ca	Co	Cr	Fe	Ga	Hg	K	La
Unit Symbol	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm
Lower Limit	5	0.2	0.5	1	5	1	1	2	2	0.01	2	10	10	0.5	2	0.01	1	1	0.01	10	1	0.01	10
Method Code	FA-AA	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
693657	685	0.5	< 0.5	23	1980	< 1	70	13	65	0.39	1040	< 10	18	< 0.5	< 2	2.73	24	25	11.9	< 10	< 1	0.09	< 10
693658	1090	0.5	< 0.5	22	1950	< 1	69	13	62	0.38	1010	< 10	18	< 0.5	< 2	2.70	24	32	11.8	< 10	< 1	0.09	< 10
693659	1290	0.4	< 0.5	18	2520	< 1	37	10	64	0.22	946	< 10	< 10	< 0.5	< 2	3.04	12	23	9.10	< 10	< 1	0.03	< 10
693660	687	0.2	< 0.5	16	831	< 1	29	8	118	0.37	581	< 10	27	< 0.5	< 2	3.06	11	24	5.82	< 10	< 1	0.12	< 10
693661	< 5	< 0.2	< 0.5	< 1	101	< 1	< 1	< 2	20	4.98	< 2	12	< 10	0.5	< 2	0.21	< 1	2	0.60	< 10	< 1	1.40	< 10
693662	43	< 0.2	< 0.5	13	643	1	32	3	40	0.69	65	< 10	44	< 0.5	< 2	3.62	14	12	3.65	< 10	< 1	0.20	< 10
693663	16	< 0.2	< 0.5	18	483	< 1	23	< 2	43	0.53	53	< 10	42	< 0.5	< 2	2.83	12	16	2.58	< 10	< 1	0.18	10
693664	25	< 0.2	< 0.5	11	659	1	32	< 2	36	0.57	69	< 10	43	< 0.5	< 2	2.91	13	15	2.90	< 10	< 1	0.19	< 10
693665	54	< 0.2	< 0.5	8	904	< 1	33	< 2	33	0.68	81	< 10	42	< 0.5	< 2	3.07	16	15	4.67	< 10	< 1	0.19	< 10
693666	137	< 0.2	< 0.5	18	482	< 1	37	6	37	0.57	86	< 10	39	< 0.5	< 2	2.35	20	7	4.60	< 10	< 1	0.19	< 10
693667	87	0.3	< 0.5	28	609	< 1	47	8	39	0.55	136	< 10	29	< 0.5	< 2	2.41	26	17	7.04	< 10	< 1	0.17	< 10
693668	79	0.3	< 0.5	29	619	< 1	47	10	43	0.61	131	< 10	32	< 0.5	< 2	2.44	26	15	6.81	< 10	< 1	0.19	< 10
693669	24	< 0.2	< 0.5	16	991	< 1	38	4	37	0.68	98	< 10	32	< 0.5	< 2	2.08	18	19	6.12	< 10	< 1	0.16	< 10
693670	141	0.2	< 0.5	20	2210	< 1	45	5	49	1.02	159	< 10	32	< 0.5	< 2	3.61	19	20	9.92	< 10	< 1	0.17	< 10
693671	1260	0.5	< 0.5	18	1670	< 1	33	10	51	0.10	1440	< 10	< 10	< 0.5	< 2	0.96	10	43	10.0	< 10	< 1	0.02	< 10
693672	3770	2.0	< 0.5	51	1440	< 1	28	28	73	0.16	1490	< 10	< 10	< 0.5	4	0.52	25	23	17.8	< 10	< 1	0.04	< 10
693673	> 5000	2.6	< 0.5	63	248	< 1	27	40	130	0.23	1080	< 10	< 10	< 0.5	3	0.09	34	28	17.6	< 10	< 1	0.06	< 10
693674	7	< 0.2	< 0.5	< 1	113	< 1	< 1	< 2	18	4.94	4	13	10	< 0.5	< 2	0.19	< 1	2	0.72	< 10	< 1	1.39	< 10
693675	> 5000	2.4	0.7	57	217	< 1	28	43	97	0.18	1840	< 10	< 10	< 0.5	4	0.10	27	31	16.9	< 10	< 1	0.06	< 10
693676	> 5000	2.1	< 0.5	51	350	< 1	58	48	85	0.33	1790	< 10	< 10	< 0.5	5	0.61	23	30	16.9	< 10	< 1	0.13	< 10
693677	371	0.2	< 0.5	5	1360	< 1	58	4	63	0.43	1580	< 10	41	< 0.5	< 2	2.93	20	39	4.49	< 10	< 1	0.18	< 10
693678	242	< 0.2	< 0.5	4	1050	< 1	38	5	30	0.24	416	< 10	27	< 0.5	< 2	2.56	11	43	3.57	< 10	< 1	0.10	< 10
693679	1060	0.3	< 0.5	162	701	< 1	67	4	63	3.72	6	43	27	< 0.5	< 2	3.13	31	119	5.70	10	< 1	0.06	< 10
693680	> 5000	2.5	0.7	67	938	< 1	117	67	104	0.13	567	< 10	< 10	< 0.5	2	0.71	29	19	18.3	< 10	< 1	0.04	< 10
693681	> 5000	2.7	< 0.5	84	444	< 1	74	89	65	0.11	489	< 10	< 10	< 0.5	4	0.16	29	28	18.3	< 10	< 1	0.03	< 10
693682	3900	1.9	1.1	64	575	2	70	85	74	0.49	828	< 10	< 10	< 0.5	3	0.26	36	21	22.4	< 10	< 1	0.06	< 10
693683	27	< 0.2	< 0.5	2	222	< 1	6	< 2	46	0.06	15	< 10	< 10	< 0.5	< 2	0.11	3	64	1.17	< 10	< 1	0.01	< 10
693684	15	< 0.2	< 0.5	< 1	165	< 1	4	< 2	17	0.03	9	< 10	< 10	< 0.5	< 2	0.05	1	85	0.92	< 10	< 1	< 0.01	< 10
693685	< 5	< 0.2	< 0.5	2	316	< 1	8	< 2	31	0.13	9	< 10	11	< 0.5	< 2	0.31	3	76	1.20	< 10	< 1	0.02	< 10
693686	7	< 0.2	< 0.5	25	2090	< 1	97	< 2	93	1.10	141	< 10	64	< 0.5	< 2	4.21	27	30	7.98	< 10	< 1	0.20	< 10
693687	7	< 0.2	< 0.5	15	1300	< 1	115	< 2	56	0.99	171	< 10	49	< 0.5	< 2	4.24	34	24	6.06	< 10	< 1	0.15	12
693688	12	< 0.2	< 0.5	16	1640	< 1	136	2	79	1.15	158	< 10	46	< 0.5	< 2	5.00	34	23	7.56	< 10	< 1	0.14	< 10
693689	< 5	< 0.2	< 0.5	27	1470	< 1	105	< 2	59	0.97	137	< 10	48	< 0.5	< 2	5.00	34	31	4.95	< 10	< 1	0.15	11
693690	6	< 0.2	< 0.5	32	2130	< 1	69	3	60	1.63	58	< 10	37	< 0.5	< 2	4.65	20	52	6.51	< 10	< 1	0.12	11
693691	< 5	< 0.2	< 0.5	28	771	< 1	47	< 2	36	0.63	62	< 10	33	< 0.5	< 2	2.16	16	66	2.39	< 10	< 1	0.11	13
693692	< 5	< 0.2	< 0.5	< 1	95	< 1	< 1	< 2	20	4.60	< 2	12	< 10	< 0.5	< 2	0.19	< 1	1	0.55	< 10	< 1	1.33	< 10
693693	< 5	< 0.2	< 0.5	13	2340	< 1	65	< 2	88	2.86	53	< 10	43	< 0.5	< 2	4.09	20	72	8.51	< 10	< 1	0.14	17
693694	< 5	< 0.2	< 0.5	20	2480	< 1	61	< 2	71	2.14	46	< 10	38	< 0.5	< 2	4.80	19	68	7.59	< 10	< 1	0.12	22
693695	10	< 0.2	< 0.5	27	1890	< 1	60	< 2	69	1.50	58	< 10	24	< 0.5	< 2	4.69	16	58	6.22	< 10	< 1	0.08	12
693696	< 5	< 0.2	< 0.5	25	1870	< 1	61	< 2	64	1.48	62	< 10	25	< 0.5	< 2	4.63	18	57	6.16	< 10	< 1	0.08	12
693697	< 5	< 0.2	< 0.5	33	1200	< 1	112	< 2	48	0.89	206	< 10	68	< 0.5	< 2	5.35	33	37	3.98	< 10	< 1	0.25	18
693698	50	< 0.2	< 0.5	45	701	< 1	66	< 2	41	1.00	91	< 10	46	< 0.5	< 2	2.59	21	58	3.12	< 10	< 1	0.15	17

## Results

## Activation Laboratories Ltd.

## Report: A18-02849

Analyte Symbol	Au	Ag	Cd	Cu	Mn	Mo	Ni	Pb	Zn	Al	As	B	Ba	Be	Bi	Ca	Co	Cr	Fe	Ga	Hg	K	La
Unit Symbol	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm
Lower Limit	5	0.2	0.5	1	5	1	1	2	2	0.01	2	10	10	0.5	2	0.01	1	1	0.01	10	1	0.01	10
Method Code	FA-AA	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
693699	1820	< 0.2	< 0.5	38	1310	< 1	65	5	65	1.84	32	< 10	46	< 0.5	< 2	3.48	20	58	5.49	< 10	< 1	0.15	20
693700	< 5	< 0.2	< 0.5	33	1830	< 1	70	< 2	66	1.72	25	< 10	38	< 0.5	< 2	4.32	20	56	6.00	< 10	< 1	0.13	18
693701	< 5	< 0.2	< 0.5	33	1840	< 1	71	< 2	66	1.73	24	< 10	37	< 0.5	< 2	4.36	20	56	5.98	< 10	< 1	0.13	18
693702	5	< 0.2	< 0.5	36	1330	< 1	81	< 2	84	1.84	39	< 10	44	< 0.5	< 2	3.61	23	56	5.41	< 10	< 1	0.16	19
693703	14	< 0.2	< 0.5	41	1660	1	77	3	79	1.49	133	< 10	44	< 0.5	< 2	4.37	26	40	6.15	< 10	< 1	0.16	13
693704	< 5	< 0.2	< 0.5	38	1690	2	182	< 2	96	1.95	268	< 10	50	< 0.5	< 2	3.29	52	51	6.77	< 10	< 1	0.18	14
693705	< 5	< 0.2	< 0.5	35	963	< 1	112	< 2	39	1.32	113	< 10	58	< 0.5	< 2	3.30	28	43	3.22	< 10	< 1	0.20	17
693706	< 5	< 0.2	< 0.5	33	888	< 1	91	< 2	55	1.44	49	< 10	40	< 0.5	< 2	3.13	32	42	3.92	< 10	< 1	0.14	18
693707	< 5	< 0.2	< 0.5	28	966	< 1	107	< 2	64	1.61	32	< 10	46	< 0.5	< 2	3.56	32	46	4.38	< 10	< 1	0.15	20
693708	< 5	< 0.2	< 0.5	34	1500	< 1	104	< 2	83	1.58	28	< 10	39	< 0.5	< 2	2.67	34	41	5.65	< 10	< 1	0.13	15
693709	< 5	< 0.2	< 0.5	25	1390	< 1	99	< 2	101	1.57	19	< 10	30	< 0.5	< 2	3.67	26	38	5.04	< 10	< 1	0.10	17
693710	1040	0.3	< 0.5	162	694	< 1	65	4	64	3.67	7	42	26	< 0.5	< 2	3.06	31	117	5.68	10	< 1	0.05	< 10
693711	< 5	< 0.2	< 0.5	26	919	< 1	71	< 2	50	1.04	15	< 10	39	< 0.5	< 2	3.95	20	25	3.67	< 10	< 1	0.12	19
693712	< 5	< 0.2	< 0.5	32	986	< 1	103	< 2	68	1.65	21	< 10	43	< 0.5	< 2	2.53	31	47	3.96	< 10	< 1	0.13	24
693713	6	< 0.2	< 0.5	38	1300	< 1	142	< 2	125	2.74	16	< 10	36	< 0.5	< 2	3.42	37	45	7.43	< 10	1	0.12	17
693714	< 5	< 0.2	< 0.5	26	747	< 1	71	< 2	53	1.23	18	< 10	43	< 0.5	< 2	2.49	23	37	3.19	< 10	< 1	0.14	20
693715	< 5	< 0.2	< 0.5	24	755	< 1	51	< 2	62	1.10	8	< 10	39	< 0.5	< 2	3.37	17	34	3.35	< 10	< 1	0.13	21
693716	< 5	< 0.2	< 0.5	27	897	< 1	73	< 2	61	1.26	6	< 10	36	< 0.5	< 2	3.88	21	31	4.10	< 10	< 1	0.12	19
693717	6	< 0.2	< 0.5	28	727	< 1	75	< 2	39	0.89	14	< 10	38	< 0.5	< 2	3.66	23	25	2.93	< 10	< 1	0.14	22
693718	< 5	< 0.2	< 0.5	33	705	< 1	119	< 2	53	1.20	18	< 10	41	< 0.5	< 2	3.08	32	36	3.40	< 10	< 1	0.14	17
693719	< 5	< 0.2	< 0.5	< 1	80	< 1	< 1	< 2	18	4.52	< 2	< 10	< 10	< 0.5	< 2	0.19	< 1	< 1	0.44	< 10	< 1	1.36	< 10
693720	< 5	< 0.2	< 0.5	40	1770	< 1	129	4	104	2.81	27	< 10	34	< 0.5	< 2	1.24	74	60	9.72	< 10	< 1	0.12	26
693721	< 5	< 0.2	< 0.5	43	2450	< 1	90	2	106	2.68	3	< 10	40	< 0.5	< 2	0.19	53	64	11.5	< 10	1	0.13	25
693722	< 5	0.3	< 0.5	47	3110	< 1	113	5	126	2.82	34	< 10	29	< 0.5	4	0.18	87	60	14.4	< 10	< 1	0.10	15
693723	< 5	< 0.2	< 0.5	51	2180	< 1	96	7	130	3.00	4	< 10	40	< 0.5	< 2	0.71	47	75	10.7	< 10	< 1	0.13	25
693724	< 5	< 0.2	< 0.5	53	1100	< 1	109	< 2	114	1.85	25	< 10	50	< 0.5	< 2	1.84	40	47	3.64	< 10	< 1	0.17	25
693725	< 5	< 0.2	< 0.5	43	849	< 1	61	< 2	54	1.45	9	< 10	56	< 0.5	< 2	3.14	20	55	3.61	< 10	< 1	0.19	25
693726	< 5	< 0.2	< 0.5	42	1230	< 1	106	7	115	2.31	11	< 10	49	< 0.5	< 2	2.94	32	61	5.72	< 10	< 1	0.17	28
693727	< 5	< 0.2	< 0.5	35	864	2	61	< 2	76	1.36	6	< 10	46	< 0.5	< 2	3.82	18	53	3.93	< 10	< 1	0.15	27
693728	< 5	< 0.2	< 0.5	65	749	1	51	2	56	1.30	13	< 10	46	< 0.5	< 2	3.72	22	93	3.29	< 10	< 1	0.14	18
693729	< 5	< 0.2	< 0.5	27	1100	< 1	83	6	77	1.54	4	< 10	48	< 0.5	< 2	4.77	19	45	4.37	< 10	< 1	0.16	27
693730	< 5	< 0.2	< 0.5	31	921	< 1	67	< 2	65	1.20	5	< 10	55	< 0.5	< 2	3.59	17	36	3.64	< 10	< 1	0.18	30
693731	< 5	< 0.2	< 0.5	32	658	< 1	43	6	58	0.99	10	< 10	62	< 0.5	< 2	3.02	12	29	2.54	< 10	< 1	0.18	32
693732	< 5	< 0.2	< 0.5	34	652	< 1	42	6	58	0.96	9	< 10	61	< 0.5	< 2	2.99	11	28	2.51	< 10	< 1	0.17	32
693733	< 5	< 0.2	< 0.5	29	848	< 1	63	5	55	1.10	12	< 10	64	< 0.5	< 2	2.81	15	32	3.09	< 10	< 1	0.19	31
693734	< 5	< 0.2	< 0.5	37	921	< 1	58	3	65	1.01	21	< 10	65	< 0.5	< 2	3.14	14	29	3.20	< 10	< 1	0.18	34
693735	< 5	< 0.2	< 0.5	35	647	< 1	57	3	64	0.91	17	< 10	67	< 0.5	< 2	2.81	14	42	2.58	< 10	< 1	0.19	31
693736	< 5	< 0.2	< 0.5	30	1070	< 1	108	< 2	97	1.62	22	< 10	53	< 0.5	< 2	3.08	18	71	4.71	< 10	< 1	0.15	27
693737	< 5	< 0.2	< 0.5	17	1730	< 1	128	4	122	1.20	80	< 10	46	< 0.5	< 2	6.23	21	43	5.68	< 10	< 1	0.15	21
693738	< 5	< 0.2	< 0.5	23	1840	< 1	115	< 2	92	1.15	33	< 10	49	< 0.5	< 2	6.27	20	43	5.56	< 10	< 1	0.15	24
693739	< 5	< 0.2	< 0.5	33	1490	< 1	97	4	76	1.51	17	< 10	55	< 0.5	< 2	3.85	18	61	4.84	< 10	< 1	0.17	29
693740	< 5	< 0.2	< 0.5	40	1080	< 1	92	3	50	1.30	18	< 10	69	< 0.5	< 2	3.10	19	59	3.27	< 10	< 1	0.20	31

Analyte Symbol	Au	Ag	Cd	Cu	Mn	Mo	Ni	Pb	Zn	Al	As	B	Ba	Be	Bi	Ca	Co	Cr	Fe	Ga	Hg	K	La
Unit Symbol	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm
Lower Limit	5	0.2	0.5	1	5	1	1	2	2	0.01	2	10	10	0.5	2	0.01	1	1	0.01	10	1	0.01	10
Method Code	FA-AA	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
693741	< 5	< 0.2	< 0.5	27	571	< 1	101	3	44	0.80	26	< 10	53	< 0.5	< 2	3.00	25	21	4.06	< 10	< 1	0.14	14
693742	< 5	< 0.2	< 0.5	25	477	< 1	114	4	34	0.60	30	< 10	48	< 0.5	< 2	2.88	25	15	3.44	< 10	< 1	0.13	14
693743	< 5	< 0.2	< 0.5	19	783	< 1	86	3	54	0.57	25	< 10	41	< 0.5	< 2	4.89	20	16	4.21	< 10	< 1	0.13	< 10
693744	< 5	< 0.2	< 0.5	23	476	< 1	115	4	45	0.78	27	< 10	47	< 0.5	< 2	2.90	27	19	4.29	< 10	< 1	0.14	12
693745	< 5	< 0.2	< 0.5	25	574	< 1	134	3	39	0.87	31	< 10	39	< 0.5	< 2	2.92	30	19	5.93	< 10	< 1	0.14	< 10
693746	< 5	< 0.2	< 0.5	23	608	< 1	161	4	33	0.70	51	< 10	29	< 0.5	< 2	2.82	35	16	7.36	< 10	< 1	0.12	< 10
693749	< 5	0.2	< 0.5	15	904	< 1	209	4	29	0.71	156	< 10	13	< 0.5	3	1.56	54	20	17.1	< 10	< 1	0.11	< 10

Analyte Symbol	Mg	Na	P	S	Sb	Sc	Sr	Ti	Th	Te	Tl	U	V	W	Y	Zr	Au
Unit Symbol	%	%	%	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	g/tonne
Lower Limit	0.01	0.001	0.001	0.01	2	1	1	0.01	20	1	2	10	1	10	1	1	0.03
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	FA- GRA
693573	1.01	0.094	0.159	1.68	< 2	2	111	< 0.01	< 20	< 1	< 2	< 10	31	< 10	5	16	
693574	1.11	0.101	0.141	1.93	< 2	3	134	< 0.01	< 20	< 1	< 2	< 10	36	< 10	4	17	
693575	0.92	0.107	0.147	2.27	< 2	3	111	< 0.01	< 20	< 1	< 2	< 10	33	< 10	4	18	
693576	0.05	2.90	0.001	< 0.01	< 2	< 1	20	< 0.01	< 20	< 1	< 2	< 10	< 1	< 10	3	2	
693577	0.97	0.101	0.150	3.32	< 2	2	102	< 0.01	< 20	< 1	< 2	< 10	34	< 10	4	19	
693578	0.89	0.100	0.152	2.09	< 2	2	108	< 0.01	< 20	< 1	< 2	< 10	28	< 10	4	16	
693579	1.17	0.103	0.151	1.53	< 2	3	125	< 0.01	< 20	< 1	< 2	< 10	38	< 10	4	16	
693580	1.32	0.099	0.144	1.49	< 2	3	138	< 0.01	< 20	< 1	< 2	< 10	37	< 10	5	16	
693581	1.35	0.089	0.131	1.99	< 2	3	158	< 0.01	< 20	3	< 2	< 10	36	< 10	4	15	
693582	1.09	0.100	0.145	2.60	2	2	144	< 0.01	< 20	< 1	< 2	< 10	34	< 10	5	16	
693583	1.10	0.113	0.147	1.51	< 2	2	132	< 0.01	< 20	< 1	< 2	< 10	35	< 10	5	14	
693584	1.10	0.099	0.152	1.37	< 2	2	121	< 0.01	< 20	3	< 2	< 10	33	< 10	5	14	
693585	1.16	0.091	0.150	1.37	< 2	2	124	< 0.01	< 20	< 1	< 2	< 10	32	< 10	5	13	
693586	0.80	0.076	0.135	1.90	< 2	2	128	< 0.01	< 20	< 1	< 2	< 10	25	< 10	4	11	
693587	0.87	0.081	0.131	2.11	< 2	2	209	< 0.01	< 20	2	< 2	< 10	21	< 10	6	12	
693588	1.10	0.062	0.116	3.65	3	5	178	< 0.01	< 20	1	< 2	< 10	44	< 10	4	12	
693589	0.89	0.081	0.147	1.15	< 2	2	138	< 0.01	< 20	4	< 2	< 10	30	< 10	5	10	
693590	0.89	0.076	0.134	1.67	< 2	3	178	< 0.01	< 20	2	< 2	< 10	29	< 10	5	10	
693591	0.99	0.102	0.134	1.62	2	3	180	< 0.01	< 20	< 1	< 2	< 10	32	< 10	5	11	
693592	0.92	0.088	0.150	0.74	< 2	2	144	< 0.01	< 20	2	< 2	< 10	29	< 10	5	9	
693593	0.81	0.089	0.161	0.41	< 2	2	163	< 0.01	< 20	< 1	< 2	< 10	21	< 10	6	7	
693594	2.21	0.066	0.035	0.24	< 2	6	36	0.37	< 20	3	< 2	< 10	159	< 10	11	17	
693595	0.67	0.098	0.162	0.43	< 2	2	147	< 0.01	< 20	1	< 2	< 10	28	< 10	5	8	
693596	0.84	0.097	0.164	0.56	2	4	155	< 0.01	< 20	< 1	< 2	< 10	41	< 10	5	8	
693597	1.05	0.108	0.132	0.65	< 2	5	117	< 0.01	< 20	< 1	< 2	< 10	43	< 10	5	11	
693598	0.60	0.103	0.143	0.52	< 2	2	148	< 0.01	< 20	2	< 2	< 10	22	< 10	5	10	
693599	0.84	0.084	0.119	0.36	< 2	3	134	< 0.01	< 20	2	< 2	< 10	20	< 10	6	9	
693600	0.75	0.101	0.141	0.26	3	2	109	< 0.01	< 20	2	< 2	< 10	21	< 10	5	9	
693601	1.05	0.091	0.129	0.60	< 2	4	102	< 0.01	< 20	< 1	< 2	< 10	34	< 10	5	9	
693602	1.06	0.125	0.133	0.46	< 2	4	126	< 0.01	< 20	2	< 2	< 10	34	< 10	5	9	
693603	0.86	0.158	0.149	0.53	< 2	3	135	< 0.01	< 20	< 1	< 2	< 10	28	< 10	5	9	
693604	0.05	2.94	0.001	< 0.01	< 2	< 1	24	< 0.01	< 20	< 1	2	< 10	< 1	< 10	4	2	
693605	1.11	0.138	0.139	0.37	< 2	4	126	< 0.01	< 20	< 1	< 2	< 10	35	< 10	5	9	
693606	0.92	0.134	0.124	0.48	< 2	4	114	< 0.01	< 20	3	< 2	< 10	33	< 10	4	9	
693607	1.01	0.137	0.132	0.96	3	4	109	< 0.01	< 20	< 1	< 2	< 10	35	< 10	5	10	
693608	0.90	0.138	0.145	0.47	< 2	3	115	< 0.01	< 20	2	< 2	< 10	26	< 10	5	8	
693609	0.98	0.136	0.152	0.20	< 2	3	121	< 0.01	< 20	< 1	< 2	< 10	23	< 10	5	7	
693610	1.20	0.153	0.125	0.89	3	5	123	< 0.01	< 20	2	< 2	< 10	45	< 10	5	13	
693611	1.00	0.139	0.131	1.29	< 2	4	97	< 0.01	< 20	3	< 2	< 10	41	< 10	5	12	
693612	1.48	0.133	0.107	2.25	2	5	107	< 0.01	< 20	< 1	< 2	< 10	28	< 10	5	12	
693613	1.39	0.148	0.115	2.33	3	5	108	< 0.01	< 20	< 1	< 2	< 10	29	< 10	5	13	

Analyte Symbol	Mg	Na	P	S	Sb	Sc	Sr	Ti	Th	Te	Tl	U	V	W	Y	Zr	Au
Unit Symbol	%	%	%	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	g/tonne
Lower Limit	0.01	0.001	0.001	0.01	2	1	1	0.01	20	1	2	10	1	10	1	1	0.03
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	FA- GRA
693614	2.97	0.128	0.071	2.59	3	5	143	< 0.01	< 20	< 1	< 2	< 10	16	< 10	5	13	
693615	1.09	0.187	0.099	1.69	3	2	100	< 0.01	< 20	2	< 2	< 10	11	< 10	4	11	
693616	0.83	0.197	0.099	3.98	3	2	88	< 0.01	< 20	< 1	< 2	< 10	13	< 10	4	15	
693617	0.82	0.153	0.101	3.44	3	2	65	< 0.01	< 20	< 1	< 2	< 10	14	< 10	4	17	
693618	0.85	0.176	0.100	2.32	3	2	72	< 0.01	< 20	< 1	< 2	< 10	15	< 10	4	14	
693619	1.10	0.141	0.065	5.23	5	15	107	< 0.01	< 20	2	< 2	< 10	130	< 10	10	15	
693620	0.82	0.173	0.097	3.34	3	2	72	< 0.01	< 20	< 1	< 2	< 10	12	< 10	4	16	
693621	0.85	0.087	0.095	3.95	4	2	60	< 0.01	< 20	< 1	< 2	< 10	7	< 10	4	14	
693622	0.91	0.097	0.101	2.35	3	2	71	< 0.01	< 20	< 1	< 2	< 10	7	< 10	4	11	
693623	2.22	0.067	0.035	0.25	< 2	7	38	0.39	< 20	4	< 2	< 10	163	< 10	11	17	
693624	0.87	0.091	0.098	4.05	5	2	61	< 0.01	< 20	< 1	< 2	< 10	8	< 10	4	14	
693625	0.80	0.097	0.107	1.94	2	2	68	< 0.01	< 20	3	< 2	< 10	9	< 10	4	10	
693626	0.79	0.094	0.106	1.90	2	2	66	< 0.01	< 20	3	< 2	< 10	9	< 10	4	10	
693627	0.77	0.069	0.093	1.63	3	2	70	< 0.01	< 20	< 1	< 2	< 10	8	< 10	4	10	
693628	0.76	0.069	0.093	1.63	3	2	70	< 0.01	< 20	< 1	< 2	< 10	8	< 10	4	10	
693629	0.85	0.062	0.098	1.82	5	6	77	< 0.01	< 20	< 1	< 2	< 10	51	< 10	5	12	
693630	0.87	0.065	0.101	1.93	5	6	79	< 0.01	< 20	2	< 2	< 10	52	< 10	6	13	
693631	0.70	0.066	0.080	4.10	6	2	93	< 0.01	< 20	< 1	< 2	< 10	7	< 10	4	16	
693632	0.70	0.063	0.080	4.02	5	2	91	< 0.01	< 20	2	< 2	< 10	7	< 10	4	16	
693633	0.04	2.62	0.001	0.01	< 2	< 1	19	< 0.01	< 20	< 1	< 2	< 10	< 1	< 10	4	1	
693634	0.73	0.102	0.100	3.48	4	2	94	< 0.01	< 20	< 1	< 2	< 10	8	< 10	4	14	
693635	0.59	0.062	0.073	5.18	5	2	82	< 0.01	< 20	2	< 2	< 10	5	< 10	3	16	
693636	0.59	0.060	0.072	5.07	5	2	81	< 0.01	< 20	1	< 2	< 10	4	< 10	3	15	
693637	0.94	0.053	0.156	3.15	4	3	131	< 0.01	< 20	3	< 2	< 10	7	< 10	6	21	
693638	0.94	0.054	0.156	3.18	4	3	131	< 0.01	< 20	2	< 2	< 10	7	< 10	6	21	
693639	1.29	0.060	0.144	1.80	2	3	126	< 0.01	< 20	< 1	< 2	< 10	8	< 10	5	13	
693640	1.28	0.061	0.141	1.78	2	3	126	< 0.01	< 20	< 1	< 2	< 10	8	< 10	5	13	
693641	0.87	0.062	0.148	2.88	5	3	108	< 0.01	< 20	< 1	< 2	< 10	8	1060	5	16	
693642	0.67	0.073	0.150	3.32	5	3	95	< 0.01	< 20	2	< 2	< 10	10	20	5	18	
693643	0.69	0.078	0.153	3.35	5	3	97	< 0.01	< 20	3	< 2	< 10	10	15	5	18	
693644	0.58	0.057	0.099	3.71	5	1	79	< 0.01	< 20	1	< 2	< 10	5	< 10	4	11	
693645	0.64	0.053	0.116	3.14	4	1	75	< 0.01	< 20	< 1	< 2	< 10	4	< 10	4	11	
693646	0.60	0.056	0.101	3.85	5	1	81	< 0.01	< 20	< 1	< 2	< 10	5	< 10	4	11	
693647	0.64	0.052	0.116	3.15	5	1	76	< 0.01	< 20	< 1	< 2	< 10	4	< 10	4	11	
693648	0.67	0.050	0.096	9.58	11	2	88	< 0.01	< 20	< 1	< 2	< 10	10	66	4	22	
693649	0.66	0.050	0.094	9.50	11	2	87	< 0.01	< 20	< 1	< 2	< 10	10	72	4	22	
693650	0.62	0.015	0.010	10.7	13	< 1	88	< 0.01	< 20	< 1	< 2	< 10	4	< 10	2	6	
693651	0.61	0.013	0.009	10.2	14	< 1	86	< 0.01	< 20	< 1	< 2	< 10	4	< 10	2	6	
693652	1.00	0.013	< 0.001	10.2	16	1	93	< 0.01	< 20	< 1	< 2	< 10	6	< 10	2	7	
693653	1.00	0.013	< 0.001	10.2	16	1	94	< 0.01	< 20	< 1	< 2	< 10	6	< 10	2	7	
693654	0.82	0.034	0.046	15.9	24	1	77	< 0.01	< 20	< 1	< 2	< 10	7	< 10	3	19	
693655	0.80	0.033	0.044	15.6	22	1	74	< 0.01	< 20	< 1	< 2	< 10	7	< 10	3	19	

Analyte Symbol	Mg	Na	P	S	Sb	Sc	Sr	Ti	Th	Te	Tl	U	V	W	Y	Zr	Au
Unit Symbol	%	%	%	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	g/tonne
Lower Limit	0.01	0.001	0.001	0.01	2	1	1	0.01	20	1	2	10	1	10	1	1	0.03
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	FA- GRA
693656	2.04	0.087	0.039	0.19	< 2	8	26	0.41	< 20	< 1	< 2	< 10	179	< 10	14	19	
693657	0.69	0.039	0.063	12.2	12	2	115	< 0.01	< 20	2	< 2	< 10	7	< 10	3	24	
693658	0.67	0.038	0.062	11.9	12	2	114	< 0.01	< 20	< 1	< 2	< 10	7	< 10	3	23	
693659	0.81	0.017	0.014	7.59	9	2	108	< 0.01	< 20	1	< 2	< 10	10	< 10	2	8	
693660	0.75	0.047	0.082	4.14	6	2	99	< 0.01	< 20	< 1	< 2	< 10	6	< 10	3	13	
693661	0.05	2.84	0.001	0.03	< 2	< 1	22	< 0.01	< 20	< 1	< 2	< 10	< 1	< 10	4	1	
693662	0.91	0.076	0.097	1.25	3	2	121	< 0.01	< 20	3	< 2	< 10	9	< 10	5	13	
693663	0.62	0.066	0.099	0.72	< 2	2	102	< 0.01	< 20	< 1	< 2	< 10	7	< 10	5	11	
693664	0.61	0.063	0.104	0.96	< 2	2	104	< 0.01	< 20	< 1	< 2	< 10	6	< 10	4	11	
693665	0.67	0.066	0.097	2.56	4	1	112	< 0.01	< 20	1	< 2	< 10	7	< 10	4	15	
693666	0.56	0.067	0.095	3.56	6	1	75	< 0.01	< 20	3	< 2	< 10	7	< 10	4	10	
693667	0.57	0.057	0.082	6.41	12	1	73	< 0.01	< 20	2	< 2	< 10	6	< 10	3	13	
693668	0.57	0.064	0.084	5.99	11	1	75	< 0.01	< 20	< 1	< 2	< 10	7	< 10	3	13	
693669	0.42	0.054	0.077	4.74	5	1	70	< 0.01	< 20	< 1	< 2	< 10	9	< 10	3	12	
693670	0.89	0.054	0.064	6.98	7	2	120	< 0.01	< 20	2	< 2	< 10	16	< 10	3	16	
693671	0.35	0.014	0.004	9.26	14	< 1	40	< 0.01	< 20	< 1	< 2	< 10	4	< 10	< 1	6	
693672	0.24	0.017	0.005	19.1	31	< 1	24	< 0.01	< 20	3	< 2	< 10	5	< 10	1	13	4.15
693673	0.05	0.020	0.012	> 20.0	36	< 1	8	< 0.01	< 20	< 1	< 2	< 10	6	< 10	< 1	11	7.07
693674	0.04	2.79	< 0.001	0.11	< 2	< 1	21	< 0.01	< 20	< 1	< 2	< 10	< 1	< 10	4	2	
693675	0.04	0.020	0.017	19.8	33	< 1	9	< 0.01	< 20	2	< 2	< 10	5	< 10	< 1	11	8.36
693676	0.17	0.036	0.029	> 20.0	26	< 1	37	< 0.01	< 20	< 1	3	< 10	6	< 10	2	24	6.01
693677	0.79	0.051	0.089	3.13	3	3	137	< 0.01	< 20	< 1	< 2	< 10	8	< 10	5	30	
693678	0.81	0.038	0.033	1.90	3	2	130	< 0.01	< 20	< 1	< 2	< 10	6	< 10	3	17	
693679	2.10	0.092	0.040	0.19	< 2	8	27	0.43	< 20	4	< 2	< 10	186	< 10	14	19	
693680	0.25	0.020	0.003	> 20.0	26	2	35	< 0.01	< 20	< 1	< 2	< 10	6	< 10	1	11	5.79
693681	0.05	0.015	0.014	> 20.0	28	< 1	9	< 0.01	< 20	< 1	< 2	< 10	5	< 10	1	9	7.49
693682	0.18	0.021	0.024	19.7	26	2	12	< 0.01	< 20	< 1	< 2	< 10	15	< 10	2	15	3.65
693683	0.05	0.018	< 0.001	0.28	< 2	< 1	4	< 0.01	< 20	< 1	< 2	< 10	1	< 10	< 1	1	
693684	0.01	0.026	< 0.001	0.15	< 2	< 1	4	< 0.01	< 20	< 1	< 2	< 10	< 1	< 10	< 1	< 1	
693685	0.08	0.026	0.005	0.03	< 2	< 1	13	< 0.01	< 20	2	< 2	< 10	4	< 10	< 1	3	
693686	1.39	0.141	0.122	1.14	2	7	140	< 0.01	< 20	2	< 2	< 10	27	< 10	7	14	
693687	1.07	0.111	0.171	0.83	3	6	126	< 0.01	< 20	1	< 2	< 10	22	< 10	8	9	
693688	1.42	0.106	0.131	1.62	3	7	140	< 0.01	< 20	< 1	< 2	< 10	27	< 10	7	21	
693689	1.20	0.103	0.154	0.53	< 2	5	136	< 0.01	< 20	< 1	< 2	< 10	25	< 10	7	10	
693690	1.32	0.086	0.124	0.20	2	6	134	< 0.01	< 20	< 1	< 2	< 10	42	< 10	6	13	
693691	0.44	0.067	0.104	0.02	< 2	2	69	< 0.01	< 20	< 1	< 2	< 10	16	< 10	4	12	
693692	0.04	2.71	0.001	< 0.01	< 2	< 1	20	< 0.01	< 20	< 1	< 2	< 10	< 1	< 10	3	1	
693693	1.31	0.082	0.170	0.05	3	7	125	< 0.01	< 20	< 1	< 2	< 10	62	< 10	7	8	
693694	1.39	0.068	0.133	0.01	4	7	129	< 0.01	< 20	< 1	< 2	< 10	55	< 10	7	9	
693695	1.36	0.055	0.125	0.06	< 2	7	121	< 0.01	< 20	2	< 2	< 10	42	< 10	6	12	
693696	1.34	0.056	0.122	0.06	< 2	6	119	< 0.01	< 20	< 1	< 2	< 10	41	< 10	6	11	

Analyte Symbol	Mg	Na	P	S	Sb	Sc	Sr	Ti	Th	Te	Tl	U	V	W	Y	Zr	Au
Unit Symbol	%	%	%	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	g/tonne
Lower Limit	0.01	0.001	0.001	0.01	2	1	1	0.01	20	1	2	10	1	10	1	1	0.03
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	FA- GRA
693697	1.28	0.125	0.152	0.03	< 2	5	158	< 0.01	< 20	< 1	< 2	< 10	23	< 10	7	5	
693698	0.50	0.113	0.173	0.05	< 2	4	84	< 0.01	< 20	2	< 2	< 10	26	< 10	6	6	
693699	0.89	0.118	0.133	0.04	< 2	7	94	< 0.01	< 20	< 1	< 2	< 10	49	< 10	5	8	
693700	1.16	0.080	0.126	0.02	2	8	103	< 0.01	< 20	< 1	< 2	< 10	48	< 10	5	9	
693701	1.17	0.079	0.126	0.02	< 2	8	103	< 0.01	< 20	< 1	< 2	< 10	48	< 10	5	9	
693702	0.91	0.100	0.132	0.04	< 2	6	90	< 0.01	< 20	< 1	< 2	< 10	45	< 10	5	8	
693703	1.03	0.116	0.124	0.17	3	6	132	< 0.01	< 20	3	< 2	< 10	32	< 10	6	9	
693704	1.26	0.158	0.098	0.21	3	7	114	< 0.01	< 20	< 1	< 2	< 10	39	< 10	6	12	
693705	0.94	0.154	0.114	0.06	< 2	5	107	< 0.01	< 20	5	< 2	< 10	26	< 10	6	7	
693706	0.94	0.115	0.116	0.05	< 2	5	98	< 0.01	< 20	< 1	< 2	< 10	30	< 10	5	9	
693707	1.18	0.115	0.103	0.03	< 2	5	111	< 0.01	< 20	< 1	< 2	< 10	27	< 10	6	11	
693708	0.99	0.102	0.098	0.24	< 2	5	90	< 0.01	< 20	< 1	< 2	< 10	26	< 10	6	13	
693709	1.20	0.085	0.096	0.04	< 2	5	103	< 0.01	< 20	< 1	< 2	< 10	29	< 10	6	12	
693710	2.07	0.087	0.040	0.19	< 2	8	26	0.42	< 20	< 1	< 2	< 10	181	< 10	14	19	
693711	1.17	0.104	0.108	0.09	< 2	4	116	< 0.01	< 20	< 1	< 2	< 10	20	< 10	6	9	
693712	0.94	0.099	0.096	0.02	< 2	4	86	< 0.01	< 20	< 1	< 2	< 10	25	< 10	6	12	
693713	1.47	0.097	0.097	0.20	2	7	114	< 0.01	< 20	< 1	< 2	< 10	47	< 10	6	15	
693714	0.74	0.097	0.102	0.02	< 2	4	82	< 0.01	< 20	2	< 2	< 10	20	< 10	6	12	
693715	1.08	0.086	0.103	0.02	< 2	3	104	< 0.01	< 20	4	< 2	< 10	19	< 10	6	13	
693716	1.27	0.096	0.102	0.02	< 2	5	118	< 0.01	< 20	2	< 2	< 10	22	< 10	6	13	
693717	1.11	0.101	0.108	0.03	< 2	3	115	< 0.01	< 20	< 1	< 2	< 10	17	< 10	7	8	
693718	0.92	0.111	0.095	0.02	< 2	4	105	< 0.01	< 20	< 1	< 2	< 10	19	< 10	6	13	
693719	0.04	2.79	0.001	< 0.01	< 2	< 1	19	< 0.01	< 20	1	< 2	< 10	< 1	< 10	3	< 1	
693720	1.05	0.101	0.046	0.01	3	6	62	< 0.01	< 20	< 1	< 2	< 10	52	< 10	6	27	
693721	0.80	0.118	0.043	0.03	5	6	46	< 0.01	< 20	< 1	< 2	< 10	54	< 10	6	30	
693722	0.99	0.094	0.034	0.24	6	8	37	< 0.01	< 20	< 1	< 2	< 10	60	< 10	6	31	
693723	0.91	0.095	0.072	0.02	4	6	52	< 0.01	< 20	< 1	< 2	< 10	54	< 10	6	23	
693724	0.69	0.111	0.096	0.02	< 2	4	94	< 0.01	< 20	< 1	< 2	< 10	27	< 10	6	11	
693725	0.88	0.109	0.153	0.01	< 2	4	115	< 0.01	< 20	< 1	< 2	< 10	22	< 10	6	7	
693726	0.95	0.093	0.154	0.01	2	6	116	< 0.01	< 20	< 1	< 2	< 10	44	< 10	7	8	
693727	0.62	0.090	0.161	0.02	< 2	3	141	< 0.01	< 20	< 1	< 2	< 10	22	< 10	6	8	
693728	0.48	0.086	0.178	0.02	< 2	3	103	< 0.01	< 20	< 1	< 2	< 10	28	< 10	6	7	
693729	0.82	0.084	0.141	0.01	< 2	4	123	< 0.01	< 20	4	< 2	< 10	25	< 10	6	8	
693730	0.83	0.078	0.155	0.01	< 2	3	121	< 0.01	< 20	< 1	< 2	< 10	18	< 10	6	6	
693731	0.45	0.066	0.176	0.02	< 2	2	98	< 0.01	< 20	< 1	< 2	< 10	13	< 10	6	6	
693732	0.45	0.064	0.172	0.02	< 2	2	97	< 0.01	< 20	3	< 2	< 10	12	< 10	6	6	
693733	0.51	0.069	0.162	0.02	< 2	3	104	< 0.01	< 20	< 1	< 2	< 10	18	< 10	6	7	
693734	0.52	0.063	0.172	0.01	< 2	4	127	< 0.01	< 20	< 1	< 2	< 10	19	< 10	6	6	
693735	0.41	0.068	0.184	0.04	< 2	2	114	< 0.01	< 20	< 1	< 2	< 10	16	< 10	7	6	
693736	0.88	0.075	0.145	0.02	< 2	5	123	< 0.01	< 20	< 1	< 2	< 10	37	< 10	7	9	
693737	2.03	0.053	0.107	0.02	< 2	7	230	< 0.01	< 20	2	< 2	< 10	30	< 10	7	12	
693738	1.82	0.051	0.118	0.01	< 2	7	232	< 0.01	< 20	< 1	< 2	< 10	31	< 10	8	11	

Analyte Symbol	Mg	Na	P	S	Sb	Sc	Sr	Ti	Th	Te	Tl	U	V	W	Y	Zr	Au
Unit Symbol	%	%	%	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	g/tonne
Lower Limit	0.01	0.001	0.001	0.01	2	1	1	0.01	20	1	2	10	1	10	1	1	0.03
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	FA- GRA
693739	1.06	0.057	0.148	0.02	2	5	160	< 0.01	< 20	< 1	< 2	< 10	29	< 10	8	8	
693740	0.53	0.073	0.166	0.04	< 2	3	138	< 0.01	< 20	2	< 2	< 10	25	< 10	7	7	
693741	0.84	0.109	0.148	2.30	< 2	2	122	< 0.01	< 20	2	< 2	< 10	13	< 10	5	11	
693742	0.75	0.086	0.148	1.95	< 2	2	112	< 0.01	< 20	< 1	< 2	< 10	10	< 10	5	10	
693743	1.16	0.080	0.134	1.86	< 2	2	168	< 0.01	< 20	< 1	< 2	< 10	9	< 10	5	11	
693744	0.78	0.081	0.142	2.76	< 2	2	98	< 0.01	< 20	2	< 2	< 10	11	< 10	4	11	
693745	0.87	0.078	0.137	4.28	< 2	2	94	< 0.01	< 20	< 1	< 2	< 10	11	< 10	4	12	
693746	0.77	0.062	0.127	6.35	3	1	92	< 0.01	< 20	< 1	< 2	< 10	8	< 10	4	13	
693749	0.49	0.054	0.075	18.1	9	< 1	52	< 0.01	< 20	< 1	< 2	< 10	9	< 10	2	16	



Analyte Symbol	Au	Ag	Cd	Cu	Mn	Mo	Ni	Pb	Zn	Al	As	B	Ba	Be	Bi	Ca	Co	Cr	Fe	Ga	Hg	K	La
Unit Symbol	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm
Lower Limit	5	0.2	0.5	1	5	1	1	2	2	0.01	2	10	10	0.5	2	0.01	1	1	0.01	10	1	0.01	10
Method Code	FA-AA	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
GXR-1 Meas		26.1	2.2	1110	774	14	23	641	682	0.32	338	< 10	286	0.7	1290	0.74	5	6	20.1	< 10	4	0.03	< 10
GXR-1 Cert		31.0	3.30	1110	852	18.0	41.0	730	760	3.52	427	15.0	750	1.22	1380	0.960	8.20	12.0	23.6	13.8	3.90	0.050	7.50
GXR-1 Meas		27.9	2.5	1190	812	15	31	670	711	0.35	350	< 10	307	0.8	1370	0.78	5	6	21.6	< 10	4	0.03	< 10
GXR-1 Cert		31.0	3.30	1110	852	18.0	41.0	730	760	3.52	427	15.0	750	1.22	1380	0.960	8.20	12.0	23.6	13.8	3.90	0.050	7.50
GXR-6 Meas		0.3	< 0.5	66	988	1	18	94	131	6.76	223	< 10	893	0.8	< 2	0.15	13	73	4.88	10	< 1	0.98	10
GXR-6 Cert		1.30	1.00	66.0	1010	2.40	27.0	101	118	17.7	330	9.80	1300	1.40	0.290	0.180	13.8	96.0	5.58	35.0	0.0680	1.87	13.9
GXR-6 Meas		0.3	< 0.5	71	1070	1	20	99	128	7.43	239	< 10	966	0.9	< 2	0.16	13	79	5.35	20	< 1	1.08	11
GXR-6 Cert		1.30	1.00	66.0	1010	2.40	27.0	101	118	17.7	330	9.80	1300	1.40	0.290	0.180	13.8	96.0	5.58	35.0	0.0680	1.87	13.9
OREAS 133a (Aqua Regia) Meas		85.6	241	310				> 5000	> 10000		121		19				21		6.70				
OREAS 133a (Aqua Regia) Cert		97	297	324				48600.00	106000.00		140		59				23		7.92				
OXN117 Meas																							
OXN117 Cert																							
OxP116 Meas																							
OxP116 Cert																							
OREAS 218 Meas	550																						
OREAS 218 Cert	531																						
OREAS 218 Meas	524																						
OREAS 218 Cert	531																						
OREAS 218 Meas	529																						
OREAS 218 Cert	531																						
OREAS 218 Meas	525																						
OREAS 218 Cert	531																						
OREAS 218 Meas	530																						
OREAS 218 Cert	531																						
OREAS 218 Meas	501																						
OREAS 218 Cert	531																						
OREAS 218 Meas	521																						
OREAS 218 Cert	531																						
OREAS 224 Meas	2200																						
OREAS 224 Cert	2150.00																						
OREAS 224 Meas	2110																						
OREAS 224 Cert	2150.00																						
OREAS 224 Meas	2100																						
OREAS 224 Cert	2150.00																						
OREAS 224 Meas	2050																						
OREAS 224 Cert	2150.00																						
OREAS 224 Meas	2070																						

Analyte Symbol	Au	Ag	Cd	Cu	Mn	Mo	Ni	Pb	Zn	Al	As	B	Ba	Be	Bi	Ca	Co	Cr	Fe	Ga	Hg	K	La
Unit Symbol	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm
Lower Limit	5	0.2	0.5	1	5	1	1	2	2	0.01	2	10	10	0.5	2	0.01	1	1	0.01	10	1	0.01	10
Method Code	FA-AA	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
OREAS 224 Cert	2150.000																						
OREAS 224 Meas	2230																						
OREAS 224 Cert	2150.000																						
693575 Orig		< 0.2	< 0.5	26	395	< 1	267	6	82	2.06	12	< 10	70	< 0.5	< 2	3.30	34	56	4.04	< 10	< 1	0.24	11
693575 Dup		< 0.2	< 0.5	24	387	< 1	258	8	77	2.01	13	< 10	72	< 0.5	< 2	3.23	33	54	3.93	< 10	< 1	0.23	11
693582 Orig	< 5																						
693582 Dup	< 5																						
693583 Orig		< 0.2	< 0.5	23	422	< 1	189	5	106	2.17	13	< 10	75	< 0.5	< 2	3.60	28	53	3.46	< 10	< 1	0.22	14
693583 Dup		< 0.2	< 0.5	23	419	< 1	184	5	105	2.15	13	< 10	73	< 0.5	< 2	3.58	28	52	3.44	< 10	< 1	0.21	13
693592 Orig	6																						
693592 Dup	5																						
693602 Orig	8																						
693602 Dup	8																						
693617 Orig	8																						
693617 Dup	6																						
693622 Orig	< 5	< 0.2	< 0.5	24	477	< 1	50	4	44	0.54	36	< 10	30	< 0.5	< 2	3.30	14	3	4.09	< 10	< 1	0.06	< 10
693622 Split PREP DUP	< 5	< 0.2	< 0.5	24	480	< 1	51	3	43	0.53	36	< 10	29	< 0.5	< 2	3.31	15	4	4.10	< 10	< 1	0.06	< 10
693623 Orig		0.4	< 0.5	166	738	1	75	8	64	3.99	11	17	27	< 0.5	< 2	3.36	30	118	5.37	< 10	< 1	0.08	< 10
693623 Dup		0.4	< 0.5	170	746	1	77	8	68	4.05	13	17	26	< 0.5	< 2	3.39	31	120	5.46	< 10	< 1	0.09	< 10
693626 Orig	< 5																						
693626 Dup	5																						
693636 Orig	374	0.3	< 0.5	15	794	< 1	88	10	52	0.29	1500	< 10	23	< 0.5	< 2	2.09	19	18	5.53	< 10	< 1	0.07	< 10
693636 Dup	382	0.3	< 0.5	14	776	< 1	83	9	49	0.28	1440	< 10	23	< 0.5	< 2	2.05	18	24	5.39	< 10	< 1	0.07	< 10
693639 Orig		< 0.2	< 0.5	18	810	< 1	148	3	45	0.42	194	< 10	33	< 0.5	< 2	3.90	26	22	3.17	< 10	< 1	0.11	< 10
693639 Dup		< 0.2	< 0.5	18	796	< 1	146	< 2	45	0.40	191	< 10	31	< 0.5	< 2	3.84	25	22	3.08	< 10	< 1	0.10	< 10
693651 Orig	2670																						
693651 Dup	2650																						
693652 Orig		0.5	< 0.5	16	3670	< 1	57	10	61	0.12	1750	< 10	< 10	< 0.5	< 2	2.39	11	39	13.2	< 10	1	< 0.01	< 10
693652 Dup		0.5	< 0.5	16	3630	< 1	57	12	60	0.12	1730	< 10	< 10	< 0.5	< 2	2.35	12	46	13.0	< 10	< 1	< 0.01	< 10
693661 Orig	< 5																						
693661 Dup	< 5																						
693664 Orig		< 0.2	< 0.5	11	654	1	31	< 2	37	0.57	68	< 10	42	< 0.5	< 2	2.88	13	16	2.87	< 10	< 1	0.18	< 10
693664 Dup		< 0.2	< 0.5	11	665	1	32	< 2	35	0.57	70	< 10	43	< 0.5	< 2	2.94	13	13	2.93	< 10	< 1	0.19	< 10
693671 Orig	1270																						
693671 Dup	1260																						
693672 Orig	3770	2.0	< 0.5	51	1440	< 1	28	28	73	0.16	1490	< 10	< 10	< 0.5	4	0.52	25	23	17.8	< 10	< 1	0.04	< 10
693672 Split PREP DUP	3790	1.9	< 0.5	53	1530	< 1	37	29	81	0.18	1580	< 10	< 10	< 0.5	4	0.58	26	25	18.4	< 10	< 1	0.04	< 10
693678 Orig		< 0.2	< 0.5	4	1030	< 1	38	5	29	0.23	403	< 10	26	< 0.5	< 2	2.53	11	41	3.51	< 10	< 1	0.09	< 10
693678 Dup		< 0.2	< 0.5	4	1060	< 1	39	6	31	0.26	429	< 10	27	< 0.5	< 2	2.59	11	44	3.62	< 10	< 1	0.10	< 10

Analyte Symbol	Au	Ag	Cd	Cu	Mn	Mo	Ni	Pb	Zn	Al	As	B	Ba	Be	Bi	Ca	Co	Cr	Fe	Ga	Hg	K	La
Unit Symbol	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm
Lower Limit	5	0.2	0.5	1	5	1	1	2	2	0.01	2	10	10	0.5	2	0.01	1	1	0.01	10	1	0.01	10
Method Code	FA-AA	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
693685 Orig	< 5																						
693685 Dup	< 5																						
693695 Orig	11																						
693695 Dup	9																						
693705 Orig	< 5																						
693705 Dup	< 5																						
693709 Orig		< 0.2	< 0.5	25	1390	< 1	98	< 2	101	1.56	19	< 10	30	< 0.5	< 2	3.65	26	38	5.01	< 10	< 1	0.10	17
693709 Dup		< 0.2	< 0.5	25	1400	< 1	99	< 2	101	1.58	18	< 10	31	< 0.5	< 2	3.69	25	39	5.07	< 10	< 1	0.10	17
693710 Orig		0.3	< 0.5	163	698	< 1	65	4	65	3.69	7	42	26	< 0.5	< 2	3.07	31	118	5.71	10	< 1	0.05	< 10
693710 Dup		0.3	< 0.5	161	689	< 1	65	5	62	3.65	7	42	27	< 0.5	< 2	3.04	30	117	5.65	10	< 1	0.05	< 10
693720 Orig	< 5																						
693720 Dup	< 5																						
693722 Orig	< 5	0.3	< 0.5	47	3110	< 1	113	5	126	2.82	34	< 10	29	< 0.5	4	0.18	87	60	14.4	< 10	< 1	0.10	15
693722 Split PREP DUP	< 5	0.2	< 0.5	46	3170	< 1	115	3	128	2.83	37	< 10	29	< 0.5	3	0.18	90	61	14.5	< 10	< 1	0.10	15
693729 Orig	< 5																						
693729 Dup	< 5																						
693739 Orig	< 5																						
693739 Dup	< 5																						
Method Blank	< 5																						
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Method Blank	< 5																						
Method Blank	< 5																						
Method Blank		< 0.2	< 0.5	2	< 5	< 1	< 1	< 2	2	< 0.01	< 2	< 10	< 10	< 0.5	< 2	< 0.01	< 1	< 1	< 0.01	< 10	< 1	< 0.01	< 10
Method Blank		< 0.2	< 0.5	< 1	< 5	< 1	< 1	< 2	< 2	< 0.01	< 2	< 10	< 10	< 0.5	< 2	< 0.01	< 1	< 1	< 0.01	< 10	< 1	< 0.01	< 10
Method Blank		< 0.2	< 0.5	< 1	< 5	< 1	< 1	< 2	< 2	< 0.01	< 2	< 10	< 10	< 0.5	< 2	< 0.01	< 1	< 1	< 0.01	< 10	< 1	< 0.01	< 10

Analyte Symbol	Mg	Na	P	S	Sb	Sc	Sr	Ti	Th	Te	Tl	U	V	W	Y	Zr	Au
Unit Symbol	%	%	%	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	g/tonne
Lower Limit	0.01	0.001	0.001	0.01	2	1	1	0.01	20	1	2	10	1	10	1	1	0.03
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	FA- GRA
GXR-1 Meas	0.12	0.044	0.038	0.19	68	1	146	< 0.01	< 20	12	< 2	28	77	127	24	13	
GXR-1 Cert	0.217	0.0520	0.0650	0.257	122	1.58	275	0.036	2.44	13.0	0.390	34.9	80.0	164	32.0	38.0	
GXR-1 Meas	0.13	0.048	0.040	0.20	72	1	154	< 0.01	< 20	9	< 2	29	81	134	25	14	
GXR-1 Cert	0.217	0.0520	0.0650	0.257	122	1.58	275	0.036	2.44	13.0	0.390	34.9	80.0	164	32.0	38.0	
GXR-6 Meas	0.35	0.075	0.032	0.01	4	21	30		< 20	< 1	< 2	< 10	171	< 10	6	14	
GXR-6 Cert	0.609	0.104	0.0350	0.0160	3.60	27.6	35.0		5.30	0.0180	2.20	1.54	186	1.90	14.0	110	
GXR-6 Meas	0.38	0.082	0.036	0.01	4	23	32		< 20	< 1	< 2	< 10	185	< 10	6	15	
GXR-6 Cert	0.609	0.104	0.0350	0.0160	3.60	27.6	35.0		5.30	0.0180	2.20	1.54	186	1.90	14.0	110	
OREAS 133a (Aqua Regia) Meas				9.71	105												
OREAS 133a (Aqua Regia) Cert				10.7	147												
OXN117 Meas																	7.73
OXN117 Cert																	7.679
OxP116 Meas																	15.1
OxP116 Cert																	14.92
OREAS 218 Meas																	
OREAS 218 Cert																	
OREAS 218 Meas																	
OREAS 218 Cert																	
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OREAS 224 Meas																	
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OREAS 224 Cert																	
OREAS 224 Meas																	
OREAS 224 Cert																	
OREAS 224 Meas																	

Analyte Symbol	Mg	Na	P	S	Sb	Sc	Sr	Ti	Th	Te	Tl	U	V	W	Y	Zr	Au
Unit Symbol	%	%	%	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	g/tonne
Lower Limit	0.01	0.001	0.001	0.01	2	1	1	0.01	20	1	2	10	1	10	1	1	0.03
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	FA- GRA
OREAS 224 Cert																	
693575 Orig	0.93	0.110	0.149	2.30	< 2	3	113	< 0.01	< 20	< 1	< 2	< 10	33	< 10	4	18	
693575 Dup	0.91	0.105	0.144	2.24	< 2	2	109	< 0.01	< 20	< 1	< 2	< 10	32	< 10	4	17	
693582 Orig																	
693582 Dup																	
693583 Orig	1.10	0.115	0.148	1.52	< 2	2	132	< 0.01	< 20	< 1	< 2	< 10	35	< 10	5	14	
693583 Dup	1.10	0.112	0.146	1.51	< 2	2	132	< 0.01	< 20	1	< 2	< 10	34	< 10	5	14	
693592 Orig																	
693592 Dup																	
693602 Orig																	
693602 Dup																	
693617 Orig																	
693617 Dup																	
693622 Orig	0.91	0.097	0.101	2.35	3	2	71	< 0.01	< 20	< 1	< 2	< 10	7	< 10	4	11	
693622 Split PREP DUP	0.91	0.094	0.101	2.33	2	2	71	< 0.01	< 20	< 1	< 2	< 10	7	< 10	4	11	
693623 Orig	2.20	0.066	0.035	0.24	3	7	38	0.38	< 20	2	< 2	< 10	161	< 10	11	17	
693623 Dup	2.23	0.067	0.036	0.25	< 2	7	39	0.39	< 20	5	< 2	< 10	164	< 10	11	17	
693626 Orig																	
693626 Dup																	
693636 Orig	0.59	0.060	0.073	5.14	5	2	83	< 0.01	< 20	1	< 2	< 10	4	< 10	3	15	
693636 Dup	0.58	0.059	0.071	5.00	5	2	79	< 0.01	< 20	1	< 2	< 10	4	< 10	3	15	
693639 Orig	1.30	0.061	0.144	1.80	2	3	126	< 0.01	< 20	< 1	< 2	< 10	8	< 10	5	13	
693639 Dup	1.27	0.059	0.143	1.80	2	3	126	< 0.01	< 20	2	< 2	< 10	8	< 10	5	13	
693651 Orig																	
693651 Dup																	
693652 Orig	1.01	0.013	< 0.001	10.3	15	1	93	< 0.01	< 20	< 1	< 2	< 10	6	< 10	2	7	
693652 Dup	0.98	0.012	< 0.001	10.2	16	1	92	< 0.01	< 20	< 1	< 2	< 10	6	< 10	1	6	
693661 Orig																	
693661 Dup																	
693664 Orig	0.61	0.063	0.103	0.96	2	2	103	< 0.01	< 20	< 1	< 2	< 10	6	< 10	4	11	
693664 Dup	0.62	0.063	0.105	0.96	< 2	2	104	< 0.01	< 20	< 1	< 2	< 10	6	< 10	5	11	
693671 Orig																	
693671 Dup																	
693672 Orig	0.24	0.017	0.005	19.1	31	< 1	24	< 0.01	< 20	3	< 2	< 10	5	< 10	1	13	4.15
693672 Split PREP DUP	0.26	0.018	0.006	> 20.0	32	< 1	27	< 0.01	< 20	< 1	< 2	< 10	6	< 10	1	14	3.89
693678 Orig	0.80	0.037	0.033	1.91	2	2	129	< 0.01	< 20	< 1	< 2	< 10	6	< 10	3	16	
693678 Dup	0.82	0.040	0.034	1.90	3	2	131	< 0.01	< 20	< 1	< 2	< 10	6	< 10	3	17	
693685 Orig																	
693685 Dup																	
693695 Orig																	

Analyte Symbol	Mg	Na	P	S	Sb	Sc	Sr	Ti	Th	Te	Tl	U	V	W	Y	Zr	Au
Unit Symbol	%	%	%	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	g/tonne
Lower Limit	0.01	0.001	0.001	0.01	2	1	1	0.01	20	1	2	10	1	10	1	1	0.03
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	FA- GRA
693695 Dup																	
693705 Orig																	
693705 Dup																	
693709 Orig	1.19	0.084	0.096	0.04	< 2	5	102	< 0.01	< 20	< 1	< 2	< 10	29	< 10	6	13	
693709 Dup	1.21	0.086	0.096	0.04	< 2	5	103	< 0.01	< 20	< 1	< 2	< 10	29	< 10	6	12	
693710 Orig	2.08	0.087	0.040	0.19	< 2	8	26	0.42	< 20	3	< 2	< 10	182	< 10	14	19	
693710 Dup	2.06	0.087	0.039	0.18	< 2	8	26	0.42	< 20	< 1	< 2	< 10	180	< 10	14	18	
693720 Orig																	
693720 Dup																	
693722 Orig	0.99	0.094	0.034	0.24	6	8	37	< 0.01	< 20	< 1	< 2	< 10	60	< 10	6	31	
693722 Split PREP DUP	1.00	0.091	0.034	0.26	5	8	36	< 0.01	< 20	< 1	< 2	< 10	60	< 10	6	32	
693729 Orig																	
693729 Dup																	
693739 Orig																	
693739 Dup																	
Method Blank																	
Method Blank																	
Method Blank																	
Method Blank																	
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Method Blank																	
Method Blank																	
Method Blank																	
Method Blank																	
Method Blank																	< 0.03
Method Blank																	< 0.03
Method Blank	< 0.01	0.010	< 0.001	< 0.01	< 2	< 1	< 1	< 0.01	< 20	< 1	< 2	< 10	< 1	< 10	< 1	< 1	
Method Blank	< 0.01	0.011	< 0.001	< 0.01	< 2	< 1	< 1	< 0.01	< 20	< 1	< 2	< 10	< 1	< 10	< 1	< 1	
Method Blank	< 0.01	0.012	< 0.001	< 0.01	< 2	< 1	< 1	< 0.01	< 20	< 1	< 2	< 10	< 1	< 10	< 1	< 1	



**Date Submitted:** 08-Mar-18  
**Invoice No.:** A18-02884  
**Invoice Date:** 04-Jun-18  
**Your Reference:** 81 Lucas

**Noble Mineral Exploration**  
**2500-120 Adelaide Street West**  
**Toronto ON M5H 1T1**  
**Canada**

**ATTN: Randy Singh (inv-cc)**

## CERTIFICATE OF ANALYSIS

105 Rock samples were submitted for analysis.

The following analytical package(s) were requested:

Code 1A2-Timmins Au - Fire Assay AA

Code 1E3-Timmins Aqua Regia ICP(AQUAGEO)

REPORT **A18-02884**

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

Notes:

If value exceeds upper limit we recommend reassay by fire assay gravimetric-Code 1A3.

Values which exceed the upper limit should be assayed for accurate numbers.

CERTIFIED BY:

A handwritten signature in black ink, appearing to read "Emmanuel Esemé". The signature is stylized with a large, sweeping initial 'E' and is written over a horizontal line.

Emmanuel Esemé , Ph.D.  
Quality Control

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E-MAIL Timmins@actlabs.com ACTLABS GROUP WEBSITE www.actlabs.com

## Results

## Activation Laboratories Ltd.

## Report: A18-02884

Analyte Symbol	Au	Au	Ag	Cd	Cu	Mn	Mo	Ni	Pb	Zn	Al	As	B	Ba	Be	Bi	Ca	Co	Cr	Fe	Ga	Hg	K
Unit Symbol	ppb	g/tonne	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%
Lower Limit	5	0.03	0.2	0.5	1	5	1	1	2	2	0.01	2	10	10	0.5	2	0.01	1	1	0.01	10	1	0.01
Method Code	FA-AA	FA- GRA	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
693747	21		< 0.2	< 0.5	16	889	< 1	317	4	34	1.49	126	< 10	11	< 0.5	< 2	2.12	63	23	15.4	< 10	< 1	0.30
693748	< 5		< 0.2	< 0.5	18	907	< 1	324	6	37	1.54	129	< 10	13	< 0.5	< 2	2.17	66	22	15.9	< 10	< 1	0.31
693750	< 5		< 0.2	< 0.5	19	1210	< 1	310	< 2	50	1.69	165	< 10	10	< 0.5	< 2	1.70	65	25	21.4	< 10	< 1	0.22
693751	< 5		< 0.2	0.6	13	1250	< 1	294	2	40	1.61	155	< 10	11	< 0.5	< 2	1.52	63	25	21.0	< 10	< 1	0.21
693752	< 5		< 0.2	< 0.5	16	2040	< 1	240	4	50	2.10	132	< 10	< 10	< 0.5	< 2	1.41	52	32	22.5	< 10	3	0.11
693753	< 5		< 0.2	< 0.5	14	1430	< 1	191	< 2	41	1.65	29	< 10	17	< 0.5	< 2	1.76	36	9	11.7	< 10	< 1	0.27
693754	< 5		< 0.2	< 0.5	13	942	< 1	86	2	40	1.32	8	< 10	58	< 0.5	< 2	3.16	16	4	5.17	< 10	< 1	0.34
693755	< 5		< 0.2	< 0.5	13	1610	< 1	70	2	106	2.44	3	< 10	75	< 0.5	2	3.59	14	7	8.41	< 10	< 1	0.22
693756	< 5		< 0.2	< 0.5	19	1830	< 1	113	< 2	89	2.62	4	< 10	43	< 0.5	< 2	2.95	20	8	11.0	< 10	< 1	0.19
693757	1100		< 0.2	< 0.5	164	718	< 1	77	2	62	3.35	< 2	48	32	< 0.5	< 2	3.05	37	142	5.98	10	< 1	0.06
693758	< 5		< 0.2	< 0.5	20	1020	2	72	< 2	63	1.56	6	< 10	114	< 0.5	< 2	2.80	19	5	4.61	< 10	< 1	0.34
693759	< 5		< 0.2	< 0.5	14	1660	< 1	96	4	84	2.50	9	< 10	68	< 0.5	< 2	3.27	18	6	9.23	< 10	< 1	0.19
693760	< 5		< 0.2	< 0.5	14	1350	< 1	98	< 2	117	2.58	7	< 10	75	< 0.5	< 2	2.87	18	7	8.65	< 10	< 1	0.22
693761	< 5		< 0.2	< 0.5	20	1350	< 1	106	< 2	87	2.13	8	< 10	58	< 0.5	< 2	3.01	19	6	7.77	< 10	< 1	0.28
693762	6		< 0.2	< 0.5	16	801	1	145	3	70	1.97	16	< 10	27	< 0.5	< 2	2.05	21	5	8.54	< 10	< 1	0.29
693763	5		< 0.2	< 0.5	15	1200	< 1	163	< 2	78	2.32	13	< 10	35	< 0.5	< 2	2.78	22	7	9.66	< 10	< 1	0.21
693764	5		< 0.2	< 0.5	14	1490	< 1	175	3	110	2.68	11	< 10	49	< 0.5	< 2	3.09	23	7	10.6	< 10	< 1	0.20
693765	5		< 0.2	< 0.5	18	1470	< 1	167	< 2	88	2.69	19	< 10	43	< 0.5	< 2	3.03	25	6	10.8	< 10	< 1	0.21
693766	11		< 0.2	< 0.5	19	1240	< 1	165	5	85	2.63	24	< 10	25	< 0.5	< 2	2.04	26	7	11.5	< 10	< 1	0.21
693767	< 5		< 0.2	< 0.5	< 1	81	< 1	1	< 2	15	4.40	< 2	10	11	0.6	< 2	0.19	< 1	< 1	0.47	10	< 1	1.41
693768	6		< 0.2	< 0.5	17	1450	< 1	126	< 2	73	2.54	9	< 10	49	< 0.5	< 2	2.81	21	5	9.72	< 10	< 1	0.23
693769	< 5		< 0.2	< 0.5	17	1600	< 1	134	3	74	2.58	18	< 10	29	< 0.5	< 2	2.33	24	5	11.9	< 10	< 1	0.20
693770	5		< 0.2	< 0.5	18	1740	< 1	116	3	85	2.67	20	< 10	24	< 0.5	< 2	2.05	21	5	13.1	< 10	< 1	0.18
693771	5		< 0.2	< 0.5	23	2510	< 1	83	3	67	2.65	8	< 10	22	< 0.5	< 2	2.02	24	6	14.4	< 10	< 1	0.22
693772	15		< 0.2	< 0.5	25	3100	< 1	68	< 2	72	2.34	< 2	< 10	28	< 0.5	< 2	2.47	27	6	13.3	< 10	< 1	0.25
693773	7		< 0.2	< 0.5	21	3740	< 1	62	< 2	75	1.37	3	< 10	34	0.5	< 2	2.19	22	4	14.0	< 10	< 1	0.29
693774	8		< 0.2	< 0.5	26	3440	< 1	66	5	105	1.26	5	< 10	38	0.5	< 2	2.53	25	4	14.3	< 10	< 1	0.28
693775	8		< 0.2	< 0.5	22	2370	< 1	81	3	129	1.52	11	< 10	74	0.5	< 2	2.88	23	5	11.6	< 10	< 1	0.29
693776	5		< 0.2	< 0.5	23	2360	< 1	83	< 2	133	1.54	13	< 10	61	0.5	< 2	2.92	28	5	11.6	< 10	< 1	0.29
693777	8		< 0.2	< 0.5	28	1720	< 1	81	2	132	1.58	18	< 10	72	0.5	< 2	2.79	25	4	9.85	< 10	< 1	0.28
693778	8		< 0.2	0.7	27	1990	< 1	89	< 2	153	1.36	15	< 10	61	0.5	< 2	2.62	27	5	11.5	< 10	< 1	0.30
693779	7		< 0.2	< 0.5	28	2260	< 1	106	3	138	1.10	25	< 10	62	0.5	< 2	2.43	32	4	11.2	< 10	< 1	0.28
693780	10		< 0.2	< 0.5	21	2500	1	105	5	121	1.27	28	< 10	52	0.6	< 2	2.48	33	5	11.3	< 10	< 1	0.33
693781	13		< 0.2	< 0.5	30	2390	1	262	5	146	1.06	61	< 10	39	< 0.5	< 2	2.25	55	5	11.3	< 10	< 1	0.28
693782	12		< 0.2	< 0.5	25	2720	< 1	467	4	145	1.17	138	< 10	35	< 0.5	< 2	2.20	85	5	11.8	< 10	< 1	0.27
693783	11		< 0.2	< 0.5	18	2920	1	458	4	177	1.18	121	< 10	49	< 0.5	< 2	2.42	82	5	12.7	< 10	< 1	0.25
693784	13		< 0.2	0.7	23	2550	< 1	609	3	204	1.25	173	< 10	34	< 0.5	< 2	2.19	106	4	12.3	< 10	< 1	0.27
693785	13		< 0.2	0.6	21	2380	< 1	812	6	147	1.34	228	< 10	30	< 0.5	< 2	2.01	135	4	12.0	< 10	< 1	0.27
693786	16		< 0.2	< 0.5	14	2410	< 1	370	3	128	1.12	88	< 10	54	< 0.5	< 2	3.11	62	5	11.4	< 10	< 1	0.26
693787	12		< 0.2	< 0.5	12	2040	< 1	256	< 2	93	1.23	66	< 10	57	< 0.5	< 2	3.32	45	5	9.44	< 10	< 1	0.34
693788	2460		< 0.2	< 0.5	99	1580	3	132	4	78	1.71	933	< 10	40	< 0.5	< 2	1.64	33	57	7.39	< 10	< 1	0.09



## Results

## Activation Laboratories Ltd.

## Report: A18-02884

Analyte Symbol	Au	Au	Ag	Cd	Cu	Mn	Mo	Ni	Pb	Zn	Al	As	B	Ba	Be	Bi	Ca	Co	Cr	Fe	Ga	Hg	K
Unit Symbol	ppb	g/tonne	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%
Lower Limit	5	0.03	0.2	0.5	1	5	1	1	2	2	0.01	2	10	10	0.5	2	0.01	1	1	0.01	10	1	0.01
Method Code	FA-AA	FA- GRA	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
693789	12		< 0.2	< 0.5	19	1960	< 1	275	2	83	1.33	72	< 10	42	< 0.5	< 2	3.05	53	5	9.53	< 10	< 1	0.34
693790	9		< 0.2	0.5	20	2610	< 1	196	3	117	1.25	38	< 10	36	< 0.5	< 2	2.27	39	6	11.4	< 10	< 1	0.31
693791	8		< 0.2	< 0.5	22	2490	< 1	394	4	101	1.08	69	< 10	25	< 0.5	< 2	1.79	61	5	12.6	< 10	< 1	0.21
693792	9		< 0.2	< 0.5	22	3040	< 1	245	8	84	1.13	61	< 10	20	< 0.5	< 2	1.65	47	4	15.0	< 10	< 1	0.22
693793	8		< 0.2	< 0.5	27	2570	< 1	140	< 2	86	1.18	14	< 10	58	< 0.5	< 2	2.73	27	4	9.90	< 10	< 1	0.28
693794	12		< 0.2	< 0.5	35	1670	< 1	279	6	99	1.23	53	< 10	30	< 0.5	2	2.09	61	4	9.73	< 10	< 1	0.27
693795	9		< 0.2	< 0.5	34	3050	< 1	103	2	116	1.29	22	< 10	70	< 0.5	< 2	2.79	29	8	11.4	< 10	< 1	0.27
693796	9		< 0.2	< 0.5	18	1870	< 1	62	< 2	62	1.41	16	< 10	96	0.5	< 2	2.95	23	4	6.84	< 10	< 1	0.35
693797	< 5		< 0.2	< 0.5	31	2210	< 1	71	2	86	1.24	20	< 10	90	0.5	< 2	3.04	27	5	7.52	< 10	< 1	0.33
693798	< 5		< 0.2	< 0.5	26	1620	< 1	60	< 2	69	1.29	7	< 10	90	0.7	< 2	2.82	19	4	6.34	< 10	< 1	0.31
693799	< 5		< 0.2	< 0.5	< 1	120	< 1	< 1	< 2	17	4.30	< 2	11	15	0.6	< 2	0.19	< 1	1	0.70	10	< 1	1.44
693800	< 5		< 0.2	< 0.5	38	2920	< 1	55	< 2	111	1.20	10	< 10	87	0.5	< 2	2.51	21	4	9.97	< 10	< 1	0.32
693801	< 5		< 0.2	< 0.5	56	2750	< 1	68	< 2	178	0.75	6	< 10	55	< 0.5	< 2	2.49	30	6	10.0	< 10	< 1	0.20
693802	< 5		< 0.2	< 0.5	45	3630	< 1	86	< 2	197	0.97	< 2	< 10	38	< 0.5	< 2	2.39	27	5	14.6	< 10	< 1	0.22
693803	9		< 0.2	< 0.5	125	3590	< 1	118	5	302	0.70	5	< 10	21	< 0.5	< 2	1.88	67	6	15.9	< 10	< 1	0.17
693804	8		< 0.2	< 0.5	76	3380	< 1	86	5	148	0.88	17	< 10	21	< 0.5	< 2	1.56	55	5	16.8	< 10	2	0.18
693805	22		0.3	< 0.5	75	2290	< 1	116	12	201	0.79	106	< 10	13	< 0.5	< 2	1.12	67	5	18.8	< 10	1	0.18
693806	11		0.3	< 0.5	51	3150	< 1	93	15	169	0.66	117	< 10	15	< 0.5	< 2	1.37	42	4	19.0	< 10	< 1	0.17
693807	10		0.4	< 0.5	42	4400	< 1	103	17	240	0.47	166	< 10	10	< 0.5	< 2	1.13	45	4	25.3	< 10	< 1	0.10
693808	< 5		< 0.2	< 0.5	11	8090	< 1	70	5	103	0.64	67	< 10	20	< 0.5	< 2	1.38	20	4	25.1	< 10	< 1	0.12
693809	8		< 0.2	< 0.5	16	4890	< 1	109	4	83	0.73	67	< 10	18	< 0.5	< 2	1.43	35	5	18.7	< 10	2	0.19
693810	6		< 0.2	< 0.5	17	4810	< 1	100	3	77	0.73	63	< 10	17	< 0.5	< 2	1.94	34	4	18.2	< 10	< 1	0.20
693811	7		< 0.2	0.6	17	4730	< 1	89	< 2	93	0.69	30	< 10	25	< 0.5	< 2	2.05	27	3	16.3	< 10	2	0.19
693812	< 5		< 0.2	< 0.5	17	4600	< 1	70	< 2	86	0.80	11	< 10	31	< 0.5	< 2	2.18	21	3	14.6	< 10	< 1	0.19
693813	< 5		< 0.2	0.7	14	3310	< 1	98	< 2	80	0.91	13	< 10	32	< 0.5	< 2	2.49	25	4	12.2	< 10	< 1	0.16
693814	< 5		< 0.2	< 0.5	27	2110	< 1	262	7	168	1.64	63	< 10	15	< 0.5	< 2	1.51	58	6	14.4	< 10	< 1	0.16
693815	7		< 0.2	< 0.5	19	2670	< 1	259	4	223	1.89	62	< 10	18	< 0.5	< 2	1.74	67	8	14.9	< 10	1	0.18
693816	8		< 0.2	< 0.5	32	2080	< 1	356	11	111	1.63	113	< 10	15	< 0.5	< 2	1.50	85	7	20.9	< 10	2	0.14
693817	8		0.3	0.6	27	2150	< 1	393	14	110	1.13	125	< 10	11	< 0.5	< 2	1.11	89	6	21.7	< 10	< 1	0.12
693818	6		< 0.2	< 0.5	6	3720	< 1	103	< 2	88	0.83	20	< 10	26	< 0.5	< 2	1.75	22	7	14.0	< 10	< 1	0.16
693819	2220		< 0.2	< 0.5	95	1520	2	128	6	76	1.55	898	< 10	38	< 0.5	< 2	1.53	32	53	7.10	< 10	< 1	0.08
693820	8		< 0.2	1.2	17	2760	< 1	204	< 2	113	1.14	42	< 10	19	< 0.5	< 2	1.75	38	8	13.7	< 10	< 1	0.14
693821	< 5		< 0.2	< 0.5	16	2530	< 1	176	< 2	128	1.83	42	< 10	18	< 0.5	< 2	1.81	37	7	14.4	< 10	< 1	0.14
693822	8		< 0.2	< 0.5	16	1940	< 1	197	< 2	117	1.60	30	< 10	21	< 0.5	< 2	1.99	41	7	11.0	< 10	< 1	0.14
693823	5		< 0.2	0.7	18	2410	< 1	185	3	99	2.05	30	< 10	19	< 0.5	< 2	2.17	38	7	13.2	< 10	< 1	0.16
693824	5		< 0.2	< 0.5	10	3130	< 1	136	< 2	135	2.12	3	< 10	72	< 0.5	< 2	2.35	23	7	11.1	< 10	< 1	0.15
693825	< 5		< 0.2	< 0.5	18	3080	< 1	100	< 2	183	2.00	4	< 10	44	< 0.5	< 2	1.54	22	7	11.5	< 10	< 1	0.13
693826	6		< 0.2	< 0.5	17	2040	< 1	122	< 2	71	2.15	9	< 10	28	< 0.5	< 2	2.57	30	6	10.7	< 10	< 1	0.15
693827	< 5		< 0.2	< 0.5	22	2680	< 1	87	< 2	73	2.09	5	< 10	45	< 0.5	< 2	3.10	20	7	10.5	< 10	< 1	0.17
693828	< 5		< 0.2	< 0.5	< 1	102	< 1	< 1	< 2	19	4.57	< 2	11	13	0.6	< 2	0.19	< 1	2	0.63	10	< 1	1.51
693829	< 5		< 0.2	< 0.5	23	4010	< 1	106	< 2	74	1.34	16	< 10	28	< 0.5	< 2	2.08	25	6	13.7	< 10	< 1	0.14
693830	< 5		< 0.2	0.7	15	2940	< 1	151	< 2	80	1.92	23	< 10	20	< 0.5	< 2	2.03	39	7	13.8	< 10	< 1	0.16

Analyte Symbol	Au	Au	Ag	Cd	Cu	Mn	Mo	Ni	Pb	Zn	Al	As	B	Ba	Be	Bi	Ca	Co	Cr	Fe	Ga	Hg	K
Unit Symbol	ppb	g/tonne	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%
Lower Limit	5	0.03	0.2	0.5	1	5	1	1	2	2	0.01	2	10	10	0.5	2	0.01	1	1	0.01	10	1	0.01
Method Code	FA-AA	FA- GRA	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
693831	6		0.4	< 0.5	23	3240	< 1	186	< 2	85	1.89	23	< 10	17	< 0.5	< 2	1.97	40	7	16.2	< 10	< 1	0.18
693832	6		< 0.2	< 0.5	24	6300	< 1	108	< 2	133	0.98	8	< 10	28	< 0.5	< 2	1.86	28	6	18.6	< 10	< 1	0.14
693833	10		< 0.2	< 0.5	17	6160	< 1	115	2	268	0.85	16	< 10	28	< 0.5	< 2	1.76	28	7	18.5	< 10	< 1	0.13
693834	5		< 0.2	< 0.5	19	4470	2	103	3	238	0.35	40	< 10	22	< 0.5	< 2	1.43	29	10	15.6	< 10	< 1	0.07
693835	7		< 0.2	< 0.5	26	4390	< 1	129	3	196	1.00	83	< 10	13	< 0.5	< 2	1.44	37	5	20.9	< 10	< 1	0.14
693836	6		< 0.2	< 0.5	27	4310	< 1	135	5	198	0.98	88	< 10	13	< 0.5	< 2	1.33	38	6	21.0	< 10	< 1	0.15
693837	7		< 0.2	0.7	30	2420	< 1	155	6	179	1.10	132	< 10	< 10	< 0.5	< 2	0.99	54	6	22.6	< 10	1	0.12
693838	7		< 0.2	0.6	18	2970	< 1	125	4	142	0.71	88	< 10	15	< 0.5	< 2	1.26	39	6	18.0	< 10	< 1	0.14
693839	< 5		< 0.2	< 0.5	6	6420	< 1	100	3	158	1.08	25	< 10	25	< 0.5	< 2	1.64	28	5	20.8	< 10	< 1	0.14
693840	5		< 0.2	< 0.5	13	4970	< 1	124	5	114	0.43	133	< 10	< 10	< 0.5	< 2	0.28	48	9	27.7	< 10	< 1	0.04
693841	6		< 0.2	0.5	15	3680	< 1	119	6	105	0.17	123	< 10	< 10	< 0.5	< 2	0.17	44	10	24.8	< 10	1	< 0.01
693842	7		< 0.2	< 0.5	14	7440	< 1	124	4	43	0.14	116	< 10	< 10	< 0.5	< 2	0.70	40	4	30.0	< 10	< 1	< 0.01
693843	> 5000	6.64	1.3	< 0.5	128	626	5	175	31	61	2.76	51	12	59	< 0.5	< 2	2.96	34	490	4.44	< 10	< 1	0.20
693844	12		< 0.2	< 0.5	6	5550	< 1	94	4	104	0.14	44	< 10	< 10	< 0.5	< 2	0.70	28	11	21.6	< 10	< 1	< 0.01
693845	6		< 0.2	< 0.5	14	3290	< 1	142	5	220	0.19	90	< 10	< 10	< 0.5	< 2	0.43	58	16	24.3	< 10	1	< 0.01
693846	11		< 0.2	0.8	22	2330	< 1	121	6	92	0.20	123	< 10	< 10	< 0.5	2	0.11	43	7	24.7	< 10	1	< 0.01
693847	11		< 0.2	< 0.5	47	1240	< 1	98	8	101	0.22	126	< 10	< 10	< 0.5	< 2	0.04	46	12	22.7	< 10	< 1	< 0.01
693848	9		< 0.2	1.3	70	4250	< 1	189	7	467	1.41	73	< 10	< 10	< 0.5	< 2	0.12	79	49	23.2	< 10	< 1	0.12
693849	9		< 0.2	< 0.5	62	3880	< 1	157	8	318	1.27	80	< 10	< 10	0.6	4	0.13	56	41	29.6	< 10	3	0.14
693850	9		0.2	1.8	95	7930	3	149	5	1000	1.05	40	< 10	11	0.6	< 2	0.65	55	26	27.7	< 10	< 1	0.08
693851	< 5		< 0.2	< 0.5	12	106	< 1	1	< 2	31	4.18	< 2	< 10	11	0.6	< 2	0.18	< 1	2	0.74	10	< 1	1.41
693852	9		< 0.2	2.0	80	5340	< 1	172	14	732	0.40	59	< 10	< 10	< 0.5	< 2	0.58	55	9	24.9	< 10	2	< 0.01

Analyte Symbol	La	Mg	Na	P	S	Sb	Sc	Sr	Ti	Th	Te	Tl	U	V	W	Y	Zr
Unit Symbol	ppm	%	%	%	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	10	0.01	0.001	0.001	0.01	2	1	1	0.01	20	1	2	10	1	10	1	1
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
693747	< 10	0.81	0.173	0.101	14.2	4	2	125	< 0.01	< 20	1	< 2	< 10	18	< 10	4	25
693748	< 10	0.82	0.179	0.102	14.6	7	2	124	< 0.01	< 20	< 1	< 2	< 10	18	< 10	4	25
693750	< 10	0.81	0.113	0.070	19.3	10	5	85	< 0.01	< 20	8	< 2	< 10	37	< 10	3	23
693751	< 10	0.70	0.094	0.077	19.0	10	4	81	< 0.01	< 20	2	< 2	< 10	33	< 10	3	21
693752	< 10	0.87	0.054	0.075	18.0	13	8	70	< 0.01	< 20	7	< 2	< 10	57	< 10	2	20
693753	< 10	0.88	0.099	0.092	7.40	3	3	114	< 0.01	< 20	2	< 2	< 10	27	< 10	4	25
693754	11	1.00	0.111	0.088	1.97	< 2	3	167	< 0.01	< 20	3	< 2	< 10	21	< 10	4	9
693755	11	1.27	0.082	0.080	1.41	2	8	208	< 0.01	< 20	< 1	< 2	< 10	51	< 10	4	10
693756	< 10	1.50	0.080	0.082	3.00	4	8	189	< 0.01	< 20	2	< 2	< 10	52	< 10	4	23
693757	< 10	2.36	0.092	0.040	0.20	< 2	9	32	0.43	< 20	2	2	< 10	175	< 10	14	24
693758	16	0.94	0.111	0.089	1.02	< 2	3	176	< 0.01	< 20	< 1	< 2	< 10	21	< 10	4	4
693759	< 10	1.51	0.067	0.076	1.90	5	8	220	< 0.01	< 20	< 1	< 2	< 10	53	< 10	4	15
693760	11	1.40	0.066	0.083	1.50	< 2	7	191	< 0.01	< 20	< 1	< 2	< 10	48	< 10	4	9
693761	11	1.22	0.086	0.086	2.14	3	5	192	< 0.01	< 20	4	< 2	< 10	33	< 10	4	15
693762	< 10	0.99	0.091	0.095	4.02	3	4	146	< 0.01	< 20	9	< 2	< 10	28	< 10	4	23
693763	< 10	1.38	0.074	0.085	3.38	4	8	194	< 0.01	< 20	< 1	< 2	< 10	48	< 10	4	22
693764	< 10	1.56	0.071	0.084	2.84	3	9	216	< 0.01	< 20	< 1	< 2	< 10	55	< 10	4	21
693765	< 10	1.53	0.073	0.081	3.04	4	8	211	< 0.01	< 20	< 1	< 2	< 10	49	< 10	4	23
693766	< 10	1.32	0.076	0.082	4.41	5	6	162	< 0.01	< 20	< 1	< 2	< 10	42	< 10	4	26
693767	< 10	0.05	3.42	0.001	0.02	< 2	< 1	21	< 0.01	< 20	2	< 2	< 10	< 1	< 10	3	1
693768	< 10	1.31	0.088	0.087	2.94	3	6	193	< 0.01	< 20	4	< 2	< 10	37	< 10	4	20
693769	< 10	1.32	0.080	0.081	4.35	6	6	176	< 0.01	< 20	5	< 2	< 10	42	< 10	4	26
693770	< 10	1.17	0.065	0.078	5.20	8	7	149	< 0.01	< 20	< 1	< 2	< 10	43	< 10	3	24
693771	< 10	1.17	0.085	0.078	5.69	6	6	143	< 0.01	< 20	< 1	< 2	< 10	41	< 10	4	29
693772	< 10	1.27	0.093	0.076	3.94	5	6	163	< 0.01	< 20	6	< 2	< 10	39	< 10	4	29
693773	< 10	1.30	0.113	0.069	3.63	7	5	147	< 0.01	< 20	6	< 2	< 10	26	< 10	4	26
693774	< 10	1.53	0.100	0.069	3.24	4	6	162	< 0.01	< 20	2	< 2	< 10	30	< 10	4	25
693775	< 10	1.54	0.099	0.075	1.96	5	8	185	< 0.01	< 20	< 1	< 2	< 10	37	< 10	4	17
693776	< 10	1.54	0.098	0.075	2.21	3	8	189	< 0.01	< 20	1	< 2	< 10	38	< 10	4	19
693777	< 10	1.42	0.102	0.073	1.85	4	6	186	< 0.01	< 20	2	< 2	< 10	33	< 10	4	18
693778	< 10	1.46	0.100	0.067	2.23	4	8	175	< 0.01	< 20	< 1	< 2	< 10	38	< 10	4	21
693779	< 10	1.26	0.096	0.070	2.14	3	6	153	< 0.01	< 20	< 1	< 2	< 10	27	< 10	4	19
693780	< 10	1.16	0.127	0.071	2.59	4	5	161	< 0.01	< 20	1	< 2	< 10	24	< 10	4	22
693781	< 10	1.04	0.117	0.070	3.40	5	4	138	< 0.01	< 20	< 1	< 2	< 10	23	< 10	4	24
693782	< 10	1.13	0.112	0.071	3.40	4	5	135	< 0.01	< 20	< 1	< 2	< 10	26	< 10	4	24
693783	< 10	1.31	0.099	0.067	2.74	6	6	135	< 0.01	< 20	< 1	< 2	< 10	30	< 10	4	22
693784	< 10	1.19	0.107	0.073	3.47	5	5	127	< 0.01	< 20	6	< 2	< 10	27	< 10	4	23
693785	< 10	1.17	0.111	0.071	3.92	7	5	129	< 0.01	< 20	4	< 2	< 10	26	< 10	4	25
693786	< 10	1.45	0.099	0.068	2.81	4	6	166	< 0.01	< 20	< 1	< 2	< 10	29	< 10	4	21
693787	< 10	1.27	0.126	0.079	2.57	4	6	180	< 0.01	< 20	< 1	< 2	< 10	29	< 10	5	19
693788	18	2.49	0.404	0.166	1.46	< 2	4	105	0.16	< 20	2	< 2	< 10	46	< 10	15	8
693789	< 10	1.16	0.129	0.078	2.94	4	4	163	< 0.01	< 20	< 1	< 2	< 10	25	< 10	4	21

Analyte Symbol	La	Mg	Na	P	S	Sb	Sc	Sr	Ti	Th	Te	Tl	U	V	W	Y	Zr
Unit Symbol	ppm	%	%	%	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	10	0.01	0.001	0.001	0.01	2	1	1	0.01	20	1	2	10	1	10	1	1
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
693790	< 10	1.07	0.123	0.071	3.24	4	4	131	< 0.01	< 20	5	< 2	< 10	25	< 10	4	21
693791	< 10	1.02	0.096	0.064	4.96	7	4	117	< 0.01	< 20	< 1	< 2	< 10	23	< 10	4	21
693792	< 10	1.13	0.103	0.065	5.68	9	4	111	< 0.01	< 20	1	< 2	< 10	23	< 10	4	25
693793	< 10	1.04	0.119	0.075	2.39	3	4	148	< 0.01	< 20	< 1	< 2	< 10	22	< 10	4	20
693794	< 10	0.93	0.116	0.082	3.46	5	4	140	< 0.01	< 20	< 1	< 2	< 10	22	< 10	4	24
693795	< 10	1.29	0.118	0.072	1.86	3	7	167	< 0.01	< 20	< 1	< 2	< 10	32	< 10	5	15
693796	14	1.04	0.159	0.097	0.62	< 2	4	182	< 0.01	< 20	< 1	< 2	< 10	22	< 10	5	4
693797	12	1.16	0.154	0.085	0.71	2	4	172	< 0.01	< 20	< 1	< 2	< 10	23	< 10	5	5
693798	15	1.04	0.148	0.092	0.38	< 2	4	178	< 0.01	< 20	< 1	< 2	< 10	21	< 10	5	3
693799	< 10	0.05	3.29	0.001	0.05	< 2	< 1	24	< 0.01	< 20	< 1	< 2	< 10	< 1	< 10	3	1
693800	11	1.12	0.133	0.083	1.48	< 2	5	157	< 0.01	< 20	< 1	< 2	< 10	23	< 10	5	13
693801	< 10	0.99	0.081	0.066	2.37	3	4	136	< 0.01	< 20	< 1	< 2	< 10	16	< 10	4	18
693802	< 10	1.35	0.093	0.068	3.28	2	5	143	< 0.01	< 20	< 1	< 2	< 10	22	< 10	4	22
693803	< 10	1.10	0.059	0.042	6.29	5	3	124	< 0.01	< 20	< 1	< 2	< 10	13	< 10	3	22
693804	< 10	1.08	0.060	0.057	6.62	7	3	101	< 0.01	< 20	< 1	< 2	< 10	14	< 10	3	24
693805	< 10	0.83	0.058	0.047	12.3	8	3	87	< 0.01	< 20	2	< 2	< 10	13	< 10	3	21
693806	< 10	0.96	0.055	0.046	11.4	7	3	90	< 0.01	< 20	4	< 2	< 10	13	< 10	3	21
693807	< 10	1.09	0.037	0.020	15.8	10	3	68	< 0.01	< 20	< 1	< 2	< 10	15	< 10	2	17
693808	< 10	1.91	0.040	0.030	6.91	12	4	112	< 0.01	< 20	< 1	< 2	< 10	18	< 10	3	18
693809	< 10	1.36	0.053	0.052	6.69	9	4	99	< 0.01	< 20	< 1	< 2	< 10	15	< 10	3	22
693810	< 10	1.34	0.055	0.052	6.74	7	4	107	< 0.01	< 20	< 1	< 2	< 10	15	< 10	4	22
693811	< 10	1.33	0.051	0.056	4.68	5	3	111	< 0.01	< 20	< 1	< 2	< 10	12	< 10	3	20
693812	< 10	1.26	0.056	0.060	3.21	5	4	110	< 0.01	< 20	< 1	< 2	< 10	14	< 10	4	21
693813	< 10	1.14	0.060	0.066	3.00	< 2	4	122	< 0.01	< 20	2	< 2	< 10	16	< 10	4	20
693814	< 10	1.05	0.057	0.071	6.93	5	3	107	< 0.01	< 20	< 1	< 2	< 10	26	< 10	3	24
693815	< 10	1.19	0.071	0.073	5.94	7	4	115	< 0.01	< 20	< 1	< 2	< 10	33	< 10	4	27
693816	< 10	0.94	0.058	0.054	15.0	9	3	82	< 0.01	< 20	< 1	< 2	< 10	29	< 10	3	27
693817	< 10	0.82	0.047	0.042	16.7	8	2	62	< 0.01	< 20	< 1	< 2	< 10	19	< 10	2	20
693818	< 10	1.17	0.053	0.049	4.02	3	3	115	< 0.01	< 20	< 1	< 2	< 10	18	< 10	3	16
693819	17	2.39	0.361	0.160	1.41	2	4	95	0.15	< 20	< 1	< 2	< 10	43	< 10	14	8
693820	< 10	1.03	0.053	0.052	5.64	6	3	108	< 0.01	< 20	< 1	< 2	< 10	21	< 10	3	17
693821	< 10	1.16	0.050	0.066	6.05	4	3	110	< 0.01	< 20	< 1	< 2	< 10	27	< 10	4	20
693822	< 10	0.96	0.053	0.065	4.38	4	3	119	< 0.01	< 20	< 1	< 2	< 10	23	< 10	3	17
693823	< 10	1.16	0.057	0.064	5.46	6	3	137	< 0.01	< 20	< 1	< 2	< 10	28	< 10	4	21
693824	< 10	1.22	0.054	0.072	1.60	3	4	124	< 0.01	< 20	< 1	< 2	< 10	27	< 10	4	15
693825	< 10	0.96	0.044	0.063	2.23	4	3	82	< 0.01	< 20	2	< 2	< 10	24	< 10	4	14
693826	< 10	1.18	0.056	0.078	3.46	3	4	147	< 0.01	< 20	< 1	< 2	< 10	27	< 10	4	19
693827	< 10	1.29	0.063	0.080	2.21	< 2	4	172	< 0.01	< 20	< 1	< 2	< 10	28	< 10	4	17
693828	< 10	0.05	3.37	0.001	0.05	< 2	< 1	24	< 0.01	< 20	4	< 2	< 10	< 1	< 10	3	1
693829	< 10	1.21	0.061	0.059	3.54	6	4	124	< 0.01	< 20	< 1	< 2	< 10	23	< 10	3	17
693830	< 10	1.20	0.063	0.073	5.18	7	4	127	< 0.01	< 20	< 1	< 2	< 10	28	< 10	4	23
693831	< 10	1.20	0.065	0.070	6.89	6	4	121	< 0.01	< 20	< 1	< 2	< 10	28	< 10	4	23

Analyte Symbol	La	Mg	Na	P	S	Sb	Sc	Sr	Ti	Th	Te	Tl	U	V	W	Y	Zr
Unit Symbol	ppm	%	%	%	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	10	0.01	0.001	0.001	0.01	2	1	1	0.01	20	1	2	10	1	10	1	1
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
693832	< 10	1.50	0.053	0.052	3.96	5	5	107	< 0.01	< 20	< 1	< 2	< 10	20	< 10	3	21
693833	< 10	1.49	0.049	0.044	3.89	7	4	108	< 0.01	< 20	< 1	< 2	< 10	22	< 10	3	18
693834	< 10	1.06	0.031	0.018	5.21	5	4	88	< 0.01	< 20	< 1	< 2	< 10	17	< 10	2	12
693835	< 10	1.25	0.045	0.048	9.71	8	4	99	< 0.01	< 20	< 1	< 2	< 10	19	< 10	3	18
693836	< 10	1.21	0.046	0.044	10.2	9	4	95	< 0.01	< 20	< 1	< 2	< 10	20	< 10	3	18
693837	< 10	0.83	0.041	0.041	16.6	7	3	62	< 0.01	< 20	< 1	< 2	< 10	18	< 10	2	18
693838	< 10	0.89	0.046	0.047	11.5	7	2	86	< 0.01	< 20	3	< 2	< 10	14	< 10	3	16
693839	< 10	1.57	0.042	0.052	4.29	10	7	88	< 0.01	< 20	< 1	< 2	< 10	30	< 10	4	19
693840	< 10	0.90	0.024	0.010	18.1	11	3	22	< 0.01	< 20	2	< 2	< 10	17	< 10	2	14
693841	< 10	0.63	0.020	0.004	18.1	10	2	11	< 0.01	< 20	< 1	< 2	< 10	17	< 10	1	10
693842	< 10	1.33	0.017	0.003	16.3	12	2	27	< 0.01	< 20	< 1	< 2	< 10	13	< 10	3	11
693843	< 10	3.28	0.069	0.029	0.74	2	10	49	0.23	< 20	6	< 2	< 10	107	< 10	9	19
693844	< 10	1.27	0.020	0.003	9.31	9	3	31	< 0.01	< 20	< 1	< 2	< 10	22	< 10	2	10
693845	< 10	0.76	0.017	0.003	17.5	8	3	21	< 0.01	< 20	< 1	< 2	< 10	32	< 10	1	11
693846	< 10	0.40	0.016	0.007	> 20.0	11	2	25	< 0.01	< 20	1	< 2	< 10	15	< 10	1	10
693847	< 10	0.20	0.018	0.004	> 20.0	11	2	5	< 0.01	< 20	< 1	< 2	< 10	14	< 10	< 1	9
693848	< 10	0.70	0.029	0.014	14.4	11	12	29	< 0.01	< 20	< 1	< 2	< 10	64	< 10	3	14
693849	< 10	1.04	0.029	0.011	18.7	13	11	25	< 0.01	< 20	7	< 2	< 10	61	< 10	3	18
693850	< 10	2.16	0.031	0.007	7.49	12	10	30	< 0.01	< 20	< 1	< 2	< 10	52	< 10	3	21
693851	< 10	0.06	3.20	< 0.001	0.21	2	< 1	22	< 0.01	< 20	2	< 2	< 10	< 1	< 10	3	1
693852	< 10	1.38	0.024	0.004	11.9	11	7	31	< 0.01	< 20	< 1	< 2	< 10	37	< 10	2	13

Analyte Symbol	Au	Au	Ag	Cd	Cu	Mn	Mo	Ni	Pb	Zn	Al	As	B	Ba	Be	Bi	Ca	Co	Cr	Fe	Ga	Hg	K
Unit Symbol	ppb	g/tonne	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%
Lower Limit	5	0.03	0.2	0.5	1	5	1	1	2	2	0.01	2	10	10	0.5	2	0.01	1	1	0.01	10	1	0.01
Method Code	FA-AA	FA- GRA	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
GXR-1 Meas			29.0	1.8	1110	758	14	26	682	649	0.29	363	< 10	319	0.9	1420	0.71	7	6	21.2	< 10	3	0.03
GXR-1 Cert			31.0	3.30	1110	852	18.0	41.0	730	760	3.52	427	15.0	750	1.22	1380	0.960	8.20	12.0	23.6	13.8	3.90	0.050
GXR-1 Meas			31.3	2.8	1230	827	15	32	751	710	0.33	411	10	244	0.9	1550	0.78	6	7	23.8	< 10	6	0.03
GXR-1 Cert			31.0	3.30	1110	852	18.0	41.0	730	760	3.52	427	15.0	750	1.22	1380	0.960	8.20	12.0	23.6	13.8	3.90	0.050
GXR-6 Meas			< 0.2	< 0.5	66	970	1	19	98	114	6.21	243	< 10	1090	1.0	< 2	0.15	14	84	5.22	20	< 1	1.05
GXR-6 Cert			1.30	1.00	66.0	1010	2.40	27.0	101	118	17.7	330	9.80	1300	1.40	0.290	0.180	13.8	96.0	5.58	35.0	0.0680	1.87
GXR-6 Meas			< 0.2	< 0.5	71	1050	3	20	106	122	6.68	252	< 10	1170	1.0	< 2	0.15	15	92	5.60	20	< 1	1.14
GXR-6 Cert			1.30	1.00	66.0	1010	2.40	27.0	101	118	17.7	330	9.80	1300	1.40	0.290	0.180	13.8	96.0	5.58	35.0	0.0680	1.87
OREAS 134b (AQUA REGIA) Meas			> 100	596	1490				> 5000	> 10000		245						127		12.5			
OREAS 134b (AQUA REGIA) Cert			204	563	1360				133000	177000		221						106		12.25			
OREAS 133a (Aqua Regia) Meas			> 100	291	334				> 5000	> 10000		139		18				24		7.84			
OREAS 133a (Aqua Regia) Cert			97	297	324				48600. 00	106000 .00		140		59				23		7.92			
OXN117 Meas		7.79																					
OXN117 Cert		7.679																					
OxP116 Meas		15.3																					
OxP116 Cert		14.92																					
OREAS 218 Meas	547																						
OREAS 218 Cert	531																						
OREAS 218 Meas	519																						
OREAS 218 Cert	531																						
OREAS 218 Meas	550																						
OREAS 218 Cert	531																						
OREAS 218 Meas	557																						
OREAS 218 Cert	531																						
OREAS 224 Meas	2100																						
OREAS 224 Cert	2150.0 00																						
OREAS 224 Meas	2160																						
OREAS 224 Cert	2150.0 00																						
OREAS 224 Meas	2130																						
OREAS 224 Cert	2150.0 00																						
OREAS 224 Meas	2130																						
OREAS 224 Cert	2150.0 00																						
693756 Orig			< 0.2	< 0.5	19	1830	< 1	113	< 2	89	2.62	3	< 10	42	< 0.5	< 2	2.97	20	8	11.0	< 10	< 1	0.20

Analyte Symbol	Au	Au	Ag	Cd	Cu	Mn	Mo	Ni	Pb	Zn	Al	As	B	Ba	Be	Bi	Ca	Co	Cr	Fe	Ga	Hg	K
Unit Symbol	ppb	g/tonne	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%
Lower Limit	5	0.03	0.2	0.5	1	5	1	1	2	2	0.01	2	10	10	0.5	2	0.01	1	1	0.01	10	1	0.01
Method Code	FA-AA	FA- GRA	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
693756 Dup			< 0.2	< 0.5	20	1830	< 1	112	3	88	2.61	4	< 10	44	< 0.5	< 2	2.93	20	8	10.9	< 10	< 1	0.19
693758 Orig	< 5																						
693758 Dup	< 5																						
693767 Orig	< 5																						
693767 Dup	< 5																						
693768 Orig			< 0.2	< 0.5	17	1450	< 1	124	< 2	73	2.53	9	< 10	47	< 0.5	< 2	2.78	21	5	9.72	< 10	< 1	0.23
693768 Dup			< 0.2	< 0.5	17	1450	< 1	128	< 2	73	2.55	8	< 10	50	< 0.5	< 2	2.84	21	5	9.71	< 10	< 1	0.23
693777 Orig	8																						
693777 Dup	8																						
693782 Orig			< 0.2	< 0.5	25	2690	< 1	464	4	144	1.14	136	< 10	35	< 0.5	< 2	2.20	84	5	11.8	< 10	< 1	0.26
693782 Dup			< 0.2	< 0.5	25	2750	< 1	470	4	147	1.20	139	< 10	34	< 0.5	< 2	2.19	85	5	11.9	< 10	< 1	0.28
693792 Orig	10																						
693792 Dup	8																						
693797 Orig	< 5		< 0.2	< 0.5	31	2210	< 1	71	2	86	1.24	20	< 10	90	0.5	< 2	3.04	27	5	7.52	< 10	< 1	0.33
693797 Split PREP DUP	< 5		< 0.2	< 0.5	30	2310	< 1	79	2	87	1.13	17	< 10	80	< 0.5	< 2	3.17	27	4	7.87	< 10	< 1	0.29
693802 Orig	< 5																						
693802 Dup	< 5																						
693812 Orig	7		< 0.2	< 0.5	17	4590	< 1	71	< 2	85	0.80	10	< 10	30	< 0.5	< 2	2.19	21	3	14.5	< 10	< 1	0.19
693812 Dup	< 5		< 0.2	< 0.5	18	4600	< 1	69	< 2	87	0.80	12	< 10	31	< 0.5	< 2	2.17	21	3	14.6	< 10	< 1	0.19
693813 Orig			< 0.2	0.7	14	3320	< 1	99	2	80	0.90	13	< 10	32	< 0.5	< 2	2.48	24	4	12.2	< 10	< 1	0.16
693813 Dup			< 0.2	0.7	14	3300	< 1	98	< 2	80	0.91	12	< 10	31	< 0.5	< 2	2.50	26	4	12.1	< 10	< 1	0.17
693827 Orig	5																						
693827 Dup	< 5																						
693837 Orig	8																						
693837 Dup	5																						
693847 Orig	11		< 0.2	< 0.5	47	1240	< 1	98	8	101	0.22	126	< 10	< 10	< 0.5	< 2	0.04	46	12	22.7	< 10	< 1	< 0.01
693847 Split PREP DUP	13		< 0.2	< 0.5	47	1230	< 1	103	11	99	0.22	125	< 10	< 10	< 0.5	< 2	0.04	46	11	22.7	< 10	2	< 0.01
693847 Orig	6																						
693847 Dup	16																						
Method Blank	< 5																						
Method Blank	< 5																						
Method Blank	< 5																						
Method Blank	< 5																						
Method Blank	< 5																						
Method Blank	< 5																						
Method Blank	< 5																						
Method Blank		< 0.03																					
Method Blank		< 0.03																					
Method Blank			< 0.2	< 0.5	< 1	< 5	< 1	< 1	< 2	< 2	< 0.01	< 2	< 10	< 10	< 0.5	< 2	< 0.01	< 1	< 1	< 0.01	< 10	< 1	< 0.01

Analyte Symbol	Au	Au	Ag	Cd	Cu	Mn	Mo	Ni	Pb	Zn	Al	As	B	Ba	Be	Bi	Ca	Co	Cr	Fe	Ga	Hg	K
Unit Symbol	ppb	g/tonne	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%
Lower Limit	5	0.03	0.2	0.5	1	5	1	1	2	2	0.01	2	10	10	0.5	2	0.01	1	1	0.01	10	1	0.01
Method Code	FA-AA	FA- GRA	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
Method Blank			< 0.2	< 0.5	< 1	< 5	< 1	< 1	< 2	< 2	< 0.01	< 2	< 10	< 10	< 0.5	< 2	< 0.01	< 1	< 1	< 0.01	< 10	< 1	< 0.01
Method Blank			< 0.2	< 0.5	< 1	< 5	< 1	< 1	< 2	< 2	< 0.01	< 2	< 10	< 10	< 0.5	< 2	< 0.01	< 1	< 1	< 0.01	< 10	< 1	< 0.01
Method Blank			< 0.2	< 0.5	< 1	< 5	< 1	< 1	< 2	< 2	< 0.01	< 2	< 10	< 10	< 0.5	< 2	< 0.01	< 1	< 1	< 0.01	< 10	< 1	< 0.01



Analyte Symbol	La	Mg	Na	P	S	Sb	Sc	Sr	Ti	Th	Te	Tl	U	V	W	Y	Zr
Unit Symbol	ppm	%	%	%	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	10	0.01	0.001	0.001	0.01	2	1	1	0.01	20	1	2	10	1	10	1	1
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
GXR-1 Meas	< 10	0.13	0.052	0.038	0.20	80	1	166	< 0.01	< 20	10	< 2	24	71	134	24	14
GXR-1 Cert	7.50	0.217	0.0520	0.0650	0.257	122	1.58	275	0.036	2.44	13.0	0.390	34.9	80.0	164	32.0	38.0
GXR-1 Meas	< 10	0.14	0.053	0.042	0.21	86	1	179	< 0.01	< 20	14	< 2	27	78	152	27	16
GXR-1 Cert	7.50	0.217	0.0520	0.0650	0.257	122	1.58	275	0.036	2.44	13.0	0.390	34.9	80.0	164	32.0	38.0
GXR-6 Meas	11	0.39	0.086	0.034	0.02	3	23	34		< 20	< 1	< 2	< 10	155	< 10	6	15
GXR-6 Cert	13.9	0.609	0.104	0.0350	0.0160	3.60	27.6	35.0		5.30	0.0180	2.20	1.54	186	1.90	14.0	110
GXR-6 Meas	12	0.42	0.093	0.036	0.02	2	25	36		< 20	2	< 2	< 10	168	< 10	6	16
GXR-6 Cert	13.9	0.609	0.104	0.0350	0.0160	3.60	27.6	35.0		5.30	0.0180	2.20	1.54	186	1.90	14.0	110
OREAS 134b (AQUA REGIA) Meas					14.8												
OREAS 134b (AQUA REGIA) Cert					19.31												
OREAS 133a (Aqua Regia) Meas					10.3	149											
OREAS 133a (Aqua Regia) Cert					10.7	147											
OXN117 Meas																	
OXN117 Cert																	
OxP116 Meas																	
OxP116 Cert																	
OREAS 218 Meas																	
OREAS 218 Cert																	
OREAS 218 Meas																	
OREAS 218 Cert																	
OREAS 218 Meas																	
OREAS 218 Cert																	
OREAS 218 Meas																	
OREAS 218 Cert																	
OREAS 224 Meas																	
OREAS 224 Cert																	
OREAS 224 Meas																	
OREAS 224 Cert																	
OREAS 224 Meas																	
OREAS 224 Cert																	
OREAS 224 Meas																	
OREAS 224 Cert																	
693756 Orig	< 10	1.50	0.080	0.082	3.01	3	8	189	< 0.01	< 20	2	< 2	< 10	52	< 10	4	23
693756 Dup	< 10	1.50	0.079	0.082	3.00	5	8	189	< 0.01	< 20	2	< 2	< 10	52	< 10	4	23
693758 Orig																	
693758 Dup																	
693767 Orig																	

Analyte Symbol	La	Mg	Na	P	S	Sb	Sc	Sr	Ti	Th	Te	Tl	U	V	W	Y	Zr
Unit Symbol	ppm	%	%	%	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	10	0.01	0.001	0.001	0.01	2	1	1	0.01	20	1	2	10	1	10	1	1
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
693767 Dup																	
693768 Orig	< 10	1.31	0.088	0.087	2.90	4	6	190	< 0.01	< 20	3	< 2	< 10	37	< 10	4	20
693768 Dup	< 10	1.32	0.087	0.087	2.97	3	6	196	< 0.01	< 20	5	< 2	< 10	38	< 10	4	20
693777 Orig																	
693777 Dup																	
693782 Orig	< 10	1.12	0.109	0.070	3.38	4	5	133	< 0.01	< 20	< 1	< 2	< 10	25	< 10	4	23
693782 Dup	< 10	1.14	0.114	0.071	3.43	4	5	137	< 0.01	< 20	< 1	< 2	< 10	26	< 10	4	25
693792 Orig																	
693792 Dup																	
693797 Orig	12	1.16	0.154	0.085	0.71	2	4	172	< 0.01	< 20	< 1	< 2	< 10	23	< 10	5	5
693797 Split PREP DUP	12	1.20	0.137	0.086	0.80	3	4	172	< 0.01	< 20	< 1	< 2	< 10	21	< 10	5	5
693802 Orig																	
693802 Dup																	
693812 Orig	< 10	1.26	0.055	0.060	3.17	5	4	110	< 0.01	< 20	< 1	< 2	< 10	14	< 10	4	21
693812 Dup	< 10	1.26	0.056	0.060	3.24	5	4	109	< 0.01	< 20	2	< 2	< 10	14	< 10	4	22
693813 Orig	< 10	1.15	0.060	0.066	3.00	4	4	122	< 0.01	< 20	3	< 2	< 10	16	< 10	4	20
693813 Dup	< 10	1.14	0.060	0.065	3.01	< 2	4	122	< 0.01	< 20	1	< 2	< 10	17	< 10	4	20
693827 Orig																	
693827 Dup																	
693837 Orig																	
693837 Dup																	
693847 Orig	< 10	0.20	0.018	0.004	> 20.0	11	2	5	< 0.01	< 20	< 1	< 2	< 10	14	< 10	< 1	9
693847 Split PREP DUP	< 10	0.21	0.016	0.004	> 20.0	9	2	5	< 0.01	< 20	< 1	< 2	< 10	14	< 10	< 1	9
693847 Orig																	
693847 Dup																	
Method Blank																	
Method Blank																	
Method Blank																	
Method Blank																	
Method Blank																	
Method Blank																	
Method Blank																	
Method Blank																	
Method Blank	< 10	< 0.01	0.010	< 0.001	< 0.01	< 2	< 1	< 1	< 0.01	< 20	< 1	< 2	< 10	< 1	< 10	< 1	< 1
Method Blank	< 10	< 0.01	0.012	< 0.001	< 0.01	< 2	< 1	< 1	< 0.01	< 20	1	< 2	< 10	< 1	< 10	< 1	< 1
Method Blank	< 10	< 0.01	0.012	< 0.001	< 0.01	< 2	< 1	< 1	< 0.01	< 20	1	< 2	< 10	< 1	< 10	< 1	< 1
Method Blank	< 10	< 0.01	0.010	< 0.001	< 0.01	< 2	< 1	< 1	< 0.01	< 20	2	< 2	< 10	< 1	< 10	< 1	< 1



**Date Submitted:** 12-Mar-18  
**Invoice No.:** A18-03021  
**Invoice Date:** 18-May-18  
**Your Reference:** 81 Lucas

**Noble Mineral Exploration**  
**2500-120 Adelaide Street West**  
**Toronto ON M5H 1T1**  
**Canada**

**ATTN: Randy Singh (inv-cc)**

## CERTIFICATE OF ANALYSIS

140 Rock samples were submitted for analysis.

The following analytical package(s) were requested:

Code 1A2-Timmins Au - Fire Assay AA

Code 1E3-Timmins Aqua Regia ICP(AQUAGEO)

REPORT      **A18-03021**

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

Notes:

If value exceeds upper limit we recommend reassay by fire assay gravimetric-Code 1A3.

Values which exceed the upper limit should be assayed for accurate numbers.

CERTIFIED BY:

A handwritten signature in black ink, appearing to be "Emmanuel Esemé". The signature is written in a cursive style with a large, stylized 'E' and 'S'.

Emmanuel Esemé , Ph.D.  
Quality Control

**ACTIVATION LABORATORIES LTD.**  
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## Results

## Activation Laboratories Ltd.

## Report: A18-03021

Analyte Symbol	Au	Ag	Cd	Cu	Mn	Mo	Ni	Pb	Zn	Al	As	B	Ba	Be	Bi	Ca	Co	Cr	Fe	Ga	Hg	K	La
Unit Symbol	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm
Lower Limit	5	0.2	0.5	1	5	1	1	2	2	0.01	2	10	10	0.5	2	0.01	1	1	0.01	10	1	0.01	10
Method Code	FA-AA	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
693853	10	0.2	< 0.5	49	6900	< 1	173	15	433	0.38	76	< 10	< 10	< 0.5	5	0.27	43	11	> 30.0	< 10	< 1	< 0.01	< 10
693854	11	0.4	0.6	37	3520	< 1	195	15	321	0.41	91	< 10	< 10	< 0.5	4	0.11	42	10	29.1	< 10	< 1	< 0.01	< 10
693855	17	< 0.2	< 0.5	30	2390	< 1	218	14	324	0.35	96	< 10	< 10	< 0.5	6	0.09	46	12	27.2	< 10	< 1	< 0.01	< 10
693856	18	< 0.2	0.7	37	4310	< 1	246	15	232	0.46	102	< 10	< 10	< 0.5	6	0.12	52	13	29.5	< 10	< 1	< 0.01	< 10
693857	12	< 0.2	< 0.5	11	2360	< 1	387	13	255	0.80	115	< 10	< 10	< 0.5	5	0.07	88	15	25.6	< 10	< 1	0.02	< 10
693858	13	0.2	< 0.5	18	3320	< 1	237	15	303	1.15	91	< 10	< 10	< 0.5	4	0.12	48	17	27.9	< 10	< 1	0.02	< 10
693859	10	< 0.2	< 0.5	11	1440	< 1	158	14	253	0.57	113	< 10	< 10	< 0.5	6	0.06	53	18	25.1	< 10	1	0.03	< 10
693860	12	< 0.2	< 0.5	16	1960	< 1	122	19	196	1.17	89	< 10	< 10	< 0.5	2	0.09	61	15	25.1	< 10	2	0.06	< 10
693861	983	0.2	< 0.5	167	745	< 1	82	2	67	3.97	7	45	31	< 0.5	< 2	3.07	37	145	6.50	10	< 1	0.06	< 10
693862	12	< 0.2	< 0.5	18	3380	< 1	159	13	674	1.64	91	< 10	< 10	< 0.5	10	0.15	86	22	29.0	< 10	< 1	0.08	< 10
693863	12	< 0.2	1.9	17	2710	< 1	181	15	944	0.43	157	< 10	< 10	< 0.5	4	0.09	68	11	27.8	< 10	< 1	0.01	< 10
693864	13	< 0.2	0.7	24	3460	< 1	134	14	410	0.31	172	< 10	< 10	< 0.5	< 2	0.11	57	27	28.5	< 10	< 1	< 0.01	< 10
693865	16	< 0.2	< 0.5	17	3710	< 1	138	13	397	0.39	194	< 10	< 10	< 0.5	5	0.10	54	32	28.7	< 10	< 1	0.01	< 10
693866	19	0.3	< 0.5	14	2180	< 1	144	14	348	0.29	210	< 10	< 10	< 0.5	3	0.07	57	37	26.7	< 10	< 1	< 0.01	< 10
693867	16	< 0.2	< 0.5	20	3870	< 1	135	16	325	0.40	233	< 10	< 10	< 0.5	< 2	0.09	61	34	> 30.0	< 10	< 1	< 0.01	< 10
693868	26	< 0.2	< 0.5	13	849	< 1	114	21	196	0.59	299	< 10	< 10	< 0.5	< 2	0.05	55	40	23.5	< 10	< 1	0.03	< 10
693869	8	< 0.2	0.7	23	2810	3	85	7	253	1.22	84	< 10	28	< 0.5	< 2	0.59	32	29	12.8	< 10	< 1	0.18	< 10
693870	16	< 0.2	< 0.5	37	1050	2	75	11	95	1.07	145	< 10	13	< 0.5	< 2	3.03	34	27	12.7	< 10	< 1	0.18	< 10
693871	< 5	< 0.2	< 0.5	< 1	108	< 1	< 1	< 2	19	4.92	< 2	14	13	0.6	< 2	0.19	< 1	6	0.74	< 10	< 1	1.50	< 10
693872	117	0.3	< 0.5	48	445	< 1	72	28	78	1.04	199	< 10	< 10	< 0.5	< 2	1.20	40	37	17.4	< 10	< 1	0.25	< 10
693873	165	0.3	< 0.5	55	997	< 1	79	22	89	0.75	198	< 10	< 10	< 0.5	< 2	2.69	36	25	16.4	< 10	< 1	0.16	< 10
693874	< 5	< 0.2	< 0.5	23	1810	1	63	< 2	66	1.94	36	< 10	47	< 0.5	< 2	3.94	23	57	6.74	< 10	< 1	0.16	< 10
693875	< 5	< 0.2	< 0.5	30	2050	< 1	66	< 2	87	2.47	26	< 10	63	< 0.5	3	3.40	22	77	7.19	< 10	< 1	0.20	13
693876	< 5	< 0.2	< 0.5	38	1790	4	84	< 2	93	2.44	44	< 10	64	< 0.5	2	3.65	29	69	7.05	< 10	< 1	0.21	14
693877	983	< 0.2	< 0.5	161	740	< 1	82	3	65	3.99	7	45	30	< 0.5	< 2	3.07	37	144	6.40	10	< 1	0.06	< 10
693878	60	< 0.2	< 0.5	39	1400	< 1	91	< 2	89	2.22	49	< 10	80	< 0.5	< 2	3.43	31	76	5.81	< 10	< 1	0.27	18
693879	6	< 0.2	< 0.5	38	1270	< 1	85	< 2	57	2.05	60	< 10	82	< 0.5	< 2	3.10	26	64	5.35	< 10	< 1	0.28	20
693880	< 5	< 0.2	< 0.5	33	1460	< 1	51	< 2	61	2.04	17	< 10	66	< 0.5	2	2.96	18	66	5.83	< 10	< 1	0.23	20
693881	< 5	< 0.2	< 0.5	38	1610	< 1	64	< 2	46	1.70	28	< 10	64	< 0.5	< 2	3.96	21	76	5.41	< 10	< 1	0.24	14
693882	< 5	< 0.2	< 0.5	34	2130	2	75	< 2	78	2.31	25	< 10	58	< 0.5	3	4.05	23	73	7.09	< 10	< 1	0.21	17
693883	< 5	< 0.2	< 0.5	33	1870	< 1	63	< 2	86	2.72	9	< 10	54	< 0.5	3	3.57	21	80	7.65	10	< 1	0.19	17
693884	< 5	< 0.2	< 0.5	39	2080	< 1	70	< 2	104	2.94	12	< 10	62	< 0.5	< 2	3.26	22	84	7.91	10	< 1	0.20	19
693885	< 5	< 0.2	< 0.5	35	1770	< 1	82	< 2	67	2.56	13	< 10	58	< 0.5	< 2	3.51	26	84	6.93	< 10	< 1	0.20	18
693886	< 5	< 0.2	< 0.5	37	1170	< 1	58	< 2	83	2.45	< 2	< 10	46	< 0.5	< 2	2.88	22	79	6.28	< 10	< 1	0.17	21
693887	< 5	< 0.2	< 0.5	36	1150	< 1	55	< 2	83	2.41	< 2	< 10	46	< 0.5	< 2	2.84	22	75	6.18	< 10	< 1	0.17	20
693888	7	< 0.2	< 0.5	34	1460	< 1	75	< 2	107	2.97	3	< 10	54	< 0.5	< 2	3.44	24	82	7.60	10	< 1	0.19	15
693889	< 5	< 0.2	< 0.5	38	1060	< 1	53	< 2	79	2.05	10	< 10	69	< 0.5	< 2	2.87	21	64	4.91	< 10	< 1	0.24	17
693890	5	< 0.2	< 0.5	29	1040	4	61	< 2	73	2.09	14	< 10	78	< 0.5	< 2	2.77	19	123	4.89	< 10	< 1	0.28	15
693891	< 5	< 0.2	< 0.5	38	1040	< 1	68	< 2	89	2.36	2	< 10	108	< 0.5	< 2	2.75	21	129	6.04	10	< 1	0.29	24
693892	< 5	< 0.2	< 0.5	37	1090	< 1	63	< 2	80	2.18	< 2	< 10	99	< 0.5	< 2	2.61	19	126	5.03	< 10	< 1	0.29	26
693893	< 5	< 0.2	< 0.5	37	1030	4	67	< 2	94	2.55	< 2	< 10	106	< 0.5	< 2	2.46	21	132	5.58	< 10	< 1	0.30	28
693894	< 5	< 0.2	< 0.5	37	1090	< 1	59	< 2	101	2.37	< 2	< 10	122	< 0.5	< 2	3.39	20	115	5.00	< 10	< 1	0.32	28

## Results

## Activation Laboratories Ltd.

## Report: A18-03021

Analyte Symbol	Au	Ag	Cd	Cu	Mn	Mo	Ni	Pb	Zn	Al	As	B	Ba	Be	Bi	Ca	Co	Cr	Fe	Ga	Hg	K	La
Unit Symbol	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm
Lower Limit	5	0.2	0.5	1	5	1	1	2	2	0.01	2	10	10	0.5	2	0.01	1	1	0.01	10	1	0.01	10
Method Code	FA-AA	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
693895	6	< 0.2	< 0.5	40	991	< 1	111	< 2	100	2.73	5	< 10	115	< 0.5	4	2.37	29	138	5.45	< 10	< 1	0.33	32
693896	< 5	< 0.2	< 0.5	42	953	< 1	106	< 2	105	3.03	2	< 10	88	< 0.5	3	2.59	30	178	6.37	10	< 1	0.27	30
693897	< 5	< 0.2	< 0.5	< 1	82	< 1	< 1	< 2	16	5.02	< 2	11	< 10	0.6	< 2	0.19	< 1	1	0.53	10	< 1	1.44	< 10
693898	< 5	< 0.2	< 0.5	41	565	< 1	85	< 2	47	1.79	15	< 10	94	< 0.5	< 2	2.01	25	119	2.68	< 10	< 1	0.30	29
693899	< 5	< 0.2	< 0.5	45	745	4	80	< 2	52	1.93	11	< 10	88	< 0.5	< 2	2.57	26	119	3.33	< 10	< 1	0.29	26
693900	< 5	< 0.2	< 0.5	142	658	3	62	< 2	58	1.94	11	< 10	98	< 0.5	< 2	2.31	22	123	3.43	< 10	< 1	0.30	29
693901	5	< 0.2	< 0.5	50	562	< 1	59	< 2	63	2.06	2	< 10	107	< 0.5	< 2	2.57	18	117	3.36	< 10	< 1	0.33	29
693902	6	< 0.2	< 0.5	47	786	< 1	108	< 2	101	2.81	3	< 10	117	< 0.5	< 2	2.48	27	139	5.10	< 10	< 1	0.35	29
693903	6	< 0.2	< 0.5	45	852	< 1	102	< 2	98	2.72	< 2	< 10	120	< 0.5	< 2	2.32	27	147	5.05	10	< 1	0.36	30
693904	6	< 0.2	< 0.5	38	873	< 1	78	< 2	100	2.72	< 2	< 10	102	< 0.5	< 2	2.58	25	139	5.88	< 10	< 1	0.28	25
693905	5	< 0.2	< 0.5	37	935	< 1	81	< 2	100	2.82	< 2	< 10	86	< 0.5	< 2	3.30	26	142	6.05	< 10	< 1	0.25	26
693906	< 5	< 0.2	< 0.5	36	972	< 1	102	< 2	93	2.79	2	< 10	113	< 0.5	< 2	3.21	25	156	5.14	10	< 1	0.35	28
693907	933	0.2	< 0.5	166	759	< 1	86	4	67	4.10	5	46	30	< 0.5	< 2	3.16	39	148	6.62	10	< 1	0.06	< 10
693908	7	< 0.2	< 0.5	40	901	< 1	90	< 2	112	2.82	< 2	< 10	87	< 0.5	< 2	2.87	26	162	5.97	10	< 1	0.25	29
693909	5	< 0.2	< 0.5	32	1300	< 1	114	< 2	156	3.89	< 2	< 10	72	< 0.5	< 2	3.59	29	171	9.06	10	< 1	0.21	23
693910	< 5	< 0.2	< 0.5	2	165	< 1	5	< 2	23	5.05	< 2	< 10	14	< 0.5	< 2	0.41	1	12	0.95	10	< 1	1.42	< 10
693911	7	< 0.2	< 0.5	44	688	< 1	96	< 2	73	2.72	7	< 10	142	0.6	< 2	2.01	26	151	4.26	< 10	< 1	0.43	24
693912	5	< 0.2	< 0.5	49	897	2	84	2	72	2.04	< 2	< 10	111	< 0.5	< 2	2.83	18	106	3.88	< 10	< 1	0.31	33
693913	6	< 0.2	< 0.5	43	797	2	67	2	65	2.25	< 2	< 10	158	0.5	< 2	2.39	16	76	3.65	< 10	< 1	0.44	30
693914	5	< 0.2	< 0.5	35	925	< 1	50	4	49	1.58	3	< 10	116	< 0.5	< 2	2.49	14	46	3.24	< 10	< 1	0.32	34
693915	5	< 0.2	< 0.5	39	1060	< 1	82	< 2	80	2.32	< 2	< 10	127	< 0.5	3	3.52	18	46	4.62	< 10	< 1	0.38	24
693916	5	< 0.2	< 0.5	35	975	< 1	74	7	56	1.98	12	< 10	124	0.6	< 2	3.02	20	86	3.70	< 10	< 1	0.37	25
693917	< 5	< 0.2	< 0.5	< 1	107	< 1	< 1	< 2	20	5.16	2	15	15	0.6	< 2	0.21	< 1	1	0.70	10	< 1	1.60	< 10
693918	6	< 0.2	< 0.5	30	744	< 1	43	3	39	1.47	12	< 10	120	< 0.5	< 2	2.02	12	37	2.35	< 10	< 1	0.33	40
693919	6	< 0.2	< 0.5	25	682	< 1	44	3	29	1.27	5	< 10	120	< 0.5	< 2	2.28	13	34	1.87	< 10	< 1	0.32	35
693920	5	< 0.2	< 0.5	23	1250	9	100	8	77	2.71	4	< 10	96	< 0.5	< 2	2.17	17	60	5.59	< 10	< 1	0.24	29
693921	< 5	< 0.2	< 0.5	9	1570	< 1	68	< 2	66	1.48	4	< 10	81	< 0.5	< 2	4.34	11	42	4.33	< 10	< 1	0.24	27
693922	5	< 0.2	< 0.5	16	1390	< 1	103	< 2	74	1.01	13	< 10	83	< 0.5	< 2	5.09	19	33	4.25	< 10	< 1	0.14	28
693923	8	< 0.2	< 0.5	17	991	< 1	67	3	54	1.68	6	< 10	175	0.6	< 2	4.12	13	35	3.10	< 10	< 1	0.52	30
693924	5	< 0.2	< 0.5	16	1090	< 1	69	2	62	1.87	3	< 10	147	0.6	< 2	4.16	12	43	3.66	< 10	< 1	0.48	29
693925	5	< 0.2	< 0.5	22	1230	< 1	74	< 2	144	1.83	< 2	< 10	134	0.6	< 2	4.85	11	41	4.06	< 10	< 1	0.47	23
693926	6	< 0.2	< 0.5	17	976	< 1	58	< 2	51	1.87	< 2	< 10	159	0.6	< 2	3.39	11	53	3.22	< 10	< 1	0.49	23
693927	5	< 0.2	< 0.5	20	1020	< 1	59	< 2	52	1.90	< 2	< 10	161	0.6	< 2	3.58	12	45	3.34	< 10	< 1	0.49	24
693928	8	< 0.2	< 0.5	12	1010	< 1	66	< 2	42	1.53	< 2	< 10	165	0.5	< 2	3.99	10	35	3.08	< 10	< 1	0.47	24
693929	10	< 0.2	< 0.5	18	981	< 1	67	< 2	61	1.65	2	< 10	127	< 0.5	< 2	4.15	14	41	3.16	< 10	< 1	0.37	23
693930	< 5	< 0.2	< 0.5	17	1050	< 1	75	< 2	78	2.01	< 2	12	137	0.6	< 2	3.76	14	54	3.66	< 10	< 1	0.42	21
693931	< 5	< 0.2	< 0.5	3	1160	< 1	59	< 2	48	1.16	< 2	14	107	< 0.5	< 2	5.48	9	36	3.29	< 10	< 1	0.32	17
693932	23	< 0.2	< 0.5	14	1160	< 1	65	< 2	53	1.55	3	< 10	148	0.5	< 2	4.75	12	47	3.25	< 10	< 1	0.45	22
693933	25	< 0.2	< 0.5	9	1280	< 1	80	< 2	49	1.47	3	< 10	114	< 0.5	< 2	4.61	13	51	3.52	< 10	< 1	0.33	21
693934	7	< 0.2	< 0.5	16	1310	< 1	101	2	73	1.29	5	< 10	86	< 0.5	< 2	5.50	17	35	4.33	< 10	< 1	0.27	21
693935	10	< 0.2	< 0.5	23	939	< 1	77	< 2	61	1.81	< 2	< 10	122	< 0.5	< 2	2.72	14	54	3.28	< 10	< 1	0.39	28
693936	1010	0.2	< 0.5	164	740	< 1	82	2	66	3.98	6	44	31	< 0.5	< 2	3.08	37	145	6.46	10	< 1	0.06	< 10

## Results

## Activation Laboratories Ltd.

## Report: A18-03021

Analyte Symbol	Au	Ag	Cd	Cu	Mn	Mo	Ni	Pb	Zn	Al	As	B	Ba	Be	Bi	Ca	Co	Cr	Fe	Ga	Hg	K	La
Unit Symbol	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm
Lower Limit	5	0.2	0.5	1	5	1	1	2	2	0.01	2	10	10	0.5	2	0.01	1	1	0.01	10	1	0.01	10
Method Code	FA-AA	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
693937	25	< 0.2	< 0.5	24	910	< 1	92	3	82	2.13	< 2	< 10	106	< 0.5	< 2	2.20	17	46	4.05	< 10	< 1	0.35	21
693938	14	< 0.2	< 0.5	11	1280	< 1	85	3	69	1.71	4	< 10	165	0.5	< 2	3.99	20	43	3.17	< 10	< 1	0.52	22
693939	8	< 0.2	< 0.5	12	1140	< 1	65	< 2	52	1.46	< 2	< 10	142	< 0.5	< 2	4.57	13	43	3.18	< 10	< 1	0.44	22
693940	9	< 0.2	< 0.5	13	894	< 1	82	2	61	2.20	< 2	< 10	188	0.6	< 2	2.70	15	58	3.18	< 10	< 1	0.53	25
693941	6	< 0.2	< 0.5	24	516	2	74	2	39	1.98	3	< 10	206	0.6	< 2	2.22	16	55	2.00	< 10	< 1	0.54	22
693942	7	< 0.2	< 0.5	18	620	2	103	4	46	1.61	2	< 10	150	< 0.5	< 2	2.39	23	53	2.15	< 10	< 1	0.42	24
693943	7	< 0.2	< 0.5	15	603	1	99	< 2	42	1.57	4	< 10	139	< 0.5	< 2	2.03	22	46	2.11	< 10	< 1	0.42	26
693944	6	< 0.2	< 0.5	9	784	< 1	63	3	47	1.54	< 2	< 10	99	< 0.5	< 2	1.95	14	56	2.64	< 10	< 1	0.30	31
693945	6	< 0.2	< 0.5	< 1	104	< 1	< 1	< 2	18	5.33	< 2	14	13	0.6	< 2	0.20	< 1	2	0.67	10	< 1	1.59	< 10
693946	< 5	< 0.2	< 0.5	12	1190	< 1	46	< 2	57	1.74	< 2	< 10	79	< 0.5	< 2	2.75	8	51	3.48	< 10	< 1	0.27	29
693947	21	< 0.2	< 0.5	16	1190	< 1	51	3	48	1.71	< 2	< 10	98	< 0.5	< 2	2.25	12	35	3.28	< 10	< 1	0.33	36
693948	10	< 0.2	< 0.5	20	1340	2	58	3	62	1.94	< 2	< 10	114	< 0.5	< 2	2.38	11	48	3.89	< 10	< 1	0.37	34
693949	< 5	< 0.2	< 0.5	25	1280	< 1	48	4	52	1.65	< 2	< 10	104	< 0.5	< 2	2.63	9	49	3.38	< 10	< 1	0.30	37
693950	7	< 0.2	< 0.5	17	1480	< 1	67	< 2	64	1.71	3	< 10	99	< 0.5	3	3.33	12	52	4.32	< 10	< 1	0.28	32
693951	9	< 0.2	< 0.5	11	1210	< 1	46	2	47	1.30	< 2	< 10	113	< 0.5	< 2	3.25	10	42	3.08	< 10	< 1	0.30	32
693952	6	< 0.2	< 0.5	11	1040	< 1	47	2	42	1.26	< 2	< 10	84	< 0.5	< 2	2.28	11	46	2.74	< 10	< 1	0.21	31
693953	8	< 0.2	< 0.5	6	1180	1	48	3	32	1.37	< 2	< 10	92	< 0.5	< 2	2.09	10	45	2.85	< 10	< 1	0.24	29
693954	7	0.4	< 0.5	7	1200	1	48	< 2	33	1.37	< 2	< 10	90	< 0.5	< 2	2.13	10	44	2.90	< 10	< 1	0.24	30
693955	9	< 0.2	< 0.5	9	1230	< 1	51	< 2	37	1.45	< 2	< 10	103	< 0.5	< 2	2.59	10	46	3.02	< 10	< 1	0.28	30
693956	5	< 0.2	< 0.5	13	1540	< 1	75	3	54	1.95	< 2	< 10	107	< 0.5	2	2.77	13	46	4.26	< 10	< 1	0.29	28
693957	< 5	< 0.2	< 0.5	17	1860	< 1	75	2	52	1.51	< 2	< 10	103	< 0.5	< 2	4.09	14	34	4.26	< 10	< 1	0.31	29
693958	7	< 0.2	< 0.5	22	1260	< 1	63	< 2	51	1.62	2	< 10	117	< 0.5	< 2	2.82	12	49	3.57	< 10	< 1	0.35	32
693959	< 5	< 0.2	< 0.5	14	1410	< 1	59	< 2	44	1.30	15	< 10	103	< 0.5	< 2	4.35	12	24	3.73	< 10	< 1	0.36	28
693960	< 5	< 0.2	< 0.5	11	867	< 1	36	< 2	36	1.40	6	< 10	98	< 0.5	< 2	2.40	8	33	2.50	< 10	< 1	0.36	29
693961	36	< 0.2	< 0.5	18	974	< 1	37	3	44	1.71	< 2	< 10	107	< 0.5	< 2	2.97	9	28	2.86	< 10	< 1	0.41	27
693962	13	< 0.2	< 0.5	24	950	1	52	3	41	1.72	6	< 10	110	< 0.5	< 2	2.43	10	38	2.96	< 10	< 1	0.38	31
693963	5	< 0.2	< 0.5	14	679	< 1	80	4	33	1.64	12	< 10	128	< 0.5	< 2	1.70	18	42	2.32	< 10	< 1	0.39	38
693964	5	< 0.2	< 0.5	12	1000	1	66	3	38	1.71	10	< 10	118	< 0.5	< 2	2.30	15	42	2.93	< 10	< 1	0.36	35
693965	1490	< 0.2	< 0.5	67	927	1	137	10	77	1.67	2870	< 10	85	< 0.5	< 2	1.31	34	41	6.04	< 10	2	0.08	17
693966	6	< 0.2	< 0.5	10	1210	< 1	38	4	41	1.67	4	< 10	90	< 0.5	< 2	2.84	9	35	3.47	< 10	< 1	0.26	33
693967	< 5	< 0.2	< 0.5	15	682	2	74	2	30	1.49	22	< 10	122	< 0.5	< 2	2.07	21	32	2.30	< 10	< 1	0.36	34
693968	22	< 0.2	< 0.5	23	464	< 1	55	5	102	1.53	27	< 10	125	< 0.5	< 2	1.45	20	22	2.27	< 10	< 1	0.41	20
693969	18	< 0.2	< 0.5	15	434	< 1	52	4	107	1.32	23	< 10	109	< 0.5	< 2	1.85	18	23	2.24	< 10	< 1	0.34	20
693970	151	< 0.2	< 0.5	15	351	1	40	4	90	1.21	30	< 10	107	< 0.5	< 2	2.55	15	12	1.71	< 10	< 1	0.34	20
693971	5	< 0.2	< 0.5	19	351	< 1	61	3	118	2.03	34	< 10	160	< 0.5	< 2	2.15	24	23	2.14	< 10	< 1	0.51	17
693972	< 5	< 0.2	< 0.5	23	326	< 1	29	4	91	1.05	19	< 10	79	< 0.5	< 2	2.22	13	17	2.07	< 10	< 1	0.24	20
693973	< 5	< 0.2	< 0.5	10	565	< 1	37	3	90	1.79	21	< 10	134	< 0.5	< 2	2.46	16	18	2.60	< 10	< 1	0.43	19
693974	< 5	< 0.2	< 0.5	2	96	< 1	< 1	< 2	18	4.84	< 2	11	11	0.5	< 2	0.19	< 1	3	0.62	< 10	< 1	1.38	< 10
693975	< 5	< 0.2	< 0.5	12	590	< 1	43	3	78	1.33	13	< 10	108	< 0.5	< 2	1.36	16	15	2.48	< 10	< 1	0.33	20
693976	< 5	< 0.2	< 0.5	12	906	< 1	85	11	92	0.76	15	< 10	70	< 0.5	< 2	1.16	21	17	3.29	< 10	< 1	0.20	19
693977	< 5	< 0.2	< 0.5	170	868	< 1	264	5	138	4.30	13	< 10	83	0.5	< 2	2.47	53	38	6.26	< 10	< 1	0.08	< 10
693978	< 5	< 0.2	< 0.5	5	435	< 1	27	5	68	1.14	21	< 10	100	< 0.5	< 2	2.61	10	10	1.91	< 10	< 1	0.31	22

Analyte Symbol	Au	Ag	Cd	Cu	Mn	Mo	Ni	Pb	Zn	Al	As	B	Ba	Be	Bi	Ca	Co	Cr	Fe	Ga	Hg	K	La
Unit Symbol	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm
Lower Limit	5	0.2	0.5	1	5	1	1	2	2	0.01	2	10	10	0.5	2	0.01	1	1	0.01	10	1	0.01	10
Method Code	FA-AA	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
693979	< 5	< 0.2	< 0.5	17	290	1	33	< 2	67	1.52	17	< 10	129	< 0.5	< 2	2.25	12	19	1.71	< 10	< 1	0.42	20
693980	< 5	< 0.2	< 0.5	12	412	< 1	32	3	74	1.42	21	< 10	120	< 0.5	< 2	2.60	13	18	2.05	< 10	< 1	0.38	22
693981	< 5	< 0.2	< 0.5	162	716	< 1	211	< 2	70	3.89	12	< 10	38	< 0.5	< 2	2.55	49	27	5.96	< 10	< 1	0.07	< 10
693982	< 5	< 0.2	< 0.5	14	424	< 1	45	3	84	1.62	21	< 10	116	< 0.5	< 2	2.21	16	16	2.59	< 10	< 1	0.36	20
693983	< 5	< 0.2	< 0.5	21	672	< 1	58	3	80	0.77	24	< 10	66	< 0.5	< 2	1.62	20	14	2.80	< 10	< 1	0.20	18
693984	< 5	< 0.2	< 0.5	22	664	< 1	57	4	82	0.82	21	< 10	70	< 0.5	< 2	1.59	19	16	2.74	< 10	< 1	0.21	19
693985	6	< 0.2	< 0.5	10	461	< 1	35	3	73	1.21	23	< 10	110	< 0.5	< 2	2.01	13	15	2.15	< 10	< 1	0.33	19
693986	< 5	< 0.2	< 0.5	10	300	< 1	27	3	70	1.40	23	< 10	120	< 0.5	< 2	2.35	9	14	1.69	< 10	< 1	0.37	19
693987	< 5	< 0.2	< 0.5	15	375	< 1	46	4	139	0.87	42	< 10	78	< 0.5	< 2	2.25	14	9	2.31	< 10	< 1	0.23	16
693988	16	< 0.2	< 0.5	10	463	1	46	4	156	1.22	47	< 10	107	< 0.5	< 2	1.53	18	6	1.96	< 10	< 1	0.34	19
693989	116	< 0.2	< 0.5	14	599	< 1	92	4	147	0.73	90	< 10	55	< 0.5	< 2	2.27	37	7	3.22	< 10	< 1	0.18	11
693990	98	1.2	< 0.5	15	444	3	365	34	295	1.10	379	< 10	12	< 0.5	< 2	1.56	62	8	8.39	< 10	< 1	0.28	< 10
693991	57	0.4	< 0.5	11	647	< 1	170	13	203	0.69	171	< 10	32	< 0.5	< 2	2.10	67	6	4.77	< 10	< 1	0.19	< 10
693992	102	0.3	< 0.5	17	624	< 1	147	11	142	1.07	136	< 10	24	< 0.5	3	1.99	35	5	5.55	< 10	< 1	0.22	12

Analyte Symbol	Mg	Na	P	S	Sb	Sc	Sr	Ti	Th	Te	Tl	U	V	W	Y	Zr
Unit Symbol	%	%	%	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	0.01	0.001	0.001	0.01	2	1	1	0.01	20	1	2	10	1	10	1	1
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
693853	1.20	0.014	0.006	17.7	14	5	15	< 0.01	< 20	< 1	< 2	< 10	31	< 10	3	15
693854	0.76	0.014	0.005	> 20.0	17	5	10	< 0.01	< 20	2	< 2	< 10	27	< 10	2	14
693855	0.58	0.014	0.005	> 20.0	16	4	7	< 0.01	< 20	< 1	< 2	< 10	26	< 10	2	12
693856	0.90	0.013	0.005	19.3	17	6	11	< 0.01	< 20	< 1	< 2	< 10	33	< 10	2	14
693857	0.53	0.014	0.006	18.7	15	5	8	< 0.01	< 20	2	< 2	< 10	34	< 10	2	15
693858	0.77	0.016	0.012	18.9	15	8	16	< 0.01	< 20	< 1	< 2	< 10	51	< 10	2	16
693859	0.36	0.016	0.009	> 20.0	12	4	11	< 0.01	< 20	< 1	< 2	< 10	21	< 10	1	13
693860	0.49	0.024	0.020	19.5	13	6	29	< 0.01	< 20	< 1	< 2	< 10	34	< 10	2	19
693861	2.43	0.090	0.044	0.23	< 2	9	31	0.48	< 20	12	< 2	< 10	191	< 10	15	22
693862	0.89	0.026	0.026	19.2	13	9	29	< 0.01	< 20	< 1	< 2	< 10	52	< 10	3	20
693863	0.54	0.018	0.006	> 20.0	16	5	11	< 0.01	< 20	5	< 2	< 10	27	< 10	2	13
693864	0.65	0.016	0.004	> 20.0	15	5	8	< 0.01	< 20	< 1	< 2	< 10	24	< 10	2	12
693865	0.59	0.017	0.006	20.0	17	4	6	< 0.01	< 20	2	< 2	< 10	21	< 10	1	12
693866	0.35	0.019	0.004	> 20.0	17	3	4	< 0.01	< 20	< 1	< 2	< 10	17	< 10	1	10
693867	0.65	0.019	0.008	> 20.0	21	6	14	< 0.01	< 20	3	< 2	< 10	31	< 10	2	13
693868	0.09	0.026	0.014	> 20.0	23	3	50	< 0.01	< 20	< 1	3	< 10	19	< 10	2	10
693869	0.21	0.108	0.055	3.80	5	5	38	< 0.01	< 20	< 1	< 2	< 10	21	< 10	5	14
693870	0.81	0.105	0.059	9.60	8	5	122	< 0.01	< 20	< 1	< 2	< 10	16	< 10	3	16
693871	0.05	3.49	0.001	0.06	< 2	< 1	24	< 0.01	< 20	< 1	3	< 10	< 1	< 10	3	2
693872	0.34	0.131	0.040	17.2	15	2	66	< 0.01	< 20	< 1	3	< 10	10	< 10	2	18
693873	0.74	0.085	0.040	14.3	13	4	109	< 0.01	< 20	2	< 2	< 10	11	< 10	2	16
693874	1.30	0.111	0.119	0.23	3	9	166	< 0.01	< 20	< 1	< 2	< 10	45	< 10	6	5
693875	1.14	0.122	0.120	0.06	2	11	135	< 0.01	< 20	1	< 2	< 10	63	< 10	5	4
693876	1.32	0.120	0.122	0.09	< 2	10	143	< 0.01	< 20	< 1	< 2	< 10	57	< 10	5	4
693877	2.40	0.090	0.043	0.21	< 2	9	32	0.48	< 20	3	< 2	< 10	195	< 10	15	22
693878	1.20	0.142	0.145	0.08	< 2	9	130	< 0.01	< 20	4	< 2	< 10	55	< 10	6	3
693879	0.89	0.147	0.141	0.04	2	7	132	< 0.01	< 20	< 1	< 2	< 10	46	< 10	6	3
693880	0.84	0.117	0.136	0.04	< 2	8	119	< 0.01	< 20	2	< 2	< 10	48	< 10	6	4
693881	1.32	0.107	0.137	0.04	< 2	8	129	< 0.01	< 20	2	< 2	< 10	46	< 10	7	4
693882	1.48	0.103	0.137	0.06	< 2	8	132	< 0.01	< 20	< 1	< 2	< 10	57	< 10	7	5
693883	1.49	0.095	0.131	0.08	2	9	113	< 0.01	< 20	< 1	< 2	< 10	64	< 10	6	5
693884	1.42	0.111	0.138	0.15	2	9	102	< 0.01	< 20	2	< 2	< 10	71	< 10	6	5
693885	1.58	0.103	0.141	0.11	< 2	9	89	< 0.01	< 20	< 1	< 2	< 10	65	< 10	6	4
693886	1.40	0.074	0.152	0.06	< 2	8	69	< 0.01	< 20	8	< 2	< 10	53	< 10	6	4
693887	1.38	0.073	0.149	0.06	3	7	69	< 0.01	< 20	< 1	< 2	< 10	52	< 10	6	4
693888	1.75	0.091	0.136	0.09	< 2	11	81	< 0.01	< 20	< 1	< 2	< 10	71	< 10	7	4
693889	1.16	0.120	0.146	0.06	< 2	7	92	< 0.01	< 20	3	< 2	< 10	47	< 10	7	3
693890	0.97	0.119	0.159	0.03	< 2	7	102	< 0.01	< 20	< 1	< 2	< 10	42	< 10	7	3
693891	0.86	0.100	0.198	0.06	< 2	7	125	< 0.01	< 20	3	< 2	< 10	47	< 10	7	3
693892	0.86	0.110	0.194	0.02	< 2	6	116	< 0.01	< 20	< 1	< 2	< 10	41	< 10	7	3
693893	0.94	0.121	0.192	0.01	3	7	106	< 0.01	< 20	3	< 2	< 10	55	< 10	7	3
693894	1.42	0.128	0.181	0.04	< 2	5	113	< 0.01	< 20	1	< 2	< 10	40	< 10	7	3



Analyte Symbol	Mg	Na	P	S	Sb	Sc	Sr	Ti	Th	Te	Tl	U	V	W	Y	Zr
Unit Symbol	%	%	%	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	0.01	0.001	0.001	0.01	2	1	1	0.01	20	1	2	10	1	10	1	1
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
693895	0.94	0.138	0.212	0.02	2	8	110	< 0.01	< 20	< 1	< 2	< 10	52	< 10	7	3
693896	1.03	0.131	0.209	0.04	< 2	9	96	< 0.01	< 20	8	< 2	< 10	64	< 10	7	4
693897	0.05	3.53	0.001	< 0.01	< 2	< 1	22	< 0.01	< 20	< 1	3	< 10	< 1	< 10	4	1
693898	0.59	0.159	0.222	0.04	< 2	3	88	< 0.01	< 20	3	< 2	< 10	35	< 10	6	2
693899	0.74	0.134	0.195	0.03	< 2	4	91	< 0.01	< 20	4	< 2	< 10	36	< 10	7	2
693900	0.50	0.120	0.217	0.13	< 2	4	99	< 0.01	< 20	2	< 2	< 10	38	< 10	7	2
693901	0.48	0.120	0.199	0.04	< 2	5	126	< 0.01	< 20	2	< 2	< 10	41	< 10	7	2
693902	0.95	0.128	0.205	0.05	< 2	9	91	< 0.01	< 20	6	< 2	< 10	54	< 10	7	3
693903	0.87	0.134	0.205	0.03	< 2	6	95	< 0.01	< 20	< 1	< 2	< 10	52	< 10	7	3
693904	0.97	0.098	0.196	0.19	< 2	7	99	< 0.01	< 20	3	< 2	< 10	56	< 10	7	3
693905	0.76	0.100	0.200	0.07	< 2	9	145	< 0.01	< 20	< 1	< 2	< 10	57	< 10	8	4
693906	0.64	0.138	0.201	0.03	< 2	8	163	< 0.01	< 20	< 1	< 2	< 10	60	< 10	8	3
693907	2.48	0.089	0.045	0.21	< 2	9	33	0.50	< 20	2	< 2	< 10	200	< 10	16	23
693908	0.76	0.095	0.211	0.04	3	7	143	< 0.01	< 20	3	< 2	< 10	57	< 10	8	4
693909	1.05	0.070	0.181	0.03	3	12	143	< 0.01	< 20	< 1	< 2	< 10	82	< 10	7	5
693910	0.10	3.39	0.012	< 0.01	< 2	< 1	27	< 0.01	< 20	< 1	< 2	< 10	6	< 10	4	3
693911	0.93	0.163	0.207	0.05	2	5	101	< 0.01	< 20	< 1	< 2	< 10	45	< 10	8	3
693912	0.73	0.114	0.137	0.02	< 2	5	140	< 0.01	< 20	< 1	< 2	< 10	28	< 10	7	3
693913	0.70	0.144	0.117	0.04	< 2	4	120	< 0.01	< 20	3	< 2	< 10	28	< 10	6	3
693914	0.66	0.107	0.126	0.02	< 2	3	118	< 0.01	< 20	3	< 2	< 10	21	< 10	6	3
693915	0.83	0.124	0.108	0.02	< 2	6	190	< 0.01	< 20	3	< 2	< 10	36	< 10	6	4
693916	0.67	0.121	0.132	0.19	< 2	3	155	< 0.01	< 20	< 1	< 2	< 10	22	< 10	7	3
693917	0.05	3.58	0.002	< 0.01	< 2	< 1	34	< 0.01	< 20	< 1	< 2	< 10	< 1	< 10	4	2
693918	0.54	0.113	0.125	0.10	< 2	2	84	< 0.01	< 20	< 1	< 2	< 10	13	< 10	6	3
693919	0.40	0.111	0.120	0.08	< 2	1	99	< 0.01	< 20	< 1	< 2	< 10	10	< 10	6	3
693920	0.75	0.098	0.103	0.16	4	6	116	< 0.01	< 20	< 1	< 2	< 10	35	< 10	6	5
693921	1.57	0.082	0.082	0.03	< 2	5	168	< 0.01	< 20	< 1	< 2	< 10	26	< 10	7	6
693922	1.81	0.059	0.093	0.03	< 2	4	170	< 0.01	< 20	< 1	< 2	< 10	19	< 10	7	6
693923	1.51	0.154	0.090	0.02	< 2	4	196	< 0.01	< 20	3	< 2	< 10	21	< 10	7	4
693924	1.68	0.154	0.093	0.01	< 2	3	180	< 0.01	< 20	4	< 2	< 10	23	< 10	6	4
693925	1.98	0.150	0.088	0.03	< 2	4	183	< 0.01	< 20	< 1	< 2	< 10	24	< 10	6	5
693926	1.39	0.150	0.091	0.04	< 2	3	154	< 0.01	< 20	2	< 2	< 10	19	< 10	6	4
693927	1.45	0.153	0.093	0.03	< 2	3	161	< 0.01	< 20	< 1	< 2	< 10	19	< 10	6	4
693928	1.56	0.140	0.089	0.05	< 2	3	166	< 0.01	< 20	< 1	< 2	< 10	20	< 10	6	5
693929	1.60	0.133	0.094	0.04	< 2	3	129	< 0.01	< 20	< 1	< 2	< 10	20	< 10	6	4
693930	1.88	0.131	0.098	0.01	< 2	4	140	< 0.01	< 20	4	< 2	< 10	20	< 10	7	3
693931	2.47	0.104	0.074	< 0.01	< 2	3	183	< 0.01	< 20	< 1	< 2	< 10	16	< 10	7	5
693932	2.11	0.136	0.094	< 0.01	< 2	4	176	< 0.01	< 20	< 1	< 2	< 10	21	< 10	8	4
693933	2.18	0.119	0.090	0.02	< 2	3	134	< 0.01	< 20	< 1	< 2	< 10	17	< 10	7	4
693934	2.39	0.086	0.085	0.01	< 2	3	183	< 0.01	< 20	< 1	< 2	< 10	18	< 10	7	4
693935	1.15	0.139	0.101	0.02	< 2	3	106	< 0.01	< 20	5	< 2	< 10	23	< 10	6	3
693936	2.43	0.090	0.044	0.20	< 2	9	32	0.48	< 20	6	< 2	< 10	194	< 10	15	22

Analyte Symbol	Mg	Na	P	S	Sb	Sc	Sr	Ti	Th	Te	Tl	U	V	W	Y	Zr
Unit Symbol	%	%	%	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	0.01	0.001	0.001	0.01	2	1	1	0.01	20	1	2	10	1	10	1	1
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
693937	1.16	0.119	0.097	0.05	< 2	3	92	< 0.01	< 20	4	< 2	< 10	23	< 10	5	5
693938	1.61	0.118	0.094	0.12	< 2	4	138	< 0.01	< 20	4	< 2	< 10	27	< 10	7	4
693939	1.68	0.104	0.089	0.04	< 2	4	155	< 0.01	< 20	8	< 2	< 10	23	< 10	7	5
693940	0.93	0.152	0.102	0.04	< 2	3	118	< 0.01	< 20	< 1	< 2	< 10	26	< 10	7	4
693941	0.39	0.161	0.113	0.07	< 2	2	97	< 0.01	< 20	4	< 2	< 10	21	< 10	7	3
693942	0.45	0.133	0.110	0.16	< 2	2	77	< 0.01	< 20	5	< 2	< 10	17	< 10	6	3
693943	0.47	0.116	0.111	0.17	< 2	2	70	< 0.01	< 20	2	< 2	< 10	17	< 10	6	3
693944	0.46	0.110	0.105	0.05	< 2	3	74	< 0.01	< 20	< 1	< 2	< 10	23	< 10	6	3
693945	0.05	3.67	0.002	< 0.01	< 2	< 1	28	< 0.01	< 20	< 1	< 2	< 10	< 1	< 10	4	2
693946	0.57	0.084	0.100	0.02	< 2	3	103	< 0.01	< 20	4	< 2	< 10	18	< 10	6	4
693947	0.62	0.086	0.116	0.04	< 2	2	79	< 0.01	< 20	4	< 2	< 10	15	< 10	6	3
693948	0.71	0.096	0.115	0.02	< 2	4	108	< 0.01	< 20	1	< 2	< 10	23	< 10	6	3
693949	0.75	0.099	0.112	0.02	2	3	106	< 0.01	< 20	6	< 2	< 10	21	< 10	6	3
693950	1.24	0.100	0.099	0.04	< 2	4	169	< 0.01	< 20	3	< 2	< 10	23	< 10	6	4
693951	1.07	0.091	0.094	0.01	< 2	3	162	< 0.01	< 20	4	< 2	< 10	17	< 10	6	4
693952	0.55	0.079	0.098	0.02	< 2	2	114	< 0.01	< 20	< 1	< 2	< 10	15	< 10	6	4
693953	0.52	0.094	0.100	0.06	< 2	2	119	< 0.01	< 20	4	< 2	< 10	15	< 10	6	4
693954	0.54	0.092	0.103	0.06	< 2	2	124	< 0.01	< 20	< 1	< 2	< 10	15	< 10	6	4
693955	0.66	0.092	0.106	0.02	< 2	2	138	< 0.01	< 20	< 1	< 2	< 10	16	< 10	6	4
693956	0.84	0.102	0.097	0.03	< 2	4	142	< 0.01	< 20	< 1	< 2	< 10	24	< 10	6	12
693957	1.31	0.083	0.110	0.05	< 2	4	186	< 0.01	< 20	< 1	< 2	< 10	21	< 10	7	3
693958	0.90	0.123	0.106	0.04	< 2	4	145	< 0.01	< 20	< 1	< 2	< 10	23	< 10	6	4
693959	1.29	0.083	0.096	0.02	< 2	2	215	< 0.01	< 20	2	< 2	< 10	14	< 10	6	4
693960	0.59	0.115	0.107	0.02	< 2	2	123	< 0.01	< 20	< 1	< 2	< 10	14	< 10	6	3
693961	0.62	0.086	0.108	0.01	< 2	2	175	< 0.01	< 20	1	< 2	< 10	12	< 10	6	3
693962	0.52	0.108	0.110	0.10	< 2	3	153	< 0.01	< 20	9	< 2	< 10	18	< 10	6	3
693963	0.36	0.138	0.111	0.13	< 2	2	99	< 0.01	< 20	< 1	< 2	< 10	17	< 10	6	3
693964	0.46	0.123	0.116	0.08	< 2	2	116	< 0.01	< 20	3	< 2	< 10	17	< 10	6	3
693965	2.38	0.377	0.141	0.79	< 2	3	99	0.15	< 20	4	< 2	< 10	34	< 10	14	4
693966	0.52	0.099	0.098	0.08	< 2	2	142	< 0.01	< 20	< 1	< 2	< 10	16	< 10	6	4
693967	0.35	0.126	0.121	0.15	< 2	2	106	< 0.01	< 20	< 1	< 2	< 10	13	< 10	6	2
693968	0.36	0.234	0.104	0.46	< 2	3	112	< 0.01	< 20	< 1	< 2	< 10	19	< 10	4	3
693969	0.46	0.206	0.107	0.36	< 2	3	115	< 0.01	< 20	2	< 2	< 10	16	< 10	4	4
693970	0.52	0.199	0.096	0.24	< 2	3	132	< 0.01	< 20	1	< 2	< 10	14	< 10	4	5
693971	0.44	0.304	0.093	0.48	< 2	4	168	< 0.01	< 20	< 1	< 2	< 10	25	< 10	4	4
693972	0.54	0.151	0.096	0.18	< 2	2	103	< 0.01	< 20	3	< 2	< 10	11	< 10	4	5
693973	0.63	0.291	0.093	0.17	< 2	4	163	< 0.01	< 20	< 1	< 2	< 10	18	< 10	4	5
693974	0.06	3.31	0.001	0.01	< 2	< 1	22	< 0.01	< 20	< 1	< 2	< 10	< 1	< 10	3	1
693975	0.32	0.228	0.088	0.23	< 2	3	108	< 0.01	< 20	< 1	< 2	< 10	17	< 10	3	4
693976	0.26	0.127	0.094	0.23	< 2	2	67	< 0.01	< 20	< 1	< 2	< 10	10	< 10	4	5
693977	1.41	0.650	0.050	0.10	2	17	105	0.31	< 20	< 1	< 2	< 10	152	< 10	15	9
693978	0.70	0.185	0.090	0.05	< 2	2	128	< 0.01	< 20	< 1	< 2	< 10	10	< 10	4	4

Analyte Symbol	Mg	Na	P	S	Sb	Sc	Sr	Ti	Th	Te	Tl	U	V	W	Y	Zr
Unit Symbol	%	%	%	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	0.01	0.001	0.001	0.01	2	1	1	0.01	20	1	2	10	1	10	1	1
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
693979	0.40	0.232	0.092	0.19	< 2	3	134	< 0.01	< 20	< 1	< 2	< 10	16	< 10	4	4
693980	0.59	0.221	0.098	0.13	< 2	2	132	< 0.01	< 20	3	< 2	< 10	14	< 10	4	4
693981	1.58	0.732	0.053	0.12	< 2	10	101	0.40	< 20	< 1	< 2	< 10	132	< 10	13	15
693982	0.48	0.241	0.091	0.19	< 2	3	135	< 0.01	< 20	< 1	< 2	< 10	20	< 10	4	6
693983	0.39	0.134	0.095	0.26	< 2	2	79	< 0.01	< 20	< 1	< 2	< 10	10	< 10	4	6
693984	0.38	0.142	0.093	0.25	< 2	2	80	< 0.01	< 20	< 1	< 2	< 10	11	< 10	4	6
693985	0.49	0.204	0.090	0.22	< 2	2	115	< 0.01	< 20	2	< 2	< 10	13	< 10	4	4
693986	0.52	0.231	0.091	0.19	< 2	2	129	< 0.01	< 20	2	< 2	< 10	14	< 10	4	4
693987	0.59	0.139	0.091	0.44	< 2	2	98	< 0.01	< 20	< 1	< 2	< 10	7	< 10	4	5
693988	0.42	0.187	0.093	0.39	< 2	2	101	< 0.01	< 20	2	< 2	< 10	9	< 10	4	3
693989	0.67	0.105	0.088	1.35	< 2	2	78	< 0.01	< 20	< 1	< 2	< 10	9	< 10	4	8
693990	0.45	0.155	0.080	7.24	8	2	89	< 0.01	< 20	< 1	< 2	< 10	9	< 10	3	19
693991	0.75	0.097	0.087	3.65	3	2	70	< 0.01	< 20	< 1	< 2	< 10	10	< 10	4	17
693992	0.49	0.168	0.077	3.59	3	2	95	< 0.01	< 20	< 1	< 2	< 10	13	< 10	4	16

Analyte Symbol	Au	Ag	Cd	Cu	Mn	Mo	Ni	Pb	Zn	Al	As	B	Ba	Be	Bi	Ca	Co	Cr	Fe	Ga	Hg	K	La
Unit Symbol	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm
Lower Limit	5	0.2	0.5	1	5	1	1	2	2	0.01	2	10	10	0.5	2	0.01	1	1	0.01	10	1	0.01	10
Method Code	FA-AA	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
GXR-1 Meas		30.9	2.6	1150	816	15	32	734	712	0.35	402	< 10	278	0.9	1600	0.76	7	7	23.6	< 10	4	0.03	< 10
GXR-1 Cert		31.0	3.30	1110	852	18.0	41.0	730	760	3.52	427	15.0	750	1.22	1380	0.960	8.20	12.0	23.6	13.8	3.90	0.050	7.50
GXR-1 Meas		32.8	2.1	1230	854	16	34	765	733	0.38	430	11	292	1.0	1650	0.80	7	11	25.5	< 10	5	0.03	< 10
GXR-1 Cert		31.0	3.30	1110	852	18.0	41.0	730	760	3.52	427	15.0	750	1.22	1380	0.960	8.20	12.0	23.6	13.8	3.90	0.050	7.50
GXR-6 Meas		< 0.2	< 0.5	67	1020	2	20	104	123	7.51	254	< 10	1130	1.0	< 2	0.15	15	89	5.68	20	< 1	1.11	12
GXR-6 Cert		1.30	1.00	66.0	1010	2.40	27.0	101	118	17.7	330	9.80	1300	1.40	0.290	0.180	13.8	96.0	5.58	35.0	0.0680	1.87	13.9
GXR-6 Meas		< 0.2	< 0.5	67	976	1	19	101	119	6.78	249	< 10	1090	1.0	< 2	0.15	14	85	5.53	10	< 1	1.02	11
GXR-6 Cert		1.30	1.00	66.0	1010	2.40	27.0	101	118	17.7	330	9.80	1300	1.40	0.290	0.180	13.8	96.0	5.58	35.0	0.0680	1.87	13.9
OREAS 134b (AQUA REGIA) Meas		> 100	626	1500				> 5000	> 10000		257						128		13.3				
OREAS 134b (AQUA REGIA) Cert		204	563	1360				133000	177000		221						106		12.25				
OREAS 133a (Aqua Regia) Meas		> 100	300	329				> 5000	> 10000		142		< 10				24		8.07				
OREAS 133a (Aqua Regia) Cert		97	297	324				48600.00	106000.00		140		59				23		7.92				
OREAS 218 Meas	551																						
OREAS 218 Cert	531																						
OREAS 218 Meas	528																						
OREAS 218 Cert	531																						
OREAS 218 Meas	521																						
OREAS 218 Cert	531																						
OREAS 218 Meas	519																						
OREAS 218 Cert	531																						
OREAS 218 Meas	514																						
OREAS 218 Cert	531																						
OREAS 224 Meas	2160																						
OREAS 224 Cert	2150.00																						
OREAS 224 Meas	2120																						
OREAS 224 Cert	2150.00																						
OREAS 224 Meas	2140																						
OREAS 224 Cert	2150.00																						
OREAS 224 Meas	2150																						
OREAS 224 Cert	2150.00																						
OREAS 224 Meas	2070																						
OREAS 224 Cert	2150.00																						
693855 Orig		0.3	0.7	32	2390	< 1	218	15	326	0.36	97	< 10	< 10	< 0.5	2	0.10	47	12	27.4	< 10	< 1	< 0.01	< 10

Analyte Symbol	Au	Ag	Cd	Cu	Mn	Mo	Ni	Pb	Zn	Al	As	B	Ba	Be	Bi	Ca	Co	Cr	Fe	Ga	Hg	K	La
Unit Symbol	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm
Lower Limit	5	0.2	0.5	1	5	1	1	2	2	0.01	2	10	10	0.5	2	0.01	1	1	0.01	10	1	0.01	10
Method Code	FA-AA	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
693855 Dup		< 0.2	< 0.5	27	2380	< 1	218	13	322	0.35	96	< 10	< 10	< 0.5	9	0.09	46	11	27.0	< 10	< 1	< 0.01	< 10
693862 Orig	13																						
693862 Dup	10																						
693863 Orig		0.2	1.5	17	2660	< 1	181	14	930	0.42	153	< 10	< 10	< 0.5	3	0.09	66	11	27.4	< 10	2	0.01	< 10
693863 Dup		< 0.2	2.3	17	2770	< 1	181	15	957	0.44	160	< 10	< 10	< 0.5	6	0.09	70	12	28.1	< 10	< 1	0.02	< 10
693872 Orig	116																						
693872 Dup	118																						
693882 Orig	< 5																						
693882 Dup	5																						
693897 Orig	< 5																						
693897 Dup	< 5																						
693902 Orig	6																						
693902 Split PREP DUP	5																						
693903 Orig		< 0.2	< 0.5	43	859	< 1	102	< 2	96	2.75	< 2	< 10	122	< 0.5	< 2	2.34	27	149	5.10	10	< 1	0.36	30
693903 Dup		< 0.2	< 0.5	47	845	< 1	102	< 2	99	2.69	< 2	< 10	118	0.5	< 2	2.30	27	145	5.00	10	< 1	0.35	30
693908 Orig	9																						
693908 Dup	5																						
693916 Orig		< 0.2	< 0.5	35	970	< 1	73	7	56	1.95	12	< 10	123	0.6	< 2	2.98	20	88	3.65	< 10	< 1	0.37	25
693916 Dup		< 0.2	< 0.5	35	981	< 1	75	7	56	2.01	13	< 10	125	0.6	< 2	3.06	20	85	3.74	< 10	< 1	0.38	26
693917 Orig	< 5																						
693917 Dup	7																						
693919 Orig		< 0.2	< 0.5	25	676	< 1	44	3	29	1.27	5	< 10	119	< 0.5	< 2	2.25	13	33	1.86	< 10	< 1	0.32	35
693919 Dup		< 0.2	< 0.5	26	689	< 1	44	3	30	1.28	5	< 10	121	< 0.5	< 2	2.31	13	34	1.89	< 10	< 1	0.32	35
693932 Orig	40	< 0.2	< 0.5	14	1150	< 1	65	< 2	53	1.55	3	< 10	148	0.5	< 2	4.74	12	49	3.23	< 10	< 1	0.45	22
693932 Dup	5	< 0.2	< 0.5	15	1170	< 1	66	< 2	54	1.56	3	< 10	147	0.5	< 2	4.75	12	46	3.27	< 10	< 1	0.45	22
693942 Orig	7																						
693942 Dup	7																						
693944 Orig		< 0.2	< 0.5	9	784	< 1	63	3	47	1.54	< 2	< 10	99	< 0.5	< 2	1.95	13	54	2.64	< 10	< 1	0.30	31
693944 Dup		< 0.2	< 0.5	9	783	< 1	62	3	47	1.54	< 2	< 10	99	< 0.5	< 2	1.94	14	59	2.63	< 10	< 1	0.30	31
693952 Orig	6																						
693952 Split PREP DUP	7																						
693952 Orig	7																						
693952 Dup	5																						
693958 Orig		< 0.2	< 0.5	22	1240	< 1	61	3	50	1.58	2	< 10	114	< 0.5	< 2	2.79	12	49	3.52	< 10	< 1	0.34	32
693958 Dup		< 0.2	< 0.5	22	1280	< 1	64	< 2	52	1.66	3	< 10	120	< 0.5	< 2	2.86	13	50	3.62	< 10	< 1	0.36	33
693967 Orig	< 5																						
693967 Dup	7																						
693977 Orig	< 5																						
693977 Dup	< 5																						
693987 Orig	< 5																						
693987 Dup	5																						

Analyte Symbol	Au	Ag	Cd	Cu	Mn	Mo	Ni	Pb	Zn	Al	As	B	Ba	Be	Bi	Ca	Co	Cr	Fe	Ga	Hg	K	La
Unit Symbol	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm
Lower Limit	5	0.2	0.5	1	5	1	1	2	2	0.01	2	10	10	0.5	2	0.01	1	1	0.01	10	1	0.01	10
Method Code	FA-AA	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
693989 Orig		< 0.2	< 0.5	14	597	< 1	91	4	145	0.74	91	< 10	55	< 0.5	< 2	2.26	37	7	3.22	< 10	< 1	0.18	11
693989 Dup		< 0.2	< 0.5	14	601	1	94	5	149	0.73	90	< 10	55	< 0.5	< 2	2.27	37	7	3.23	< 10	< 1	0.18	11
693990 Orig		1.2	< 0.5	15	443	3	368	34	295	1.10	379	< 10	12	< 0.5	< 2	1.56	63	8	8.35	< 10	< 1	0.28	< 10
693990 Dup		1.3	< 0.5	15	444	3	361	34	295	1.10	378	< 10	12	< 0.5	2	1.56	62	7	8.42	< 10	< 1	0.27	< 10
Method Blank	< 5																						
Method Blank	< 5																						
Method Blank	< 5																						
Method Blank	< 5																						
Method Blank	< 5																						
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Method Blank	< 5																						
Method Blank	< 5																						
Method Blank		< 0.2	< 0.5	< 1	< 5	< 1	< 1	< 2	< 2	< 0.01	< 2	< 10	< 10	< 0.5	< 2	< 0.01	< 1	< 1	< 0.01	< 10	< 1	< 0.01	< 10
Method Blank		< 0.2	< 0.5	< 1	< 5	< 1	< 1	< 2	< 2	< 0.01	< 2	< 10	< 10	< 0.5	< 2	< 0.01	< 1	< 1	< 0.01	< 10	< 1	< 0.01	< 10
Method Blank		< 0.2	< 0.5	< 1	< 5	< 1	< 1	< 2	< 2	< 0.01	< 2	< 10	< 10	< 0.5	< 2	< 0.01	< 1	< 1	< 0.01	< 10	< 1	< 0.01	< 10
Method Blank		< 0.2	< 0.5	< 1	< 5	< 1	< 1	< 2	< 2	< 0.01	< 2	< 10	< 10	< 0.5	< 2	< 0.01	< 1	< 1	< 0.01	< 10	< 1	< 0.01	< 10

Analyte Symbol	Mg	Na	P	S	Sb	Sc	Sr	Ti	Th	Te	Tl	U	V	W	Y	Zr
Unit Symbol	%	%	%	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	0.01	0.001	0.001	0.01	2	1	1	0.01	20	1	2	10	1	10	1	1
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
GXR-1 Meas	0.14	0.054	0.044	0.21	87	1	171	< 0.01	< 20	13	2	26	79	149	25	15
GXR-1 Cert	0.217	0.0520	0.0650	0.257	122	1.58	275	0.036	2.44	13.0	0.390	34.9	80.0	164	32.0	38.0
GXR-1 Meas	0.15	0.056	0.045	0.22	83	1	180	< 0.01	< 20	14	< 2	30	84	154	27	16
GXR-1 Cert	0.217	0.0520	0.0650	0.257	122	1.58	275	0.036	2.44	13.0	0.390	34.9	80.0	164	32.0	38.0
GXR-6 Meas	0.41	0.095	0.037	0.02	2	25	36		< 20	< 1	< 2	< 10	174	< 10	6	15
GXR-6 Cert	0.609	0.104	0.0350	0.0160	3.60	27.6	35.0		5.30	0.0180	2.20	1.54	186	1.90	14.0	110
GXR-6 Meas	0.38	0.086	0.036	0.01	4	22	31		< 20	< 1	< 2	< 10	169	< 10	6	15
GXR-6 Cert	0.609	0.104	0.0350	0.0160	3.60	27.6	35.0		5.30	0.0180	2.20	1.54	186	1.90	14.0	110
OREAS 134b (AQUA REGIA) Meas				18.2												
OREAS 134b (AQUA REGIA) Cert				19.31												
OREAS 133a (Aqua Regia) Meas				10.7	136											
OREAS 133a (Aqua Regia) Cert				10.7	147											
OREAS 218 Meas																
OREAS 218 Cert																
OREAS 218 Meas																
OREAS 218 Cert																
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OREAS 224 Cert																
693855 Orig	0.58	0.014	0.005	> 20.0	15	4	7	< 0.01	< 20	2	< 2	< 10	26	< 10	2	12
693855 Dup	0.58	0.013	0.005	19.8	17	4	7	< 0.01	< 20	< 1	< 2	< 10	26	< 10	2	12
693862 Orig																
693862 Dup																
693863 Orig	0.53	0.017	0.006	> 20.0	15	5	11	< 0.01	< 20	5	< 2	< 10	26	< 10	2	13

Analyte Symbol	Mg	Na	P	S	Sb	Sc	Sr	Ti	Th	Te	Tl	U	V	W	Y	Zr
Unit Symbol	%	%	%	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	0.01	0.001	0.001	0.01	2	1	1	0.01	20	1	2	10	1	10	1	1
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
693863 Dup	0.55	0.018	0.006	> 20.0	16	5	11	< 0.01	< 20	5	< 2	< 10	28	< 10	2	13
693872 Orig																
693872 Dup																
693882 Orig																
693882 Dup																
693897 Orig																
693897 Dup																
693902 Orig																
693902 Split PREP DUP																
693903 Orig	0.88	0.136	0.207	0.03	< 2	6	96	< 0.01	< 20	< 1	< 2	< 10	52	< 10	7	3
693903 Dup	0.86	0.132	0.202	0.03	3	6	94	< 0.01	< 20	< 1	< 2	< 10	52	< 10	7	3
693908 Orig																
693908 Dup																
693916 Orig	0.66	0.120	0.131	0.19	< 2	3	153	< 0.01	< 20	2	< 2	< 10	21	< 10	7	3
693916 Dup	0.68	0.122	0.134	0.19	< 2	3	157	< 0.01	< 20	< 1	< 2	< 10	22	< 10	7	3
693917 Orig																
693917 Dup																
693919 Orig	0.39	0.111	0.119	0.08	< 2	1	97	< 0.01	< 20	< 1	< 2	< 10	10	< 10	5	3
693919 Dup	0.40	0.111	0.122	0.09	< 2	1	101	< 0.01	< 20	< 1	< 2	< 10	10	< 10	6	3
693932 Orig	2.10	0.136	0.093	< 0.01	< 2	4	173	< 0.01	< 20	1	< 2	< 10	21	< 10	8	4
693932 Dup	2.12	0.135	0.095	< 0.01	< 2	4	178	< 0.01	< 20	< 1	< 2	< 10	21	< 10	8	4
693942 Orig																
693942 Dup																
693944 Orig	0.46	0.110	0.106	0.05	< 2	3	74	< 0.01	< 20	< 1	< 2	< 10	23	< 10	6	3
693944 Dup	0.45	0.111	0.104	0.05	< 2	3	73	< 0.01	< 20	7	< 2	< 10	23	< 10	6	3
693952 Orig																
693952 Split PREP DUP																
693952 Orig																
693952 Dup																
693958 Orig	0.89	0.120	0.105	0.04	< 2	4	143	< 0.01	< 20	< 1	< 2	< 10	23	< 10	6	4
693958 Dup	0.91	0.126	0.108	0.04	< 2	4	146	< 0.01	< 20	3	< 2	< 10	23	< 10	7	4
693967 Orig																
693967 Dup																
693977 Orig																
693977 Dup																
693987 Orig																
693987 Dup																
693989 Orig	0.67	0.104	0.088	1.36	< 2	2	77	< 0.01	< 20	< 1	< 2	< 10	9	< 10	4	8
693989 Dup	0.67	0.105	0.088	1.34	< 2	2	78	< 0.01	< 20	< 1	< 2	< 10	9	< 10	4	7
693990 Orig	0.45	0.157	0.079	7.26	9	2	89	< 0.01	< 20	< 1	< 2	< 10	9	< 10	4	19
693990 Dup	0.45	0.154	0.080	7.22	7	2	88	< 0.01	< 20	< 1	2	< 10	9	< 10	3	19



Analyte Symbol	Mg	Na	P	S	Sb	Sc	Sr	Ti	Th	Te	Tl	U	V	W	Y	Zr
Unit Symbol	%	%	%	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	0.01	0.001	0.001	0.01	2	1	1	0.01	20	1	2	10	1	10	1	1
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
Method Blank																
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Method Blank																
Method Blank	< 0.01	0.010	< 0.001	< 0.01	< 2	< 1	< 1	< 0.01	< 20	< 1	< 2	< 10	< 1	< 10	< 1	< 1
Method Blank	< 0.01	0.013	< 0.001	< 0.01	< 2	< 1	< 1	< 0.01	< 20	< 1	< 2	< 10	< 1	< 10	< 1	< 1
Method Blank	< 0.01	0.013	< 0.001	< 0.01	< 2	< 1	< 1	< 0.01	< 20	< 1	< 2	< 10	< 1	< 10	< 1	< 1
Method Blank	< 0.01	0.011	< 0.001	< 0.01	< 2	< 1	< 1	< 0.01	< 20	1	< 2	< 10	< 1	< 10	< 1	< 1



**Date Submitted:** 12-Mar-18  
**Invoice No.:** A18-03023  
**Invoice Date:** 15-May-18  
**Your Reference:** 81 Lucas

**Noble Mineral Exploration**  
**2500-120 Adelaide Street West**  
**Toronto ON M5H 1T1**  
**Canada**

**ATTN: Randy Singh (inv-cc)**

## CERTIFICATE OF ANALYSIS

105 Rock samples were submitted for analysis.

The following analytical package(s) were requested:

Code 1A2-Timmins Au - Fire Assay AA

Code 1E3-Timmins Aqua Regia ICP(AQUAGEO)

REPORT      **A18-03023**

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Notes:

If value exceeds upper limit we recommend reassay by fire assay gravimetric-Code 1A3.

Values which exceed the upper limit should be assayed for accurate numbers.

Footnote : Sample 693994 is insufficient for 1E3.

CERTIFIED BY:

A handwritten signature in black ink, appearing to read "Emmanuel Esemé". The signature is stylized with a large, sweeping initial 'E'.

Emmanuel Esemé , Ph.D.  
Quality Control

**ACTIVATION LABORATORIES LTD.**  
1752 Riverside Drive, Timmins, Ontario, Canada, P4R 1N1  
TELEPHONE +705 264-0123 or +1.888.228.5227 FAX +1.905.648.9613  
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## Results

## Activation Laboratories Ltd.

## Report: A18-03023

Analyte Symbol	Au	Ag	Cd	Cu	Mn	Mo	Ni	Pb	Zn	Al	As	B	Ba	Be	Bi	Ca	Co	Cr	Fe	Ga	Hg	K	La
Unit Symbol	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm
Lower Limit	5	0.2	0.5	1	5	1	1	2	2	0.01	2	10	10	0.5	2	0.01	1	1	0.01	10	1	0.01	10
Method Code	FA-AA	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
693993	384	0.8	< 0.5	29	638	5	178	40	106	0.45	328	< 10	19	< 0.5	< 2	2.04	40	4	7.52	< 10	< 1	0.11	< 10
693994	1150																						
693995	21	< 0.2	< 0.5	58	603	< 1	49	3	110	0.57	66	< 10	49	< 0.5	< 2	2.31	20	4	2.21	< 10	< 1	0.16	16
693996	7	< 0.2	< 0.5	20	710	< 1	33	< 2	792	0.66	28	< 10	40	< 0.5	< 2	1.84	12	4	2.37	< 10	< 1	0.13	13
693997	10	< 0.2	< 0.5	17	1080	< 1	50	< 2	129	1.15	28	< 10	32	< 0.5	< 2	2.90	11	4	4.42	< 10	< 1	0.10	< 10
693998	< 5	< 0.2	< 0.5	14	495	< 1	48	< 2	59	0.38	53	< 10	43	< 0.5	< 2	2.16	11	4	1.68	< 10	< 1	0.12	11
693999	6	< 0.2	< 0.5	14	750	< 1	52	3	68	0.48	66	< 10	49	< 0.5	< 2	3.04	11	3	2.27	< 10	< 1	0.15	10
694000	10	< 0.2	< 0.5	15	686	< 1	57	< 2	49	0.47	84	< 10	50	< 0.5	< 2	3.06	14	2	2.31	< 10	< 1	0.14	< 10
694501	8	< 0.2	< 0.5	12	667	< 1	39	< 2	47	0.44	34	< 10	46	< 0.5	< 2	2.96	11	3	2.15	< 10	< 1	0.14	< 10
694502	6	< 0.2	< 0.5	15	743	< 1	41	< 2	54	0.43	49	< 10	45	< 0.5	< 2	2.71	9	3	1.97	< 10	< 1	0.13	< 10
694503	< 5	< 0.2	< 0.5	2	92	< 1	< 1	< 2	16	4.69	< 2	11	< 10	< 0.5	< 2	0.19	< 1	1	0.59	< 10	< 1	1.38	< 10
694504	97	< 0.2	< 0.5	14	1410	< 1	72	2	62	0.56	128	< 10	41	< 0.5	< 2	2.68	15	4	4.07	< 10	< 1	0.14	< 10
694505	72	< 0.2	< 0.5	13	2710	< 1	133	5	73	0.95	145	< 10	34	< 0.5	< 2	1.92	24	4	7.92	< 10	< 1	0.11	< 10
694506	31	< 0.2	< 0.5	18	2890	< 1	181	6	82	1.14	106	< 10	33	< 0.5	< 2	2.71	45	3	9.76	< 10	< 1	0.11	< 10
694507	27	< 0.2	< 0.5	11	1960	< 1	103	4	46	0.84	113	< 10	43	< 0.5	< 2	1.64	28	4	6.17	< 10	< 1	0.16	10
694508	86	< 0.2	< 0.5	9	4960	< 1	100	4	65	0.79	195	< 10	27	< 0.5	< 2	2.36	17	3	12.4	< 10	< 1	0.11	< 10
694509	37	< 0.2	< 0.5	20	4420	< 1	144	5	87	1.01	215	< 10	27	< 0.5	< 2	2.21	21	4	11.7	< 10	< 1	0.09	< 10
694510	99	< 0.2	< 0.5	12	1300	< 1	60	5	47	0.75	102	< 10	44	< 0.5	< 2	1.91	14	6	4.45	< 10	< 1	0.18	11
694511	127	0.3	< 0.5	21	3680	< 1	94	11	58	0.98	157	< 10	27	< 0.5	< 2	2.09	17	4	10.4	< 10	< 1	0.11	< 10
694512	94	< 0.2	< 0.5	21	4570	< 1	77	6	57	0.85	313	< 10	23	< 0.5	< 2	1.98	15	4	10.7	< 10	< 1	0.08	< 10
694513	80	< 0.2	< 0.5	20	4390	< 1	75	6	53	0.81	300	< 10	22	< 0.5	< 2	1.93	14	4	10.3	< 10	< 1	0.07	< 10
694514	180	0.3	< 0.5	27	3620	< 1	86	12	44	0.77	164	< 10	30	< 0.5	< 2	1.92	21	4	9.56	< 10	< 1	0.11	< 10
694515	90	< 0.2	< 0.5	19	3890	< 1	75	4	53	0.85	63	< 10	34	< 0.5	< 2	2.17	15	5	9.44	< 10	< 1	0.12	< 10
694516	69	0.3	< 0.5	17	2970	4	82	3	61	0.80	87	< 10	42	< 0.5	< 2	1.82	18	4	8.68	< 10	< 1	0.16	< 10
694517	64	< 0.2	< 0.5	9	4300	< 1	75	3	76	0.84	45	< 10	39	< 0.5	< 2	2.46	13	5	10.9	< 10	< 1	0.13	< 10
694518	40	< 0.2	< 0.5	11	2670	< 1	114	3	76	0.86	103	< 10	37	< 0.5	< 2	2.42	17	5	8.31	< 10	< 1	0.13	< 10
694519	74	< 0.2	< 0.5	12	3050	< 1	132	6	71	0.86	87	< 10	33	< 0.5	< 2	2.59	22	6	10.4	< 10	< 1	0.13	< 10
694520	20	< 0.2	< 0.5	10	2320	< 1	96	4	65	0.68	65	< 10	37	< 0.5	< 2	2.10	23	4	7.28	< 10	< 1	0.13	< 10
694521	45	< 0.2	< 0.5	8	3300	< 1	108	3	83	0.76	71	< 10	36	< 0.5	< 2	2.32	23	4	10.3	< 10	< 1	0.13	< 10
694522	1580	< 0.2	< 0.5	62	844	< 1	109	9	68	1.31	2350	< 10	66	< 0.5	< 2	1.19	28	31	5.02	< 10	< 1	0.07	13
694523	54	< 0.2	< 0.5	7	3020	< 1	138	5	69	0.78	157	< 10	30	< 0.5	< 2	2.44	27	4	10.9	< 10	< 1	0.12	< 10
694524	92	< 0.2	< 0.5	13	2250	< 1	189	6	60	0.73	485	< 10	27	< 0.5	< 2	2.55	39	4	9.76	< 10	< 1	0.14	< 10
694525	18	< 0.2	< 0.5	8	4400	< 1	101	2	72	0.82	143	< 10	29	< 0.5	< 2	2.64	16	4	11.6	< 10	< 1	0.10	< 10
694526	37	< 0.2	< 0.5	16	3590	< 1	182	3	104	1.07	197	< 10	36	< 0.5	< 2	2.67	34	5	12.6	< 10	< 1	0.13	< 10
694527	16	< 0.2	< 0.5	7	2450	< 1	66	2	38	0.55	72	< 10	40	< 0.5	< 2	2.40	17	4	6.20	< 10	< 1	0.13	< 10
694528	17	< 0.2	< 0.5	44	2460	< 1	185	4	159	1.29	78	< 10	48	< 0.5	< 2	2.62	29	12	7.25	< 10	< 1	0.11	< 10
694529	16	< 0.2	< 0.5	31	3430	< 1	132	5	60	1.18	55	< 10	40	< 0.5	< 2	3.12	20	17	9.24	< 10	< 1	0.09	< 10
694530	21	< 0.2	< 0.5	7	3070	< 1	113	3	63	0.56	86	< 10	29	< 0.5	< 2	2.83	21	3	9.97	< 10	< 1	0.10	< 10
694531	14	< 0.2	< 0.5	6	4120	< 1	115	5	101	0.48	57	< 10	29	< 0.5	< 2	2.34	22	3	12.6	< 10	< 1	0.10	< 10
694532	17	< 0.2	< 0.5	5	3700	< 1	134	4	101	0.45	53	< 10	32	< 0.5	< 2	2.14	27	2	11.9	< 10	< 1	0.11	< 10
694533	< 5	< 0.2	< 0.5	1	99	< 1	< 1	< 2	17	4.71	< 2	12	< 10	< 0.5	< 2	0.19	< 1	1	0.60	< 10	< 1	1.34	< 10
694534	24	< 0.2	< 0.5	5	3330	< 1	144	5	92	0.51	55	< 10	34	< 0.5	< 2	2.37	24	2	10.8	< 10	< 1	0.12	< 10

## Results

## Activation Laboratories Ltd.

## Report: A18-03023

Analyte Symbol	Au	Ag	Cd	Cu	Mn	Mo	Ni	Pb	Zn	Al	As	B	Ba	Be	Bi	Ca	Co	Cr	Fe	Ga	Hg	K	La
Unit Symbol	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm
Lower Limit	5	0.2	0.5	1	5	1	1	2	2	0.01	2	10	10	0.5	2	0.01	1	1	0.01	10	1	0.01	10
Method Code	FA-AA	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
694535	29	< 0.2	< 0.5	6	3890	< 1	165	4	89	0.50	69	< 10	33	< 0.5	< 2	2.59	33	3	12.5	< 10	< 1	0.12	< 10
694536	14	0.3	< 0.5	8	3640	< 1	206	4	146	0.58	85	< 10	35	< 0.5	< 2	2.44	38	3	12.4	< 10	< 1	0.13	< 10
694537	9	< 0.2	< 0.5	9	1590	< 1	35	6	76	0.59	119	< 10	48	< 0.5	< 2	1.39	11	5	5.45	< 10	< 1	0.20	12
694538	5	< 0.2	< 0.5	10	2300	< 1	51	2	77	0.65	67	< 10	48	< 0.5	< 2	1.85	11	4	7.26	< 10	< 1	0.17	< 10
694539	14	< 0.2	< 0.5	5	3670	< 1	110	2	123	0.62	34	< 10	33	< 0.5	< 2	2.75	20	3	11.5	< 10	< 1	0.11	< 10
694540	28	< 0.2	< 0.5	9	3700	< 1	150	5	88	0.67	67	< 10	32	< 0.5	< 2	3.15	32	4	12.4	< 10	< 1	0.11	< 10
694541	7	< 0.2	< 0.5	8	3040	< 1	60	2	55	0.58	29	< 10	25	< 0.5	< 2	2.50	15	3	8.40	< 10	< 1	0.09	< 10
694542	7	< 0.2	< 0.5	9	3040	< 1	58	3	55	0.58	29	< 10	26	< 0.5	< 2	2.50	15	3	8.36	< 10	< 1	0.09	< 10
694543	5	< 0.2	< 0.5	17	409	2	29	4	39	0.58	38	< 10	53	< 0.5	< 2	1.07	12	3	1.17	< 10	< 1	0.19	14
694544	7	< 0.2	< 0.5	17	2350	9	49	3	57	0.90	45	< 10	40	< 0.5	< 2	3.35	11	3	7.34	< 10	< 1	0.15	< 10
694545	9	< 0.2	< 0.5	9	4000	< 1	82	3	65	0.63	33	< 10	35	< 0.5	< 2	2.23	13	3	10.2	< 10	< 1	0.12	< 10
694546	13	< 0.2	< 0.5	11	3680	< 1	190	3	80	0.92	98	< 10	37	< 0.5	< 2	2.60	35	7	10.7	< 10	< 1	0.12	< 10
694547	35	0.2	< 0.5	7	5180	< 1	90	5	89	1.34	43	< 10	25	< 0.5	< 2	2.65	18	5	15.8	< 10	< 1	0.08	< 10
694548	9	0.4	< 0.5	4	6020	< 1	61	9	84	0.92	64	< 10	19	< 0.5	< 2	2.62	13	2	18.6	< 10	1	0.06	< 10
694549	9	< 0.2	< 0.5	2	6300	< 1	45	< 2	112	0.86	46	< 10	25	< 0.5	3	2.41	6	2	16.3	< 10	1	0.08	< 10
694550	1090	< 0.2	< 0.5	157	722	< 1	68	3	61	3.68	6	44	25	< 0.5	< 2	3.10	30	119	5.69	10	< 1	0.05	< 10
694551	12	< 0.2	< 0.5	5	7000	< 1	57	2	106	0.70	58	< 10	26	< 0.5	< 2	2.19	9	3	17.3	< 10	< 1	0.08	< 10
694552	8	< 0.2	< 0.5	8	5660	< 1	87	3	129	1.10	74	< 10	27	< 0.5	< 2	2.89	13	4	14.5	< 10	< 1	0.08	< 10
694553	10	0.2	< 0.5	3	7840	< 1	54	< 2	100	0.80	59	< 10	26	< 0.5	3	2.80	8	3	18.0	< 10	< 1	0.07	< 10
694554	8	< 0.2	< 0.5	2	6900	< 1	66	< 2	109	0.94	38	< 10	24	< 0.5	< 2	2.58	7	4	16.7	< 10	< 1	0.06	< 10
694555	9	0.2	< 0.5	3	7020	< 1	61	< 2	100	1.23	95	< 10	19	< 0.5	< 2	2.77	8	5	17.6	< 10	< 1	0.04	< 10
694556	8	< 0.2	< 0.5	4	7840	< 1	83	< 2	133	0.83	52	< 10	27	< 0.5	< 2	2.39	9	5	18.3	< 10	< 1	0.05	< 10
694557	163	0.3	< 0.5	10	7820	< 1	125	7	174	0.54	224	< 10	13	< 0.5	3	0.49	26	11	19.6	< 10	< 1	0.02	< 10
694558	< 5	< 0.2	< 0.5	2	103	< 1	< 1	< 2	16	4.77	< 2	10	< 10	< 0.5	< 2	0.19	< 1	1	0.59	< 10	< 1	1.41	< 10
694559	177	0.2	< 0.5	11	5580	< 1	82	4	53	0.10	147	< 10	< 10	< 0.5	< 2	1.60	22	10	16.6	< 10	< 1	< 0.01	< 10
694560	76	0.3	< 0.5	6	4690	< 1	93	< 2	54	0.10	220	< 10	< 10	< 0.5	< 2	1.65	31	12	16.5	< 10	< 1	< 0.01	< 10
694561	462	0.5	< 0.5	9	2920	< 1	164	5	76	0.64	516	< 10	< 10	< 0.5	3	1.01	69	5	21.1	< 10	< 1	0.03	< 10
694562	32	0.2	0.6	3	7360	< 1	146	5	222	1.18	120	< 10	22	< 0.5	< 2	0.76	31	8	19.5	< 10	< 1	0.06	< 10
694563	406	0.5	< 0.5	15	3780	< 1	224	10	105	0.57	506	< 10	< 10	< 0.5	4	0.57	75	7	23.7	< 10	< 1	0.01	< 10
694564	418	0.5	< 0.5	15	3890	< 1	232	8	109	0.60	516	< 10	< 10	< 0.5	5	0.59	75	7	24.3	< 10	< 1	0.01	< 10
694565	348	0.4	< 0.5	13	5060	< 1	173	6	199	1.09	354	< 10	< 10	< 0.5	4	1.49	40	11	21.6	< 10	< 1	0.05	< 10
694566	695	0.7	< 0.5	15	3280	< 1	181	10	80	0.74	452	< 10	< 10	< 0.5	2	1.27	48	8	20.9	< 10	< 1	0.08	< 10
694567	115	0.3	< 0.5	11	4350	< 1	97	3	65	0.90	194	< 10	11	< 0.5	< 2	1.80	27	9	17.7	< 10	1	0.08	< 10
694568	61	< 0.2	< 0.5	8	5640	< 1	100	3	131	1.27	119	< 10	20	< 0.5	< 2	1.15	20	11	16.0	< 10	< 1	0.10	< 10
694569	655	0.4	< 0.5	20	5300	< 1	144	13	108	1.14	289	< 10	11	< 0.5	3	0.97	35	9	22.1	< 10	< 1	0.05	< 10
694570	156	0.3	< 0.5	13	4300	< 1	124	7	84	1.21	220	< 10	12	< 0.5	< 2	2.15	28	11	17.3	< 10	< 1	0.08	< 10
694571	197	< 0.2	< 0.5	12	4710	< 1	99	4	87	0.37	170	< 10	16	< 0.5	< 2	1.96	24	14	15.3	< 10	< 1	0.04	< 10
694572	312	0.9	< 0.5	12	5760	< 1	88	7	77	0.17	257	< 10	< 10	< 0.5	< 2	1.86	19	11	17.5	< 10	< 1	< 0.01	< 10
694573	2280	< 0.2	< 0.5	95	1580	3	110	6	78	1.68	857	< 10	66	< 0.5	< 2	1.61	29	45	7.04	< 10	< 1	0.08	15
694574	196	0.4	< 0.5	15	3560	< 1	175	8	67	0.38	483	< 10	< 10	< 0.5	3	0.88	58	7	22.8	< 10	< 1	< 0.01	< 10
694575	248	0.3	< 0.5	14	3440	< 1	155	8	65	0.36	457	< 10	< 10	< 0.5	4	0.85	56	6	21.5	< 10	< 1	< 0.01	< 10
694576	26	< 0.2	< 0.5	9	3350	< 1	127	4	152	0.64	199	< 10	13	< 0.5	< 2	2.50	31	15	16.8	< 10	< 1	0.04	< 10

Analyte Symbol	Au	Ag	Cd	Cu	Mn	Mo	Ni	Pb	Zn	Al	As	B	Ba	Be	Bi	Ca	Co	Cr	Fe	Ga	Hg	K	La
Unit Symbol	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm
Lower Limit	5	0.2	0.5	1	5	1	1	2	2	0.01	2	10	10	0.5	2	0.01	1	1	0.01	10	1	0.01	10
Method Code	FA-AA	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
694577	25	< 0.2	< 0.5	10	3330	< 1	122	8	155	0.64	196	< 10	14	< 0.5	< 2	2.52	31	16	16.8	< 10	< 1	0.04	< 10
694578	74	< 0.2	< 0.5	12	4360	< 1	110	6	107	0.86	269	< 10	14	< 0.5	< 2	2.59	26	14	17.1	< 10	< 1	0.06	< 10
694579	76	< 0.2	< 0.5	12	4240	< 1	103	6	103	0.83	266	< 10	14	< 0.5	< 2	2.53	27	13	16.7	< 10	1	0.05	< 10
694580	24	< 0.2	< 0.5	15	3610	< 1	118	6	102	1.77	143	< 10	13	< 0.5	< 2	1.81	26	17	16.7	< 10	< 1	0.09	< 10
694581	9	0.4	< 0.5	31	3560	< 1	232	13	136	1.24	316	< 10	< 10	< 0.5	7	0.89	55	14	22.3	< 10	< 1	0.06	< 10
694582	7	< 0.2	< 0.5	19	4180	< 1	176	10	168	1.42	215	< 10	< 10	< 0.5	< 2	1.71	40	15	20.0	< 10	< 1	0.06	< 10
694583	< 5	< 0.2	< 0.5	52	2580	< 1	154	4	166	2.05	45	< 10	27	< 0.5	< 2	2.88	42	35	10.6	< 10	< 1	0.09	< 10
694584	< 5	< 0.2	< 0.5	1	91	< 1	< 1	< 2	15	4.19	< 2	12	< 10	< 0.5	< 2	0.18	< 1	2	0.56	< 10	< 1	1.34	< 10
694585	< 5	< 0.2	< 0.5	34	2630	< 1	150	2	128	2.08	24	< 10	40	< 0.5	< 2	3.41	28	36	9.20	< 10	< 1	0.11	< 10
694586	13	< 0.2	< 0.5	23	2780	< 1	101	< 2	98	2.09	20	< 10	56	< 0.5	< 2	4.44	18	30	8.32	< 10	< 1	0.14	< 10
694587	14	< 0.2	< 0.5	38	1480	< 1	193	4	111	1.25	217	< 10	33	< 0.5	3	2.80	34	24	6.99	< 10	< 1	0.17	< 10
694588	136	0.4	< 0.5	8	3420	1	28	2	37	0.12	193	< 10	< 10	< 0.5	< 2	1.31	3	22	7.81	< 10	< 1	< 0.01	< 10
694589	90	< 0.2	< 0.5	10	3020	2	70	2	101	0.30	177	< 10	19	< 0.5	< 2	0.96	8	27	7.48	< 10	< 1	0.04	< 10
694590	79	< 0.2	< 0.5	10	2890	2	64	3	98	0.34	162	< 10	22	< 0.5	< 2	1.08	7	27	7.12	< 10	< 1	0.05	< 10
694591	60	< 0.2	< 0.5	3	2870	2	25	< 2	91	0.08	103	< 10	< 10	< 0.5	3	1.16	3	25	6.32	< 10	< 1	< 0.01	< 10
694592	173	< 0.2	< 0.5	6	3800	2	25	2	67	0.10	94	< 10	< 10	< 0.5	< 2	1.19	2	23	8.31	< 10	< 1	< 0.01	< 10
694593	95	1.3	< 0.5	1	3240	< 1	10	< 2	34	0.05	159	< 10	< 10	< 0.5	< 2	1.99	< 1	19	6.92	< 10	< 1	< 0.01	< 10
694594	120	< 0.2	< 0.5	2	3060	2	25	< 2	55	0.11	242	< 10	< 10	< 0.5	< 2	2.40	3	20	7.69	< 10	< 1	< 0.01	< 10
694595	92	< 0.2	< 0.5	2	2620	1	37	< 2	99	0.08	236	< 10	< 10	< 0.5	< 2	2.22	3	19	6.65	< 10	< 1	< 0.01	< 10
694596	23	< 0.2	< 0.5	< 1	1780	2	27	4	95	0.05	67	< 10	< 10	< 0.5	< 2	3.73	3	21	4.36	< 10	< 1	< 0.01	< 10
694597	143	< 0.2	< 0.5	6	3070	1	44	4	39	0.07	242	< 10	< 10	< 0.5	< 2	6.73	5	10	7.46	< 10	< 1	< 0.01	< 10

Analyte Symbol	Mg	Na	P	S	Sb	Sc	Sr	Ti	Th	Te	Tl	U	V	W	Y	Zr
Unit Symbol	%	%	%	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	0.01	0.001	0.001	0.01	2	1	1	0.01	20	1	2	10	1	10	1	1
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
693993	0.50	0.072	0.066	6.94	9	1	53	< 0.01	< 20	2	< 2	< 10	4	< 10	3	16
693994																
693995	0.41	0.087	0.087	0.66	< 2	1	69	< 0.01	< 20	< 1	< 2	< 10	6	< 10	4	10
693996	0.37	0.097	0.081	0.33	< 2	2	57	< 0.01	< 20	< 1	< 2	< 10	9	< 10	4	10
693997	0.82	0.089	0.076	0.72	< 2	4	79	< 0.01	< 20	< 1	< 2	< 10	20	< 10	4	12
693998	0.62	0.092	0.074	0.19	< 2	2	77	< 0.01	< 20	2	< 2	< 10	8	< 10	4	11
693999	0.88	0.097	0.076	0.30	< 2	2	90	< 0.01	< 20	2	< 2	< 10	9	< 10	4	10
694000	0.90	0.097	0.080	0.57	< 2	2	91	< 0.01	< 20	< 1	< 2	< 10	9	< 10	4	11
694501	0.82	0.092	0.071	0.24	< 2	2	96	< 0.01	< 20	2	< 2	< 10	8	< 10	4	10
694502	0.73	0.088	0.070	0.30	< 2	1	106	< 0.01	< 20	< 1	< 2	< 10	6	< 10	3	10
694503	0.04	3.06	< 0.001	< 0.01	< 2	< 1	18	< 0.01	< 20	< 1	< 2	< 10	< 1	< 10	3	< 1
694504	0.71	0.095	0.068	2.33	< 2	2	118	< 0.01	< 20	6	< 2	< 10	7	< 10	4	16
694505	0.69	0.068	0.067	3.30	3	2	90	< 0.01	< 20	3	< 2	< 10	9	< 10	3	16
694506	1.17	0.073	0.063	3.08	5	4	129	< 0.01	< 20	1	< 2	< 10	17	< 10	4	17
694507	0.57	0.068	0.072	2.53	3	2	85	< 0.01	< 20	< 1	< 2	< 10	9	< 10	3	14
694508	1.13	0.058	0.058	4.71	7	3	123	< 0.01	< 20	< 1	< 2	< 10	8	< 10	3	18
694509	1.22	0.066	0.056	2.34	5	7	110	< 0.01	< 20	5	< 2	< 10	20	< 10	3	16
694510	0.51	0.070	0.090	2.36	3	2	108	< 0.01	< 20	< 1	< 2	< 10	8	< 10	4	16
694511	0.93	0.064	0.055	3.20	5	4	110	< 0.01	< 20	2	< 2	< 10	14	< 10	3	15
694512	0.92	0.049	0.061	3.61	5	3	105	< 0.01	< 20	< 1	< 2	< 10	11	< 10	3	15
694513	0.90	0.047	0.059	3.38	4	3	98	< 0.01	< 20	< 1	< 2	< 10	10	< 10	3	15
694514	0.71	0.072	0.064	3.53	6	2	97	< 0.01	< 20	< 1	< 2	< 10	9	< 10	3	16
694515	0.78	0.064	0.064	2.52	3	2	103	< 0.01	< 20	3	< 2	< 10	10	< 10	3	15
694516	0.70	0.060	0.072	2.85	3	2	97	< 0.01	< 20	< 1	< 2	< 10	10	< 10	3	15
694517	1.28	0.052	0.059	1.08	5	7	124	< 0.01	< 20	< 1	< 2	< 10	19	< 10	3	13
694518	0.96	0.065	0.065	2.08	3	5	131	< 0.01	< 20	3	< 2	< 10	15	< 10	3	13
694519	1.08	0.057	0.058	3.85	6	5	130	< 0.01	< 20	< 1	< 2	< 10	16	< 10	3	16
694520	0.85	0.067	0.065	1.82	2	4	110	< 0.01	< 20	< 1	< 2	< 10	14	< 10	3	13
694521	1.20	0.056	0.057	2.57	4	5	123	< 0.01	< 20	< 1	< 2	< 10	18	< 10	3	13
694522	1.99	0.272	0.122	0.73	3	2	74	0.13	< 20	< 1	< 2	< 10	30	< 10	13	7
694523	1.22	0.047	0.051	3.60	5	5	120	< 0.01	< 20	3	< 2	< 10	20	< 10	3	16
694524	0.96	0.053	0.058	4.85	4	4	127	< 0.01	< 20	< 1	< 2	< 10	14	< 10	4	17
694525	1.49	0.055	0.052	1.04	6	4	133	< 0.01	< 20	< 1	< 2	< 10	14	< 10	3	13
694526	1.42	0.057	0.057	2.81	6	7	135	< 0.01	< 20	3	< 2	< 10	25	< 10	3	17
694527	0.76	0.060	0.064	1.41	2	2	118	< 0.01	< 20	< 1	< 2	< 10	8	< 10	3	12
694528	0.86	0.164	0.065	1.91	3	6	122	0.07	< 20	< 1	< 2	< 10	50	< 10	7	20
694529	1.38	0.134	0.051	1.40	4	6	133	0.03	< 20	4	< 2	< 10	38	< 10	7	19
694530	1.47	0.051	0.051	2.50	6	4	129	< 0.01	< 20	< 1	< 2	< 10	16	< 10	4	16
694531	1.58	0.045	0.047	2.06	8	7	107	< 0.01	< 20	< 1	< 2	< 10	19	< 10	3	15
694532	1.37	0.047	0.051	1.98	7	7	94	< 0.01	< 20	< 1	< 2	< 10	18	< 10	3	14
694533	0.05	3.00	0.001	< 0.01	< 2	< 1	20	< 0.01	< 20	1	< 2	< 10	< 1	< 10	3	1
694534	1.29	0.057	0.055	2.04	6	6	109	< 0.01	< 20	1	< 2	< 10	17	< 10	4	15

Analyte Symbol	Mg	Na	P	S	Sb	Sc	Sr	Ti	Th	Te	Tl	U	V	W	Y	Zr
Unit Symbol	%	%	%	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	0.01	0.001	0.001	0.01	2	1	1	0.01	20	1	2	10	1	10	1	1
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
694535	1.44	0.047	0.055	2.70	8	5	118	< 0.01	< 20	< 1	< 2	< 10	12	< 10	4	16
694536	1.56	0.044	0.053	2.40	7	7	107	< 0.01	< 20	< 1	< 2	< 10	20	< 10	4	17
694537	0.66	0.036	0.067	2.63	4	3	74	< 0.01	< 20	7	< 2	< 10	9	< 10	3	12
694538	0.95	0.050	0.055	1.23	4	2	88	< 0.01	< 20	< 1	< 2	< 10	7	< 10	3	14
694539	1.57	0.042	0.048	1.43	5	8	111	< 0.01	< 20	< 1	< 2	< 10	22	< 10	4	15
694540	1.73	0.044	0.044	3.04	6	6	128	< 0.01	< 20	< 1	< 2	< 10	18	< 10	4	18
694541	0.99	0.038	0.056	0.97	2	3	106	< 0.01	< 20	5	< 2	< 10	8	< 10	3	12
694542	0.98	0.039	0.056	0.97	4	3	107	< 0.01	< 20	< 1	< 2	< 10	8	< 10	3	12
694543	0.21	0.091	0.085	0.24	< 2	< 1	50	< 0.01	< 20	2	< 2	< 10	4	< 10	3	10
694544	1.02	0.068	0.060	1.40	3	2	150	< 0.01	< 20	< 1	< 2	< 10	9	< 10	4	14
694545	1.16	0.047	0.054	0.99	4	4	109	< 0.01	< 20	4	< 2	< 10	14	< 10	3	12
694546	1.18	0.048	0.060	2.77	5	4	133	< 0.01	< 20	< 1	< 2	< 10	17	< 10	4	15
694547	1.68	0.046	0.039	3.36	9	4	134	< 0.01	< 20	< 1	< 2	< 10	16	< 10	4	19
694548	2.03	0.029	0.020	4.79	12	5	119	< 0.01	< 20	< 1	< 2	< 10	16	< 10	3	15
694549	1.99	0.033	0.023	1.28	6	6	112	< 0.01	< 20	3	< 2	< 10	16	< 10	3	15
694550	2.14	0.077	0.040	0.20	3	7	26	0.43	< 20	< 1	< 2	< 10	181	< 10	14	20
694551	1.98	0.041	0.036	1.17	8	7	104	< 0.01	< 20	< 1	< 2	< 10	18	< 10	3	14
694552	1.78	0.056	0.041	0.56	7	7	142	< 0.01	< 20	< 1	< 2	< 10	19	< 10	3	15
694553	1.97	0.037	0.028	0.94	9	6	121	< 0.01	< 20	< 1	< 2	< 10	15	< 10	3	17
694554	1.93	0.038	0.030	0.89	8	7	119	< 0.01	< 20	< 1	< 2	< 10	23	< 10	3	17
694555	2.00	0.045	0.031	1.14	9	8	130	< 0.01	< 20	< 1	< 2	< 10	26	< 10	3	17
694556	1.90	0.029	0.025	1.53	9	7	111	< 0.01	< 20	< 1	< 2	< 10	20	< 10	3	17
694557	1.10	0.018	0.011	6.06	13	4	17	< 0.01	< 20	4	< 2	< 10	14	< 10	3	13
694558	0.04	3.13	< 0.001	0.01	< 2	< 1	20	< 0.01	< 20	3	< 2	< 10	< 1	< 10	3	< 1
694559	1.24	0.014	0.002	7.50	15	2	54	< 0.01	< 20	< 1	< 2	< 10	8	< 10	2	9
694560	1.21	0.011	0.003	9.04	16	4	58	< 0.01	< 20	< 1	< 2	< 10	13	< 10	3	11
694561	0.73	0.017	0.014	17.9	36	2	52	< 0.01	< 20	< 1	< 2	< 10	9	< 10	2	14
694562	1.20	0.020	0.017	5.24	12	7	31	< 0.01	< 20	< 1	< 2	< 10	22	< 10	5	15
694563	0.88	0.015	0.007	18.3	39	5	26	< 0.01	< 20	< 1	< 2	< 10	17	< 10	2	14
694564	0.91	0.015	0.008	18.3	40	5	27	< 0.01	< 20	< 1	< 2	< 10	18	< 10	2	14
694565	1.30	0.020	0.030	13.5	23	7	76	< 0.01	< 20	< 1	< 2	< 10	26	< 10	3	17
694566	0.84	0.026	0.046	17.4	28	3	61	< 0.01	< 20	< 1	< 2	< 10	14	< 10	2	15
694567	1.02	0.035	0.054	11.1	15	2	83	< 0.01	< 20	< 1	< 2	< 10	13	< 10	3	14
694568	1.06	0.037	0.061	5.64	9	3	57	< 0.01	< 20	< 1	< 2	< 10	17	< 10	3	14
694569	1.07	0.024	0.027	12.5	18	4	40	< 0.01	< 20	< 1	< 2	< 10	17	< 10	3	15
694570	1.18	0.031	0.061	10.4	18	3	102	< 0.01	< 20	< 1	< 2	< 10	17	< 10	3	15
694571	1.21	0.020	0.029	7.54	12	6	86	< 0.01	< 20	< 1	< 2	< 10	19	< 10	2	11
694572	1.36	0.012	0.003	8.92	14	5	69	< 0.01	< 20	< 1	< 2	< 10	13	< 10	2	10
694573	2.27	0.326	0.164	1.44	3	3	81	0.17	< 20	< 1	< 2	< 10	47	< 10	14	8
694574	0.76	0.015	0.007	18.3	35	2	36	< 0.01	< 20	< 1	< 2	< 10	10	< 10	1	11
694575	0.73	0.013	0.007	17.3	34	2	35	< 0.01	< 20	< 1	< 2	< 10	9	< 10	1	10
694576	1.35	0.024	0.045	11.1	12	6	100	< 0.01	< 20	1	< 2	< 10	22	< 10	3	12

Analyte Symbol	Mg	Na	P	S	Sb	Sc	Sr	Ti	Th	Te	Tl	U	V	W	Y	Zr
Unit Symbol	%	%	%	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	0.01	0.001	0.001	0.01	2	1	1	0.01	20	1	2	10	1	10	1	1
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
694577	1.35	0.025	0.045	11.1	13	6	100	< 0.01	< 20	< 1	< 2	< 10	22	< 10	3	13
694578	1.17	0.031	0.069	10.7	13	4	110	< 0.01	< 20	< 1	< 2	< 10	18	< 10	3	14
694579	1.14	0.028	0.067	10.3	12	4	108	< 0.01	< 20	3	< 2	< 10	17	< 10	3	13
694580	0.97	0.044	0.073	9.32	11	3	79	< 0.01	< 20	< 1	< 2	< 10	29	< 10	4	14
694581	0.58	0.038	0.047	17.7	17	3	37	< 0.01	< 20	< 1	< 2	< 10	17	< 10	3	14
694582	0.84	0.036	0.050	13.5	15	3	71	< 0.01	< 20	4	< 2	< 10	18	< 10	3	14
694583	0.91	0.059	0.098	4.93	5	5	112	< 0.01	< 20	< 1	< 2	< 10	33	< 10	4	12
694584	0.04	2.90	0.001	0.02	< 2	< 1	20	< 0.01	< 20	< 1	< 2	< 10	< 1	< 10	3	< 1
694585	1.08	0.080	0.102	3.36	4	6	121	< 0.01	< 20	3	< 2	< 10	37	< 10	4	12
694586	1.55	0.087	0.100	2.24	2	4	152	< 0.01	< 20	< 1	< 2	< 10	34	< 10	5	13
694587	0.79	0.077	0.118	4.05	6	3	111	< 0.01	< 20	< 1	< 2	< 10	23	< 10	4	13
694588	0.82	0.017	0.003	2.08	4	3	41	< 0.01	< 20	< 1	< 2	< 10	11	< 10	2	5
694589	0.71	0.029	0.020	2.38	4	3	38	< 0.01	< 20	< 1	< 2	< 10	14	< 10	2	6
694590	0.71	0.034	0.020	2.11	4	3	42	< 0.01	< 20	< 1	< 2	< 10	14	< 10	2	6
694591	0.69	0.013	0.001	1.38	3	2	38	< 0.01	< 20	< 1	< 2	< 10	10	< 10	2	4
694592	0.91	0.012	0.002	1.76	4	2	47	< 0.01	< 20	3	< 2	< 10	10	< 10	2	4
694593	1.06	0.011	0.002	1.46	3	3	71	< 0.01	< 20	2	< 2	< 10	10	< 10	2	4
694594	1.24	0.011	0.001	2.26	5	3	89	< 0.01	< 20	4	< 2	< 10	12	< 10	2	6
694595	1.10	0.009	< 0.001	2.11	3	3	99	< 0.01	< 20	< 1	< 2	< 10	9	< 10	2	5
694596	1.46	0.011	< 0.001	0.55	3	2	135	< 0.01	< 20	< 1	< 2	< 10	7	< 10	2	4
694597	2.50	0.011	0.001	3.38	5	3	250	< 0.01	< 20	6	< 2	< 10	11	< 10	4	7



Analyte Symbol	Au	Ag	Cd	Cu	Mn	Mo	Ni	Pb	Zn	Al	As	B	Ba	Be	Bi	Ca	Co	Cr	Fe	Ga	Hg	K	La
Unit Symbol	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm
Lower Limit	5	0.2	0.5	1	5	1	1	2	2	0.01	2	10	10	0.5	2	0.01	1	1	0.01	10	1	0.01	10
Method Code	FA-AA	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
GXR-1 Meas		26.3	2.2	1060	781	14	32	641	635	0.32	337	< 10	314	0.7	1350	0.76	5	5	20.3	< 10	5	0.03	< 10
GXR-1 Cert		31.0	3.30	1110	852	18.0	41.0	730	760	3.52	427	15.0	750	1.22	1380	0.960	8.20	12.0	23.6	13.8	3.90	0.050	7.50
GXR-1 Meas		25.9	1.9	1040	736	13	21	638	637	0.31	325	< 10	260	0.7	1340	0.74	5	6	19.6	< 10	5	0.03	< 10
GXR-1 Cert		31.0	3.30	1110	852	18.0	41.0	730	760	3.52	427	15.0	750	1.22	1380	0.960	8.20	12.0	23.6	13.8	3.90	0.050	7.50
GXR-6 Meas		0.2	< 0.5	70	1050	1	20	98	122	7.45	232	< 10	955	0.9	< 2	0.16	13	77	5.33	20	< 1	1.08	10
GXR-6 Cert		1.30	1.00	66.0	1010	2.40	27.0	101	118	17.7	330	9.80	1300	1.40	0.290	0.180	13.8	96.0	5.58	35.0	0.0680	1.87	13.9
GXR-6 Meas		< 0.2	< 0.5	72	1030	2	15	100	122	7.51	237	< 10	1010	0.9	< 2	0.16	13	77	5.38	20	< 1	1.10	10
GXR-6 Cert		1.30	1.00	66.0	1010	2.40	27.0	101	118	17.7	330	9.80	1300	1.40	0.290	0.180	13.8	96.0	5.58	35.0	0.0680	1.87	13.9
OREAS 134b (AQUA REGIA) Meas		> 100	560	1250				> 5000	> 10000		192						96		10.3				
OREAS 134b (AQUA REGIA) Cert		204	563	1360				133000	177000		221						110		12.25				
OREAS 133a (Aqua Regia) Meas		85.7	288	299				> 5000	> 10000		119		16				19		6.90				
OREAS 133a (Aqua Regia) Cert		97	297	324				48600.00	106000.00		140		59				23		7.92				
OREAS 218 Meas	513																						
OREAS 218 Cert	531																						
OREAS 218 Meas	550																						
OREAS 218 Cert	531																						
OREAS 218 Meas	551																						
OREAS 218 Cert	531																						
OREAS 218 Meas	545																						
OREAS 218 Cert	531																						
OREAS 218 Meas	543																						
OREAS 218 Cert	531																						
OREAS 218 Meas	545																						
OREAS 218 Cert	531																						
OREAS 224 Meas	2180																						
OREAS 224 Cert	2150.00																						
OREAS 224 Meas	2160																						
OREAS 224 Cert	2150.00																						
OREAS 224 Meas	2220																						
OREAS 224 Cert	2150.00																						
OREAS 224 Meas	2240																						
OREAS 224 Cert	2150.00																						
693995 Orig		< 0.2	< 0.5	60	612	< 1	50	2	113	0.59	68	< 10	50	< 0.5	< 2	2.34	20	3	2.24	< 10	< 1	0.16	16
693995 Dup		< 0.2	< 0.5	57	594	< 1	47	3	107	0.56	65	< 10	48	< 0.5	< 2	2.27	20	4	2.17	< 10	< 1	0.16	16

Analyte Symbol	Au	Ag	Cd	Cu	Mn	Mo	Ni	Pb	Zn	Al	As	B	Ba	Be	Bi	Ca	Co	Cr	Fe	Ga	Hg	K	La
Unit Symbol	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm
Lower Limit	5	0.2	0.5	1	5	1	1	2	2	0.01	2	10	10	0.5	2	0.01	1	1	0.01	10	1	0.01	10
Method Code	FA-AA	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
694502 Orig	5																						
694502 Dup	7																						
694503 Orig		< 0.2	< 0.5	2	93	< 1	< 1	< 2	17	4.62	< 2	11	< 10	< 0.5	< 2	0.19	< 1	1	0.58	< 10	< 1	1.39	< 10
694503 Dup		< 0.2	< 0.5	1	91	< 1	< 1	< 2	16	4.75	< 2	11	< 10	< 0.5	< 2	0.19	< 1	1	0.59	< 10	< 1	1.37	< 10
694512 Orig	89																						
694512 Dup	98																						
694523 Orig	55																						
694523 Dup	53																						
694537 Orig	9																						
694537 Dup	8																						
694542 Orig	7																						
694542 Split PREP DUP	7																						
694543 Orig		< 0.2	< 0.5	16	412	2	29	4	37	0.59	38	< 10	53	< 0.5	< 2	1.07	12	3	1.17	< 10	< 1	0.19	14
694543 Dup		< 0.2	< 0.5	18	407	2	29	4	41	0.58	38	< 10	52	< 0.5	< 2	1.08	12	3	1.16	< 10	< 1	0.19	14
694546 Orig	12																						
694546 Dup	13																						
694556 Orig	7	0.2	< 0.5	5	7840	< 1	84	< 2	135	0.83	52	< 10	27	< 0.5	3	2.38	10	5	18.2	< 10	< 1	0.05	< 10
694556 Dup	8	< 0.2	< 0.5	4	7840	< 1	82	< 2	131	0.84	51	< 10	27	< 0.5	< 2	2.41	8	4	18.4	< 10	< 1	0.05	< 10
694559 Orig		0.2	< 0.5	11	5530	< 1	83	4	52	0.10	145	< 10	< 10	< 0.5	< 2	1.59	22	9	16.4	< 10	< 1	< 0.01	< 10
694559 Dup		0.3	< 0.5	11	5620	< 1	82	4	54	0.10	149	< 10	< 10	< 0.5	< 2	1.62	22	10	16.9	< 10	< 1	< 0.01	< 10
694571 Orig	163																						
694571 Dup	231																						
694572 Orig		0.5	< 0.5	12	5730	< 1	88	7	75	0.17	259	< 10	< 10	< 0.5	5	1.85	19	11	17.4	< 10	< 1	< 0.01	< 10
694572 Dup		1.3	< 0.5	12	5800	< 1	88	7	78	0.17	256	< 10	< 10	< 0.5	< 2	1.88	19	11	17.6	< 10	< 1	< 0.01	< 10
694580 Orig	24																						
694580 Dup	24																						
694583 Orig	< 5																						
694583 Dup	< 5																						
694584 Orig		< 0.2	< 0.5	1	99	< 1	< 1	< 2	15	4.49	< 2	13	< 10	< 0.5	< 2	0.19	< 1	2	0.60	< 10	< 1	1.36	< 10
694584 Dup		< 0.2	< 0.5	1	83	< 1	< 1	< 2	14	3.89	< 2	12	< 10	< 0.5	< 2	0.17	< 1	1	0.52	< 10	< 1	1.31	< 10
694591 Orig	68																						
694591 Dup	51																						
694592 Orig	173																						
694592 Split PREP DUP	146																						
Method Blank	< 5																						
Method Blank	< 5																						
Method Blank	< 5																						
Method Blank	< 5																						
Method Blank	< 5																						
Method Blank	< 5																						
Method Blank	< 5																						

Analyte Symbol	Au	Ag	Cd	Cu	Mn	Mo	Ni	Pb	Zn	Al	As	B	Ba	Be	Bi	Ca	Co	Cr	Fe	Ga	Hg	K	La
Unit Symbol	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm
Lower Limit	5	0.2	0.5	1	5	1	1	2	2	0.01	2	10	10	0.5	2	0.01	1	1	0.01	10	1	0.01	10
Method Code	FA-AA	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
Method Blank	< 5																						
Method Blank	5																						
Method Blank	< 5																						
Method Blank	< 5																						
Method Blank		< 0.2	< 0.5	< 1	< 5	< 1	< 1	< 2	< 2	< 0.01	< 2	< 10	< 10	< 0.5	< 2	< 0.01	< 1	< 1	< 0.01	< 10	< 1	< 0.01	< 10
Method Blank		< 0.2	< 0.5	< 1	< 5	< 1	< 1	< 2	< 2	< 0.01	< 2	< 10	< 10	< 0.5	< 2	< 0.01	< 1	< 1	< 0.01	< 10	< 1	< 0.01	< 10
Method Blank		< 0.2	< 0.5	< 1	< 5	< 1	< 1	< 2	< 2	< 0.01	< 2	< 10	< 10	< 0.5	< 2	< 0.01	< 1	< 1	< 0.01	< 10	< 1	< 0.01	< 10
Method Blank		< 0.2	< 0.5	< 1	< 5	< 1	< 1	< 2	< 2	< 0.01	< 2	< 10	< 10	< 0.5	< 2	< 0.01	< 1	< 1	< 0.01	< 10	< 1	< 0.01	< 10
Method Blank		< 0.2	< 0.5	< 1	< 5	< 1	< 1	< 2	< 2	< 0.01	< 2	< 10	< 10	< 0.5	< 2	< 0.01	< 1	< 1	< 0.01	< 10	< 1	< 0.01	< 10

Analyte Symbol	Mg	Na	P	S	Sb	Sc	Sr	Ti	Th	Te	Tl	U	V	W	Y	Zr
Unit Symbol	%	%	%	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	0.01	0.001	0.001	0.01	2	1	1	0.01	20	1	2	10	1	10	1	1
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
GXR-1 Meas	0.12	0.045	0.037	0.19	85	< 1	140	< 0.01	< 20	10	< 2	32	75	137	24	15
GXR-1 Cert	0.217	0.0520	0.0650	0.257	122	1.58	275	0.036	2.44	13.0	0.390	34.9	80.0	164	32.0	38.0
GXR-1 Meas	0.11	0.044	0.037	0.19	69	< 1	140	< 0.01	< 20	9	< 2	29	74	132	23	12
GXR-1 Cert	0.217	0.0520	0.0650	0.257	122	1.58	275	0.036	2.44	13.0	0.390	34.9	80.0	164	32.0	38.0
GXR-6 Meas	0.38	0.084	0.035	0.02	4	21	32		< 20	< 1	< 2	< 10	181	< 10	6	14
GXR-6 Cert	0.609	0.104	0.0350	0.0160	3.60	27.6	35.0		5.30	0.0180	2.20	1.54	186	1.90	14.0	110
GXR-6 Meas	0.39	0.085	0.036	0.03	4	21	32		< 20	< 1	< 2	< 10	181	< 10	6	13
GXR-6 Cert	0.609	0.104	0.0350	0.0160	3.60	27.6	35.0		5.30	0.0180	2.20	1.54	186	1.90	14.0	110
OREAS 134b (AQUA REGIA) Meas				14.4												
OREAS 134b (AQUA REGIA) Cert				19.31												
OREAS 133a (Aqua Regia) Meas				9.36	131											
OREAS 133a (Aqua Regia) Cert				10.7	147											
OREAS 218 Meas																
OREAS 218 Cert																
OREAS 218 Meas																
OREAS 218 Cert																
OREAS 218 Meas																
OREAS 218 Cert																
OREAS 218 Meas																
OREAS 218 Cert																
OREAS 218 Meas																
OREAS 218 Cert																
OREAS 218 Meas																
OREAS 218 Cert																
OREAS 224 Meas																
OREAS 224 Cert																
OREAS 224 Meas																
OREAS 224 Cert																
OREAS 224 Meas																
OREAS 224 Cert																
OREAS 224 Meas																
OREAS 224 Cert																
693995 Orig	0.41	0.089	0.088	0.67	< 2	1	71	< 0.01	< 20	< 1	< 2	< 10	6	< 10	4	10
693995 Dup	0.40	0.086	0.086	0.65	< 2	1	68	< 0.01	< 20	< 1	< 2	< 10	5	< 10	4	10
694502 Orig																
694502 Dup																
694503 Orig	0.04	3.07	< 0.001	< 0.01	< 2	< 1	18	< 0.01	< 20	< 1	3	< 10	< 1	< 10	3	1

Analyte Symbol	Mg	Na	P	S	Sb	Sc	Sr	Ti	Th	Te	Tl	U	V	W	Y	Zr
Unit Symbol	%	%	%	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	0.01	0.001	0.001	0.01	2	1	1	0.01	20	1	2	10	1	10	1	1
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
694503 Dup	0.04	3.05	0.001	< 0.01	< 2	< 1	18	< 0.01	< 20	< 1	< 2	< 10	< 1	< 10	3	< 1
694512 Orig																
694512 Dup																
694523 Orig																
694523 Dup																
694537 Orig																
694537 Dup																
694542 Orig																
694542 Split PREP DUP																
694543 Orig	0.21	0.091	0.084	0.24	< 2	< 1	50	< 0.01	< 20	2	< 2	< 10	4	< 10	3	10
694543 Dup	0.21	0.091	0.085	0.23	< 2	< 1	50	< 0.01	< 20	2	< 2	< 10	4	< 10	3	9
694546 Orig																
694546 Dup																
694556 Orig	1.88	0.029	0.025	1.54	10	7	111	< 0.01	< 20	< 1	< 2	< 10	20	< 10	3	17
694556 Dup	1.91	0.029	0.026	1.53	8	7	111	< 0.01	< 20	< 1	< 2	< 10	20	< 10	3	17
694559 Orig	1.23	0.016	0.002	7.54	16	2	54	< 0.01	< 20	3	< 2	< 10	8	< 10	2	9
694559 Dup	1.26	0.013	0.002	7.46	15	2	55	< 0.01	< 20	< 1	< 2	< 10	8	< 10	2	9
694571 Orig																
694571 Dup																
694572 Orig	1.36	0.012	0.003	8.95	13	5	69	< 0.01	< 20	< 1	< 2	< 10	13	< 10	2	11
694572 Dup	1.37	0.011	0.003	8.89	15	5	70	< 0.01	< 20	< 1	< 2	< 10	14	< 10	2	10
694580 Orig																
694580 Dup																
694583 Orig																
694583 Dup																
694584 Orig	0.04	2.96	0.001	0.03	< 2	< 1	21	< 0.01	< 20	< 1	< 2	< 10	< 1	< 10	3	1
694584 Dup	0.04	2.83	0.001	0.02	< 2	< 1	19	< 0.01	< 20	< 1	< 2	< 10	< 1	< 10	3	< 1
694591 Orig																
694591 Dup																
694592 Orig																
694592 Split PREP DUP																
Method Blank																
Method Blank																
Method Blank																
Method Blank																
Method Blank																
Method Blank																
Method Blank																
Method Blank																
Method Blank																

Analyte Symbol	Mg	Na	P	S	Sb	Sc	Sr	Ti	Th	Te	Tl	U	V	W	Y	Zr
Unit Symbol	%	%	%	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	0.01	0.001	0.001	0.01	2	1	1	0.01	20	1	2	10	1	10	1	1
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
Method Blank																
Method Blank	< 0.01	0.010	< 0.001	< 0.01	< 2	< 1	< 1	< 0.01	< 20	2	< 2	< 10	< 1	< 10	< 1	< 1
Method Blank	< 0.01	0.011	< 0.001	< 0.01	< 2	< 1	< 1	< 0.01	< 20	2	< 2	< 10	< 1	< 10	< 1	< 1
Method Blank	< 0.01	0.011	< 0.001	< 0.01	< 2	< 1	< 1	< 0.01	< 20	1	< 2	< 10	< 1	< 10	< 1	< 1
Method Blank	< 0.01	0.010	< 0.001	< 0.01	< 2	< 1	< 1	< 0.01	< 20	2	< 2	< 10	< 1	< 10	< 1	< 1
Method Blank	< 0.01	0.010	< 0.001	< 0.01	< 2	< 1	< 1	< 0.01	< 20	1	< 2	< 10	< 1	< 10	< 1	< 1



**Date Submitted:** 13-Mar-18  
**Invoice No.:** A18-03162  
**Invoice Date:** 15-May-18  
**Your Reference:** 81 Lucas

**Noble Mineral Exploration**  
**2500-120 Adelaide Street West**  
**Toronto ON M5H 1T1**  
**Canada**

**ATTN: Randy Singh (inv-cc)**

## CERTIFICATE OF ANALYSIS

140 Rock samples were submitted for analysis.

The following analytical package(s) were requested:

Code 1A2-Timmins Au - Fire Assay AA

Code 1E3-Timmins Aqua Regia ICP(AQUAGEO)

REPORT      **A18-03162**

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

Notes:

If value exceeds upper limit we recommend reassay by fire assay gravimetric-Code 1A3.

Values which exceed the upper limit should be assayed for accurate numbers.

CERTIFIED BY:

A handwritten signature in black ink, appearing to be "Emmanuel Esemé", written over a horizontal line.

Emmanuel Esemé , Ph.D.  
Quality Control

**ACTIVATION LABORATORIES LTD.**  
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## Results

## Activation Laboratories Ltd.

## Report: A18-03162

Analyte Symbol	Au	Ag	Cd	Cu	Mn	Mo	Ni	Pb	Zn	Al	As	B	Ba	Be	Bi	Ca	Co	Cr	Fe	Ga	Hg	K	La
Unit Symbol	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm
Lower Limit	5	0.2	0.5	1	5	1	1	2	2	0.01	2	10	10	0.5	2	0.01	1	1	0.01	10	1	0.01	10
Method Code	FA-AA	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
694598	1120	1.2	< 0.5	43	4150	< 1	168	33	127	0.27	628	< 10	< 10	< 0.5	4	0.63	32	11	21.3	< 10	< 1	< 0.01	< 10
694599	1140	1.6	0.8	124	1090	< 1	111	50	380	0.20	484	< 10	< 10	< 0.5	3	0.24	52	16	18.7	< 10	< 1	0.05	< 10
694600	1550	1.1	0.8	93	2440	2	296	36	370	0.29	677	< 10	< 10	< 0.5	3	0.22	46	27	17.5	< 10	2	0.05	< 10
694601	2460	2.0	0.8	41	3450	< 1	75	28	69	0.18	772	< 10	< 10	< 0.5	5	0.74	18	20	21.4	< 10	2	< 0.01	< 10
694602	> 5000	1.4	< 0.5	121	592	4	138	31	59	3.02	47	12	46	< 0.5	< 2	3.02	28	402	4.03	< 10	< 1	0.19	< 10
694603	55	< 0.2	< 0.5	5	3000	< 1	17	4	47	0.08	159	< 10	< 10	< 0.5	< 2	0.70	1	57	6.51	< 10	< 1	< 0.01	< 10
694604	1180	0.7	< 0.5	22	3550	< 1	53	19	73	0.09	585	< 10	< 10	< 0.5	< 2	0.99	9	27	12.8	< 10	< 1	< 0.01	< 10
694605	< 5	< 0.2	< 0.5	< 1	91	< 1	< 1	< 2	16	4.92	< 2	12	< 10	< 0.5	< 2	0.20	< 1	< 1	0.55	< 10	< 1	1.45	< 10
694606	564	0.5	< 0.5	13	3870	< 1	23	11	34	0.08	193	< 10	< 10	< 0.5	< 2	3.45	6	45	11.1	< 10	< 1	< 0.01	< 10
694607	615	0.4	< 0.5	15	3160	< 1	62	9	49	0.20	322	< 10	< 10	< 0.5	< 2	2.50	10	46	10.2	< 10	< 1	0.02	< 10
694608	643	0.2	< 0.5	17	4720	< 1	127	8	64	0.68	387	< 10	16	< 0.5	< 2	2.96	22	14	14.2	< 10	< 1	0.08	< 10
694609	1020	0.9	0.5	20	1790	< 1	353	16	76	0.68	598	< 10	10	< 0.5	< 2	3.02	56	15	16.5	< 10	< 1	0.07	< 10
694610	1300	0.8	< 0.5	19	2270	< 1	276	17	74	0.59	562	< 10	< 10	< 0.5	< 2	1.84	41	12	18.3	< 10	< 1	0.07	< 10
694611	1850	1.3	0.8	21	6220	11	110	19	80	0.27	727	< 10	< 10	< 0.5	3	0.93	18	9	23.4	< 10	< 1	0.02	< 10
694612	961	0.9	< 0.5	17	5100	15	160	12	106	0.17	895	< 10	< 10	< 0.5	5	1.28	23	18	21.1	< 10	< 1	< 0.01	< 10
694613	1020	0.8	< 0.5	25	5130	9	69	9	81	0.12	285	< 10	< 10	< 0.5	3	1.93	11	41	17.3	< 10	< 1	< 0.01	< 10
694614	159	< 0.2	< 0.5	4	2960	19	54	3	124	0.04	175	< 10	< 10	< 0.5	< 2	1.97	7	42	8.15	< 10	< 1	< 0.01	< 10
694615	347	< 0.2	< 0.5	9	1610	2	41	8	118	0.09	152	< 10	< 10	< 0.5	3	2.72	9	21	5.67	< 10	< 1	< 0.01	< 10
694616	397	< 0.2	< 0.5	11	1810	2	53	10	147	0.10	174	< 10	< 10	< 0.5	< 2	3.06	11	82	6.73	< 10	< 1	< 0.01	< 10
694617	662	0.7	2.6	181	1250	6	170	38	1540	0.32	510	< 10	14	< 0.5	< 2	1.36	82	15	7.17	< 10	< 1	0.05	< 10
694618	1690	0.6	0.5	12	4630	< 1	99	13	185	0.48	720	< 10	14	< 0.5	< 2	0.22	24	18	14.7	< 10	< 1	0.05	< 10
694619	848	0.5	0.6	25	3600	< 1	134	13	142	0.51	823	< 10	19	< 0.5	< 2	1.53	27	18	12.5	< 10	< 1	0.10	< 10
694620	1170	1.1	< 0.5	28	1920	< 1	88	20	115	0.19	399	< 10	14	< 0.5	< 2	3.21	23	30	8.42	< 10	< 1	0.06	< 10
694621	1030	0.8	0.6	27	1920	< 1	125	20	62	0.31	838	< 10	15	< 0.5	< 2	2.52	31	17	10.3	< 10	< 1	0.09	< 10
694622	190	< 0.2	< 0.5	18	1240	< 1	197	7	172	0.36	531	< 10	27	< 0.5	< 2	2.82	32	13	4.64	< 10	< 1	0.10	< 10
694623	222	< 0.2	< 0.5	17	699	1	167	6	76	0.37	318	< 10	29	< 0.5	< 2	2.87	28	14	3.45	< 10	< 1	0.11	< 10
694624	132	< 0.2	< 0.5	10	957	2	55	8	79	0.37	130	< 10	25	< 0.5	< 2	2.17	16	14	3.92	< 10	< 1	0.09	< 10
694625	3350	2.4	< 0.5	50	2330	< 1	74	70	34	0.15	2330	< 10	< 10	< 0.5	< 2	0.47	18	8	16.5	< 10	2	0.03	< 10
694626	3670	2.4	< 0.5	50	2480	< 1	76	71	33	0.14	2490	< 10	< 10	< 0.5	2	0.57	21	17	17.0	< 10	< 1	0.02	< 10
694627	3060	1.5	< 0.5	46	3080	< 1	64	53	35	0.18	5250	< 10	< 10	< 0.5	< 2	1.30	18	9	17.4	< 10	< 1	0.01	< 10
694628	2430	2.0	< 0.5	48	1460	< 1	29	54	35	0.09	5880	< 10	< 10	< 0.5	< 2	0.34	19	17	13.6	< 10	< 1	< 0.01	< 10
694629	1500	1.3	< 0.5	36	702	< 1	26	35	25	0.09	2980	< 10	< 10	< 0.5	< 2	0.06	15	33	9.73	< 10	< 1	< 0.01	< 10
694630	902	0.7	< 0.5	21	349	< 1	19	23	25	0.08	1840	< 10	< 10	< 0.5	2	0.02	10	45	6.24	< 10	< 1	< 0.01	< 10
694631	2050	2.1	< 0.5	51	226	< 1	24	58	18	0.03	2060	< 10	< 10	< 0.5	< 2	0.03	16	38	10.9	< 10	1	< 0.01	< 10
694632	2240	1.6	< 0.5	37	696	< 1	20	39	15	0.05	2060	< 10	< 10	< 0.5	< 2	0.04	12	53	10.5	< 10	< 1	< 0.01	< 10
694633	1820	1.3	< 0.5	30	1870	< 1	38	33	52	0.21	2430	< 10	< 10	< 0.5	< 2	0.24	20	31	12.9	< 10	< 1	0.06	< 10
694634	1200	0.9	< 0.5	19	1610	< 1	40	19	29	0.40	1030	< 10	19	< 0.5	< 2	2.89	20	19	7.84	< 10	< 1	0.14	< 10
694635	1160	1.7	< 0.5	34	1690	< 1	60	55	37	0.36	1360	< 10	11	< 0.5	< 2	1.99	27	24	12.0	< 10	< 1	0.13	< 10
694636	1690	0.3	< 0.5	162	730	< 1	80	6	59	3.80	12	16	24	< 0.5	< 2	3.12	30	113	5.15	< 10	< 1	0.08	< 10
694637	706	0.9	7.5	28	193	32	23	34	3590	0.21	247	< 10	16	< 0.5	< 2	0.08	13	39	7.50	< 10	< 1	0.05	< 10
694638	84	< 0.2	< 0.5	8	2360	< 1	77	< 2	70	0.73	1600	< 10	42	< 0.5	< 2	4.51	22	21	6.70	< 10	< 1	0.15	< 10
694639	153	< 0.2	< 0.5	21	2460	< 1	92	< 2	131	0.61	2370	< 10	31	< 0.5	< 2	3.07	24	18	7.89	< 10	1	0.12	< 10



## Results

## Activation Laboratories Ltd.

## Report: A18-03162

Analyte Symbol	Au	Ag	Cd	Cu	Mn	Mo	Ni	Pb	Zn	Al	As	B	Ba	Be	Bi	Ca	Co	Cr	Fe	Ga	Hg	K	La
Unit Symbol	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm
Lower Limit	5	0.2	0.5	1	5	1	1	2	2	0.01	2	10	10	0.5	2	0.01	1	1	0.01	10	1	0.01	10
Method Code	FA-AA	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
694640	58	< 0.2	< 0.5	24	2720	< 1	70	< 2	58	0.87	808	< 10	34	< 0.5	< 2	5.39	17	21	7.55	< 10	< 1	0.14	< 10
694641	38	< 0.2	< 0.5	26	2510	< 1	88	< 2	69	0.75	620	< 10	30	< 0.5	< 2	5.65	20	22	7.23	< 10	< 1	0.12	< 10
694642	9	< 0.2	< 0.5	35	1570	< 1	71	< 2	98	0.70	120	< 10	46	< 0.5	< 2	4.27	20	24	4.97	< 10	< 1	0.14	11
694643	16	< 0.2	< 0.5	29	3100	< 1	69	< 2	87	0.84	81	< 10	29	< 0.5	< 2	3.52	18	26	9.32	< 10	< 1	0.11	< 10
694644	6	< 0.2	< 0.5	27	3050	< 1	67	< 2	81	1.97	13	< 10	31	< 0.5	< 2	5.90	14	50	7.99	< 10	< 1	0.11	< 10
694645	5	< 0.2	< 0.5	< 1	89	< 1	< 1	< 2	16	4.72	< 2	10	< 10	< 0.5	< 2	0.21	< 1	< 1	0.44	< 10	< 1	1.41	< 10
694646	< 5	< 0.2	< 0.5	30	2720	< 1	63	< 2	65	1.89	6	< 10	45	< 0.5	< 2	3.81	16	53	7.51	< 10	< 1	0.15	14
694647	< 5	< 0.2	< 0.5	31	2180	< 1	82	< 2	57	1.16	17	< 10	37	< 0.5	< 2	4.55	20	31	5.72	< 10	< 1	0.14	11
694648	5	< 0.2	< 0.5	32	2510	< 1	86	< 2	45	1.17	20	< 10	40	< 0.5	< 2	4.41	21	30	6.49	< 10	< 1	0.14	12
694649	< 5	< 0.2	< 0.5	29	2330	< 1	96	< 2	59	1.87	10	< 10	33	< 0.5	< 2	4.96	21	42	6.50	< 10	< 1	0.12	12
694650	< 5	< 0.2	< 0.5	43	885	< 1	123	< 2	34	0.90	37	< 10	51	< 0.5	< 2	3.50	31	23	3.41	< 10	< 1	0.18	17
694651	< 5	< 0.2	< 0.5	35	1540	< 1	105	< 2	61	1.97	10	< 10	56	< 0.5	< 2	3.62	24	60	5.90	< 10	< 1	0.21	15
694652	5	< 0.2	< 0.5	29	2110	< 1	82	< 2	68	2.26	2	< 10	58	< 0.5	< 2	4.88	19	56	6.81	< 10	< 1	0.19	15
694653	5	< 0.2	< 0.5	29	2320	< 1	108	< 2	64	2.42	8	< 10	47	< 0.5	< 2	4.55	24	61	7.38	< 10	< 1	0.17	10
694654	5	< 0.2	< 0.5	32	1930	< 1	94	< 2	42	1.48	23	< 10	51	< 0.5	< 2	4.77	25	44	5.47	< 10	< 1	0.18	13
694655	6	< 0.2	< 0.5	35	1930	< 1	95	< 2	46	1.48	23	< 10	52	< 0.5	< 2	4.80	25	47	5.53	< 10	< 1	0.18	13
694656	5	< 0.2	< 0.5	28	2040	< 1	83	< 2	63	1.98	17	< 10	52	< 0.5	< 2	5.06	19	52	6.45	< 10	< 1	0.18	10
694657	38	< 0.2	< 0.5	33	1710	< 1	67	< 2	76	2.23	19	< 10	77	< 0.5	< 2	3.89	20	58	6.14	< 10	< 1	0.24	16
694658	6	< 0.2	< 0.5	31	1980	< 1	65	< 2	74	1.26	25	< 10	63	< 0.5	3	6.93	18	35	4.62	< 10	< 1	0.21	12
694659	7	< 0.2	< 0.5	37	1210	< 1	55	< 2	79	1.76	23	< 10	59	< 0.5	3	3.50	20	53	4.96	< 10	< 1	0.20	15
694660	9	< 0.2	< 0.5	44	346	8	30	3	66	1.02	23	< 10	89	< 0.5	< 2	2.04	14	16	1.69	< 10	< 1	0.29	17
694661	9	< 0.2	< 0.5	19	466	< 1	44	5	98	1.56	23	< 10	120	< 0.5	< 2	3.21	16	16	2.12	< 10	< 1	0.41	15
694662	< 5	< 0.2	< 0.5	11	331	< 1	34	2	100	1.68	14	< 10	125	< 0.5	< 2	2.22	11	17	1.82	< 10	< 1	0.41	19
694663	5	< 0.2	< 0.5	13	461	< 1	42	3	88	1.00	23	< 10	83	< 0.5	< 2	2.49	12	13	1.76	< 10	< 1	0.26	19
694664	< 5	< 0.2	< 0.5	6	530	< 1	45	3	97	1.01	35	< 10	87	< 0.5	< 2	3.01	16	9	2.05	< 10	< 1	0.27	18
694665	1040	< 0.2	< 0.5	159	707	< 1	77	3	60	3.66	5	41	24	< 0.5	< 2	3.02	30	117	5.65	< 10	< 1	0.05	< 10
694666	18	< 0.2	< 0.5	21	335	< 1	37	3	77	1.13	17	< 10	98	< 0.5	< 2	1.78	13	18	1.75	< 10	< 1	0.30	17
694667	11	< 0.2	< 0.5	20	333	< 1	46	4	76	1.13	23	< 10	95	< 0.5	< 2	1.78	14	18	1.67	< 10	< 1	0.29	18
694668	16	< 0.2	< 0.5	10	458	< 1	47	4	104	0.95	33	< 10	77	< 0.5	< 2	2.32	17	8	2.14	< 10	< 1	0.25	16
694669	28	< 0.2	< 0.5	27	347	< 1	54	3	95	0.80	31	< 10	68	< 0.5	< 2	1.99	18	16	1.90	< 10	< 1	0.22	14
694670	20	< 0.2	< 0.5	20	445	< 1	37	3	102	0.79	18	< 10	61	< 0.5	< 2	3.50	11	18	1.92	< 10	< 1	0.21	14
694671	14	< 0.2	< 0.5	14	342	< 1	26	4	74	1.09	13	< 10	87	< 0.5	< 2	2.72	7	19	1.49	< 10	< 1	0.30	17
694672	15	< 0.2	< 0.5	24	293	1	36	3	64	0.77	21	< 10	66	< 0.5	< 2	2.39	13	15	1.44	< 10	< 1	0.23	14
694673	16	< 0.2	< 0.5	24	362	< 1	53	4	105	0.98	21	< 10	75	< 0.5	< 2	2.38	15	25	1.80	< 10	< 1	0.26	15
694674	14	< 0.2	< 0.5	16	333	< 1	37	6	97	0.55	27	< 10	45	< 0.5	< 2	2.32	14	24	1.75	< 10	< 1	0.15	14
694675	15	< 0.2	< 0.5	16	336	< 1	39	7	95	0.57	28	< 10	48	< 0.5	< 2	2.37	15	23	1.80	< 10	< 1	0.16	15
694676	21	< 0.2	< 0.5	16	475	< 1	49	4	90	0.79	36	< 10	67	< 0.5	< 2	2.18	19	22	1.99	< 10	< 1	0.23	15
694677	15	< 0.2	< 0.5	24	610	< 1	47	2	98	0.81	56	< 10	69	< 0.5	< 2	3.04	19	12	2.23	< 10	< 1	0.24	15
694678	27	< 0.2	< 0.5	20	402	< 1	25	3	74	0.87	32	< 10	70	< 0.5	< 2	2.81	11	8	1.72	< 10	< 1	0.25	16
694679	43	< 0.2	< 0.5	15	624	< 1	42	3	93	0.88	39	< 10	65	< 0.5	< 2	3.59	17	16	2.50	< 10	< 1	0.23	15
694680	12	< 0.2	< 0.5	15	445	< 1	43	4	82	0.78	22	< 10	64	< 0.5	< 2	1.93	14	15	2.08	< 10	< 1	0.21	16
694681	8	< 0.2	< 0.5	9	454	< 1	26	2	70	1.05	24	< 10	88	< 0.5	< 2	2.68	10	11	1.79	< 10	< 1	0.30	20

## Results

## Activation Laboratories Ltd.

## Report: A18-03162

Analyte Symbol	Au	Ag	Cd	Cu	Mn	Mo	Ni	Pb	Zn	Al	As	B	Ba	Be	Bi	Ca	Co	Cr	Fe	Ga	Hg	K	La
Unit Symbol	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm
Lower Limit	5	0.2	0.5	1	5	1	1	2	2	0.01	2	10	10	0.5	2	0.01	1	1	0.01	10	1	0.01	10
Method Code	FA-AA	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
694682	9	< 0.2	< 0.5	14	311	< 1	25	< 2	73	0.63	20	< 10	55	< 0.5	< 2	2.57	10	14	1.58	< 10	< 1	0.19	17
694683	10	< 0.2	< 0.5	13	336	< 1	28	4	67	0.86	15	< 10	70	< 0.5	< 2	3.04	10	12	1.58	< 10	< 1	0.25	16
694684	9	< 0.2	< 0.5	12	356	< 1	27	3	86	0.77	12	< 10	60	< 0.5	< 2	2.67	10	25	1.91	< 10	< 1	0.21	17
694685	6	< 0.2	< 0.5	< 1	115	< 1	< 1	< 2	21	5.53	< 2	15	11	0.5	< 2	0.22	< 1	2	0.70	10	< 1	1.58	< 10
694686	17	< 0.2	< 0.5	13	433	< 1	30	< 2	81	0.66	22	< 10	56	< 0.5	< 2	2.72	12	11	2.05	< 10	< 1	0.19	16
694687	8	< 0.2	< 0.5	12	428	< 1	32	< 2	72	0.63	20	< 10	56	< 0.5	< 2	2.67	13	14	1.92	< 10	< 1	0.20	17
694688	9	< 0.2	< 0.5	18	548	< 1	30	4	86	0.54	30	< 10	46	< 0.5	< 2	4.50	13	9	2.18	< 10	< 1	0.16	14
694689	9	< 0.2	< 0.5	160	541	< 1	68	< 2	58	3.26	< 2	< 10	22	< 0.5	< 2	2.41	28	28	4.80	< 10	< 1	0.04	< 10
694690	7	< 0.2	< 0.5	14	362	< 1	52	3	71	1.38	22	< 10	111	< 0.5	< 2	2.47	14	17	1.54	< 10	< 1	0.40	20
694691	6	< 0.2	< 0.5	9	356	< 1	30	< 2	73	1.03	37	< 10	90	< 0.5	< 2	2.18	11	10	1.39	< 10	< 1	0.31	20
694692	32	0.4	0.5	14	353	1	73	9	299	0.86	73	< 10	69	< 0.5	< 2	2.02	27	12	2.73	< 10	< 1	0.26	11
694693	16	< 0.2	< 0.5	12	438	< 1	73	< 2	127	0.93	60	< 10	68	< 0.5	< 2	2.17	28	8	2.00	< 10	< 1	0.25	15
694694	82	0.7	< 0.5	12	597	2	233	22	275	0.62	220	< 10	25	< 0.5	< 2	2.55	45	8	6.12	< 10	< 1	0.17	< 10
694695	98	0.4	< 0.5	13	383	< 1	173	17	301	0.75	191	< 10	19	< 0.5	< 2	1.68	43	11	5.44	< 10	< 1	0.22	< 10
694696	1410	< 0.2	< 0.5	58	809	< 1	107	8	66	1.25	2220	< 10	63	< 0.5	< 2	1.14	26	29	4.72	< 10	< 1	0.06	12
694697	110	0.4	< 0.5	17	397	2	135	21	288	0.50	172	< 10	28	< 0.5	< 2	1.46	32	7	4.37	< 10	< 1	0.16	< 10
694698	110	0.6	< 0.5	13	324	< 1	167	19	249	0.75	197	< 10	15	< 0.5	< 2	1.49	40	12	5.44	< 10	< 1	0.24	< 10
694699	71	< 0.2	< 0.5	17	778	< 1	77	6	191	0.57	93	< 10	37	< 0.5	4	2.51	21	14	4.62	< 10	< 1	0.17	10
694700	158	0.6	< 0.5	17	981	< 1	150	19	145	0.72	138	< 10	20	< 0.5	< 2	1.94	34	11	6.40	< 10	< 1	0.19	< 10
694701	89	0.5	< 0.5	14	1340	< 1	171	20	125	1.30	108	< 10	21	< 0.5	< 2	1.94	36	10	6.97	< 10	< 1	0.24	< 10
694702	30	< 0.2	< 0.5	7	2320	< 1	147	6	58	1.61	71	< 10	23	< 0.5	< 2	2.51	28	12	8.16	< 10	< 1	0.22	< 10
694703	26	< 0.2	< 0.5	4	1890	< 1	117	4	37	1.59	43	< 10	47	< 0.5	< 2	2.27	22	11	5.62	< 10	< 1	0.30	12
694704	48	< 0.2	< 0.5	9	2120	< 1	136	6	36	1.23	69	< 10	22	< 0.5	< 2	1.84	26	10	8.18	< 10	< 1	0.22	< 10
694705	40	< 0.2	< 0.5	14	2710	2	143	10	55	1.13	92	< 10	37	< 0.5	< 2	2.43	29	8	8.55	< 10	< 1	0.14	< 10
694706	40	< 0.2	< 0.5	13	2640	1	134	9	52	1.09	86	< 10	36	< 0.5	< 2	2.35	28	6	8.28	< 10	< 1	0.13	< 10
694707	29	< 0.2	< 0.5	10	3980	< 1	82	3	41	1.01	47	< 10	43	< 0.5	< 2	1.99	20	12	9.21	< 10	< 1	0.14	< 10
694708	22	< 0.2	< 0.5	9	3870	< 1	76	2	46	1.23	34	< 10	54	< 0.5	< 2	2.26	16	18	8.39	< 10	< 1	0.19	< 10
694709	28	< 0.2	< 0.5	12	2950	< 1	73	< 2	52	1.25	52	< 10	65	< 0.5	< 2	1.74	18	14	6.91	< 10	< 1	0.25	< 10
694710	34	< 0.2	< 0.5	13	3630	< 1	161	5	48	1.30	161	< 10	59	< 0.5	< 2	1.77	41	16	8.41	< 10	< 1	0.24	< 10
694711	25	< 0.2	< 0.5	11	5560	< 1	51	3	56	1.39	51	< 10	41	< 0.5	< 2	2.30	10	6	11.1	< 10	< 1	0.15	< 10
694712	22	< 0.2	< 0.5	11	4750	< 1	53	3	65	1.65	47	< 10	51	< 0.5	< 2	2.27	18	8	10.7	< 10	< 1	0.20	< 10
694713	49	< 0.2	< 0.5	8	4320	< 1	50	2	50	1.28	115	< 10	41	< 0.5	< 2	2.58	9	7	9.24	< 10	< 1	0.17	< 10
694714	66	0.3	< 0.5	18	2770	< 1	82	13	54	1.62	100	< 10	24	< 0.5	< 2	2.00	16	16	8.61	< 10	< 1	0.26	< 10
694715	5	< 0.2	< 0.5	< 1	98	< 1	< 1	< 2	17	5.06	< 2	12	< 10	0.5	< 2	0.20	< 1	< 1	0.52	< 10	< 1	1.44	< 10
694716	47	< 0.2	< 0.5	16	3060	< 1	118	8	55	1.34	126	< 10	23	< 0.5	< 2	1.94	20	14	10.4	< 10	< 1	0.19	< 10
694717	24	< 0.2	< 0.5	10	4220	2	86	4	113	1.32	61	< 10	45	< 0.5	< 2	2.76	14	53	11.4	< 10	1	0.17	< 10
694718	32	< 0.2	< 0.5	13	4000	1	102	5	62	1.51	88	< 10	25	< 0.5	< 2	1.86	19	52	11.6	< 10	< 1	0.26	< 10
694719	52	0.2	< 0.5	17	3150	< 1	104	9	46	1.11	131	< 10	34	< 0.5	< 2	1.87	21	26	9.12	< 10	< 1	0.17	< 10
694720	18	< 0.2	< 0.5	11	3920	< 1	56	< 2	51	1.28	53	< 10	65	< 0.5	< 2	1.82	14	15	8.69	< 10	< 1	0.25	< 10
694721	466	1.4	< 0.5	21	4340	< 1	138	42	55	1.21	330	< 10	12	< 0.5	< 2	1.73	35	16	15.9	< 10	< 1	0.19	< 10
694722	107	< 0.2	< 0.5	20	4200	< 1	100	6	60	0.98	195	< 10	34	< 0.5	< 2	1.84	19	15	11.0	< 10	< 1	0.17	< 10
694723	1460	< 0.2	< 0.5	61	837	1	115	9	70	1.31	2300	< 10	65	< 0.5	< 2	1.18	26	30	4.97	< 10	1	0.07	13

Analyte Symbol	Au	Ag	Cd	Cu	Mn	Mo	Ni	Pb	Zn	Al	As	B	Ba	Be	Bi	Ca	Co	Cr	Fe	Ga	Hg	K	La
Unit Symbol	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm
Lower Limit	5	0.2	0.5	1	5	1	1	2	2	0.01	2	10	10	0.5	2	0.01	1	1	0.01	10	1	0.01	10
Method Code	FA-AA	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
694724	94	< 0.2	< 0.5	19	3660	< 1	87	8	56	0.89	146	< 10	36	< 0.5	< 2	1.48	18	19	9.70	< 10	< 1	0.23	< 10
694725	62	< 0.2	< 0.5	16	3000	< 1	90	7	46	0.78	63	< 10	48	< 0.5	< 2	2.19	18	13	8.30	< 10	< 1	0.18	< 10
694726	26	< 0.2	< 0.5	11	3820	< 1	79	3	99	0.83	66	< 10	36	< 0.5	< 2	2.55	14	11	10.00	< 10	< 1	0.12	< 10
694727	31	< 0.2	< 0.5	14	3700	< 1	96	4	63	1.01	94	< 10	51	< 0.5	< 2	1.65	17	10	9.72	< 10	< 1	0.20	< 10
694728	46	< 0.2	< 0.5	16	3550	< 1	88	4	60	1.07	91	< 10	51	< 0.5	< 2	1.62	17	13	9.38	< 10	< 1	0.25	< 10
694729	25	< 0.2	< 0.5	2	3310	< 1	126	< 2	241	1.34	96	< 10	18	< 0.5	< 2	8.18	18	15	10.8	< 10	< 1	0.06	< 10
694730	15	< 0.2	< 0.5	< 1	3000	< 1	69	< 2	87	0.81	62	< 10	23	< 0.5	< 2	9.33	6	10	7.13	< 10	< 1	0.09	< 10
694731	15	< 0.2	< 0.5	< 1	3030	< 1	51	< 2	73	0.34	47	< 10	11	< 0.5	< 2	9.77	5	10	6.77	< 10	< 1	0.03	< 10
694732	14	< 0.2	< 0.5	< 1	3020	< 1	49	< 2	73	0.34	46	< 10	11	< 0.5	< 2	9.80	5	11	6.73	< 10	< 1	0.03	< 10
694733	55	0.3	< 0.5	10	3770	< 1	172	9	159	1.04	189	< 10	25	< 0.5	< 2	6.28	25	21	13.1	< 10	1	0.09	< 10
694734	19	< 0.2	< 0.5	9	2630	1	123	3	118	1.15	73	< 10	47	< 0.5	< 2	2.64	18	18	9.25	< 10	< 1	0.20	< 10
694735	16	< 0.2	< 0.5	6	3390	< 1	144	3	165	1.09	73	< 10	35	< 0.5	< 2	2.22	25	16	11.0	< 10	< 1	0.25	10
694736	22	< 0.2	< 0.5	7	3120	< 1	186	5	98	1.08	109	< 10	25	< 0.5	< 2	2.86	34	14	10.3	< 10	< 1	0.28	< 10
694737	23	< 0.2	< 0.5	5	3480	< 1	157	3	71	0.83	85	< 10	37	< 0.5	< 2	3.81	26	15	10.4	< 10	< 1	0.21	< 10

Analyte Symbol	Mg	Na	P	S	Sb	Sc	Sr	Ti	Th	Te	Tl	U	V	W	Y	Zr	Au
Unit Symbol	%	%	%	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	g/tonne
Lower Limit	0.01	0.001	0.001	0.01	2	1	1	0.01	20	1	2	10	1	10	1	1	0.03
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	FA- GRA
694598	0.77	0.014	0.003	16.4	38	4	22	< 0.01	< 20	< 1	< 2	< 10	19	< 10	2	10	
694599	0.21	0.022	0.008	19.3	43	1	10	< 0.01	< 20	< 1	< 2	< 10	8	< 10	1	11	
694600	0.42	0.021	0.005	15.7	31	2	10	< 0.01	< 20	< 1	< 2	< 10	12	< 10	1	11	
694601	0.72	0.015	0.003	18.4	49	3	31	< 0.01	< 20	< 1	< 2	< 10	14	< 10	1	10	
694602	2.85	0.058	0.028	0.70	2	9	40	0.22	< 20	5	< 2	< 10	108	< 10	9	15	6.76
694603	0.62	0.013	0.002	1.72	3	2	27	< 0.01	< 20	3	< 2	< 10	7	< 10	< 1	3	
694604	0.70	0.013	< 0.001	9.06	16	2	43	< 0.01	< 20	< 1	< 2	< 10	9	< 10	1	6	
694605	0.06	3.30	< 0.001	0.03	< 2	< 1	20	< 0.01	< 20	< 1	< 2	< 10	< 1	< 10	3	< 1	
694606	1.88	0.018	0.002	5.58	11	2	72	< 0.01	< 20	< 1	< 2	< 10	9	< 10	3	6	
694607	1.25	0.029	0.008	5.54	11	2	68	< 0.01	< 20	1	< 2	< 10	9	< 10	2	7	
694608	1.49	0.049	0.050	8.16	12	3	108	< 0.01	< 20	< 1	< 2	< 10	13	< 10	3	15	
694609	1.26	0.041	0.043	16.0	24	2	108	< 0.01	< 20	3	< 2	< 10	12	< 10	3	16	
694610	1.04	0.036	0.035	17.0	25	2	76	< 0.01	< 20	< 1	< 2	< 10	12	< 10	2	16	
694611	1.04	0.021	0.011	15.9	34	2	30	< 0.01	< 20	< 1	< 2	< 10	13	< 10	2	11	
694612	1.08	0.010	0.002	14.2	25	4	45	< 0.01	< 20	< 1	< 2	< 10	21	< 10	2	8	
694613	1.39	0.013	0.003	9.02	21	5	46	< 0.01	< 20	< 1	< 2	< 10	23	< 10	2	7	
694614	1.16	0.013	0.001	2.38	6	4	55	< 0.01	< 20	< 1	< 2	< 10	18	< 10	1	4	
694615	0.89	0.014	0.004	2.95	6	4	99	< 0.01	< 20	< 1	< 2	< 10	14	< 10	2	4	
694616	0.98	0.014	0.006	3.68	6	4	111	< 0.01	< 20	< 1	< 2	< 10	14	< 10	2	4	
694617	0.53	0.032	0.057	5.95	13	3	69	< 0.01	< 20	1	< 2	< 10	6	< 10	3	15	
694618	0.49	0.025	0.034	8.10	11	3	12	< 0.01	< 20	< 1	< 2	< 10	14	< 10	4	12	
694619	0.85	0.041	0.089	6.72	10	4	67	< 0.01	< 20	< 1	< 2	< 10	12	< 10	4	15	
694620	0.97	0.029	0.037	7.32	19	3	124	< 0.01	< 20	< 1	< 2	< 10	8	< 10	3	13	
694621	0.70	0.035	0.082	9.34	18	3	104	< 0.01	< 20	2	< 2	< 10	7	< 10	4	16	
694622	0.72	0.039	0.139	3.27	5	3	109	< 0.01	< 20	< 1	< 2	< 10	8	< 10	5	14	
694623	0.75	0.042	0.139	2.01	4	2	106	< 0.01	< 20	< 1	< 2	< 10	6	< 10	4	10	
694624	0.52	0.041	0.133	1.65	3	1	81	< 0.01	< 20	5	< 2	< 10	4	< 10	4	9	
694625	0.27	0.022	0.007	16.5	22	< 1	21	< 0.01	< 20	4	< 2	< 10	5	< 10	1	9	3.18
694626	0.29	0.018	0.006	17.3	23	1	25	< 0.01	< 20	1	< 2	< 10	5	< 10	2	9	3.12
694627	0.56	0.014	0.002	17.5	19	2	67	< 0.01	< 20	7	< 2	< 10	5	< 10	2	7	3.35
694628	0.13	0.015	0.001	14.0	20	< 1	18	< 0.01	< 20	2	< 2	< 10	3	< 10	1	5	
694629	0.03	0.013	< 0.001	9.87	14	< 1	4	< 0.01	< 20	< 1	< 2	< 10	2	< 10	< 1	3	
694630	0.01	0.013	< 0.001	6.13	9	< 1	3	< 0.01	< 20	< 1	< 2	< 10	1	< 10	< 1	2	
694631	0.01	0.014	0.001	11.8	21	< 1	2	< 0.01	< 20	< 1	< 2	< 10	1	< 10	< 1	3	
694632	0.01	0.012	0.001	11.2	17	< 1	2	< 0.01	< 20	< 1	< 2	< 10	2	< 10	< 1	4	
694633	0.06	0.027	0.019	12.6	15	1	14	< 0.01	< 20	8	< 2	< 10	4	< 10	2	12	
694634	0.89	0.067	0.097	6.35	9	2	110	< 0.01	< 20	< 1	< 2	< 10	8	< 10	5	13	
694635	0.56	0.053	0.070	12.4	16	2	84	< 0.01	< 20	< 1	< 2	< 10	6	< 10	4	18	
694636	2.13	0.055	0.034	0.27	< 2	6	35	0.37	< 20	< 1	< 2	< 10	153	< 10	11	17	
694637	0.02	0.023	0.016	8.34	8	< 1	9	< 0.01	< 20	< 1	< 2	< 10	3	< 10	< 1	8	
694638	1.26	0.073	0.082	1.76	3	7	144	< 0.01	< 20	3	< 2	< 10	18	< 10	5	18	

Analyte Symbol	Mg	Na	P	S	Sb	Sc	Sr	Ti	Th	Te	Tl	U	V	W	Y	Zr	Au
Unit Symbol	%	%	%	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	g/tonne
Lower Limit	0.01	0.001	0.001	0.01	2	1	1	0.01	20	1	2	10	1	10	1	1	0.03
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	FA- GRA
694639	1.16	0.079	0.114	0.92	4	7	97	< 0.01	< 20	2	< 2	< 10	19	< 10	4	13	
694640	1.83	0.108	0.095	0.27	2	6	144	< 0.01	< 20	1	< 2	< 10	22	< 10	5	11	
694641	1.82	0.088	0.119	0.31	3	7	139	< 0.01	< 20	< 1	< 2	< 10	23	100	5	9	
694642	1.17	0.090	0.119	0.13	< 2	5	106	< 0.01	< 20	< 1	< 2	< 10	17	< 10	5	8	
694643	1.43	0.095	0.095	0.16	< 2	6	88	< 0.01	< 20	6	< 2	< 10	23	< 10	4	12	
694644	2.12	0.057	0.086	0.08	3	7	123	< 0.01	< 20	< 1	< 2	< 10	49	< 10	4	9	
694645	0.05	3.15	0.001	< 0.01	< 2	< 1	19	< 0.01	< 20	1	< 2	< 10	< 1	< 10	3	< 1	
694646	1.14	0.074	0.114	0.08	4	7	99	< 0.01	< 20	3	< 2	< 10	47	< 10	4	8	
694647	1.30	0.061	0.112	0.11	3	5	104	< 0.01	< 20	< 1	< 2	< 10	28	< 10	5	9	
694648	1.26	0.073	0.113	0.09	< 2	4	108	< 0.01	< 20	< 1	< 2	< 10	26	< 10	4	7	
694649	1.68	0.062	0.110	0.06	3	4	113	< 0.01	< 20	< 1	< 2	< 10	35	< 10	5	7	
694650	0.69	0.096	0.149	0.14	< 2	3	84	< 0.01	< 20	5	< 2	< 10	20	< 10	5	6	
694651	0.97	0.108	0.127	0.14	2	7	98	< 0.01	< 20	2	< 2	< 10	49	< 10	4	5	
694652	1.68	0.088	0.108	0.02	< 2	7	121	< 0.01	< 20	< 1	< 2	< 10	53	< 10	5	6	
694653	1.53	0.085	0.108	0.13	3	8	109	< 0.01	< 20	5	< 2	< 10	59	< 10	5	8	
694654	1.26	0.100	0.120	0.07	2	6	116	< 0.01	< 20	2	< 2	< 10	34	< 10	5	7	
694655	1.28	0.101	0.122	0.07	3	6	116	< 0.01	< 20	3	< 2	< 10	34	< 10	5	8	
694656	1.55	0.108	0.109	0.07	2	7	116	< 0.01	< 20	4	< 2	< 10	46	< 10	6	7	
694657	1.10	0.115	0.125	0.11	3	7	106	< 0.01	< 20	4	< 2	< 10	49	< 10	5	7	
694658	1.01	0.100	0.109	0.24	2	6	130	< 0.01	< 20	< 1	< 2	< 10	31	< 10	5	9	
694659	0.87	0.123	0.128	0.13	3	6	96	< 0.01	< 20	2	< 2	< 10	38	< 10	5	5	
694660	0.45	0.155	0.105	0.40	< 2	2	91	< 0.01	< 20	3	< 2	< 10	14	< 10	4	7	
694661	0.72	0.233	0.100	0.41	< 2	4	147	< 0.01	< 20	4	< 2	< 10	24	< 10	5	6	
694662	0.47	0.237	0.107	0.17	< 2	3	129	< 0.01	< 20	6	< 2	< 10	18	< 10	5	5	
694663	0.57	0.154	0.096	0.11	< 2	3	99	< 0.01	< 20	< 1	< 2	< 10	14	< 10	4	7	
694664	0.72	0.161	0.098	0.14	< 2	3	110	< 0.01	< 20	2	< 2	< 10	14	< 10	5	7	
694665	2.11	0.076	0.040	0.20	< 2	7	26	0.42	< 20	< 1	< 2	< 10	179	< 10	14	22	
694666	0.37	0.165	0.106	0.32	< 2	2	88	< 0.01	< 20	< 1	< 2	< 10	14	< 10	4	6	
694667	0.39	0.168	0.100	0.26	< 2	3	86	< 0.01	< 20	7	< 2	< 10	15	< 10	4	6	
694668	0.55	0.133	0.105	0.23	< 2	3	88	< 0.01	< 20	< 1	< 2	< 10	12	< 10	5	7	
694669	0.43	0.136	0.094	0.50	< 2	2	77	< 0.01	< 20	< 1	< 2	< 10	10	< 10	4	10	
694670	0.63	0.139	0.090	0.26	< 2	3	108	< 0.01	< 20	< 1	< 2	< 10	11	< 10	4	9	
694671	0.52	0.186	0.100	0.19	< 2	2	111	< 0.01	< 20	1	< 2	< 10	13	< 10	4	8	
694672	0.34	0.126	0.095	0.40	< 2	2	90	< 0.01	< 20	5	< 2	< 10	10	< 10	4	9	
694673	0.38	0.156	0.097	0.46	< 2	2	99	< 0.01	< 20	< 1	< 2	< 10	13	< 10	4	9	
694674	0.39	0.087	0.092	0.39	< 2	2	74	< 0.01	< 20	< 1	< 2	< 10	7	< 10	3	10	
694675	0.40	0.093	0.094	0.41	< 2	2	76	< 0.01	< 20	2	< 2	< 10	7	< 10	3	10	
694676	0.37	0.138	0.087	0.41	< 2	2	86	< 0.01	< 20	< 1	< 2	< 10	10	< 10	4	9	
694677	0.70	0.134	0.086	0.22	< 2	2	98	< 0.01	< 20	< 1	< 2	< 10	9	< 10	4	9	
694678	0.59	0.144	0.084	0.13	< 2	2	96	< 0.01	< 20	3	< 2	< 10	9	< 10	3	9	
694679	0.82	0.150	0.085	0.19	< 2	3	105	< 0.01	< 20	< 1	< 2	< 10	11	< 10	4	9	
694680	0.34	0.122	0.092	0.41	< 2	2	77	< 0.01	< 20	< 1	< 2	< 10	10	< 10	4	9	

Analyte Symbol	Mg	Na	P	S	Sb	Sc	Sr	Ti	Th	Te	Tl	U	V	W	Y	Zr	Au
Unit Symbol	%	%	%	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	g/tonne
Lower Limit	0.01	0.001	0.001	0.01	2	1	1	0.01	20	1	2	10	1	10	1	1	0.03
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	FA- GRA
694681	0.63	0.165	0.092	0.07	< 2	2	105	< 0.01	< 20	< 1	< 2	< 10	10	< 10	4	7	
694682	0.47	0.099	0.095	0.22	< 2	2	79	< 0.01	< 20	< 1	< 2	< 10	7	< 10	3	9	
694683	0.40	0.134	0.088	0.20	< 2	2	106	< 0.01	< 20	2	< 2	< 10	9	< 10	3	8	
694684	0.44	0.118	0.094	0.22	< 2	2	93	< 0.01	< 20	< 1	< 2	< 10	9	< 10	3	8	
694685	0.05	3.41	0.001	< 0.01	< 2	< 1	24	< 0.01	< 20	2	< 2	< 10	< 1	< 10	4	2	
694686	0.51	0.108	0.093	0.31	< 2	2	84	< 0.01	< 20	< 1	< 2	< 10	7	< 10	4	8	
694687	0.54	0.104	0.089	0.20	< 2	2	80	< 0.01	< 20	< 1	< 2	< 10	7	< 10	4	7	
694688	0.97	0.089	0.085	0.19	< 2	2	102	< 0.01	< 20	< 1	< 2	< 10	7	< 10	4	8	
694689	1.58	0.550	0.047	0.07	3	6	72	0.40	< 20	6	< 2	< 10	115	< 10	12	26	
694690	0.41	0.202	0.092	0.13	< 2	2	117	< 0.01	< 20	1	< 2	< 10	12	< 10	4	6	
694691	0.42	0.155	0.092	0.08	< 2	2	94	< 0.01	< 20	< 1	< 2	< 10	8	< 10	4	6	
694692	0.41	0.130	0.086	1.69	2	2	76	< 0.01	< 20	< 1	< 2	< 10	12	< 10	3	12	
694693	0.43	0.138	0.090	0.43	< 2	2	86	< 0.01	< 20	< 1	< 2	< 10	9	< 10	4	7	
694694	0.61	0.092	0.077	5.25	7	2	81	< 0.01	< 20	< 1	< 2	< 10	7	< 10	3	16	
694695	0.32	0.109	0.075	5.23	6	2	71	< 0.01	< 20	< 1	< 2	< 10	12	< 10	3	19	
694696	1.87	0.262	0.116	0.68	3	2	70	0.12	< 20	3	< 2	< 10	28	< 10	12	6	
694697	0.29	0.074	0.078	3.91	6	1	54	< 0.01	< 20	< 1	< 2	< 10	7	< 10	3	16	
694698	0.21	0.113	0.083	5.26	5	2	64	< 0.01	< 20	< 1	< 2	< 10	13	< 10	3	22	
694699	0.48	0.082	0.076	3.11	2	2	78	< 0.01	< 20	< 1	< 2	< 10	10	< 10	4	17	
694700	0.36	0.079	0.068	5.24	7	2	68	< 0.01	< 20	< 1	< 2	< 10	10	< 10	3	20	
694701	0.41	0.105	0.076	4.83	6	3	79	< 0.01	< 20	2	< 2	< 10	16	< 10	3	22	
694702	0.58	0.141	0.061	4.66	4	3	101	< 0.01	< 20	3	< 2	< 10	20	< 10	3	22	
694703	0.55	0.142	0.082	2.57	3	2	100	< 0.01	< 20	< 1	< 2	< 10	19	< 10	4	21	
694704	0.58	0.084	0.065	4.75	4	2	89	< 0.01	< 20	< 1	< 2	< 10	15	< 10	3	22	
694705	0.68	0.078	0.063	3.88	5	3	114	< 0.01	< 20	< 1	< 2	< 10	14	< 10	3	19	
694706	0.66	0.073	0.060	3.83	4	3	112	< 0.01	< 20	< 1	< 2	< 10	13	< 10	3	18	
694707	0.76	0.079	0.062	2.19	5	3	101	< 0.01	< 20	2	< 2	< 10	15	< 10	3	19	
694708	0.76	0.097	0.058	1.61	3	3	122	< 0.01	< 20	2	< 2	< 10	15	< 10	3	19	
694709	0.63	0.093	0.072	1.65	3	3	107	< 0.01	< 20	< 1	< 2	< 10	13	< 10	3	18	
694710	0.69	0.106	0.071	2.11	4	3	110	< 0.01	< 20	< 1	< 2	< 10	16	< 10	4	22	
694711	1.11	0.080	0.050	1.82	7	3	129	< 0.01	< 20	< 1	< 2	< 10	12	< 10	3	17	
694712	1.07	0.108	0.055	2.33	6	4	134	< 0.01	< 20	< 1	< 2	< 10	19	< 10	3	19	
694713	0.97	0.093	0.052	3.44	5	3	144	< 0.01	< 20	3	< 2	< 10	12	< 10	3	18	
694714	0.67	0.136	0.078	3.85	6	2	122	< 0.01	< 20	6	< 2	< 10	15	< 10	4	21	
694715	0.05	3.22	0.001	0.01	< 2	< 1	20	< 0.01	< 20	< 1	< 2	< 10	< 1	< 10	4	1	
694716	0.85	0.088	0.056	4.62	6	3	111	< 0.01	< 20	4	< 2	< 10	19	< 10	3	19	
694717	1.33	0.073	0.048	2.47	7	7	166	< 0.01	< 20	< 1	< 2	< 10	33	< 10	3	17	
694718	0.96	0.097	0.067	3.99	5	4	114	< 0.01	< 20	< 1	< 2	< 10	23	< 10	3	22	
694719	0.69	0.082	0.055	3.73	5	2	104	< 0.01	< 20	2	< 2	< 10	15	< 10	3	17	
694720	0.78	0.111	0.057	1.31	4	3	109	< 0.01	< 20	< 1	< 2	< 10	15	< 10	3	17	
694721	0.83	0.082	0.059	9.32	17	3	100	< 0.01	< 20	< 1	< 2	< 10	15	< 10	3	22	

Analyte Symbol	Mg	Na	P	S	Sb	Sc	Sr	Ti	Th	Te	Tl	U	V	W	Y	Zr	Au
Unit Symbol	%	%	%	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	g/tonne
Lower Limit	0.01	0.001	0.001	0.01	2	1	1	0.01	20	1	2	10	1	10	1	1	0.03
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	FA- GRA
694722	0.77	0.063	0.056	4.15	5	3	92	< 0.01	< 20	2	< 2	< 10	12	< 10	3	19	
694723	1.97	0.273	0.120	0.71	3	2	71	0.12	< 20	3	< 2	< 10	29	< 10	12	7	
694724	0.69	0.066	0.060	3.53	5	3	82	< 0.01	< 20	< 1	< 2	< 10	12	< 10	3	18	
694725	0.84	0.075	0.059	2.58	4	2	99	< 0.01	< 20	3	< 2	< 10	13	< 10	3	16	
694726	1.22	0.059	0.057	1.99	4	5	121	< 0.01	< 20	2	< 2	< 10	19	< 10	3	15	
694727	0.92	0.075	0.061	2.56	5	3	88	< 0.01	< 20	< 1	< 2	< 10	12	< 10	3	17	
694728	0.87	0.082	0.062	2.69	5	3	90	< 0.01	< 20	2	< 2	< 10	14	< 10	3	18	
694729	3.62	0.048	0.027	1.09	4	18	399	< 0.01	< 20	2	< 2	< 10	56	< 10	4	18	
694730	3.81	0.035	0.022	0.30	2	5	513	< 0.01	< 20	< 1	< 2	< 10	18	< 10	6	14	
694731	3.92	0.026	0.018	0.41	3	6	483	< 0.01	< 20	< 1	< 2	< 10	20	< 10	5	13	
694732	3.90	0.026	0.018	0.41	< 2	6	482	< 0.01	< 20	< 1	< 2	< 10	20	< 10	5	13	
694733	2.56	0.055	0.034	4.27	8	12	339	< 0.01	< 20	< 1	< 2	< 10	44	< 10	5	20	
694734	1.23	0.083	0.056	2.98	6	8	139	< 0.01	< 20	< 1	< 2	< 10	32	< 10	3	19	
694735	1.26	0.106	0.066	2.28	5	7	137	< 0.01	< 20	< 1	< 2	< 10	25	< 10	4	20	
694736	1.45	0.107	0.059	2.57	3	7	167	< 0.01	< 20	< 1	< 2	< 10	24	< 10	4	21	
694737	1.63	0.081	0.062	2.42	3	5	201	< 0.01	< 20	2	< 2	< 10	16	< 10	4	19	

Analyte Symbol	Au	Ag	Cd	Cu	Mn	Mo	Ni	Pb	Zn	Al	As	B	Ba	Be	Bi	Ca	Co	Cr	Fe	Ga	Hg	K	La
Unit Symbol	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm
Lower Limit	5	0.2	0.5	1	5	1	1	2	2	0.01	2	10	10	0.5	2	0.01	1	1	0.01	10	1	0.01	10
Method Code	FA-AA	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
GXR-1 Meas		26.3	2.2	1060	781	14	32	641	635	0.32	337	< 10	314	0.7	1350	0.76	5	5	20.3	< 10	5	0.03	< 10
GXR-1 Cert		31.0	3.30	1110	852	18.0	41.0	730	760	3.52	427	15.0	750	1.22	1380	0.960	8.20	12.0	23.6	13.8	3.90	0.050	7.50
GXR-1 Meas		25.9	1.9	1040	736	13	21	638	637	0.31	325	< 10	260	0.7	1340	0.74	5	6	19.6	< 10	5	0.03	< 10
GXR-1 Cert		31.0	3.30	1110	852	18.0	41.0	730	760	3.52	427	15.0	750	1.22	1380	0.960	8.20	12.0	23.6	13.8	3.90	0.050	7.50
GXR-6 Meas		0.2	< 0.5	70	1050	1	20	98	122	7.45	232	< 10	955	0.9	< 2	0.16	13	77	5.33	20	< 1	1.08	10
GXR-6 Cert		1.30	1.00	66.0	1010	2.40	27.0	101	118	17.7	330	9.80	1300	1.40	0.290	0.180	13.8	96.0	5.58	35.0	0.0680	1.87	13.9
GXR-6 Meas		< 0.2	< 0.5	72	1030	2	15	100	122	7.51	237	< 10	1010	0.9	< 2	0.16	13	77	5.38	20	< 1	1.10	10
GXR-6 Cert		1.30	1.00	66.0	1010	2.40	27.0	101	118	17.7	330	9.80	1300	1.40	0.290	0.180	13.8	96.0	5.58	35.0	0.0680	1.87	13.9
OREAS 134b (AQUA REGIA) Meas		> 100	560	1250				> 5000	> 10000		192						96		10.3				
OREAS 134b (AQUA REGIA) Cert		204	563	1360				133000	177000		221						110		12.25				
OREAS 133a (Aqua Regia) Meas		85.7	288	299				> 5000	> 10000		119		16				19		6.90				
OREAS 133a (Aqua Regia) Cert		97	297	324				48600.00	106000.00		140		59				23		7.92				
OXN117 Meas																							
OXN117 Cert																							
OXN117 Meas																							
OXN117 Cert																							
OxP116 Meas																							
OxP116 Cert																							
OxP116 Meas																							
OxP116 Cert																							
OREAS 218 Meas	528																						
OREAS 218 Cert	531																						
OREAS 218 Meas	506																						
OREAS 218 Cert	531																						
OREAS 218 Meas	516																						
OREAS 218 Cert	531																						
OREAS 218 Meas	514																						
OREAS 218 Cert	531																						
OREAS 218 Meas	505																						
OREAS 218 Cert	531																						
OREAS 224 Meas	2070																						
OREAS 224 Cert	2150.00																						
OREAS 224 Meas	2110																						
OREAS 224 Cert	2150.00																						
OREAS 224 Meas	2060																						



Analyte Symbol	Au	Ag	Cd	Cu	Mn	Mo	Ni	Pb	Zn	Al	As	B	Ba	Be	Bi	Ca	Co	Cr	Fe	Ga	Hg	K	La
Unit Symbol	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm
Lower Limit	5	0.2	0.5	1	5	1	1	2	2	0.01	2	10	10	0.5	2	0.01	1	1	0.01	10	1	0.01	10
Method Code	FA-AA	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
OREAS 224 Cert	2150.00																						
OREAS 224 Meas	2070																						
OREAS 224 Cert	2150.00																						
OREAS 224 Meas	2110																						
OREAS 224 Cert	2150.00																						
694598 Orig		1.2	< 0.5	43	4120	< 1	169	35	126	0.27	625	< 10	< 10	< 0.5	3	0.63	31	9	21.2	< 10	< 1	< 0.01	< 10
694598 Dup		1.2	0.8	43	4180	< 1	168	32	128	0.27	630	< 10	< 10	< 0.5	5	0.63	33	13	21.5	< 10	< 1	< 0.01	< 10
694607 Orig	647																						
694607 Dup	582																						
694617 Orig	613																						
694617 Dup	710																						
694627 Orig	3000																						
694627 Dup	3130																						
694629 Orig		1.2	< 0.5	35	692	< 1	26	34	25	0.08	2920	< 10	< 10	< 0.5	< 2	0.06	14	35	9.52	< 10	1	< 0.01	< 10
694629 Dup		1.4	< 0.5	37	712	< 1	27	35	25	0.09	3040	< 10	< 10	< 0.5	< 2	0.06	15	32	9.94	< 10	< 1	< 0.01	< 10
694630 Orig		0.7	< 0.5	21	348	< 1	20	23	25	0.08	1840	< 10	< 10	< 0.5	2	0.02	10	38	6.24	< 10	< 1	< 0.01	< 10
694630 Dup		0.7	< 0.5	21	350	< 1	19	22	25	0.08	1840	< 10	< 10	< 0.5	2	0.02	11	52	6.24	< 10	< 1	< 0.01	< 10
694642 Orig	9																						
694642 Dup	9																						
694647 Orig	< 5	< 0.2	< 0.5	31	2180	< 1	82	< 2	57	1.16	17	< 10	37	< 0.5	< 2	4.55	20	31	5.72	< 10	< 1	0.14	11
694647 Split PREP DUP	< 5	< 0.2	< 0.5	31	2220	< 1	84	< 2	58	1.19	19	< 10	41	< 0.5	< 2	4.69	20	32	5.85	< 10	< 1	0.15	11
694651 Orig	< 5																						
694651 Dup	< 5																						
694661 Orig	9																						
694661 Dup	8																						
694670 Orig		< 0.2	< 0.5	20	439	< 1	36	3	101	0.78	18	< 10	60	< 0.5	< 2	3.47	11	16	1.90	< 10	< 1	0.21	14
694670 Dup		< 0.2	< 0.5	21	451	< 1	38	4	103	0.80	19	< 10	63	< 0.5	< 2	3.52	11	19	1.93	< 10	< 1	0.22	15
694675 Orig		< 0.2	< 0.5	16	336	< 1	40	6	96	0.57	29	< 10	47	< 0.5	< 2	2.38	16	19	1.79	< 10	< 1	0.16	15
694675 Dup		< 0.2	< 0.5	16	335	< 1	38	8	93	0.57	27	< 10	48	< 0.5	< 2	2.36	15	27	1.80	< 10	< 1	0.16	15
694676 Orig	14																						
694676 Dup	27																						
694679 Orig		< 0.2	< 0.5	15	610	< 1	42	2	91	0.85	36	< 10	63	< 0.5	< 2	3.50	16	16	2.43	< 10	< 1	0.23	14
694679 Dup		< 0.2	< 0.5	16	638	< 1	42	3	96	0.91	41	< 10	67	< 0.5	< 2	3.68	17	16	2.57	< 10	< 1	0.24	15
694686 Orig	17																						
694686 Dup	17																						
694687 Orig		0.4	< 0.5	13	435	< 1	32	< 2	72	0.65	19	< 10	57	< 0.5	< 2	2.70	12	16	1.95	< 10	< 1	0.20	17
694687 Dup		< 0.2	< 0.5	12	422	< 1	31	2	73	0.62	21	< 10	56	< 0.5	< 2	2.64	13	11	1.89	< 10	< 1	0.19	17
694697 Orig	110	0.4	< 0.5	17	397	2	135	21	288	0.50	172	< 10	28	< 0.5	< 2	1.46	32	7	4.37	< 10	< 1	0.16	< 10
694697 Split	91	0.4	< 0.5	17	401	2	140	20	288	0.49	169	< 10	27	< 0.5	< 2	1.46	32	9	4.35	< 10	< 1	0.15	< 10

Analyte Symbol	Au	Ag	Cd	Cu	Mn	Mo	Ni	Pb	Zn	Al	As	B	Ba	Be	Bi	Ca	Co	Cr	Fe	Ga	Hg	K	La
Unit Symbol	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm
Lower Limit	5	0.2	0.5	1	5	1	1	2	2	0.01	2	10	10	0.5	2	0.01	1	1	0.01	10	1	0.01	10
Method Code	FA-AA	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
PREP DUP																							
694697 Orig	111																						
694697 Dup	108																						
694710 Orig	34																						
694710 Dup	34																						
694716 Orig		< 0.2	< 0.5	16	3090	< 1	119	8	57	1.38	129	< 10	23	< 0.5	< 2	1.98	21	15	10.6	< 10	< 1	0.19	< 10
694716 Dup		0.3	< 0.5	16	3030	< 1	117	8	53	1.29	123	< 10	23	< 0.5	< 2	1.91	19	13	10.1	< 10	< 1	0.18	< 10
694719 Orig		0.2	< 0.5	16	3110	< 1	105	9	45	1.08	128	< 10	32	< 0.5	< 2	1.83	22	25	8.90	< 10	< 1	0.16	< 10
694719 Dup		0.2	< 0.5	17	3200	1	104	9	47	1.14	135	< 10	36	< 0.5	< 2	1.91	21	27	9.33	< 10	< 1	0.17	< 10
694720 Orig	16																						
694720 Dup	20																						
694730 Orig	14																						
694730 Dup	16																						
694732 Orig		< 0.2	< 0.5	< 1	3010	< 1	49	< 2	73	0.34	47	< 10	11	< 0.5	< 2	9.79	5	10	6.73	< 10	< 1	0.03	< 10
694732 Dup		< 0.2	< 0.5	< 1	3020	< 1	50	< 2	73	0.34	46	< 10	11	< 0.5	3	9.81	5	12	6.72	< 10	< 1	0.03	< 10
Method Blank	< 5																						
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Method Blank		< 0.2	< 0.5	< 1	< 5	< 1	< 1	< 2	< 2	< 0.01	< 2	< 10	< 10	< 0.5	< 2	< 0.01	< 1	< 1	< 0.01	< 10	< 1	< 0.01	< 10
Method Blank		< 0.2	< 0.5	< 1	< 5	< 1	< 1	< 2	< 2	< 0.01	< 2	< 10	< 10	< 0.5	< 2	< 0.01	< 1	< 1	< 0.01	< 10	< 1	< 0.01	< 10
Method Blank		< 0.2	< 0.5	< 1	< 5	< 1	< 1	< 2	< 2	< 0.01	< 2	< 10	< 10	< 0.5	< 2	< 0.01	< 1	< 1	< 0.01	< 10	< 1	< 0.01	< 10
Method Blank		< 0.2	< 0.5	< 1	< 5	< 1	< 1	< 2	< 2	< 0.01	< 2	< 10	< 10	< 0.5	< 2	< 0.01	< 1	< 1	< 0.01	< 10	< 1	< 0.01	< 10
Method Blank		< 0.2	< 0.5	< 1	< 5	< 1	< 1	< 2	< 2	< 0.01	< 2	< 10	< 10	< 0.5	< 2	< 0.01	< 1	< 1	< 0.01	< 10	< 1	< 0.01	< 10

Analyte Symbol	Mg	Na	P	S	Sb	Sc	Sr	Ti	Th	Te	Tl	U	V	W	Y	Zr	Au
Unit Symbol	%	%	%	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	g/tonne
Lower Limit	0.01	0.001	0.001	0.01	2	1	1	0.01	20	1	2	10	1	10	1	1	0.03
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	FA- GRA
GXR-1 Meas	0.12	0.045	0.037	0.19	85	< 1	140	< 0.01	< 20	10	< 2	32	75	137	24	15	
GXR-1 Cert	0.217	0.0520	0.0650	0.257	122	1.58	275	0.036	2.44	13.0	0.390	34.9	80.0	164	32.0	38.0	
GXR-1 Meas	0.11	0.044	0.037	0.19	69	< 1	140	< 0.01	< 20	9	< 2	29	74	132	23	12	
GXR-1 Cert	0.217	0.0520	0.0650	0.257	122	1.58	275	0.036	2.44	13.0	0.390	34.9	80.0	164	32.0	38.0	
GXR-6 Meas	0.38	0.084	0.035	0.02	4	21	32		< 20	< 1	< 2	< 10	181	< 10	6	14	
GXR-6 Cert	0.609	0.104	0.0350	0.0160	3.60	27.6	35.0		5.30	0.0180	2.20	1.54	186	1.90	14.0	110	
GXR-6 Meas	0.39	0.085	0.036	0.03	4	21	32		< 20	< 1	< 2	< 10	181	< 10	6	13	
GXR-6 Cert	0.609	0.104	0.0350	0.0160	3.60	27.6	35.0		5.30	0.0180	2.20	1.54	186	1.90	14.0	110	
OREAS 134b (AQUA REGIA) Meas				14.4													
OREAS 134b (AQUA REGIA) Cert				19.31													
OREAS 133a (Aqua Regia) Meas				9.36	131												
OREAS 133a (Aqua Regia) Cert				10.7	147												
OXN117 Meas																	7.64
OXN117 Cert																	7.679
OXN117 Meas																	7.60
OXN117 Cert																	7.679
OxP116 Meas																	15.4
OxP116 Cert																	14.92
OxP116 Meas																	14.9
OxP116 Cert																	14.92
OREAS 218 Meas																	
OREAS 218 Cert																	
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OREAS 224 Meas																	
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OREAS 224 Meas																	
OREAS 224 Cert																	

Analyte Symbol	Mg	Na	P	S	Sb	Sc	Sr	Ti	Th	Te	Tl	U	V	W	Y	Zr	Au
Unit Symbol	%	%	%	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	g/tonne
Lower Limit	0.01	0.001	0.001	0.01	2	1	1	0.01	20	1	2	10	1	10	1	1	0.03
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	FA- GRA
OREAS 224 Meas																	
OREAS 224 Cert																	
OREAS 224 Meas																	
OREAS 224 Cert																	
694598 Orig	0.77	0.014	0.003	16.2	38	4	22	< 0.01	< 20	< 1	< 2	< 10	20	< 10	2	10	
694598 Dup	0.77	0.015	0.003	16.7	39	4	22	< 0.01	< 20	< 1	< 2	< 10	18	< 10	2	10	
694607 Orig																	
694607 Dup																	
694617 Orig																	
694617 Dup																	
694627 Orig																	
694627 Dup																	
694629 Orig	0.03	0.013	< 0.001	9.56	13	< 1	4	< 0.01	< 20	< 1	< 2	< 10	2	< 10	< 1	3	
694629 Dup	0.03	0.014	< 0.001	10.2	15	< 1	4	< 0.01	< 20	< 1	< 2	< 10	2	< 10	< 1	3	
694630 Orig	0.01	0.013	< 0.001	6.14	9	< 1	3	< 0.01	< 20	< 1	< 2	< 10	1	< 10	< 1	2	
694630 Dup	0.01	0.013	< 0.001	6.11	9	< 1	3	< 0.01	< 20	< 1	< 2	< 10	1	< 10	< 1	2	
694642 Orig																	
694642 Dup																	
694647 Orig	1.30	0.061	0.112	0.11	3	5	104	< 0.01	< 20	< 1	< 2	< 10	28	< 10	5	9	
694647 Split PREP DUP	1.33	0.067	0.114	0.11	2	5	106	< 0.01	< 20	< 1	< 2	< 10	28	< 10	5	7	
694651 Orig																	
694651 Dup																	
694661 Orig																	
694661 Dup																	
694670 Orig	0.63	0.136	0.089	0.26	< 2	3	107	< 0.01	< 20	< 1	< 2	< 10	11	< 10	4	9	
694670 Dup	0.64	0.141	0.091	0.27	< 2	3	109	< 0.01	< 20	< 1	< 2	< 10	12	< 10	4	9	
694675 Orig	0.40	0.092	0.095	0.41	< 2	2	76	< 0.01	< 20	1	< 2	< 10	7	< 10	3	10	
694675 Dup	0.40	0.093	0.093	0.41	< 2	2	76	< 0.01	< 20	2	< 2	< 10	7	< 10	3	10	
694676 Orig																	
694676 Dup																	
694679 Orig	0.80	0.145	0.083	0.19	< 2	3	102	< 0.01	< 20	< 1	< 2	< 10	11	< 10	4	9	
694679 Dup	0.84	0.154	0.087	0.20	< 2	3	107	< 0.01	< 20	< 1	< 2	< 10	11	< 10	4	8	
694686 Orig																	
694686 Dup																	
694687 Orig	0.55	0.106	0.091	0.20	< 2	2	81	< 0.01	< 20	< 1	< 2	< 10	7	< 10	4	7	
694687 Dup	0.53	0.101	0.088	0.20	< 2	2	79	< 0.01	< 20	1	< 2	< 10	7	< 10	4	7	
694697 Orig	0.29	0.074	0.078	3.91	6	1	54	< 0.01	< 20	< 1	< 2	< 10	7	< 10	3	16	
694697 Split PREP DUP	0.29	0.072	0.077	3.90	5	1	54	< 0.01	< 20	< 1	< 2	< 10	7	< 10	3	16	
694697 Orig																	
694697 Dup																	

Analyte Symbol	Mg	Na	P	S	Sb	Sc	Sr	Ti	Th	Te	Tl	U	V	W	Y	Zr	Au
Unit Symbol	%	%	%	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	g/tonne
Lower Limit	0.01	0.001	0.001	0.01	2	1	1	0.01	20	1	2	10	1	10	1	1	0.03
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	FA- GRA
694710 Orig																	
694710 Dup																	
694716 Orig	0.86	0.093	0.057	4.66	6	4	112	< 0.01	< 20	1	< 2	< 10	19	< 10	3	19	
694716 Dup	0.83	0.084	0.055	4.59	6	3	109	< 0.01	< 20	6	< 2	< 10	18	< 10	3	19	
694719 Orig	0.67	0.079	0.054	3.74	6	2	103	< 0.01	< 20	3	< 2	< 10	15	< 10	3	17	
694719 Dup	0.71	0.085	0.057	3.72	5	3	106	< 0.01	< 20	1	< 2	< 10	16	< 10	3	17	
694720 Orig																	
694720 Dup																	
694730 Orig																	
694730 Dup																	
694732 Orig	3.90	0.026	0.018	0.40	2	6	480	< 0.01	< 20	< 1	< 2	< 10	20	< 10	5	13	
694732 Dup	3.89	0.026	0.018	0.41	< 2	6	485	< 0.01	< 20	< 1	< 2	< 10	20	< 10	5	13	
Method Blank																	
Method Blank																	
Method Blank																	
Method Blank																	
Method Blank																	
Method Blank																	
Method Blank																	
Method Blank																	
Method Blank																	
Method Blank																	
Method Blank																	< 0.03
Method Blank																	< 0.03
Method Blank																	< 0.03
Method Blank																	< 0.03
Method Blank	< 0.01	0.010	< 0.001	< 0.01	< 2	< 1	< 1	< 0.01	< 20	2	< 2	< 10	< 1	< 10	< 1	< 1	
Method Blank	< 0.01	0.011	< 0.001	< 0.01	< 2	< 1	< 1	< 0.01	< 20	2	< 2	< 10	< 1	< 10	< 1	< 1	
Method Blank	< 0.01	0.011	< 0.001	< 0.01	< 2	< 1	< 1	< 0.01	< 20	1	< 2	< 10	< 1	< 10	< 1	< 1	
Method Blank	< 0.01	0.010	< 0.001	< 0.01	< 2	< 1	< 1	< 0.01	< 20	2	< 2	< 10	< 1	< 10	< 1	< 1	
Method Blank	< 0.01	0.010	< 0.001	< 0.01	< 2	< 1	< 1	< 0.01	< 20	1	< 2	< 10	< 1	< 10	< 1	< 1	



**Date Submitted:** 14-Mar-18  
**Invoice No.:** A18-03223  
**Invoice Date:** 18-May-18  
**Your Reference:** 81 Lucas

**Noble Mineral Exploration**  
**2500-120 Adelaide Street West**  
**Toronto ON M5H 1T1**  
**Canada**

**ATTN: Randy Singh (inv-cc)**

## CERTIFICATE OF ANALYSIS

105 Rock samples were submitted for analysis.

The following analytical package(s) were requested:

Code 1A2-Timmins Au - Fire Assay AA

Code 1E3-Timmins Aqua Regia ICP(AQUAGEO)

REPORT      **A18-03223**

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

Notes:

If value exceeds upper limit we recommend reassay by fire assay gravimetric-Code 1A3.

Values which exceed the upper limit should be assayed for accurate numbers.

Footnote: Insufficient material for sample with missing data

CERTIFIED BY:

A handwritten signature in black ink, appearing to be "Emmanuel Esemé", written over a horizontal line.

Emmanuel Esemé , Ph.D.  
Quality Control

**ACTIVATION LABORATORIES LTD.**  
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## Results

## Activation Laboratories Ltd.

## Report: A18-03223

Analyte Symbol	Au	Ag	Cd	Cu	Mn	Mo	Ni	Pb	Zn	Al	As	B	Ba	Be	Bi	Ca	Co	Cr	Fe	Ga	Hg	K	La
Unit Symbol	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm
Lower Limit	5	0.2	0.5	1	5	1	1	2	2	0.01	2	10	10	0.5	2	0.01	1	1	0.01	10	1	0.01	10
Method Code	FA-AA	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
694738	14	< 0.2	< 0.5	11	3670	< 1	189	6	58	0.84	104	< 10	57	< 0.5	< 2	2.42	34	15	10.3	< 10	< 1	0.25	< 10
694739	24	< 0.2	< 0.5	7	4190	< 1	183	6	59	0.77	144	< 10	48	< 0.5	< 2	2.03	36	7	12.1	< 10	< 1	0.22	< 10
694740	6																						
694741	98	0.3	< 0.5	11	3980	< 1	171	12	58	0.99	148	< 10	28	< 0.5	< 2	2.40	25	10	12.1	< 10	< 1	0.28	< 10
694742	31	< 0.2	< 0.5	9	1930	< 1	83	2	40	0.95	120	< 10	58	< 0.5	< 2	2.00	15	18	5.57	< 10	< 1	0.32	< 10
694743	156	< 0.2	< 0.5	12	3360	< 1	158	4	56	0.79	171	< 10	33	< 0.5	< 2	2.16	27	9	9.84	< 10	< 1	0.24	< 10
694744	34	< 0.2	< 0.5	8	3480	< 1	102	5	51	0.92	71	< 10	51	< 0.5	< 2	2.38	16	16	10.0	< 10	< 1	0.25	< 10
694745	32	< 0.2	< 0.5	7	3280	< 1	128	5	53	0.90	95	< 10	34	< 0.5	< 2	3.19	23	13	10.8	< 10	< 1	0.23	< 10
694746	17	< 0.2	< 0.5	5	4940	< 1	100	< 2	78	0.91	69	< 10	48	< 0.5	< 2	2.45	18	9	13.8	< 10	< 1	0.25	< 10
694747	21	< 0.2	< 0.5	11	4110	16	181	4	82	0.98	126	< 10	42	< 0.5	< 2	3.90	26	9	13.4	< 10	< 1	0.23	< 10
694748	13	< 0.2	< 0.5	11	4230	< 1	243	4	76	1.21	122	< 10	23	< 0.5	< 2	3.36	35	14	14.4	< 10	< 1	0.30	< 10
694749	12	0.2	< 0.5	10	4360	< 1	297	8	68	0.97	153	< 10	18	< 0.5	< 2	2.99	41	16	15.3	< 10	< 1	0.21	< 10
694750	9	< 0.2	< 0.5	9	3980	< 1	224	2	75	1.17	98	< 10	17	< 0.5	< 2	2.13	31	19	13.6	< 10	< 1	0.31	< 10
694751	1120	0.2	< 0.5	160	723	< 1	81	3	64	3.89	8	43	28	< 0.5	< 2	2.99	36	141	6.31	10	< 1	0.05	< 10
694752	7	< 0.2	< 0.5	4	3570	< 1	207	3	70	1.03	54	< 10	30	< 0.5	< 2	2.64	27	20	11.2	< 10	< 1	0.24	< 10
694753	18	< 0.2	< 0.5	15	2250	< 1	342	5	132	1.55	156	< 10	23	< 0.5	< 2	3.49	43	34	11.1	< 10	< 1	0.34	< 10
694754	28	0.2	< 0.5	29	769	< 1	479	9	110	0.93	278	< 10	11	< 0.5	< 2	2.86	53	22	10.5	< 10	< 1	0.25	< 10
694755	30	< 0.2	< 0.5	32	703	1	509	7	106	1.52	176	< 10	17	< 0.5	< 2	2.45	59	29	6.65	< 10	< 1	0.36	12
694756	17	< 0.2	< 0.5	40	473	1	348	8	121	1.18	142	< 10	21	< 0.5	3	2.58	54	29	5.60	< 10	< 1	0.27	13
694757	11	< 0.2	< 0.5	46	507	2	317	8	116	1.50	131	< 10	23	< 0.5	< 2	2.64	57	29	5.76	< 10	< 1	0.33	14
694758	< 5	< 0.2	< 0.5	37	964	< 1	179	3	60	1.57	54	< 10	19	< 0.5	< 2	2.47	36	44	6.19	< 10	< 1	0.30	15
694759	< 5	< 0.2	< 0.5	28	1290	< 1	184	5	71	1.88	39	< 10	25	< 0.5	3	2.81	33	47	7.14	< 10	< 1	0.27	14
694760	< 5	< 0.2	< 0.5	24	1140	< 1	165	3	61	1.64	43	< 10	49	< 0.5	< 2	3.04	31	48	5.43	< 10	< 1	0.28	16
694761	< 5	< 0.2	< 0.5	26	3510	< 1	164	< 2	95	3.39	8	< 10	62	< 0.5	< 2	3.69	27	68	10.5	10	< 1	0.19	17
694762	10	< 0.2	< 0.5	43	882	1	278	10	138	1.38	118	< 10	20	< 0.5	< 2	3.03	52	31	7.30	< 10	< 1	0.26	14
694763	8	< 0.2	< 0.5	31	1770	< 1	181	3	120	2.19	53	< 10	30	< 0.5	< 2	3.37	35	47	8.76	< 10	< 1	0.25	12
694764	8	< 0.2	< 0.5	36	1930	< 1	177	2	111	2.01	51	< 10	26	< 0.5	< 2	3.44	38	49	9.31	< 10	< 1	0.17	11
694765	5	< 0.2	< 0.5	24	2030	< 1	147	< 2	92	2.08	17	< 10	31	< 0.5	< 2	2.98	30	59	7.39	< 10	< 1	0.27	14
694766	8	< 0.2	< 0.5	36	1380	< 1	137	2	78	1.75	26	< 10	35	< 0.5	< 2	2.96	30	49	6.04	< 10	< 1	0.28	16
694767	< 5	< 0.2	< 0.5	23	1520	< 1	126	3	70	1.76	33	< 10	37	< 0.5	< 2	2.81	27	47	6.17	< 10	< 1	0.24	15
694768	13	< 0.2	< 0.5	29	1510	< 1	145	3	97	1.84	32	< 10	41	< 0.5	3	2.72	32	46	6.34	< 10	< 1	0.25	17
694769	9	< 0.2	< 0.5	27	1890	< 1	131	< 2	137	1.90	13	< 10	39	< 0.5	< 2	2.50	31	54	6.68	< 10	< 1	0.20	16
694770	6	< 0.2	0.5	150	1200	< 1	205	< 2	970	3.69	7	< 10	74	< 0.5	< 2	3.67	32	50	3.59	< 10	< 1	0.04	< 10
694771	13	< 0.2	< 0.5	22	1640	< 1	158	3	100	1.79	48	< 10	35	< 0.5	3	3.38	28	41	7.44	< 10	< 1	0.19	14
694772	8	< 0.2	< 0.5	27	804	< 1	165	4	75	1.13	53	< 10	52	< 0.5	< 2	3.31	34	27	4.07	< 10	< 1	0.23	19
694773	< 5	< 0.2	< 0.5	< 1	96	< 1	1	2	16	5.02	< 2	15	13	0.6	< 2	0.19	< 1	1	0.61	10	< 1	1.52	< 10
694774	22	0.2	< 0.5	45	1290	< 1	223	13	104	1.66	76	< 10	21	< 0.5	3	3.22	48	40	9.26	< 10	< 1	0.22	14
694775	5	< 0.2	< 0.5	28	1830	< 1	155	< 2	89	2.09	17	< 10	61	< 0.5	< 2	3.83	33	53	5.84	< 10	< 1	0.29	23
694776	8	< 0.2	< 0.5	29	1340	< 1	142	< 2	146	1.73	17	< 10	67	< 0.5	< 2	3.20	31	50	5.57	< 10	< 1	0.20	23
694777	9	< 0.2	< 0.5	39	601	1	287	13	109	1.49	71	< 10	34	< 0.5	< 2	2.74	47	39	5.65	< 10	< 1	0.26	21
694778	12	< 0.2	< 0.5	41	524	1	303	13	113	1.44	90	< 10	24	< 0.5	< 2	2.59	51	37	6.33	< 10	< 1	0.25	17
694779	< 5	< 0.2	< 0.5	35	580	1	203	8	125	1.15	56	< 10	60	< 0.5	< 2	3.54	45	33	4.05	< 10	< 1	0.22	20

## Results

## Activation Laboratories Ltd.

## Report: A18-03223

Analyte Symbol	Au	Ag	Cd	Cu	Mn	Mo	Ni	Pb	Zn	Al	As	B	Ba	Be	Bi	Ca	Co	Cr	Fe	Ga	Hg	K	La
Unit Symbol	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm
Lower Limit	5	0.2	0.5	1	5	1	1	2	2	0.01	2	10	10	0.5	2	0.01	1	1	0.01	10	1	0.01	10
Method Code	FA-AA	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
694780	5	< 0.2	< 0.5	42	491	1	223	7	148	1.04	69	< 10	44	< 0.5	3	3.30	49	33	4.41	< 10	< 1	0.21	16
694781	10	< 0.2	< 0.5	56	562	2	333	12	188	1.26	123	< 10	24	< 0.5	< 2	3.42	69	32	6.43	< 10	< 1	0.24	14
694782	1630																						
694783	5	< 0.2	< 0.5	40	588	< 1	234	7	164	0.93	72	< 10	37	< 0.5	3	3.52	43	29	4.43	< 10	< 1	0.18	17
694784	13	< 0.2	< 0.5	46	528	3	251	10	153	1.06	105	< 10	17	< 0.5	2	2.53	43	35	6.02	< 10	< 1	0.21	15
694785	< 5	< 0.2	< 0.5	32	867	< 1	174	7	91	1.23	62	< 10	26	< 0.5	< 2	3.23	32	41	5.95	< 10	< 1	0.21	14
694786	5	< 0.2	< 0.5	29	1100	< 1	165	4	109	1.41	44	< 10	33	< 0.5	< 2	3.10	33	41	6.38	< 10	< 1	0.20	16
694787	5	< 0.2	< 0.5	28	995	< 1	162	6	86	1.05	54	< 10	34	< 0.5	< 2	3.27	31	41	5.62	< 10	< 1	0.19	15
694788	5	< 0.2	< 0.5	26	1860	< 1	160	3	99	2.07	35	< 10	31	< 0.5	2	3.20	28	58	8.92	< 10	< 1	0.16	13
694789	11	< 0.2	< 0.5	26	2290	< 1	145	3	90	1.91	48	< 10	45	< 0.5	< 2	3.51	28	49	8.29	< 10	< 1	0.14	13
694790	6	< 0.2	< 0.5	28	2430	< 1	157	3	96	2.05	50	< 10	43	< 0.5	< 2	3.70	29	66	8.79	< 10	< 1	0.15	15
694791	6	< 0.2	< 0.5	28	2580	< 1	109	3	109	2.32	66	< 10	86	< 0.5	< 2	3.39	27	51	7.57	< 10	< 1	0.23	19
694792	9	< 0.2	< 0.5	28	2620	< 1	104	4	124	2.01	75	< 10	96	< 0.5	< 2	3.71	24	54	7.53	< 10	< 1	0.25	17
694793	76	< 0.2	< 0.5	19	2280	< 1	126	5	96	1.67	171	< 10	39	< 0.5	< 2	3.60	29	39	7.76	< 10	< 1	0.27	11
694794	339	0.4	< 0.5	14	5510	< 1	217	10	92	1.96	364	< 10	13	< 0.5	< 2	2.45	32	15	21.0	< 10	< 1	0.13	< 10
694795	734	0.6	< 0.5	17	6330	< 1	209	15	124	1.83	868	< 10	< 10	< 0.5	< 2	2.48	34	10	27.7	< 10	< 1	0.04	< 10
694796	> 5000	1.5	< 0.5	130	649	5	181	33	65	3.40	58	13	56	< 0.5	< 2	3.07	34	507	4.76	< 10	< 1	0.21	< 10
694797	282	0.2	< 0.5	11	5460	< 1	101	6	67	1.82	551	< 10	17	< 0.5	< 2	3.36	19	12	18.5	< 10	< 1	0.20	< 10
694798	658	0.4	< 0.5	14	5700	< 1	108	7	67	1.75	1040	< 10	14	< 0.5	< 2	3.10	20	8	20.7	< 10	< 1	0.11	< 10
694799	496	0.3	< 0.5	11	6200	7	136	4	70	1.77	510	< 10	16	< 0.5	< 2	2.67	17	10	21.0	< 10	< 1	0.10	< 10
694800	769	< 0.2	< 0.5	12	5070	9	135	6	83	0.15	505	< 10	< 10	< 0.5	< 2	2.30	14	38	16.7	< 10	< 1	< 0.01	< 10
694801	6	< 0.2	< 0.5	3	187	< 1	1	2	26	5.29	6	17	16	0.6	< 2	0.27	< 1	2	0.88	10	< 1	1.57	< 10
694802	822	0.6	< 0.5	14	3910	25	100	16	67	0.10	484	< 10	< 10	< 0.5	< 2	2.32	15	56	14.5	< 10	< 1	< 0.01	< 10
694803	547	0.5	0.6	18	4180	9	103	15	87	0.09	637	< 10	< 10	< 0.5	< 2	2.76	18	48	15.1	< 10	< 1	< 0.01	< 10
694804	631	0.4	< 0.5	11	5580	12	213	10	144	0.28	633	< 10	< 10	< 0.5	< 2	2.85	30	35	21.6	< 10	< 1	0.01	< 10
694805	187	< 0.2	< 0.5	6	5330	11	120	4	112	0.39	291	< 10	11	< 0.5	< 2	3.20	20	50	18.5	< 10	< 1	0.01	< 10
694806	86	< 0.2	< 0.5	2	4360	6	74	3	102	0.28	187	< 10	< 10	< 0.5	< 2	7.76	12	31	13.8	< 10	< 1	0.01	< 10
694809	121	< 0.2	< 0.5	5	4710	< 1	106	8	108	0.08	182	< 10	< 10	< 0.5	< 2	3.29	19	48	15.7	< 10	< 1	< 0.01	< 10
694807	278	< 0.2	0.7	6	4120	1	96	5	88	0.08	259	< 10	< 10	< 0.5	< 2	3.09	19	31	17.2	< 10	< 1	< 0.01	< 10
694808	275	0.2	< 0.5	6	4230	1	99	7	93	0.08	262	< 10	< 10	< 0.5	< 2	2.70	18	49	17.5	< 10	< 1	< 0.01	< 10
694810	297	0.3	< 0.5	7	4760	5	181	8	127	0.59	289	< 10	12	< 0.5	< 2	2.87	29	23	19.8	< 10	< 1	0.02	< 10
694811	70	< 0.2	< 0.5	7	4690	< 1	105	3	65	1.65	77	< 10	34	< 0.5	< 2	3.39	19	15	13.7	< 10	< 1	0.22	< 10
694812	18	< 0.2	< 0.5	8	4290	< 1	72	3	55	1.60	58	< 10	38	< 0.5	< 2	5.42	13	18	13.3	< 10	< 1	0.17	< 10
694813	26	< 0.2	0.5	7	4590	< 1	65	4	61	1.87	64	< 10	29	< 0.5	< 2	4.30	12	13	14.7	< 10	< 1	0.21	< 10
694814	5	< 0.2	< 0.5	2	153	< 1	< 1	2	24	5.42	< 2	15	12	0.6	< 2	0.25	< 1	1	0.77	10	< 1	1.64	< 10
694815	23	< 0.2	0.5	5	5320	< 1	39	9	58	1.68	45	< 10	55	< 0.5	< 2	4.95	11	17	14.4	< 10	< 1	0.18	< 10
694816	49	< 0.2	0.7	8	4560	< 1	66	7	61	1.29	71	< 10	38	< 0.5	< 2	6.80	14	11	14.3	< 10	< 1	0.11	< 10
694817	29	< 0.2	< 0.5	9	5280	< 1	50	4	61	1.35	61	< 10	34	< 0.5	< 2	3.81	14	10	15.7	< 10	< 1	0.16	< 10
694818	30	< 0.2	< 0.5	9	5370	< 1	56	3	64	1.22	83	< 10	30	< 0.5	< 2	3.10	14	9	16.3	< 10	< 1	0.16	< 10
694819	30	< 0.2	< 0.5	10	4560	< 1	72	3	51	1.22	95	< 10	36	< 0.5	< 2	3.73	16	13	13.2	< 10	< 1	0.16	< 10
694820	45	< 0.2	< 0.5	10	5490	< 1	45	5	50	1.09	95	< 10	31	< 0.5	< 2	3.75	16	8	15.5	< 10	< 1	0.16	< 10
694821	128	< 0.2	< 0.5	12	4960	< 1	67	7	66	1.70	137	< 10	29	< 0.5	< 2	2.98	17	9	14.7	< 10	< 1	0.24	< 10



Analyte Symbol	Au	Ag	Cd	Cu	Mn	Mo	Ni	Pb	Zn	Al	As	B	Ba	Be	Bi	Ca	Co	Cr	Fe	Ga	Hg	K	La
Unit Symbol	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm
Lower Limit	5	0.2	0.5	1	5	1	1	2	2	0.01	2	10	10	0.5	2	0.01	1	1	0.01	10	1	0.01	10
Method Code	FA-AA	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
694822	278	< 0.2	< 0.5	18	3300	< 1	135	6	76	1.59	269	< 10	19	< 0.5	< 2	3.50	22	13	13.6	< 10	< 1	0.24	< 10
694823	1150	< 0.2	< 0.5	159	732	< 1	80	4	65	3.95	7	46	28	< 0.5	< 2	3.05	37	142	6.34	10	< 1	0.05	< 10
694824	154	< 0.2	< 0.5	13	3040	< 1	180	6	72	0.96	271	< 10	20	< 0.5	< 2	2.74	25	19	13.0	< 10	< 1	0.15	< 10
694825	166	< 0.2	< 0.5	14	2060	< 1	180	6	54	0.86	258	< 10	25	< 0.5	< 2	3.26	29	28	8.97	< 10	< 1	0.13	< 10
694826	443	0.4	< 0.5	35	2020	< 1	198	11	83	1.71	685	< 10	12	< 0.5	< 2	2.93	31	18	15.3	< 10	< 1	0.25	< 10
694827	393	< 0.2	< 0.5	22	2060	< 1	174	10	79	1.33	1300	< 10	22	< 0.5	< 2	4.11	28	16	12.5	< 10	< 1	0.20	< 10
694828	181	< 0.2	< 0.5	20	512	< 1	267	5	59	0.99	427	< 10	36	< 0.5	< 2	2.55	27	17	4.86	< 10	< 1	0.21	< 10
694829	302	0.3	< 0.5	23	472	< 1	221	11	52	1.05	312	< 10	21	< 0.5	< 2	2.74	28	17	7.18	< 10	< 1	0.22	< 10
694830	291	0.3	< 0.5	19	393	< 1	205	11	40	0.89	284	< 10	17	< 0.5	< 2	2.44	30	19	8.79	< 10	< 1	0.18	< 10
694831	264	0.3	< 0.5	15	438	< 1	186	8	36	1.16	239	< 10	18	< 0.5	< 2	2.24	27	28	7.52	< 10	< 1	0.23	< 10
694832	215	< 0.2	< 0.5	13	511	< 1	136	6	39	0.84	186	< 10	28	< 0.5	< 2	2.51	20	28	5.38	< 10	< 1	0.20	< 10
694833	232	< 0.2	< 0.5	13	498	< 1	166	9	42	0.88	223	< 10	26	< 0.5	< 2	2.60	24	28	5.76	< 10	< 1	0.21	< 10
694834	84	< 0.2	< 0.5	16	693	< 1	156	5	55	1.30	268	< 10	80	< 0.5	< 2	3.40	23	28	4.43	< 10	< 1	0.27	12
694835	193	< 0.2	< 0.5	26	509	< 1	203	3	71	1.10	384	< 10	65	< 0.5	< 2	3.31	27	13	4.58	< 10	< 1	0.23	15
694836	79	< 0.2	< 0.5	24	650	< 1	152	< 2	51	1.19	304	< 10	96	< 0.5	< 2	3.48	23	21	3.68	< 10	< 1	0.24	15
694837	405																						
694838	1240	0.9	< 0.5	22	1470	< 1	240	22	193	1.11	535	< 10	13	< 0.5	< 2	2.49	30	26	11.8	< 10	< 1	0.23	< 10
694839	1610	1.4	< 0.5	33	4080	< 1	213	24	86	0.81	1300	< 10	11	< 0.5	< 2	2.35	34	13	20.4	< 10	< 1	0.14	< 10
694840	1940	1.7	< 0.5	41	4810	< 1	163	26	111	1.09	1470	< 10	< 10	< 0.5	3	1.88	27	9	25.9	< 10	< 1	0.17	< 10
694841	560	0.4	< 0.5	15	3520	< 1	151	9	60	1.12	2270	< 10	23	< 0.5	< 2	4.70	25	21	10.8	< 10	< 1	0.25	< 10
694842	5	< 0.2	< 0.5	3	116	< 1	< 1	< 2	24	5.00	< 2	12	13	0.6	< 2	0.18	< 1	2	0.80	10	< 1	1.47	< 10

Analyte Symbol	Mg	Na	P	S	Sb	Sc	Sr	Ti	Th	Te	Tl	U	V	W	Y	Zr	Au
Unit Symbol	%	%	%	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	g/tonne
Lower Limit	0.01	0.001	0.001	0.01	2	1	1	0.01	20	1	2	10	1	10	1	1	0.03
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	FA- GRA
694738	1.15	0.093	0.077	2.29	4	5	134	< 0.01	< 20	2	< 2	< 10	17	< 10	4	17	
694739	1.30	0.069	0.058	2.48	7	4	115	< 0.01	< 20	5	< 2	< 10	13	< 10	3	16	
694740																	
694741	1.30	0.089	0.064	3.66	8	5	132	< 0.01	< 20	2	< 2	< 10	18	< 10	4	20	
694742	0.76	0.120	0.065	1.81	3	5	123	< 0.01	< 20	4	< 2	< 10	18	< 10	4	16	
694743	1.05	0.075	0.057	2.96	4	4	123	< 0.01	< 20	1	< 2	< 10	13	< 10	4	16	
694744	1.21	0.112	0.066	2.32	5	4	141	< 0.01	< 20	2	< 2	< 10	18	< 10	4	19	
694745	1.44	0.093	0.068	3.51	7	4	188	< 0.01	< 20	< 1	< 2	< 10	18	< 10	4	20	
694746	1.67	0.086	0.056	2.09	8	7	144	< 0.01	< 20	3	< 2	< 10	18	< 10	4	19	
694747	2.10	0.081	0.057	3.54	5	6	214	< 0.01	< 20	< 1	< 2	< 10	21	< 10	4	21	
694748	1.94	0.103	0.062	4.40	7	6	193	< 0.01	< 20	1	< 2	< 10	25	< 10	5	25	
694749	1.71	0.084	0.057	5.76	8	5	166	< 0.01	< 20	< 1	< 2	< 10	26	< 10	4	24	
694750	1.35	0.091	0.064	4.43	8	5	132	< 0.01	< 20	3	< 2	< 10	24	< 10	4	22	
694751	2.36	0.085	0.043	0.20	< 2	9	31	0.47	< 20	12	3	< 10	187	< 10	15	22	
694752	1.34	0.089	0.062	2.96	4	5	158	< 0.01	< 20	< 1	< 2	< 10	24	< 10	4	21	
694753	1.41	0.129	0.100	5.05	5	7	209	< 0.01	< 20	< 1	< 2	< 10	34	< 10	5	25	
694754	0.86	0.104	0.124	8.54	10	3	165	< 0.01	< 20	< 1	< 2	< 10	16	< 10	5	26	
694755	0.82	0.175	0.134	4.09	7	4	160	< 0.01	< 20	2	< 2	< 10	24	< 10	5	18	
694756	0.85	0.146	0.140	3.72	5	3	151	< 0.01	< 20	6	< 2	< 10	17	< 10	5	9	
694757	0.85	0.186	0.143	3.63	4	3	166	< 0.01	< 20	1	< 2	< 10	20	< 10	6	9	
694758	0.91	0.140	0.144	3.45	2	3	138	< 0.01	< 20	< 1	< 2	< 10	27	< 10	5	12	
694759	1.13	0.133	0.131	3.02	5	4	158	< 0.01	< 20	4	< 2	< 10	32	< 10	5	12	
694760	1.25	0.128	0.133	2.05	3	4	183	< 0.01	< 20	< 1	< 2	< 10	26	< 10	5	5	
694761	1.76	0.132	0.116	1.67	3	8	194	< 0.01	< 20	< 1	< 2	< 10	58	< 10	5	9	
694762	0.97	0.155	0.151	4.51	4	5	159	< 0.01	< 20	< 1	< 2	< 10	19	< 10	5	18	
694763	1.33	0.163	0.128	3.68	3	5	183	< 0.01	< 20	< 1	< 2	< 10	35	< 10	5	17	
694764	1.40	0.112	0.125	3.92	4	5	168	< 0.01	< 20	< 1	< 2	< 10	34	< 10	5	18	
694765	1.08	0.144	0.132	2.62	2	4	161	< 0.01	< 20	3	< 2	< 10	34	< 10	5	11	
694766	1.11	0.155	0.123	2.50	2	5	168	< 0.01	< 20	1	< 2	< 10	28	< 10	4	10	
694767	1.10	0.126	0.122	2.22	3	4	161	< 0.01	< 20	2	< 2	< 10	27	< 10	4	9	
694768	1.03	0.145	0.130	2.43	3	4	137	< 0.01	< 20	< 1	< 2	< 10	28	< 10	5	10	
694769	0.95	0.132	0.120	2.25	< 2	4	113	< 0.01	< 20	5	< 2	< 10	31	< 10	4	10	
694770	0.71	0.668	0.045	0.13	< 2	13	110	0.27	< 20	1	3	< 10	126	< 10	14	5	
694771	1.22	0.167	0.127	2.75	3	5	141	< 0.01	< 20	1	< 2	< 10	31	< 10	5	9	
694772	1.04	0.168	0.141	1.62	< 2	3	159	< 0.01	< 20	2	< 2	< 10	18	< 10	5	5	
694773	0.05	3.47	0.001	0.01	< 2	< 1	26	< 0.01	< 20	< 1	< 2	< 10	< 1	< 10	3	1	
694774	1.12	0.170	0.141	5.75	4	4	149	< 0.01	< 20	< 1	< 2	< 10	24	< 10	5	18	
694775	1.33	0.247	0.145	1.74	< 2	4	184	< 0.01	< 20	5	< 2	< 10	29	< 10	5	6	
694776	1.14	0.177	0.134	1.71	< 2	4	128	< 0.01	< 20	< 1	< 2	< 10	25	< 10	5	8	
694777	0.88	0.211	0.153	3.44	4	3	128	< 0.01	< 20	3	< 2	< 10	20	< 10	5	12	
694778	0.83	0.225	0.143	4.40	5	3	131	< 0.01	< 20	< 1	< 2	< 10	21	< 10	5	16	

Analyte Symbol	Mg	Na	P	S	Sb	Sc	Sr	Ti	Th	Te	Tl	U	V	W	Y	Zr	Au
Unit Symbol	%	%	%	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	g/tonne
Lower Limit	0.01	0.001	0.001	0.01	2	1	1	0.01	20	1	2	10	1	10	1	1	0.03
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	FA- GRA
694779	1.15	0.197	0.152	1.76	< 2	3	134	< 0.01	< 20	< 1	< 2	< 10	17	< 10	5	8	
694780	1.04	0.188	0.156	2.33	2	3	130	< 0.01	< 20	2	< 2	< 10	15	< 10	5	7	
694781	1.14	0.225	0.148	4.44	5	3	150	< 0.01	< 20	< 1	< 2	< 10	20	< 10	5	15	
694782																	
694783	1.18	0.165	0.137	2.26	< 2	3	131	< 0.01	< 20	< 1	< 2	< 10	15	< 10	5	9	
694784	0.80	0.169	0.130	4.55	4	2	113	< 0.01	< 20	< 1	< 2	< 10	17	< 10	4	14	
694785	1.15	0.179	0.126	3.50	4	3	133	< 0.01	< 20	< 1	< 2	< 10	20	< 10	5	13	
694786	1.09	0.170	0.135	3.28	4	3	128	< 0.01	< 20	< 1	< 2	< 10	23	< 10	5	14	
694787	1.05	0.138	0.130	2.77	4	3	131	< 0.01	< 20	< 1	< 2	< 10	19	< 10	5	10	
694788	1.22	0.139	0.112	3.28	< 2	5	149	< 0.01	< 20	1	< 2	< 10	35	< 10	4	15	
694789	1.32	0.103	0.113	2.47	4	5	154	< 0.01	< 20	6	< 2	< 10	35	< 10	4	13	
694790	1.41	0.111	0.119	2.60	3	5	163	< 0.01	< 20	4	< 2	< 10	37	< 10	5	14	
694791	1.25	0.141	0.130	1.14	< 2	5	175	< 0.01	< 20	< 1	< 2	< 10	38	< 10	5	10	
694792	1.30	0.112	0.119	1.08	3	5	201	< 0.01	< 20	< 1	< 2	< 10	36	< 10	5	11	
694793	1.28	0.093	0.131	2.56	6	4	193	< 0.01	< 20	< 1	< 2	< 10	27	< 10	5	10	
694794	2.12	0.059	0.043	8.79	16	5	130	< 0.01	< 20	1	< 2	< 10	31	< 10	3	23	
694795	2.81	0.026	0.018	13.0	23	8	122	< 0.01	< 20	< 1	< 2	< 10	30	< 10	3	22	
694796	3.37	0.068	0.033	0.74	2	11	50	0.26	< 20	7	3	< 10	121	< 10	10	20	6.50
694797	2.38	0.067	0.047	6.78	13	4	184	< 0.01	< 20	6	< 2	< 10	20	< 10	4	22	
694798	2.51	0.040	0.033	9.38	15	4	147	< 0.01	< 20	< 1	< 2	< 10	20	< 10	3	19	
694799	2.52	0.038	0.030	8.09	13	5	128	< 0.01	< 20	< 1	< 2	< 10	27	< 10	3	21	
694800	1.88	0.018	0.002	7.37	10	4	91	< 0.01	< 20	< 1	< 2	< 10	17	< 10	3	9	
694801	0.09	3.53	0.002	0.08	< 2	< 1	31	< 0.01	< 20	< 1	2	< 10	1	< 10	4	3	
694802	1.47	0.020	0.001	8.68	16	3	111	< 0.01	< 20	< 1	< 2	< 10	12	< 10	2	7	
694803	1.78	0.026	0.002	7.41	16	5	124	< 0.01	< 20	7	< 2	< 10	18	< 10	2	8	
694804	2.52	0.020	0.012	9.10	24	8	112	< 0.01	< 20	< 1	< 2	< 10	25	< 10	3	11	
694805	2.60	0.020	0.005	6.80	15	7	129	< 0.01	< 20	< 1	< 2	< 10	23	< 10	3	11	
694806	3.70	0.019	0.005	3.75	11	10	330	< 0.01	< 20	< 1	< 2	< 10	26	< 10	4	11	
694809	2.26	0.016	0.002	5.55	13	7	105	< 0.01	< 20	3	< 2	< 10	19	< 10	3	8	
694807	2.02	0.014	0.001	8.49	23	4	134	< 0.01	< 20	5	< 2	< 10	15	< 10	2	8	
694808	2.07	0.017	0.001	8.15	23	4	122	< 0.01	< 20	2	< 2	< 10	16	< 10	2	8	
694810	2.27	0.025	0.011	9.15	20	5	95	< 0.01	< 20	< 1	< 2	< 10	19	< 10	3	14	
694811	2.06	0.177	0.061	3.19	7	4	138	< 0.01	< 20	1	< 2	< 10	21	< 10	4	19	
694812	2.66	0.141	0.052	3.44	6	3	194	< 0.01	< 20	< 1	< 2	< 10	19	< 10	5	18	
694813	2.54	0.188	0.056	4.08	6	3	172	< 0.01	< 20	4	< 2	< 10	22	< 10	4	20	
694814	0.07	3.80	0.002	0.04	< 2	< 1	28	< 0.01	< 20	< 1	< 2	< 10	< 1	< 10	4	3	
694815	2.75	0.184	0.056	2.58	8	4	190	< 0.01	< 20	< 1	< 2	< 10	22	< 10	5	18	
694816	3.33	0.102	0.047	3.99	8	3	223	< 0.01	< 20	< 1	< 2	< 10	17	< 10	5	17	
694817	2.19	0.153	0.064	3.99	7	4	146	< 0.01	< 20	3	< 2	< 10	18	< 10	4	20	
694818	2.04	0.159	0.062	4.26	9	3	119	< 0.01	< 20	6	< 2	< 10	17	< 10	4	19	
694819	1.79	0.165	0.062	3.38	8	3	143	< 0.01	< 20	5	< 2	< 10	18	< 10	4	18	
694820	2.05	0.153	0.076	4.18	7	3	135	< 0.01	< 20	< 1	< 2	< 10	14	< 10	4	17	

Analyte Symbol	Mg	Na	P	S	Sb	Sc	Sr	Ti	Th	Te	Tl	U	V	W	Y	Zr	Au
Unit Symbol	%	%	%	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	g/tonne
Lower Limit	0.01	0.001	0.001	0.01	2	1	1	0.01	20	1	2	10	1	10	1	1	0.03
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	FA- GRA
694821	1.83	0.236	0.067	4.42	5	4	148	< 0.01	< 20	3	< 2	< 10	22	< 10	4	21	
694822	1.58	0.227	0.062	6.97	9	4	167	< 0.01	< 20	< 1	< 2	< 10	23	< 10	4	24	
694823	2.38	0.085	0.044	0.20	< 2	9	32	0.49	< 20	4	< 2	< 10	191	< 10	15	23	
694824	1.37	0.133	0.058	6.04	10	4	122	< 0.01	< 20	< 1	< 2	< 10	19	< 10	3	19	
694825	1.16	0.137	0.057	5.05	8	3	137	< 0.01	< 20	< 1	< 2	< 10	16	< 10	3	17	
694826	1.24	0.223	0.061	11.2	11	3	145	< 0.01	< 20	< 1	< 2	< 10	20	< 10	4	24	
694827	1.48	0.174	0.087	7.88	10	4	186	< 0.01	< 20	6	< 2	< 10	16	< 10	5	27	
694828	0.77	0.206	0.099	3.12	7	3	137	< 0.01	< 20	< 1	< 2	< 10	13	< 10	4	17	
694829	0.78	0.234	0.101	5.47	10	3	136	< 0.01	< 20	6	< 2	< 10	16	< 10	4	20	
694830	0.69	0.204	0.098	7.17	16	3	116	< 0.01	< 20	< 1	< 2	< 10	14	< 10	4	20	
694831	0.64	0.259	0.083	6.14	14	3	124	< 0.01	< 20	< 1	2	< 10	17	< 10	4	22	
694832	0.72	0.236	0.105	3.53	8	3	119	< 0.01	< 20	< 1	< 2	< 10	16	< 10	4	17	
694833	0.74	0.240	0.097	3.90	10	3	126	< 0.01	< 20	< 1	< 2	< 10	16	< 10	4	18	
694834	1.05	0.282	0.125	2.00	4	4	179	< 0.01	< 20	2	< 2	< 10	18	< 10	6	11	
694835	1.03	0.238	0.128	2.42	4	3	171	< 0.01	< 20	< 1	< 2	< 10	17	< 10	5	10	
694836	1.09	0.262	0.125	1.27	2	4	184	< 0.01	< 20	2	< 2	< 10	19	< 10	5	7	
694837																	
694838	0.93	0.225	0.071	10.3	15	4	160	< 0.01	< 20	< 1	< 2	< 10	20	< 10	4	29	
694839	1.54	0.146	0.064	15.0	20	5	142	< 0.01	< 20	7	< 2	< 10	20	< 10	4	29	
694840	1.45	0.172	0.052	19.3	23	7	118	< 0.01	< 20	< 1	< 2	< 10	25	< 10	3	29	
694841	1.67	0.182	0.110	6.95	8	7	279	< 0.01	< 20	4	< 2	< 10	23	< 10	6	34	
694842	0.05	3.50	0.001	< 0.01	< 2	< 1	24	< 0.01	< 20	< 1	< 2	< 10	< 1	< 10	3	2	

Analyte Symbol	Au	Ag	Cd	Cu	Mn	Mo	Ni	Pb	Zn	Al	As	B	Ba	Be	Bi	Ca	Co	Cr	Fe	Ga	Hg	K	La	
Unit Symbol	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	
Lower Limit	5	0.2	0.5	1	5	1	1	2	2	0.01	2	10	10	0.5	2	0.01	1	1	0.01	10	1	0.01	10	
Method Code	FA-AA	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	
GXR-1 Meas		30.9	2.6	1150	816	15	32	734	712	0.35	402	< 10	278	0.9	1600	0.76	7	7	23.6	< 10	4	0.03	< 10	
GXR-1 Cert		31.0	3.30	1110	852	18.0	41.0	730	760	3.52	427	15.0	750	1.22	1380	0.960	8.20	12.0	23.6	13.8	3.90	0.050	7.50	
GXR-1 Meas		32.8	2.1	1230	854	16	34	765	733	0.38	430	11	292	1.0	1650	0.80	7	11	25.5	< 10	5	0.03	< 10	
GXR-1 Cert		31.0	3.30	1110	852	18.0	41.0	730	760	3.52	427	15.0	750	1.22	1380	0.960	8.20	12.0	23.6	13.8	3.90	0.050	7.50	
GXR-6 Meas		< 0.2	< 0.5	67	1020	2	20	104	123	7.51	254	< 10	1130	1.0	< 2	0.15	15	89	5.68	20	< 1	1.11	12	
GXR-6 Cert		1.30	1.00	66.0	1010	2.40	27.0	101	118	17.7	330	9.80	1300	1.40	0.290	0.180	13.8	96.0	5.58	35.0	0.0680	1.87	13.9	
GXR-6 Meas		< 0.2	< 0.5	67	976	1	19	101	119	6.78	249	< 10	1090	1.0	< 2	0.15	14	85	5.53	10	< 1	1.02	11	
GXR-6 Cert		1.30	1.00	66.0	1010	2.40	27.0	101	118	17.7	330	9.80	1300	1.40	0.290	0.180	13.8	96.0	5.58	35.0	0.0680	1.87	13.9	
OREAS 134b (AQUA REGIA) Meas		> 100	626	1500				> 5000	> 10000		257						128		13.3					
OREAS 134b (AQUA REGIA) Cert		204	563	1360				133000	177000		221						106		12.25					
OREAS 133a (Aqua Regia) Meas		> 100	300	329				> 5000	> 10000		142		< 10				24		8.07					
OREAS 133a (Aqua Regia) Cert		97	297	324				48600.00	106000.00		140		59				23		7.92					
OXN117 Meas																								
OXN117 Cert																								
OxP116 Meas																								
OxP116 Cert																								
OREAS 218 Meas	544																							
OREAS 218 Cert	531																							
OREAS 218 Meas	560																							
OREAS 218 Cert	531																							
OREAS 218 Meas	564																							
OREAS 218 Cert	531																							
OREAS 224 Meas	2130																							
OREAS 224 Cert	2150.00																							
OREAS 224 Meas	2210																							
OREAS 224 Cert	2150.00																							
OREAS 224 Meas	2250																							
OREAS 224 Cert	2150.00																							
694747 Orig	21																							
694747 Dup	20																							
694757 Orig	12																							
694757 Dup	9																							
694767 Orig	< 5																							
694767 Dup	5																							

Analyte Symbol	Au	Ag	Cd	Cu	Mn	Mo	Ni	Pb	Zn	Al	As	B	Ba	Be	Bi	Ca	Co	Cr	Fe	Ga	Hg	K	La
Unit Symbol	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm
Lower Limit	5	0.2	0.5	1	5	1	1	2	2	0.01	2	10	10	0.5	2	0.01	1	1	0.01	10	1	0.01	10
Method Code	FA-AA	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
694776 Orig		< 0.2	< 0.5	30	1380	< 1	147	2	150	1.81	19	< 10	69	< 0.5	< 2	3.31	32	53	5.76	< 10	< 1	0.21	23
694776 Dup		< 0.2	< 0.5	28	1300	< 1	137	< 2	143	1.66	15	< 10	66	< 0.5	< 2	3.09	30	46	5.38	< 10	< 1	0.20	22
694781 Orig		< 0.2	< 0.5	54	553	2	322	10	184	1.23	120	< 10	24	< 0.5	< 2	3.38	69	34	6.33	< 10	< 1	0.23	13
694781 Dup		< 0.2	< 0.5	58	572	2	343	13	192	1.29	126	< 10	25	< 0.5	3	3.46	70	30	6.54	< 10	< 1	0.24	14
694782 Orig	1620																						
694782 Dup	1630																						
694785 Orig		< 0.2	< 0.5	32	879	< 1	175	7	92	1.25	63	< 10	23	< 0.5	< 2	3.27	33	40	6.04	< 10	< 1	0.21	14
694785 Dup		< 0.2	< 0.5	32	854	< 1	174	7	90	1.21	61	< 10	28	< 0.5	2	3.19	32	41	5.86	< 10	< 1	0.20	13
694792 Orig	9																						
694792 Dup	8																						
694793 Orig		< 0.2	< 0.5	18	2220	< 1	120	6	94	1.64	168	< 10	39	< 0.5	< 2	3.52	28	38	7.57	< 10	< 1	0.27	11
694793 Dup		< 0.2	< 0.5	19	2330	< 1	132	4	97	1.71	173	< 10	39	< 0.5	< 2	3.69	29	40	7.96	< 10	< 1	0.28	11
694802 Orig	795																						
694802 Dup	848																						
694817 Orig	29																						
694817 Dup	29																						
694823 Orig		0.2	< 0.5	160	737	< 1	79	4	65	3.96	7	46	28	< 0.5	< 2	3.08	37	143	6.37	10	< 1	0.05	< 10
694823 Dup		< 0.2	< 0.5	158	727	< 1	81	4	65	3.93	8	45	28	< 0.5	< 2	3.02	37	142	6.30	10	< 1	0.05	< 10
694826 Orig		0.4	< 0.5	34	2000	< 1	196	10	83	1.70	675	< 10	12	< 0.5	< 2	2.97	30	17	15.1	< 10	< 1	0.24	< 10
694826 Dup		0.3	< 0.5	35	2040	1	200	12	84	1.73	694	< 10	12	< 0.5	< 2	2.89	31	20	15.5	< 10	< 1	0.25	< 10
694827 Orig	393																						
694827 Dup	392																						
694838 Orig	1260																						
694838 Dup	1230																						
694839 Orig		1.5	< 0.5	34	4210	< 1	222	24	88	0.85	1360	< 10	11	< 0.5	< 2	2.63	36	11	21.4	< 10	< 1	0.15	< 10
694839 Dup		1.3	< 0.5	31	3940	< 1	205	23	84	0.76	1250	< 10	11	< 0.5	< 2	2.07	33	14	19.5	< 10	< 1	0.14	< 10
Method Blank	< 5																						
Method Blank	< 5																						
Method Blank	< 5																						
Method Blank	5																						
Method Blank	5																						
Method Blank	< 5																						
Method Blank	< 5																						
Method Blank																							
Method Blank		< 0.2	< 0.5	< 1	< 5	< 1	< 1	< 2	< 2	< 0.01	< 2	< 10	< 10	< 0.5	< 2	< 0.01	< 1	< 1	< 0.01	< 10	< 1	< 0.01	< 10
Method Blank		< 0.2	< 0.5	< 1	< 5	< 1	< 1	< 2	< 2	< 0.01	< 2	< 10	< 10	< 0.5	< 2	< 0.01	< 1	< 1	< 0.01	< 10	< 1	< 0.01	< 10
Method Blank		< 0.2	< 0.5	< 1	< 5	< 1	< 1	< 2	< 2	< 0.01	< 2	< 10	< 10	< 0.5	< 2	< 0.01	< 1	< 1	< 0.01	< 10	< 1	< 0.01	< 10
Method Blank		< 0.2	< 0.5	< 1	< 5	< 1	< 1	< 2	< 2	< 0.01	< 2	< 10	< 10	< 0.5	< 2	< 0.01	< 1	< 1	< 0.01	< 10	< 1	< 0.01	< 10

Analyte Symbol	Mg	Na	P	S	Sb	Sc	Sr	Ti	Th	Te	Tl	U	V	W	Y	Zr	Au
Unit Symbol	%	%	%	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	g/tonne
Lower Limit	0.01	0.001	0.001	0.01	2	1	1	0.01	20	1	2	10	1	10	1	1	0.03
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	FA- GRA
GXR-1 Meas	0.14	0.054	0.044	0.21	87	1	171	< 0.01	< 20	13	2	26	79	149	25	15	
GXR-1 Cert	0.217	0.0520	0.0650	0.257	122	1.58	275	0.036	2.44	13.0	0.390	34.9	80.0	164	32.0	38.0	
GXR-1 Meas	0.15	0.056	0.045	0.22	83	1	180	< 0.01	< 20	14	< 2	30	84	154	27	16	
GXR-1 Cert	0.217	0.0520	0.0650	0.257	122	1.58	275	0.036	2.44	13.0	0.390	34.9	80.0	164	32.0	38.0	
GXR-6 Meas	0.41	0.095	0.037	0.02	2	25	36		< 20	< 1	< 2	< 10	174	< 10	6	15	
GXR-6 Cert	0.609	0.104	0.0350	0.0160	3.60	27.6	35.0		5.30	0.0180	2.20	1.54	186	1.90	14.0	110	
GXR-6 Meas	0.38	0.086	0.036	0.01	4	22	31		< 20	< 1	< 2	< 10	169	< 10	6	15	
GXR-6 Cert	0.609	0.104	0.0350	0.0160	3.60	27.6	35.0		5.30	0.0180	2.20	1.54	186	1.90	14.0	110	
OREAS 134b (AQUA REGIA) Meas				18.2													
OREAS 134b (AQUA REGIA) Cert				19.31													
OREAS 133a (Aqua Regia) Meas				10.7	136												
OREAS 133a (Aqua Regia) Cert				10.7	147												
OXN117 Meas																	7.85
OXN117 Cert																	7.679
OxP116 Meas																	15.3
OxP116 Cert																	14.92
OREAS 218 Meas																	
OREAS 218 Cert																	
OREAS 218 Meas																	
OREAS 218 Cert																	
OREAS 218 Meas																	
OREAS 218 Cert																	
OREAS 224 Meas																	
OREAS 224 Cert																	
OREAS 224 Meas																	
OREAS 224 Cert																	
OREAS 224 Meas																	
OREAS 224 Cert																	
694747 Orig																	
694747 Dup																	
694757 Orig																	
694757 Dup																	
694767 Orig																	
694767 Dup																	
694776 Orig	1.18	0.183	0.138	1.73	< 2	4	133	< 0.01	< 20	3	< 2	< 10	26	< 10	5	7	
694776 Dup	1.10	0.172	0.129	1.69	3	4	123	< 0.01	< 20	< 1	< 2	< 10	24	< 10	5	8	

Analyte Symbol	Mg	Na	P	S	Sb	Sc	Sr	Ti	Th	Te	Tl	U	V	W	Y	Zr	Au
Unit Symbol	%	%	%	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	g/tonne
Lower Limit	0.01	0.001	0.001	0.01	2	1	1	0.01	20	1	2	10	1	10	1	1	0.03
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	FA- GRA
694781 Orig	1.12	0.218	0.145	4.37	5	3	147	< 0.01	< 20	< 1	< 2	< 10	19	< 10	5	14	
694781 Dup	1.16	0.232	0.151	4.51	5	4	152	< 0.01	< 20	6	< 2	< 10	21	< 10	5	16	
694782 Orig																	
694782 Dup																	
694785 Orig	1.16	0.181	0.127	3.53	3	3	135	< 0.01	< 20	< 1	< 2	< 10	21	< 10	5	13	
694785 Dup	1.13	0.177	0.124	3.47	5	3	130	< 0.01	< 20	< 1	< 2	< 10	20	< 10	4	14	
694792 Orig																	
694792 Dup																	
694793 Orig	1.24	0.091	0.127	2.52	5	4	189	< 0.01	< 20	< 1	< 2	< 10	26	< 10	5	11	
694793 Dup	1.31	0.094	0.134	2.61	6	4	196	< 0.01	< 20	< 1	< 2	< 10	27	< 10	5	10	
694802 Orig																	
694802 Dup																	
694817 Orig																	
694817 Dup																	
694823 Orig	2.39	0.086	0.044	0.21	< 2	9	32	0.49	< 20	4	< 2	< 10	193	< 10	15	23	
694823 Dup	2.37	0.084	0.044	0.20	< 2	9	31	0.48	< 20	4	< 2	< 10	189	< 10	15	23	
694826 Orig	1.22	0.222	0.060	11.3	10	3	149	< 0.01	< 20	< 1	< 2	< 10	20	< 10	4	24	
694826 Dup	1.25	0.224	0.062	11.2	11	3	141	< 0.01	< 20	6	< 2	< 10	20	< 10	4	25	
694827 Orig																	
694827 Dup																	
694838 Orig																	
694838 Dup																	
694839 Orig	1.60	0.152	0.067	15.7	22	6	156	< 0.01	< 20	7	< 2	< 10	21	< 10	4	30	
694839 Dup	1.48	0.140	0.062	14.2	18	5	129	< 0.01	< 20	7	< 2	< 10	19	< 10	3	28	
Method Blank																	
Method Blank																	
Method Blank																	
Method Blank																	
Method Blank																	
Method Blank																	< 0.03
Method Blank																	< 0.03
Method Blank	< 0.01	0.010	< 0.001	< 0.01	< 2	< 1	< 1	< 0.01	< 20	< 1	< 2	< 10	< 1	< 10	< 1	< 1	
Method Blank	< 0.01	0.013	< 0.001	< 0.01	< 2	< 1	< 1	< 0.01	< 20	< 1	< 2	< 10	< 1	< 10	< 1	< 1	
Method Blank	< 0.01	0.013	< 0.001	< 0.01	< 2	< 1	< 1	< 0.01	< 20	< 1	< 2	< 10	< 1	< 10	< 1	< 1	
Method Blank	< 0.01	0.011	< 0.001	< 0.01	< 2	< 1	< 1	< 0.01	< 20	1	< 2	< 10	< 1	< 10	< 1	< 1	





**Date Submitted:** 16-Mar-18  
**Invoice No.:** A18-03368  
**Invoice Date:** 01-Jun-18  
**Your Reference:** 81 Lucas

**Noble Mineral Exploration**  
**2500-120 Adelaide Street West**  
**Toronto ON M5H 1T1**  
**Canada**

**ATTN: Randy Singh (inv-cc)**

## CERTIFICATE OF ANALYSIS

105 Rock samples were submitted for analysis.

The following analytical package(s) were requested:

Code 1A2-Timmins Au - Fire Assay AA

Code 1E3-Timmins Aqua Regia ICP(AQUAGEO)

REPORT **A18-03368**

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

Notes:

If value exceeds upper limit we recommend reassay by fire assay gravimetric-Code 1A3.

Values which exceed the upper limit should be assayed for accurate numbers.

Footnote: Sample 694851 is insufficient for 1E3.

CERTIFIED BY:

A handwritten signature in black ink, appearing to be "Emmanuel Esemé", written over a horizontal line.

Emmanuel Esemé, Ph.D.  
Quality Control

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## Results

## Activation Laboratories Ltd.

## Report: A18-03368

Analyte Symbol	Ag	Cd	Cu	Mn	Mo	Ni	Pb	Zn	Al	As	B	Ba	Be	Bi	Ca	Co	Cr	Fe	Ga	Hg	K	La	Mg
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	%
Lower Limit	0.2	0.5	1	5	1	1	2	2	0.01	2	10	10	0.5	2	0.01	1	1	0.01	10	1	0.01	10	0.01
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
694843	0.3	< 0.5	16	2200	< 1	67	10	186	0.42	1480	< 10	29	< 0.5	< 2	2.66	11	28	7.34	< 10	< 1	0.10	< 10	0.82
694844	2.3	< 0.5	74	2000	< 1	87	56	204	0.13	472	< 10	< 10	< 0.5	< 2	0.59	31	23	18.4	< 10	< 1	0.03	< 10	0.34
694845	2.7	0.9	75	1050	< 1	49	69	143	0.32	526	< 10	< 10	< 0.5	< 2	0.45	28	25	17.6	< 10	< 1	0.08	< 10	0.22
694846	2.9	< 0.5	76	500	< 1	29	73	224	0.37	399	< 10	< 10	< 0.5	< 2	0.31	31	22	16.8	< 10	1	0.10	< 10	0.12
694847	2.9	< 0.5	73	1920	< 1	27	53	121	0.17	1080	< 10	< 10	< 0.5	< 2	0.95	20	26	17.6	< 10	1	0.04	< 10	0.38
694848	2.5	< 0.5	79	821	< 1	38	62	215	0.44	562	< 10	< 10	< 0.5	< 2	0.60	29	22	17.5	< 10	1	0.13	< 10	0.19
694849	< 0.2	< 0.5	19	961	1	269	7	44	1.12	424	< 10	48	< 0.5	2	3.06	39	47	4.36	< 10	< 1	0.32	12	0.88
694850	0.5	< 0.5	18	1460	< 1	127	10	32	1.06	1100	< 10	26	< 0.5	< 2	3.23	27	17	9.85	< 10	< 1	0.35	< 10	1.23
694851																							
694852	0.8	< 0.5	23	870	< 1	66	16	37	1.02	579	< 10	14	< 0.5	< 2	1.54	21	10	13.0	< 10	< 1	0.29	< 10	0.40
694853	0.8	0.5	18	970	1	54	16	43	0.94	553	< 10	11	< 0.5	< 2	0.83	20	15	13.1	< 10	< 1	0.27	< 10	0.21
694854	1.2	< 0.5	31	2320	< 1	55	32	41	0.13	3400	< 10	< 10	< 0.5	< 2	1.35	16	28	14.1	< 10	< 1	0.02	< 10	0.55
694855	2.4	< 0.5	58	3720	< 1	78	57	62	0.26	4560	< 10	< 10	< 0.5	4	1.03	22	17	20.4	< 10	< 1	0.02	< 10	0.59
694856	1.1	< 0.5	26	1220	2	25	27	33	0.10	2710	< 10	11	< 0.5	< 2	0.89	12	50	10.8	< 10	1	0.02	< 10	0.28
694857	< 0.2	< 0.5	< 1	96	< 1	< 1	< 2	16	5.56	3	10	12	0.5	< 2	0.23	< 1	< 1	0.56	10	< 1	1.50	< 10	0.05
694858	0.6	< 0.5	15	1180	1	44	13	31	0.93	1450	< 10	24	< 0.5	< 2	1.72	21	29	8.37	< 10	1	0.27	< 10	0.47
694859	1.4	< 0.5	32	813	1	47	22	28	1.04	614	< 10	17	< 0.5	< 2	1.70	29	27	10.3	< 10	< 1	0.32	< 10	0.42
694860	0.5	< 0.5	18	1050	< 1	38	8	27	1.02	1040	< 10	29	< 0.5	3	2.85	22	13	7.09	< 10	< 1	0.29	< 10	0.75
694861	1.1	< 0.5	32	1370	< 1	55	19	77	0.95	1500	< 10	14	< 0.5	< 2	1.76	31	16	13.3	< 10	< 1	0.27	< 10	0.53
694862	1.2	< 0.5	36	1360	< 1	58	16	68	0.95	1060	< 10	10	< 0.5	< 2	1.98	34	13	15.0	< 10	2	0.26	< 10	0.56
694863	0.6	< 0.5	28	1390	< 1	47	11	32	0.80	563	< 10	23	< 0.5	< 2	2.98	29	12	9.99	< 10	< 1	0.24	< 10	0.67
694864	0.7	< 0.5	28	1380	< 1	49	11	31	0.82	560	< 10	25	< 0.5	< 2	2.99	29	16	10.0	< 10	< 1	0.25	< 10	0.67
694865	0.5	< 0.5	17	1950	< 1	51	7	32	1.56	1210	< 10	23	< 0.5	< 2	3.18	24	19	10.5	< 10	< 1	0.41	< 10	0.78
694866	1.0	< 0.5	31	2300	< 1	85	15	38	1.49	1680	< 10	14	< 0.5	< 2	2.67	31	17	15.2	< 10	< 1	0.37	< 10	0.76
694867	1.0	< 0.5	24	2080	< 1	45	19	57	0.11	1530	< 10	12	< 0.5	< 2	1.89	15	59	11.2	< 10	< 1	0.02	< 10	0.58
694868	2.6	< 0.5	56	861	1	52	48	92	0.44	1980	< 10	< 10	< 0.5	4	0.86	30	28	18.4	< 10	1	0.14	< 10	0.29
694869	1.2	< 0.5	40	1060	3	40	33	61	0.26	713	< 10	14	< 0.5	< 2	2.29	20	32	13.7	< 10	< 1	0.09	< 10	0.32
694870	0.2	< 0.5	20	1090	< 1	16	15	27	0.16	233	< 10	16	< 0.5	3	1.23	7	43	6.81	< 10	< 1	0.05	< 10	0.37
694871	1.5	< 0.5	141	696	5	157	33	70	3.61	60	11	61	< 0.5	< 2	3.62	33	484	4.84	10	< 1	0.22	< 10	3.50
694872	< 0.2	< 0.5	23	498	< 1	25	9	73	0.40	427	< 10	14	< 0.5	5	1.01	10	67	7.52	< 10	< 1	0.02	< 10	0.41
694873	< 0.2	< 0.5	3	323	< 1	6	< 2	20	0.43	10	< 10	23	< 0.5	< 2	0.59	2	78	1.66	< 10	< 1	0.06	< 10	0.18
694874	< 0.2	< 0.5	< 1	1000	< 1	29	< 2	33	2.02	46	< 10	99	< 0.5	< 2	2.30	10	75	3.76	< 10	< 1	0.31	11	0.72
694875	< 0.2	< 0.5	39	2190	2	124	3	68	2.27	92	< 10	69	< 0.5	< 2	4.21	30	53	10.4	< 10	< 1	0.32	< 10	1.51
694876	< 0.2	< 0.5	42	2180	< 1	153	< 2	68	2.23	144	< 10	75	< 0.5	< 2	3.58	35	47	9.43	< 10	< 1	0.31	< 10	1.26
694877	< 0.2	< 0.5	1	140	< 1	< 1	< 2	17	5.29	< 2	12	12	< 0.5	< 2	0.21	< 1	2	0.92	< 10	< 1	1.46	< 10	0.05
694878	< 0.2	< 0.5	21	1970	< 1	119	< 2	72	2.51	88	< 10	40	< 0.5	< 2	3.87	27	65	9.05	< 10	< 1	0.10	< 10	1.31
694879	< 0.2	< 0.5	44	1010	< 1	105	< 2	46	1.85	153	< 10	79	< 0.5	< 2	2.82	42	68	5.90	< 10	< 1	0.21	12	0.78
694880	< 0.2	< 0.5	34	1090	< 1	113	< 2	59	1.48	132	< 10	81	< 0.5	< 2	3.57	35	57	6.40	< 10	< 1	0.20	10	0.92
694881	< 0.2	< 0.5	27	756	< 1	111	< 2	37	0.78	112	< 10	77	< 0.5	< 2	2.51	21	46	3.58	< 10	< 1	0.18	< 10	0.70
694882	< 0.2	< 0.5	13	1030	< 1	85	2	32	1.84	115	< 10	157	< 0.5	< 2	3.51	23	43	3.74	< 10	< 1	0.40	13	0.81
694883	< 0.2	< 0.5	17	1520	< 1	111	< 2	37	2.07	137	< 10	86	< 0.5	< 2	5.06	31	40	5.21	< 10	< 1	0.45	< 10	1.29
694884	< 0.2	< 0.5	3	1120	< 1	59	< 2	42	0.98	80	< 10	50	< 0.5	2	3.80	17	37	4.04	< 10	< 1	0.14	20	0.83

## Results

## Activation Laboratories Ltd.

## Report: A18-03368

Analyte Symbol	Ag	Cd	Cu	Mn	Mo	Ni	Pb	Zn	Al	As	B	Ba	Be	Bi	Ca	Co	Cr	Fe	Ga	Hg	K	La	Mg
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	%
Lower Limit	0.2	0.5	1	5	1	1	2	2	0.01	2	10	10	0.5	2	0.01	1	1	0.01	10	1	0.01	10	0.01
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
694885	< 0.2	< 0.5	3	1170	< 1	62	< 2	44	1.07	84	< 10	57	< 0.5	< 2	3.98	18	40	4.25	< 10	< 1	0.15	21	0.87
694886	< 0.2	< 0.5	2	1300	< 1	50	< 2	35	2.01	49	< 10	137	< 0.5	< 2	3.64	15	45	4.14	< 10	< 1	0.39	22	0.85
694887	< 0.2	< 0.5	3	1450	< 1	86	< 2	80	1.46	114	< 10	77	< 0.5	4	4.16	25	43	4.99	< 10	< 1	0.22	18	0.96
694888	< 0.2	< 0.5	38	999	< 1	113	3	68	2.18	134	< 10	66	< 0.5	< 2	3.57	37	68	5.17	< 10	< 1	0.45	10	0.83
694889	< 0.2	< 0.5	2	1330	< 1	88	< 2	73	2.35	119	< 10	131	< 0.5	4	4.40	31	73	5.36	< 10	< 1	0.40	18	1.08
694890	< 0.2	< 0.5	< 1	1610	< 1	87	< 2	51	2.49	109	< 10	110	< 0.5	< 2	5.07	26	66	6.17	< 10	< 1	0.34	18	1.25
694891	< 0.2	< 0.5	3	1280	< 1	119	< 2	33	1.78	182	< 10	110	< 0.5	< 2	4.06	36	46	4.31	< 10	< 1	0.33	18	0.92
694892	< 0.2	< 0.5	< 1	991	< 1	146	< 2	36	1.28	228	< 10	86	< 0.5	< 2	4.41	32	36	4.34	< 10	< 1	0.24	21	0.92
694893	< 0.2	< 0.5	2	1310	3	121	< 2	40	2.16	155	< 10	128	< 0.5	< 2	5.11	31	59	5.53	< 10	< 1	0.41	15	1.14
694894	< 0.2	< 0.5	12	1960	< 1	133	< 2	98	2.99	94	< 10	69	< 0.5	< 2	5.07	37	60	9.84	< 10	< 1	0.22	< 10	1.59
694895	< 0.2	< 0.5	14	1030	< 1	58	< 2	50	1.81	61	< 10	98	< 0.5	< 2	3.88	23	64	4.83	< 10	< 1	0.28	24	0.96
694896	< 0.2	< 0.5	66	881	< 1	109	11	73	1.55	2490	< 10	76	< 0.5	< 2	1.37	28	35	5.35	< 10	< 1	0.07	14	2.14
694897	< 0.2	< 0.5	27	1930	< 1	82	< 2	76	2.32	68	< 10	74	< 0.5	< 2	5.77	25	72	7.48	< 10	< 1	0.22	22	1.76
694898	< 0.2	< 0.5	28	1290	< 1	62	< 2	56	2.37	38	< 10	115	< 0.5	< 2	3.65	24	65	5.22	< 10	< 1	0.34	20	1.00
694899	< 0.2	< 0.5	28	1450	< 1	83	< 2	67	2.08	43	< 10	72	< 0.5	3	4.23	28	67	5.91	< 10	< 1	0.21	21	1.21
694900	< 0.2	< 0.5	10	466	1	111	6	51	0.97	70	< 10	50	< 0.5	< 2	1.33	27	5	2.84	< 10	< 1	0.30	15	0.30
694901	< 0.2	< 0.5	13	1000	< 1	63	3	93	0.85	16	< 10	72	< 0.5	< 2	1.86	18	7	2.30	< 10	< 1	0.22	16	0.40
694902	< 0.2	< 0.5	12	1790	< 1	67	< 2	100	1.80	6	< 10	61	< 0.5	< 2	2.32	19	9	4.99	< 10	< 1	0.32	13	0.57
694903	< 0.2	< 0.5	12	4140	< 1	100	3	202	2.91	27	< 10	34	< 0.5	< 2	2.33	22	9	12.3	< 10	< 1	0.12	< 10	0.92
694904	< 0.2	< 0.5	12	1650	< 1	94	6	169	2.09	38	< 10	22	< 0.5	< 2	1.98	32	22	7.29	< 10	< 1	0.45	10	0.44
694905	< 0.2	< 0.5	11	1150	1	79	3	79	1.55	18	< 10	48	< 0.5	< 2	1.70	24	35	4.45	< 10	< 1	0.38	14	0.32
694906	< 0.2	< 0.5	6	1680	< 1	64	2	41	1.89	9	< 10	52	< 0.5	< 2	2.21	18	28	4.66	< 10	< 1	0.47	14	0.39
694907	< 0.2	< 0.5	11	1620	< 1	91	6	57	1.30	35	< 10	36	< 0.5	< 2	2.41	26	19	5.92	< 10	< 1	0.31	11	0.43
694908	< 0.2	< 0.5	9	2380	< 1	73	4	153	1.49	26	< 10	33	< 0.5	3	3.08	20	19	7.14	< 10	< 1	0.26	10	0.61
694909	< 0.2	< 0.5	9	2380	< 1	74	4	155	1.49	25	< 10	34	< 0.5	< 2	3.08	20	15	7.11	< 10	< 1	0.26	< 10	0.61
694910	< 0.2	< 0.5	8	2230	< 1	84	3	70	1.39	22	< 10	43	< 0.5	< 2	3.86	22	15	6.72	< 10	< 1	0.30	< 10	0.91
694911	< 0.2	< 0.5	11	2250	< 1	68	< 2	47	2.11	13	< 10	41	< 0.5	2	2.47	17	13	6.54	< 10	< 1	0.43	12	0.48
694912	< 0.2	< 0.5	10	2780	< 1	78	5	72	1.81	14	< 10	35	< 0.5	< 2	2.31	20	14	7.67	< 10	< 1	0.30	12	0.48
694913	< 0.2	< 0.5	9	3250	< 1	112	7	59	1.88	22	< 10	30	< 0.5	< 2	1.11	27	7	8.56	< 10	< 1	0.29	12	0.36
694914	< 0.2	< 0.5	7	5940	< 1	79	6	39	1.65	19	< 10	35	< 0.5	< 2	0.40	20	7	8.83	< 10	< 1	0.21	12	0.26
694915	0.4	< 0.5	7	454	< 1	127	11	63	0.21	142	< 10	< 10	< 0.5	4	0.03	34	56	25.0	< 10	< 1	< 0.01	< 10	0.05
694916	0.3	< 0.5	6	438	< 1	130	10	63	0.20	139	< 10	< 10	< 0.5	6	0.03	32	54	24.2	< 10	1	< 0.01	< 10	0.05
694917	0.6	< 0.5	18	3970	< 1	239	19	47	0.26	249	< 10	< 10	< 0.5	4	0.10	54	25	27.2	< 10	< 1	< 0.01	< 10	0.43
694918	0.6	< 0.5	10	9490	< 1	181	13	47	0.15	153	< 10	< 10	< 0.5	5	0.28	27	7	> 30.0	< 10	< 1	< 0.01	< 10	1.26
694919	0.4	< 0.5	15	6140	< 1	166	22	44	0.16	215	< 10	< 10	< 0.5	6	0.14	35	20	26.8	< 10	< 1	< 0.01	< 10	0.74
694920	< 0.2	< 0.5	5	1700	< 1	100	6	30	0.08	73	< 10	< 10	< 0.5	< 2	0.04	28	163	7.93	< 10	< 1	< 0.01	< 10	0.17
694921	< 0.2	< 0.5	< 1	475	< 1	2	< 2	< 2	< 0.01	3	< 10	< 10	< 0.5	< 2	< 0.01	< 1	7	0.57	< 10	< 1	< 0.01	< 10	0.02
694922	0.2	< 0.5	12	2320	1	98	10	29	0.10	159	< 10	11	< 0.5	< 2	0.05	26	91	14.8	< 10	< 1	< 0.01	< 10	0.26
694923	< 0.2	< 0.5	3	1960	< 1	74	5	26	0.07	50	< 10	10	< 0.5	< 2	0.04	24	161	8.27	< 10	< 1	< 0.01	< 10	0.19
694924	0.2	< 0.5	66	876	1	107	10	72	1.48	2480	< 10	74	< 0.5	< 2	1.32	28	35	5.38	< 10	< 1	0.07	14	2.14
694925	< 0.2	< 0.5	6	2290	< 1	51	3	30	0.07	48	< 10	< 10	< 0.5	< 2	0.05	15	202	6.95	< 10	< 1	< 0.01	< 10	0.22
694926	< 0.2	< 0.5	10	2270	1	119	11	67	0.10	131	< 10	11	< 0.5	< 2	0.04	34	127	10.3	< 10	< 1	0.01	< 10	0.23

Analyte Symbol	Ag	Cd	Cu	Mn	Mo	Ni	Pb	Zn	Al	As	B	Ba	Be	Bi	Ca	Co	Cr	Fe	Ga	Hg	K	La	Mg
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	%
Lower Limit	0.2	0.5	1	5	1	1	2	2	0.01	2	10	10	0.5	2	0.01	1	1	0.01	10	1	0.01	10	0.01
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
694927	< 0.2	< 0.5	4	910	< 1	57	6	28	0.09	70	< 10	< 10	< 0.5	< 2	0.02	17	147	5.34	< 10	< 1	< 0.01	< 10	0.08
694928	0.2	< 0.5	14	2440	1	156	17	82	0.14	225	< 10	< 10	< 0.5	< 2	0.05	49	153	17.0	< 10	2	< 0.01	< 10	0.22
694929	0.8	< 0.5	39	2410	< 1	141	34	76	0.36	315	< 10	< 10	< 0.5	6	0.06	34	21	22.2	< 10	1	< 0.01	< 10	0.30
694930	0.5	< 0.5	27	5240	< 1	136	29	80	0.39	234	< 10	< 10	< 0.5	4	0.12	41	20	25.6	< 10	1	< 0.01	< 10	0.60
694931	0.9	< 0.5	36	1840	1	185	51	168	0.47	349	< 10	< 10	< 0.5	4	0.05	50	24	22.5	< 10	< 1	0.01	< 10	0.23
694932	< 0.2	< 0.5	< 1	95	< 1	< 1	< 2	15	4.59	< 2	< 10	< 10	< 0.5	< 2	0.19	< 1	2	0.58	< 10	< 1	1.44	< 10	0.04
694933	1.2	< 0.5	28	502	< 1	126	59	135	0.31	391	< 10	< 10	< 0.5	3	0.03	64	35	27.4	< 10	1	0.01	< 10	0.07
694934	0.9	< 0.5	26	498	< 1	37	50	105	0.54	237	< 10	< 10	< 0.5	5	0.03	42	36	19.0	< 10	1	0.02	< 10	0.08
694935	1.3	< 0.5	33	1290	1	58	54	76	0.30	293	< 10	< 10	< 0.5	5	0.04	30	55	22.3	< 10	< 1	0.02	< 10	0.11
694936	1.0	< 0.5	32	2380	< 1	132	38	104	0.25	286	< 10	< 10	< 0.5	7	0.06	45	37	21.1	< 10	1	< 0.01	< 10	0.24
694937	1.5	< 0.5	29	235	< 1	124	52	172	0.21	295	< 10	< 10	< 0.5	2	0.01	36	58	18.6	< 10	2	0.01	< 10	0.03
694938	1.0	< 0.5	31	823	< 1	82	48	122	0.34	251	< 10	< 10	< 0.5	3	0.03	48	24	19.8	< 10	2	0.03	< 10	0.05
694939	0.3	< 0.5	10	275	2	76	32	61	0.10	118	< 10	< 10	< 0.5	< 2	0.02	9	73	18.2	< 10	< 1	< 0.01	< 10	0.04
694940	0.2	< 0.5	11	274	2	80	32	62	0.10	119	< 10	< 10	< 0.5	2	0.02	8	78	18.4	< 10	< 1	< 0.01	< 10	0.04
694941	< 0.2	< 0.5	4	891	< 1	40	11	31	0.12	47	< 10	< 10	< 0.5	< 2	0.05	5	91	9.68	< 10	< 1	< 0.01	< 10	0.06
694942	< 0.2	< 0.5	6	1070	2	42	7	20	0.14	34	< 10	< 10	< 0.5	4	0.03	7	132	6.95	< 10	< 1	< 0.01	< 10	0.08
694943	< 0.2	< 0.5	7	2020	15	46	7	33	0.18	38	< 10	< 10	< 0.5	< 2	0.05	10	111	6.77	< 10	< 1	< 0.01	< 10	0.23
694944	< 0.2	< 0.5	4	785	4	12	< 2	7	0.04	7	< 10	< 10	< 0.5	< 2	0.03	2	156	1.67	< 10	< 1	< 0.01	< 10	0.03
694945	< 0.2	< 0.5	8	3230	12	30	7	26	0.12	39	< 10	< 10	< 0.5	< 2	0.07	11	121	8.47	< 10	< 1	< 0.01	< 10	0.41
694946	< 0.2	< 0.5	2	2970	4	15	< 2	18	0.09	6	< 10	11	< 0.5	< 2	0.07	2	159	5.64	< 10	< 1	< 0.01	< 10	0.34
694947	< 0.2	< 0.5	5	5890	18	33	7	34	0.15	26	< 10	11	< 0.5	< 2	0.12	7	71	11.1	< 10	< 1	< 0.01	< 10	0.71

Analyte Symbol	Na	P	S	Sb	Sc	Sr	Ti	Th	Te	Tl	U	V	W	Y	Zr	Au	Au
Unit Symbol	%	%	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	g/tonne
Lower Limit	0.001	0.001	0.01	2	1	1	0.01	20	1	2	10	1	10	1	1	5	0.02
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	FA-AA	FA- GRA
694843	0.055	0.020	5.77	6	3	118	< 0.01	< 20	< 1	< 2	< 10	9	< 10	3	14	633	
694844	0.021	0.002	19.3	37	2	32	< 0.01	< 20	< 1	< 2	< 10	5	< 10	1	12	3790	4.60
694845	0.041	0.009	19.3	39	1	28	< 0.01	< 20	3	< 2	< 10	5	< 10	1	14	> 5000	6.06
694846	0.044	0.006	19.4	41	< 1	25	< 0.01	< 20	< 1	< 2	< 10	5	< 10	1	17	> 5000	8.28
694847	0.031	0.004	18.4	42	< 1	43	< 0.01	< 20	1	< 2	< 10	4	< 10	1	11	> 5000	5.60
694848	0.052	0.023	19.3	37	2	37	< 0.01	< 20	< 1	< 2	< 10	7	< 10	2	18	> 5000	5.74
694849	0.139	0.156	3.05	5	4	150	< 0.01	< 20	< 1	< 2	< 10	22	< 10	6	18	199	
694850	0.099	0.107	7.49	11	3	141	< 0.01	< 20	< 1	< 2	< 10	14	< 10	5	30	616	
694851																1610	
694852	0.095	0.087	12.5	14	2	77	< 0.01	< 20	< 1	< 2	< 10	8	< 10	4	32	929	
694853	0.091	0.072	13.4	14	2	54	< 0.01	< 20	< 1	< 2	< 10	9	< 10	4	26	1160	
694854	0.019	0.002	14.2	19	2	66	< 0.01	< 20	2	< 2	< 10	5	< 10	1	7	2330	
694855	0.018	0.002	19.2	33	2	52	< 0.01	< 20	3	< 2	< 10	6	< 10	3	11	> 5000	7.42
694856	0.020	0.001	10.9	17	< 1	38	< 0.01	< 20	4	< 2	< 10	2	< 10	< 1	6	1870	
694857	3.46	< 0.001	0.03	< 2	< 1	22	< 0.01	< 20	< 1	< 2	< 10	< 1	< 10	4	1	< 5	
694858	0.124	0.088	7.73	10	2	91	< 0.01	< 20	7	< 2	< 10	11	< 10	4	21	998	
694859	0.136	0.110	10.5	20	2	92	< 0.01	< 20	4	< 2	< 10	13	< 10	4	27	2380	
694860	0.162	0.109	6.04	9	2	123	< 0.01	< 20	2	< 2	< 10	16	< 10	5	21	590	
694861	0.123	0.075	13.9	23	2	90	< 0.01	< 20	< 1	< 2	< 10	11	< 10	4	30	2160	
694862	0.127	0.082	16.0	29	2	92	< 0.01	< 20	< 1	< 2	< 10	12	< 10	3	26	1550	
694863	0.113	0.095	8.66	18	2	103	< 0.01	< 20	3	< 2	< 10	12	< 10	4	19	1070	
694864	0.114	0.094	8.81	19	2	105	< 0.01	< 20	< 1	< 2	< 10	12	< 10	4	19	1140	
694865	0.178	0.098	9.13	12	3	143	< 0.01	< 20	< 1	< 2	< 10	19	< 10	5	29	951	
694866	0.153	0.064	14.8	24	3	126	< 0.01	< 20	< 1	< 2	< 10	24	< 10	4	32	1870	
694867	0.026	0.002	11.3	17	< 1	84	< 0.01	< 20	< 1	< 2	< 10	3	< 10	2	7	1920	
694868	0.053	0.018	> 20.0	32	1	43	< 0.01	< 20	< 1	< 2	< 10	7	< 10	2	23	4170	4.25
694869	0.036	0.012	15.7	17	1	52	< 0.01	< 20	< 1	< 2	< 10	4	< 10	3	17	1960	
694870	0.035	0.011	5.91	6	1	51	< 0.01	< 20	< 1	< 2	< 10	3	< 10	1	5	222	
694871	0.071	0.033	0.81	5	11	49	0.27	< 20	6	< 2	< 10	133	< 10	11	21	> 5000	6.69
694872	0.019	0.006	3.00	5	2	17	< 0.01	< 20	< 1	< 2	< 10	10	< 10	3	5	78	
694873	0.060	0.014	0.03	< 2	< 1	25	< 0.01	< 20	< 1	< 2	< 10	7	< 10	1	6	< 5	
694874	0.196	0.056	0.05	< 2	4	110	< 0.01	< 20	< 1	< 2	< 10	30	< 10	6	23	< 5	
694875	0.270	0.067	2.30	3	9	169	< 0.01	< 20	< 1	< 2	< 10	43	< 10	5	35	< 5	
694876	0.229	0.086	2.02	4	6	139	< 0.01	< 20	2	< 2	< 10	33	< 10	6	30	5	
694877	3.25	0.001	0.01	< 2	< 1	22	< 0.01	< 20	< 1	< 2	< 10	< 1	< 10	4	2	< 5	
694878	0.097	0.098	1.02	4	6	111	< 0.01	< 20	< 1	< 2	< 10	43	< 10	6	21	< 5	
694879	0.117	0.169	0.77	< 2	5	114	< 0.01	< 20	< 1	< 2	< 10	38	< 10	10	7	5	
694880	0.124	0.144	1.96	2	7	116	< 0.01	< 20	4	< 2	< 10	34	< 10	8	14	11	
694881	0.156	0.094	1.39	< 2	4	100	< 0.01	< 20	< 1	< 2	< 10	17	< 10	5	8	10	
694882	0.243	0.122	0.65	< 2	6	146	< 0.01	< 20	< 1	< 2	< 10	34	< 10	7	5	13	
694883	0.267	0.115	1.13	2	6	179	< 0.01	< 20	4	< 2	< 10	37	< 10	8	6	7	

Analyte Symbol	Na	P	S	Sb	Sc	Sr	Ti	Th	Te	Tl	U	V	W	Y	Zr	Au	Au
Unit Symbol	%	%	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	g/tonne
Lower Limit	0.001	0.001	0.01	2	1	1	0.01	20	1	2	10	1	10	1	1	5	0.02
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	FA-AA	FA- GRA
694884	0.084	0.164	0.07	< 2	4	95	< 0.01	< 20	< 1	< 2	< 10	21	< 10	7	4	8	
694885	0.096	0.169	0.07	< 2	5	100	< 0.01	< 20	2	< 2	< 10	23	< 10	8	4	< 5	
694886	0.194	0.123	0.02	< 2	6	118	< 0.01	< 20	1	< 2	< 10	39	< 10	7	4	< 5	
694887	0.134	0.140	0.15	< 2	6	115	< 0.01	< 20	< 1	< 2	< 10	34	< 10	8	5	< 5	
694888	0.232	0.121	1.36	< 2	7	127	< 0.01	< 20	6	< 2	< 10	60	< 10	7	7	12	
694889	0.238	0.113	0.09	< 2	8	148	< 0.01	< 20	< 1	< 2	< 10	62	< 10	7	5	< 5	
694890	0.219	0.274	0.01	2	9	171	< 0.01	< 20	< 1	< 2	< 10	61	< 10	10	4	< 5	
694891	0.206	0.141	0.15	< 2	6	137	< 0.01	< 20	6	< 2	< 10	37	< 10	7	4	< 5	
694892	0.153	0.169	0.07	< 2	6	126	< 0.01	< 20	< 1	< 2	< 10	28	< 10	8	4	< 5	
694893	0.234	0.209	0.51	< 2	8	170	< 0.01	< 20	< 1	< 2	< 10	42	< 10	9	4	9	
694894	0.135	0.085	1.36	3	10	128	< 0.01	< 20	< 1	< 2	< 10	65	< 10	5	21	14	
694895	0.153	0.145	0.01	< 2	6	111	< 0.01	< 20	2	< 2	< 10	46	< 10	7	5	6	
694896	0.322	0.129	0.76	3	3	83	0.14	< 20	5	< 2	< 10	33	< 10	14	8	1540	
694897	0.123	0.126	0.01	2	9	137	< 0.01	< 20	6	< 2	< 10	61	< 10	7	5	< 5	
694898	0.180	0.125	< 0.01	< 2	8	118	< 0.01	< 20	3	< 2	< 10	56	< 10	6	5	5	
694899	0.135	0.130	0.02	< 2	8	123	< 0.01	< 20	< 1	< 2	< 10	54	< 10	6	5	6	
694900	0.119	0.067	2.16	< 2	2	63	< 0.01	< 20	< 1	< 2	< 10	8	< 10	4	19	5	
694901	0.096	0.065	0.61	< 2	2	61	< 0.01	< 20	< 1	< 2	< 10	10	< 10	4	14	< 5	
694902	0.147	0.057	1.71	< 2	2	90	< 0.01	< 20	< 1	< 2	< 10	15	< 10	4	20	< 5	
694903	0.056	0.040	3.94	5	3	70	< 0.01	< 20	< 1	< 2	< 10	28	< 10	5	20	< 5	
694904	0.169	0.051	4.78	3	3	91	< 0.01	< 20	3	< 2	< 10	21	< 10	4	26	6	
694905	0.157	0.063	2.41	< 2	1	78	< 0.01	< 20	3	< 2	< 10	11	< 10	4	24	< 5	
694906	0.187	0.060	2.07	< 2	2	94	< 0.01	< 20	< 1	< 2	< 10	14	< 10	5	26	< 5	
694907	0.137	0.057	3.49	< 2	2	94	< 0.01	< 20	2	< 2	< 10	13	< 10	4	23	6	
694908	0.116	0.053	3.27	2	3	108	< 0.01	< 20	3	< 2	< 10	16	< 10	4	20	6	
694909	0.114	0.053	3.30	2	3	108	< 0.01	< 20	2	< 2	< 10	16	< 10	4	21	7	
694910	0.125	0.048	3.08	< 2	2	129	< 0.01	< 20	2	< 2	< 10	18	< 10	5	21	6	
694911	0.172	0.053	2.75	< 2	2	105	< 0.01	< 20	< 1	< 2	< 10	17	< 10	4	24	< 5	
694912	0.123	0.054	3.14	2	2	90	< 0.01	< 20	2	< 2	< 10	14	< 10	4	21	5	
694913	0.108	0.059	3.84	3	2	52	< 0.01	< 20	4	< 2	< 10	14	< 10	4	20	6	
694914	0.084	0.060	3.44	3	1	23	< 0.01	< 20	1	< 2	< 10	10	< 10	4	16	6	
694915	0.017	0.040	12.3	14	3	2	< 0.01	< 20	< 1	< 2	< 10	11	< 10	4	10	17	
694916	0.017	0.039	12.0	13	3	2	< 0.01	< 20	< 1	< 2	< 10	11	< 10	4	10	20	
694917	0.018	0.015	18.7	20	2	3	< 0.01	< 20	4	< 2	< 10	14	< 10	3	10	72	
694918	0.015	0.010	16.6	26	2	5	< 0.01	< 20	7	< 2	< 10	11	< 10	4	11	44	
694919	0.014	0.009	17.3	19	2	3	< 0.01	< 20	< 1	< 2	< 10	10	< 10	2	10	98	
694920	0.019	0.002	4.92	6	< 1	2	< 0.01	< 20	< 1	< 2	< 10	6	< 10	< 1	4	14	
694921	< 0.001	< 0.001	0.76	< 2	< 1	< 1	< 0.01	< 20	4	< 2	< 10	< 1	< 10	< 1	< 1	14	
694922	0.019	0.008	9.34	11	< 1	3	< 0.01	< 20	2	< 2	< 10	5	< 10	2	6	64	
694923	0.017	0.004	4.20	6	< 1	2	< 0.01	< 20	< 1	< 2	< 10	7	< 10	1	4	8	
694924	0.308	0.128	0.75	< 2	3	80	0.13	< 20	2	< 2	< 10	32	< 10	14	7	1590	
694925	0.017	0.003	2.74	6	1	2	< 0.01	< 20	4	< 2	< 10	15	< 10	2	3	8	

Analyte Symbol	Na	P	S	Sb	Sc	Sr	Ti	Th	Te	Tl	U	V	W	Y	Zr	Au	Au
Unit Symbol	%	%	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	g/tonne
Lower Limit	0.001	0.001	0.01	2	1	1	0.01	20	1	2	10	1	10	1	1	5	0.02
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	FA-AA	FA- GRA
694926	0.017	0.003	6.96	11	1	3	< 0.01	< 20	< 1	< 2	< 10	12	< 10	1	4	1630	
694927	0.016	0.001	3.60	5	< 1	2	< 0.01	< 20	< 1	< 2	< 10	6	< 10	< 1	3	20	
694928	0.016	0.003	10.7	15	< 1	3	< 0.01	< 20	< 1	< 2	< 10	6	< 10	2	6	68	
694929	0.017	0.003	19.7	22	1	3	< 0.01	< 20	< 1	< 2	< 10	10	< 10	1	9	392	
694930	0.017	0.004	18.9	17	2	4	< 0.01	< 20	5	< 2	< 10	16	< 10	3	12	121	
694931	0.017	0.002	> 20.0	26	1	3	< 0.01	< 20	2	< 2	< 10	15	< 10	< 1	10	532	
694932	3.17	< 0.001	0.05	< 2	< 1	19	< 0.01	< 20	< 1	< 2	< 10	< 1	< 10	3	< 1	< 5	
694933	0.021	0.004	> 20.0	27	< 1	4	< 0.01	< 20	2	2	< 10	10	< 10	< 1	9	488	
694934	0.019	0.008	19.0	19	< 1	5	< 0.01	< 20	< 1	< 2	< 10	16	< 10	1	8	438	
694935	0.020	0.003	> 20.0	28	< 1	4	< 0.01	< 20	9	< 2	< 10	8	< 10	1	10	552	
694936	0.014	0.002	19.1	22	1	2	< 0.01	< 20	3	< 2	< 10	10	< 10	1	8	162	
694937	0.018	0.002	19.6	25	< 1	3	< 0.01	< 20	1	< 2	< 10	7	< 10	< 1	7	290	
694938	0.022	0.005	> 20.0	20	< 1	6	< 0.01	< 20	4	< 2	< 10	7	< 10	1	10	266	
694939	0.016	0.032	10.7	13	13	4	< 0.01	< 20	< 1	< 2	< 10	31	< 10	12	26	17	
694940	0.015	0.033	10.7	12	13	4	< 0.01	< 20	2	< 2	< 10	30	< 10	12	26	17	
694941	0.016	0.008	7.26	6	8	4	< 0.01	< 20	1	< 2	< 10	39	< 10	5	16	< 5	
694942	0.016	0.003	4.31	3	4	6	< 0.01	< 20	< 1	< 2	< 10	29	< 10	2	5	5	
694943	0.016	0.002	4.15	4	2	4	< 0.01	< 20	< 1	< 2	< 10	14	< 10	1	5	5	
694944	0.018	< 0.001	0.52	< 2	< 1	3	< 0.01	< 20	< 1	< 2	< 10	2	< 10	< 1	2	< 5	
694945	0.019	0.003	3.54	5	2	4	< 0.01	< 20	< 1	< 2	< 10	13	< 10	2	6	10	
694946	0.020	0.003	0.84	4	1	4	< 0.01	< 20	< 1	< 2	< 10	9	< 10	2	4	< 5	
694947	0.018	0.004	3.55	7	3	5	< 0.01	< 20	< 1	< 2	< 10	18	< 10	5	8	7	

Analyte Symbol	Ag	Cd	Cu	Mn	Mo	Ni	Pb	Zn	Al	As	B	Ba	Be	Bi	Ca	Co	Cr	Fe	Ga	Hg	K	La	Mg
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	%
Lower Limit	0.2	0.5	1	5	1	1	2	2	0.01	2	10	10	0.5	2	0.01	1	1	0.01	10	1	0.01	10	0.01
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
GXR-1 Meas	30.4	2.5	1190	937	15	28	730	671	0.31	398	11	301	0.9	1530	0.76	4	8	21.2	< 10	4	0.03	< 10	0.14
GXR-1 Cert	31.0	3.30	1110	852	18.0	41.0	730	760	3.52	427	15.0	750	1.22	1380	0.960	8.20	12.0	23.6	13.8	3.90	0.050	7.50	0.217
GXR-1 Meas	29.5	2.6	1130	913	14	29	695	644	0.29	378	10	251	0.8	1470	0.72	5	7	19.8	< 10	5	0.03	< 10	0.13
GXR-1 Cert	31.0	3.30	1110	852	18.0	41.0	730	760	3.52	427	15.0	750	1.22	1380	0.960	8.20	12.0	23.6	13.8	3.90	0.050	7.50	0.217
GXR-1 Meas	28.3	1.7	1190	823	14	27	689	679	0.35	357	< 10	305	0.8	1520	0.82	5	6	21.6	< 10	5	0.03	< 10	0.13
GXR-1 Cert	31.0	3.30	1110	852	18.0	41.0	730	760	3.52	427	15.0	750	1.22	1380	0.960	8.20	12.0	23.6	13.8	3.90	0.050	7.50	0.217
GXR-6 Meas	< 0.2	< 0.5	76	1100	1	16	95	108	6.02	236	< 10	1100	0.9	< 2	0.14	11	82	4.70	20	< 1	1.01	11	0.38
GXR-6 Cert	1.30	1.00	66.0	1010	2.40	27.0	101	118	17.7	330	9.80	1300	1.40	0.290	0.180	13.8	96.0	5.58	35.0	0.0680	1.87	13.9	0.609
GXR-6 Meas	< 0.2	< 0.5	67	1120	1	17	98	110	6.05	240	< 10	1080	0.9	< 2	0.15	11	83	4.72	20	< 1	1.04	11	0.38
GXR-6 Cert	1.30	1.00	66.0	1010	2.40	27.0	101	118	17.7	330	9.80	1300	1.40	0.290	0.180	13.8	96.0	5.58	35.0	0.0680	1.87	13.9	0.609
GXR-6 Meas	0.2	< 0.5	73	1060	2	17	102	123	7.60	240	< 10	1030	0.9	< 2	0.16	13	80	5.41	20	< 1	1.10	11	0.38
GXR-6 Cert	1.30	1.00	66.0	1010	2.40	27.0	101	118	17.7	330	9.80	1300	1.40	0.290	0.180	13.8	96.0	5.58	35.0	0.0680	1.87	13.9	0.609
OREAS 134b (AQUA REGIA) Meas	> 100	486	1290				> 5000	> 10000		221						87		10.2					
OREAS 134b (AQUA REGIA) Cert	204	563	1360				133000	177000		221						110		12.25					
OREAS 134b (AQUA REGIA) Meas	> 100	592	1480				> 5000	> 10000		222						104		11.8					
OREAS 134b (AQUA REGIA) Cert	204	563	1360				133000	177000		221						106		12.25					
OREAS 133a (Aqua Regia) Meas	95.4	289	314				> 5000	> 10000		135		13				18		6.80					
OREAS 133a (Aqua Regia) Cert	97	297	324				48600.00	106000.00		140		59				23		7.92					
OREAS 133a (Aqua Regia) Meas	86.9	289	317				> 5000	> 10000		123		20				21		7.22					
OREAS 133a (Aqua Regia) Cert	97	297	324				48600.00	106000.00		140		59				23		7.92					
OXN117 Meas																							
OXN117 Cert																							
OxP116 Meas																							
OxP116 Cert																							
OREAS 218 Meas																							
OREAS 218 Cert																							
OREAS 218 Meas																							
OREAS 218 Cert																							
OREAS 218 Meas																							
OREAS 218 Cert																							
OREAS 218 Meas																							



Analyte Symbol	Ag	Cd	Cu	Mn	Mo	Ni	Pb	Zn	Al	As	B	Ba	Be	Bi	Ca	Co	Cr	Fe	Ga	Hg	K	La	Mg
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	%
Lower Limit	0.2	0.5	1	5	1	1	2	2	0.01	2	10	10	0.5	2	0.01	1	1	0.01	10	1	0.01	10	0.01
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
OREAS 218 Cert																							
OREAS 218 Meas																							
OREAS 218 Cert																							
OREAS 224 Meas																							
OREAS 224 Cert																							
OREAS 224 Meas																							
OREAS 224 Cert																							
OREAS 224 Meas																							
OREAS 224 Cert																							
OREAS 224 Meas																							
OREAS 224 Cert																							
OREAS 224 Meas																							
OREAS 224 Cert																							
OREAS 224 Meas																							
OREAS 224 Cert																							
694844 Orig	2.4	< 0.5	74	1980	< 1	87	56	205	0.13	474	< 10	< 10	< 0.5	9	0.59	31	22	18.4	< 10	2	0.03	< 10	0.34
694844 Dup	2.2	< 0.5	74	2020	< 1	87	57	203	0.13	471	< 10	< 10	< 0.5	< 2	0.59	31	23	18.5	< 10	< 1	0.03	< 10	0.34
694852 Orig	0.8	0.7	23	867	< 1	66	17	37	1.03	582	< 10	14	< 0.5	< 2	1.52	21	10	13.0	< 10	< 1	0.29	< 10	0.40
694852 Dup	0.8	< 0.5	23	873	< 1	65	15	38	1.01	577	< 10	14	< 0.5	< 2	1.56	20	9	12.9	< 10	< 1	0.28	< 10	0.40
694862 Orig																							
694862 Dup																							
694872 Orig																							
694872 Dup																							
694887 Orig																							
694887 Dup																							
694892 Orig	< 0.2	< 0.5	< 1	991	< 1	146	< 2	36	1.28	228	< 10	86	< 0.5	< 2	4.41	32	36	4.34	< 10	< 1	0.24	21	0.92
694892 Split PREP DUP	< 0.2	< 0.5	< 1	1010	< 1	147	< 2	35	1.29	233	< 10	85	< 0.5	3	4.48	32	34	4.40	< 10	< 1	0.24	22	0.94
694892 Orig	< 0.2	< 0.5	< 1	970	< 1	143	< 2	33	1.25	224	< 10	84	< 0.5	< 2	4.30	31	33	4.24	< 10	< 1	0.24	21	0.90
694892 Dup	< 0.2	< 0.5	2	1010	< 1	148	< 2	38	1.32	233	< 10	87	< 0.5	< 2	4.52	32	39	4.45	< 10	< 1	0.25	22	0.95
694897 Orig																							
694897 Dup																							
694904 Orig	< 0.2	< 0.5	12	1630	< 1	94	6	170	2.06	39	< 10	22	< 0.5	< 2	1.96	32	26	7.22	< 10	< 1	0.44	10	0.43
694904 Dup	< 0.2	< 0.5	12	1660	< 1	94	6	168	2.11	38	< 10	22	< 0.5	2	2.01	33	19	7.35	< 10	< 1	0.45	11	0.44
694906 Orig																							
694906 Dup																							
694907 Orig	< 0.2	< 0.5	11	1640	< 1	93	6	58	1.31	36	< 10	36	< 0.5	2	2.44	26	19	6.00	< 10	< 1	0.31	11	0.43
694907 Dup	< 0.2	< 0.5	10	1590	1	89	5	56	1.28	34	< 10	36	< 0.5	< 2	2.37	25	20	5.83	< 10	< 1	0.31	11	0.42
694920 Orig	< 0.2	< 0.5	5	1740	< 1	104	6	32	0.08	74	< 10	11	< 0.5	< 2	0.04	28	170	8.13	< 10	< 1	< 0.01	< 10	0.17
694920 Dup	< 0.2	< 0.5	5	1660	< 1	97	5	29	0.08	72	< 10	< 10	< 0.5	< 2	0.04	28	157	7.73	< 10	< 1	< 0.01	< 10	0.16
694921 Orig																							
694921 Dup																							
694931 Orig																							
694931 Dup																							
694932 Orig	< 0.2	< 0.5	< 1	102	< 1	< 1	< 2	16	4.87	< 2	< 10	< 10	< 0.5	< 2	0.20	< 1	2	0.63	< 10	< 1	1.50	< 10	0.05

Analyte Symbol	Ag	Cd	Cu	Mn	Mo	Ni	Pb	Zn	Al	As	B	Ba	Be	Bi	Ca	Co	Cr	Fe	Ga	Hg	K	La	Mg
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	%
Lower Limit	0.2	0.5	1	5	1	1	2	2	0.01	2	10	10	0.5	2	0.01	1	1	0.01	10	1	0.01	10	0.01
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
694932 Dup	< 0.2	< 0.5	< 1	87	< 1	< 1	< 2	14	4.32	< 2	< 10	< 10	< 0.5	< 2	0.18	< 1	1	0.53	< 10	< 1	1.38	< 10	0.04
694941 Orig																							
694941 Dup																							
694942 Orig	< 0.2	< 0.5	6	1070	2	42	7	20	0.14	34	< 10	< 10	< 0.5	4	0.03	7	132	6.95	< 10	< 1	< 0.01	< 10	0.08
694942 Split PREP DUP	< 0.2	< 0.5	7	1060	2	42	8	18	0.14	32	< 10	< 10	< 0.5	< 2	0.03	7	129	6.93	< 10	< 1	< 0.01	< 10	0.08
694945 Orig	< 0.2	< 0.5	8	3240	12	30	6	27	0.12	39	< 10	< 10	< 0.5	< 2	0.07	11	118	8.52	< 10	< 1	< 0.01	< 10	0.41
694945 Dup	< 0.2	< 0.5	8	3210	12	30	7	26	0.12	39	< 10	10	< 0.5	< 2	0.07	11	124	8.43	< 10	< 1	< 0.01	< 10	0.41
Method Blank																							
Method Blank																							
Method Blank																							
Method Blank																							
Method Blank																							
Method Blank																							
Method Blank																							
Method Blank																							
Method Blank	< 0.2	< 0.5	< 1	< 5	< 1	< 1	< 2	< 2	< 0.01	< 2	< 10	< 10	< 0.5	< 2	< 0.01	< 1	< 1	< 0.01	< 10	< 1	< 0.01	< 10	< 0.01
Method Blank	< 0.2	< 0.5	< 1	< 5	< 1	< 1	< 2	< 2	< 0.01	< 2	< 10	< 10	< 0.5	< 2	< 0.01	< 1	< 1	< 0.01	< 10	< 1	< 0.01	< 10	< 0.01
Method Blank	< 0.2	< 0.5	< 1	< 5	< 1	< 1	< 2	< 2	< 0.01	< 2	< 10	< 10	< 0.5	< 2	< 0.01	< 1	< 1	< 0.01	< 10	< 1	< 0.01	< 10	< 0.01
Method Blank	< 0.2	< 0.5	< 1	< 5	< 1	< 1	< 2	< 2	< 0.01	< 2	< 10	10	< 0.5	< 2	< 0.01	< 1	< 1	< 0.01	< 10	< 1	< 0.01	< 10	< 0.01
Method Blank	< 0.2	< 0.5	< 1	< 5	< 1	< 1	< 2	< 2	< 0.01	< 2	< 10	< 10	< 0.5	< 2	< 0.01	< 1	< 1	< 0.01	< 10	< 1	< 0.01	< 10	< 0.01

Analyte Symbol	Na	P	S	Sb	Sc	Sr	Ti	Th	Te	Tl	U	V	W	Y	Zr	Au	Au
Unit Symbol	%	%	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	g/tonne
Lower Limit	0.001	0.001	0.01	2	1	1	0.01	20	1	2	10	1	10	1	1	5	0.02
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	FA-AA	FA- GRA
GXR-1 Meas	0.052	0.039	0.21	81	1	174	< 0.01	< 20	12	< 2	32	69	136	25	15		
GXR-1 Cert	0.0520	0.0650	0.257	122	1.58	275	0.036	2.44	13.0	0.390	34.9	80.0	164	32.0	38.0		
GXR-1 Meas	0.048	0.035	0.20	77	1	160	< 0.01	< 20	15	< 2	29	68	138	24	14		
GXR-1 Cert	0.0520	0.0650	0.257	122	1.58	275	0.036	2.44	13.0	0.390	34.9	80.0	164	32.0	38.0		
GXR-1 Meas	0.049	0.040	0.20	81	1	152	< 0.01	< 20	14	< 2	25	79	140	25	14		
GXR-1 Cert	0.0520	0.0650	0.257	122	1.58	275	0.036	2.44	13.0	0.390	34.9	80.0	164	32.0	38.0		
GXR-6 Meas	0.083	0.030	0.01	5	22	33		< 20	< 1	< 2	< 10	148	< 10	6	14		
GXR-6 Cert	0.104	0.0350	0.0160	3.60	27.6	35.0		5.30	0.0180	2.20	1.54	186	1.90	14.0	110		
GXR-6 Meas	0.086	0.031	0.02	3	23	34		< 20	< 1	< 2	< 10	144	< 10	6	14		
GXR-6 Cert	0.104	0.0350	0.0160	3.60	27.6	35.0		5.30	0.0180	2.20	1.54	186	1.90	14.0	110		
GXR-6 Meas	0.084	0.036	0.02	5	23	32		< 20	< 1	2	< 10	181	< 10	7	14		
GXR-6 Cert	0.104	0.0350	0.0160	3.60	27.6	35.0		5.30	0.0180	2.20	1.54	186	1.90	14.0	110		
OREAS 134b (AQUA REGIA) Meas			15.0														
OREAS 134b (AQUA REGIA) Cert			19.31														
OREAS 134b (AQUA REGIA) Meas			17.3														
OREAS 134b (AQUA REGIA) Cert			19.31														
OREAS 133a (Aqua Regia) Meas			10.3	126													
OREAS 133a (Aqua Regia) Cert			10.7	147													
OREAS 133a (Aqua Regia) Meas			9.14	130													
OREAS 133a (Aqua Regia) Cert			10.7	147													
OXN117 Meas																	7.74
OXN117 Cert																	7.679
OxP116 Meas																	15.0
OxP116 Cert																	14.92
OREAS 218 Meas																	505
OREAS 218 Cert																	531
OREAS 218 Meas																	557
OREAS 218 Cert																	531
OREAS 218 Meas																	556
OREAS 218 Cert																	531

Analyte Symbol	Na	P	S	Sb	Sc	Sr	Ti	Th	Te	Tl	U	V	W	Y	Zr	Au	Au
Unit Symbol	%	%	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	g/tonne
Lower Limit	0.001	0.001	0.01	2	1	1	0.01	20	1	2	10	1	10	1	1	5	0.02
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	FA-AA	FA- GRA
OREAS 218 Meas																540	
OREAS 218 Cert																531	
OREAS 218 Meas																534	
OREAS 218 Cert																531	
OREAS 224 Meas																2070	
OREAS 224 Cert																2150.0 00	
OREAS 224 Meas																2190	
OREAS 224 Cert																2150.0 00	
OREAS 224 Meas																2200	
OREAS 224 Cert																2150.0 00	
OREAS 224 Meas																2170	
OREAS 224 Cert																2150.0 00	
OREAS 224 Meas																2130	
OREAS 224 Cert																2150.0 00	
694844 Orig	0.022	0.002	19.5	37	2	32	< 0.01	< 20	< 1	< 2	< 10	5	< 10	1	12		
694844 Dup	0.019	0.002	19.0	36	2	32	< 0.01	< 20	< 1	< 2	< 10	5	< 10	1	12		
694852 Orig	0.096	0.087	12.7	13	2	78	< 0.01	< 20	< 1	< 2	< 10	9	< 10	4	31	901	
694852 Dup	0.094	0.087	12.3	14	2	77	< 0.01	< 20	< 1	< 2	< 10	8	< 10	4	32	956	
694862 Orig																1530	
694862 Dup																1580	
694872 Orig																78	
694872 Dup																77	
694887 Orig																< 5	
694887 Dup																< 5	
694892 Orig	0.153	0.169	0.07	< 2	6	126	< 0.01	< 20	< 1	< 2	< 10	28	< 10	8	4	< 5	
694892 Split PREP DUP	0.154	0.172	0.07	2	6	128	< 0.01	< 20	< 1	< 2	< 10	28	< 10	8	4	< 5	
694892 Orig	0.149	0.165	0.07	< 2	6	123	< 0.01	< 20	< 1	< 2	< 10	27	< 10	7	3		
694892 Dup	0.156	0.173	0.07	< 2	6	129	< 0.01	< 20	< 1	< 2	< 10	29	< 10	8	4		
694897 Orig																8	
694897 Dup																< 5	
694904 Orig	0.167	0.051	4.75	3	3	89	< 0.01	< 20	3	3	< 10	21	< 10	4	26		
694904 Dup	0.171	0.052	4.82	3	3	92	< 0.01	< 20	3	< 2	< 10	21	< 10	4	27		
694906 Orig																5	
694906 Dup																< 5	
694907 Orig	0.140	0.058	3.54	< 2	2	95	< 0.01	< 20	2	< 2	< 10	13	< 10	4	23		
694907 Dup	0.135	0.056	3.44	< 2	2	93	< 0.01	< 20	2	< 2	< 10	13	< 10	4	22		
694920 Orig	0.020	0.002	5.03	7	< 1	3	< 0.01	< 20	< 1	< 2	< 10	6	< 10	1	4		

Analyte Symbol	Na	P	S	Sb	Sc	Sr	Ti	Th	Te	Tl	U	V	W	Y	Zr	Au	Au
Unit Symbol	%	%	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	g/tonne
Lower Limit	0.001	0.001	0.01	2	1	1	0.01	20	1	2	10	1	10	1	1	5	0.02
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	FA-AA	FA- GRA
694920 Dup	0.018	0.002	4.80	6	< 1	2	< 0.01	< 20	3	< 2	< 10	6	< 10	< 1	4		
694921 Orig																	14
694921 Dup																	13
694931 Orig																	531
694931 Dup																	532
694932 Orig	3.30	< 0.001	0.06	< 2	< 1	21	< 0.01	< 20	< 1	< 2	< 10	< 1	< 10	3	< 1		
694932 Dup	3.03	< 0.001	0.04	< 2	< 1	18	< 0.01	< 20	< 1	< 2	< 10	< 1	< 10	3	< 1		
694941 Orig																	9
694941 Dup																	< 5
694942 Orig	0.016	0.003	4.31	3	4	6	< 0.01	< 20	< 1	< 2	< 10	29	< 10	2	5	5	
694942 Split PREP DUP	0.016	0.003	4.34	4	4	6	< 0.01	< 20	< 1	< 2	< 10	28	< 10	2	5	5	
694945 Orig	0.018	0.003	3.58	5	2	4	< 0.01	< 20	< 1	< 2	< 10	13	< 10	2	6		
694945 Dup	0.020	0.003	3.50	4	2	4	< 0.01	< 20	2	< 2	< 10	13	< 10	2	6		
Method Blank																	< 5
Method Blank																	< 5
Method Blank																	< 5
Method Blank																	< 5
Method Blank																	< 5
Method Blank																	< 5
Method Blank																	< 5
Method Blank																	< 0.02
Method Blank																	< 0.02
Method Blank																	< 5
Method Blank																	< 5
Method Blank	0.011	< 0.001	< 0.01	< 2	< 1	< 1	< 0.01	< 20	1	< 2	< 10	< 1	< 10	< 1	< 1		
Method Blank	0.010	< 0.001	< 0.01	< 2	< 1	< 1	< 0.01	< 20	1	< 2	< 10	< 1	< 10	< 1	< 1		
Method Blank	0.011	< 0.001	< 0.01	< 2	< 1	< 1	< 0.01	< 20	< 1	< 2	< 10	< 1	< 10	< 1	< 1		
Method Blank	0.014	< 0.001	< 0.01	< 2	< 1	< 1	< 0.01	< 20	1	< 2	< 10	< 1	< 10	< 1	< 1		
Method Blank	0.013	< 0.001	< 0.01	< 2	< 1	< 1	< 0.01	< 20	< 1	< 2	< 10	< 1	< 10	< 1	< 1		



**Date Submitted:** 19-Mar-18  
**Invoice No.:** A18-03399  
**Invoice Date:** 18-May-18  
**Your Reference:**

**Noble Mineral Exploration**  
**2500-120 Adelaide Street West**  
**Toronto ON M5H 1T1**  
**Canada**

**ATTN: Randy Singh (inv-cc)**

## CERTIFICATE OF ANALYSIS

175 Rock samples were submitted for analysis.

The following analytical package(s) were requested:

Code 1A2-Timmins Au - Fire Assay AA

Code 1E3-Timmins Aqua Regia ICP(AQUAGEO)

REPORT      **A18-03399**

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

Notes:

If value exceeds upper limit we recommend reassay by fire assay gravimetric-Code 1A3.

Values which exceed the upper limit should be assayed for accurate numbers.

Note: Sample 694948 and 695085 are insufficient for 1E3.

CERTIFIED BY:

A handwritten signature in black ink, appearing to be "Emmanuel Esemé". The signature is written in a cursive, somewhat stylized font.

Emmanuel Esemé , Ph.D.  
Quality Control

**ACTIVATION LABORATORIES LTD.**  
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## Results

## Activation Laboratories Ltd.

## Report: A18-03399

Analyte Symbol	Ag	Cd	Cu	Mn	Mo	Ni	Pb	Zn	Al	As	B	Ba	Be	Bi	Ca	Co	Cr	Fe	Ga	Hg	K	La	Mg
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	%
Lower Limit	0.2	0.5	1	5	1	1	2	2	0.01	2	10	10	0.5	2	0.01	1	1	0.01	10	1	0.01	10	0.01
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
694948																							
694949	< 0.2	< 0.5	4	1780	8	22	6	17	0.10	23	< 10	< 10	< 0.5	< 2	0.05	6	53	4.62	< 10	< 1	< 0.01	< 10	0.21
694950	< 0.2	< 0.5	6	2540	9	15	7	18	0.08	12	< 10	< 10	< 0.5	< 2	0.04	3	79	5.19	< 10	< 1	< 0.01	< 10	0.19
694951	< 0.2	< 0.5	4	1460	4	30	14	13	0.05	19	< 10	10	< 0.5	< 2	0.05	5	68	8.94	< 10	< 1	< 0.01	< 10	0.06
694952	< 0.2	< 0.5	5	2730	< 1	93	14	23	0.06	40	< 10	< 10	< 0.5	< 2	0.03	17	69	11.7	< 10	< 1	< 0.01	< 10	0.19
694953	< 0.2	< 0.5	4	2800	< 1	36	9	18	0.06	18	< 10	< 10	< 0.5	< 2	0.04	7	99	8.28	< 10	< 1	< 0.01	< 10	0.26
694954	< 0.2	< 0.5	9	3400	< 1	30	9	27	0.05	29	< 10	< 10	< 0.5	< 2	0.06	5	77	7.60	< 10	< 1	< 0.01	< 10	0.16
694955	< 0.2	< 0.5	8	1600	< 1	104	14	19	0.07	54	< 10	< 10	< 0.5	< 2	0.03	21	84	10.6	< 10	< 1	< 0.01	< 10	0.11
694956	0.4	< 0.5	10	6050	< 1	146	31	72	0.34	99	< 10	< 10	< 0.5	4	0.08	33	24	28.2	< 10	< 1	< 0.01	< 10	0.74
694957	< 0.2	< 0.5	1	148	< 1	< 1	< 2	22	4.30	< 2	11	< 10	0.6	< 2	0.18	< 1	5	1.04	< 10	< 1	1.41	< 10	0.05
694958	0.2	< 0.5	13	3830	< 1	163	27	59	0.38	88	< 10	< 10	< 0.5	< 2	0.07	34	30	23.4	< 10	< 1	< 0.01	< 10	0.45
694959	0.2	< 0.5	14	3980	6	75	20	51	0.22	58	< 10	< 10	< 0.5	< 2	0.05	22	70	15.5	< 10	< 1	< 0.01	< 10	0.41
694960	0.4	< 0.5	19	3170	< 1	174	67	63	0.42	133	< 10	< 10	< 0.5	3	0.04	49	25	21.5	< 10	< 1	< 0.01	< 10	0.44
694961	0.3	< 0.5	25	574	1	187	42	74	0.27	134	< 10	< 10	< 0.5	3	0.02	42	25	19.3	< 10	< 1	< 0.01	< 10	0.15
694962	0.4	0.6	79	4700	< 1	93	73	71	0.14	108	< 10	< 10	< 0.5	< 2	0.46	35	36	18.1	< 10	< 1	0.04	< 10	0.22
694963	0.3	< 0.5	76	5030	1	222	97	68	0.08	147	< 10	< 10	< 0.5	< 2	0.18	57	42	18.4	< 10	< 1	0.03	< 10	0.08
694964	0.9	< 0.5	61	2210	< 1	73	84	53	0.04	170	< 10	< 10	< 0.5	< 2	0.02	38	40	20.4	< 10	< 1	0.01	< 10	0.01
694965	0.4	< 0.5	54	1280	< 1	103	62	43	0.12	134	< 10	< 10	< 0.5	3	0.02	40	42	19.1	< 10	< 1	0.04	< 10	< 0.01
694966	< 0.2	< 0.5	88	1550	2	122	5	78	1.45	908	< 10	40	< 0.5	< 2	1.44	31	49	7.21	< 10	< 1	0.08	16	2.22
694967	0.5	< 0.5	31	89	< 1	225	46	47	0.23	154	< 10	< 10	< 0.5	3	0.03	27	60	19.3	< 10	< 1	0.05	< 10	0.03
694968	0.6	< 0.5	40	78	< 1	144	53	68	0.44	140	< 10	< 10	< 0.5	< 2	0.02	36	26	18.8	< 10	1	0.06	< 10	0.08
694969	0.4	< 0.5	92	202	2	163	39	102	0.18	119	< 10	< 10	< 0.5	2	0.02	48	112	18.8	< 10	< 1	0.01	< 10	0.05
694970	0.4	< 0.5	31	5580	2	231	13	108	0.71	99	< 10	< 10	< 0.5	2	0.09	48	44	26.5	< 10	< 1	< 0.01	< 10	0.97
694971	0.6	< 0.5	16	2570	< 1	254	13	82	0.34	156	< 10	< 10	< 0.5	4	0.05	47	31	> 30.0	< 10	< 1	< 0.01	< 10	0.44
694972	0.8	< 0.5	22	7510	< 1	154	21	58	0.58	111	< 10	< 10	< 0.5	2	0.14	27	24	> 30.0	< 10	< 1	< 0.01	< 10	1.16
694973	< 0.2	< 0.5	4	2690	< 1	22	< 2	18	0.07	9	< 10	< 10	< 0.5	4	0.05	5	79	4.84	< 10	< 1	< 0.01	< 10	0.20
694974	< 0.2	< 0.5	2	2480	1	23	< 2	15	0.05	15	< 10	< 10	< 0.5	3	0.04	6	135	4.22	< 10	< 1	< 0.01	< 10	0.17
694975	< 0.2	< 0.5	1	2460	< 1	21	2	15	0.04	14	< 10	< 10	< 0.5	< 2	0.04	6	110	4.17	< 10	< 1	< 0.01	< 10	0.16
694976	< 0.2	< 0.5	4	3330	14	99	5	41	0.10	65	< 10	< 10	< 0.5	< 2	0.05	21	84	12.3	< 10	< 1	< 0.01	< 10	0.37
694977	< 0.2	< 0.5	2	6020	23	118	4	49	0.15	65	< 10	< 10	< 0.5	< 2	0.10	27	61	12.1	< 10	< 1	< 0.01	< 10	0.48
694978	0.4	< 0.5	11	5140	< 1	185	7	54	0.10	171	< 10	< 10	< 0.5	2	0.12	25	28	28.3	< 10	< 1	< 0.01	< 10	0.65
694979	0.5	< 0.5	8	4400	2	241	8	51	0.20	200	< 10	< 10	< 0.5	2	0.09	61	61	23.0	< 10	< 1	< 0.01	< 10	0.62
694980	0.7	< 0.5	15	2510	2	209	22	71	1.10	201	< 10	< 10	< 0.5	3	0.08	66	27	29.6	< 10	< 1	0.02	< 10	0.49
694981	< 0.2	< 0.5	< 1	141	< 1	< 1	< 2	20	4.42	< 2	11	< 10	0.6	< 2	0.18	< 1	4	1.01	10	< 1	1.45	< 10	0.05
694982	< 0.2	< 0.5	15	5800	< 1	116	< 2	88	2.80	3	< 10	60	< 0.5	< 2	2.86	25	22	13.0	< 10	< 1	0.19	< 10	1.35
694983	< 0.2	< 0.5	5	583	< 1	17	< 2	10	0.82	13	< 10	126	< 0.5	< 2	1.46	7	22	1.60	< 10	< 1	0.29	18	0.38
694984	< 0.2	< 0.5	4	2510	< 1	52	< 2	51	1.53	12	< 10	84	< 0.5	< 2	2.80	13	23	7.74	< 10	< 1	0.21	10	1.19
694985	< 0.2	< 0.5	6	3370	< 1	71	10	34	0.41	66	< 10	26	< 0.5	< 2	1.09	21	71	11.0	< 10	< 1	0.04	< 10	0.84
694986	0.4	< 0.5	16	6480	16	161	5	83	1.46	117	< 10	13	< 0.5	3	1.60	29	49	20.9	< 10	< 1	0.14	< 10	1.37
694987	< 0.2	< 0.5	16	3970	< 1	114	3	71	2.50	10	< 10	39	< 0.5	< 2	3.11	22	36	11.9	< 10	< 1	0.24	< 10	1.47
694988	0.3	< 0.5	161	766	< 1	82	3	67	3.40	6	44	30	< 0.5	< 2	3.04	37	142	6.54	10	< 1	0.06	< 10	2.33
694989	< 0.2	< 0.5	28	2130	< 1	183	3	66	2.17	19	< 10	20	< 0.5	< 2	3.83	36	47	10.1	< 10	< 1	0.30	11	1.53

## Results

## Activation Laboratories Ltd.

## Report: A18-03399

Analyte Symbol	Ag	Cd	Cu	Mn	Mo	Ni	Pb	Zn	Al	As	B	Ba	Be	Bi	Ca	Co	Cr	Fe	Ga	Hg	K	La	Mg
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	%
Lower Limit	0.2	0.5	1	5	1	1	2	2	0.01	2	10	10	0.5	2	0.01	1	1	0.01	10	1	0.01	10	0.01
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
694990	< 0.2	< 0.5	35	1350	< 1	127	2	44	1.16	17	< 10	62	< 0.5	< 2	3.49	31	37	6.33	< 10	< 1	0.16	14	1.26
694991	< 0.2	< 0.5	37	1380	< 1	128	< 2	45	1.17	17	< 10	69	< 0.5	< 2	3.56	31	38	6.47	< 10	< 1	0.16	14	1.29
694992	< 0.2	< 0.5	34	2070	< 1	183	5	62	1.72	23	< 10	49	< 0.5	< 2	3.30	39	48	8.72	< 10	< 1	0.12	< 10	1.35
694993	< 0.2	< 0.5	36	2130	< 1	186	4	63	1.77	23	< 10	44	< 0.5	< 2	3.40	41	47	8.95	< 10	< 1	0.13	10	1.40
694994	< 0.2	< 0.5	44	2400	< 1	249	4	81	2.37	26	< 10	40	< 0.5	< 2	3.53	57	47	10.5	< 10	< 1	0.11	< 10	1.79
694995	< 0.2	< 0.5	47	2470	< 1	262	6	83	2.39	25	< 10	39	< 0.5	< 2	3.61	59	50	10.7	< 10	< 1	0.12	< 10	1.84
694996	< 0.2	< 0.5	12	1670	< 1	68	< 2	33	0.83	8	< 10	47	< 0.5	< 2	4.68	14	21	3.52	< 10	< 1	0.12	< 10	2.30
694997	< 0.2	< 0.5	13	1720	< 1	78	< 2	35	0.88	10	< 10	52	< 0.5	< 2	4.84	15	24	3.63	< 10	< 1	0.13	11	2.35
694998	< 0.2	< 0.5	16	853	< 1	32	< 2	60	1.06	5	< 10	85	< 0.5	< 2	3.22	11	24	2.28	< 10	< 1	0.23	13	1.62
694999	< 0.2	< 0.5	21	301	< 1	26	3	104	1.44	7	< 10	112	< 0.5	< 2	1.65	11	30	1.71	< 10	< 1	0.31	23	0.63
695000	< 0.2	< 0.5	23	259	< 1	24	2	106	1.34	4	< 10	114	< 0.5	< 2	2.15	9	29	1.48	< 10	< 1	0.31	23	0.44
695001	< 0.2	< 0.5	29	218	1	23	3	135	1.46	3	< 10	108	< 0.5	< 2	2.19	11	33	1.65	< 10	< 1	0.30	22	0.40
695002	< 0.2	< 0.5	20	268	< 1	27	< 2	113	1.60	< 2	< 10	114	< 0.5	< 2	2.26	10	29	1.73	< 10	< 1	0.33	22	0.52
695003	< 0.2	< 0.5	10	378	< 1	14	< 2	62	1.00	< 2	< 10	73	< 0.5	< 2	2.42	5	20	1.30	< 10	< 1	0.22	16	0.76
695004	< 0.2	< 0.5	10	281	< 1	23	< 2	84	1.29	3	< 10	73	< 0.5	< 2	1.24	8	27	1.97	< 10	< 1	0.21	18	0.74
695005	< 0.2	< 0.5	6	333	< 1	28	2	64	1.50	< 2	< 10	91	< 0.5	< 2	1.27	8	26	2.19	< 10	< 1	0.27	16	0.94
695006	0.2	< 0.5	150	716	< 1	73	2	63	3.14	4	40	29	< 0.5	< 2	2.85	35	132	6.05	10	< 1	0.05	< 10	2.21
695007	< 0.2	< 0.5	16	266	< 1	32	2	119	1.27	3	< 10	89	< 0.5	< 2	1.26	11	29	1.89	< 10	< 1	0.25	17	0.67
695008	< 0.2	< 0.5	16	228	< 1	40	< 2	86	1.24	9	< 10	98	< 0.5	< 2	1.24	16	29	1.66	< 10	< 1	0.28	16	0.49
695009	< 0.2	< 0.5	15	399	< 1	42	2	111	1.34	7	< 10	93	< 0.5	< 2	1.54	15	28	2.01	< 10	< 1	0.27	16	0.84
695010	< 0.2	< 0.5	22	292	< 1	55	< 2	128	1.30	13	< 10	98	< 0.5	< 2	1.51	23	32	1.80	< 10	< 1	0.28	19	0.51
695011	< 0.2	< 0.5	17	374	< 1	48	< 2	142	1.62	6	< 10	123	< 0.5	< 2	1.92	20	27	1.84	< 10	< 1	0.37	20	0.45
695012	< 0.2	< 0.5	16	317	1	71	3	103	1.35	11	< 10	109	< 0.5	< 2	1.78	27	26	1.64	< 10	< 1	0.33	20	0.32
695013	< 0.2	< 0.5	7	459	< 1	33	< 2	95	1.47	4	< 10	97	< 0.5	< 2	3.44	14	21	1.81	< 10	< 1	0.30	21	0.60
695014	< 0.2	< 0.5	15	246	< 1	38	< 2	78	1.41	6	< 10	103	< 0.5	< 2	2.21	17	23	1.66	< 10	< 1	0.31	18	0.49
695015	< 0.2	< 0.5	< 1	105	< 1	< 1	< 2	19	4.34	< 2	12	10	0.6	< 2	0.19	< 1	1	0.65	10	< 1	1.49	< 10	0.05
695016	< 0.2	< 0.5	8	219	< 1	25	< 2	66	1.51	< 2	< 10	98	< 0.5	< 2	1.87	11	23	1.76	< 10	< 1	0.30	19	0.57
695017	< 0.2	< 0.5	21	288	< 1	39	< 2	60	1.29	11	< 10	98	< 0.5	< 2	2.55	17	38	1.47	< 10	< 1	0.29	17	0.44
695018	< 0.2	< 0.5	18	232	1	44	< 2	64	2.24	3	11	195	0.5	< 2	2.00	18	46	1.54	< 10	< 1	0.57	21	0.40
695019	< 0.2	< 0.5	16	292	< 1	43	2	90	1.82	< 2	< 10	112	< 0.5	< 2	2.29	15	26	2.04	< 10	< 1	0.34	23	0.58
695020	< 0.2	< 0.5	12	366	< 1	36	< 2	73	1.63	< 2	< 10	97	< 0.5	< 2	2.46	13	26	2.02	< 10	< 1	0.29	22	0.73
695021	< 0.2	< 0.5	13	320	< 1	32	< 2	78	1.45	< 2	< 10	77	< 0.5	< 2	2.32	12	26	2.02	< 10	< 1	0.23	23	0.60
695022	< 0.2	< 0.5	9	397	< 1	23	< 2	66	1.59	< 2	< 10	99	< 0.5	< 2	2.83	11	17	1.88	< 10	< 1	0.31	23	0.58
695023	< 0.2	< 0.5	15	293	< 1	33	< 2	59	1.51	4	< 10	107	< 0.5	< 2	1.81	14	20	1.61	< 10	< 1	0.34	21	0.39
695024	< 0.2	< 0.5	15	287	< 1	32	3	55	1.51	< 2	< 10	108	< 0.5	< 2	1.77	13	20	1.58	< 10	< 1	0.34	22	0.39
695025	< 0.2	< 0.5	14	933	< 1	97	< 2	107	2.27	4	< 10	108	< 0.5	< 2	4.19	21	26	3.63	< 10	< 1	0.36	18	0.82
695026	< 0.2	< 0.5	36	708	< 1	196	< 2	113	2.52	5	< 10	161	< 0.5	< 2	3.13	40	58	3.83	10	< 1	0.50	44	0.82
695027	< 0.2	< 0.5	38	709	< 1	164	< 2	83	2.78	6	12	216	0.5	< 2	3.32	36	58	3.53	10	< 1	0.66	46	0.79
695028	< 0.2	< 0.5	33	781	< 1	146	< 2	80	2.31	< 2	< 10	127	< 0.5	< 2	3.48	31	53	4.00	10	< 1	0.38	40	0.69
695029	< 0.2	< 0.5	33	791	< 1	185	4	207	2.90	< 2	< 10	176	< 0.5	< 2	3.57	38	57	4.80	10	< 1	0.52	46	0.91
695030	< 0.2	< 0.5	36	946	< 1	129	< 2	112	3.04	< 2	< 10	197	< 0.5	< 2	4.09	30	58	4.73	10	< 1	0.60	45	0.87
695031	< 0.2	< 0.5	42	812	< 1	116	< 2	87	2.61	< 2	< 10	131	< 0.5	< 2	3.72	30	54	4.67	10	< 1	0.42	43	0.79



## Results

## Activation Laboratories Ltd.

## Report: A18-03399

Analyte Symbol	Ag	Cd	Cu	Mn	Mo	Ni	Pb	Zn	Al	As	B	Ba	Be	Bi	Ca	Co	Cr	Fe	Ga	Hg	K	La	Mg
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	%
Lower Limit	0.2	0.5	1	5	1	1	2	2	0.01	2	10	10	0.5	2	0.01	1	1	0.01	10	1	0.01	10	0.01
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
695032	< 0.2	< 0.5	33	648	< 1	147	< 2	50	3.14	25	15	263	0.7	< 2	2.92	35	56	3.19	10	< 1	0.88	34	0.68
695033	0.3	< 0.5	160	762	< 1	78	4	67	3.35	5	43	28	< 0.5	< 2	3.01	37	140	6.48	10	< 1	0.06	< 10	2.31
695034	< 0.2	< 0.5	35	790	< 1	131	< 2	73	2.65	4	< 10	174	< 0.5	< 2	3.85	30	49	3.56	10	< 1	0.57	41	0.73
695035	< 0.2	< 0.5	32	711	< 1	171	< 2	85	2.82	10	10	203	0.5	< 2	3.55	34	53	3.36	10	< 1	0.65	42	0.68
695036	< 0.2	< 0.5	13	420	< 1	60	< 2	91	1.51	6	< 10	137	< 0.5	< 2	2.36	13	21	1.71	< 10	< 1	0.45	21	0.58
695037	< 0.2	< 0.5	15	364	< 1	47	3	57	2.29	5	13	229	0.5	< 2	2.12	14	28	1.54	< 10	< 1	0.76	21	0.49
695038	< 0.2	< 0.5	32	734	< 1	140	< 2	84	3.35	11	17	307	0.6	< 2	3.46	31	55	3.12	10	< 1	0.96	42	0.72
695039	< 0.2	< 0.5	35	847	< 1	108	< 2	98	3.06	3	13	237	0.6	2	3.94	27	53	3.69	10	< 1	0.74	44	0.82
695040	< 0.2	< 0.5	31	1010	< 1	144	< 2	108	2.81	13	11	203	0.6	< 2	3.90	34	50	3.97	10	< 1	0.64	42	0.90
695041	< 0.2	< 0.5	34	993	< 1	152	3	127	2.70	15	< 10	159	0.5	< 2	4.40	36	57	4.41	10	< 1	0.52	39	0.88
695042	< 0.2	< 0.5	36	995	< 1	154	3	127	2.71	16	< 10	162	0.5	< 2	4.42	36	67	4.40	10	< 1	0.52	40	0.88
695043	< 0.2	< 0.5	36	1040	< 1	159	4	114	2.28	14	< 10	108	< 0.5	< 2	4.03	36	50	4.83	< 10	< 1	0.33	41	0.92
695044	< 0.2	< 0.5	35	953	< 1	129	2	112	1.60	9	< 10	69	< 0.5	2	3.60	30	45	4.30	< 10	< 1	0.20	41	0.90
695045	< 0.2	< 0.5	37	854	< 1	138	< 2	84	1.23	18	< 10	52	< 0.5	3	3.57	31	33	3.89	< 10	< 1	0.15	40	0.83
695046	< 0.2	< 0.5	36	938	< 1	161	2	89	1.82	31	< 10	122	< 0.5	< 2	3.88	37	38	3.85	< 10	< 1	0.38	44	0.86
695047	< 0.2	< 0.5	36	979	< 1	162	2	90	2.15	31	< 10	153	< 0.5	< 2	3.96	38	40	4.27	< 10	< 1	0.43	44	0.87
695048	< 0.2	< 0.5	31	993	< 1	136	< 2	119	2.25	27	< 10	122	< 0.5	< 2	4.25	29	42	5.15	< 10	< 1	0.37	44	0.84
695049	< 0.2	< 0.5	30	1190	< 1	165	3	110	1.76	35	< 10	98	< 0.5	< 2	3.73	37	37	4.78	< 10	< 1	0.29	38	0.73
695050	< 0.2	< 0.5	34	1320	< 1	183	3	135	2.33	47	< 10	127	< 0.5	< 2	3.83	43	48	5.52	< 10	< 1	0.40	46	0.89
695051	< 0.2	< 0.5	< 1	110	< 1	< 1	< 2	19	4.63	< 2	12	12	0.6	< 2	0.21	< 1	2	0.73	10	< 1	1.49	< 10	0.06
695052	< 0.2	< 0.5	33	1340	< 1	203	< 2	130	2.39	55	< 10	141	< 0.5	< 2	4.52	44	41	5.54	< 10	< 1	0.46	43	0.98
695053	< 0.2	< 0.5	31	1000	< 1	159	2	89	1.90	44	< 10	150	< 0.5	< 2	3.85	36	30	3.66	< 10	< 1	0.47	44	0.71
695054	< 0.2	1.6	15	1240	< 1	151	< 2	1290	2.77	30	< 10	111	< 0.5	< 2	4.06	34	26	7.21	10	< 1	0.38	22	1.38
695055	< 0.2	< 0.5	19	655	< 1	74	2	163	1.64	20	< 10	129	< 0.5	< 2	2.27	25	19	3.07	< 10	< 1	0.40	25	0.63
695056	< 0.2	< 0.5	18	440	< 1	54	2	59	1.43	9	< 10	155	< 0.5	< 2	2.09	14	24	1.38	< 10	< 1	0.45	26	0.32
695057	< 0.2	< 0.5	35	755	< 1	262	2	102	2.25	78	11	199	0.5	3	3.35	58	42	3.57	< 10	< 1	0.58	41	0.71
695058	< 0.2	< 0.5	30	656	< 1	135	< 2	63	1.17	48	< 10	131	< 0.5	< 2	3.02	28	21	2.48	< 10	< 1	0.38	44	0.58
695059	0.2	< 0.5	166	773	< 1	84	< 2	70	3.48	7	45	32	< 0.5	< 2	3.11	38	145	6.69	10	< 1	0.06	< 10	2.36
695060	< 0.2	< 0.5	36	642	< 1	171	3	62	1.24	73	< 10	131	< 0.5	< 2	3.26	32	26	2.60	< 10	< 1	0.37	46	0.60
695061	< 0.2	< 0.5	51	758	< 1	208	< 2	101	1.57	99	< 10	138	< 0.5	< 2	4.21	38	33	3.19	< 10	< 1	0.39	43	0.66
695062	< 0.2	< 0.5	36	642	< 1	212	3	73	1.16	77	< 10	124	< 0.5	< 2	3.11	37	26	2.81	< 10	< 1	0.33	46	0.60
695063	< 0.2	< 0.5	35	541	< 1	155	3	61	1.05	72	< 10	118	< 0.5	< 2	3.06	31	28	2.13	< 10	< 1	0.32	48	0.48
695064	< 0.2	< 0.5	36	462	< 1	106	< 2	144	1.37	51	< 10	132	< 0.5	< 2	2.61	25	39	2.28	< 10	< 1	0.37	43	0.49
695065	< 0.2	< 0.5	39	587	< 1	163	2	179	1.42	59	< 10	136	< 0.5	< 2	3.31	36	28	2.83	< 10	< 1	0.38	48	0.59
695066	< 0.2	< 0.5	38	543	< 1	132	3	105	1.23	57	< 10	132	< 0.5	< 2	3.15	44	20	2.25	< 10	< 1	0.37	40	0.50
695067	< 0.2	< 0.5	19	640	< 1	139	5	156	0.69	41	< 10	70	< 0.5	< 2	2.51	27	12	2.43	< 10	< 1	0.21	24	0.52
695068	< 0.2	< 0.5	19	653	< 1	128	4	132	1.21	35	< 10	118	< 0.5	< 2	2.57	25	14	2.41	< 10	< 1	0.36	24	0.54
695069	< 0.2	< 0.5	14	293	1	82	9	127	1.04	56	< 10	94	< 0.5	< 2	0.90	20	12	2.30	< 10	< 1	0.32	16	0.30
695070	< 0.2	< 0.5	31	710	1	155	< 2	81	1.07	91	< 10	122	< 0.5	< 2	2.96	43	17	1.98	< 10	< 1	0.38	40	0.57
695071	< 0.2	< 0.5	33	648	< 1	196	2	107	1.09	89	< 10	112	< 0.5	< 2	3.33	49	16	2.66	< 10	< 1	0.35	35	0.63
695072	< 0.2	< 0.5	20	638	< 1	124	3	188	1.18	48	< 10	88	< 0.5	< 2	2.83	34	16	3.35	< 10	< 1	0.28	23	0.65
695073	< 0.2	< 0.5	17	635	< 1	87	3	104	1.09	21	< 10	103	< 0.5	< 2	2.41	21	13	2.42	< 10	< 1	0.34	23	0.51

## Results

## Activation Laboratories Ltd.

## Report: A18-03399

Analyte Symbol	Ag	Cd	Cu	Mn	Mo	Ni	Pb	Zn	Al	As	B	Ba	Be	Bi	Ca	Co	Cr	Fe	Ga	Hg	K	La	Mg
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	%
Lower Limit	0.2	0.5	1	5	1	1	2	2	0.01	2	10	10	0.5	2	0.01	1	1	0.01	10	1	0.01	10	0.01
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
695074	1.9	< 0.5	16	620	< 1	113	30	248	1.00	64	< 10	28	< 0.5	< 2	1.46	23	11	4.68	< 10	< 1	0.32	14	0.39
695075	< 0.2	< 0.5	16	692	< 1	84	5	99	0.92	23	< 10	87	< 0.5	< 2	1.99	23	17	2.70	< 10	< 1	0.28	21	0.45
695076	< 0.2	< 0.5	< 1	106	< 1	< 1	< 2	19	4.56	< 2	12	11	0.6	< 2	0.19	< 1	1	0.65	10	< 1	1.50	< 10	0.05
695077	< 0.2	< 0.5	16	766	< 1	82	2	65	0.97	40	< 10	86	< 0.5	< 2	2.15	21	20	2.51	< 10	< 1	0.28	22	0.61
695078	< 0.2	< 0.5	20	772	< 1	85	3	92	1.11	36	< 10	83	< 0.5	2	2.16	28	20	3.22	< 10	< 1	0.26	22	0.57
695079	< 0.2	< 0.5	19	1240	< 1	79	< 2	81	1.31	26	< 10	75	< 0.5	< 2	2.36	28	21	4.11	< 10	< 1	0.24	21	0.64
695080	< 0.2	< 0.5	15	1560	< 1	59	3	81	1.55	23	< 10	85	< 0.5	3	2.47	22	25	4.60	< 10	< 1	0.27	21	0.71
695081	< 0.2	< 0.5	12	1270	< 1	44	4	76	1.23	20	< 10	72	< 0.5	< 2	2.46	19	13	3.98	< 10	< 1	0.24	18	0.71
695082	< 0.2	< 0.5	14	519	1	56	6	56	0.75	33	< 10	84	< 0.5	< 2	1.66	19	20	1.98	< 10	< 1	0.27	20	0.35
695083	< 0.2	< 0.5	12	608	< 1	58	8	52	0.60	50	< 10	69	< 0.5	< 2	2.11	16	20	2.26	< 10	< 1	0.22	17	0.62
695084	< 0.2	< 0.5	20	1360	< 1	141	4	105	1.78	47	< 10	53	< 0.5	< 2	3.97	25	23	7.38	< 10	< 1	0.18	11	1.56
695085																							
695086	< 0.2	< 0.5	21	581	< 1	110	5	35	1.05	82	< 10	94	< 0.5	< 2	2.39	28	13	3.00	< 10	< 1	0.30	20	0.54
695087	< 0.2	< 0.5	29	759	< 1	132	< 2	66	0.83	142	< 10	91	< 0.5	< 2	3.09	32	14	2.18	< 10	< 1	0.29	40	0.71
695088	< 0.2	< 0.5	32	797	< 1	143	2	82	0.87	215	< 10	91	< 0.5	< 2	3.30	35	17	2.23	< 10	< 1	0.28	40	0.84
695089	< 0.2	< 0.5	33	610	< 1	173	< 2	73	1.06	229	< 10	130	< 0.5	< 2	3.06	42	21	2.10	< 10	< 1	0.38	47	0.70
695090	< 0.2	< 0.5	35	441	< 1	167	< 2	73	1.05	158	< 10	137	< 0.5	< 2	2.79	45	21	1.68	< 10	< 1	0.40	49	0.46
695091	< 0.2	< 0.5	35	446	< 1	196	< 2	66	1.01	205	< 10	125	< 0.5	< 2	3.52	51	20	1.81	< 10	< 1	0.37	46	0.49
695092	< 0.2	< 0.5	36	484	< 1	176	3	65	1.11	254	< 10	147	< 0.5	< 2	3.72	49	21	1.91	< 10	< 1	0.39	43	0.63
695093	< 0.2	< 0.5	36	481	< 1	174	< 2	65	1.01	256	< 10	144	< 0.5	< 2	3.73	49	19	1.89	< 10	< 1	0.37	42	0.63
695094	< 0.2	< 0.5	40	525	< 1	183	3	57	1.15	313	< 10	134	< 0.5	< 2	3.81	58	20	1.96	< 10	< 1	0.41	45	0.71
695095	< 0.2	< 0.5	39	498	< 1	167	< 2	53	1.13	277	< 10	131	< 0.5	< 2	3.32	49	19	2.24	< 10	< 1	0.41	43	0.67
695096	< 0.2	< 0.5	20	634	< 1	158	< 2	47	1.26	325	< 10	137	< 0.5	< 2	3.26	42	18	2.30	< 10	< 1	0.45	42	0.69
695097	< 0.2	< 0.5	27	866	< 1	48	< 2	110	0.75	59	< 10	64	< 0.5	2	2.31	19	14	3.35	< 10	< 1	0.20	20	0.52
695098	< 0.2	< 0.5	24	1050	2	49	2	94	1.17	54	< 10	100	< 0.5	< 2	2.31	18	17	3.74	< 10	< 1	0.33	20	0.51
695099	< 0.2	< 0.5	19	746	1	45	3	78	0.97	52	< 10	109	< 0.5	< 2	2.02	17	18	2.42	< 10	< 1	0.36	20	0.36
695100	< 0.2	< 0.5	19	705	1	35	2	40	1.02	22	< 10	119	< 0.5	< 2	1.61	13	16	1.92	< 10	< 1	0.40	21	0.36
695101	< 0.2	< 0.5	10	445	< 1	27	< 2	27	0.83	20	< 10	103	< 0.5	< 2	1.42	11	14	1.47	< 10	< 1	0.35	23	0.31
695102	< 0.2	< 0.5	< 1	94	< 1	< 1	< 2	16	4.76	< 2	11	11	0.6	< 2	0.20	< 1	1	0.57	10	< 1	1.54	< 10	0.05
695103	< 0.2	< 0.5	11	433	< 1	39	< 2	28	0.99	23	< 10	115	< 0.5	< 2	1.58	11	15	1.67	< 10	< 1	0.40	22	0.35
695104	< 0.2	< 0.5	7	373	< 1	26	< 2	19	0.87	29	< 10	104	< 0.5	< 2	1.41	7	14	1.29	< 10	< 1	0.38	19	0.32
695105	< 0.2	< 0.5	14	539	< 1	41	< 2	24	0.87	62	< 10	104	< 0.5	< 2	1.57	13	13	1.90	< 10	< 1	0.36	16	0.35
695106	< 0.2	< 0.5	13	2030	< 1	68	4	61	0.93	66	< 10	70	< 0.5	< 2	2.08	20	12	6.38	< 10	< 1	0.30	12	0.79
695107	< 0.2	< 0.5	6	1530	1	107	5	34	0.75	65	< 10	67	< 0.5	< 2	1.27	25	13	5.02	< 10	< 1	0.23	14	0.54
695108	< 0.2	< 0.5	8	2450	< 1	61	< 2	93	0.88	14	< 10	67	< 0.5	< 2	2.04	9	4	7.71	< 10	< 1	0.19	10	1.17
695109	< 0.2	< 0.5	4	5660	< 1	111	< 2	139	0.78	15	< 10	44	< 0.5	< 2	3.07	13	7	15.9	< 10	< 1	0.12	< 10	2.19
695110	< 0.2	< 0.5	4	5610	< 1	122	< 2	234	0.78	8	< 10	38	< 0.5	< 2	2.46	13	4	17.3	< 10	< 1	0.11	< 10	2.08
695111	< 0.2	< 0.5	7	2860	< 1	54	< 2	105	0.79	24	< 10	72	< 0.5	< 2	2.08	7	4	8.11	< 10	< 1	0.20	< 10	1.13
695112	0.2	< 0.5	151	738	< 1	77	< 2	63	3.19	6	40	28	< 0.5	< 2	2.87	35	134	6.19	10	< 1	0.05	< 10	2.24
695113	< 0.2	< 0.5	9	2450	< 1	53	< 2	77	0.76	107	< 10	60	< 0.5	< 2	1.96	8	6	6.54	< 10	< 1	0.18	< 10	0.87
695114	< 0.2	< 0.5	13	1490	< 1	54	3	66	0.91	181	< 10	59	< 0.5	< 2	2.39	13	9	4.67	< 10	< 1	0.27	< 10	0.75
695115	< 0.2	< 0.5	11	2530	1	157	8	33	1.00	299	< 10	28	< 0.5	< 2	1.92	29	10	7.64	< 10	< 1	0.26	< 10	0.63

Results

Activation Laboratories Ltd.

Report: A18-03399

Analyte Symbol	Ag	Cd	Cu	Mn	Mo	Ni	Pb	Zn	Al	As	B	Ba	Be	Bi	Ca	Co	Cr	Fe	Ga	Hg	K	La	Mg
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	%
Lower Limit	0.2	0.5	1	5	1	1	2	2	0.01	2	10	10	0.5	2	0.01	1	1	0.01	10	1	0.01	10	0.01
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
695116	< 0.2	< 0.5	9	1560	< 1	93	3	32	0.90	128	< 10	66	< 0.5	< 2	1.92	27	6	4.30	< 10	< 1	0.22	< 10	0.56
695117	0.9	< 0.5	12	3670	2	139	< 2	55	1.16	110	< 10	41	< 0.5	< 2	1.97	27	8	9.73	< 10	< 1	0.21	< 10	0.77
695118	< 0.2	< 0.5	7	2460	< 1	67	< 2	33	0.75	60	< 10	49	< 0.5	< 2	1.63	16	9	5.64	< 10	< 1	0.16	11	0.51
695119	0.3	< 0.5	21	4220	< 1	134	7	44	1.14	88	< 10	17	< 0.5	< 2	2.13	27	17	14.8	< 10	< 1	0.17	< 10	0.86
695120	0.8	< 0.5	29	3010	2	194	27	39	1.38	229	< 10	< 10	< 0.5	< 2	2.25	52	19	14.6	< 10	< 1	0.21	< 10	0.72
695121	0.7	< 0.5	31	2770	1	185	26	38	1.24	210	< 10	11	< 0.5	< 2	2.20	46	18	13.4	< 10	< 1	0.20	< 10	0.68
695122	0.4	0.7	25	5350	< 1	135	9	62	1.39	136	< 10	18	< 0.5	< 2	2.14	25	15	16.3	< 10	< 1	0.18	< 10	1.11

Analyte Symbol	Na	P	S	Sb	Sc	Sr	Ti	Th	Te	Tl	U	V	W	Y	Zr	Au	Au
Unit Symbol	%	%	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	g/tonne
Lower Limit	0.001	0.001	0.01	2	1	1	0.01	20	1	2	10	1	10	1	1	5	0.02
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	FA-AA	FA- GRA
694948																> 5000	6.73
694949	0.020	0.003	2.01	< 2	2	5	< 0.01	< 20	< 1	< 2	< 10	11	< 10	2	5	82	
694950	0.015	0.001	2.85	3	< 1	3	< 0.01	< 20	< 1	< 2	< 10	6	< 10	2	5	9	
694951	0.015	0.001	8.24	4	2	4	< 0.01	< 20	< 1	< 2	< 10	9	< 10	2	5	13	
694952	0.016	0.001	9.48	7	2	3	< 0.01	< 20	< 1	< 2	< 10	17	< 10	2	7	21	
694953	0.013	0.003	4.81	5	3	3	< 0.01	< 20	< 1	< 2	< 10	17	< 10	2	5	12	
694954	0.018	0.004	4.15	5	2	3	< 0.01	< 20	< 1	< 2	< 10	10	< 10	4	4	11	
694955	0.015	0.002	9.31	7	1	3	< 0.01	< 20	< 1	< 2	< 10	9	< 10	1	5	22	
694956	0.016	0.010	17.7	15	6	3	< 0.01	< 20	3	< 2	< 10	31	< 10	4	17	13	
694957	3.09	0.001	0.06	< 2	< 1	23	< 0.01	< 20	2	< 2	< 10	< 1	< 10	3	2	< 5	
694958	0.022	0.012	16.7	11	4	4	< 0.01	< 20	< 1	< 2	< 10	22	< 10	4	15	12	
694959	0.015	0.007	10.1	8	3	3	< 0.01	< 20	< 1	< 2	< 10	15	< 10	3	14	13	
694960	0.016	0.004	18.2	13	2	3	< 0.01	< 20	3	< 2	< 10	15	< 10	3	16	13	
694961	0.014	0.006	17.6	10	2	3	< 0.01	< 20	3	< 2	< 10	11	< 10	2	13	12	
694962	0.025	0.004	17.0	9	1	23	< 0.01	< 20	< 1	< 2	< 10	5	< 10	2	11	14	
694963	0.022	0.004	17.7	12	1	11	< 0.01	< 20	< 1	< 2	< 10	4	< 10	2	10	14	
694964	0.025	0.006	19.9	10	1	3	< 0.01	< 20	2	< 2	< 10	3	< 10	2	9	18	
694965	0.029	0.008	18.3	10	2	7	< 0.01	< 20	< 1	< 2	< 10	6	< 10	1	10	19	
694966	0.338	0.159	1.38	3	3	91	0.15	< 20	5	< 2	< 10	43	< 10	14	6	2060	
694967	0.032	0.010	19.4	13	< 1	9	< 0.01	< 20	3	3	< 10	6	< 10	< 1	11	24	
694968	0.049	0.007	18.0	13	1	13	< 0.01	< 20	< 1	< 2	< 10	8	< 10	1	13	44	
694969	0.018	0.014	17.4	11	3	4	< 0.01	< 20	< 1	< 2	< 10	13	< 10	2	12	18	
694970	0.012	0.014	14.6	13	8	3	< 0.01	< 20	2	< 2	< 10	41	< 10	3	16	12	
694971	0.015	0.021	17.1	15	8	2	< 0.01	< 20	< 1	< 2	< 10	38	< 10	5	18	18	
694972	0.016	0.007	17.2	15	7	3	< 0.01	< 20	< 1	< 2	< 10	33	< 10	4	19	26	
694973	0.016	0.003	1.01	3	2	2	< 0.01	< 20	2	< 2	< 10	7	< 10	3	6	< 5	
694974	0.013	0.002	0.89	3	1	2	< 0.01	< 20	< 1	< 2	< 10	5	< 10	2	6	6	
694975	0.012	0.002	0.89	< 2	1	2	< 0.01	< 20	< 1	< 2	< 10	4	< 10	2	6	6	
694976	0.015	0.012	3.38	5	5	2	< 0.01	< 20	< 1	< 2	< 10	20	< 10	4	9	5	
694977	0.015	0.007	3.03	6	6	2	< 0.01	< 20	3	< 2	< 10	25	< 10	5	11	6	
694978	0.013	0.014	13.8	17	5	3	< 0.01	< 20	2	< 2	< 10	20	< 10	4	15	23	
694979	0.015	0.007	13.4	12	4	3	< 0.01	< 20	2	< 2	< 10	25	< 10	3	13	29	
694980	0.017	0.024	11.5	20	7	6	< 0.01	< 20	2	< 2	< 10	27	< 10	13	33	19	
694981	3.22	0.001	0.06	< 2	< 1	23	< 0.01	< 20	1	< 2	< 10	< 1	< 10	4	1	< 5	
694982	0.068	0.061	1.83	5	7	141	< 0.01	< 20	< 1	< 2	< 10	41	< 10	6	22	6	
694983	0.140	0.062	0.16	< 2	2	73	< 0.01	< 20	1	< 2	< 10	9	< 10	4	6	< 5	
694984	0.104	0.050	1.37	< 2	4	135	< 0.01	< 20	1	< 2	< 10	24	< 10	6	17	< 5	
694985	0.026	0.005	3.93	4	2	46	< 0.01	< 20	3	< 2	< 10	12	< 10	3	13	5	
694986	0.043	0.041	7.72	11	6	90	< 0.01	< 20	1	< 2	< 10	34	< 10	4	24	< 5	
694987	0.079	0.095	2.04	4	6	169	< 0.01	< 20	< 1	< 2	< 10	42	< 10	5	14	< 5	
694988	0.091	0.043	0.20	< 2	9	32	0.43	< 20	7	< 2	< 10	181	< 10	15	22	1100	

Analyte Symbol	Na	P	S	Sb	Sc	Sr	Ti	Th	Te	Tl	U	V	W	Y	Zr	Au	Au
Unit Symbol	%	%	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	g/tonne
Lower Limit	0.001	0.001	0.01	2	1	1	0.01	20	1	2	10	1	10	1	1	5	0.02
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	FA-AA	FA- GRA
694989	0.099	0.212	3.39	3	8	200	< 0.01	< 20	2	< 2	< 10	58	< 10	7	7	< 5	
694990	0.071	0.200	1.90	3	5	172	< 0.01	< 20	1	< 2	< 10	35	< 10	6	7	6	
694991	0.073	0.202	1.91	< 2	5	173	< 0.01	< 20	< 1	< 2	< 10	35	< 10	6	7	7	
694992	0.061	0.201	2.65	3	5	139	< 0.01	< 20	< 1	< 2	< 10	42	< 10	6	10	7	
694993	0.063	0.208	2.70	2	5	140	< 0.01	< 20	2	< 2	< 10	44	< 10	6	8	< 5	
694994	0.060	0.178	3.03	4	6	115	< 0.01	< 20	< 1	< 2	< 10	49	< 10	6	11	< 5	
694995	0.065	0.185	3.22	3	6	119	< 0.01	< 20	< 1	< 2	< 10	51	< 10	7	11	< 5	
694996	0.064	0.085	0.57	< 2	3	72	< 0.01	< 20	< 1	< 2	< 10	15	< 10	9	8	< 5	
694997	0.070	0.088	0.59	< 2	3	75	< 0.01	< 20	2	< 2	< 10	16	< 10	9	7	< 5	
694998	0.136	0.080	0.30	< 2	2	89	< 0.01	< 20	< 1	< 2	< 10	11	< 10	6	5	< 5	
694999	0.198	0.098	0.07	< 2	2	124	< 0.01	< 20	< 1	< 2	< 10	17	< 10	5	3	< 5	
695000	0.186	0.096	0.09	< 2	2	157	< 0.01	< 20	2	< 2	< 10	16	< 10	5	3	< 5	
695001	0.182	0.090	0.20	< 2	2	145	< 0.01	< 20	2	< 2	< 10	18	< 10	5	4	< 5	
695002	0.193	0.092	0.17	< 2	3	129	< 0.01	< 20	1	< 2	< 10	22	< 10	5	4	< 5	
695003	0.113	0.073	0.08	< 2	2	87	< 0.01	< 20	< 1	< 2	< 10	11	< 10	4	4	5	
695004	0.110	0.085	0.21	< 2	2	63	< 0.01	< 20	2	< 2	< 10	17	< 10	4	4	< 5	
695005	0.134	0.086	0.17	< 2	2	60	< 0.01	< 20	4	< 2	< 10	18	< 10	4	3	< 5	
695006	0.083	0.040	0.19	2	8	29	0.40	< 20	5	< 2	< 10	169	< 10	14	20	1080	
695007	0.126	0.084	0.31	< 2	2	62	< 0.01	< 20	2	< 2	< 10	18	< 10	4	4	7	
695008	0.158	0.078	0.38	< 2	2	76	< 0.01	< 20	< 1	< 2	< 10	19	< 10	4	4	< 5	
695009	0.145	0.079	0.36	< 2	3	64	< 0.01	< 20	2	< 2	< 10	18	< 10	5	4	< 5	
695010	0.134	0.092	0.34	< 2	2	86	< 0.01	< 20	< 1	< 2	< 10	17	< 10	4	3	< 5	
695011	0.168	0.098	0.28	< 2	3	151	< 0.01	< 20	2	< 2	< 10	21	< 10	5	3	< 5	
695012	0.153	0.090	0.40	< 2	2	138	< 0.01	< 20	< 1	< 2	< 10	15	< 10	4	3	< 5	
695013	0.139	0.075	0.08	< 2	3	260	< 0.01	< 20	< 1	< 2	< 10	16	< 10	5	5	< 5	
695014	0.142	0.082	0.22	< 2	3	182	< 0.01	< 20	< 1	< 2	< 10	18	< 10	4	5	< 5	
695015	3.29	0.001	< 0.01	< 2	< 1	24	< 0.01	< 20	< 1	< 2	< 10	< 1	< 10	4	2	< 5	
695016	0.142	0.080	0.08	< 2	2	142	< 0.01	< 20	< 1	< 2	< 10	16	< 10	4	6	< 5	
695017	0.135	0.079	0.16	< 2	2	204	< 0.01	< 20	6	< 2	< 10	17	< 10	4	4	6	
695018	0.282	0.084	0.24	< 2	4	239	< 0.01	< 20	2	< 2	< 10	28	< 10	4	3	7	
695019	0.164	0.094	0.12	< 2	3	186	< 0.01	< 20	< 1	< 2	< 10	22	< 10	5	4	10	
695020	0.134	0.092	0.06	< 2	2	139	< 0.01	< 20	< 1	< 2	< 10	16	< 10	6	5	5	
695021	0.108	0.093	0.06	< 2	2	148	< 0.01	< 20	2	< 2	< 10	15	< 10	5	5	< 5	
695022	0.136	0.083	0.04	< 2	2	214	< 0.01	< 20	3	< 2	< 10	15	< 10	5	6	< 5	
695023	0.153	0.092	0.15	< 2	2	171	< 0.01	< 20	3	< 2	< 10	16	< 10	5	4	< 5	
695024	0.152	0.090	0.14	< 2	2	175	< 0.01	< 20	< 1	< 2	< 10	16	< 10	5	4	< 5	
695025	0.138	0.076	0.19	< 2	5	277	< 0.01	< 20	< 1	< 2	< 10	34	< 10	5	7	5	
695026	0.143	0.279	0.16	< 2	6	165	< 0.01	< 20	< 1	< 2	< 10	61	< 10	8	3	8	
695027	0.179	0.280	0.14	< 2	6	185	< 0.01	< 20	< 1	< 2	< 10	77	< 10	9	2	6	
695028	0.110	0.256	0.15	< 2	6	221	< 0.01	< 20	< 1	< 2	< 10	62	< 10	9	3	< 5	
695029	0.129	0.283	0.15	< 2	6	181	< 0.01	< 20	< 1	< 2	< 10	75	< 10	9	3	< 5	
695030	0.154	0.267	0.08	< 2	9	276	< 0.01	< 20	1	< 2	< 10	84	< 10	9	3	< 5	

Analyte Symbol	Na	P	S	Sb	Sc	Sr	Ti	Th	Te	Tl	U	V	W	Y	Zr	Au	Au
Unit Symbol	%	%	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	g/tonne
Lower Limit	0.001	0.001	0.01	2	1	1	0.01	20	1	2	10	1	10	1	1	5	0.02
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	FA-AA	FA- GRA
695031	0.122	0.263	0.11	3	7	221	< 0.01	< 20	4	< 2	< 10	68	< 10	10	3	5	
695032	0.213	0.238	0.14	< 2	7	213	< 0.01	< 20	2	< 2	< 10	71	< 10	9	2	5	
695033	0.087	0.043	0.20	< 2	9	31	0.42	< 20	3	< 2	< 10	180	< 10	15	23	1050	
695034	0.143	0.256	0.11	< 2	5	296	< 0.01	< 20	< 1	< 2	< 10	58	< 10	8	2	7	
695035	0.176	0.255	0.11	2	7	275	< 0.01	< 20	4	< 2	< 10	62	< 10	8	2	5	
695036	0.156	0.086	0.18	< 2	3	177	< 0.01	< 20	< 1	< 2	< 10	19	< 10	4	3	< 5	
695037	0.241	0.102	0.19	< 2	4	216	< 0.01	< 20	< 1	< 2	< 10	28	< 10	4	3	< 5	
695038	0.274	0.253	0.10	< 2	7	269	< 0.01	< 20	< 1	< 2	< 10	78	< 10	8	2	< 5	
695039	0.245	0.260	0.03	< 2	6	303	< 0.01	< 20	< 1	< 2	< 10	67	< 10	9	2	< 5	
695040	0.240	0.253	0.10	< 2	6	270	< 0.01	< 20	1	< 2	< 10	71	< 10	8	2	< 5	
695041	0.210	0.273	0.10	< 2	6	312	< 0.01	< 20	< 1	< 2	< 10	70	< 10	10	2	5	
695042	0.214	0.273	0.10	< 2	6	316	< 0.01	< 20	< 1	< 2	< 10	71	< 10	10	2	6	
695043	0.165	0.267	0.15	< 2	5	237	< 0.01	< 20	2	< 2	< 10	57	< 10	9	3	7	
695044	0.102	0.275	0.05	< 2	4	163	< 0.01	< 20	2	< 2	< 10	38	< 10	8	3	5	
695045	0.084	0.273	0.08	< 2	3	140	< 0.01	< 20	3	< 2	< 10	31	< 10	7	4	< 5	
695046	0.223	0.274	0.10	< 2	5	189	< 0.01	< 20	< 1	< 2	< 10	47	< 10	8	3	< 5	
695047	0.259	0.265	0.11	< 2	5	213	< 0.01	< 20	< 1	< 2	< 10	51	< 10	8	3	< 5	
695048	0.206	0.259	0.08	< 2	6	185	< 0.01	< 20	< 1	< 2	< 10	49	< 10	10	4	7	
695049	0.187	0.242	0.22	< 2	5	184	< 0.01	< 20	6	< 2	< 10	39	< 10	7	4	51	
695050	0.237	0.271	0.11	< 2	7	202	< 0.01	< 20	< 1	< 2	< 10	53	< 10	7	3	< 5	
695051	3.32	0.002	< 0.01	< 2	< 1	24	< 0.01	< 20	2	< 2	< 10	< 1	< 10	4	1	< 5	
695052	0.278	0.249	0.08	< 2	8	237	< 0.01	< 20	< 1	< 2	< 10	56	< 10	8	3	< 5	
695053	0.262	0.266	0.10	< 2	5	193	< 0.01	< 20	1	< 2	< 10	40	< 10	8	3	< 5	
695054	0.238	0.092	0.21	< 2	10	203	< 0.01	< 20	< 1	< 2	< 10	59	< 10	6	8	8	
695055	0.237	0.104	0.27	< 2	4	156	< 0.01	< 20	< 1	< 2	< 10	26	< 10	5	4	13	
695056	0.273	0.104	0.16	< 2	3	155	< 0.01	< 20	1	< 2	< 10	17	< 10	4	3	9	
695057	0.319	0.272	0.39	< 2	6	217	< 0.01	< 20	3	< 2	< 10	47	< 10	8	2	50	
695058	0.209	0.283	0.21	< 2	3	149	< 0.01	< 20	< 1	< 2	< 10	26	< 10	7	2	431	
695059	0.095	0.046	0.21	< 2	9	34	0.44	< 20	1	< 2	< 10	182	< 10	15	23	973	
695060	0.244	0.285	0.15	< 2	3	161	< 0.01	< 20	< 1	< 2	< 10	30	< 10	8	2	21	
695061	0.228	0.283	0.14	< 2	4	218	< 0.01	< 20	< 1	< 2	< 10	35	< 10	9	2	6	
695062	0.197	0.291	0.16	< 2	3	150	< 0.01	< 20	< 1	< 2	< 10	30	< 10	7	2	< 5	
695063	0.173	0.291	0.10	< 2	3	153	< 0.01	< 20	1	< 2	< 10	26	< 10	8	2	< 5	
695064	0.210	0.290	0.06	< 2	4	141	< 0.01	< 20	< 1	< 2	< 10	34	< 10	8	2	< 5	
695065	0.209	0.304	0.09	< 2	4	173	< 0.01	< 20	< 1	< 2	< 10	34	< 10	8	2	< 5	
695066	0.189	0.266	0.15	< 2	4	166	< 0.01	< 20	5	< 2	< 10	26	< 10	7	2	< 5	
695067	0.101	0.138	0.36	< 2	2	108	< 0.01	< 20	3	< 2	< 10	10	< 10	5	4	5	
695068	0.181	0.132	0.28	< 2	3	147	< 0.01	< 20	< 1	< 2	< 10	17	< 10	5	2	< 5	
695069	0.121	0.060	0.99	< 2	1	85	< 0.01	< 20	< 1	< 2	< 10	9	< 10	3	14	26	
695070	0.173	0.262	0.17	< 2	3	142	< 0.01	< 20	2	< 2	< 10	25	< 10	7	2	< 5	
695071	0.171	0.255	0.27	< 2	4	165	< 0.01	< 20	< 1	< 2	< 10	24	< 10	8	2	5	

Analyte Symbol	Na	P	S	Sb	Sc	Sr	Ti	Th	Te	Tl	U	V	W	Y	Zr	Au	Au
Unit Symbol	%	%	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	g/tonne
Lower Limit	0.001	0.001	0.01	2	1	1	0.01	20	1	2	10	1	10	1	1	5	0.02
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	FA-AA	FA- GRA
695072	0.158	0.115	0.28	< 2	4	142	< 0.01	< 20	3	< 2	< 10	23	< 10	5	3	8	
695073	0.163	0.087	0.31	< 2	2	140	< 0.01	< 20	< 1	< 2	< 10	12	< 10	5	5	7	
695074	0.122	0.065	3.04	5	2	100	< 0.01	< 20	< 1	< 2	< 10	10	< 10	4	20	63	
695075	0.156	0.085	0.61	< 2	3	112	< 0.01	< 20	< 1	< 2	< 10	13	< 10	4	6	39	
695076	3.32	0.001	< 0.01	< 2	< 1	25	< 0.01	< 20	1	< 2	< 10	< 1	< 10	4	1	< 5	
695077	0.163	0.092	0.36	< 2	2	115	< 0.01	< 20	< 1	< 2	< 10	11	< 10	5	5	< 5	
695078	0.154	0.086	0.32	< 2	3	129	< 0.01	< 20	2	< 2	< 10	16	< 10	4	5	< 5	
695079	0.160	0.082	0.42	< 2	4	131	< 0.01	< 20	5	< 2	< 10	19	< 10	4	5	< 5	
695080	0.173	0.083	0.46	< 2	4	140	< 0.01	< 20	1	< 2	< 10	20	< 10	4	6	8	
695081	0.136	0.077	0.52	< 2	3	123	< 0.01	< 20	3	< 2	< 10	13	< 10	4	6	14	
695082	0.145	0.075	0.72	< 2	2	92	< 0.01	< 20	< 1	< 2	< 10	8	< 10	4	5	18	
695083	0.112	0.075	0.86	< 2	2	80	< 0.01	< 20	< 1	< 2	< 10	6	< 10	4	7	49	
695084	0.116	0.088	0.85	3	11	144	< 0.01	< 20	5	< 2	< 10	44	< 10	5	10	16	
695085																	1030
695086	0.143	0.161	0.45	2	3	126	< 0.01	< 20	< 1	< 2	< 10	17	< 10	5	3	26	
695087	0.138	0.274	0.06	< 2	3	127	< 0.01	< 20	< 1	< 2	< 10	19	< 10	7	2	12	
695088	0.165	0.264	0.04	< 2	3	141	< 0.01	< 20	3	< 2	< 10	22	< 10	7	2	14	
695089	0.194	0.294	0.08	< 2	3	159	< 0.01	< 20	2	< 2	< 10	27	< 10	8	2	13	
695090	0.178	0.299	0.08	< 2	3	147	< 0.01	< 20	2	< 2	< 10	27	< 10	7	2	17	
695091	0.179	0.301	0.09	< 2	3	184	< 0.01	< 20	5	< 2	< 10	24	< 10	8	1	15	
695092	0.199	0.288	0.07	< 2	3	192	< 0.01	< 20	6	< 2	< 10	27	< 10	8	2	14	
695093	0.182	0.286	0.06	< 2	3	187	< 0.01	< 20	2	< 2	< 10	25	< 10	8	1	17	
695094	0.191	0.288	0.05	< 2	3	195	< 0.01	< 20	2	< 2	< 10	26	< 10	8	1	17	
695095	0.178	0.292	0.11	< 2	4	190	< 0.01	< 20	2	< 2	< 10	27	< 10	8	2	17	
695096	0.181	0.303	0.08	< 2	4	212	< 0.01	< 20	4	< 2	< 10	26	< 10	8	2	18	
695097	0.097	0.094	0.59	< 2	3	135	< 0.01	< 20	< 1	< 2	< 10	10	< 10	4	7	78	
695098	0.154	0.101	0.63	< 2	4	157	< 0.01	< 20	1	< 2	< 10	19	< 10	4	5	25	
695099	0.155	0.098	0.49	< 2	3	142	< 0.01	< 20	< 1	< 2	< 10	14	< 10	4	4	25	
695100	0.134	0.102	0.35	< 2	2	127	< 0.01	< 20	2	< 2	< 10	13	< 10	4	3	28	
695101	0.121	0.099	0.20	< 2	1	109	< 0.01	< 20	< 1	< 2	< 10	9	< 10	4	4	17	
695102	3.42	0.001	< 0.01	< 2	< 1	23	< 0.01	< 20	< 1	< 2	< 10	< 1	< 10	3	< 1	< 5	
695103	0.133	0.097	0.22	< 2	2	123	< 0.01	< 20	< 1	< 2	< 10	10	< 10	4	4	15	
695104	0.120	0.085	0.07	< 2	2	107	< 0.01	< 20	< 1	< 2	< 10	11	< 10	3	3	16	
695105	0.111	0.084	0.45	< 2	2	108	< 0.01	< 20	< 1	< 2	< 10	11	< 10	3	4	19	
695106	0.110	0.076	1.45	3	4	141	< 0.01	< 20	< 1	< 2	< 10	18	< 10	3	13	17	
695107	0.115	0.085	1.47	2	2	94	< 0.01	< 20	< 1	< 2	< 10	12	< 10	3	12	16	
695108	0.125	0.057	0.42	3	3	136	< 0.01	< 20	< 1	< 2	< 10	12	< 10	4	12	13	
695109	0.075	0.041	1.51	6	8	158	< 0.01	< 20	< 1	< 2	< 10	20	< 10	5	18	16	
695110	0.065	0.041	0.88	7	9	135	< 0.01	< 20	2	< 2	< 10	21	< 10	4	16	17	
695111	0.102	0.062	0.43	2	3	123	< 0.01	< 20	< 1	< 2	< 10	12	< 10	4	12	18	
695112	0.082	0.041	0.19	< 2	8	30	0.40	< 20	2	< 2	< 10	169	< 10	14	22	1060	
695113	0.102	0.060	1.17	< 2	2	113	< 0.01	< 20	< 1	< 2	< 10	9	< 10	3	14	31	

Analyte Symbol	Na	P	S	Sb	Sc	Sr	Ti	Th	Te	Tl	U	V	W	Y	Zr	Au	Au
Unit Symbol	%	%	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	g/tonne
Lower Limit	0.001	0.001	0.01	2	1	1	0.01	20	1	2	10	1	10	1	1	5	0.02
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	FA-AA	FA- GRA
695114	0.093	0.051	1.79	3	2	139	< 0.01	< 20	1	< 2	< 10	8	< 10	3	18	43	
695115	0.112	0.065	3.11	4	2	116	< 0.01	< 20	< 1	< 2	< 10	11	< 10	3	18	91	
695116	0.100	0.074	1.54	< 2	1	108	< 0.01	< 20	2	< 2	< 10	8	< 10	3	12	50	
695117	0.108	0.066	2.51	4	2	120	< 0.01	< 20	< 1	< 2	< 10	13	< 10	3	18	30	
695118	0.097	0.069	1.20	3	2	90	< 0.01	< 20	4	< 2	< 10	9	< 10	3	11	15	
695119	0.077	0.073	6.47	7	3	118	< 0.01	< 20	< 1	< 2	< 10	16	< 10	3	18	73	
695120	0.091	0.078	8.30	10	3	127	< 0.01	< 20	< 1	< 2	< 10	18	< 10	4	22	350	
695121	0.083	0.074	7.65	10	2	123	< 0.01	< 20	5	< 2	< 10	17	< 10	3	21	362	
695122	0.082	0.093	4.99	8	3	120	< 0.01	< 20	< 1	< 2	< 10	18	< 10	4	20	148	



Analyte Symbol	Ag	Cd	Cu	Mn	Mo	Ni	Pb	Zn	Al	As	B	Ba	Be	Bi	Ca	Co	Cr	Fe	Ga	Hg	K	La	Mg
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	%
Lower Limit	0.2	0.5	1	5	1	1	2	2	0.01	2	10	10	0.5	2	0.01	1	1	0.01	10	1	0.01	10	0.01
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
GXR-1 Meas	32.3	2.2	1220	873	16	34	746	755	0.33	428	< 10	274	0.9	1520	0.79	8	8	26.0	< 10	4	0.03	< 10	0.14
GXR-1 Cert	31.0	3.30	1110	852	18.0	41.0	730	760	3.52	427	15.0	750	1.22	1380	0.960	8.20	12.0	23.6	13.8	3.90	0.050	7.50	0.217
GXR-1 Meas	31.7	2.8	1180	873	16	32	744	749	0.33	424	11	278	0.9	1480	0.80	8	7	25.2	< 10	3	0.03	< 10	0.14
GXR-1 Cert	31.0	3.30	1110	852	18.0	41.0	730	760	3.52	427	15.0	750	1.22	1380	0.960	8.20	12.0	23.6	13.8	3.90	0.050	7.50	0.217
GXR-6 Meas	0.2	< 0.5	69	1110	1	21	104	130	6.61	259	< 10	1060	1.0	< 2	0.15	15	89	5.97	20	< 1	1.13	12	0.40
GXR-6 Cert	1.30	1.00	66.0	1010	2.40	27.0	101	118	17.7	330	9.80	1300	1.40	0.290	0.180	13.8	96.0	5.58	35.0	0.0680	1.87	13.9	0.609
GXR-6 Meas	0.2	< 0.5	64	1040	1	21	98	122	6.16	244	< 10	993	1.0	< 2	0.14	15	84	5.53	20	< 1	1.06	11	0.38
GXR-6 Cert	1.30	1.00	66.0	1010	2.40	27.0	101	118	17.7	330	9.80	1300	1.40	0.290	0.180	13.8	96.0	5.58	35.0	0.0680	1.87	13.9	0.609
OREAS 134b (AQUA REGIA) Meas	> 100	583	1370				> 5000	> 10000		236						113		12.5					
OREAS 134b (AQUA REGIA) Cert	204	563	1360				133000	177000		221						106		12.25					
OREAS 133a (Aqua Regia) Meas	> 100	316	327				> 5000	> 10000		147		13				25		8.43					
OREAS 133a (Aqua Regia) Cert	97	297	324				48600.00	106000.00		140		59				23		7.92					
OXN117 Meas																							
OXN117 Cert																							
OxP116 Meas																							
OxP116 Cert																							
OREAS 203 Meas																							
OREAS 203 Cert																							
OREAS 218 Meas																							
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OREAS 218 Cert																							
OREAS 224 Meas																							
OREAS 224 Cert																							
OREAS 224 Meas																							
OREAS 224 Cert																							
OREAS 224 Meas																							
OREAS 224 Cert																							
OREAS 224 Meas																							

Analyte Symbol	Ag	Cd	Cu	Mn	Mo	Ni	Pb	Zn	Al	As	B	Ba	Be	Bi	Ca	Co	Cr	Fe	Ga	Hg	K	La	Mg
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	%
Lower Limit	0.2	0.5	1	5	1	1	2	2	0.01	2	10	10	0.5	2	0.01	1	1	0.01	10	1	0.01	10	0.01
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
OREAS 224 Cert																							
OREAS 224 Meas																							
OREAS 224 Cert																							
OREAS 224 Meas																							
OREAS 224 Cert																							
694950 Orig	< 0.2	< 0.5	8	2610	9	15	7	21	0.08	15	< 10	< 10	< 0.5	< 2	0.04	3	80	5.35	< 10	< 1	< 0.01	< 10	0.20
694950 Dup	< 0.2	< 0.5	5	2470	9	15	7	14	0.07	10	< 10	< 10	< 0.5	< 2	0.03	3	78	5.03	< 10	< 1	< 0.01	< 10	0.18
694957 Orig																							
694957 Dup																							
694958 Orig	0.2	< 0.5	13	3820	< 1	162	25	61	0.38	87	< 10	< 10	< 0.5	< 2	0.07	35	30	23.5	< 10	< 1	< 0.01	< 10	0.45
694958 Dup	0.2	< 0.5	13	3830	1	164	28	58	0.38	89	< 10	< 10	< 0.5	< 2	0.07	33	30	23.4	< 10	< 1	< 0.01	< 10	0.45
694967 Orig																							
694967 Dup																							
694977 Orig																							
694977 Dup																							
694992 Orig																							
694992 Dup																							
694997 Orig	< 0.2	< 0.5	13	1720	< 1	78	< 2	35	0.88	10	< 10	52	< 0.5	< 2	4.84	15	24	3.63	< 10	< 1	0.13	11	2.35
694997 Split PREP DUP	< 0.2	< 0.5	14	1730	< 1	70	3	36	0.89	9	< 10	52	< 0.5	< 2	4.88	15	24	3.65	< 10	< 1	0.14	11	2.37
694997 Split PREP DUP	< 0.2	< 0.5	14	1730	< 1	70	3	36	0.89	9	< 10	52	< 0.5	< 2	4.88	15	24	3.65	< 10	< 1	0.14	11	2.37
695001 Orig																							
695001 Dup																							
695010 Orig	< 0.2	< 0.5	23	289	1	54	2	127	1.28	15	< 10	95	< 0.5	< 2	1.48	23	29	1.77	< 10	< 1	0.28	18	0.50
695010 Dup	< 0.2	< 0.5	21	294	< 1	56	< 2	129	1.33	11	< 10	100	< 0.5	< 2	1.53	23	36	1.82	< 10	< 1	0.29	20	0.52
695011 Orig																							
695011 Dup																							
695013 Orig	< 0.2	< 0.5	8	460	< 1	34	3	96	1.48	4	< 10	96	< 0.5	< 2	3.45	14	21	1.82	< 10	< 1	0.30	21	0.60
695013 Dup	< 0.2	< 0.5	7	458	< 1	33	< 2	95	1.47	3	< 10	97	< 0.5	< 2	3.43	14	20	1.80	< 10	< 1	0.30	20	0.60
695026 Orig	< 0.2	< 0.5	35	692	< 1	193	2	110	2.45	5	< 10	157	< 0.5	< 2	3.06	39	57	3.73	10	< 1	0.48	43	0.80
695026 Dup	< 0.2	< 0.5	37	724	< 1	199	< 2	116	2.59	5	< 10	164	< 0.5	< 2	3.19	41	60	3.92	10	< 1	0.51	45	0.84
695036 Orig																							
695036 Dup																							
695038 Orig	< 0.2	< 0.5	31	734	< 1	140	< 2	84	3.37	11	17	306	0.6	< 2	3.45	31	55	3.12	10	< 1	0.96	42	0.72
695038 Dup	< 0.2	< 0.5	32	733	< 1	139	2	84	3.32	11	17	308	0.6	< 2	3.46	31	55	3.12	10	< 1	0.96	42	0.73
695046 Orig																							
695046 Dup																							
695047 Orig	< 0.2	< 0.5	36	979	< 1	162	2	90	2.15	31	< 10	153	< 0.5	< 2	3.96	38	40	4.27	< 10	< 1	0.43	44	0.87
695047 Split PREP DUP	< 0.2	< 0.5	35	935	< 1	160	< 2	86	2.06	31	< 10	149	< 0.5	< 2	3.82	36	39	4.11	< 10	< 1	0.42	43	0.84
695051 Orig	< 0.2	< 0.5	< 1	111	< 1	< 1	< 2	20	4.67	< 2	11	12	0.6	< 2	0.21	< 1	2	0.73	10	< 1	1.49	< 10	0.05
695051 Dup	< 0.2	< 0.5	< 1	108	< 1	< 1	< 2	19	4.60	< 2	12	12	0.6	< 2	0.20	< 1	2	0.72	10	< 1	1.49	< 10	0.06

Analyte Symbol	Ag	Cd	Cu	Mn	Mo	Ni	Pb	Zn	Al	As	B	Ba	Be	Bi	Ca	Co	Cr	Fe	Ga	Hg	K	La	Mg
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	%
Lower Limit	0.2	0.5	1	5	1	1	2	2	0.01	2	10	10	0.5	2	0.01	1	1	0.01	10	1	0.01	10	0.01
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
695060 Orig																							
695060 Dup																							
695070 Orig																							
695070 Dup																							
695080 Orig																							
695080 Dup																							
695082 Orig	< 0.2	< 0.5	13	515	1	54	6	55	0.73	32	< 10	82	< 0.5	< 2	1.65	19	17	1.96	< 10	< 1	0.27	20	0.34
695082 Dup	< 0.2	< 0.5	15	523	1	58	6	58	0.76	35	< 10	85	< 0.5	< 2	1.67	19	24	2.00	< 10	< 1	0.27	20	0.35
695083 Orig	< 0.2	< 0.5	12	603	< 1	56	9	53	0.60	49	< 10	69	< 0.5	< 2	2.09	16	20	2.23	< 10	< 1	0.22	17	0.61
695083 Dup	< 0.2	< 0.5	12	614	< 1	59	8	52	0.60	52	< 10	68	< 0.5	< 2	2.13	16	21	2.28	< 10	< 1	0.22	16	0.63
695095 Orig																							
695095 Dup																							
695097 Orig	< 0.2	< 0.5	27	866	< 1	48	< 2	110	0.75	59	< 10	64	< 0.5	2	2.31	19	14	3.35	< 10	< 1	0.20	20	0.52
695097 Split PREP DUP	< 0.2	< 0.5	26	865	< 1	48	2	103	0.72	58	< 10	62	< 0.5	< 2	2.33	19	13	3.37	< 10	< 1	0.19	19	0.52
695104 Orig																							
695104 Dup																							
695114 Orig																							
695114 Dup																							
Method Blank																							
Method Blank																							
Method Blank																							
Method Blank																							
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Method Blank																							
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Method Blank																							
Method Blank																							
Method Blank																							
Method Blank																							
Method Blank	< 0.2	< 0.5	< 1	< 5	< 1	< 1	< 2	< 2	< 0.01	< 2	< 10	< 10	< 0.5	< 2	< 0.01	< 1	< 1	< 0.01	< 10	< 1	< 0.01	< 10	< 0.01
Method Blank	< 0.2	< 0.5	< 1	< 5	< 1	< 1	< 2	< 2	< 0.01	< 2	< 10	< 10	< 0.5	< 2	< 0.01	< 1	< 1	< 0.01	< 10	< 1	< 0.01	< 10	< 0.01
Method Blank	< 0.2	< 0.5	< 1	< 5	< 1	< 1	< 2	< 2	< 0.01	< 2	< 10	< 10	< 0.5	< 2	< 0.01	< 1	< 1	< 0.01	< 10	< 1	< 0.01	< 10	< 0.01

Analyte Symbol	Na	P	S	Sb	Sc	Sr	Ti	Th	Te	Tl	U	V	W	Y	Zr	Au	Au
Unit Symbol	%	%	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	g/tonne
Lower Limit	0.001	0.001	0.01	2	1	1	0.01	20	1	2	10	1	10	1	1	5	0.02
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	FA-AA	FA- GRA
GXR-1 Meas	0.054	0.046	0.21	84	1	181	< 0.01	< 20	10	< 2	29	81	147	27	16		
GXR-1 Cert	0.0520	0.0650	0.257	122	1.58	275	0.036	2.44	13.0	0.390	34.9	80.0	164	32.0	38.0		
GXR-1 Meas	0.054	0.045	0.20	84	1	176	< 0.01	< 20	12	< 2	30	78	146	26	16		
GXR-1 Cert	0.0520	0.0650	0.257	122	1.58	275	0.036	2.44	13.0	0.390	34.9	80.0	164	32.0	38.0		
GXR-6 Meas	0.089	0.037	0.02	4	24	35		< 20	4	< 2	< 10	173	< 10	6	15		
GXR-6 Cert	0.104	0.0350	0.0160	3.60	27.6	35.0		5.30	0.0180	2.20	1.54	186	1.90	14.0	110		
GXR-6 Meas	0.083	0.035	0.01	3	23	34		< 20	< 1	< 2	< 10	160	< 10	6	14		
GXR-6 Cert	0.104	0.0350	0.0160	3.60	27.6	35.0		5.30	0.0180	2.20	1.54	186	1.90	14.0	110		
OREAS 134b (AQUA REGIA) Meas			14.4														
OREAS 134b (AQUA REGIA) Cert			19.31														
OREAS 133a (Aqua Regia) Meas			10.5	131													
OREAS 133a (Aqua Regia) Cert			10.7	147													
OXN117 Meas																	7.85
OXN117 Cert																	7.679
OxP116 Meas																	15.1
OxP116 Cert																	14.92
OREAS 203 Meas																	832
OREAS 203 Cert																	871
OREAS 218 Meas																	534
OREAS 218 Cert																	531
OREAS 218 Meas																	543
OREAS 218 Cert																	531
OREAS 218 Meas																	514
OREAS 218 Cert																	531
OREAS 218 Meas																	518
OREAS 218 Cert																	531
OREAS 218 Meas																	542
OREAS 218 Cert																	531
OREAS 218 Meas																	541
OREAS 218 Cert																	531
OREAS 224 Meas																	2180
OREAS 224 Cert																	2150.00
OREAS 224 Meas																	2100
OREAS 224 Cert																	2150.00

Analyte Symbol	Na	P	S	Sb	Sc	Sr	Ti	Th	Te	Tl	U	V	W	Y	Zr	Au	Au
Unit Symbol	%	%	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	g/tonne
Lower Limit	0.001	0.001	0.01	2	1	1	0.01	20	1	2	10	1	10	1	1	5	0.02
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	FA-AA	FA- GRA
OREAS 224 Meas																2110	
OREAS 224 Cert																2150.0 00	
OREAS 224 Meas																2080	
OREAS 224 Cert																2150.0 00	
OREAS 224 Meas																2120	
OREAS 224 Cert																2150.0 00	
OREAS 224 Meas																2120	
OREAS 224 Cert																2150.0 00	
694950 Orig	0.015	0.002	2.91	3	1	4	< 0.01	< 20	< 1	< 2	< 10	6	< 10	2	5		
694950 Dup	0.014	0.001	2.78	3	< 1	3	< 0.01	< 20	< 1	< 2	< 10	6	< 10	1	5		
694957 Orig																	< 5
694957 Dup																	< 5
694958 Orig	0.024	0.012	17.3	10	4	4	< 0.01	< 20	< 1	< 2	< 10	22	< 10	4	15		
694958 Dup	0.020	0.012	16.1	11	4	4	< 0.01	< 20	< 1	< 2	< 10	22	< 10	4	15		
694967 Orig																	26
694967 Dup																	22
694977 Orig																	5
694977 Dup																	6
694992 Orig																	8
694992 Dup																	5
694997 Orig	0.070	0.088	0.59	< 2	3	75	< 0.01	< 20	2	< 2	< 10	16	< 10	9	7	< 5	
694997 Split PREP DUP	0.071	0.089	0.59	< 2	3	75	< 0.01	< 20	< 1	< 2	< 10	16	< 10	9	7	< 5	
694997 Split PREP DUP	0.071	0.089	0.59	< 2	3	75	< 0.01	< 20	< 1	< 2	< 10	16	< 10	9	7		
695001 Orig																	< 5
695001 Dup																	< 5
695010 Orig	0.129	0.091	0.33	< 2	2	84	< 0.01	< 20	2	< 2	< 10	17	< 10	4	3		
695010 Dup	0.138	0.093	0.34	< 2	3	87	< 0.01	< 20	< 1	< 2	< 10	17	< 10	4	3		
695011 Orig																	< 5
695011 Dup																	< 5
695013 Orig	0.138	0.075	0.08	< 2	3	263	< 0.01	< 20	< 1	< 2	< 10	16	< 10	5	5		
695013 Dup	0.140	0.074	0.08	< 2	3	258	< 0.01	< 20	< 1	< 2	< 10	16	< 10	5	5		
695026 Orig	0.141	0.273	0.15	< 2	6	160	< 0.01	< 20	< 1	< 2	< 10	59	< 10	8	3	8	
695026 Dup	0.146	0.285	0.17	< 2	6	169	< 0.01	< 20	2	< 2	< 10	62	< 10	9	3	8	
695036 Orig																	5
695036 Dup																	< 5
695038 Orig	0.273	0.252	0.10	< 2	7	271	< 0.01	< 20	< 1	< 2	< 10	77	< 10	8	2		
695038 Dup	0.275	0.253	0.10	< 2	7	267	< 0.01	< 20	< 1	< 2	< 10	78	< 10	8	2		

Analyte Symbol	Na	P	S	Sb	Sc	Sr	Ti	Th	Te	Tl	U	V	W	Y	Zr	Au	Au
Unit Symbol	%	%	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	g/tonne
Lower Limit	0.001	0.001	0.01	2	1	1	0.01	20	1	2	10	1	10	1	1	5	0.02
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	FA-AA	FA- GRA
695046 Orig																	< 5
695046 Dup																	< 5
695047 Orig	0.259	0.265	0.11	< 2	5	213	< 0.01	< 20	< 1	< 2	< 10	51	< 10	8	3	< 5	
695047 Split PREP DUP	0.251	0.256	0.11	< 2	5	200	< 0.01	< 20	2	< 2	< 10	49	< 10	7	3	5	
695051 Orig	3.30	0.002	< 0.01	< 2	< 1	24	< 0.01	< 20	2	< 2	< 10	< 1	< 10	4	1		
695051 Dup	3.34	0.002	< 0.01	< 2	< 1	24	< 0.01	< 20	1	< 2	< 10	< 1	< 10	4	1		
695060 Orig																	27
695060 Dup																	15
695070 Orig																	< 5
695070 Dup																	6
695080 Orig																	7
695080 Dup																	8
695082 Orig	0.142	0.075	0.71	< 2	2	91	< 0.01	< 20	3	< 2	< 10	8	< 10	4	5		
695082 Dup	0.148	0.075	0.72	< 2	2	94	< 0.01	< 20	< 1	< 2	< 10	8	< 10	4	5		
695083 Orig	0.112	0.074	0.85	< 2	1	79	< 0.01	< 20	3	< 2	< 10	6	< 10	4	7		
695083 Dup	0.112	0.075	0.86	< 2	2	81	< 0.01	< 20	< 1	< 2	< 10	6	< 10	4	7		
695095 Orig																	18
695095 Dup																	16
695097 Orig	0.097	0.094	0.59	< 2	3	135	< 0.01	< 20	< 1	< 2	< 10	10	< 10	4	7	78	
695097 Split PREP DUP	0.093	0.095	0.59	< 2	3	131	< 0.01	< 20	< 1	< 2	< 10	10	< 10	4	6	36	
695104 Orig																	17
695104 Dup																	15
695114 Orig																	45
695114 Dup																	41
Method Blank																	< 5
Method Blank																	< 5
Method Blank																	< 5
Method Blank																	< 5
Method Blank																	< 5
Method Blank																	< 5
Method Blank																	< 5
Method Blank																	< 5
Method Blank																	< 5
Method Blank																	< 5
Method Blank																	< 5
Method Blank																	< 0.02
Method Blank																	< 0.02
Method Blank																	< 5
Method Blank																	< 5

Analyte Symbol	Na	P	S	Sb	Sc	Sr	Ti	Th	Te	Tl	U	V	W	Y	Zr	Au	Au
Unit Symbol	%	%	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	g/tonne
Lower Limit	0.001	0.001	0.01	2	1	1	0.01	20	1	2	10	1	10	1	1	5	0.02
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	FA-AA	FA- GRA
Method Blank	0.011	< 0.001	< 0.01	< 2	< 1	< 1	< 0.01	< 20	< 1	< 2	< 10	< 1	< 10	< 1	< 1		
Method Blank	0.013	< 0.001	< 0.01	< 2	< 1	< 1	< 0.01	< 20	< 1	< 2	< 10	< 1	< 10	< 1	< 1		
Method Blank	0.010	< 0.001	< 0.01	< 2	< 1	< 1	< 0.01	< 20	< 1	< 2	< 10	< 1	< 10	< 1	< 1		



**Date Submitted:** 19-Mar-18  
**Invoice No.:** A18-03400  
**Invoice Date:** 23-May-18  
**Your Reference:** 81 Lucas

**Noble Mineral Exploration**  
**2500-120 Adelaide Street West**  
**Toronto ON M5H 1T1**  
**Canada**

**ATTN: Randy Singh (inv-cc)**

## CERTIFICATE OF ANALYSIS

175 Rock samples were submitted for analysis.

The following analytical package(s) were requested:

Code 1A2-Timmins Au - Fire Assay AA

Code 1E3-Timmins Aqua Regia ICP(AQUAGEO)

REPORT      **A18-03400**

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Notes:

If value exceeds upper limit we recommend reassay by fire assay gravimetric-Code 1A3.

Values which exceed the upper limit should be assayed for accurate numbers.

CERTIFIED BY:

A handwritten signature in black ink, appearing to be "Emmanuel Esemé". The signature is stylized and somewhat cursive, written over a horizontal line.

Emmanuel Esemé , Ph.D.  
Quality Control

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Results

Activation Laboratories Ltd.

Report: A18-03400

Analyte Symbol	Ag	Cd	Cu	Mn	Mo	Ni	Pb	Zn	Al	As	B	Ba	Be	Bi	Ca	Co	Cr	Fe	Ga	Hg	K	La	Mg
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	%
Lower Limit	0.2	0.5	1	5	1	1	2	2	0.01	2	10	10	0.5	2	0.01	1	1	0.01	10	1	0.01	10	0.01
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
695123	3.4	< 0.5	51	3680	< 1	307	95	56	1.32	584	< 10	< 10	< 0.5	5	0.99	92	22	25.5	< 10	1	0.12	< 10	0.74
695124	0.4	< 0.5	20	4190	2	154	15	50	1.52	273	< 10	29	< 0.5	< 2	2.09	32	28	12.9	< 10	< 1	0.25	< 10	0.89
695125	0.3	< 0.5	23	4040	4	222	12	64	1.33	441	< 10	32	< 0.5	< 2	2.54	38	32	11.9	< 10	< 1	0.21	< 10	0.96
695126	< 0.2	< 0.5	12	3610	2	171	4	48	1.54	211	< 10	48	< 0.5	< 2	2.18	31	25	9.91	< 10	< 1	0.25	< 10	0.85
695127	< 0.2	< 0.5	8	4790	< 1	107	< 2	46	1.43	94	< 10	49	< 0.5	< 2	2.00	16	21	11.7	< 10	< 1	0.20	< 10	0.93
695128	0.5	< 0.5	21	4100	< 1	163	11	45	1.49	269	< 10	18	< 0.5	< 2	2.27	36	26	16.3	< 10	< 1	0.20	< 10	0.92
695129	1.3	< 0.5	133	605	4	166	32	62	2.97	58	12	54	< 0.5	< 2	2.88	33	479	4.25	< 10	< 1	0.19	< 10	3.15
695130	< 0.2	< 0.5	16	4420	1	194	< 2	47	1.32	118	< 10	38	< 0.5	< 2	2.15	34	21	11.8	< 10	< 1	0.12	< 10	0.98
695131	< 0.2	< 0.5	11	3370	2	222	5	41	1.38	195	< 10	30	< 0.5	< 2	2.27	36	28	11.7	< 10	< 1	0.18	< 10	0.85
695132	0.3	< 0.5	23	4410	< 1	192	12	50	1.12	377	< 10	12	< 0.5	3	1.61	45	27	22.4	< 10	< 1	0.08	< 10	0.90
695133	0.4	< 0.5	27	3890	< 1	225	16	52	1.28	471	< 10	< 10	< 0.5	< 2	1.31	62	24	23.2	< 10	< 1	0.16	< 10	0.82
695134	0.3	< 0.5	7	6790	< 1	80	6	88	1.47	151	< 10	25	< 0.5	< 2	2.31	19	20	19.7	< 10	< 1	0.11	< 10	1.40
695135	< 0.2	< 0.5	5	6070	< 1	48	< 2	71	1.48	51	< 10	49	< 0.5	< 2	2.11	14	21	14.2	< 10	< 1	0.17	< 10	1.20
695136	< 0.2	< 0.5	24	5610	< 1	146	5	103	1.39	220	< 10	24	< 0.5	< 2	1.62	29	18	17.4	< 10	< 1	0.17	< 10	1.05
695137	< 0.2	< 0.5	< 1	103	< 1	< 1	< 2	16	4.11	< 2	10	< 10	0.5	< 2	0.17	< 1	1	0.56	< 10	< 1	1.30	< 10	0.05
695138	< 0.2	< 0.5	11	4750	< 1	61	3	59	1.57	365	< 10	51	< 0.5	< 2	2.47	14	47	11.3	< 10	< 1	0.26	< 10	1.01
695139	0.2	< 0.5	15	5200	< 1	163	5	68	1.37	1910	< 10	37	< 0.5	< 2	2.09	24	27	12.8	< 10	< 1	0.22	< 10	1.04
695140	0.2	< 0.5	16	5370	< 1	109	10	71	1.13	349	< 10	28	< 0.5	< 2	1.62	19	25	13.6	< 10	< 1	0.22	< 10	1.02
695141	0.2	< 0.5	24	2090	1	183	9	69	1.15	494	< 10	26	< 0.5	< 2	2.31	32	42	8.60	< 10	< 1	0.24	< 10	0.72
695142	< 0.2	< 0.5	44	1730	2	380	9	70	1.44	606	< 10	45	< 0.5	< 2	3.26	63	30	7.07	< 10	< 1	0.32	< 10	0.97
695143	< 0.2	< 0.5	108	1300	2	465	8	292	1.58	878	< 10	26	< 0.5	< 2	2.86	70	29	9.96	< 10	< 1	0.30	< 10	0.99
695144	< 0.2	< 0.5	66	1050	2	440	9	62	1.41	730	< 10	32	< 0.5	< 2	2.70	69	35	8.46	< 10	< 1	0.26	< 10	0.93
695145	0.2	< 0.5	66	1020	2	443	8	60	1.44	721	< 10	34	< 0.5	< 2	2.67	70	34	8.15	< 10	< 1	0.28	< 10	0.92
695146	< 0.2	< 0.5	50	991	2	564	8	92	1.40	845	< 10	37	< 0.5	< 2	3.47	70	30	8.20	< 10	< 1	0.32	< 10	1.24
695147	< 0.2	< 0.5	38	866	1	653	4	278	1.18	697	< 10	38	< 0.5	< 2	4.07	70	28	7.91	< 10	< 1	0.28	< 10	1.60
695148	< 0.2	< 0.5	38	848	< 1	545	3	635	1.01	630	< 10	42	< 0.5	< 2	4.61	68	31	7.45	< 10	< 1	0.27	< 10	1.92
695149	< 0.2	< 0.5	51	756	2	685	10	709	1.16	775	< 10	21	< 0.5	< 2	3.13	91	30	11.3	< 10	< 1	0.25	< 10	1.49
695150	0.3	< 0.5	45	921	1	581	13	790	1.04	661	< 10	14	< 0.5	2	2.36	80	34	14.8	< 10	< 1	0.22	< 10	1.41
695151	0.5	< 0.5	30	1590	1	487	28	661	0.77	790	< 10	14	< 0.5	< 2	2.17	83	29	16.1	< 10	< 1	0.23	< 10	1.53
695152	0.2	< 0.5	29	3240	< 1	138	17	58	0.84	375	< 10	21	< 0.5	< 2	2.68	35	24	13.2	< 10	< 1	0.23	< 10	1.33
695153	< 0.2	< 0.5	177	788	< 1	80	< 2	175	3.62	24	< 10	26	< 0.5	< 2	2.68	36	50	5.31	< 10	< 1	0.05	< 10	1.46
695154	< 0.2	< 0.5	21	2090	< 1	97	5	34	1.04	251	< 10	42	< 0.5	< 2	2.79	25	33	8.33	< 10	< 1	0.21	10	1.06
695155	0.3	< 0.5	21	8080	< 1	82	10	61	0.49	346	< 10	15	< 0.5	2	2.00	28	20	22.7	< 10	< 1	0.09	< 10	1.96
695156	< 0.2	< 0.5	98	1520	3	130	6	79	1.51	976	< 10	78	< 0.5	< 2	1.42	32	51	6.92	< 10	< 1	0.08	17	2.33
695157	< 0.2	< 0.5	162	1090	< 1	85	< 2	214	3.77	161	< 10	41	0.7	< 2	2.78	34	65	7.37	< 10	< 1	0.08	< 10	1.60
695158	< 0.2	< 0.5	20	2620	< 1	107	13	39	1.01	332	< 10	22	< 0.5	< 2	3.13	30	30	11.6	< 10	< 1	0.15	< 10	1.30
695159	0.4	< 0.5	44	2590	< 1	134	12	51	0.72	419	< 10	12	< 0.5	< 2	2.17	44	23	20.3	< 10	< 1	0.10	< 10	1.39
695160	1.4	< 0.5	45	3030	< 1	78	53	68	0.23	438	< 10	< 10	< 0.5	< 2	1.96	44	13	20.5	< 10	1	0.04	< 10	1.02
695161	0.7	< 0.5	34	5520	< 1	115	18	44	0.60	407	< 10	16	< 0.5	< 2	2.65	30	20	19.5	< 10	< 1	0.14	< 10	1.51
695162	1.5	< 0.5	35	1400	< 1	68	17	72	0.27	557	< 10	< 10	< 0.5	< 2	1.13	39	21	18.7	< 10	< 1	0.07	< 10	0.48
695163	1.4	< 0.5	37	2190	< 1	109	21	74	0.46	689	< 10	< 10	< 0.5	< 2	1.06	47	23	19.9	< 10	< 1	0.12	< 10	0.62
695164	< 0.2	< 0.5	4	97	< 1	1	< 2	17	4.01	5	< 10	< 10	0.5	< 2	0.18	< 1	1	0.56	< 10	< 1	1.31	< 10	0.06

Analyte Symbol	Ag	Cd	Cu	Mn	Mo	Ni	Pb	Zn	Al	As	B	Ba	Be	Bi	Ca	Co	Cr	Fe	Ga	Hg	K	La	Mg
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	%
Lower Limit	0.2	0.5	1	5	1	1	2	2	0.01	2	10	10	0.5	2	0.01	1	1	0.01	10	1	0.01	10	0.01
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
695165	1.9	< 0.5	48	733	< 1	92	32	143	0.24	645	< 10	< 10	< 0.5	< 2	1.04	47	22	18.8	< 10	1	0.06	< 10	0.38
695166	1.3	< 0.5	50	2520	< 1	67	62	90	0.23	1270	< 10	< 10	< 0.5	< 2	2.22	37	14	18.9	< 10	< 1	0.05	< 10	1.03
695167	< 0.2	< 0.5	7	1070	< 1	22	3	33	0.92	45	< 10	73	< 0.5	< 2	2.92	10	19	3.22	< 10	< 1	0.25	< 10	0.97
695168	< 0.2	< 0.5	38	1170	< 1	72	< 2	57	1.25	130	< 10	76	< 0.5	< 2	3.84	42	30	4.02	< 10	< 1	0.26	< 10	1.16
695169	< 0.2	< 0.5	15	1190	< 1	53	< 2	60	1.37	55	< 10	60	< 0.5	< 2	3.17	16	25	3.72	< 10	< 1	0.21	13	1.08
695170	< 0.2	< 0.5	12	970	< 1	23	< 2	165	1.12	21	< 10	74	< 0.5	< 2	2.53	8	22	2.56	< 10	< 1	0.24	18	0.74
695171	< 0.2	< 0.5	12	958	< 1	24	< 2	41	1.03	23	< 10	78	< 0.5	< 2	2.32	9	14	2.86	< 10	< 1	0.24	18	0.71
695172	< 0.2	< 0.5	15	932	< 1	54	< 2	47	0.96	36	< 10	85	< 0.5	< 2	3.06	20	28	2.68	< 10	< 1	0.25	14	0.97
695173	0.2	< 0.5	5	5470	< 1	157	8	81	0.76	84	< 10	29	< 0.5	< 2	4.03	39	29	17.5	< 10	1	0.09	< 10	2.54
695174	0.3	< 0.5	4	5630	< 1	169	6	82	0.76	95	< 10	29	< 0.5	3	4.32	43	29	18.5	< 10	< 1	0.09	< 10	2.58
695175	< 0.2	< 0.5	7	3600	6	120	6	56	0.70	58	< 10	33	< 0.5	< 2	5.66	35	29	11.7	< 10	< 1	0.10	< 10	2.80
695176	0.6	< 0.5	4	4130	< 1	149	12	62	0.70	227	< 10	13	< 0.5	3	1.53	49	15	24.4	< 10	2	0.05	< 10	2.20
695177	0.9	< 0.5	9	3440	< 1	177	34	69	0.61	253	< 10	11	< 0.5	5	1.94	64	19	23.7	< 10	< 1	0.03	< 10	1.89
695178	< 0.2	< 0.5	41	1660	2	111	< 2	70	1.91	26	< 10	73	< 0.5	< 2	3.89	26	141	5.76	< 10	< 1	0.21	14	1.53
695179	0.3	< 0.5	< 1	63	< 1	< 1	< 2	11	3.97	< 2	< 10	10	< 0.5	< 2	0.16	< 1	< 1	0.27	< 10	< 1	1.35	< 10	0.04
695180	< 0.2	< 0.5	36	908	< 1	106	< 2	53	1.96	11	< 10	81	< 0.5	< 2	2.79	25	133	5.10	< 10	< 1	0.25	11	1.18
695181	< 0.2	< 0.5	56	902	< 1	118	2	58	1.83	9	< 10	83	< 0.5	< 2	2.67	29	81	5.19	< 10	< 1	0.25	< 10	1.19
695182	< 0.2	< 0.5	29	879	< 1	103	< 2	57	1.79	11	< 10	96	< 0.5	< 2	2.78	25	63	4.42	< 10	< 1	0.28	11	1.23
695183	< 0.2	< 0.5	38	766	< 1	85	< 2	45	1.57	14	< 10	79	< 0.5	< 2	2.28	26	61	3.86	< 10	< 1	0.24	13	0.85
695184	< 0.2	< 0.5	33	1050	< 1	106	< 2	54	1.75	16	< 10	82	< 0.5	< 2	3.58	27	58	5.21	< 10	< 1	0.24	< 10	1.52
695185	< 0.2	< 0.5	37	1030	< 1	106	< 2	55	1.42	28	< 10	83	< 0.5	< 2	3.30	28	44	4.64	< 10	< 1	0.24	< 10	1.31
695186	< 0.2	< 0.5	35	1010	< 1	111	2	45	1.40	32	< 10	93	< 0.5	< 2	2.66	34	48	4.52	< 10	< 1	0.29	10	0.97
695187	< 0.2	< 0.5	41	895	< 1	93	< 2	41	1.55	15	< 10	90	< 0.5	< 2	2.26	24	47	4.26	< 10	< 1	0.28	14	0.90
695188	< 0.2	< 0.5	42	1260	< 1	87	2	44	1.32	9	< 10	85	< 0.5	< 2	2.61	22	37	5.06	< 10	< 1	0.29	11	0.92
695189	< 0.2	< 0.5	165	676	< 1	78	3	62	3.43	7	42	29	< 0.5	< 2	2.84	36	137	5.63	10	< 1	0.05	< 10	2.27
695190	< 0.2	< 0.5	35	941	< 1	78	3	42	1.58	4	< 10	88	< 0.5	< 2	2.05	17	42	3.94	< 10	< 1	0.30	12	0.70
695191	< 0.2	< 0.5	33	1240	< 1	79	< 2	60	1.83	3	< 10	72	< 0.5	2	2.41	17	54	4.46	< 10	< 1	0.25	15	0.94
695192	< 0.2	< 0.5	39	1200	< 1	81	< 2	60	1.86	8	< 10	87	< 0.5	< 2	2.35	17	54	4.15	< 10	< 1	0.30	18	0.89
695193	< 0.2	< 0.5	38	1250	< 1	95	< 2	67	1.99	11	< 10	92	< 0.5	< 2	2.65	18	69	4.34	< 10	< 1	0.33	21	1.05
695194	< 0.2	< 0.5	48	1370	2	118	< 2	93	1.81	11	< 10	82	< 0.5	2	3.03	21	120	4.37	< 10	< 1	0.30	20	1.11
695195	< 0.2	< 0.5	< 1	80	< 1	< 1	< 2	15	4.63	< 2	11	11	0.6	< 2	0.18	< 1	1	0.49	< 10	< 1	1.37	< 10	0.05
695196	< 0.2	< 0.5	41	1190	< 1	109	< 2	79	1.86	7	< 10	80	< 0.5	< 2	2.67	19	118	4.25	< 10	< 1	0.30	21	0.96
695197	< 0.2	< 0.5	34	1840	< 1	152	< 2	79	2.23	19	< 10	62	< 0.5	< 2	2.63	34	125	6.64	< 10	< 1	0.23	17	1.20
695198	< 0.2	< 0.5	36	973	< 1	94	< 2	58	1.79	11	< 10	68	< 0.5	3	2.64	19	89	4.25	< 10	< 1	0.25	21	0.92
695199	< 0.2	< 0.5	36	1220	< 1	80	< 2	76	1.75	7	< 10	83	< 0.5	4	2.74	17	69	4.00	< 10	< 1	0.30	21	0.89
695200	< 0.2	< 0.5	74	2090	< 1	159	< 2	79	2.34	3	< 10	57	< 0.5	< 2	2.81	29	102	7.20	< 10	< 1	0.20	12	1.18
695201	< 0.2	< 0.5	80	2200	< 1	157	< 2	78	2.32	2	< 10	59	< 0.5	< 2	2.98	29	105	7.21	< 10	< 1	0.20	13	1.22
695202	< 0.2	< 0.5	43	1920	< 1	185	5	94	2.38	10	< 10	51	< 0.5	< 2	3.94	37	98	10.3	< 10	< 1	0.16	< 10	1.83
695203	< 0.2	< 0.5	46	1470	< 1	146	< 2	71	2.88	8	< 10	57	< 0.5	< 2	2.40	39	140	8.44	< 10	< 1	0.21	< 10	1.40
695204	< 0.2	< 0.5	50	4500	< 1	106	< 2	72	2.13	3	< 10	39	< 0.5	< 2	3.51	29	90	10.4	< 10	< 1	0.15	< 10	1.71
695205	< 0.2	< 0.5	27	2880	2	102	5	112	1.91	26	< 10	36	< 0.5	< 2	1.57	40	34	11.7	< 10	< 1	0.20	< 10	0.98
695206	0.8	< 0.5	30	1900	3	106	53	64	1.67	146	< 10	17	< 0.5	< 2	1.58	45	23	15.7	< 10	1	0.20	< 10	0.76

Analyte Symbol	Ag	Cd	Cu	Mn	Mo	Ni	Pb	Zn	Al	As	B	Ba	Be	Bi	Ca	Co	Cr	Fe	Ga	Hg	K	La	Mg
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	%
Lower Limit	0.2	0.5	1	5	1	1	2	2	0.01	2	10	10	0.5	2	0.01	1	1	0.01	10	1	0.01	10	0.01
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
695207	0.9	< 0.5	25	1410	2	121	42	56	1.22	169	< 10	14	< 0.5	< 2	1.53	52	24	15.0	< 10	< 1	0.17	< 10	0.59
695208	< 0.2	< 0.5	< 1	68	< 1	< 1	< 2	15	3.69	< 2	< 10	< 10	< 0.5	< 2	0.15	< 1	< 1	0.43	< 10	< 1	1.22	< 10	0.04
695209	< 0.2	< 0.5	28	1080	< 1	120	< 2	58	1.93	14	< 10	82	< 0.5	< 2	2.30	33	60	4.36	< 10	< 1	0.27	14	0.93
695210	< 0.2	< 0.5	26	1040	< 1	97	< 2	68	1.70	17	< 10	84	< 0.5	< 2	3.00	24	62	3.95	< 10	< 1	0.28	19	1.06
695211	< 0.2	< 0.5	34	1160	< 1	139	< 2	66	1.89	25	< 10	81	< 0.5	< 2	3.49	32	62	4.92	< 10	< 1	0.27	14	1.34
695212	< 0.2	< 0.5	28	1020	< 1	113	< 2	78	2.23	21	< 10	68	< 0.5	< 2	3.10	29	68	5.70	< 10	< 1	0.23	16	1.27
695213	< 0.2	< 0.5	37	1080	< 1	117	< 2	92	2.28	44	< 10	77	< 0.5	< 2	3.40	34	73	5.84	< 10	< 1	0.27	20	1.30
695214	< 0.2	< 0.5	41	602	< 1	103	< 2	68	2.18	27	< 10	96	< 0.5	< 2	1.71	37	66	4.15	< 10	< 1	0.34	25	0.67
695215	< 0.2	< 0.5	37	690	< 1	100	< 2	70	2.05	31	< 10	102	< 0.5	< 2	2.15	43	53	4.29	< 10	< 1	0.35	33	0.68
695216	< 0.2	< 0.5	38	623	< 1	74	2	93	1.69	17	< 10	107	< 0.5	< 2	2.23	28	58	3.23	< 10	< 1	0.40	29	0.59
695217	< 0.2	< 0.5	39	382	5	90	3	138	1.49	37	< 10	104	< 0.5	< 2	1.55	39	36	2.21	< 10	< 1	0.40	35	0.37
695218	< 0.2	< 0.5	159	640	< 1	74	2	60	3.22	6	41	29	< 0.5	< 2	2.73	35	131	5.31	10	< 1	0.05	< 10	2.17
695219	< 0.2	< 0.5	35	500	< 1	81	2	83	1.35	23	< 10	88	< 0.5	< 2	2.15	27	41	2.77	< 10	< 1	0.34	29	0.57
695220	< 0.2	< 0.5	34	1300	< 1	103	3	165	2.26	11	< 10	64	< 0.5	< 2	2.72	28	71	7.56	< 10	< 1	0.24	19	0.89
695221	< 0.2	< 0.5	31	566	3	43	< 2	48	1.07	8	< 10	90	< 0.5	< 2	2.28	14	39	2.43	< 10	< 1	0.30	31	0.45
695222	< 0.2	< 0.5	27	806	1	38	3	59	1.17	6	< 10	91	< 0.5	< 2	3.23	13	29	2.24	< 10	< 1	0.30	28	0.39
695223	< 0.2	< 0.5	28	849	2	51	< 2	63	1.47	< 2	< 10	93	< 0.5	< 2	2.45	13	42	3.25	< 10	< 1	0.30	32	0.51
695224	< 0.2	< 0.5	11	1240	< 1	34	< 2	40	1.96	5	< 10	87	< 0.5	6	1.99	13	23	4.68	< 10	< 1	0.25	11	0.91
695225	< 0.2	< 0.5	22	919	< 1	27	< 2	18	1.17	9	< 10	103	< 0.5	< 2	2.81	13	25	2.38	< 10	< 1	0.32	11	1.12
695226	< 0.2	< 0.5	11	843	< 1	34	< 2	20	1.01	10	< 10	85	< 0.5	< 2	2.42	13	25	2.44	< 10	< 1	0.25	< 10	0.86
695227	< 0.2	< 0.5	15	829	< 1	24	< 2	20	0.78	9	< 10	70	< 0.5	< 2	2.39	11	20	2.28	< 10	< 1	0.20	12	0.78
695228	< 0.2	< 0.5	2	84	< 1	< 1	< 2	14	3.67	< 2	< 10	10	< 0.5	< 2	0.17	< 1	2	0.54	< 10	< 1	1.35	< 10	0.04
695229	< 0.2	< 0.5	15	866	< 1	25	2	27	0.86	7	< 10	84	< 0.5	< 2	2.75	11	13	2.50	< 10	< 1	0.22	16	0.87
695230	< 0.2	< 0.5	11	850	< 1	20	3	36	1.05	5	< 10	100	< 0.5	< 2	1.94	9	19	2.37	< 10	< 1	0.25	18	0.64
695231	< 0.2	< 0.5	23	1740	< 1	18	2	37	1.32	2	< 10	117	< 0.5	3	3.08	8	12	3.56	< 10	< 1	0.29	21	0.95
695232	0.3	< 0.5	14	3570	< 1	43	14	68	2.65	10	< 10	59	< 0.5	< 2	2.64	16	23	8.82	< 10	< 1	0.14	12	1.13
695233	< 0.2	< 0.5	8	3600	< 1	33	< 2	82	2.78	3	< 10	52	< 0.5	< 2	2.91	11	20	8.71	< 10	< 1	0.12	13	1.29
695234	< 0.2	< 0.5	5	3450	< 1	23	< 2	66	2.54	< 2	< 10	62	< 0.5	< 2	2.75	7	20	7.64	< 10	< 1	0.15	16	1.16
695235	< 0.2	< 0.5	5	2790	< 1	18	< 2	53	1.89	< 2	< 10	83	< 0.5	< 2	2.72	6	22	5.59	< 10	< 1	0.22	16	0.95
695236	< 0.2	< 0.5	8	1460	< 1	22	< 2	47	1.46	< 2	< 10	83	< 0.5	< 2	2.43	10	16	3.94	< 10	< 1	0.24	15	1.00
695237	< 0.2	< 0.5	8	1480	< 1	23	< 2	47	1.51	< 2	< 10	85	< 0.5	< 2	2.38	10	14	3.99	< 10	< 1	0.25	15	0.99
695238	< 0.2	< 0.5	12	1780	< 1	34	3	55	1.67	6	< 10	106	< 0.5	< 2	2.32	14	15	4.52	< 10	< 1	0.28	19	0.81
695239	0.2	< 0.5	22	1330	< 1	45	13	41	1.40	19	< 10	107	< 0.5	< 2	1.92	16	27	4.05	< 10	< 1	0.32	18	0.57
695240	< 0.2	< 0.5	22	1480	< 1	27	2	55	1.85	< 2	< 10	109	< 0.5	< 2	2.20	12	18	4.30	< 10	< 1	0.32	18	0.92
695241	< 0.2	< 0.5	16	2440	< 1	22	< 2	93	2.70	< 2	< 10	78	< 0.5	< 2	2.57	8	25	6.62	< 10	< 1	0.24	16	1.33
695242	< 0.2	< 0.5	10	3260	< 1	25	< 2	79	2.20	< 2	< 10	74	< 0.5	< 2	2.82	10	23	6.50	< 10	< 1	0.20	16	1.00
695243	< 0.2	< 0.5	12	2100	< 1	22	< 2	65	2.19	< 2	< 10	119	< 0.5	2	2.23	10	23	4.85	< 10	< 1	0.34	21	0.87
695244	< 0.2	< 0.5	11	1870	< 1	18	2	54	1.71	< 2	< 10	105	< 0.5	< 2	2.58	7	13	3.56	< 10	< 1	0.31	22	0.84
695245	< 0.2	< 0.5	12	2140	< 1	27	< 2	112	2.13	< 2	< 10	91	< 0.5	< 2	2.38	10	19	4.69	< 10	< 1	0.28	23	0.94
695246	< 0.2	< 0.5	11	1240	< 1	23	2	112	1.96	6	< 10	124	< 0.5	< 2	2.40	10	20	3.12	< 10	< 1	0.38	23	0.61
695247	< 0.2	< 0.5	8	618	< 1	18	3	71	1.75	6	< 10	148	< 0.5	< 2	2.24	9	17	1.77	< 10	< 1	0.47	23	0.41
695248	< 0.2	< 0.5	160	638	< 1	75	4	60	3.19	7	38	26	< 0.5	< 2	2.66	34	129	5.28	10	< 1	0.05	< 10	2.15

## Results

## Activation Laboratories Ltd.

## Report: A18-03400

Analyte Symbol	Ag	Cd	Cu	Mn	Mo	Ni	Pb	Zn	Al	As	B	Ba	Be	Bi	Ca	Co	Cr	Fe	Ga	Hg	K	La	Mg
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	%
Lower Limit	0.2	0.5	1	5	1	1	2	2	0.01	2	10	10	0.5	2	0.01	1	1	0.01	10	1	0.01	10	0.01
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
695249	< 0.2	< 0.5	31	652	1	28	5	81	1.63	6	< 10	129	< 0.5	< 2	2.35	13	18	2.04	< 10	< 1	0.41	24	0.48
695250	< 0.2	< 0.5	7	620	< 1	23	2	96	1.37	6	< 10	128	< 0.5	< 2	2.35	12	12	1.70	< 10	< 1	0.39	26	0.59
695251	< 0.2	< 0.5	21	490	< 1	26	< 2	74	1.39	4	< 10	134	< 0.5	< 2	2.37	11	12	1.71	< 10	< 1	0.40	25	0.53
695252	< 0.2	< 0.5	5	481	< 1	16	< 2	65	1.23	3	< 10	142	< 0.5	< 2	2.29	8	11	1.34	< 10	< 1	0.42	29	0.52
695253	< 0.2	< 0.5	11	1140	< 1	32	< 2	54	1.43	2	< 10	129	< 0.5	< 2	2.54	14	22	2.69	< 10	< 1	0.36	20	0.73
695254	< 0.2	< 0.5	10	5070	< 1	26	2	50	3.03	3	< 10	44	< 0.5	< 2	3.10	13	18	10.8	< 10	< 1	0.09	12	1.24
695255	< 0.2	< 0.5	9	1210	1	34	2	12	1.37	4	< 10	225	< 0.5	< 2	1.35	14	12	2.01	< 10	< 1	0.42	31	0.43
695256	< 0.2	< 0.5	11	2810	< 1	60	< 2	42	2.18	2	< 10	122	< 0.5	< 2	2.30	16	25	6.43	< 10	< 1	0.23	17	0.89
695257	< 0.2	< 0.5	< 1	87	< 1	< 1	< 2	16	4.24	< 2	12	12	0.5	< 2	0.17	< 1	1	0.53	< 10	< 1	1.42	< 10	0.05
695258	< 0.2	< 0.5	17	3400	< 1	123	4	78	2.71	< 2	< 10	76	< 0.5	< 2	2.60	30	20	9.84	< 10	< 1	0.17	< 10	1.13
695259	< 0.2	< 0.5	12	1500	< 1	76	3	37	1.48	3	< 10	142	< 0.5	2	1.73	18	15	3.83	< 10	< 1	0.32	14	0.57
695260	< 0.2	< 0.5	22	1700	1	161	< 2	50	1.62	4	< 10	100	< 0.5	< 2	2.19	31	17	5.21	< 10	< 1	0.25	10	0.79
695261	0.5	< 0.5	18	1770	1	141	6	49	1.53	< 2	< 10	93	< 0.5	< 2	2.43	30	37	5.02	< 10	< 1	0.25	13	0.86
695262	0.2	< 0.5	22	1490	< 1	179	8	50	1.46	< 2	< 10	78	< 0.5	< 2	2.10	40	50	4.89	< 10	< 1	0.28	11	0.61
695263	< 0.2	< 0.5	16	878	< 1	134	5	30	1.16	< 2	< 10	134	< 0.5	< 2	1.62	23	25	2.56	< 10	< 1	0.33	14	0.42
695264	< 0.2	< 0.5	17	2070	< 1	232	< 2	71	2.03	< 2	< 10	82	< 0.5	< 2	2.34	29	37	6.91	< 10	< 1	0.23	< 10	0.90
695265	< 0.2	< 0.5	15	1750	< 1	221	6	64	1.83	< 2	< 10	69	< 0.5	< 2	2.62	30	23	6.80	< 10	< 1	0.19	< 10	1.13
695266	< 0.2	< 0.5	15	1780	< 1	224	3	66	1.86	3	< 10	72	< 0.5	< 2	2.69	31	24	6.89	< 10	< 1	0.20	< 10	1.16
695267	< 0.2	< 0.5	8	1150	< 1	191	7	28	1.18	< 2	< 10	80	< 0.5	< 2	2.28	32	44	4.35	< 10	< 1	0.31	< 10	0.66
695268	0.3	< 0.5	10	772	< 1	130	6	16	0.93	< 2	< 10	108	< 0.5	< 2	1.87	29	35	2.66	< 10	< 1	0.26	< 10	0.51
695269	< 0.2	< 0.5	20	1300	< 1	118	3	39	1.27	< 2	< 10	99	< 0.5	< 2	2.26	34	37	3.91	< 10	< 1	0.23	11	0.72
695270	< 0.2	< 0.5	55	1710	< 1	260	3	88	2.33	6	< 10	90	< 0.5	< 2	2.94	64	55	6.54	< 10	< 1	0.23	19	0.95
695271	< 0.2	< 0.5	44	1330	< 1	174	< 2	71	1.87	5	< 10	131	< 0.5	< 2	3.26	41	53	4.41	< 10	< 1	0.29	24	0.95
695272	< 0.2	< 0.5	53	1230	< 1	200	3	69	1.61	6	< 10	100	< 0.5	3	3.68	41	50	4.51	< 10	< 1	0.22	18	0.97
695273	< 0.2	< 0.5	43	1060	< 1	182	< 2	65	1.91	10	< 10	123	< 0.5	< 2	2.90	71	53	4.45	< 10	< 1	0.27	22	0.87
695274	< 0.2	< 0.5	170	690	< 1	81	3	64	3.49	10	43	30	< 0.5	< 2	2.89	36	140	5.73	10	< 1	0.06	< 10	2.32
695275	< 0.2	< 0.5	50	930	< 1	184	3	79	2.02	13	< 10	116	< 0.5	< 2	2.41	51	59	4.60	10	< 1	0.27	24	0.84
695276	< 0.2	< 0.5	41	899	< 1	193	4	70	1.90	10	< 10	126	< 0.5	< 2	2.61	45	56	3.88	< 10	< 1	0.29	23	0.69
695277	< 0.2	< 0.5	52	1130	< 1	225	< 2	81	1.94	17	< 10	109	< 0.5	< 2	2.88	52	52	4.55	< 10	< 1	0.29	21	0.78
695278	< 0.2	< 0.5	48	1340	< 1	234	3	83	2.04	15	< 10	80	< 0.5	< 2	2.86	58	50	5.67	< 10	< 1	0.22	16	1.37
695279	< 0.2	< 0.5	48	1320	< 1	243	< 2	89	2.30	9	< 10	68	< 0.5	< 2	2.37	48	51	6.53	< 10	< 1	0.19	14	1.23
695280	< 0.2	< 0.5	34	775	5	243	< 2	47	1.76	15	< 10	131	< 0.5	< 2	1.91	43	33	3.37	< 10	< 1	0.33	20	0.90
695281	< 0.2	< 0.5	36	1970	< 1	355	5	109	2.40	11	< 10	42	< 0.5	< 2	3.76	67	33	9.56	< 10	< 1	0.16	< 10	1.99
695282	< 0.2	< 0.5	< 1	92	< 1	< 1	< 2	15	4.33	< 2	13	10	0.6	< 2	0.18	< 1	2	0.59	10	< 1	1.45	< 10	0.05
695283	< 0.2	< 0.5	41	2560	3	302	3	109	2.79	14	< 10	69	< 0.5	< 2	3.97	59	42	8.85	10	< 1	0.18	11	1.84
695284	< 0.2	< 0.5	42	1750	1	284	3	74	2.36	22	< 10	100	< 0.5	< 2	3.50	61	39	6.34	< 10	< 1	0.25	17	1.30
695285	< 0.2	< 0.5	48	1330	< 1	264	4	60	2.16	25	< 10	99	< 0.5	< 2	3.01	61	34	5.50	< 10	< 1	0.29	19	0.97
695286	0.4	< 0.5	40	1670	2	305	3	65	2.22	34	< 10	73	< 0.5	< 2	3.82	71	34	7.01	< 10	< 1	0.23	12	1.75
695287	< 0.2	< 0.5	66	1480	7	400	6	58	2.19	67	< 10	46	< 0.5	< 2	2.81	126	34	7.84	< 10	< 1	0.24	12	1.28
695288	0.4	< 0.5	168	700	1	89	7	63	3.47	13	16	29	< 0.5	< 2	2.97	35	130	5.08	< 10	< 1	0.09	< 10	2.31
695289	< 0.2	< 0.5	46	1630	2	380	2	77	2.66	17	< 10	63	< 0.5	< 2	3.18	74	40	7.95	< 10	< 1	0.18	12	1.73
695290	< 0.2	< 0.5	54	2040	< 1	376	5	66	2.36	12	< 10	50	< 0.5	< 2	3.71	65	35	8.80	< 10	< 1	0.19	< 10	1.61

Analyte Symbol	Ag	Cd	Cu	Mn	Mo	Ni	Pb	Zn	Al	As	B	Ba	Be	Bi	Ca	Co	Cr	Fe	Ga	Hg	K	La	Mg
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	%
Lower Limit	0.2	0.5	1	5	1	1	2	2	0.01	2	10	10	0.5	2	0.01	1	1	0.01	10	1	0.01	10	0.01
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
695291	< 0.2	< 0.5	43	1460	< 1	350	4	65	2.39	12	< 10	82	< 0.5	< 2	4.16	64	40	6.56	< 10	< 1	0.24	14	1.19
695292	< 0.2	< 0.5	35	1360	< 1	311	4	60	2.23	11	< 10	78	< 0.5	< 2	3.72	51	41	6.58	< 10	< 1	0.20	15	1.15
695293	< 0.2	< 0.5	29	1490	< 1	255	3	60	2.00	16	< 10	74	< 0.5	< 2	4.43	44	41	6.63	< 10	< 1	0.19	13	1.46
695294	< 0.2	< 0.5	31	1380	< 1	207	4	59	2.11	29	< 10	118	< 0.5	< 2	4.39	34	37	5.88	< 10	< 1	0.31	16	1.80
695295	< 0.2	< 0.5	34	1000	< 1	217	3	54	1.94	13	< 10	110	< 0.5	< 2	3.42	37	44	5.05	< 10	< 1	0.26	20	1.46
695296	< 0.2	< 0.5	37	828	< 1	106	3	45	1.72	7	< 10	126	< 0.5	< 2	3.01	24	47	3.71	< 10	< 1	0.29	26	1.02
695297	< 0.2	< 0.5	29	860	< 1	117	4	46	1.97	10	< 10	127	< 0.5	< 2	3.76	24	43	4.02	< 10	< 1	0.30	20	0.79

Analyte Symbol	Na	P	S	Sb	Sc	Sr	Ti	Th	Te	Tl	U	V	W	Y	Zr	Au	Au
Unit Symbol	%	%	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	g/tonne
Lower Limit	0.001	0.001	0.01	2	1	1	0.01	20	1	2	10	1	10	1	1	5	0.02
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	FA-AA	FA- GRA
695123	0.069	0.042	15.9	39	2	63	< 0.01	< 20	< 1	< 2	< 10	17	< 10	2	20	1840	
695124	0.119	0.070	5.37	11	3	125	< 0.01	< 20	< 1	< 2	< 10	20	< 10	3	18	189	
695125	0.109	0.054	5.44	10	3	149	< 0.01	< 20	< 1	< 2	< 10	19	< 10	3	19	149	
695126	0.144	0.063	3.42	6	3	140	< 0.01	< 20	< 1	< 2	< 10	19	< 10	3	19	58	
695127	0.106	0.062	3.15	5	3	121	< 0.01	< 20	4	< 2	< 10	18	< 10	3	17	17	
695128	0.092	0.070	8.98	17	3	134	< 0.01	< 20	2	< 2	< 10	17	< 10	3	17	63	
695129	0.065	0.030	0.72	< 2	10	46	0.22	< 20	4	< 2	< 10	103	< 10	9	17	> 5000	6.71
695130	0.071	0.068	3.44	5	3	116	< 0.01	< 20	< 1	< 2	< 10	16	< 10	3	15	20	
695131	0.079	0.102	5.24	12	2	127	< 0.01	< 20	7	< 2	< 10	17	< 10	4	15	11	
695132	0.045	0.051	14.4	32	2	90	< 0.01	< 20	3	< 2	< 10	15	< 10	2	16	18	
695133	0.076	0.055	16.3	45	2	81	< 0.01	< 20	< 1	< 2	< 10	17	< 10	2	17	39	
695134	0.064	0.034	7.12	16	5	127	< 0.01	< 20	< 1	< 2	< 10	20	< 10	2	16	16	
695135	0.093	0.050	3.04	7	3	120	< 0.01	< 20	2	< 2	< 10	18	< 10	3	16	10	
695136	0.102	0.050	6.74	13	3	97	< 0.01	< 20	< 1	< 2	< 10	20	< 10	3	19	158	
695137	3.08	< 0.001	0.02	< 2	< 1	20	< 0.01	< 20	< 1	< 2	< 10	< 1	< 10	3	1	< 5	
695138	0.172	0.058	3.24	4	3	152	< 0.01	< 20	5	< 2	< 10	18	< 10	4	21	152	
695139	0.150	0.054	4.18	7	3	133	< 0.01	< 20	< 1	< 2	< 10	19	< 10	3	20	383	
695140	0.130	0.055	5.02	9	3	107	< 0.01	< 20	< 1	< 2	< 10	15	< 10	3	21	221	
695141	0.137	0.078	6.35	6	2	149	< 0.01	< 20	1	< 2	< 10	16	< 10	4	23	204	
695142	0.157	0.193	4.29	6	4	211	< 0.01	< 20	< 1	< 2	< 10	24	< 10	5	20	118	
695143	0.139	0.165	7.16	8	4	161	< 0.01	< 20	< 1	< 2	< 10	29	< 10	5	24	169	
695144	0.120	0.186	5.69	9	4	166	< 0.01	< 20	2	< 2	< 10	27	< 10	5	22	126	
695145	0.127	0.179	5.70	7	4	168	< 0.01	< 20	4	< 2	< 10	28	< 10	5	22	136	
695146	0.136	0.187	5.66	9	4	221	< 0.01	< 20	1	< 2	< 10	28	< 10	5	24	103	
695147	0.114	0.160	5.36	10	4	240	< 0.01	< 20	3	< 2	< 10	27	< 10	5	22	53	
695148	0.104	0.149	5.09	10	5	248	< 0.01	< 20	< 1	< 2	< 10	27	< 10	5	20	35	
695149	0.104	0.145	9.25	16	5	185	< 0.01	< 20	7	< 2	< 10	28	< 10	4	24	84	
695150	0.094	0.120	13.1	22	6	148	< 0.01	< 20	< 1	< 2	< 10	27	< 10	4	24	266	
695151	0.098	0.118	13.4	27	7	134	< 0.01	< 20	6	< 2	< 10	27	< 10	4	27	706	
695152	0.099	0.093	8.36	10	3	154	< 0.01	< 20	3	< 2	< 10	16	< 10	4	22	293	
695153	0.703	0.051	0.18	< 2	14	102	0.35	< 20	3	< 2	< 10	147	< 10	14	29	10	
695154	0.143	0.115	3.90	6	3	166	< 0.01	< 20	4	< 2	< 10	19	< 10	5	21	111	
695155	0.066	0.034	6.81	14	5	114	< 0.01	< 20	< 1	< 2	< 10	17	< 10	2	16	118	
695156	0.325	0.163	1.42	3	3	85	0.15	< 20	8	< 2	< 10	42	< 10	14	10	2090	
695157	0.694	0.064	0.17	3	20	122	0.23	< 20	< 1	< 2	< 10	174	< 10	16	18	7	
695158	0.119	0.090	6.53	10	3	166	< 0.01	< 20	< 1	< 2	< 10	20	< 10	4	18	52	
695159	0.070	0.041	15.6	19	2	109	< 0.01	< 20	< 1	< 2	< 10	12	< 10	2	16	401	
695160	0.033	0.011	16.6	33	1	97	< 0.01	< 20	5	< 2	< 10	7	< 10	2	10	2410	
695161	0.094	0.071	12.4	15	3	138	< 0.01	< 20	3	< 2	< 10	12	< 10	4	19	555	
695162	0.048	0.021	17.6	31	< 1	68	< 0.01	< 20	3	< 2	< 10	5	< 10	1	11	1480	
695163	0.066	0.043	17.4	28	1	65	< 0.01	< 20	1	< 2	< 10	8	< 10	2	18	940	

Analyte Symbol	Na	P	S	Sb	Sc	Sr	Ti	Th	Te	Tl	U	V	W	Y	Zr	Au	Au
Unit Symbol	%	%	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	g/tonne
Lower Limit	0.001	0.001	0.01	2	1	1	0.01	20	1	2	10	1	10	1	1	5	0.02
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	FA-AA	FA- GRA
695164	3.10	0.001	0.08	< 2	< 1	20	< 0.01	< 20	< 1	< 2	< 10	< 1	< 10	3	< 1	< 5	
695165	0.037	0.014	19.0	33	< 1	63	< 0.01	< 20	2	3	< 10	5	< 10	1	11	1730	
695166	0.027	0.002	16.7	26	2	121	< 0.01	< 20	4	< 2	< 10	5	< 10	3	14	2010	
695167	0.137	0.067	1.49	< 2	4	134	< 0.01	< 20	< 1	< 2	< 10	10	< 10	4	12	< 5	
695168	0.168	0.093	0.45	< 2	9	158	< 0.01	< 20	6	< 2	< 10	30	< 10	4	9	< 5	
695169	0.166	0.071	0.11	< 2	5	141	< 0.01	< 20	4	< 2	< 10	18	< 10	4	11	5	
695170	0.180	0.066	0.11	< 2	2	111	< 0.01	< 20	< 1	< 2	< 10	9	< 10	5	11	< 5	
695171	0.175	0.068	0.12	< 2	2	109	< 0.01	< 20	4	< 2	< 10	10	< 10	4	12	358	
695172	0.159	0.075	0.26	< 2	3	130	< 0.01	< 20	6	< 2	< 10	13	< 10	4	12	< 5	
695173	0.058	0.026	5.15	11	7	135	< 0.01	< 20	5	< 2	< 10	21	< 10	4	20	14	
695174	0.057	0.024	5.98	12	7	146	< 0.01	< 20	3	< 2	< 10	21	< 10	4	21	12	
695175	0.069	0.032	3.65	8	5	177	< 0.01	< 20	2	< 2	< 10	18	< 10	3	19	5	
695176	0.036	0.019	13.8	23	3	58	< 0.01	< 20	6	< 2	< 10	15	< 10	2	15	20	
695177	0.028	0.010	15.3	29	4	74	< 0.01	< 20	6	< 2	< 10	17	< 10	2	15	45	
695178	0.111	0.160	0.23	2	7	145	< 0.01	< 20	7	< 2	< 10	36	< 10	5	5	< 5	
695179	3.23	< 0.001	0.02	< 2	< 1	16	< 0.01	< 20	< 1	< 2	< 10	< 1	< 10	3	< 1	< 5	
695180	0.134	0.164	0.76	< 2	5	128	< 0.01	< 20	7	< 2	< 10	32	< 10	5	6	7	
695181	0.125	0.117	1.34	< 2	5	118	< 0.01	< 20	< 1	< 2	< 10	29	< 10	5	12	6	
695182	0.150	0.113	0.82	2	6	122	< 0.01	< 20	< 1	< 2	< 10	29	< 10	6	10	7	
695183	0.154	0.106	0.46	< 2	5	103	< 0.01	< 20	4	< 2	< 10	27	< 10	5	8	< 5	
695184	0.145	0.095	0.88	2	7	147	< 0.01	< 20	7	< 2	< 10	31	< 10	5	16	5	
695185	0.135	0.089	1.25	< 2	6	127	< 0.01	< 20	3	< 2	< 10	25	< 10	5	20	10	
695186	0.173	0.103	1.35	3	5	137	< 0.01	< 20	4	< 2	< 10	20	< 10	5	12	15	
695187	0.176	0.117	0.36	2	5	124	< 0.01	< 20	1	< 2	< 10	23	< 10	6	6	7	
695188	0.154	0.099	0.89	< 2	5	123	< 0.01	< 20	4	< 2	< 10	21	< 10	5	13	11	
695189	0.089	0.041	0.20	< 2	8	29	0.41	< 20	4	< 2	< 10	162	< 10	14	20	1060	
695190	0.169	0.106	0.46	< 2	4	116	< 0.01	< 20	< 1	< 2	< 10	22	< 10	5	9	11	
695191	0.135	0.106	0.17	< 2	5	113	< 0.01	< 20	5	< 2	< 10	26	< 10	5	9	< 5	
695192	0.130	0.111	0.04	< 2	5	107	< 0.01	< 20	3	< 2	< 10	29	< 10	6	7	5	
695193	0.133	0.118	0.01	2	5	117	< 0.01	< 20	2	< 2	< 10	31	< 10	6	7	6	
695194	0.120	0.161	0.06	< 2	5	118	< 0.01	< 20	< 1	< 2	< 10	30	< 10	7	5	8	
695195	3.30	0.001	< 0.01	< 2	< 1	21	< 0.01	< 20	5	< 2	< 10	< 1	< 10	3	1	< 5	
695196	0.126	0.156	0.02	2	5	114	< 0.01	< 20	2	< 2	< 10	30	< 10	6	5	10	
695197	0.119	0.141	0.12	3	6	110	< 0.01	< 20	6	< 2	< 10	35	< 10	5	7	10	
695198	0.141	0.138	0.04	< 2	5	107	< 0.01	< 20	7	< 2	< 10	30	< 10	6	6	< 5	
695199	0.151	0.133	0.07	< 2	5	110	< 0.01	< 20	6	< 2	< 10	28	< 10	6	6	< 5	
695200	0.129	0.124	0.75	3	6	109	< 0.01	< 20	< 1	< 2	< 10	38	< 10	5	14	< 5	
695201	0.134	0.126	0.68	< 2	6	114	< 0.01	< 20	6	< 2	< 10	38	< 10	5	13	5	
695202	0.119	0.105	2.57	5	6	138	< 0.01	< 20	3	< 2	< 10	40	< 10	5	29	12	
695203	0.166	0.142	2.65	4	6	125	< 0.01	< 20	1	< 2	< 10	42	< 10	5	23	6	
695204	0.101	0.083	1.60	4	6	139	< 0.01	< 20	7	< 2	< 10	33	< 10	6	22	5	
695205	0.139	0.048	5.47	6	3	96	< 0.01	< 20	< 1	< 2	< 10	19	< 10	4	35	18	

Analyte Symbol	Na	P	S	Sb	Sc	Sr	Ti	Th	Te	Tl	U	V	W	Y	Zr	Au	Au
Unit Symbol	%	%	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	g/tonne
Lower Limit	0.001	0.001	0.01	2	1	1	0.01	20	1	2	10	1	10	1	1	5	0.02
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	FA-AA	FA- GRA
695206	0.129	0.046	13.0	21	3	85	< 0.01	< 20	< 1	< 2	< 10	16	< 10	4	39	67	
695207	0.118	0.059	14.2	23	3	88	< 0.01	< 20	1	< 2	< 10	12	< 10	4	34	35	
695208	2.89	< 0.001	0.02	< 2	< 1	17	< 0.01	< 20	< 1	< 2	< 10	< 1	< 10	3	< 1	< 5	
695209	0.178	0.098	0.65	< 2	5	136	< 0.01	< 20	2	< 2	< 10	26	< 10	6	12	< 5	
695210	0.165	0.110	0.06	< 2	6	144	< 0.01	< 20	6	< 2	< 10	31	< 10	6	6	8	
695211	0.148	0.103	0.06	< 2	6	161	< 0.01	< 20	< 1	< 2	< 10	31	< 10	6	6	< 5	
695212	0.133	0.087	0.02	3	5	147	< 0.01	< 20	6	< 2	< 10	27	< 10	5	9	< 5	
695213	0.137	0.105	0.02	< 2	6	155	< 0.01	< 20	5	< 2	< 10	32	< 10	6	7	6	
695214	0.143	0.108	0.04	< 2	5	104	< 0.01	< 20	< 1	< 2	< 10	31	< 10	6	6	6	
695215	0.142	0.138	0.03	< 2	5	118	< 0.01	< 20	3	< 2	< 10	29	< 10	7	5	6	
695216	0.148	0.117	0.05	< 2	4	122	< 0.01	< 20	3	< 2	< 10	23	< 10	7	5	7	
695217	0.149	0.121	0.04	< 2	3	101	< 0.01	< 20	4	< 2	< 10	18	< 10	8	4	6	
695218	0.085	0.039	0.19	< 2	8	28	0.38	< 20	7	< 2	< 10	152	< 10	13	18	1060	
695219	0.132	0.105	0.05	< 2	4	107	< 0.01	< 20	7	< 2	< 10	22	< 10	8	5	8	
695220	0.103	0.084	0.07	< 2	5	115	< 0.01	< 20	< 1	< 2	< 10	32	< 10	6	12	10	
695221	0.139	0.120	0.02	< 2	3	110	< 0.01	< 20	7	< 2	< 10	14	< 10	6	4	< 5	
695222	0.149	0.112	0.02	< 2	2	168	< 0.01	< 20	4	< 2	< 10	13	< 10	5	5	< 5	
695223	0.160	0.122	< 0.01	< 2	4	131	< 0.01	< 20	5	< 2	< 10	19	< 10	6	4	< 5	
695224	0.104	0.084	0.75	< 2	3	85	< 0.01	< 20	4	< 2	< 10	21	< 10	4	14	< 5	
695225	0.127	0.086	0.47	< 2	3	104	< 0.01	< 20	< 1	< 2	< 10	13	< 10	6	12	> 5000	7.77
695226	0.103	0.085	0.43	< 2	4	94	< 0.01	< 20	< 1	< 2	< 10	17	< 10	4	11	26	
695227	0.098	0.085	0.41	< 2	3	98	< 0.01	< 20	< 1	< 2	< 10	14	< 10	4	11	6	
695228	3.11	0.001	< 0.01	< 2	< 1	19	< 0.01	< 20	5	< 2	< 10	< 1	< 10	3	< 1	< 5	
695229	0.109	0.084	0.34	< 2	3	123	< 0.01	< 20	1	< 2	< 10	15	< 10	4	10	7	
695230	0.119	0.091	0.36	< 2	3	102	< 0.01	< 20	2	< 2	< 10	15	< 10	4	11	7	
695231	0.113	0.087	0.24	< 2	4	163	< 0.01	< 20	< 1	< 2	< 10	21	< 10	5	11	6	
695232	0.061	0.070	1.35	3	5	129	< 0.01	< 20	< 1	< 2	< 10	37	< 10	4	18	17	
695233	0.049	0.072	0.61	2	5	138	< 0.01	< 20	< 1	< 2	< 10	36	< 10	5	16	8	
695234	0.055	0.073	0.29	3	5	142	< 0.01	< 20	4	< 2	< 10	32	< 10	4	13	5	
695235	0.078	0.082	0.32	< 2	4	151	< 0.01	< 20	2	< 2	< 10	27	< 10	4	14	< 5	
695236	0.077	0.091	0.48	< 2	3	116	< 0.01	< 20	3	< 2	< 10	17	< 10	5	13	5	
695237	0.079	0.089	0.47	2	3	117	< 0.01	< 20	7	< 2	< 10	17	< 10	5	13	5	
695238	0.089	0.090	0.62	< 2	4	147	< 0.01	< 20	2	< 2	< 10	21	< 10	4	15	7	
695239	0.110	0.093	1.44	< 2	3	128	< 0.01	< 20	9	< 2	< 10	19	< 10	4	19	11	
695240	0.100	0.088	0.57	< 2	3	129	< 0.01	< 20	3	< 2	< 10	22	< 10	4	15	< 5	
695241	0.084	0.083	0.24	2	5	119	< 0.01	< 20	3	< 2	< 10	36	< 10	4	15	< 5	
695242	0.077	0.083	0.41	3	5	163	< 0.01	< 20	1	< 2	< 10	33	< 10	4	15	7	
695243	0.118	0.093	0.31	3	4	138	< 0.01	< 20	5	< 2	< 10	25	< 10	4	16	9	
695244	0.112	0.082	0.14	< 2	4	134	< 0.01	< 20	1	< 2	< 10	24	< 10	4	14	6	
695245	0.107	0.093	0.15	< 2	5	131	< 0.01	< 20	< 1	< 2	< 10	28	< 10	4	14	< 5	
695246	0.154	0.102	0.36	< 2	4	183	< 0.01	< 20	< 1	< 2	< 10	27	< 10	4	13	< 5	



Analyte Symbol	Na	P	S	Sb	Sc	Sr	Ti	Th	Te	Tl	U	V	W	Y	Zr	Au	Au
Unit Symbol	%	%	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	g/tonne
Lower Limit	0.001	0.001	0.01	2	1	1	0.01	20	1	2	10	1	10	1	1	5	0.02
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	FA-AA	FA- GRA
695247	0.191	0.102	0.29	< 2	4	228	< 0.01	< 20	< 1	< 2	< 10	19	< 10	4	13	6	
695248	0.082	0.039	0.19	< 2	8	27	0.36	< 20	7	< 2	< 10	148	< 10	13	18	1060	
695249	0.172	0.104	0.34	< 2	4	193	< 0.01	< 20	< 1	< 2	< 10	19	< 10	5	12	10	
695250	0.153	0.100	0.11	< 2	4	177	< 0.01	< 20	8	< 2	< 10	19	< 10	4	10	5	
695251	0.152	0.098	0.19	< 2	3	190	< 0.01	< 20	< 1	< 2	< 10	16	< 10	4	10	7	
695252	0.144	0.106	0.07	< 2	4	181	< 0.01	< 20	3	< 2	< 10	16	< 10	4	7	< 5	
695253	0.123	0.095	0.25	< 2	3	161	< 0.01	< 20	2	< 2	< 10	22	< 10	5	11	< 5	
695254	0.034	0.063	0.63	5	4	208	< 0.01	< 20	3	< 2	< 10	30	< 10	4	17	7	
695255	0.107	0.103	0.06	< 2	2	111	< 0.01	< 20	3	< 2	< 10	14	< 10	5	8	< 5	
695256	0.081	0.078	0.69	< 2	4	173	< 0.01	< 20	1	< 2	< 10	26	< 10	4	20	10	
695257	3.29	0.001	< 0.01	< 2	< 1	23	< 0.01	< 20	4	< 2	< 10	< 1	< 10	3	1	< 5	
695258	0.055	0.057	2.24	3	5	189	< 0.01	< 20	< 1	< 2	< 10	38	< 10	4	21	8	
695259	0.091	0.081	0.84	< 2	3	131	< 0.01	< 20	< 1	< 2	< 10	18	< 10	4	17	< 5	
695260	0.091	0.071	1.38	< 2	4	137	< 0.01	< 20	6	< 2	< 10	24	< 10	4	16	8	
695261	0.114	0.086	1.55	2	3	140	< 0.01	< 20	< 1	< 2	< 10	22	< 10	4	18	21	
695262	0.115	0.068	1.89	< 2	3	155	< 0.01	< 20	3	< 2	< 10	21	< 10	4	17	17	
695263	0.131	0.064	0.78	< 2	2	128	< 0.01	< 20	6	< 2	< 10	16	< 10	4	12	6	
695264	0.092	0.067	1.91	2	5	152	< 0.01	< 20	2	< 2	< 10	30	< 10	4	15	11	
695265	0.085	0.066	2.32	3	4	129	< 0.01	< 20	3	< 2	< 10	25	< 10	5	14	14	
695266	0.087	0.068	2.39	3	4	132	< 0.01	< 20	< 1	< 2	< 10	26	< 10	5	14	11	
695267	0.132	0.065	2.14	< 2	2	141	< 0.01	< 20	< 1	< 2	< 10	16	< 10	4	13	10	
695268	0.130	0.053	1.04	< 2	2	124	< 0.01	< 20	3	< 2	< 10	12	< 10	3	10	23	
695269	0.115	0.078	1.15	< 2	3	137	< 0.01	< 20	< 1	< 2	< 10	21	< 10	4	15	10	
695270	0.107	0.211	1.77	3	6	186	< 0.01	< 20	< 1	< 2	< 10	51	< 10	7	9	9	
695271	0.140	0.218	0.93	< 2	5	195	< 0.01	< 20	< 1	< 2	< 10	44	< 10	7	6	8	
695272	0.129	0.210	1.15	< 2	5	224	< 0.01	< 20	< 1	< 2	< 10	46	< 10	8	7	9	
695273	0.145	0.249	1.04	< 2	5	174	< 0.01	< 20	4	< 2	< 10	46	< 10	9	5	10	
695274	0.091	0.042	0.20	< 2	8	29	0.41	< 20	3	< 2	< 10	164	< 10	14	20	1040	
695275	0.152	0.229	1.17	< 2	5	155	< 0.01	< 20	8	< 2	< 10	51	< 10	8	6	16	
695276	0.152	0.234	0.94	< 2	5	195	< 0.01	< 20	3	< 2	< 10	46	< 10	8	4	10	
695277	0.149	0.234	1.38	2	6	184	< 0.01	< 20	7	< 2	< 10	45	< 10	8	5	12	
695278	0.116	0.194	1.85	< 2	6	112	< 0.01	< 20	1	< 2	< 10	44	< 10	9	9	11	
695279	0.097	0.185	2.12	2	6	87	< 0.01	< 20	< 1	< 2	< 10	48	< 10	7	12	< 5	
695280	0.133	0.201	0.99	< 2	3	121	< 0.01	< 20	2	< 2	< 10	26	< 10	7	4	< 5	
695281	0.089	0.150	4.04	4	8	124	< 0.01	< 20	< 1	< 2	< 10	48	< 10	7	20	6	
695282	3.39	0.002	0.01	< 2	< 1	24	< 0.01	< 20	< 1	< 2	< 10	< 1	< 10	3	1	< 5	
695283	0.103	0.179	2.35	5	9	189	< 0.01	< 20	2	< 2	< 10	55	< 10	7	13	> 5000	4.82
695284	0.122	0.203	1.48	3	6	238	< 0.01	< 20	4	< 2	< 10	44	< 10	7	8	6	
695285	0.144	0.266	1.77	3	5	211	< 0.01	< 20	5	< 2	< 10	36	< 10	7	6	5	
695286	0.127	0.210	2.51	< 2	6	187	< 0.01	< 20	6	< 2	< 10	40	< 10	8	12	8	
695287	0.161	0.168	3.93	3	6	184	< 0.01	< 20	4	< 2	< 10	40	< 10	7	22	7	
695288	0.069	0.038	0.25	< 2	7	41	0.34	< 20	7	< 2	< 10	133	< 10	11	16	1680	

Analyte Symbol	Na	P	S	Sb	Sc	Sr	Ti	Th	Te	Tl	U	V	W	Y	Zr	Au	Au
Unit Symbol	%	%	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	g/tonne
Lower Limit	0.001	0.001	0.01	2	1	1	0.01	20	1	2	10	1	10	1	1	5	0.02
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	FA-AA	FA- GRA
695289	0.128	0.165	2.49	4	7	157	< 0.01	< 20	2	< 2	< 10	50	< 10	7	17	7	
695290	0.127	0.175	3.68	4	6	182	< 0.01	< 20	3	< 2	< 10	47	< 10	6	18	8	
695291	0.129	0.188	2.30	3	6	196	< 0.01	< 20	< 1	< 2	< 10	44	< 10	7	12	6	
695292	0.096	0.223	2.30	4	5	218	< 0.01	< 20	4	< 2	< 10	41	< 10	7	10	6	
695293	0.095	0.213	2.31	< 2	5	217	< 0.01	< 20	< 1	< 2	< 10	42	< 10	8	10	6	
695294	0.152	0.206	1.34	< 2	5	249	< 0.01	< 20	3	< 2	< 10	43	< 10	8	6	6	
695295	0.126	0.227	1.22	< 2	5	186	< 0.01	< 20	3	< 2	< 10	44	< 10	7	6	< 5	
695296	0.138	0.243	0.90	< 2	4	194	< 0.01	< 20	4	< 2	< 10	41	< 10	8	5	< 5	
695297	0.112	0.238	1.20	< 2	4	278	< 0.01	< 20	< 1	< 2	< 10	37	< 10	7	7	< 5	

Analyte Symbol	Ag	Cd	Cu	Mn	Mo	Ni	Pb	Zn	Al	As	B	Ba	Be	Bi	Ca	Co	Cr	Fe	Ga	Hg	K	La	Mg
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	%
Lower Limit	0.2	0.5	1	5	1	1	2	2	0.01	2	10	10	0.5	2	0.01	1	1	0.01	10	1	0.01	10	0.01
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
GXR-1 Meas	29.4	2.2	1160	789	14	29	695	690	0.32	400	< 10	259	0.9	1430	0.73	6	6	21.7	< 10	4	0.03	< 10	0.13
GXR-1 Cert	31.0	3.30	1110	852	18.0	41.0	730	760	3.52	427	15.0	750	1.22	1380	0.960	8.20	12.0	23.6	13.8	3.90	0.050	7.50	0.217
GXR-1 Meas	30.5	2.3	1210	815	15	34	727	688	0.32	411	< 10	282	0.9	1490	0.74	7	8	21.5	< 10	4	0.03	< 10	0.13
GXR-1 Cert	31.0	3.30	1110	852	18.0	41.0	730	760	3.52	427	15.0	750	1.22	1380	0.960	8.20	12.0	23.6	13.8	3.90	0.050	7.50	0.217
GXR-6 Meas	0.2	< 0.5	70	970	2	20	101	118	6.74	268	< 10	1100	1.0	< 2	0.15	15	85	5.12	20	< 1	1.03	11	0.39
GXR-6 Cert	1.30	1.00	66.0	1010	2.40	27.0	101	118	17.7	330	9.80	1300	1.40	0.290	0.180	13.8	96.0	5.58	35.0	0.0680	1.87	13.9	0.609
GXR-6 Meas	0.2	< 0.5	70	942	2	19	102	113	6.57	268	< 10	1110	1.0	< 2	0.15	15	86	4.98	20	< 1	1.04	12	0.39
GXR-6 Cert	1.30	1.00	66.0	1010	2.40	27.0	101	118	17.7	330	9.80	1300	1.40	0.290	0.180	13.8	96.0	5.58	35.0	0.0680	1.87	13.9	0.609
OREAS 134b (AQUA REGIA) Meas	> 100	589	1430				> 5000	> 10000		241						116		11.6					
OREAS 134b (AQUA REGIA) Cert	204	563	1360				133000	177000		221						106		12.25					
OREAS 133a (Aqua Regia) Meas	> 100	308	349				> 5000	> 10000		148		15				25		7.50					
OREAS 133a (Aqua Regia) Cert	97	297	324				48600.00	106000.00		140		59				23		7.92					
OXN117 Meas																							
OXN117 Cert																							
OxP116 Meas																							
OxP116 Cert																							
OREAS 203 Meas																							
OREAS 203 Cert																							
OREAS 218 Meas																							
OREAS 218 Cert																							
OREAS 218 Meas																							
OREAS 218 Cert																							
OREAS 218 Meas																							
OREAS 218 Cert																							
OREAS 218 Meas																							
OREAS 218 Cert																							
OREAS 218 Meas																							
OREAS 218 Cert																							
OREAS 224 Meas																							
OREAS 224 Cert																							
OREAS 224 Meas																							
OREAS 224 Cert																							
OREAS 224 Meas																							
OREAS 224 Cert																							
OREAS 224 Meas																							

Analyte Symbol	Ag	Cd	Cu	Mn	Mo	Ni	Pb	Zn	Al	As	B	Ba	Be	Bi	Ca	Co	Cr	Fe	Ga	Hg	K	La	Mg
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	%
Lower Limit	0.2	0.5	1	5	1	1	2	2	0.01	2	10	10	0.5	2	0.01	1	1	0.01	10	1	0.01	10	0.01
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
OREAS 224 Cert																							
OREAS 224 Meas																							
OREAS 224 Cert																							
OREAS 224 Meas																							
OREAS 224 Cert																							
OREAS 224 Meas																							
OREAS 224 Cert																							
695125 Orig	0.3	< 0.5	24	4080	4	223	13	65	1.35	445	< 10	32	< 0.5	< 2	2.56	38	30	12.0	< 10	< 1	0.21	< 10	0.97
695125 Dup	0.3	< 0.5	22	4000	4	222	10	62	1.32	438	< 10	32	< 0.5	< 2	2.52	38	33	11.8	< 10	< 1	0.21	< 10	0.95
695132 Orig																							
695132 Dup																							
695133 Orig	0.6	< 0.5	27	3950	< 1	226	17	53	1.29	470	< 10	< 10	< 0.5	< 2	1.30	62	23	23.4	< 10	1	0.16	< 10	0.83
695133 Dup	0.3	< 0.5	27	3840	< 1	224	14	51	1.27	471	< 10	< 10	< 0.5	3	1.31	61	24	23.0	< 10	< 1	0.16	< 10	0.82
695142 Orig																							
695142 Dup																							
695152 Orig																							
695152 Dup																							
695167 Orig																							
695167 Dup																							
695172 Orig	< 0.2	< 0.5	15	932	< 1	54	< 2	47	0.96	36	< 10	85	< 0.5	< 2	3.06	20	28	2.68	< 10	< 1	0.25	14	0.97
695172 Split PREP DUP	< 0.2	< 0.5	16	944	< 1	58	< 2	38	1.02	41	< 10	89	< 0.5	< 2	3.10	22	27	2.70	< 10	< 1	0.26	14	1.00
695176 Orig																							
695176 Dup																							
695185 Orig	< 0.2	< 0.5	37	1000	< 1	104	< 2	54	1.39	29	< 10	82	< 0.5	< 2	3.27	28	44	4.56	< 10	< 1	0.23	< 10	1.30
695185 Dup	< 0.2	< 0.5	37	1050	< 1	107	2	56	1.46	27	< 10	84	< 0.5	< 2	3.34	29	43	4.72	< 10	< 1	0.24	< 10	1.33
695186 Orig																							
695186 Dup																							
695188 Orig	< 0.2	< 0.5	43	1260	< 1	87	2	44	1.34	9	< 10	86	< 0.5	< 2	2.62	23	39	5.09	< 10	< 1	0.29	11	0.92
695188 Dup	< 0.2	< 0.5	42	1250	< 1	87	2	44	1.30	9	< 10	84	< 0.5	< 2	2.60	22	36	5.04	< 10	< 1	0.28	11	0.91
695201 Orig	< 0.2	< 0.5	79	2190	< 1	156	< 2	79	2.31	2	< 10	58	< 0.5	< 2	2.96	28	104	7.15	< 10	< 1	0.20	13	1.20
695201 Dup	< 0.2	< 0.5	80	2210	< 1	158	< 2	78	2.34	3	< 10	60	< 0.5	5	3.00	29	107	7.27	< 10	< 1	0.20	13	1.23
695211 Orig																							
695211 Dup																							
695213 Orig	< 0.2	< 0.5	36	1070	< 1	113	< 2	92	2.24	43	< 10	75	< 0.5	< 2	3.32	33	73	5.75	< 10	< 1	0.27	20	1.27
695213 Dup	< 0.2	< 0.5	38	1100	< 1	120	< 2	93	2.32	45	< 10	78	< 0.5	< 2	3.48	35	74	5.94	< 10	< 1	0.28	21	1.33
695221 Orig																							
695221 Dup																							
695222 Orig	< 0.2	< 0.5	27	806	1	38	3	59	1.17	6	< 10	91	< 0.5	< 2	3.23	13	29	2.24	< 10	< 1	0.30	28	0.39
695222 Split PREP DUP	< 0.2	< 0.5	29	744	2	39	5	67	1.23	8	< 10	104	< 0.5	< 2	3.09	14	31	2.17	< 10	< 1	0.34	29	0.40
695226 Orig	< 0.2	< 0.5	11	844	< 1	34	< 2	20	1.03	10	< 10	87	< 0.5	< 2	2.46	14	26	2.47	< 10	< 1	0.25	10	0.87
695226 Dup	< 0.2	< 0.5	11	842	< 1	34	< 2	19	1.00	11	< 10	83	< 0.5	< 2	2.38	13	23	2.41	< 10	< 1	0.24	< 10	0.85

Analyte Symbol	Ag	Cd	Cu	Mn	Mo	Ni	Pb	Zn	Al	As	B	Ba	Be	Bi	Ca	Co	Cr	Fe	Ga	Hg	K	La	Mg
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	%
Lower Limit	0.2	0.5	1	5	1	1	2	2	0.01	2	10	10	0.5	2	0.01	1	1	0.01	10	1	0.01	10	0.01
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
695235 Orig																							
695235 Dup																							
695245 Orig																							
695245 Dup																							
695255 Orig																							
695255 Dup																							
695257 Orig	< 0.2	< 0.5	< 1	86	< 1	2	< 2	16	4.17	< 2	12	11	0.5	< 2	0.17	< 1	1	0.52	< 10	< 1	1.41	< 10	0.05
695257 Dup	< 0.2	< 0.5	< 1	88	< 1	< 1	< 2	16	4.32	< 2	12	12	0.5	< 2	0.17	< 1	1	0.54	10	< 1	1.43	< 10	0.05
695258 Orig	< 0.2	< 0.5	17	3330	< 1	122	4	78	2.65	4	< 10	77	< 0.5	< 2	2.60	30	21	9.64	< 10	< 1	0.17	< 10	1.13
695258 Dup	0.2	< 0.5	17	3470	< 1	124	3	78	2.76	< 2	< 10	74	< 0.5	< 2	2.61	30	19	10.0	< 10	< 1	0.16	< 10	1.13
695270 Orig																							
695270 Dup																							
695272 Orig	< 0.2	< 0.5	53	1230	< 1	200	3	69	1.61	6	< 10	100	< 0.5	3	3.68	41	50	4.51	< 10	< 1	0.22	18	0.97
695272 Split PREP DUP	< 0.2	< 0.5	54	1250	< 1	204	< 2	69	1.66	6	< 10	109	< 0.5	< 2	3.81	43	52	4.55	< 10	< 1	0.24	20	1.01
695279 Orig																							
695279 Dup																							
695289 Orig																							
695289 Dup																							
Method Blank																							
Method Blank																							
Method Blank																							
Method Blank																							
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Method Blank																							
Method Blank																							
Method Blank																							
Method Blank	< 0.2	< 0.5	< 1	< 5	< 1	< 1	< 2	< 2	< 0.01	< 2	< 10	< 10	< 0.5	< 2	< 0.01	< 1	< 1	< 0.01	< 10	< 1	< 0.01	< 10	< 0.01
Method Blank	< 0.2	< 0.5	< 1	< 5	< 1	< 1	< 2	< 2	< 0.01	< 2	< 10	< 10	< 0.5	< 2	< 0.01	< 1	< 1	< 0.01	< 10	< 1	< 0.01	< 10	< 0.01
Method Blank	< 0.2	< 0.5	< 1	< 5	< 1	< 1	< 2	< 2	< 0.01	< 2	< 10	< 10	< 0.5	< 2	< 0.01	< 1	< 1	< 0.01	< 10	< 1	< 0.01	< 10	< 0.01

Analyte Symbol	Na	P	S	Sb	Sc	Sr	Ti	Th	Te	Tl	U	V	W	Y	Zr	Au	Au
Unit Symbol	%	%	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	g/tonne
Lower Limit	0.001	0.001	0.01	2	1	1	0.01	20	1	2	10	1	10	1	1	5	0.02
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	FA-AA	FA- GRA
GXR-1 Meas	0.048	0.039	0.20	79	1	155	< 0.01	< 20	11	< 2	30	73	124	24	14		
GXR-1 Cert	0.0520	0.0650	0.257	122	1.58	275	0.036	2.44	13.0	0.390	34.9	80.0	164	32.0	38.0		
GXR-1 Meas	0.051	0.040	0.20	79	1	165	< 0.01	< 20	17	< 2	30	73	131	25	14		
GXR-1 Cert	0.0520	0.0650	0.257	122	1.58	275	0.036	2.44	13.0	0.390	34.9	80.0	164	32.0	38.0		
GXR-6 Meas	0.083	0.035	0.01	3	24	34		< 20	< 1	< 2	< 10	157	< 10	6	15		
GXR-6 Cert	0.104	0.0350	0.0160	3.60	27.6	35.0		5.30	0.0180	2.20	1.54	186	1.90	14.0	110		
GXR-6 Meas	0.084	0.035	0.01	4	24	35		< 20	< 1	3	< 10	153	< 10	6	14		
GXR-6 Cert	0.104	0.0350	0.0160	3.60	27.6	35.0		5.30	0.0180	2.20	1.54	186	1.90	14.0	110		
OREAS 134b (AQUA REGIA) Meas			14.8														
OREAS 134b (AQUA REGIA) Cert			19.31														
OREAS 133a (Aqua Regia) Meas			10.3	135													
OREAS 133a (Aqua Regia) Cert			10.7	147													
OXN117 Meas																	7.85
OXN117 Cert																	7.679
OxP116 Meas																	15.1
OxP116 Cert																	14.92
OREAS 203 Meas																	832
OREAS 203 Cert																	871
OREAS 218 Meas																	526
OREAS 218 Cert																	531
OREAS 218 Meas																	533
OREAS 218 Cert																	531
OREAS 218 Meas																	523
OREAS 218 Cert																	531
OREAS 218 Meas																	528
OREAS 218 Cert																	531
OREAS 218 Meas																	531
OREAS 218 Cert																	531
OREAS 218 Meas																	526
OREAS 218 Cert																	531
OREAS 224 Meas																	2180
OREAS 224 Cert																	2150.00
OREAS 224 Meas																	2080
OREAS 224 Cert																	2150.00

Analyte Symbol	Na	P	S	Sb	Sc	Sr	Ti	Th	Te	Tl	U	V	W	Y	Zr	Au	Au
Unit Symbol	%	%	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	g/tonne
Lower Limit	0.001	0.001	0.01	2	1	1	0.01	20	1	2	10	1	10	1	1	5	0.02
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	FA-AA	FA- GRA
OREAS 224 Meas																2140	
OREAS 224 Cert																2150.0 00	
OREAS 224 Meas																2090	
OREAS 224 Cert																2150.0 00	
OREAS 224 Meas																2070	
OREAS 224 Cert																2150.0 00	
OREAS 224 Meas																2090	
OREAS 224 Cert																2150.0 00	
OREAS 224 Meas																2200	
OREAS 224 Cert																2150.0 00	
695125 Orig	0.111	0.055	5.49	9	3	151	< 0.01	< 20	5	< 2	< 10	20	< 10	3	19		
695125 Dup	0.107	0.054	5.38	10	3	147	< 0.01	< 20	< 1	< 2	< 10	19	< 10	3	19		
695132 Orig																	10
695132 Dup																	26
695133 Orig	0.076	0.055	16.3	46	2	81	< 0.01	< 20	2	< 2	< 10	17	< 10	2	17		
695133 Dup	0.076	0.054	16.2	44	2	81	< 0.01	< 20	< 1	< 2	< 10	17	< 10	2	17		
695142 Orig																	117
695142 Dup																	118
695152 Orig																	292
695152 Dup																	293
695167 Orig																	16
695167 Dup																	< 5
695172 Orig	0.159	0.075	0.26	< 2	3	130	< 0.01	< 20	6	< 2	< 10	13	< 10	4	12	< 5	
695172 Split PREP DUP	0.163	0.076	0.25	< 2	3	133	< 0.01	< 20	3	< 2	< 10	14	< 10	4	12	6	
695176 Orig																	20
695176 Dup																	20
695185 Orig	0.132	0.088	1.24	< 2	6	124	< 0.01	< 20	4	< 2	< 10	24	< 10	5	20		
695185 Dup	0.137	0.090	1.26	< 2	6	130	< 0.01	< 20	1	< 2	< 10	25	< 10	5	20		
695186 Orig																	14
695186 Dup																	15
695188 Orig	0.156	0.100	0.89	2	5	125	< 0.01	< 20	2	< 2	< 10	22	< 10	5	13		
695188 Dup	0.153	0.099	0.90	< 2	5	122	< 0.01	< 20	5	< 2	< 10	21	< 10	5	14		
695201 Orig	0.133	0.125	0.68	3	6	114	< 0.01	< 20	9	< 2	< 10	38	< 10	5	12	5	
695201 Dup	0.135	0.127	0.69	< 2	6	114	< 0.01	< 20	3	< 2	< 10	39	< 10	5	13	5	
695211 Orig																	< 5
695211 Dup																	< 5
695213 Orig	0.134	0.103	0.02	< 2	6	151	< 0.01	< 20	7	< 2	< 10	31	< 10	6	7		

Analyte Symbol	Na	P	S	Sb	Sc	Sr	Ti	Th	Te	Tl	U	V	W	Y	Zr	Au	Au
Unit Symbol	%	%	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	g/tonne
Lower Limit	0.001	0.001	0.01	2	1	1	0.01	20	1	2	10	1	10	1	1	5	0.02
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	FA-AA	FA- GRA
695213 Dup	0.140	0.107	0.03	2	6	158	< 0.01	< 20	4	< 2	< 10	32	< 10	7	7		
695221 Orig																	7
695221 Dup																	< 5
695222 Orig	0.149	0.112	0.02	< 2	2	168	< 0.01	< 20	4	< 2	< 10	13	< 10	5	5	< 5	
695222 Split PREP DUP	0.169	0.115	0.02	< 2	2	166	< 0.01	< 20	< 1	< 2	< 10	13	< 10	6	5	< 5	
695226 Orig	0.105	0.086	0.43	< 2	4	96	< 0.01	< 20	< 1	< 2	< 10	17	< 10	4	11		
695226 Dup	0.100	0.084	0.43	< 2	4	93	< 0.01	< 20	< 1	< 2	< 10	16	< 10	4	11		
695235 Orig																	< 5
695235 Dup																	< 5
695245 Orig																	< 5
695245 Dup																	< 5
695255 Orig																	< 5
695255 Dup																	< 5
695257 Orig	3.27	0.001	< 0.01	< 2	< 1	23	< 0.01	< 20	1	< 2	< 10	< 1	< 10	3	1		
695257 Dup	3.32	0.001	< 0.01	< 2	< 1	23	< 0.01	< 20	6	< 2	< 10	< 1	< 10	3	1		
695258 Orig	0.057	0.057	2.25	4	5	189	< 0.01	< 20	< 1	< 2	< 10	37	< 10	4	20		
695258 Dup	0.052	0.057	2.23	2	5	190	< 0.01	< 20	< 1	< 2	< 10	38	< 10	4	21		
695270 Orig																	8
695270 Dup																	9
695272 Orig	0.129	0.210	1.15	< 2	5	224	< 0.01	< 20	< 1	< 2	< 10	46	< 10	8	7	9	
695272 Split PREP DUP	0.138	0.216	1.20	< 2	6	234	< 0.01	< 20	3	< 2	< 10	47	< 10	8	8	9	
695279 Orig																	8
695279 Dup																	< 5
695289 Orig																	7
695289 Dup																	7
Method Blank																	< 5
Method Blank																	< 5
Method Blank																	< 5
Method Blank																	< 5
Method Blank																	< 5
Method Blank																	< 5
Method Blank																	< 5
Method Blank																	< 5
Method Blank																	< 5
Method Blank																	< 5
Method Blank																	< 5
Method Blank																	< 5
Method Blank																	< 0.02
Method Blank																	< 0.02
Method Blank																	< 5



Analyte Symbol	Na	P	S	Sb	Sc	Sr	Ti	Th	Te	Tl	U	V	W	Y	Zr	Au	Au
Unit Symbol	%	%	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	g/tonne
Lower Limit	0.001	0.001	0.01	2	1	1	0.01	20	1	2	10	1	10	1	1	5	0.02
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	FA-AA	FA- GRA
Method Blank																	< 5
Method Blank	0.011	< 0.001	< 0.01	< 2	< 1	< 1	< 0.01	< 20	< 1	< 2	< 10	< 1	< 10	< 1	< 1		
Method Blank	0.013	< 0.001	< 0.01	< 2	< 1	< 1	< 0.01	< 20	1	< 2	< 10	< 1	< 10	< 1	< 1		
Method Blank	0.012	< 0.001	< 0.01	< 2	< 1	< 1	< 0.01	< 20	1	< 2	< 10	< 1	< 10	< 1	< 1		



**Date Submitted:** 20-Mar-18  
**Invoice No.:** A18-03487  
**Invoice Date:** 16-May-18  
**Your Reference:** 81 Lucas

**Noble Mineral Exploration**  
**2500-120 Adelaide Street West**  
**Toronto ON M5H 1T1**  
**Canada**

**ATTN: Randy Singh (inv-cc)**

## CERTIFICATE OF ANALYSIS

105 Rock samples were submitted for analysis.

The following analytical package(s) were requested:

Code 1A2-Timmins Au - Fire Assay AA

Code 1E3-Timmins Aqua Regia ICP(AQUAGEO)

REPORT      **A18-03487**

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

Notes:

If value exceeds upper limit we recommend reassay by fire assay gravimetric-Code 1A3.

Values which exceed the upper limit should be assayed for accurate numbers.

CERTIFIED BY:

A handwritten signature in black ink, appearing to be "Emmanuel Esemé". The signature is written in a cursive style with a large, stylized 'E' and 'S'.

Emmanuel Esemé , Ph.D.  
Quality Control

**ACTIVATION LABORATORIES LTD.**  
1752 Riverside Drive, Timmins, Ontario, Canada, P4R 1N1  
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## Results

## Activation Laboratories Ltd.

## Report: A18-03487

Analyte Symbol	Au	Ag	Cd	Cu	Mn	Mo	Ni	Pb	Zn	Al	As	B	Ba	Be	Bi	Ca	Co	Cr	Fe	Ga	Hg	K	La
Unit Symbol	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm
Lower Limit	5	0.2	0.5	1	5	1	1	2	2	0.01	2	10	10	0.5	2	0.01	1	1	0.01	10	1	0.01	10
Method Code	FA-AA	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
695298	< 5	< 0.2	< 0.5	4	86	< 1	2	< 2	19	3.47	3	< 10	< 10	< 0.5	< 2	0.19	< 1	2	0.61	< 10	< 1	1.21	< 10
695299	< 5	< 0.2	< 0.5	26	1080	< 1	149	4	63	2.04	12	< 10	48	< 0.5	3	4.28	29	41	5.97	< 10	< 1	0.33	15
695300	11	< 0.2	< 0.5	26	1200	< 1	148	5	55	1.90	9	< 10	50	< 0.5	< 2	4.17	28	34	5.56	< 10	< 1	0.34	17
695301	5	< 0.2	< 0.5	24	1000	< 1	153	5	63	2.15	8	< 10	45	< 0.5	< 2	3.79	29	38	5.45	< 10	< 1	0.39	18
695302	6	< 0.2	< 0.5	37	1130	< 1	247	6	71	2.22	18	< 10	28	< 0.5	< 2	3.70	47	42	7.63	< 10	< 1	0.31	14
695303	< 5	< 0.2	< 0.5	27	1580	< 1	171	4	61	2.21	11	< 10	66	< 0.5	2	6.82	31	43	6.03	< 10	< 1	0.33	16
695304	5	< 0.2	< 0.5	30	1030	< 1	132	3	57	1.76	8	< 10	58	< 0.5	2	3.80	29	37	4.78	< 10	< 1	0.26	20
695305	5	< 0.2	< 0.5	26	986	< 1	130	6	60	2.03	6	< 10	80	< 0.5	< 2	3.49	25	40	4.90	< 10	< 1	0.31	22
695306	7	0.3	< 0.5	40	1030	< 1	136	5	71	2.11	12	< 10	85	< 0.5	2	3.63	26	42	5.12	< 10	< 1	0.32	23
695307	5	< 0.2	< 0.5	30	1440	< 1	179	4	65	2.21	11	< 10	59	< 0.5	< 2	5.13	33	40	6.14	< 10	< 1	0.28	18
695308	5	< 0.2	< 0.5	28	1050	< 1	164	3	79	2.02	9	< 10	86	< 0.5	< 2	3.93	28	49	5.34	< 10	< 1	0.22	24
695309	6	< 0.2	< 0.5	27	776	< 1	154	3	57	1.97	5	< 10	138	< 0.5	2	3.30	24	41	3.79	< 10	< 1	0.37	28
695310	6	< 0.2	< 0.5	29	713	< 1	200	5	61	2.11	7	< 10	93	< 0.5	2	3.45	35	42	4.39	< 10	< 1	0.39	25
695311	8	< 0.2	< 0.5	33	840	< 1	217	3	69	2.31	5	< 10	81	< 0.5	2	4.31	33	44	4.46	< 10	< 1	0.43	24
695312	7	< 0.2	< 0.5	33	634	< 1	283	5	73	2.05	13	< 10	26	< 0.5	< 2	3.22	44	42	6.75	< 10	< 1	0.27	16
695313	8	< 0.2	0.7	31	529	< 1	274	9	70	2.00	24	< 10	14	< 0.5	< 2	2.78	41	48	9.49	< 10	< 1	0.25	13
695314	8	< 0.2	< 0.5	27	821	1	218	5	66	1.61	13	< 10	29	< 0.5	< 2	4.37	32	39	7.57	< 10	< 1	0.21	12
695315	7	< 0.2	0.6	32	1010	< 1	327	4	82	2.22	12	< 10	37	< 0.5	< 2	5.01	40	48	8.02	< 10	< 1	0.31	15
695316	10	< 0.2	< 0.5	33	469	< 1	284	5	90	2.01	12	< 10	35	< 0.5	< 2	2.61	37	46	6.53	< 10	< 1	0.20	17
695317	1050	< 0.2	< 0.5	145	721	< 1	69	3	67	2.89	5	36	26	< 0.5	< 2	3.14	33	128	6.47	10	< 1	0.05	< 10
695318	15	< 0.2	< 0.5	29	528	< 1	247	5	87	2.11	8	< 10	84	< 0.5	2	2.76	31	51	5.24	< 10	< 1	0.23	20
695319	7	< 0.2	< 0.5	28	682	< 1	213	4	82	2.04	5	< 10	51	< 0.5	< 2	3.64	30	47	6.08	< 10	< 1	0.19	16
695320	7	< 0.2	< 0.5	34	566	< 1	167	4	82	1.99	4	< 10	84	< 0.5	< 2	3.41	31	47	4.89	< 10	< 1	0.22	24
695321	7	< 0.2	< 0.5	31	725	< 1	153	2	82	2.17	5	< 10	126	< 0.5	< 2	4.56	25	50	4.55	< 10	< 1	0.33	29
695322	7	< 0.2	< 0.5	30	810	< 1	204	3	87	2.30	5	< 10	85	< 0.5	< 2	5.27	31	45	5.50	< 10	< 1	0.31	21
695323	7	< 0.2	< 0.5	34	684	< 1	203	3	88	2.23	6	< 10	96	< 0.5	3	4.21	34	49	5.53	< 10	< 1	0.25	23
695324	< 5	< 0.2	< 0.5	34	592	< 1	263	6	92	2.68	8	< 10	40	< 0.5	< 2	3.65	38	50	6.17	< 10	< 1	0.42	22
695325	< 5	< 0.2	< 0.5	34	656	< 1	200	< 2	93	2.24	5	< 10	98	< 0.5	< 2	4.06	31	48	5.26	< 10	< 1	0.25	22
695326	< 5	< 0.2	< 0.5	< 1	112	< 1	4	< 2	20	3.94	< 2	11	16	0.5	< 2	0.28	< 1	2	0.69	< 10	< 1	1.28	< 10
695327	< 5	< 0.2	< 0.5	32	661	< 1	263	5	84	2.41	8	< 10	71	< 0.5	< 2	3.33	36	52	5.68	< 10	< 1	0.32	20
695328	< 5	< 0.2	< 0.5	35	660	< 1	256	5	90	2.26	8	< 10	73	< 0.5	< 2	3.04	41	51	5.91	< 10	< 1	0.20	19
695329	< 5	< 0.2	< 0.5	32	807	< 1	287	3	86	2.24	3	< 10	92	< 0.5	< 2	3.87	41	51	5.39	< 10	< 1	0.24	22
695330	< 5	< 0.2	< 0.5	29	790	3	318	< 2	71	2.05	< 2	< 10	94	< 0.5	< 2	3.71	46	46	4.75	< 10	< 1	0.25	21
695331	< 5	< 0.2	< 0.5	29	853	2	290	< 2	71	1.93	< 2	< 10	85	< 0.5	2	4.13	43	47	4.66	< 10	< 1	0.21	20
695332	< 5	< 0.2	< 0.5	31	808	2	399	6	76	2.09	12	< 10	23	< 0.5	< 2	3.39	54	44	7.42	< 10	< 1	0.20	12
695333	< 5	< 0.2	0.7	30	812	1	574	9	79	2.42	19	< 10	24	< 0.5	< 2	3.53	61	51	7.47	< 10	< 1	0.31	15
695334	6	< 0.2	0.6	30	813	1	618	4	75	1.98	18	< 10	34	< 0.5	4	3.90	60	45	7.35	< 10	< 1	0.17	12
695335	< 5	< 0.2	< 0.5	28	790	< 1	581	8	74	1.88	18	< 10	33	< 0.5	< 2	3.75	59	43	7.05	< 10	< 1	0.16	11
695336	< 5	< 0.2	< 0.5	32	844	2	609	5	87	2.03	19	< 10	31	< 0.5	< 2	3.42	60	48	7.88	< 10	< 1	0.14	12
695337	6	< 0.2	< 0.5	36	696	3	604	9	84	1.92	33	< 10	18	< 0.5	< 2	2.92	65	43	8.38	< 10	< 1	0.18	11
695338	< 5	< 0.2	< 0.5	29	721	2	667	8	73	1.43	36	< 10	17	< 0.5	< 2	3.31	66	34	8.72	< 10	< 1	0.11	< 10
695339	< 5	< 0.2	< 0.5	35	695	1	634	10	82	1.35	15	< 10	40	< 0.5	< 2	3.63	69	35	6.37	< 10	< 1	0.13	14

## Results

## Activation Laboratories Ltd.

## Report: A18-03487

Analyte Symbol	Au	Ag	Cd	Cu	Mn	Mo	Ni	Pb	Zn	Al	As	B	Ba	Be	Bi	Ca	Co	Cr	Fe	Ga	Hg	K	La
Unit Symbol	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm
Lower Limit	5	0.2	0.5	1	5	1	1	2	2	0.01	2	10	10	0.5	2	0.01	1	1	0.01	10	1	0.01	10
Method Code	FA-AA	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
695340	< 5	< 0.2	< 0.5	35	741	1	617	7	86	1.22	16	< 10	42	< 0.5	< 2	3.96	69	32	6.22	< 10	< 1	0.10	13
695341	< 5	< 0.2	< 0.5	34	707	1	525	7	80	0.93	23	< 10	38	< 0.5	< 2	3.90	74	24	5.85	< 10	< 1	0.09	12
695342	< 5	< 0.2	< 0.5	31	678	1	266	3	70	0.87	3	< 10	43	< 0.5	< 2	4.10	45	15	4.92	< 10	< 1	0.10	13
695343	1120	0.2	< 0.5	135	656	< 1	65	4	62	2.72	6	33	23	< 0.5	< 2	2.89	30	118	5.94	10	< 1	0.05	< 10
695344	5	< 0.2	< 0.5	36	759	< 1	260	4	74	1.79	5	< 10	27	< 0.5	< 2	3.59	45	28	5.52	< 10	< 1	0.29	13
695345	< 5	< 0.2	< 0.5	24	832	< 1	277	< 2	94	1.68	8	< 10	61	< 0.5	< 2	3.86	38	27	5.33	< 10	< 1	0.23	15
695346	< 5	< 0.2	< 0.5	26	631	< 1	289	< 2	87	1.94	5	< 10	109	< 0.5	< 2	2.93	42	29	4.14	< 10	< 1	0.29	22
695347	6	< 0.2	< 0.5	45	626	1	342	3	90	1.41	20	< 10	37	< 0.5	< 2	3.01	58	23	6.08	< 10	< 1	0.18	16
695348	< 5	< 0.2	< 0.5	40	787	< 1	322	3	71	1.87	21	< 10	47	< 0.5	< 2	3.61	63	25	5.03	< 10	< 1	0.32	16
695349	< 5	< 0.2	0.5	44	818	< 1	323	2	73	1.63	18	< 10	56	< 0.5	< 2	3.80	62	22	5.11	< 10	< 1	0.28	16
695350	20	< 0.2	< 0.5	40	695	< 1	348	< 2	92	1.88	19	< 10	47	< 0.5	3	3.78	55	25	5.38	< 10	< 1	0.30	16
695351	< 5	< 0.2	< 0.5	35	892	< 1	377	3	95	1.85	10	< 10	35	< 0.5	< 2	4.03	55	25	6.57	< 10	< 1	0.27	13
695352	< 5	< 0.2	< 0.5	< 1	91	< 1	2	< 2	16	3.72	< 2	< 10	< 10	< 0.5	< 2	0.21	< 1	< 1	0.56	< 10	< 1	1.23	< 10
695353	< 5	< 0.2	< 0.5	41	693	1	451	3	88	1.18	13	< 10	35	< 0.5	< 2	3.34	67	29	6.08	< 10	< 1	0.16	14
695354	26	< 0.2	< 0.5	42	688	1	402	2	85	1.19	9	< 10	52	< 0.5	< 2	3.35	60	19	5.11	< 10	< 1	0.19	16
695355	8	< 0.2	< 0.5	32	723	< 1	425	4	89	1.24	8	< 10	59	< 0.5	< 2	3.48	56	19	5.61	< 10	< 1	0.18	17
695356	< 5	< 0.2	< 0.5	44	716	< 1	533	6	102	1.20	12	< 10	37	< 0.5	< 2	3.31	70	21	6.36	< 10	< 1	0.17	14
695357	< 5	< 0.2	< 0.5	41	821	< 1	457	2	113	1.21	28	< 10	38	< 0.5	3	3.67	69	18	6.54	< 10	< 1	0.18	13
695358	5	< 0.2	< 0.5	49	757	1	647	< 2	230	1.35	32	< 10	27	< 0.5	3	3.37	89	19	6.79	< 10	< 1	0.21	12
695359	5	< 0.2	< 0.5	36	809	1	832	9	283	1.35	37	< 10	30	< 0.5	< 2	3.76	100	19	7.30	< 10	< 1	0.21	10
695360	< 5	< 0.2	< 0.5	31	653	1	551	8	160	0.97	32	< 10	37	< 0.5	< 2	3.11	74	15	5.92	< 10	< 1	0.13	12
695361	< 5	< 0.2	< 0.5	27	632	1	537	11	154	0.93	33	< 10	36	< 0.5	< 2	3.01	72	15	5.74	< 10	< 1	0.13	12
695362	< 5	< 0.2	< 0.5	24	808	< 1	496	6	131	1.09	40	< 10	36	< 0.5	2	3.80	52	19	5.73	< 10	< 1	0.18	12
695363	5	< 0.2	< 0.5	36	801	2	804	13	173	1.23	59	< 10	18	< 0.5	< 2	3.31	88	22	8.32	< 10	< 1	0.19	< 10
695364	< 5	< 0.2	< 0.5	39	709	1	821	11	159	0.95	56	< 10	20	< 0.5	< 2	2.97	96	23	6.99	< 10	< 1	0.16	10
695365	5	< 0.2	< 0.5	34	1490	< 1	644	8	170	1.94	65	< 10	18	< 0.5	< 2	3.78	67	34	11.8	< 10	< 1	0.14	< 10
695366	6	< 0.2	0.7	46	1140	2	1030	16	194	1.73	79	< 10	11	< 0.5	< 2	2.61	124	33	14.8	< 10	< 1	0.18	< 10
695367	< 5	< 0.2	0.7	31	3050	< 1	619	5	161	2.49	6	< 10	23	< 0.5	< 2	3.80	44	40	13.9	< 10	2	0.08	< 10
695368	5	< 0.2	< 0.5	58	1830	2	1100	5	255	1.84	5	< 10	12	< 0.5	< 2	2.73	51	31	12.1	< 10	< 1	0.15	< 10
695369	1720	0.3	< 0.5	146	724	< 1	76	7	65	3.02	10	13	24	< 0.5	< 2	3.26	31	121	5.81	< 10	< 1	0.08	< 10
695370	7	< 0.2	< 0.5	26	3140	< 1	535	< 2	194	2.40	13	< 10	26	< 0.5	< 2	4.68	47	38	14.0	< 10	< 1	0.10	< 10
695371	6	< 0.2	< 0.5	30	1160	< 1	559	5	221	1.19	38	< 10	17	< 0.5	< 2	3.44	59	23	9.73	< 10	< 1	0.15	< 10
695372	< 5	< 0.2	< 0.5	30	971	< 1	570	8	198	1.19	63	< 10	12	< 0.5	< 2	2.97	59	24	10.8	< 10	< 1	0.17	< 10
695373	5	< 0.2	< 0.5	38	615	2	830	11	229	1.04	120	< 10	< 10	< 0.5	< 2	2.38	82	22	12.7	< 10	< 1	0.15	< 10
695374	< 5	< 0.2	0.9	26	833	< 1	593	8	172	1.20	87	< 10	13	< 0.5	< 2	3.40	57	21	10.5	< 10	< 1	0.20	< 10
695375	7	< 0.2	< 0.5	25	985	1	615	8	167	0.92	119	< 10	15	< 0.5	< 2	3.88	58	21	11.9	< 10	< 1	0.15	< 10
695376	7	0.2	< 0.5	26	1070	1	642	10	189	1.06	206	< 10	< 10	< 0.5	< 2	3.24	54	25	16.0	< 10	< 1	0.17	< 10
695377	8	< 0.2	< 0.5	28	1080	< 1	562	13	121	1.21	132	< 10	11	< 0.5	< 2	3.43	62	23	12.8	< 10	< 1	0.23	< 10
695378	11	< 0.2	< 0.5	33	892	< 1	509	12	119	1.39	147	< 10	10	< 0.5	< 2	2.98	52	23	13.3	< 10	< 1	0.28	< 10
695379	< 5	< 0.2	< 0.5	< 1	105	< 1	< 1	< 2	20	4.32	< 2	14	11	0.6	< 2	0.22	< 1	< 1	0.71	10	< 1	1.51	< 10
695380	7	0.2	0.5	27	829	1	502	14	111	0.91	213	< 10	12	< 0.5	< 2	3.11	46	22	15.2	< 10	< 1	0.18	< 10
695381	37	< 0.2	0.8	26	795	1	462	11	96	0.68	213	< 10	11	< 0.5	< 2	3.01	42	19	13.2	< 10	< 1	0.13	< 10

Analyte Symbol	Au	Ag	Cd	Cu	Mn	Mo	Ni	Pb	Zn	Al	As	B	Ba	Be	Bi	Ca	Co	Cr	Fe	Ga	Hg	K	La
Unit Symbol	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm
Lower Limit	5	0.2	0.5	1	5	1	1	2	2	0.01	2	10	10	0.5	2	0.01	1	1	0.01	10	1	0.01	10
Method Code	FA-AA	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
695382	88	< 0.2	< 0.5	24	752	1	435	8	94	0.81	210	< 10	10	< 0.5	< 2	2.45	50	23	11.2	< 10	< 1	0.19	< 10
695383	354	0.3	< 0.5	30	1080	< 1	491	15	135	0.69	393	< 10	< 10	< 0.5	< 2	2.43	43	20	16.0	< 10	< 1	0.13	< 10
695384	87	< 0.2	< 0.5	42	5310	< 1	171	4	63	0.85	177	< 10	14	< 0.5	< 2	2.69	27	16	17.5	< 10	< 1	0.14	< 10
695385	172	0.2	< 0.5	79	5520	< 1	158	6	61	0.31	308	< 10	10	< 0.5	5	3.17	19	16	22.5	< 10	< 1	0.02	< 10
695386	987	0.9	< 0.5	66	6880	< 1	215	33	104	0.45	493	< 10	< 10	< 0.5	4	0.66	34	19	> 30.0	< 10	1	0.04	< 10
695387	2170	< 0.2	< 0.5	94	1650	2	120	6	87	1.41	960	< 10	46	< 0.5	< 2	1.69	31	50	8.41	< 10	< 1	0.08	17
695388	976	1.0	< 0.5	51	2890	< 1	161	57	97	0.10	497	< 10	< 10	< 0.5	4	0.92	35	16	25.2	< 10	< 1	0.02	< 10
695389	16	< 0.2	< 0.5	14	1990	< 1	29	3	55	0.90	38	< 10	41	< 0.5	< 2	3.97	12	17	6.26	< 10	< 1	0.15	< 10
695390	< 5	< 0.2	< 0.5	10	1420	< 1	13	< 2	36	0.58	13	< 10	41	< 0.5	2	4.11	7	16	3.63	< 10	< 1	0.15	14
695391	< 5	< 0.2	< 0.5	21	1490	< 1	22	< 2	60	0.74	23	< 10	44	< 0.5	< 2	5.10	13	15	5.32	< 10	< 1	0.17	12
695392	< 5	< 0.2	< 0.5	12	726	< 1	13	< 2	37	0.44	14	< 10	40	< 0.5	< 2	2.75	6	16	2.26	< 10	< 1	0.14	15
695393	< 5	< 0.2	< 0.5	14	1070	< 1	22	< 2	63	1.02	10	< 10	44	< 0.5	3	2.96	9	18	4.14	< 10	< 1	0.17	15
695394	< 5	< 0.2	< 0.5	31	854	< 1	65	< 2	75	1.30	29	< 10	47	< 0.5	< 2	2.82	24	57	4.90	< 10	< 1	0.19	12
695395	< 5	< 0.2	< 0.5	12	1030	< 1	30	< 2	72	1.14	7	< 10	54	< 0.5	< 2	2.63	10	21	3.97	< 10	< 1	0.20	21
695396	< 5	< 0.2	< 0.5	< 1	96	< 1	< 1	< 2	23	4.17	< 2	11	11	0.6	< 2	0.22	< 1	< 1	0.58	< 10	< 1	1.42	< 10
695397	< 5	< 0.2	< 0.5	14	925	< 1	25	2	54	1.01	9	< 10	63	< 0.5	< 2	2.59	15	18	3.34	< 10	< 1	0.24	20
695398	< 5	< 0.2	< 0.5	11	972	< 1	24	3	58	0.84	3	< 10	47	< 0.5	< 2	2.62	12	20	3.34	< 10	< 1	0.17	20
695399	6	< 0.2	< 0.5	12	508	< 1	19	2	49	0.63	3	< 10	66	< 0.5	< 2	1.89	12	15	1.65	< 10	< 1	0.23	19
695400	15	0.2	< 0.5	8	7740	< 1	240	9	91	0.26	89	< 10	< 10	< 0.5	8	0.19	45	29	28.8	< 10	2	< 0.01	< 10
695401	11	< 0.2	< 0.5	4	3210	< 1	196	10	58	0.16	58	< 10	< 10	< 0.5	< 2	0.07	40	59	15.1	< 10	< 1	< 0.01	< 10
695402	12	< 0.2	< 0.5	4	4700	< 1	182	5	72	0.14	35	< 10	< 10	< 0.5	< 2	0.10	31	68	15.9	< 10	< 1	< 0.01	< 10

Analyte Symbol	Mg	Na	P	S	Sb	Sc	Sr	Ti	Th	Te	Tl	U	V	W	Y	Zr
Unit Symbol	%	%	%	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	0.01	0.001	0.001	0.01	2	1	1	0.01	20	1	2	10	1	10	1	1
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
695298	0.04	2.71	0.001	< 0.01	< 2	< 1	19	< 0.01	< 20	< 1	< 2	< 10	< 1	< 10	3	1
695299	0.94	0.106	0.192	1.67	2	4	238	< 0.01	< 20	< 1	< 2	< 10	54	< 10	7	4
695300	0.98	0.114	0.211	1.47	< 2	4	224	< 0.01	< 20	< 1	< 2	< 10	46	< 10	6	3
695301	0.79	0.110	0.208	1.43	< 2	4	224	< 0.01	< 20	2	< 2	< 10	51	< 10	6	3
695302	1.00	0.096	0.195	2.57	3	3	221	< 0.01	< 20	5	< 2	< 10	53	< 10	6	6
695303	0.84	0.109	0.155	1.46	< 2	4	381	< 0.01	< 20	< 1	< 2	< 10	59	< 10	7	4
695304	0.72	0.083	0.195	1.12	< 2	3	244	< 0.01	< 20	3	< 2	< 10	43	< 10	6	3
695305	0.78	0.095	0.209	0.94	< 2	3	247	< 0.01	< 20	2	< 2	< 10	46	< 10	6	3
695306	0.81	0.102	0.217	1.00	< 2	3	257	< 0.01	< 20	4	< 2	< 10	48	< 10	6	4
695307	0.93	0.088	0.211	1.42	< 2	4	358	< 0.01	< 20	< 1	< 2	< 10	53	< 10	7	4
695308	1.24	0.085	0.225	0.68	< 2	4	253	< 0.01	< 20	< 1	< 2	< 10	53	< 10	7	3
695309	0.93	0.121	0.213	0.43	< 2	3	255	< 0.01	< 20	4	< 2	< 10	45	< 10	6	3
695310	1.01	0.118	0.221	0.83	< 2	4	279	< 0.01	< 20	4	< 2	< 10	49	< 10	7	3
695311	0.80	0.143	0.206	0.89	< 2	4	379	< 0.01	< 20	< 1	< 2	< 10	51	< 10	6	3
695312	0.90	0.102	0.218	2.67	< 2	3	252	< 0.01	< 20	< 1	< 2	< 10	48	< 10	6	5
695313	0.94	0.096	0.210	5.16	3	3	206	< 0.01	< 20	3	< 2	< 10	50	< 10	6	13
695314	1.48	0.081	0.204	3.25	< 2	3	232	< 0.01	< 20	< 1	< 2	< 10	41	< 10	6	6
695315	2.10	0.112	0.194	2.43	2	5	272	< 0.01	< 20	< 1	< 2	< 10	62	< 10	7	5
695316	1.17	0.073	0.223	2.05	3	3	157	< 0.01	< 20	4	< 2	< 10	49	< 10	7	4
695317	2.12	0.074	0.038	0.18	2	8	27	0.36	< 20	7	< 2	< 10	179	< 10	13	20
695318	1.15	0.077	0.183	1.01	< 2	4	145	< 0.01	< 20	1	< 2	< 10	55	< 10	6	4
695319	1.11	0.072	0.193	1.71	3	4	200	< 0.01	< 20	3	< 2	< 10	56	< 10	6	4
695320	0.96	0.087	0.230	0.92	< 2	4	244	< 0.01	< 20	< 1	< 2	< 10	51	< 10	7	3
695321	1.30	0.117	0.214	0.55	< 2	4	307	< 0.01	< 20	< 1	< 2	< 10	51	< 10	8	3
695322	1.50	0.106	0.190	0.93	< 2	4	354	< 0.01	< 20	3	< 2	< 10	53	< 10	8	3
695323	1.41	0.091	0.201	0.95	< 2	4	270	< 0.01	< 20	< 1	< 2	< 10	53	< 10	7	3
695324	1.37	0.145	0.206	1.57	< 2	5	277	< 0.01	< 20	4	< 2	< 10	63	< 10	7	4
695325	1.21	0.094	0.204	0.86	< 2	4	236	< 0.01	< 20	1	< 2	< 10	52	< 10	7	4
695326	0.07	2.86	0.005	0.04	< 2	< 1	29	< 0.01	< 20	4	< 2	< 10	3	< 10	3	2
695327	1.13	0.119	0.187	1.23	2	5	259	< 0.01	< 20	2	< 2	< 10	62	< 10	7	4
695328	1.18	0.085	0.180	1.17	< 2	4	230	< 0.01	< 20	< 1	< 2	< 10	59	< 10	6	4
695329	1.13	0.103	0.206	0.91	< 2	4	267	< 0.01	< 20	3	< 2	< 10	55	< 10	7	3
695330	1.01	0.114	0.197	0.84	< 2	4	240	< 0.01	< 20	4	< 2	< 10	47	< 10	7	3
695331	0.82	0.108	0.200	0.90	< 2	4	264	< 0.01	< 20	6	< 2	< 10	45	< 10	6	3
695332	1.02	0.105	0.174	2.96	2	4	223	< 0.01	< 20	< 1	< 2	< 10	49	< 10	6	5
695333	1.19	0.160	0.185	2.78	< 2	5	241	< 0.01	< 20	< 1	< 2	< 10	61	< 10	7	4
695334	1.13	0.092	0.177	2.76	2	4	204	< 0.01	< 20	4	< 2	< 10	49	< 10	7	5
695335	1.08	0.085	0.173	2.72	< 2	4	194	< 0.01	< 20	< 1	< 2	< 10	47	< 10	6	5
695336	1.38	0.084	0.176	2.80	3	5	173	< 0.01	< 20	< 1	< 2	< 10	54	< 10	6	6
695337	1.17	0.114	0.177	3.78	2	4	166	< 0.01	< 20	< 1	< 2	< 10	47	< 10	6	10
695338	1.04	0.078	0.170	4.45	< 2	3	145	< 0.01	< 20	< 1	< 2	< 10	38	< 10	5	14
695339	1.06	0.099	0.186	2.11	2	4	156	< 0.01	< 20	< 1	< 2	< 10	37	< 10	6	4

Analyte Symbol	Mg	Na	P	S	Sb	Sc	Sr	Ti	Th	Te	Tl	U	V	W	Y	Zr
Unit Symbol	%	%	%	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	0.01	0.001	0.001	0.01	2	1	1	0.01	20	1	2	10	1	10	1	1
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
695340	1.13	0.072	0.191	1.82	< 2	3	154	< 0.01	< 20	< 1	< 2	< 10	34	< 10	6	5
695341	1.09	0.071	0.175	1.80	< 2	3	126	< 0.01	< 20	< 1	< 2	< 10	28	< 10	6	5
695342	0.73	0.095	0.178	1.66	< 2	3	174	< 0.01	< 20	2	< 2	< 10	19	< 10	6	4
695343	1.92	0.068	0.035	0.17	< 2	7	25	0.35	< 20	8	< 2	< 10	174	< 10	12	18
695344	0.82	0.301	0.156	2.19	2	5	211	< 0.01	< 20	< 1	< 2	< 10	37	< 10	6	3
695345	1.13	0.252	0.172	1.22	2	6	200	< 0.01	< 20	< 1	< 2	< 10	37	< 10	5	3
695346	0.86	0.300	0.172	0.68	< 2	5	209	< 0.01	< 20	1	< 2	< 10	39	< 10	5	2
695347	0.84	0.184	0.186	2.21	< 2	4	149	< 0.01	< 20	< 1	< 2	< 10	30	< 10	6	4
695348	0.89	0.336	0.193	1.71	< 2	5	239	< 0.01	< 20	< 1	< 2	< 10	36	< 10	6	3
695349	0.93	0.290	0.194	1.68	< 2	5	218	< 0.01	< 20	< 1	< 2	< 10	32	< 10	6	3
695350	0.90	0.316	0.181	1.72	< 2	5	230	< 0.01	< 20	< 1	< 2	< 10	37	< 10	6	3
695351	1.12	0.286	0.167	2.08	< 2	6	209	< 0.01	< 20	< 1	< 2	< 10	39	< 10	6	3
695352	0.05	2.81	0.002	0.01	< 2	< 1	19	< 0.01	< 20	3	< 2	< 10	< 1	< 10	3	< 1
695353	0.85	0.162	0.165	2.20	< 2	5	135	< 0.01	< 20	1	< 2	< 10	24	< 10	5	5
695354	0.78	0.179	0.201	1.70	< 2	5	148	< 0.01	< 20	< 1	< 2	< 10	23	< 10	6	3
695355	0.82	0.180	0.213	1.83	< 2	4	155	< 0.01	< 20	5	< 2	< 10	24	< 10	6	3
695356	0.79	0.152	0.188	2.38	< 2	5	148	< 0.01	< 20	< 1	< 2	< 10	24	< 10	5	5
695357	0.90	0.167	0.205	2.50	2	4	160	< 0.01	< 20	< 1	< 2	< 10	24	< 10	6	4
695358	0.85	0.196	0.180	2.99	< 2	3	170	< 0.01	< 20	< 1	< 2	< 10	27	< 10	6	6
695359	1.03	0.185	0.157	3.15	< 2	5	171	< 0.01	< 20	< 1	< 2	< 10	29	< 10	6	7
695360	0.80	0.113	0.176	2.34	< 2	3	125	< 0.01	< 20	5	< 2	< 10	20	< 10	6	6
695361	0.77	0.110	0.171	2.36	< 2	3	122	< 0.01	< 20	< 1	< 2	< 10	20	< 10	6	5
695362	0.87	0.151	0.188	2.20	< 2	3	158	< 0.01	< 20	2	< 2	< 10	22	< 10	6	4
695363	0.89	0.163	0.169	4.30	3	3	158	< 0.01	< 20	< 1	< 2	< 10	26	< 10	5	14
695364	0.80	0.132	0.165	3.99	< 2	3	140	< 0.01	< 20	2	< 2	< 10	21	< 10	5	12
695365	1.54	0.124	0.145	5.24	5	6	148	< 0.01	< 20	3	< 2	< 10	49	< 10	5	21
695366	0.90	0.156	0.139	9.74	5	4	137	< 0.01	< 20	1	< 2	< 10	39	< 10	4	29
695367	1.67	0.085	0.135	4.66	7	7	140	< 0.01	< 20	4	< 2	< 10	61	< 10	4	20
695368	0.83	0.130	0.139	6.24	4	4	135	< 0.01	< 20	< 1	< 2	< 10	42	< 10	4	23
695369	2.08	0.052	0.032	0.21	< 2	6	38	0.32	< 20	6	< 2	< 10	157	< 10	10	16
695370	1.84	0.104	0.121	4.51	5	7	168	< 0.01	< 20	< 1	< 2	< 10	63	< 10	4	21
695371	0.91	0.127	0.164	4.89	3	4	152	< 0.01	< 20	< 1	< 2	< 10	30	< 10	4	18
695372	0.80	0.135	0.163	6.76	3	4	151	< 0.01	< 20	3	< 2	< 10	30	< 10	4	22
695373	0.68	0.113	0.151	9.11	6	3	124	< 0.01	< 20	2	< 2	< 10	25	< 10	4	24
695374	1.03	0.138	0.153	6.20	5	4	156	< 0.01	< 20	< 1	< 2	< 10	29	< 10	5	22
695375	1.14	0.104	0.163	7.79	7	5	165	< 0.01	< 20	< 1	< 2	< 10	27	< 10	5	23
695376	0.95	0.119	0.119	11.4	10	5	155	< 0.01	< 20	< 1	< 2	< 10	32	< 10	4	24
695377	0.91	0.149	0.154	8.71	9	5	174	< 0.01	< 20	6	< 2	< 10	29	< 10	4	24
695378	0.81	0.160	0.144	9.30	8	5	169	< 0.01	< 20	< 1	< 2	< 10	33	< 10	4	26
695379	0.05	3.16	0.001	0.01	< 2	< 1	24	< 0.01	< 20	7	< 2	< 10	< 1	< 10	3	2
695380	0.89	0.099	0.138	11.1	10	5	145	< 0.01	< 20	2	< 2	< 10	27	< 10	4	23
695381	0.84	0.069	0.148	9.98	11	4	136	< 0.01	< 20	3	< 2	< 10	19	< 10	4	21

Analyte Symbol	Mg	Na	P	S	Sb	Sc	Sr	Ti	Th	Te	Tl	U	V	W	Y	Zr
Unit Symbol	%	%	%	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	0.01	0.001	0.001	0.01	2	1	1	0.01	20	1	2	10	1	10	1	1
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
695382	0.65	0.083	0.150	8.39	8	3	125	< 0.01	< 20	5	< 2	< 10	22	< 10	4	22
695383	0.68	0.051	0.108	12.4	15	3	111	< 0.01	< 20	< 1	< 2	< 10	16	< 10	3	19
695384	1.29	0.059	0.118	6.63	7	4	122	< 0.01	< 20	< 1	< 2	< 10	21	< 10	5	22
695385	1.39	0.021	0.015	11.3	11	4	138	< 0.01	< 20	< 1	< 2	< 10	14	< 10	3	12
695386	0.93	0.035	0.024	> 20.0	24	3	34	< 0.01	< 20	5	< 2	< 10	15	< 10	4	18
695387	2.25	0.337	0.160	1.39	4	3	87	0.15	< 20	1	< 2	< 10	51	< 10	13	5
695388	0.41	0.018	0.006	> 20.0	22	2	50	< 0.01	< 20	< 1	< 2	< 10	6	< 10	2	10
695389	1.09	0.097	0.060	1.46	< 2	3	125	< 0.01	< 20	< 1	< 2	< 10	14	< 10	4	11
695390	1.04	0.100	0.055	0.15	< 2	3	116	< 0.01	< 20	2	< 2	< 10	11	< 10	4	8
695391	1.26	0.108	0.054	0.37	< 2	4	133	< 0.01	< 20	3	< 2	< 10	18	< 10	5	12
695392	0.58	0.095	0.057	0.04	< 2	2	80	< 0.01	< 20	6	< 2	< 10	8	< 10	3	7
695393	0.76	0.106	0.059	0.05	< 2	3	102	< 0.01	< 20	< 1	< 2	< 10	16	< 10	3	9
695394	0.77	0.111	0.110	0.20	< 2	4	102	< 0.01	< 20	< 1	< 2	< 10	32	< 10	4	4
695395	0.76	0.108	0.066	0.09	< 2	2	101	< 0.01	< 20	7	< 2	< 10	16	< 10	4	6
695396	0.05	3.21	0.001	< 0.01	< 2	< 1	23	< 0.01	< 20	< 1	< 2	< 10	< 1	< 10	3	1
695397	0.67	0.128	0.069	0.17	< 2	2	105	< 0.01	< 20	3	< 2	< 10	13	< 10	4	8
695398	0.71	0.086	0.068	0.13	< 2	2	93	< 0.01	< 20	2	< 2	< 10	12	< 10	4	7
695399	0.38	0.124	0.063	0.15	< 2	1	84	< 0.01	< 20	2	< 2	< 10	8	< 10	3	7
695400	1.39	0.016	0.004	11.5	12	7	4	< 0.01	< 20	< 1	< 2	< 10	47	< 10	3	12
695401	0.64	0.016	0.005	6.39	7	4	3	< 0.01	< 20	< 1	< 2	< 10	24	< 10	3	8
695402	0.73	0.014	0.005	5.52	5	3	3	< 0.01	< 20	3	< 2	< 10	19	< 10	2	6



Analyte Symbol	Au	Ag	Cd	Cu	Mn	Mo	Ni	Pb	Zn	Al	As	B	Ba	Be	Bi	Ca	Co	Cr	Fe	Ga	Hg	K	La
Unit Symbol	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm
Lower Limit	5	0.2	0.5	1	5	1	1	2	2	0.01	2	10	10	0.5	2	0.01	1	1	0.01	10	1	0.01	10
Method Code	FA-AA	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
GXR-1 Meas		28.2	2.8	1090	814	14	26	676	745	0.28	388	< 10	283	0.8	1430	0.82	7	9	25.0	< 10	4	0.03	< 10
GXR-1 Cert		31.0	3.30	1110	852	18.0	41.0	730	760	3.52	427	15.0	750	1.22	1380	0.960	8.20	12.0	23.6	13.8	3.90	0.050	7.50
GXR-6 Meas		0.2	< 0.5	66	1060	2	19	98	133	5.93	248	< 10	927	0.9	< 2	0.16	14	82	6.03	20	< 1	1.02	11
GXR-6 Cert		1.30	1.00	66.0	1010	2.40	27.0	101	118	17.7	330	9.80	1300	1.40	0.290	0.180	13.8	96.0	5.58	35.0	0.0680	1.87	13.9
OREAS 134b (AQUA REGIA) Meas		> 100	540	1140				> 5000	> 10000		206						105		11.6				
OREAS 134b (AQUA REGIA) Cert		204	563	1360				133000	177000		221						106		12.25				
OREAS 203 Meas	866																						
OREAS 203 Cert	871																						
OREAS 218 Meas	560																						
OREAS 218 Cert	531																						
OREAS 218 Meas	558																						
OREAS 218 Cert	531																						
OREAS 218 Meas	553																						
OREAS 218 Cert	531																						
OREAS 224 Meas	2130																						
OREAS 224 Cert	2150.000																						
OREAS 224 Meas	2110																						
OREAS 224 Cert	2150.000																						
OREAS 224 Meas	2130																						
OREAS 224 Cert	2150.000																						
OREAS 224 Meas	2140																						
OREAS 224 Cert	2150.000																						
OREAS 224 Meas	2100																						
OREAS 224 Cert	2150.000																						
695300 Orig		< 0.2	< 0.5	26	1220	< 1	149	6	56	1.95	8	< 10	48	< 0.5	< 2	4.25	29	35	5.64	< 10	< 1	0.35	17
695300 Dup		< 0.2	< 0.5	25	1180	< 1	147	5	54	1.86	10	< 10	52	< 0.5	< 2	4.10	28	34	5.48	< 10	< 1	0.34	17
695307 Orig	5																						
695307 Dup	5																						
695308 Orig		< 0.2	< 0.5	30	1050	< 1	164	3	81	2.03	9	< 10	87	< 0.5	< 2	3.94	28	49	5.36	< 10	< 1	0.23	24
695308 Dup		< 0.2	< 0.5	27	1050	< 1	165	3	78	2.00	9	< 10	86	< 0.5	< 2	3.92	28	48	5.33	< 10	< 1	0.22	24
695318 Orig	15																						
695318 Dup	15																						
695327 Orig	< 5																						
695327 Dup	< 5																						
695342 Orig	< 5																						

Analyte Symbol	Au	Ag	Cd	Cu	Mn	Mo	Ni	Pb	Zn	Al	As	B	Ba	Be	Bi	Ca	Co	Cr	Fe	Ga	Hg	K	La
Unit Symbol	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm
Lower Limit	5	0.2	0.5	1	5	1	1	2	2	0.01	2	10	10	0.5	2	0.01	1	1	0.01	10	1	0.01	10
Method Code	FA-AA	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
695342 Dup	< 5																						
695347 Orig	6	< 0.2	< 0.5	45	626	1	342	3	90	1.41	20	< 10	37	< 0.5	< 2	3.01	58	23	6.08	< 10	< 1	0.18	16
695347 Split PREP DUP	< 5	< 0.2	< 0.5	48	648	1	352	4	94	1.45	22	< 10	42	< 0.5	< 2	3.11	60	23	6.31	< 10	< 1	0.19	16
695347 Split PREP DUP		< 0.2	< 0.5	48	648	1	352	4	94	1.45	22	< 10	42	< 0.5	< 2	3.11	60	23	6.31	< 10	< 1	0.19	16
695351 Orig	< 5																						
695351 Dup	< 5																						
695360 Orig		< 0.2	< 0.5	32	655	1	552	10	163	0.97	32	< 10	37	< 0.5	< 2	3.10	75	15	5.89	< 10	< 1	0.14	12
695360 Dup		< 0.2	< 0.5	30	652	1	549	6	156	0.96	32	< 10	37	< 0.5	< 2	3.11	73	15	5.95	< 10	< 1	0.13	12
695361 Orig	< 5																						
695361 Dup	< 5																						
695363 Orig		< 0.2	< 0.5	37	817	1	827	13	177	1.28	62	< 10	19	< 0.5	< 2	3.40	91	24	8.58	< 10	< 1	0.20	< 10
695363 Dup		< 0.2	< 0.5	35	785	2	781	13	168	1.19	57	< 10	18	< 0.5	< 2	3.21	85	20	8.07	< 10	< 1	0.18	< 10
695376 Orig	7	0.2	< 0.5	26	1080	1	650	10	190	1.07	207	< 10	< 10	< 0.5	< 2	3.25	55	25	16.1	< 10	< 1	0.17	< 10
695376 Dup	7	0.2	< 0.5	25	1060	1	633	10	188	1.05	205	< 10	< 10	< 0.5	< 2	3.23	53	25	15.8	< 10	< 1	0.17	< 10
695386 Orig	967																						
695386 Dup	1010																						
695388 Orig		1.0	< 0.5	52	2900	< 1	162	58	100	0.10	500	< 10	< 10	< 0.5	2	0.93	35	16	25.4	< 10	1	0.02	< 10
695388 Dup		0.9	< 0.5	51	2880	< 1	160	55	94	0.10	494	< 10	< 10	< 0.5	5	0.91	36	16	25.0	< 10	< 1	0.01	< 10
695396 Orig	< 5																						
695396 Dup	< 5																						
695397 Orig	< 5	< 0.2	< 0.5	14	925	< 1	25	2	54	1.01	9	< 10	63	< 0.5	< 2	2.59	15	18	3.34	< 10	< 1	0.24	20
695397 Split PREP DUP	< 5	< 0.2	< 0.5	13	969	< 1	23	< 2	55	0.91	6	< 10	56	< 0.5	3	2.69	13	15	3.40	< 10	< 1	0.21	20
695401 Orig		< 0.2	< 0.5	4	3220	< 1	198	12	60	0.16	58	< 10	< 10	< 0.5	< 2	0.07	40	54	15.1	< 10	< 1	< 0.01	< 10
695401 Dup		< 0.2	< 0.5	4	3210	< 1	194	9	56	0.16	59	< 10	10	< 0.5	< 2	0.07	41	63	15.0	< 10	< 1	< 0.01	< 10
Method Blank	< 5																						
Method Blank	< 5																						
Method Blank	< 5																						
Method Blank	< 5																						
Method Blank	< 5																						
Method Blank	< 5																						
Method Blank	< 5																						
Method Blank	< 5																						
Method Blank		< 0.2	< 0.5	< 1	< 5	< 1	< 1	< 2	< 2	< 0.01	< 2	< 10	< 10	< 0.5	< 2	< 0.01	< 1	< 1	< 0.01	< 10	< 1	< 0.01	< 10
Method Blank		< 0.2	< 0.5	< 1	< 5	< 1	< 1	< 2	< 2	< 0.01	< 2	< 10	< 10	< 0.5	< 2	< 0.01	< 1	< 1	< 0.01	< 10	< 1	< 0.01	< 10

Analyte Symbol	Mg	Na	P	S	Sb	Sc	Sr	Ti	Th	Te	Tl	U	V	W	Y	Zr
Unit Symbol	%	%	%	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	0.01	0.001	0.001	0.01	2	1	1	0.01	20	1	2	10	1	10	1	1
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
GXR-1 Meas	0.12	0.048	0.039	0.19	74	1	161	< 0.01	< 20	13	< 2	23	85	136	23	14
GXR-1 Cert	0.217	0.0520	0.0650	0.257	122	1.58	275	0.036	2.44	13.0	0.390	34.9	80.0	164	32.0	38.0
GXR-6 Meas	0.36	0.081	0.033	0.02	5	22	33	< 20	< 1	< 2	< 10	186	< 10	6	15	
GXR-6 Cert	0.609	0.104	0.0350	0.0160	3.60	27.6	35.0		5.30	0.0180	2.20	1.54	186	1.90	14.0	110
OREAS 134b (AQUA REGIA) Meas				12.3												
OREAS 134b (AQUA REGIA) Cert				19.31												
OREAS 203 Meas																
OREAS 203 Cert																
OREAS 218 Meas																
OREAS 218 Cert																
OREAS 218 Meas																
OREAS 218 Cert																
OREAS 218 Meas																
OREAS 218 Cert																
OREAS 218 Meas																
OREAS 218 Cert																
OREAS 224 Meas																
OREAS 224 Cert																
OREAS 224 Meas																
OREAS 224 Cert																
OREAS 224 Meas																
OREAS 224 Cert																
OREAS 224 Meas																
OREAS 224 Cert																
OREAS 224 Meas																
OREAS 224 Cert																
695300 Orig	0.99	0.116	0.214	1.49	< 2	4	228	< 0.01	< 20	< 1	< 2	< 10	47	< 10	7	3
695300 Dup	0.96	0.112	0.207	1.45	< 2	4	219	< 0.01	< 20	1	< 2	< 10	46	< 10	6	3
695307 Orig																
695307 Dup																
695308 Orig	1.24	0.086	0.226	0.68	< 2	4	254	< 0.01	< 20	< 1	< 2	< 10	53	< 10	7	3
695308 Dup	1.23	0.084	0.224	0.67	2	4	252	< 0.01	< 20	3	< 2	< 10	52	< 10	7	3
695318 Orig																
695318 Dup																
695327 Orig																
695327 Dup																
695342 Orig																
695342 Dup																
695347 Orig	0.84	0.184	0.186	2.21	< 2	4	149	< 0.01	< 20	< 1	< 2	< 10	30	< 10	6	4
695347 Split PREP DUP	0.88	0.189	0.194	2.26	< 2	4	153	< 0.01	< 20	< 1	< 2	< 10	31	< 10	6	4

Analyte Symbol	Mg	Na	P	S	Sb	Sc	Sr	Ti	Th	Te	Tl	U	V	W	Y	Zr
Unit Symbol	%	%	%	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	0.01	0.001	0.001	0.01	2	1	1	0.01	20	1	2	10	1	10	1	1
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
695347 Split PREP DUP	0.88	0.189	0.194	2.26	< 2	4	153	< 0.01	< 20	< 1	< 2	< 10	31	< 10	6	4
695351 Orig																
695351 Dup																
695360 Orig	0.81	0.114	0.176	2.31	3	3	126	< 0.01	< 20	6	< 2	< 10	21	< 10	6	6
695360 Dup	0.80	0.113	0.177	2.37	< 2	3	125	< 0.01	< 20	3	< 2	< 10	20	< 10	6	5
695361 Orig																
695361 Dup																
695363 Orig	0.92	0.170	0.174	4.42	3	4	164	< 0.01	< 20	< 1	< 2	< 10	27	< 10	5	14
695363 Dup	0.86	0.157	0.164	4.18	3	3	153	< 0.01	< 20	2	< 2	< 10	25	< 10	5	14
695376 Orig	0.96	0.119	0.120	11.7	10	5	156	< 0.01	< 20	< 1	< 2	< 10	32	< 10	4	24
695376 Dup	0.94	0.119	0.118	11.2	10	5	153	< 0.01	< 20	< 1	< 2	< 10	31	< 10	4	24
695386 Orig																
695386 Dup																
695388 Orig	0.41	0.019	0.006	> 20.0	23	2	51	< 0.01	< 20	< 1	< 2	< 10	6	< 10	2	10
695388 Dup	0.41	0.017	0.006	> 20.0	20	2	49	< 0.01	< 20	4	< 2	< 10	6	< 10	2	10
695396 Orig																
695396 Dup																
695397 Orig	0.67	0.128	0.069	0.17	< 2	2	105	< 0.01	< 20	3	< 2	< 10	13	< 10	4	8
695397 Split PREP DUP	0.69	0.110	0.069	0.15	< 2	2	103	< 0.01	< 20	< 1	< 2	< 10	12	< 10	4	8
695401 Orig	0.64	0.015	0.006	6.39	8	4	3	< 0.01	< 20	< 1	< 2	< 10	24	< 10	3	8
695401 Dup	0.64	0.016	0.005	6.38	6	4	2	< 0.01	< 20	< 1	< 2	< 10	24	< 10	3	8
Method Blank																
Method Blank																
Method Blank																
Method Blank																
Method Blank																
Method Blank																
Method Blank																
Method Blank																
Method Blank	< 0.01	0.008	< 0.001	< 0.01	< 2	< 1	< 1	< 0.01	< 20	< 1	< 2	< 10	< 1	< 10	< 1	< 1
Method Blank	< 0.01	0.009	< 0.001	< 0.01	< 2	< 1	< 1	< 0.01	< 20	2	< 2	< 10	< 1	< 10	< 1	< 1



**Date Submitted:** 21-Mar-18  
**Invoice No.:** A18-03557  
**Invoice Date:** 16-May-18  
**Your Reference:** 81 Lucas

**Noble Mineral Exploration**  
**2500-120 Adelaide Street West**  
**Toronto ON M5H 1T1**  
**Canada**

**ATTN: Randy Singh (inv-cc)**

## CERTIFICATE OF ANALYSIS

105 Rock samples were submitted for analysis.

The following analytical package(s) were requested:

Code 1A2-Timmins Au - Fire Assay AA

Code 1E3-Timmins Aqua Regia ICP(AQUAGEO)

REPORT **A18-03557**

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

Notes:

If value exceeds upper limit we recommend reassay by fire assay gravimetric-Code 1A3.

Values which exceed the upper limit should be assayed for accurate numbers.

CERTIFIED BY:

A handwritten signature in black ink, appearing to read "Emmanuel Esemé". The signature is stylized and somewhat abstract, with a horizontal line underneath it.

Emmanuel Esemé , Ph.D.  
Quality Control

**ACTIVATION LABORATORIES LTD.**  
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## Results

## Activation Laboratories Ltd.

## Report: A18-03557

Analyte Symbol	Au	Ag	Cd	Cu	Mn	Mo	Ni	Pb	Zn	Al	As	B	Ba	Be	Bi	Ca	Co	Cr	Fe	Ga	Hg	K	La
Unit Symbol	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm
Lower Limit	5	0.2	0.5	1	5	1	1	2	2	0.01	2	10	10	0.5	2	0.01	1	1	0.01	10	1	0.01	10
Method Code	FA-AA	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
695403	5	0.4	< 0.5	25	8890	< 1	217	14	98	0.46	152	< 10	< 10	< 0.5	3	0.18	36	8	> 30.0	< 10	< 1	< 0.01	< 10
695404	1840	0.4	< 0.5	164	787	1	79	5	64	3.43	12	17	28	< 0.5	< 2	3.09	35	132	5.94	10	< 1	0.09	< 10
695405	7	0.3	< 0.5	18	8210	< 1	142	11	108	0.22	122	< 10	< 10	< 0.5	4	0.18	29	8	> 30.0	< 10	< 1	< 0.01	< 10
695406	5	0.2	< 0.5	20	5640	< 1	141	16	99	0.21	147	< 10	< 10	< 0.5	< 2	0.13	40	9	> 30.0	< 10	< 1	< 0.01	< 10
695407	< 5	< 0.2	< 0.5	21	3910	< 1	318	13	206	0.41	170	< 10	< 10	< 0.5	5	0.09	93	19	26.0	< 10	< 1	< 0.01	< 10
695408	< 5	< 0.2	< 0.5	4	2830	< 1	153	3	86	2.24	32	< 10	21	< 0.5	< 2	0.25	43	13	10.2	< 10	< 1	0.13	12
695409	< 5	< 0.2	< 0.5	4	8140	< 1	124	2	161	2.24	13	< 10	38	< 0.5	< 2	0.38	28	12	15.0	< 10	< 1	0.13	< 10
695410	7	0.5	< 0.5	9	6140	< 1	195	15	144	1.78	237	< 10	12	< 0.5	5	0.30	63	9	> 30.0	< 10	< 1	0.02	< 10
695411	< 5	< 0.2	< 0.5	1	101	< 1	< 1	< 2	17	4.07	< 2	10	12	0.6	< 2	0.17	< 1	1	0.59	< 10	< 1	1.44	< 10
695412	< 5	0.4	< 0.5	< 1	6980	< 1	91	< 2	87	0.08	72	< 10	13	< 0.5	< 2	0.80	23	15	23.6	< 10	< 1	< 0.01	< 10
695413	10	0.3	< 0.5	4	7160	< 1	141	8	103	0.06	145	< 10	11	< 0.5	< 2	0.17	46	15	28.6	< 10	< 1	< 0.01	< 10
695414	6	< 0.2	< 0.5	2	6620	< 1	85	8	102	0.11	69	< 10	15	< 0.5	< 2	0.14	20	22	27.4	< 10	< 1	< 0.01	< 10
695415	56	1.9	< 0.5	18	6680	< 1	252	22	114	0.17	289	< 10	< 10	< 0.5	7	0.16	51	9	> 30.0	< 10	< 1	< 0.01	< 10
695416	40	0.5	< 0.5	14	8270	< 1	160	13	101	0.10	226	< 10	12	0.6	4	0.24	29	9	> 30.0	< 10	< 1	< 0.01	< 10
695417	42	0.6	< 0.5	10	8190	< 1	165	12	94	0.09	234	< 10	11	0.5	4	0.23	31	8	> 30.0	< 10	< 1	< 0.01	< 10
695418	57	0.6	< 0.5	16	8350	< 1	205	15	90	0.09	296	< 10	< 10	< 0.5	5	0.24	43	7	> 30.0	< 10	< 1	< 0.01	< 10
695419	9	< 0.2	< 0.5	9	7940	< 1	93	6	87	0.19	83	< 10	15	< 0.5	5	0.13	25	24	22.8	< 10	< 1	< 0.01	< 10
695420	< 5	< 0.2	< 0.5	5	5790	< 1	77	3	72	0.11	34	< 10	15	< 0.5	< 2	0.12	15	46	16.4	< 10	< 1	< 0.01	< 10
695421	35	1.5	< 0.5	53	192	< 1	195	19	89	1.51	179	< 10	11	< 0.5	< 2	0.04	43	31	17.7	< 10	< 1	0.02	< 10
695422	8	< 0.2	< 0.5	41	4140	2	62	15	56	1.03	74	< 10	38	< 0.5	< 2	0.70	27	11	5.98	< 10	< 1	0.22	< 10
695423	7	< 0.2	< 0.5	33	615	2	40	12	15	0.80	50	< 10	36	< 0.5	< 2	1.58	17	9	2.80	< 10	< 1	0.26	12
695424	< 5	< 0.2	< 0.5	23	1440	< 1	17	9	11	0.72	23	< 10	67	< 0.5	< 2	3.95	8	8	2.82	< 10	< 1	0.22	< 10
695425	< 5	< 0.2	< 0.5	29	1100	< 1	21	8	25	0.82	22	< 10	64	< 0.5	< 2	3.14	10	8	2.84	< 10	< 1	0.24	< 10
695426	6	0.2	< 0.5	25	2330	< 1	101	7	43	1.77	53	< 10	15	< 0.5	< 2	1.91	26	12	9.57	< 10	< 1	0.25	< 10
695427	< 5	< 0.2	< 0.5	7	2910	< 1	75	3	58	2.34	14	< 10	25	< 0.5	< 2	1.51	23	16	9.85	< 10	< 1	0.23	11
695428	520	< 0.2	< 0.5	172	788	< 1	60	< 2	69	3.41	4	50	26	< 0.5	< 2	3.01	37	99	6.82	10	< 1	0.04	< 10
695429	< 5	< 0.2	< 0.5	10	4280	< 1	63	2	80	2.51	2	< 10	31	< 0.5	< 2	3.55	20	18	11.6	< 10	< 1	0.22	< 10
695430	< 5	< 0.2	< 0.5	9	3950	< 1	84	5	89	2.44	< 2	< 10	35	< 0.5	< 2	3.48	23	20	11.4	< 10	< 1	0.19	< 10
695431	< 5	< 0.2	< 0.5	11	2520	< 1	45	3	51	1.68	< 2	< 10	89	< 0.5	< 2	3.19	15	21	6.21	< 10	< 1	0.33	15
695432	< 5	< 0.2	< 0.5	18	1680	< 1	30	3	46	1.09	< 2	< 10	69	< 0.5	3	2.35	13	19	4.58	< 10	< 1	0.18	15
695433	< 5	< 0.2	< 0.5	15	1870	< 1	23	3	74	0.92	< 2	< 10	67	< 0.5	< 2	3.38	10	16	4.31	< 10	< 1	0.18	15
695434	10	< 0.2	< 0.5	21	1350	< 1	32	< 2	99	1.21	4	< 10	83	< 0.5	< 2	2.06	14	19	4.06	< 10	< 1	0.21	20
695435	5	< 0.2	< 0.5	38	797	< 1	22	4	60	1.01	4	< 10	115	< 0.5	< 2	1.83	10	20	2.52	< 10	< 1	0.31	19
695436	< 5	< 0.2	< 0.5	7	3820	< 1	28	< 2	78	2.37	< 2	< 10	75	< 0.5	< 2	3.58	7	22	8.48	< 10	< 1	0.19	18
695437	< 5	< 0.2	< 0.5	< 1	110	< 1	< 1	< 2	18	4.78	< 2	14	13	0.6	< 2	0.21	< 1	< 1	0.67	10	< 1	1.58	< 10
695438	< 5	< 0.2	< 0.5	8	1790	< 1	22	3	66	2.07	5	< 10	102	< 0.5	2	1.84	7	23	5.44	< 10	< 1	0.27	21
695439	< 5	< 0.2	< 0.5	3	512	< 1	13	< 2	54	1.08	< 2	< 10	99	< 0.5	< 2	1.60	5	14	1.75	< 10	< 1	0.29	24
695440	< 5	< 0.2	< 0.5	10	538	< 1	23	< 2	74	1.02	7	< 10	92	< 0.5	< 2	2.29	8	11	1.85	< 10	< 1	0.27	23
695441	< 5	< 0.2	< 0.5	14	505	< 1	25	< 2	99	0.97	15	< 10	92	< 0.5	< 2	2.57	14	10	1.96	< 10	< 1	0.28	23
695442	< 5	< 0.2	< 0.5	6	396	< 1	31	< 2	70	0.82	4	< 10	81	< 0.5	< 2	2.24	10	11	1.50	< 10	< 1	0.24	22
695443	< 5	< 0.2	< 0.5	9	375	< 1	28	2	59	0.89	5	< 10	87	< 0.5	< 2	1.63	10	14	1.51	< 10	< 1	0.24	22
695444	5	< 0.2	< 0.5	20	375	< 1	27	4	112	0.85	7	< 10	78	< 0.5	< 2	2.05	13	16	1.78	< 10	< 1	0.21	17

## Results

## Activation Laboratories Ltd.

## Report: A18-03557

Analyte Symbol	Au	Ag	Cd	Cu	Mn	Mo	Ni	Pb	Zn	Al	As	B	Ba	Be	Bi	Ca	Co	Cr	Fe	Ga	Hg	K	La
Unit Symbol	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm
Lower Limit	5	0.2	0.5	1	5	1	1	2	2	0.01	2	10	10	0.5	2	0.01	1	1	0.01	10	1	0.01	10
Method Code	FA-AA	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
695445	< 5	< 0.2	< 0.5	18	378	< 1	25	3	103	1.02	6	< 10	97	< 0.5	< 2	2.45	13	18	1.86	< 10	< 1	0.28	16
695446	8	< 0.2	< 0.5	39	371	< 1	28	5	104	0.85	8	< 10	80	< 0.5	< 2	2.35	14	35	1.85	< 10	< 1	0.22	15
695447	7	0.3	< 0.5	52	381	< 1	28	5	111	0.76	10	< 10	70	< 0.5	< 2	2.43	14	27	1.89	< 10	< 1	0.19	15
695448	13	< 0.2	< 0.5	20	342	< 1	23	5	103	0.99	7	< 10	89	< 0.5	< 2	1.90	11	39	1.61	< 10	< 1	0.26	16
695449	11	< 0.2	< 0.5	15	297	1	23	5	99	0.83	7	< 10	65	< 0.5	< 2	1.75	10	35	1.57	< 10	< 1	0.18	15
695450	< 5	< 0.2	< 0.5	13	354	1	24	3	103	0.78	6	< 10	60	< 0.5	< 2	2.14	9	31	1.59	< 10	< 1	0.17	15
695451	5	< 0.2	< 0.5	20	346	< 1	26	5	115	0.78	6	< 10	61	< 0.5	< 2	1.96	10	46	1.62	< 10	< 1	0.17	15
695452	6	< 0.2	< 0.5	20	385	< 1	22	5	108	0.65	7	< 10	64	< 0.5	< 2	2.23	10	27	1.64	< 10	< 1	0.18	15
695453	85	0.3	< 0.5	32	299	< 1	29	7	123	0.78	13	< 10	71	< 0.5	< 2	1.90	15	40	1.89	< 10	< 1	0.20	15
695454	5	< 0.2	< 0.5	16	297	1	25	3	124	1.05	4	< 10	89	< 0.5	< 2	1.89	10	43	1.67	< 10	< 1	0.26	17
695455	510	< 0.2	< 0.5	173	800	< 1	63	< 2	69	3.45	2	50	26	< 0.5	< 2	3.04	38	102	6.87	10	< 1	0.04	< 10
695456	14	< 0.2	< 0.5	20	404	< 1	27	4	165	0.97	8	< 10	63	< 0.5	< 2	2.23	12	41	2.21	< 10	< 1	0.19	14
695457	6	< 0.2	< 0.5	15	586	< 1	30	3	158	1.12	9	< 10	68	< 0.5	< 2	3.07	12	43	2.56	< 10	< 1	0.21	14
695458	5	< 0.2	< 0.5	11	600	< 1	23	2	97	0.95	6	< 10	60	< 0.5	< 2	3.01	10	39	2.04	< 10	< 1	0.18	12
695459	7	< 0.2	< 0.5	20	391	< 1	24	5	68	0.86	8	< 10	71	< 0.5	< 2	1.93	10	45	1.77	< 10	< 1	0.21	15
695460	7	< 0.2	< 0.5	19	374	< 1	28	5	132	1.00	7	< 10	76	< 0.5	< 2	1.97	12	38	1.92	< 10	< 1	0.23	16
695461	5	< 0.2	< 0.5	23	442	< 1	30	4	132	1.09	6	< 10	84	< 0.5	< 2	2.01	11	63	1.90	< 10	< 1	0.25	16
695462	5	< 0.2	< 0.5	20	484	< 1	27	5	133	0.92	6	< 10	60	< 0.5	< 2	2.42	11	36	1.97	< 10	< 1	0.18	15
695463	< 5	< 0.2	< 0.5	21	451	< 1	29	7	184	1.12	6	< 10	73	< 0.5	< 2	2.13	12	31	2.25	< 10	< 1	0.22	17
695464	7	< 0.2	< 0.5	15	462	< 1	28	5	133	1.12	6	< 10	75	< 0.5	< 2	2.11	11	36	2.05	< 10	< 1	0.23	18
695465	< 5	< 0.2	< 0.5	6	98	< 1	< 1	< 2	19	4.43	< 2	12	12	0.6	< 2	0.19	< 1	1	0.58	10	< 1	1.47	< 10
695466	8	< 0.2	< 0.5	17	505	< 1	28	7	166	1.06	7	< 10	68	< 0.5	< 2	2.04	12	32	2.21	< 10	< 1	0.20	20
695467	8	< 0.2	< 0.5	25	493	< 1	25	5	119	1.14	9	< 10	88	< 0.5	< 2	2.11	11	26	1.89	< 10	< 1	0.27	19
695468	6	< 0.2	< 0.5	20	587	< 1	32	4	150	1.27	6	< 10	95	< 0.5	< 2	2.32	12	41	2.32	< 10	< 1	0.29	19
695469	8	< 0.2	< 0.5	24	539	< 1	34	4	112	1.15	4	< 10	91	< 0.5	< 2	1.99	16	31	2.26	< 10	< 1	0.28	15
695470	< 5	< 0.2	< 0.5	12	1020	< 1	42	2	65	1.27	< 2	< 10	97	< 0.5	< 2	1.87	20	33	2.55	< 10	< 1	0.30	19
695471	< 5	< 0.2	< 0.5	13	2760	< 1	45	< 2	141	2.29	< 2	< 10	60	< 0.5	< 2	2.50	18	29	7.09	< 10	< 1	0.18	16
695472	< 5	< 0.2	< 0.5	13	1960	< 1	33	3	84	1.40	2	< 10	90	< 0.5	< 2	2.70	15	25	4.05	< 10	< 1	0.29	19
695473	8	< 0.2	< 0.5	13	1920	< 1	27	< 2	99	2.12	< 2	< 10	91	< 0.5	< 2	2.53	13	28	6.08	< 10	< 1	0.28	19
695474	548	< 0.2	< 0.5	188	851	< 1	68	< 2	73	3.70	< 2	55	30	< 0.5	< 2	3.24	39	107	7.43	10	< 1	0.04	< 10
695475	5	< 0.2	< 0.5	14	4350	< 1	39	3	118	2.62	< 2	< 10	77	< 0.5	< 2	2.89	16	23	9.65	< 10	< 1	0.21	21
695476	< 5	< 0.2	< 0.5	7	5780	< 1	41	4	93	3.13	3	< 10	46	< 0.5	< 2	3.05	15	22	13.0	10	< 1	0.11	18
695477	< 5	< 0.2	< 0.5	5	7370	< 1	35	< 2	96	3.03	< 2	< 10	33	< 0.5	< 2	2.99	13	20	16.2	10	< 1	0.08	19
695478	< 5	< 0.2	< 0.5	12	8260	< 1	39	4	207	2.80	< 2	< 10	21	< 0.5	< 2	3.77	13	15	18.5	10	< 1	0.05	12
695479	< 5	< 0.2	< 0.5	10	6360	< 1	50	2	109	1.91	6	< 10	34	< 0.5	< 2	3.18	15	28	13.5	< 10	< 1	0.08	14
695480	18	< 0.2	< 0.5	12	6190	< 1	49	< 2	115	1.99	4	< 10	47	< 0.5	< 2	2.83	12	30	13.3	< 10	< 1	0.14	16
695481	5	< 0.2	< 0.5	17	5780	2	47	3	109	1.81	< 2	< 10	43	< 0.5	< 2	2.65	14	28	12.0	< 10	< 1	0.13	14
695482	17	< 0.2	< 0.5	18	4300	4	56	3	142	2.06	4	< 10	75	< 0.5	< 2	2.56	17	30	9.62	< 10	< 1	0.24	16
695483	< 5	< 0.2	< 0.5	17	4210	4	52	4	139	2.02	2	< 10	75	< 0.5	< 2	2.52	17	30	9.42	< 10	< 1	0.23	17
695484	17	< 0.2	< 0.5	20	3300	< 1	44	5	88	1.73	< 2	< 10	49	< 0.5	< 2	2.38	14	43	7.37	< 10	< 1	0.14	15
695485	10	< 0.2	< 0.5	18	3880	< 1	50	4	122	2.00	2	< 10	37	< 0.5	< 2	2.89	13	37	8.45	< 10	< 1	0.10	16
695486	10	< 0.2	< 0.5	25	2640	< 1	42	4	109	1.67	4	< 10	54	< 0.5	2	2.03	16	39	6.33	< 10	< 1	0.15	20

Analyte Symbol	Au	Ag	Cd	Cu	Mn	Mo	Ni	Pb	Zn	Al	As	B	Ba	Be	Bi	Ca	Co	Cr	Fe	Ga	Hg	K	La
Unit Symbol	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm
Lower Limit	5	0.2	0.5	1	5	1	1	2	2	0.01	2	10	10	0.5	2	0.01	1	1	0.01	10	1	0.01	10
Method Code	FA-AA	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
695487	15	< 0.2	< 0.5	21	1980	< 1	39	< 2	89	1.36	3	< 10	64	< 0.5	2	1.86	14	52	4.61	< 10	< 1	0.19	21
695488	10	< 0.2	< 0.5	22	1180	< 1	39	3	126	1.56	< 2	< 10	48	< 0.5	< 2	1.28	14	36	4.53	< 10	< 1	0.15	15
695489	< 5	< 0.2	< 0.5	15	909	< 1	18	2	69	0.96	6	< 10	65	< 0.5	< 2	2.03	10	22	2.15	< 10	< 1	0.23	20
695490	5	< 0.2	< 0.5	16	424	< 1	22	< 2	77	1.17	7	< 10	81	< 0.5	< 2	1.77	11	28	1.98	< 10	< 1	0.29	21
695491	5	< 0.2	< 0.5	12	290	< 1	24	2	69	0.75	5	< 10	60	< 0.5	< 2	1.94	10	30	1.50	< 10	< 1	0.20	20
695492	< 5	< 0.2	< 0.5	< 1	100	< 1	< 1	< 2	21	4.30	< 2	14	13	0.6	< 2	0.19	< 1	< 1	0.60	10	< 1	1.50	< 10
695493	12	< 0.2	< 0.5	14	270	< 1	24	2	70	0.98	5	< 10	67	< 0.5	< 2	1.98	11	33	1.72	< 10	< 1	0.23	19
695494	6	< 0.2	< 0.5	15	349	< 1	19	2	51	0.85	6	< 10	64	< 0.5	< 2	1.89	12	39	1.56	< 10	< 1	0.22	16
695495	< 5	< 0.2	< 0.5	11	303	< 1	25	< 2	85	1.02	8	< 10	63	< 0.5	< 2	1.05	12	31	1.96	< 10	< 1	0.21	18
695496	< 5	< 0.2	< 0.5	13	709	< 1	34	< 2	57	0.93	11	< 10	59	< 0.5	< 2	2.27	16	19	2.59	< 10	< 1	0.21	14
695497	14	< 0.2	< 0.5	19	682	< 1	44	5	98	0.92	17	< 10	57	< 0.5	2	1.48	23	33	3.08	< 10	< 1	0.19	12
695498	8	< 0.2	< 0.5	12	963	< 1	42	3	87	1.54	5	< 10	38	< 0.5	< 2	1.65	20	38	4.38	< 10	< 1	0.13	11
695499	30	1.0	0.8	34	668	< 1	110	34	351	1.13	9	< 10	19	< 0.5	< 2	1.80	31	27	5.10	< 10	< 1	0.25	11
695500	7	< 0.2	< 0.5	9	526	< 1	33	5	69	0.83	6	< 10	57	< 0.5	< 2	1.32	17	47	1.79	< 10	< 1	0.18	13
696001	526	< 0.2	< 0.5	157	743	< 1	58	< 2	65	3.17	3	46	24	< 0.5	< 2	2.83	35	93	6.30	10	< 1	0.04	< 10
696002	< 5	< 0.2	< 0.5	10	756	< 1	28	4	62	0.86	5	< 10	63	< 0.5	< 2	1.44	15	53	1.85	< 10	< 1	0.20	14
696003	10	< 0.2	< 0.5	14	1020	< 1	72	< 2	199	1.84	11	< 10	70	< 0.5	2	0.96	34	52	4.86	< 10	< 1	0.24	15
696004	5	0.3	< 0.5	10	1220	1	55	11	107	1.34	12	< 10	55	< 0.5	3	1.53	18	61	4.43	< 10	< 1	0.21	< 10
696005	< 5	< 0.2	< 0.5	13	1420	< 1	30	3	97	1.21	< 2	< 10	65	< 0.5	< 2	2.47	15	65	3.72	< 10	< 1	0.22	< 10
696006	< 5	< 0.2	< 0.5	11	1760	< 1	22	< 2	80	1.20	< 2	< 10	58	< 0.5	< 2	1.89	12	40	3.83	< 10	< 1	0.17	13
696007	10	0.9	< 0.5	33	1760	< 1	72	38	156	1.20	45	< 10	24	< 0.5	< 2	1.54	39	43	7.22	< 10	< 1	0.15	< 10



Analyte Symbol	Mg	Na	P	S	Sb	Sc	Sr	Ti	Th	Te	Tl	U	V	W	Y	Zr
Unit Symbol	%	%	%	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	0.01	0.001	0.001	0.01	2	1	1	0.01	20	1	2	10	1	10	1	1
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
695403	1.59	0.022	0.005	18.0	18	4	8	< 0.01	< 20	< 1	< 2	< 10	20	< 10	3	14
695404	2.28	0.062	0.035	0.24	2	7	43	0.36	< 20	< 1	< 2	< 10	165	< 10	11	17
695405	1.58	0.022	0.004	16.3	18	7	5	< 0.01	< 20	< 1	< 2	< 10	36	< 10	3	15
695406	1.03	0.018	0.004	18.6	17	5	4	< 0.01	< 20	7	< 2	< 10	27	< 10	2	12
695407	0.75	0.018	0.004	17.3	13	6	3	< 0.01	< 20	< 1	< 2	< 10	37	< 10	2	11
695408	0.47	0.049	0.050	3.52	6	2	19	< 0.01	< 20	< 1	< 2	< 10	25	< 10	4	11
695409	0.75	0.060	0.056	2.32	7	6	19	< 0.01	< 20	< 1	< 2	< 10	34	< 10	5	14
695410	1.69	0.024	0.022	13.9	12	12	10	< 0.01	< 20	< 1	< 2	< 10	54	< 10	5	26
695411	0.05	3.30	0.001	0.02	< 2	< 1	22	< 0.01	< 20	4	3	< 10	< 1	< 10	3	< 1
695412	1.66	0.021	0.005	6.77	13	11	24	< 0.01	< 20	< 1	< 2	< 10	48	< 10	3	14
695413	1.64	0.018	0.005	9.97	14	13	5	< 0.01	< 20	< 1	< 2	< 10	59	< 10	4	17
695414	1.21	0.018	0.013	5.46	12	14	4	< 0.01	< 20	< 1	< 2	< 10	58	< 10	6	21
695415	1.21	0.017	0.019	16.6	25	13	5	< 0.01	< 20	11	< 2	< 10	67	< 10	6	26
695416	1.52	0.018	0.039	13.1	24	16	5	< 0.01	< 20	< 1	< 2	< 10	55	< 10	7	20
695417	1.50	0.019	0.040	13.9	26	16	5	< 0.01	< 20	9	< 2	< 10	54	< 10	7	20
695418	1.53	0.019	0.015	17.5	28	13	5	< 0.01	< 20	3	< 2	< 10	54	< 10	4	16
695419	1.30	0.018	0.012	5.65	11	11	4	< 0.01	< 20	< 1	< 2	< 10	45	< 10	3	12
695420	1.20	0.017	0.004	2.53	8	12	3	< 0.01	< 20	3	< 2	< 10	58	< 10	3	9
695421	0.31	0.021	0.018	13.6	10	7	29	< 0.01	< 20	5	< 2	< 10	36	< 10	3	12
695422	0.25	0.088	0.071	2.23	3	2	42	< 0.01	< 20	4	< 2	< 10	6	< 10	6	17
695423	0.68	0.117	0.076	2.08	< 2	2	68	< 0.01	< 20	< 1	< 2	< 10	7	< 10	4	7
695424	1.82	0.092	0.075	1.21	< 2	2	75	< 0.01	< 20	< 1	< 2	< 10	7	< 10	7	5
695425	1.43	0.096	0.085	1.60	< 2	2	101	< 0.01	< 20	< 1	< 2	< 10	8	< 10	4	5
695426	0.78	0.096	0.073	5.27	3	2	93	< 0.01	< 20	1	< 2	< 10	19	< 10	4	25
695427	0.84	0.084	0.068	3.35	5	3	79	< 0.01	< 20	< 1	< 2	< 10	28	< 10	3	23
695428	2.26	0.089	0.043	0.14	< 2	9	29	0.45	< 20	3	< 2	< 10	205	< 10	15	21
695429	1.60	0.075	0.068	3.29	5	4	162	< 0.01	< 20	2	< 2	< 10	35	< 10	4	20
695430	1.57	0.073	0.063	3.16	4	5	165	< 0.01	< 20	< 1	< 2	< 10	36	< 10	4	19
695431	1.12	0.133	0.081	1.22	< 2	4	164	< 0.01	< 20	3	< 2	< 10	29	< 10	5	7
695432	0.75	0.082	0.087	0.80	< 2	4	112	< 0.01	< 20	3	< 2	< 10	23	< 10	4	7
695433	1.09	0.089	0.085	0.40	< 2	3	141	< 0.01	< 20	2	< 2	< 10	25	< 10	5	6
695434	0.67	0.105	0.096	0.56	< 2	4	110	< 0.01	< 20	2	< 2	< 10	28	< 10	4	5
695435	0.58	0.147	0.098	0.64	< 2	3	96	< 0.01	< 20	< 1	< 2	< 10	17	< 10	5	4
695436	1.55	0.091	0.085	0.34	5	6	135	< 0.01	< 20	1	< 2	< 10	43	< 10	6	6
695437	0.06	3.65	0.002	0.01	< 2	< 1	25	< 0.01	< 20	1	2	< 10	< 1	< 10	4	1
695438	0.89	0.128	0.091	0.46	3	4	91	< 0.01	< 20	1	< 2	< 10	31	< 10	5	7
695439	0.63	0.124	0.101	0.05	< 2	2	85	< 0.01	< 20	< 1	< 2	< 10	11	< 10	4	3
695440	0.98	0.129	0.097	0.09	< 2	2	90	< 0.01	< 20	< 1	< 2	< 10	13	< 10	5	4
695441	1.02	0.143	0.085	0.08	< 2	2	114	< 0.01	< 20	< 1	< 2	< 10	13	< 10	5	4
695442	0.90	0.126	0.080	0.08	< 2	2	92	< 0.01	< 20	< 1	< 2	< 10	9	< 10	4	5
695443	0.72	0.148	0.078	0.22	< 2	2	73	< 0.01	< 20	< 1	< 2	< 10	12	< 10	5	4
695444	0.57	0.127	0.081	0.54	< 2	2	94	< 0.01	< 20	< 1	< 2	< 10	13	< 10	4	4

Analyte Symbol	Mg	Na	P	S	Sb	Sc	Sr	Ti	Th	Te	Tl	U	V	W	Y	Zr
Unit Symbol	%	%	%	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	0.01	0.001	0.001	0.01	2	1	1	0.01	20	1	2	10	1	10	1	1
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
695445	0.52	0.164	0.084	0.56	< 2	2	153	< 0.01	< 20	< 1	< 2	< 10	16	< 10	5	4
695446	0.45	0.129	0.081	0.57	< 2	2	123	< 0.01	< 20	< 1	< 2	< 10	14	< 10	4	4
695447	0.46	0.112	0.083	0.59	< 2	2	119	< 0.01	< 20	< 1	< 2	< 10	12	< 10	4	5
695448	0.46	0.148	0.081	0.45	< 2	2	102	< 0.01	< 20	< 1	< 2	< 10	14	< 10	4	4
695449	0.30	0.105	0.088	0.41	< 2	2	93	< 0.01	< 20	< 1	< 2	< 10	14	< 10	4	4
695450	0.31	0.095	0.082	0.40	< 2	2	103	< 0.01	< 20	< 1	< 2	< 10	13	< 10	3	5
695451	0.34	0.102	0.082	0.38	< 2	2	104	< 0.01	< 20	< 1	< 2	< 10	13	< 10	3	5
695452	0.48	0.108	0.081	0.46	< 2	2	99	< 0.01	< 20	< 1	< 2	< 10	12	< 10	4	4
695453	0.36	0.114	0.083	0.81	< 2	2	98	< 0.01	< 20	< 1	< 2	< 10	14	< 10	4	5
695454	0.32	0.145	0.091	0.40	< 2	2	117	< 0.01	< 20	< 1	< 2	< 10	20	< 10	4	4
695455	2.28	0.089	0.043	0.15	< 2	9	30	0.45	< 20	7	< 2	< 10	206	< 10	15	21
695456	0.42	0.099	0.088	0.60	< 2	2	108	< 0.01	< 20	2	< 2	< 10	21	< 10	3	5
695457	0.65	0.106	0.080	0.53	< 2	2	130	< 0.01	< 20	< 1	< 2	< 10	25	< 10	4	5
695458	0.63	0.094	0.075	0.45	< 2	2	97	< 0.01	< 20	< 1	< 2	< 10	17	< 10	4	6
695459	0.32	0.105	0.089	0.55	< 2	2	93	< 0.01	< 20	1	< 2	< 10	15	< 10	4	4
695460	0.32	0.112	0.087	0.54	< 2	2	109	< 0.01	< 20	< 1	< 2	< 10	18	< 10	4	4
695461	0.34	0.125	0.085	0.41	< 2	2	124	< 0.01	< 20	< 1	< 2	< 10	18	< 10	4	3
695462	0.35	0.094	0.084	0.43	< 2	2	132	< 0.01	< 20	< 1	< 2	< 10	17	< 10	4	4
695463	0.39	0.113	0.085	0.44	< 2	2	130	< 0.01	< 20	< 1	< 2	< 10	20	< 10	4	4
695464	0.36	0.119	0.085	0.39	< 2	2	126	< 0.01	< 20	< 1	< 2	< 10	19	< 10	4	4
695465	0.05	3.36	0.001	< 0.01	< 2	< 1	23	< 0.01	< 20	< 1	< 2	< 10	< 1	< 10	3	< 1
695466	0.40	0.106	0.087	0.42	< 2	2	130	< 0.01	< 20	< 1	< 2	< 10	18	< 10	4	4
695467	0.33	0.146	0.085	0.41	< 2	2	144	< 0.01	< 20	< 1	< 2	< 10	18	< 10	4	4
695468	0.41	0.139	0.089	0.45	< 2	3	180	< 0.01	< 20	< 1	< 2	< 10	19	< 10	5	5
695469	0.39	0.129	0.089	0.68	< 2	3	156	< 0.01	< 20	< 1	< 2	< 10	16	< 10	5	6
695470	0.56	0.120	0.093	0.33	< 2	3	112	< 0.01	< 20	< 1	< 2	< 10	15	< 10	4	4
695471	1.18	0.071	0.084	0.42	2	6	109	< 0.01	< 20	6	< 2	< 10	36	< 10	5	8
695472	1.14	0.105	0.098	0.32	< 2	4	124	< 0.01	< 20	< 1	< 2	< 10	22	< 10	5	4
695473	1.38	0.095	0.093	0.39	2	4	102	< 0.01	< 20	< 1	< 2	< 10	28	< 10	6	5
695474	2.40	0.099	0.047	0.16	2	9	33	0.48	< 20	6	< 2	< 10	223	< 10	16	23
695475	1.22	0.075	0.087	0.35	4	6	182	< 0.01	< 20	1	< 2	< 10	39	< 10	5	9
695476	1.34	0.053	0.081	0.53	6	7	210	< 0.01	< 20	< 1	< 2	< 10	50	< 10	4	12
695477	1.63	0.043	0.071	0.20	5	7	222	< 0.01	< 20	< 1	< 2	< 10	48	< 10	4	14
695478	2.07	0.029	0.057	0.18	7	6	281	< 0.01	< 20	< 1	< 2	< 10	41	< 10	5	13
695479	1.49	0.047	0.072	0.27	6	6	224	< 0.01	< 20	< 1	< 2	< 10	34	< 10	4	13
695480	1.47	0.059	0.074	0.27	5	6	210	< 0.01	< 20	< 1	< 2	< 10	35	< 10	4	13
695481	1.23	0.059	0.071	0.46	4	6	211	< 0.01	< 20	< 1	< 2	< 10	33	< 10	4	14
695482	1.08	0.089	0.076	0.45	3	5	204	< 0.01	< 20	< 1	< 2	< 10	34	< 10	4	10
695483	1.05	0.086	0.075	0.44	2	5	201	< 0.01	< 20	< 1	< 2	< 10	34	< 10	4	10
695484	0.85	0.075	0.077	0.58	< 2	5	181	< 0.01	< 20	2	< 2	< 10	35	< 10	4	7
695485	1.11	0.061	0.080	0.48	3	6	204	< 0.01	< 20	6	< 2	< 10	41	< 10	4	7
695486	0.74	0.071	0.089	0.42	3	4	150	< 0.01	< 20	< 1	< 2	< 10	33	< 10	4	8

Analyte Symbol	Mg	Na	P	S	Sb	Sc	Sr	Ti	Th	Te	Tl	U	V	W	Y	Zr
Unit Symbol	%	%	%	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	0.01	0.001	0.001	0.01	2	1	1	0.01	20	1	2	10	1	10	1	1
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
695487	0.61	0.074	0.093	0.42	< 2	3	113	< 0.01	< 20	3	< 2	< 10	23	< 10	4	5
695488	0.77	0.060	0.089	0.41	2	2	64	< 0.01	< 20	< 1	< 2	< 10	23	< 10	4	5
695489	0.96	0.076	0.090	0.14	< 2	3	69	< 0.01	< 20	8	< 2	< 10	13	< 10	5	3
695490	0.54	0.100	0.087	0.21	< 2	2	88	< 0.01	< 20	< 1	< 2	< 10	18	< 10	4	3
695491	0.37	0.075	0.085	0.24	< 2	1	124	< 0.01	< 20	3	< 2	< 10	10	< 10	4	3
695492	0.05	3.37	0.001	< 0.01	< 2	< 1	25	< 0.01	< 20	2	< 2	< 10	< 1	< 10	4	1
695493	0.35	0.096	0.082	0.29	< 2	2	139	< 0.01	< 20	< 1	< 2	< 10	14	< 10	4	4
695494	0.53	0.097	0.079	0.34	< 2	1	87	< 0.01	< 20	2	< 2	< 10	11	< 10	4	5
695495	0.61	0.081	0.085	0.20	< 2	2	57	< 0.01	< 20	< 1	< 2	< 10	14	< 10	4	3
695496	1.05	0.077	0.084	0.29	< 2	3	94	< 0.01	< 20	< 1	< 2	< 10	15	< 10	4	5
695497	0.75	0.080	0.076	1.26	< 2	2	66	< 0.01	< 20	< 1	< 2	< 10	14	< 10	4	8
695498	0.92	0.085	0.062	0.72	< 2	5	57	< 0.01	< 20	< 1	< 2	< 10	32	< 10	4	8
695499	0.25	0.122	0.069	3.35	3	2	97	< 0.01	< 20	< 1	< 2	< 10	15	< 10	5	19
695500	0.20	0.095	0.071	0.49	< 2	1	90	< 0.01	< 20	2	< 2	< 10	9	< 10	4	6
696001	2.10	0.083	0.040	0.14	< 2	8	28	0.41	< 20	4	< 2	< 10	189	< 10	14	20
696002	0.25	0.108	0.072	0.42	< 2	2	87	< 0.01	< 20	< 1	< 2	< 10	10	< 10	4	6
696003	0.63	0.087	0.094	0.87	< 2	3	59	< 0.01	< 20	< 1	< 2	< 10	33	< 10	4	5
696004	0.67	0.093	0.083	1.31	3	3	63	< 0.01	< 20	< 1	< 2	< 10	20	< 10	4	6
696005	0.61	0.118	0.078	0.83	< 2	3	79	< 0.01	< 20	5	< 2	< 10	22	< 10	5	5
696006	0.59	0.096	0.080	0.47	< 2	3	69	< 0.01	< 20	< 1	< 2	< 10	20	< 10	4	5
696007	0.54	0.100	0.078	3.66	5	3	69	< 0.01	< 20	1	< 2	< 10	23	< 10	4	22

Analyte Symbol	Au	Ag	Cd	Cu	Mn	Mo	Ni	Pb	Zn	Al	As	B	Ba	Be	Bi	Ca	Co	Cr	Fe	Ga	Hg	K	La
Unit Symbol	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm
Lower Limit	5	0.2	0.5	1	5	1	1	2	2	0.01	2	10	10	0.5	2	0.01	1	1	0.01	10	1	0.01	10
Method Code	FA-AA	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
GXR-1 Meas		30.6	2.9	1200	872	15	31	718	737	0.31	416	< 10	272	0.9	1490	0.75	5	11	24.9	< 10	3	0.03	< 10
GXR-1 Cert		31.0	3.30	1110	852	18.0	41.0	730	760	3.52	427	15.0	750	1.22	1380	0.960	8.20	12.0	23.6	13.8	3.90	0.050	7.50
GXR-6 Meas		0.4	< 0.5	76	1120	2	19	102	142	6.43	256	< 10	965	1.0	< 2	0.16	15	88	5.96	20	< 1	1.10	12
GXR-6 Cert		1.30	1.00	66.0	1010	2.40	27.0	101	118	17.7	330	9.80	1300	1.40	0.290	0.180	13.8	96.0	5.58	35.0	0.0680	1.87	13.9
OREAS 134b (AQUA REGIA) Meas		> 100	655	1430				> 5000	> 10000		245						118		12.7				
OREAS 134b (AQUA REGIA) Cert		204	563	1360				133000	177000		221						106		12.25				
OREAS 133a (Aqua Regia) Meas		> 100	334	332				> 5000	> 10000		146		13				24		8.23				
OREAS 133a (Aqua Regia) Cert		97	297	324				48600.00	106000.00		140		59				23		7.92				
OREAS 218 Meas	540																						
OREAS 218 Cert	531																						
OREAS 218 Meas	551																						
OREAS 218 Cert	531																						
OREAS 218 Meas	524																						
OREAS 218 Cert	531																						
OREAS 218 Meas	549																						
OREAS 218 Cert	531																						
OREAS 224 Meas	2220																						
OREAS 224 Cert	2150.00																						
OREAS 224 Meas	2240																						
OREAS 224 Cert	2150.00																						
OREAS 224 Meas	2220																						
OREAS 224 Cert	2150.00																						
OREAS 224 Meas	2240																						
OREAS 224 Cert	2150.00																						
695405 Orig		0.3	< 0.5	18	8080	< 1	141	12	108	0.22	120	< 10	< 10	< 0.5	5	0.17	28	8	> 30.0	< 10	< 1	< 0.01	< 10
695405 Dup		0.3	< 0.5	18	8340	< 1	143	10	109	0.23	124	< 10	< 10	< 0.5	3	0.18	29	8	> 30.0	< 10	< 1	< 0.01	< 10
695412 Orig	5																						
695412 Dup	< 5																						
695413 Orig		0.3	< 0.5	4	7200	< 1	143	7	104	0.06	146	< 10	12	< 0.5	7	0.18	47	15	28.7	< 10	< 1	< 0.01	< 10
695413 Dup		0.3	< 0.5	4	7130	< 1	140	9	101	0.06	145	< 10	11	< 0.5	< 2	0.17	46	15	28.5	< 10	< 1	< 0.01	< 10
695422 Orig	6																						
695422 Dup	9																						
695432 Orig	< 5																						
695432 Dup	< 5																						

Analyte Symbol	Au	Ag	Cd	Cu	Mn	Mo	Ni	Pb	Zn	Al	As	B	Ba	Be	Bi	Ca	Co	Cr	Fe	Ga	Hg	K	La
Unit Symbol	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm
Lower Limit	5	0.2	0.5	1	5	1	1	2	2	0.01	2	10	10	0.5	2	0.01	1	1	0.01	10	1	0.01	10
Method Code	FA-AA	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
695447 Orig	6																						
695447 Dup	7																						
695452 Orig	6	< 0.2	< 0.5	20	385	< 1	22	5	108	0.65	7	< 10	64	< 0.5	< 2	2.23	10	27	1.64	< 10	< 1	0.18	15
695452 Split PREP DUP	5	< 0.2	< 0.5	19	404	< 1	24	6	107	0.79	9	< 10	79	< 0.5	< 2	2.34	10	31	1.73	< 10	< 1	0.22	16
695452 Split PREP DUP		< 0.2	< 0.5	19	404	< 1	24	6	107	0.79	9	< 10	79	< 0.5	< 2	2.34	10	31	1.73	< 10	< 1	0.22	16
695457 Orig	6																						
695457 Dup	6																						
695465 Orig		< 0.2	< 0.5	6	100	< 1	< 1	< 2	18	4.45	< 2	11	12	0.6	< 2	0.19	< 1	2	0.60	10	< 1	1.47	< 10
695465 Dup		< 0.2	< 0.5	5	96	< 1	< 1	< 2	20	4.40	< 2	12	11	0.6	< 2	0.20	< 1	1	0.55	10	< 1	1.47	< 10
695467 Orig	8																						
695467 Dup	8																						
695468 Orig		< 0.2	< 0.5	20	574	< 1	31	4	149	1.24	6	< 10	93	< 0.5	< 2	2.28	12	40	2.28	< 10	< 1	0.29	19
695468 Dup		< 0.2	< 0.5	21	600	< 1	32	4	152	1.29	6	< 10	97	< 0.5	< 2	2.36	13	42	2.37	< 10	< 1	0.30	19
695481 Orig		< 0.2	0.6	17	5960	2	49	4	112	1.88	4	< 10	44	< 0.5	< 2	2.74	15	29	12.5	< 10	< 1	0.13	15
695481 Dup		< 0.2	< 0.5	16	5590	2	44	3	107	1.75	< 2	< 10	42	< 0.5	< 2	2.57	13	28	11.6	< 10	< 1	0.12	14
695482 Orig	24																						
695482 Dup	10																						
695492 Orig	< 5																						
695492 Dup	< 5																						
695493 Orig		< 0.2	< 0.5	14	268	< 1	25	2	70	0.97	6	< 10	65	< 0.5	< 2	1.97	12	33	1.72	< 10	< 1	0.22	18
695493 Dup		< 0.2	< 0.5	13	271	< 1	24	3	71	0.99	4	< 10	68	< 0.5	< 2	1.98	10	32	1.73	< 10	< 1	0.23	19
696002 Orig	< 5	< 0.2	< 0.5	10	756	< 1	28	4	62	0.86	5	< 10	63	< 0.5	< 2	1.44	15	53	1.85	< 10	< 1	0.20	14
696002 Split PREP DUP	< 5	< 0.2	< 0.5	10	753	< 1	26	4	63	0.82	5	< 10	60	< 0.5	< 2	1.44	14	42	1.77	< 10	< 1	0.19	13
696002 Orig	< 5																						
696002 Dup	5																						
696006 Orig		< 0.2	< 0.5	11	1760	< 1	21	4	80	1.21	< 2	< 10	58	< 0.5	< 2	1.90	12	40	3.84	< 10	< 1	0.17	13
696006 Dup		< 0.2	< 0.5	11	1760	< 1	22	< 2	80	1.20	2	< 10	57	< 0.5	< 2	1.89	12	40	3.82	< 10	< 1	0.17	13
Method Blank	< 5																						
Method Blank	< 5																						
Method Blank	< 5																						
Method Blank	< 5																						
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Method Blank	< 5																						
Method Blank	< 5																						
Method Blank		< 0.2	< 0.5	< 1	< 5	< 1	< 1	< 2	< 2	< 0.01	< 2	< 10	< 10	< 0.5	< 2	< 0.01	< 1	< 1	< 0.01	< 10	< 1	< 0.01	< 10
Method Blank		< 0.2	< 0.5	1	< 5	< 1	< 1	< 2	3	< 0.01	< 2	< 10	< 10	< 0.5	< 2	< 0.01	< 1	< 1	< 0.01	< 10	< 1	< 0.01	< 10

Analyte Symbol	Mg	Na	P	S	Sb	Sc	Sr	Ti	Th	Te	Tl	U	V	W	Y	Zr
Unit Symbol	%	%	%	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	0.01	0.001	0.001	0.01	2	1	1	0.01	20	1	2	10	1	10	1	1
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
GXR-1 Meas	0.14	0.054	0.041	0.20	84	1	172	< 0.01	< 20	16	< 2	31	84	148	26	15
GXR-1 Cert	0.217	0.0520	0.0650	0.257	122	1.58	275	0.036	2.44	13.0	0.390	34.9	80.0	164	32.0	38.0
GXR-6 Meas	0.43	0.092	0.035	0.02	4	24	36	< 20	< 1	< 2	< 10	185	< 10	6	13	
GXR-6 Cert	0.609	0.104	0.0350	0.0160	3.60	27.6	35.0	5.30	0.0180	2.20	1.54	186	1.90	14.0	110	
OREAS 134b (AQUA REGIA) Meas				15.6												
OREAS 134b (AQUA REGIA) Cert				19.31												
OREAS 133a (Aqua Regia) Meas				9.84	129											
OREAS 133a (Aqua Regia) Cert				10.7	147											
OREAS 218 Meas																
OREAS 218 Cert																
OREAS 218 Meas																
OREAS 218 Cert																
OREAS 218 Meas																
OREAS 218 Cert																
OREAS 218 Meas																
OREAS 218 Cert																
OREAS 224 Meas																
OREAS 224 Cert																
OREAS 224 Meas																
OREAS 224 Cert																
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OREAS 224 Cert																
695405 Orig	1.53	0.022	0.003	16.1	15	7	5	< 0.01	< 20	6	< 2	< 10	35	< 10	3	14
695405 Dup	1.62	0.022	0.004	16.6	20	7	5	< 0.01	< 20	< 1	< 2	< 10	37	< 10	4	15
695412 Orig																
695412 Dup																
695413 Orig	1.65	0.019	0.005	10.00	15	13	5	< 0.01	< 20	< 1	< 2	< 10	59	< 10	4	17
695413 Dup	1.63	0.017	0.005	9.95	13	13	5	< 0.01	< 20	< 1	< 2	< 10	59	< 10	4	16
695422 Orig																
695422 Dup																
695432 Orig																
695432 Dup																
695447 Orig																
695447 Dup																
695452 Orig	0.48	0.108	0.081	0.46	< 2	2	99	< 0.01	< 20	< 1	< 2	< 10	12	< 10	4	4

Analyte Symbol	Mg	Na	P	S	Sb	Sc	Sr	Ti	Th	Te	Tl	U	V	W	Y	Zr
Unit Symbol	%	%	%	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	0.01	0.001	0.001	0.01	2	1	1	0.01	20	1	2	10	1	10	1	1
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
695452 Split PREP DUP	0.51	0.137	0.083	0.46	< 2	2	112	< 0.01	< 20	< 1	< 2	< 10	15	< 10	4	4
695452 Split PREP DUP	0.51	0.137	0.083	0.46	< 2	2	112	< 0.01	< 20	< 1	< 2	< 10	15	< 10	4	4
695457 Orig																
695457 Dup																
695465 Orig	0.05	3.35	0.001	< 0.01	< 2	< 1	22	< 0.01	< 20	3	< 2	< 10	< 1	< 10	3	< 1
695465 Dup	0.05	3.38	0.001	< 0.01	< 2	< 1	23	< 0.01	< 20	< 1	< 2	< 10	< 1	< 10	4	< 1
695467 Orig																
695467 Dup																
695468 Orig	0.40	0.137	0.087	0.45	< 2	3	178	< 0.01	< 20	< 1	< 2	< 10	19	< 10	4	5
695468 Dup	0.41	0.142	0.091	0.46	< 2	3	183	< 0.01	< 20	< 1	< 2	< 10	19	< 10	5	5
695481 Orig	1.27	0.061	0.074	0.47	4	6	219	< 0.01	< 20	< 1	< 2	< 10	34	< 10	4	14
695481 Dup	1.18	0.058	0.069	0.44	4	5	202	< 0.01	< 20	3	< 2	< 10	32	< 10	4	13
695482 Orig																
695482 Dup																
695492 Orig																
695492 Dup																
695493 Orig	0.35	0.094	0.082	0.29	< 2	2	137	< 0.01	< 20	< 1	< 2	< 10	14	< 10	4	4
695493 Dup	0.35	0.098	0.083	0.29	< 2	2	140	< 0.01	< 20	1	< 2	< 10	14	< 10	4	4
696002 Orig	0.25	0.108	0.072	0.42	< 2	2	87	< 0.01	< 20	< 1	< 2	< 10	10	< 10	4	6
696002 Split PREP DUP	0.25	0.102	0.070	0.40	< 2	2	84	< 0.01	< 20	< 1	< 2	< 10	10	< 10	4	6
696002 Orig																
696002 Dup																
696006 Orig	0.59	0.097	0.080	0.47	< 2	3	69	< 0.01	< 20	< 1	< 2	< 10	20	< 10	4	5
696006 Dup	0.59	0.095	0.080	0.46	< 2	3	69	< 0.01	< 20	3	< 2	< 10	20	< 10	4	5
Method Blank																
Method Blank																
Method Blank																
Method Blank																
Method Blank																
Method Blank																
Method Blank																
Method Blank	< 0.01	0.013	< 0.001	< 0.01	< 2	< 1	< 1	< 0.01	< 20	< 1	< 2	< 10	< 1	< 10	< 1	< 1
Method Blank	< 0.01	0.013	< 0.001	< 0.01	< 2	< 1	< 1	< 0.01	< 20	< 1	< 2	< 10	< 1	< 10	< 1	< 1



**Date Submitted:** 22-Mar-18  
**Invoice No.:** A18-03637  
**Invoice Date:** 29-May-18  
**Your Reference:** 81 Lucas

**Noble Mineral Exploration**  
**2500-120 Adelaide Street West**  
**Toronto ON M5H 1T1**  
**Canada**

**ATTN: Randy Singh (inv-cc)**

## CERTIFICATE OF ANALYSIS

140 Rock samples were submitted for analysis.

The following analytical package(s) were requested:

Code 1A2-Timmins Au - Fire Assay AA

Code 1E3-Timmins Aqua Regia ICP(AQUAGEO)

REPORT      **A18-03637**

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

Notes:

If value exceeds upper limit we recommend reassay by fire assay gravimetric-Code 1A3.

Values which exceed the upper limit should be assayed for accurate numbers.

CERTIFIED BY:

A handwritten signature in black ink, appearing to be "Emmanuel Esemé", written over a horizontal line.

Emmanuel Esemé , Ph.D.  
Quality Control

**ACTIVATION LABORATORIES LTD.**  
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## Results

## Activation Laboratories Ltd.

## Report: A18-03637

Analyte Symbol	Au	Ag	Cd	Cu	Mn	Mo	Ni	Pb	Zn	Al	As	B	Ba	Be	Bi	Ca	Co	Cr	Fe	Ga	Hg	K	La
Unit Symbol	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm
Lower Limit	5	0.2	0.5	1	5	1	1	2	2	0.01	2	10	10	0.5	2	0.01	1	1	0.01	10	1	0.01	10
Method Code	FA-AA	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
696008	19	< 0.2	< 0.5	8	2280	< 1	21	20	272	1.98	6	< 10	24	< 0.5	2	1.60	7	52	5.81	< 10	< 1	0.06	14
696009	5	< 0.2	< 0.5	< 1	66	< 1	< 1	2	35	4.35	3	< 10	< 10	0.6	< 2	0.17	< 1	< 1	0.38	10	< 1	1.38	< 10
696010	16	< 0.2	< 0.5	12	841	< 1	14	5	104	1.09	3	< 10	99	< 0.5	< 2	1.22	7	33	1.82	< 10	< 1	0.27	13
696011	18	< 0.2	< 0.5	16	1190	< 1	39	4	91	1.41	11	< 10	77	< 0.5	< 2	1.58	18	46	3.34	< 10	< 1	0.22	13
696012	18	< 0.2	< 0.5	13	719	< 1	62	5	85	0.95	31	< 10	100	< 0.5	< 2	2.38	28	20	2.25	< 10	< 1	0.33	14
696013	25	0.6	< 0.5	13	735	26	130	24	245	1.05	56	< 10	38	< 0.5	< 2	2.26	42	26	4.46	< 10	< 1	0.34	< 10
696014	11	< 0.2	< 0.5	13	1110	< 1	71	8	104	1.35	25	< 10	96	< 0.5	2	2.31	28	38	3.69	< 10	< 1	0.31	12
696015	19	< 0.2	< 0.5	16	3110	< 1	88	5	76	2.71	14	< 10	53	< 0.5	< 2	1.93	28	29	9.38	< 10	< 1	0.15	10
696016	15	< 0.2	< 0.5	9	4180	< 1	70	2	74	2.86	11	< 10	54	< 0.5	< 2	2.68	24	29	9.48	< 10	< 1	0.14	11
696017	17	< 0.2	< 0.5	10	4680	< 1	68	3	125	3.09	8	< 10	31	< 0.5	< 2	2.62	22	26	11.7	< 10	< 1	0.07	< 10
696018	18	< 0.2	< 0.5	9	4620	< 1	67	4	125	3.06	5	< 10	31	< 0.5	< 2	2.57	20	21	11.6	< 10	< 1	0.07	< 10
696019	15	< 0.2	< 0.5	5	4660	< 1	72	3	74	3.00	8	< 10	27	< 0.5	< 2	2.64	20	23	11.4	< 10	< 1	0.06	< 10
696020	18	0.2	< 0.5	6	4280	< 1	73	4	54	2.86	7	< 10	25	< 0.5	< 2	2.39	21	23	10.6	< 10	< 1	0.06	< 10
696021	20	< 0.2	< 0.5	9	4170	< 1	96	5	64	2.99	12	< 10	27	< 0.5	< 2	2.37	24	28	11.5	< 10	< 1	0.06	< 10
696022	40	< 0.2	< 0.5	11	4100	< 1	82	5	126	2.97	11	< 10	30	< 0.5	< 2	2.55	26	34	11.1	< 10	< 1	0.07	< 10
696023	37	< 0.2	< 0.5	16	939	< 1	42	5	105	1.14	18	< 10	132	< 0.5	< 2	1.67	18	24	2.45	< 10	< 1	0.38	19
696024	17	< 0.2	< 0.5	11	864	< 1	44	< 2	86	1.33	29	< 10	137	< 0.5	< 2	1.88	29	27	2.39	< 10	< 1	0.39	20
696025	8	< 0.2	< 0.5	14	738	< 1	55	< 2	85	1.14	29	< 10	124	< 0.5	< 2	2.24	29	25	1.76	< 10	< 1	0.35	20
696026	10	< 0.2	< 0.5	13	667	< 1	66	2	113	1.05	32	< 10	119	< 0.5	< 2	2.01	32	20	1.76	< 10	< 1	0.33	21
696027	500	< 0.2	< 0.5	169	703	< 1	66	< 2	63	3.62	4	47	27	< 0.5	< 2	2.89	36	97	5.95	10	< 1	0.04	< 10
696028	27	0.2	< 0.5	16	541	< 1	107	10	151	1.21	33	< 10	109	< 0.5	< 2	2.01	46	18	2.35	< 10	< 1	0.31	20
696029	12	< 0.2	< 0.5	11	439	< 1	78	3	137	1.51	24	< 10	145	< 0.5	< 2	1.74	31	36	1.87	< 10	< 1	0.44	21
696030	7	< 0.2	< 0.5	14	585	< 1	58	< 2	104	1.07	21	< 10	94	< 0.5	< 2	1.90	24	26	1.97	< 10	< 1	0.28	18
696031	< 5	< 0.2	< 0.5	36	531	< 1	84	< 2	60	1.36	31	< 10	149	< 0.5	< 2	2.91	22	25	1.61	< 10	< 1	0.41	45
696032	7	< 0.2	< 0.5	57	751	< 1	122	7	146	1.93	36	< 10	165	< 0.5	< 2	2.67	26	37	3.16	< 10	< 1	0.44	47
696033	11	< 0.2	< 0.5	22	1230	< 1	143	< 2	90	1.56	22	< 10	96	< 0.5	< 2	2.57	28	49	5.04	< 10	< 1	0.24	24
696034	22	< 0.2	< 0.5	13	2930	< 1	72	3	52	2.13	5	< 10	76	< 0.5	< 2	2.72	14	31	8.16	< 10	< 1	0.17	11
696035	15	< 0.2	< 0.5	16	3460	< 1	63	4	53	2.64	4	< 10	96	< 0.5	< 2	2.70	12	30	9.04	10	< 1	0.20	14
696036	< 5	< 0.2	< 0.5	1	73	< 1	< 1	< 2	14	4.01	< 2	10	< 10	0.5	< 2	0.17	< 1	< 1	0.41	< 10	< 1	1.32	< 10
696037	16	< 0.2	< 0.5	11	3820	< 1	49	< 2	64	2.97	< 2	< 10	63	< 0.5	< 2	2.89	11	26	10.3	< 10	< 1	0.13	12
696038	20	< 0.2	< 0.5	8	3110	< 1	132	3	95	2.74	16	< 10	33	< 0.5	< 2	2.31	16	20	11.5	< 10	< 1	0.06	< 10
696039	17	< 0.2	< 0.5	8	3510	< 1	197	4	87	2.25	19	< 10	39	< 0.5	< 2	2.07	24	24	13.3	< 10	< 1	0.08	< 10
696040	11	< 0.2	< 0.5	4	2690	< 1	197	3	85	2.10	16	< 10	49	< 0.5	< 2	2.23	24	20	10.5	< 10	< 1	0.13	< 10
696041	9	< 0.2	< 0.5	5	2240	< 1	227	3	78	2.22	17	< 10	43	< 0.5	< 2	2.22	27	32	9.68	< 10	< 1	0.17	< 10
696042	8	< 0.2	< 0.5	10	2640	< 1	263	5	61	1.79	23	< 10	21	< 0.5	< 2	2.12	31	28	11.0	< 10	< 1	0.21	< 10
696043	6	< 0.2	< 0.5	8	3580	< 1	162	< 2	62	1.73	10	< 10	40	< 0.5	< 2	4.58	15	20	9.48	< 10	< 1	0.08	< 10
696044	7	< 0.2	< 0.5	10	2630	< 1	256	3	59	1.81	23	< 10	41	< 0.5	< 2	2.61	34	32	10.4	< 10	< 1	0.14	< 10
696045	312	< 0.2	< 0.5	111	671	< 1	93	< 2	59	2.51	< 2	24	33	< 0.5	< 2	2.05	34	64	5.00	< 10	< 1	0.05	< 10
696046	8	< 0.2	< 0.5	6	4610	< 1	119	4	55	1.51	6	< 10	62	< 0.5	< 2	2.55	19	25	11.0	< 10	< 1	0.15	< 10
696047	8	< 0.2	< 0.5	10	3890	1	124	2	48	1.52	5	< 10	80	< 0.5	< 2	2.61	18	21	9.14	< 10	< 1	0.19	< 10
696048	16	0.2	< 0.5	12	5220	< 1	115	8	73	1.68	21	< 10	50	< 0.5	< 2	2.39	22	19	13.4	< 10	< 1	0.12	< 10
696049	10	< 0.2	< 0.5	5	5530	< 1	82	5	65	2.29	7	< 10	48	< 0.5	< 2	2.28	14	28	13.8	< 10	< 1	0.10	< 10

Analyte Symbol	Au	Ag	Cd	Cu	Mn	Mo	Ni	Pb	Zn	Al	As	B	Ba	Be	Bi	Ca	Co	Cr	Fe	Ga	Hg	K	La
Unit Symbol	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm
Lower Limit	5	0.2	0.5	1	5	1	1	2	2	0.01	2	10	10	0.5	2	0.01	1	1	0.01	10	1	0.01	10
Method Code	FA-AA	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
696050	19	< 0.2	< 0.5	11	2960	< 1	116	5	53	2.24	10	< 10	50	< 0.5	< 2	2.44	18	34	9.41	< 10	< 1	0.17	10
696051	14	< 0.2	< 0.5	16	1790	< 1	72	4	40	1.67	5	< 10	119	< 0.5	< 2	2.02	17	52	5.07	< 10	< 1	0.28	18
696052	16	< 0.2	< 0.5	14	1680	< 1	65	4	63	2.04	5	< 10	99	< 0.5	< 2	2.90	16	32	5.10	< 10	< 1	0.26	18
696053	12	< 0.2	< 0.5	16	725	< 1	42	2	103	1.40	8	< 10	100	< 0.5	< 2	2.24	16	25	2.51	< 10	< 1	0.27	22
696054	12	< 0.2	< 0.5	16	732	< 1	44	< 2	104	1.44	8	< 10	106	< 0.5	< 2	2.28	16	29	2.54	< 10	< 1	0.28	22
696055	5	< 0.2	< 0.5	15	528	< 1	43	3	91	1.48	6	< 10	114	< 0.5	< 2	2.94	14	41	2.12	< 10	< 1	0.31	22
696056	< 5	< 0.2	< 0.5	14	357	< 1	51	< 2	78	1.15	5	< 10	107	< 0.5	< 2	1.95	15	25	1.68	< 10	< 1	0.29	22
696057	5	< 0.2	< 0.5	14	338	< 1	47	3	40	0.49	6	< 10	57	< 0.5	< 2	2.20	15	22	1.20	< 10	< 1	0.14	20
696058	< 5	< 0.2	< 0.5	40	437	< 1	259	4	85	1.14	46	< 10	78	< 0.5	< 2	2.83	50	30	3.32	< 10	< 1	0.18	25
696059	8	< 0.2	< 0.5	36	551	1	465	9	68	2.11	25	< 10	32	< 0.5	2	2.75	50	42	6.54	< 10	< 1	0.35	12
696060	10	0.2	< 0.5	48	626	1	643	9	88	1.84	45	< 10	26	< 0.5	< 2	3.03	51	35	9.15	< 10	< 1	0.19	< 10
696061	< 5	< 0.2	< 0.5	44	563	2	670	9	78	1.85	61	< 10	19	< 0.5	< 2	2.41	54	38	10.2	< 10	< 1	0.22	< 10
696062	7	< 0.2	< 0.5	44	542	2	702	11	85	1.78	61	< 10	22	< 0.5	< 2	2.59	56	39	10.1	< 10	< 1	0.19	< 10
696063	< 5	< 0.2	< 0.5	< 1	95	< 1	< 1	< 2	16	4.68	< 2	15	12	0.6	< 2	0.19	< 1	2	0.60	10	< 1	1.46	< 10
696064	7	0.2	< 0.5	51	428	3	788	13	82	1.83	88	< 10	16	< 0.5	< 2	2.33	61	37	11.7	< 10	< 1	0.22	< 10
696065	5	< 0.2	< 0.5	39	644	2	623	6	82	1.52	54	< 10	27	< 0.5	< 2	2.93	49	32	8.67	< 10	< 1	0.16	< 10
696066	7	< 0.2	< 0.5	50	438	2	739	12	83	1.95	55	< 10	23	< 0.5	< 2	2.27	57	37	8.88	< 10	< 1	0.24	< 10
696067	10	< 0.2	< 0.5	40	491	3	771	12	80	1.80	81	< 10	17	< 0.5	< 2	2.36	56	35	11.4	< 10	< 1	0.19	< 10
696068	10	< 0.2	< 0.5	37	447	3	668	8	77	1.86	66	< 10	18	< 0.5	< 2	2.17	52	39	9.84	< 10	< 1	0.21	< 10
696069	8	< 0.2	< 0.5	42	515	2	711	9	89	1.86	61	< 10	23	< 0.5	< 2	2.64	56	43	9.51	< 10	< 1	0.18	< 10
696070	7	< 0.2	< 0.5	32	589	1	636	3	80	1.74	45	< 10	36	< 0.5	< 2	3.10	47	40	7.57	< 10	< 1	0.18	< 10
696071	1680	0.4	< 0.5	169	701	1	87	5	59	3.73	13	18	30	< 0.5	< 2	3.22	36	136	5.24	10	< 1	0.09	< 10
696072	8	< 0.2	< 0.5	34	567	2	636	4	75	1.68	57	< 10	26	< 0.5	< 2	3.07	50	40	8.15	< 10	< 1	0.20	< 10
696073	9	< 0.2	< 0.5	33	691	2	596	3	69	1.76	38	< 10	36	< 0.5	< 2	3.41	46	35	6.67	< 10	< 1	0.24	< 10
696074	11	< 0.2	< 0.5	32	691	1	477	4	77	1.93	25	< 10	44	< 0.5	< 2	3.76	42	48	5.65	< 10	< 1	0.25	12
696075	9	< 0.2	< 0.5	43	513	1	523	< 2	85	2.11	34	< 10	48	< 0.5	< 2	3.34	47	48	5.84	< 10	< 1	0.27	12
696076	5	< 0.2	< 0.5	28	566	< 1	446	4	72	1.93	29	< 10	48	< 0.5	< 2	4.37	40	40	5.81	< 10	< 1	0.27	< 10
696077	7	< 0.2	< 0.5	38	518	1	614	4	86	2.02	38	< 10	35	< 0.5	< 2	3.33	54	46	6.78	< 10	< 1	0.25	11
696078	9	< 0.2	< 0.5	44	468	1	715	5	91	2.23	50	< 10	23	< 0.5	< 2	2.60	55	49	7.65	< 10	< 1	0.31	11
696079	11	< 0.2	< 0.5	61	437	2	944	4	97	1.93	52	< 10	32	< 0.5	< 2	2.87	75	53	8.03	< 10	< 1	0.17	< 10
696080	7	< 0.2	< 0.5	58	420	2	893	9	93	1.85	52	< 10	29	< 0.5	< 2	2.72	72	50	7.73	< 10	< 1	0.16	< 10
696081	7	< 0.2	< 0.5	43	434	1	616	4	81	1.90	40	< 10	36	< 0.5	< 2	2.66	60	47	6.33	< 10	< 1	0.22	12
696082	< 5	< 0.2	< 0.5	49	326	1	399	< 2	69	1.30	25	< 10	36	< 0.5	< 2	3.26	47	33	4.05	< 10	< 1	0.14	13
696083	< 5	< 0.2	< 0.5	40	488	< 1	356	< 2	87	1.57	17	< 10	101	< 0.5	< 2	3.43	38	38	3.87	< 10	< 1	0.21	17
696084	5	< 0.2	< 0.5	29	372	< 1	341	< 2	72	1.64	14	< 10	99	< 0.5	< 2	2.85	32	39	3.89	< 10	< 1	0.23	18
696085	5	< 0.2	< 0.5	40	602	2	636	5	100	1.78	20	< 10	75	< 0.5	< 2	3.31	54	42	5.83	< 10	< 1	0.22	12
696086	< 5	< 0.2	< 0.5	26	649	< 1	537	< 2	87	1.85	19	< 10	81	< 0.5	< 2	3.66	46	41	5.59	< 10	< 1	0.25	13
696087	< 5	< 0.2	< 0.5	33	529	< 1	521	3	77	1.50	24	< 10	51	< 0.5	3	3.15	46	39	5.21	< 10	< 1	0.25	12
696088	< 5	< 0.2	< 0.5	40	476	1	763	3	96	1.93	34	< 10	35	< 0.5	< 2	2.80	63	46	7.00	< 10	< 1	0.25	11
696089	< 5	< 0.2	< 0.5	< 1	84	< 1	< 1	< 2	15	4.55	< 2	14	11	0.6	< 2	0.19	< 1	< 1	0.52	10	< 1	1.43	< 10
696090	7	< 0.2	< 0.5	33	603	1	639	4	82	1.60	37	< 10	34	< 0.5	< 2	3.06	53	37	6.71	< 10	< 1	0.24	< 10
696091	14	< 0.2	< 0.5	26	619	< 1	624	< 2	91	1.38	30	< 10	53	< 0.5	3	3.10	52	37	6.29	< 10	< 1	0.16	11

## Results

## Activation Laboratories Ltd.

## Report: A18-03637

Analyte Symbol	Au	Ag	Cd	Cu	Mn	Mo	Ni	Pb	Zn	Al	As	B	Ba	Be	Bi	Ca	Co	Cr	Fe	Ga	Hg	K	La
Unit Symbol	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm
Lower Limit	5	0.2	0.5	1	5	1	1	2	2	0.01	2	10	10	0.5	2	0.01	1	1	0.01	10	1	0.01	10
Method Code	FA-AA	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
696092	10	< 0.2	< 0.5	29	620	1	672	7	107	1.59	36	< 10	46	< 0.5	< 2	3.12	56	37	6.92	< 10	< 1	0.18	< 10
696093	10	< 0.2	< 0.5	40	473	2	888	9	98	1.73	64	< 10	25	< 0.5	< 2	2.50	71	40	9.04	< 10	< 1	0.20	< 10
696094	13	< 0.2	< 0.5	32	526	3	715	5	104	1.96	44	< 10	28	< 0.5	< 2	2.70	59	40	7.97	< 10	< 1	0.26	< 10
696095	15	< 0.2	< 0.5	34	575	2	662	3	92	1.42	53	< 10	31	< 0.5	< 2	2.96	55	30	8.39	< 10	< 1	0.19	< 10
696096	9	0.2	< 0.5	37	536	2	622	3	91	1.66	46	< 10	26	< 0.5	< 2	2.79	56	34	7.94	< 10	< 1	0.29	< 10
696097	< 5	< 0.2	< 0.5	41	531	1	635	5	93	1.35	35	< 10	31	< 0.5	< 2	2.76	65	29	6.71	< 10	< 1	0.23	< 10
696098	1700	0.3	< 0.5	166	681	< 1	86	6	58	3.62	12	17	29	< 0.5	< 2	3.10	34	132	5.09	10	< 1	0.08	< 10
696099	< 5	< 0.2	< 0.5	35	547	1	714	4	94	1.49	33	< 10	29	< 0.5	< 2	3.02	60	34	7.26	< 10	< 1	0.21	< 10
696100	5	< 0.2	< 0.5	36	508	2	790	< 2	103	1.96	40	< 10	22	< 0.5	< 2	2.81	66	43	7.97	< 10	< 1	0.29	< 10
696101	8	< 0.2	< 0.5	51	460	2	1040	10	120	1.94	56	< 10	20	< 0.5	< 2	2.52	88	43	9.84	< 10	< 1	0.25	< 10
696102	6	0.2	< 0.5	39	559	2	896	6	131	2.12	45	< 10	25	< 0.5	< 2	3.06	70	48	8.55	< 10	< 1	0.32	< 10
696103	7	< 0.2	< 0.5	33	621	3	662	4	130	1.48	35	< 10	37	< 0.5	< 2	3.39	57	32	6.99	< 10	< 1	0.25	< 10
696104	18	< 0.2	< 0.5	40	446	3	1230	9	182	1.74	48	< 10	24	< 0.5	< 2	2.63	83	38	8.66	< 10	< 1	0.24	< 10
696105	21	< 0.2	< 0.5	48	577	4	1480	10	156	1.14	96	< 10	17	< 0.5	< 2	2.41	95	25	11.9	< 10	< 1	0.17	< 10
696106	19	< 0.2	< 0.5	49	581	4	1500	9	154	1.14	99	< 10	17	< 0.5	< 2	2.39	99	24	11.9	< 10	< 1	0.17	< 10
696107	22	< 0.2	< 0.5	42	534	2	1080	9	120	1.47	53	< 10	31	< 0.5	< 2	2.99	78	39	8.24	< 10	< 1	0.20	< 10
696108	10	< 0.2	< 0.5	26	636	< 1	465	2	85	1.41	34	< 10	52	< 0.5	< 2	3.59	41	31	5.53	< 10	< 1	0.27	10
696109	12	< 0.2	< 0.5	28	627	1	624	< 2	82	1.38	34	< 10	78	< 0.5	< 2	3.63	49	29	5.28	< 10	< 1	0.25	14
696110	8	< 0.2	< 0.5	46	509	2	1110	7	97	1.53	52	< 10	35	< 0.5	< 2	3.36	74	28	7.23	< 10	< 1	0.28	10
696111	9	0.2	< 0.5	39	511	2	1100	6	78	2.01	92	< 10	21	< 0.5	< 2	2.92	67	30	8.88	< 10	< 1	0.41	< 10
696112	9	< 0.2	0.6	26	688	< 1	654	3	58	1.15	48	< 10	62	< 0.5	5	4.22	47	20	6.02	< 10	< 1	0.25	10
696113	9	< 0.2	< 0.5	37	566	1	760	9	61	1.34	55	< 10	41	< 0.5	< 2	3.48	56	19	6.53	< 10	< 1	0.28	10
696114	7	< 0.2	< 0.5	28	532	< 1	353	< 2	54	1.47	23	< 10	116	< 0.5	< 2	3.24	32	22	3.70	< 10	< 1	0.36	21
696115	< 5	< 0.2	< 0.5	2	92	< 1	< 1	< 2	18	4.37	4	14	13	0.6	< 2	0.19	< 1	2	0.57	10	< 1	1.44	< 10
696116	10	< 0.2	< 0.5	46	811	2	669	6	75	1.57	66	< 10	30	< 0.5	3	3.46	65	26	7.52	< 10	< 1	0.29	< 10
696117	11	< 0.2	< 0.5	34	1160	< 1	412	8	82	1.39	104	< 10	27	< 0.5	< 2	3.05	61	28	10.1	< 10	< 1	0.29	< 10
696118	5	< 0.2	< 0.5	36	825	< 1	254	3	65	0.84	55	< 10	63	< 0.5	2	3.51	43	27	5.33	< 10	< 1	0.21	12
696119	10	< 0.2	< 0.5	42	1010	3	593	11	86	1.10	192	< 10	19	< 0.5	< 2	2.68	75	26	12.3	< 10	< 1	0.20	< 10
696120	14	0.4	< 0.5	36	957	< 1	579	9	69	1.24	236	< 10	14	< 0.5	< 2	2.48	63	27	14.1	< 10	< 1	0.17	< 10
696121	15	0.2	< 0.5	33	787	1	560	11	64	0.92	224	< 10	14	< 0.5	< 2	2.36	69	33	12.4	< 10	< 1	0.14	< 10
696122	12	< 0.2	< 0.5	32	1100	< 1	526	8	76	0.91	171	< 10	21	< 0.5	< 2	3.17	66	22	11.5	< 10	< 1	0.14	< 10
696123	1790	0.4	< 0.5	169	688	< 1	90	5	58	3.65	12	17	30	< 0.5	< 2	3.14	35	134	5.17	< 10	< 1	0.09	< 10
696124	18	< 0.2	< 0.5	37	872	< 1	628	10	73	1.41	212	< 10	14	< 0.5	< 2	1.99	68	28	13.9	< 10	< 1	0.10	< 10
696125	11	< 0.2	< 0.5	20	906	< 1	336	4	61	0.92	90	< 10	36	< 0.5	5	3.92	41	29	6.89	< 10	< 1	0.18	< 10
696126	21	< 0.2	< 0.5	44	670	1	685	10	70	1.30	199	< 10	13	< 0.5	< 2	1.95	73	26	12.0	< 10	< 1	0.13	< 10
696127	9	< 0.2	< 0.5	31	694	< 1	319	3	62	0.80	77	< 10	45	< 0.5	< 2	3.20	38	21	5.58	< 10	< 1	0.19	< 10
696128	8	< 0.2	< 0.5	27	818	< 1	244	3	60	0.64	49	< 10	66	< 0.5	2	3.89	31	31	4.38	< 10	< 1	0.17	< 10
696129	9	< 0.2	< 0.5	32	650	< 1	203	< 2	68	0.75	50	< 10	69	< 0.5	< 2	3.33	31	26	4.23	< 10	< 1	0.19	12
696130	11	< 0.2	< 0.5	26	818	< 1	208	< 2	57	0.86	63	< 10	73	< 0.5	< 2	4.29	30	30	4.75	< 10	< 1	0.23	10
696131	34	< 0.2	< 0.5	51	677	1	327	4	84	0.81	144	< 10	31	< 0.5	< 2	3.75	52	25	6.77	< 10	< 1	0.20	< 10
696132	32	< 0.2	< 0.5	50	664	1	317	4	84	0.81	140	< 10	32	< 0.5	< 2	3.63	52	24	6.59	< 10	< 1	0.21	< 10
696133	56	< 0.2	< 0.5	37	633	< 1	325	4	57	0.57	118	< 10	49	< 0.5	< 2	3.82	47	21	5.54	< 10	< 1	0.15	< 10

Analyte Symbol	Au	Ag	Cd	Cu	Mn	Mo	Ni	Pb	Zn	Al	As	B	Ba	Be	Bi	Ca	Co	Cr	Fe	Ga	Hg	K	La
Unit Symbol	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm
Lower Limit	5	0.2	0.5	1	5	1	1	2	2	0.01	2	10	10	0.5	2	0.01	1	1	0.01	10	1	0.01	10
Method Code	FA-AA	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
696134	194	0.3	< 0.5	59	552	1	630	10	75	0.63	359	< 10	17	< 0.5	< 2	2.17	85	19	10.2	< 10	< 1	0.14	< 10
696135	157	< 0.2	< 0.5	29	868	< 1	346	6	79	0.70	423	< 10	33	< 0.5	< 2	3.68	49	29	7.62	< 10	< 1	0.21	< 10
696136	392	0.4	< 0.5	51	838	1	652	20	95	0.71	987	< 10	12	< 0.5	< 2	1.94	92	21	12.3	< 10	< 1	0.20	< 10
696137	124	< 0.2	< 0.5	39	970	< 1	287	10	69	0.63	455	< 10	56	< 0.5	< 2	4.87	42	25	5.54	< 10	< 1	0.22	< 10
696138	646	0.4	< 0.5	24	1860	2	429	33	83	0.77	2640	< 10	11	< 0.5	< 2	1.92	63	12	14.3	< 10	< 1	0.24	< 10
696139	< 5	< 0.2	< 0.5	< 1	82	< 1	< 1	< 2	14	4.36	3	13	11	0.6	< 2	0.19	< 1	< 1	0.49	10	< 1	1.43	< 10
696140	2620	1.5	< 0.5	47	2540	< 1	122	82	64	0.37	3070	< 10	< 10	< 0.5	2	1.30	31	10	17.7	< 10	1	0.04	< 10
696141	1380	0.8	< 0.5	36	4080	< 1	107	47	54	0.23	2780	< 10	< 10	< 0.5	< 2	1.09	28	7	17.6	< 10	< 1	0.02	< 10
696142	15	< 0.2	< 0.5	187	678	< 1	75	< 2	233	3.83	41	< 10	86	< 0.5	< 2	3.36	41	75	4.73	< 10	< 1	0.05	< 10
696143	8	< 0.2	< 0.5	35	741	< 1	33	9	23	0.58	59	< 10	40	< 0.5	< 2	2.46	16	20	2.81	< 10	< 1	0.17	< 10
696144	5	< 0.2	< 0.5	12	768	< 1	18	< 2	36	0.78	32	< 10	84	< 0.5	< 2	2.80	9	14	2.32	< 10	< 1	0.26	13
696145	< 5	< 0.2	< 0.5	14	1120	< 1	26	< 2	54	1.00	27	< 10	67	< 0.5	< 2	3.34	12	19	3.65	< 10	< 1	0.22	12
696146	326	< 0.2	< 0.5	120	648	< 1	94	< 2	60	2.44	2	25	34	< 0.5	< 2	2.14	36	67	4.85	< 10	< 1	0.05	< 10
696147	< 5	< 0.2	< 0.5	13	688	< 1	19	< 2	38	0.97	12	< 10	80	< 0.5	< 2	2.56	8	26	2.24	< 10	< 1	0.26	18

Analyte Symbol	Mg	Na	P	S	Sb	Sc	Sr	Ti	Th	Te	Tl	U	V	W	Y	Zr
Unit Symbol	%	%	%	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	0.01	0.001	0.001	0.01	2	1	1	0.01	20	1	2	10	1	10	1	1
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
696008	0.79	0.128	0.066	0.26	3	7	85	< 0.01	< 20	8	< 2	< 10	37	< 10	3	17
696009	0.05	3.37	0.001	< 0.01	< 2	< 1	26	< 0.01	< 20	2	< 2	< 10	< 1	< 10	4	< 1
696010	0.29	0.150	0.078	0.20	< 2	1	71	< 0.01	< 20	3	< 2	< 10	8	< 10	4	13
696011	0.51	0.093	0.077	0.48	2	3	90	< 0.01	< 20	4	< 2	< 10	19	< 10	4	15
696012	0.59	0.079	0.088	0.74	< 2	2	126	< 0.01	< 20	6	< 2	< 10	11	< 10	5	13
696013	0.51	0.093	0.077	3.25	4	2	126	< 0.01	< 20	3	< 2	< 10	12	< 10	5	23
696014	0.59	0.089	0.085	1.29	< 2	3	133	< 0.01	< 20	< 1	< 2	< 10	15	< 10	5	18
696015	0.94	0.045	0.063	2.40	4	4	123	< 0.01	< 20	< 1	< 2	< 10	34	< 10	3	19
696016	1.08	0.042	0.062	1.33	3	5	173	< 0.01	< 20	< 1	< 2	< 10	34	< 10	3	14
696017	1.13	0.025	0.052	2.31	4	5	182	< 0.01	< 20	< 1	< 2	< 10	36	< 10	2	14
696018	1.10	0.025	0.051	2.26	3	5	179	< 0.01	< 20	< 1	< 2	< 10	35	< 10	2	13
696019	1.12	0.026	0.054	2.14	3	5	184	< 0.01	< 20	< 1	< 2	< 10	35	< 10	2	14
696020	1.01	0.024	0.049	2.10	4	5	162	< 0.01	< 20	6	< 2	< 10	35	< 10	2	14
696021	1.07	0.025	0.052	2.75	5	5	156	< 0.01	< 20	< 1	< 2	< 10	36	< 10	3	15
696022	1.09	0.033	0.058	2.33	5	6	148	< 0.01	< 20	< 1	< 2	< 10	44	< 10	3	14
696023	0.47	0.104	0.093	0.94	< 2	2	120	< 0.01	< 20	1	< 2	< 10	14	< 10	4	13
696024	0.56	0.113	0.095	0.40	< 2	2	129	< 0.01	< 20	< 1	< 2	< 10	13	< 10	4	12
696025	0.37	0.110	0.100	0.39	< 2	2	135	< 0.01	< 20	5	< 2	< 10	11	< 10	5	10
696026	0.39	0.113	0.093	0.46	< 2	2	151	< 0.01	< 20	< 1	< 2	< 10	12	< 10	4	12
696027	2.18	0.093	0.042	0.14	< 2	8	29	0.44	< 20	7	< 2	< 10	175	< 10	15	20
696028	0.46	0.117	0.095	0.73	< 2	3	157	< 0.01	< 20	1	< 2	< 10	15	< 10	5	14
696029	0.47	0.169	0.094	0.46	< 2	2	174	< 0.01	< 20	< 1	< 2	< 10	16	< 10	5	12
696030	0.72	0.102	0.087	0.29	< 2	2	105	< 0.01	< 20	< 1	< 2	< 10	12	< 10	4	10
696031	0.60	0.132	0.272	0.05	< 2	3	176	< 0.01	< 20	4	< 2	< 10	25	< 10	8	2
696032	0.84	0.157	0.277	0.10	< 2	4	161	< 0.01	< 20	< 1	< 2	< 10	47	< 10	8	3
696033	0.97	0.092	0.193	1.41	< 2	4	135	< 0.01	< 20	2	< 2	< 10	34	< 10	6	8
696034	1.10	0.072	0.066	2.18	< 2	4	168	< 0.01	< 20	7	< 2	< 10	29	< 10	3	16
696035	1.10	0.071	0.069	1.57	3	4	214	< 0.01	< 20	5	< 2	< 10	32	< 10	3	16
696036	0.04	3.23	< 0.001	< 0.01	< 2	< 1	21	< 0.01	< 20	1	< 2	< 10	< 1	< 10	4	< 1
696037	1.31	0.048	0.062	1.22	4	6	239	< 0.01	< 20	< 1	< 2	< 10	38	< 10	3	14
696038	1.45	0.035	0.048	2.93	5	8	227	< 0.01	< 20	< 1	< 2	< 10	48	< 10	3	18
696039	1.40	0.035	0.048	4.23	6	10	198	< 0.01	< 20	2	< 2	< 10	54	< 10	3	19
696040	1.30	0.060	0.044	2.78	5	12	224	< 0.01	< 20	< 1	< 2	< 10	52	< 10	3	17
696041	1.16	0.048	0.051	2.61	4	8	214	< 0.01	< 20	1	< 2	< 10	39	< 10	3	19
696042	0.95	0.060	0.055	4.66	5	6	189	< 0.01	< 20	< 1	< 2	< 10	35	< 10	3	22
696043	1.46	0.037	0.044	2.31	3	8	266	< 0.01	< 20	< 1	< 2	< 10	34	< 10	7	17
696044	1.05	0.045	0.057	4.18	4	6	206	< 0.01	< 20	3	< 2	< 10	35	< 10	4	19
696045	2.28	0.189	0.083	0.08	< 2	5	52	0.31	< 20	9	< 2	< 10	102	< 10	13	17
696046	1.24	0.061	0.054	1.66	5	5	210	< 0.01	< 20	< 1	< 2	< 10	28	< 10	4	17
696047	1.09	0.063	0.058	1.65	5	5	228	< 0.01	< 20	4	< 2	< 10	26	< 10	3	16
696048	1.38	0.041	0.048	3.08	6	6	225	< 0.01	< 20	< 1	< 2	< 10	32	< 10	3	17
696049	1.47	0.039	0.050	2.18	6	9	219	< 0.01	< 20	2	< 2	< 10	46	< 10	3	16

Analyte Symbol	Mg	Na	P	S	Sb	Sc	Sr	Ti	Th	Te	Tl	U	V	W	Y	Zr
Unit Symbol	%	%	%	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	0.01	0.001	0.001	0.01	2	1	1	0.01	20	1	2	10	1	10	1	1
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
696050	0.92	0.058	0.064	2.99	4	5	207	< 0.01	< 20	4	< 2	< 10	32	< 10	3	17
696051	0.61	0.095	0.084	1.26	< 2	3	169	< 0.01	< 20	5	< 2	< 10	23	< 10	4	16
696052	0.62	0.090	0.083	0.93	2	3	278	< 0.01	< 20	< 1	< 2	< 10	25	< 10	5	14
696053	0.41	0.106	0.093	0.37	< 2	2	196	< 0.01	< 20	< 1	< 2	< 10	16	< 10	5	11
696054	0.42	0.111	0.094	0.37	< 2	2	200	< 0.01	< 20	3	< 2	< 10	17	< 10	5	11
696055	0.40	0.133	0.090	0.27	< 2	2	303	< 0.01	< 20	< 1	< 2	< 10	15	< 10	5	11
696056	0.35	0.133	0.075	0.36	< 2	2	165	< 0.01	< 20	3	< 2	< 10	12	< 10	4	12
696057	0.26	0.072	0.074	0.40	< 2	1	128	< 0.01	< 20	2	< 2	< 10	6	< 10	4	11
696058	0.57	0.096	0.228	1.34	< 2	2	161	< 0.01	< 20	3	< 2	< 10	20	< 10	6	6
696059	0.85	0.233	0.183	4.10	5	4	207	< 0.01	< 20	2	< 2	< 10	36	< 10	7	19
696060	1.14	0.143	0.177	6.18	4	4	167	< 0.01	< 20	5	< 2	< 10	33	< 10	6	24
696061	1.06	0.163	0.175	7.55	4	4	161	< 0.01	< 20	< 1	2	< 10	34	< 10	6	28
696062	1.14	0.143	0.177	7.58	4	4	159	< 0.01	< 20	2	< 2	< 10	32	< 10	7	26
696063	0.05	3.42	0.002	0.02	< 2	< 1	26	< 0.01	< 20	< 1	< 2	< 10	< 1	< 10	4	2
696064	0.92	0.161	0.167	10.2	5	3	177	< 0.01	< 20	1	< 2	< 10	32	< 10	6	32
696065	1.18	0.124	0.171	5.72	4	3	170	< 0.01	< 20	6	< 2	< 10	27	< 10	6	23
696066	1.04	0.185	0.185	6.71	3	4	164	< 0.01	< 20	1	2	< 10	34	< 10	7	24
696067	1.10	0.154	0.162	9.22	5	3	151	< 0.01	< 20	< 1	< 2	< 10	32	< 10	6	31
696068	1.07	0.167	0.175	8.04	5	4	152	< 0.01	< 20	< 1	< 2	< 10	33	< 10	6	29
696069	1.21	0.144	0.182	6.98	5	4	151	< 0.01	< 20	1	< 2	< 10	34	< 10	7	25
696070	1.25	0.141	0.197	4.94	3	4	173	< 0.01	< 20	2	< 2	< 10	31	< 10	7	19
696071	2.40	0.069	0.036	0.25	< 2	8	46	0.37	< 20	6	< 2	< 10	143	< 10	12	17
696072	1.21	0.164	0.179	6.09	3	4	175	< 0.01	< 20	< 1	< 2	< 10	31	< 10	7	23
696073	1.31	0.201	0.193	4.29	3	4	200	< 0.01	< 20	4	< 2	< 10	32	< 10	7	16
696074	1.30	0.195	0.213	2.78	3	5	211	< 0.01	< 20	3	< 2	< 10	36	< 10	8	7
696075	1.08	0.198	0.192	3.29	< 2	4	221	< 0.01	< 20	< 1	< 2	< 10	38	< 10	7	13
696076	1.07	0.199	0.168	3.39	< 2	5	245	< 0.01	< 20	< 1	< 2	< 10	36	< 10	7	16
696077	1.21	0.177	0.205	4.00	< 2	4	192	< 0.01	< 20	< 1	< 2	< 10	40	< 10	8	15
696078	1.08	0.239	0.210	5.25	4	5	199	< 0.01	< 20	3	< 2	< 10	43	< 10	7	18
696079	1.11	0.138	0.209	5.36	3	4	179	< 0.01	< 20	3	< 2	< 10	41	< 10	7	20
696080	1.05	0.129	0.199	5.21	3	4	170	< 0.01	< 20	< 1	< 2	< 10	39	< 10	7	19
696081	0.95	0.178	0.216	4.05	< 2	4	217	< 0.01	< 20	2	< 2	< 10	34	< 10	7	14
696082	0.59	0.124	0.235	2.46	< 2	2	197	< 0.01	< 20	1	< 2	< 10	20	< 10	7	9
696083	0.89	0.181	0.232	1.68	< 2	3	225	< 0.01	< 20	2	< 2	< 10	27	< 10	7	5
696084	0.75	0.196	0.231	1.93	< 2	3	205	< 0.01	< 20	< 1	< 2	< 10	26	< 10	7	5
696085	1.31	0.170	0.202	2.64	2	4	210	< 0.01	< 20	4	< 2	< 10	35	< 10	7	9
696086	1.38	0.194	0.190	2.33	3	5	209	< 0.01	< 20	< 1	< 2	< 10	37	< 10	7	9
696087	1.03	0.188	0.221	3.01	2	4	190	< 0.01	< 20	4	< 2	< 10	29	< 10	7	7
696088	1.22	0.190	0.197	3.95	2	4	181	< 0.01	< 20	< 1	< 2	< 10	40	< 10	7	16
696089	0.05	3.40	0.001	0.01	< 2	< 1	24	< 0.01	< 20	< 1	< 2	< 10	< 1	< 10	4	2
696090	1.18	0.185	0.194	4.19	3	4	181	< 0.01	< 20	< 1	< 2	< 10	33	< 10	7	17
696091	1.27	0.138	0.198	3.34	< 2	4	157	< 0.01	< 20	3	< 2	< 10	29	< 10	7	14

Analyte Symbol	Mg	Na	P	S	Sb	Sc	Sr	Ti	Th	Te	Tl	U	V	W	Y	Zr
Unit Symbol	%	%	%	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	0.01	0.001	0.001	0.01	2	1	1	0.01	20	1	2	10	1	10	1	1
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
696092	1.28	0.134	0.197	3.88	< 2	4	198	< 0.01	< 20	2	< 2	< 10	32	< 10	7	16
696093	1.17	0.144	0.191	6.41	4	4	150	< 0.01	< 20	1	< 2	< 10	35	< 10	7	24
696094	1.23	0.196	0.196	5.17	4	4	180	< 0.01	< 20	1	< 2	< 10	38	< 10	7	20
696095	1.21	0.132	0.198	6.01	4	4	159	< 0.01	< 20	11	< 2	< 10	27	< 10	7	23
696096	1.08	0.194	0.179	5.76	< 2	4	184	< 0.01	< 20	< 1	< 2	< 10	31	< 10	7	25
696097	1.04	0.158	0.186	4.63	3	3	161	< 0.01	< 20	4	< 2	< 10	26	< 10	6	20
696098	2.32	0.066	0.035	0.25	< 2	7	44	0.36	< 20	7	< 2	< 10	141	< 10	11	16
696099	1.14	0.144	0.184	4.72	3	4	181	< 0.01	< 20	2	< 2	< 10	29	< 10	7	20
696100	1.10	0.205	0.196	5.38	3	4	185	< 0.01	< 20	1	< 2	< 10	36	< 10	8	20
696101	1.12	0.177	0.203	7.23	4	4	165	< 0.01	< 20	5	< 2	< 10	38	< 10	7	22
696102	1.28	0.241	0.198	5.85	3	5	211	< 0.01	< 20	< 1	< 2	< 10	40	< 10	7	19
696103	1.16	0.202	0.214	4.59	2	4	197	< 0.01	< 20	1	< 2	< 10	26	< 10	6	11
696104	1.00	0.182	0.204	6.25	3	4	167	< 0.01	< 20	< 1	< 2	< 10	32	< 10	7	21
696105	1.06	0.131	0.150	9.80	6	3	107	< 0.01	< 20	3	3	< 10	22	< 10	5	30
696106	1.07	0.130	0.152	10.1	6	3	105	< 0.01	< 20	2	< 2	< 10	21	< 10	4	30
696107	1.19	0.148	0.188	5.77	3	4	161	< 0.01	< 20	2	< 2	< 10	26	< 10	6	22
696108	1.29	0.200	0.198	3.21	< 2	4	207	< 0.01	< 20	3	< 2	< 10	23	< 10	7	10
696109	1.29	0.181	0.205	2.64	2	4	195	< 0.01	< 20	1	< 2	< 10	23	< 10	7	8
696110	1.13	0.191	0.208	4.82	4	4	187	< 0.01	< 20	3	< 2	< 10	27	< 10	7	15
696111	1.05	0.285	0.204	6.77	5	5	183	< 0.01	< 20	< 1	< 2	< 10	33	< 10	6	24
696112	1.42	0.160	0.215	3.57	2	4	202	< 0.01	< 20	5	< 2	< 10	21	< 10	7	10
696113	1.16	0.179	0.182	4.23	< 2	4	189	< 0.01	< 20	2	< 2	< 10	23	< 10	7	17
696114	0.93	0.232	0.229	1.68	< 2	3	214	< 0.01	< 20	< 1	< 2	< 10	24	< 10	7	4
696115	0.05	3.40	0.002	0.02	< 2	< 1	27	< 0.01	< 20	< 1	< 2	< 10	< 1	< 10	4	2
696116	1.19	0.183	0.182	4.82	5	4	198	< 0.01	< 20	9	< 2	< 10	27	< 10	7	19
696117	1.58	0.167	0.170	6.33	7	5	137	< 0.01	< 20	5	< 2	< 10	30	< 10	4	26
696118	1.09	0.123	0.216	3.26	4	4	206	< 0.01	< 20	10	< 2	< 10	21	< 10	6	11
696119	1.55	0.110	0.169	8.88	10	4	127	< 0.01	< 20	< 1	< 2	< 10	24	< 10	4	28
696120	1.55	0.098	0.131	11.0	10	5	122	< 0.01	< 20	6	< 2	< 10	28	< 10	4	25
696121	1.35	0.074	0.133	10.8	10	4	129	< 0.01	< 20	< 1	< 2	< 10	20	< 10	4	23
696122	2.08	0.080	0.126	7.54	10	5	119	< 0.01	< 20	5	< 2	< 10	24	< 10	4	22
696123	2.38	0.068	0.036	0.27	< 2	7	44	0.36	< 20	2	< 2	< 10	142	< 10	11	16
696124	1.56	0.058	0.116	11.0	11	4	94	< 0.01	< 20	5	< 2	< 10	29	< 10	3	22
696125	1.47	0.095	0.166	4.73	3	4	213	< 0.01	< 20	7	< 2	< 10	20	< 10	6	17
696126	1.07	0.075	0.144	10.4	9	4	123	< 0.01	< 20	< 1	< 2	< 10	27	< 10	4	23
696127	1.08	0.095	0.182	3.77	4	5	198	< 0.01	< 20	6	< 2	< 10	21	< 10	5	14
696128	1.24	0.090	0.174	2.22	3	4	232	< 0.01	< 20	< 1	< 2	< 10	17	< 10	6	10
696129	1.13	0.095	0.204	2.30	3	5	225	< 0.01	< 20	< 1	< 2	< 10	21	< 10	6	6
696130	1.55	0.117	0.187	2.36	2	5	278	< 0.01	< 20	5	< 2	< 10	25	< 10	6	6
696131	1.34	0.109	0.159	5.10	5	5	242	< 0.01	< 20	1	< 2	< 10	21	< 10	5	17
696132	1.31	0.110	0.155	4.92	6	5	236	< 0.01	< 20	5	< 2	< 10	21	< 10	5	18
696133	1.32	0.079	0.174	3.72	6	4	239	< 0.01	< 20	2	< 2	< 10	16	< 10	5	14

Analyte Symbol	Mg	Na	P	S	Sb	Sc	Sr	Ti	Th	Te	Tl	U	V	W	Y	Zr
Unit Symbol	%	%	%	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	0.01	0.001	0.001	0.01	2	1	1	0.01	20	1	2	10	1	10	1	1
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
696134	1.22	0.071	0.135	8.25	15	4	89	< 0.01	< 20	1	< 2	< 10	16	< 10	3	21
696135	1.48	0.089	0.173	5.29	7	4	190	< 0.01	< 20	3	< 2	< 10	18	< 10	6	19
696136	1.28	0.091	0.141	10.3	11	5	106	< 0.01	< 20	7	< 2	< 10	20	< 10	4	24
696137	1.86	0.090	0.172	3.37	4	6	281	< 0.01	< 20	1	< 2	< 10	22	< 10	7	12
696138	1.57	0.079	0.117	11.9	12	4	131	< 0.01	< 20	11	< 2	< 10	15	< 10	4	32
696139	0.05	3.45	0.002	0.03	< 2	< 1	25	< 0.01	< 20	3	< 2	< 10	< 1	< 10	4	1
696140	1.03	0.033	0.001	16.5	20	3	70	< 0.01	< 20	7	< 2	< 10	6	< 10	2	20
696141	1.33	0.021	0.003	15.2	13	6	65	< 0.01	< 20	9	< 2	< 10	5	< 10	2	14
696142	1.68	0.735	0.058	0.23	< 2	21	108	0.32	< 20	3	< 2	< 10	180	< 10	18	22
696143	1.07	0.099	0.065	2.00	< 2	4	94	< 0.01	< 20	< 1	< 2	< 10	10	< 10	4	10
696144	0.81	0.163	0.063	0.68	< 2	3	131	< 0.01	< 20	3	< 2	< 10	8	< 10	4	10
696145	0.98	0.119	0.062	0.35	< 2	3	141	< 0.01	< 20	5	< 2	< 10	10	< 10	4	11
696146	2.38	0.200	0.086	0.09	< 2	5	55	0.30	< 20	2	< 2	< 10	99	< 10	14	15
696147	0.68	0.191	0.067	0.05	< 2	3	133	< 0.01	< 20	5	< 2	< 10	10	< 10	4	11



Analyte Symbol	Au	Ag	Cd	Cu	Mn	Mo	Ni	Pb	Zn	Al	As	B	Ba	Be	Bi	Ca	Co	Cr	Fe	Ga	Hg	K	La
Unit Symbol	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm
Lower Limit	5	0.2	0.5	1	5	1	1	2	2	0.01	2	10	10	0.5	2	0.01	1	1	0.01	10	1	0.01	10
Method Code	FA-AA	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
GXR-1 Meas		30.6	1.8	1210	769	15	27	732	665	0.32	419	< 10	287	0.9	1500	0.74	7	7	21.2	< 10	4	0.03	< 10
GXR-1 Cert		31.0	3.30	1110	852	18.0	41.0	730	760	3.52	427	15.0	750	1.22	1380	0.960	8.20	12.0	23.6	13.8	3.90	0.050	7.50
GXR-1 Meas		30.7	1.9	1220	751	16	31	737	653	0.32	420	10	294	0.9	1520	0.76	10	7	21.0	< 10	4	0.03	< 10
GXR-1 Cert		31.0	3.30	1110	852	18.0	41.0	730	760	3.52	427	15.0	750	1.22	1380	0.960	8.20	12.0	23.6	13.8	3.90	0.050	7.50
GXR-6 Meas		< 0.2	< 0.5	74	916	2	20	105	111	6.44	281	< 10	1180	1.0	< 2	0.16	15	90	4.86	20	< 1	1.10	12
GXR-6 Cert		1.30	1.00	66.0	1010	2.40	27.0	101	118	17.7	330	9.80	1300	1.40	0.290	0.180	13.8	96.0	5.58	35.0	0.0680	1.87	13.9
GXR-6 Meas		< 0.2	< 0.5	72	914	2	21	104	110	6.46	274	< 10	1150	1.0	< 2	0.15	15	88	4.83	20	< 1	1.09	12
GXR-6 Cert		1.30	1.00	66.0	1010	2.40	27.0	101	118	17.7	330	9.80	1300	1.40	0.290	0.180	13.8	96.0	5.58	35.0	0.0680	1.87	13.9
OREAS 134b (AQUA REGIA) Meas		> 100	574	1410				> 5000	> 10000		248						117		11.1				
OREAS 134b (AQUA REGIA) Cert		204	563	1360				133000	177000		221						106		12.25				
OREAS 203 Meas	882																						
OREAS 203 Cert	871																						
OREAS 218 Meas	513																						
OREAS 218 Cert	531																						
OREAS 218 Meas	505																						
OREAS 218 Cert	531																						
OREAS 218 Meas	511																						
OREAS 218 Cert	531																						
OREAS 218 Meas	501																						
OREAS 218 Cert	531																						
OREAS 218 Meas	516																						
OREAS 218 Cert	531																						
OREAS 224 Meas	2080																						
OREAS 224 Cert	2150.00																						
OREAS 224 Meas	2250																						
OREAS 224 Cert	2150.00																						
OREAS 224 Meas	2180																						
OREAS 224 Cert	2150.00																						
OREAS 224 Meas	2130																						
OREAS 224 Cert	2150.00																						
OREAS 224 Meas	2350																						
OREAS 224 Cert	2150.00																						
OREAS 224 Meas	2190																						
OREAS 224 Cert	2150.00																						

Analyte Symbol	Au	Ag	Cd	Cu	Mn	Mo	Ni	Pb	Zn	Al	As	B	Ba	Be	Bi	Ca	Co	Cr	Fe	Ga	Hg	K	La
Unit Symbol	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm
Lower Limit	5	0.2	0.5	1	5	1	1	2	2	0.01	2	10	10	0.5	2	0.01	1	1	0.01	10	1	0.01	10
Method Code	FA-AA	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
696010 Orig		< 0.2	< 0.5	12	845	< 1	13	6	119	1.11	2	< 10	100	< 0.5	< 2	1.22	7	37	1.84	< 10	< 1	0.27	13
696010 Dup		< 0.2	< 0.5	12	836	< 1	14	3	90	1.08	3	< 10	98	< 0.5	< 2	1.22	7	29	1.80	< 10	< 1	0.27	13
696017 Orig	17																						
696017 Dup	16																						
696018 Orig		< 0.2	< 0.5	9	4680	< 1	68	3	128	3.09	5	< 10	32	< 0.5	< 2	2.60	21	22	11.7	< 10	< 1	0.07	< 10
696018 Dup		< 0.2	< 0.5	9	4560	< 1	65	4	123	3.02	4	< 10	31	< 0.5	< 2	2.53	20	20	11.5	< 10	< 1	0.07	< 10
696028 Orig	18																						
696028 Dup	36																						
696037 Orig	16																						
696037 Dup	16																						
696052 Orig	18																						
696052 Dup	14																						
696057 Orig	5	< 0.2	< 0.5	14	338	< 1	47	3	40	0.49	6	< 10	57	< 0.5	< 2	2.20	15	22	1.20	< 10	< 1	0.14	20
696057 Split PREP DUP	6	< 0.2	< 0.5	15	349	< 1	52	< 2	41	0.51	7	< 10	57	< 0.5	< 2	2.25	15	28	1.22	< 10	< 1	0.14	20
696057 Split PREP DUP		< 0.2	< 0.5	15	349	< 1	52	< 2	41	0.51	7	< 10	57	< 0.5	< 2	2.25	15	28	1.22	< 10	< 1	0.14	20
696061 Orig	< 5																						
696061 Dup	6																						
696070 Orig		< 0.2	< 0.5	31	591	1	630	4	80	1.74	44	< 10	35	< 0.5	< 2	3.09	46	39	7.61	< 10	< 1	0.17	< 10
696070 Dup		< 0.2	< 0.5	32	587	1	643	3	80	1.74	46	< 10	36	< 0.5	< 2	3.12	47	40	7.54	< 10	< 1	0.18	< 10
696073 Orig		< 0.2	< 0.5	33	700	2	614	3	69	1.78	40	< 10	38	< 0.5	< 2	3.49	47	37	6.75	< 10	< 1	0.25	< 10
696073 Dup		< 0.2	< 0.5	32	682	2	578	2	69	1.74	37	< 10	35	< 0.5	< 2	3.34	45	34	6.60	< 10	< 1	0.24	< 10
696086 Orig	< 5	< 0.2	< 0.5	26	652	< 1	538	3	88	1.85	18	< 10	79	< 0.5	< 2	3.64	46	41	5.62	< 10	< 1	0.25	13
696086 Dup	< 5	< 0.2	< 0.5	26	646	< 1	535	< 2	86	1.84	19	< 10	84	< 0.5	< 2	3.67	45	41	5.57	< 10	< 1	0.25	13
696096 Orig	12																						
696096 Dup	5																						
696098 Orig		0.3	< 0.5	162	685	< 1	86	6	58	3.64	10	16	28	< 0.5	< 2	3.07	34	131	5.11	10	< 1	0.08	< 10
696098 Dup		0.4	< 0.5	169	677	< 1	86	6	57	3.60	15	17	29	< 0.5	< 2	3.12	35	134	5.07	10	< 1	0.08	< 10
696106 Orig	17																						
696106 Dup	21																						
696107 Orig	22	< 0.2	< 0.5	42	534	2	1080	9	120	1.47	53	< 10	31	< 0.5	< 2	2.99	78	39	8.24	< 10	< 1	0.20	< 10
696107 Split PREP DUP	17	< 0.2	< 0.5	42	525	2	1080	8	120	1.45	53	< 10	31	< 0.5	< 2	2.95	77	32	8.11	< 10	< 1	0.20	< 10
696111 Orig		0.2	< 0.5	40	522	2	1120	7	80	2.02	94	< 10	20	< 0.5	< 2	2.79	68	31	9.06	< 10	< 1	0.40	< 10
696111 Dup		0.2	< 0.5	39	500	2	1090	4	76	1.99	91	< 10	23	< 0.5	< 2	3.05	66	29	8.70	< 10	< 1	0.41	< 10
696120 Orig	14																						
696120 Dup	14																						
696130 Orig	11																						
696130 Dup	10																						
696140 Orig	2650																						
696140 Dup	2590																						
696142 Orig		< 0.2	< 0.5	193	697	< 1	78	< 2	236	3.97	44	< 10	89	< 0.5	< 2	3.48	42	78	4.86	10	< 1	0.05	< 10

Analyte Symbol	Au	Ag	Cd	Cu	Mn	Mo	Ni	Pb	Zn	Al	As	B	Ba	Be	Bi	Ca	Co	Cr	Fe	Ga	Hg	K	La
Unit Symbol	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm
Lower Limit	5	0.2	0.5	1	5	1	1	2	2	0.01	2	10	10	0.5	2	0.01	1	1	0.01	10	1	0.01	10
Method Code	FA-AA	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
696142 Dup		< 0.2	< 0.5	181	660	< 1	72	< 2	230	3.70	37	< 10	82	< 0.5	< 2	3.25	40	73	4.59	< 10	< 1	0.05	< 10
696143 Orig		< 0.2	< 0.5	37	743	< 1	33	9	24	0.57	60	< 10	41	< 0.5	< 2	2.48	16	19	2.80	< 10	< 1	0.17	< 10
696143 Dup		< 0.2	< 0.5	32	740	< 1	33	8	23	0.58	58	< 10	39	< 0.5	< 2	2.43	16	21	2.81	< 10	< 1	0.17	< 10
Method Blank	< 5																						
Method Blank	< 5																						
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Method Blank	< 5																						
Method Blank		< 0.2	< 0.5	6	< 5	< 1	< 1	< 2	9	< 0.01	< 2	< 10	< 10	< 0.5	< 2	< 0.01	< 1	< 1	< 0.01	< 10	< 1	< 0.01	< 10
Method Blank		< 0.2	< 0.5	< 1	< 5	< 1	< 1	< 2	< 2	< 0.01	< 2	< 10	< 10	< 0.5	< 2	< 0.01	< 1	< 1	< 0.01	< 10	< 1	< 0.01	< 10
Method Blank		< 0.2	< 0.5	< 1	< 5	< 1	< 1	< 2	< 2	< 0.01	< 2	< 10	< 10	< 0.5	< 2	< 0.01	< 1	< 1	< 0.01	< 10	< 1	< 0.01	< 10

Analyte Symbol	Mg	Na	P	S	Sb	Sc	Sr	Ti	Th	Te	Tl	U	V	W	Y	Zr
Unit Symbol	%	%	%	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	0.01	0.001	0.001	0.01	2	1	1	0.01	20	1	2	10	1	10	1	1
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
GXR-1 Meas	0.14	0.052	0.041	0.21	79	1	170	< 0.01	< 20	11	< 2	30	70	136	25	14
GXR-1 Cert	0.217	0.0520	0.0650	0.257	122	1.58	275	0.036	2.44	13.0	0.390	34.9	80.0	164	32.0	38.0
GXR-1 Meas	0.14	0.055	0.043	0.22	75	1	173	< 0.01	< 20	11	< 2	29	69	134	25	13
GXR-1 Cert	0.217	0.0520	0.0650	0.257	122	1.58	275	0.036	2.44	13.0	0.390	34.9	80.0	164	32.0	38.0
GXR-6 Meas	0.41	0.089	0.036	0.02	5	26	37		< 20	< 1	< 2	< 10	149	< 10	7	13
GXR-6 Cert	0.609	0.104	0.0350	0.0160	3.60	27.6	35.0		5.30	0.0180	2.20	1.54	186	1.90	14.0	110
GXR-6 Meas	0.41	0.089	0.036	0.02	4	25	36		< 20	< 1	< 2	< 10	149	< 10	6	13
GXR-6 Cert	0.609	0.104	0.0350	0.0160	3.60	27.6	35.0		5.30	0.0180	2.20	1.54	186	1.90	14.0	110
OREAS 134b (AQUA REGIA) Meas				14.9												
OREAS 134b (AQUA REGIA) Cert				19.31												
OREAS 203 Meas																
OREAS 203 Cert																
OREAS 218 Meas																
OREAS 218 Cert																
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OREAS 224 Cert																
696010 Orig	0.29	0.153	0.078	0.20	< 2	1	71	< 0.01	< 20	1	< 2	< 10	8	< 10	4	13
696010 Dup	0.29	0.147	0.078	0.20	< 2	1	71	< 0.01	< 20	4	< 2	< 10	8	< 10	4	13
696017 Orig																
696017 Dup																
696018 Orig	1.11	0.026	0.052	2.26	4	5	181	< 0.01	< 20	< 1	< 2	< 10	36	< 10	2	14

Analyte Symbol	Mg	Na	P	S	Sb	Sc	Sr	Ti	Th	Te	Tl	U	V	W	Y	Zr
Unit Symbol	%	%	%	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	0.01	0.001	0.001	0.01	2	1	1	0.01	20	1	2	10	1	10	1	1
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
696018 Dup	1.09	0.025	0.051	2.25	3	5	176	< 0.01	< 20	< 1	< 2	< 10	35	< 10	2	13
696028 Orig																
696028 Dup																
696037 Orig																
696037 Dup																
696052 Orig																
696052 Dup																
696057 Orig	0.26	0.072	0.074	0.40	< 2	1	128	< 0.01	< 20	2	< 2	< 10	6	< 10	4	11
696057 Split PREP DUP	0.26	0.072	0.077	0.39	< 2	1	130	< 0.01	< 20	5	< 2	< 10	6	< 10	4	11
696057 Split PREP DUP	0.26	0.072	0.077	0.39	< 2	1	130	< 0.01	< 20	5	< 2	< 10	6	< 10	4	11
696061 Orig																
696061 Dup																
696070 Orig	1.24	0.140	0.196	4.89	4	4	170	< 0.01	< 20	3	< 2	< 10	31	< 10	7	19
696070 Dup	1.25	0.143	0.198	5.00	2	4	175	< 0.01	< 20	2	3	< 10	31	< 10	7	20
696073 Orig	1.34	0.205	0.196	4.36	3	4	205	< 0.01	< 20	5	< 2	< 10	32	< 10	7	17
696073 Dup	1.28	0.198	0.189	4.22	3	4	195	< 0.01	< 20	3	< 2	< 10	32	< 10	7	16
696086 Orig	1.38	0.194	0.189	2.32	3	5	209	< 0.01	< 20	4	< 2	< 10	37	< 10	7	9
696086 Dup	1.39	0.195	0.190	2.34	2	5	209	< 0.01	< 20	< 1	< 2	< 10	36	< 10	7	9
696096 Orig																
696096 Dup																
696098 Orig	2.30	0.066	0.035	0.24	< 2	7	44	0.36	< 20	8	< 2	< 10	140	< 10	11	16
696098 Dup	2.34	0.066	0.035	0.25	< 2	7	44	0.36	< 20	6	< 2	< 10	141	< 10	11	16
696106 Orig																
696106 Dup																
696107 Orig	1.19	0.148	0.188	5.77	3	4	161	< 0.01	< 20	2	< 2	< 10	26	< 10	6	22
696107 Split PREP DUP	1.18	0.146	0.185	5.70	3	4	159	< 0.01	< 20	4	< 2	< 10	26	< 10	6	21
696111 Orig	1.06	0.284	0.207	6.78	4	5	157	< 0.01	< 20	< 1	< 2	< 10	33	< 10	6	23
696111 Dup	1.04	0.286	0.202	6.76	5	5	209	< 0.01	< 20	1	2	< 10	33	< 10	7	25
696120 Orig																
696120 Dup																
696130 Orig																
696130 Dup																
696140 Orig																
696140 Dup																
696142 Orig	1.74	0.765	0.060	0.25	< 2	21	112	0.33	< 20	3	< 2	< 10	185	< 10	18	22
696142 Dup	1.62	0.705	0.056	0.21	< 2	20	104	0.31	< 20	3	< 2	< 10	176	< 10	17	22
696143 Orig	1.08	0.101	0.065	2.01	< 2	4	95	< 0.01	< 20	< 1	< 2	< 10	10	< 10	4	10
696143 Dup	1.06	0.098	0.065	1.99	3	4	94	< 0.01	< 20	< 1	< 2	< 10	10	< 10	4	10
Method Blank																
Method Blank																

Analyte Symbol	Mg	Na	P	S	Sb	Sc	Sr	Ti	Th	Te	Tl	U	V	W	Y	Zr
Unit Symbol	%	%	%	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	0.01	0.001	0.001	0.01	2	1	1	0.01	20	1	2	10	1	10	1	1
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
Method Blank																
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Method Blank	< 0.01	0.011	< 0.001	< 0.01	< 2	< 1	< 1	< 0.01	< 20	< 1	< 2	< 10	< 1	< 10	< 1	< 1
Method Blank	< 0.01	0.010	< 0.001	< 0.01	< 2	< 1	< 1	< 0.01	< 20	< 1	< 2	< 10	< 1	< 10	< 1	< 1
Method Blank	< 0.01	0.010	< 0.001	< 0.01	< 2	< 1	< 1	< 0.01	< 20	2	< 2	< 10	< 1	< 10	< 1	< 1



**Date Submitted:** 28-Mar-18  
**Invoice No.:** A18-03897  
**Invoice Date:** 15-Jun-18  
**Your Reference:** 81 Lucas

**Noble Mineral Exploration**  
**2500-120 Adelaide Street West**  
**Toronto ON M5H 1T1**  
**Canada**

**ATTN: Randy Singh (inv-cc)**

## CERTIFICATE OF ANALYSIS

105 Rock samples were submitted for analysis.

The following analytical package(s) were requested:

Code 1A2-Timmins Au - Fire Assay AA

Code 1E3-Timmins Aqua Regia ICP(AQUAGEO)

REPORT **A18-03897**

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

Notes:

If value exceeds upper limit we recommend reassay by fire assay gravimetric-Code 1A3.

Values which exceed the upper limit should be assayed for accurate numbers.

CERTIFIED BY:

A handwritten signature in black ink, appearing to read "Elitsa Hrischeva".

---

Elitsa Hrischeva, Ph.D.  
Quality Control

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Analyte Symbol	Au	Ag	Cd	Cu	Mn	Mo	Ni	Pb	Zn	Al	As	B	Ba	Be	Bi	Ca	Co	Cr	Fe	Ga	Hg	K	La
Unit Symbol	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm
Lower Limit	5	0.2	0.5	1	5	1	1	2	2	0.01	2	10	10	0.5	2	0.01	1	1	0.01	10	1	0.01	10
Method Code	FA-AA	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
696148	< 5	< 0.2	< 0.5	38	870	< 1	60	< 2	61	2.03	29	< 10	111	< 0.5	< 2	2.72	15	109	3.72	< 10	< 1	0.37	20
696149	< 5	< 0.2	< 0.5	46	1110	< 1	75	< 2	123	1.87	51	< 10	108	0.5	< 2	3.09	17	98	4.49	< 10	< 1	0.37	21
696150	< 5	< 0.2	< 0.5	39	1400	< 1	94	< 2	69	1.47	35	< 10	72	< 0.5	< 2	3.58	20	73	5.73	< 10	< 1	0.25	14
696151	< 5	< 0.2	0.8	33	1610	< 1	129	< 2	438	1.48	49	< 10	71	< 0.5	< 2	3.92	24	85	6.80	< 10	< 1	0.24	16
696152	< 5	< 0.2	< 0.5	30	1910	< 1	121	< 2	56	1.42	55	< 10	83	< 0.5	< 2	5.46	19	80	6.20	< 10	< 1	0.28	12
696153	< 5	< 0.2	< 0.5	37	996	< 1	67	< 2	46	1.18	25	< 10	61	< 0.5	< 2	2.94	14	69	4.29	< 10	< 1	0.20	17
696154	< 5	< 0.2	< 0.5	36	1170	< 1	105	< 2	72	1.42	55	< 10	72	< 0.5	< 2	3.26	19	54	5.10	< 10	< 1	0.24	17
696155	< 5	< 0.2	< 0.5	35	1160	< 1	100	< 2	70	2.29	60	< 10	129	0.5	< 2	3.34	19	72	4.83	< 10	< 1	0.43	19
696156	< 5	< 0.2	< 0.5	< 1	113	< 1	< 1	< 2	18	5.32	< 2	14	14	0.6	< 2	0.19	< 1	2	0.63	10	< 1	1.58	< 10
696157	< 5	< 0.2	< 0.5	33	1450	< 1	105	< 2	51	1.24	85	< 10	67	< 0.5	< 2	3.78	20	37	4.99	< 10	< 1	0.21	18
696158	5	< 0.2	< 0.5	37	1370	< 1	102	< 2	57	1.22	70	< 10	64	< 0.5	< 2	3.34	20	49	5.29	< 10	< 1	0.20	18
696159	< 5	< 0.2	< 0.5	37	1100	< 1	112	< 2	70	1.48	79	< 10	58	< 0.5	< 2	3.33	18	43	4.73	< 10	< 1	0.19	14
696160	< 5	< 0.2	< 0.5	33	1540	< 1	123	< 2	85	1.54	92	< 10	58	< 0.5	< 2	4.09	21	41	5.50	< 10	< 1	0.20	12
696161	5	< 0.2	1.1	31	1650	< 1	93	< 2	585	1.34	62	< 10	46	< 0.5	5	4.42	17	33	5.90	< 10	< 1	0.16	< 10
696162	< 5	< 0.2	< 0.5	32	1580	< 1	143	< 2	86	1.60	94	< 10	63	< 0.5	3	4.98	21	50	5.77	< 10	< 1	0.21	12
696163	6	< 0.2	< 0.5	37	1230	< 1	124	< 2	61	1.64	56	< 10	67	< 0.5	< 2	3.43	22	50	5.54	< 10	< 1	0.22	12
696164	6	< 0.2	< 0.5	37	933	< 1	95	< 2	49	1.74	43	< 10	86	< 0.5	2	3.17	21	68	4.29	< 10	< 1	0.28	14
696165	5	< 0.2	< 0.5	45	675	5	54	< 2	39	1.31	21	< 10	95	< 0.5	< 2	2.67	18	64	3.20	< 10	< 1	0.28	19
696166	< 5	< 0.2	< 0.5	45	684	6	59	3	38	1.47	26	< 10	103	< 0.5	3	2.70	20	71	3.29	< 10	< 1	0.32	19
696167	< 5	< 0.2	< 0.5	32	926	< 1	52	< 2	42	1.16	19	< 10	78	< 0.5	< 2	3.25	14	43	3.85	< 10	< 1	0.24	15
696168	5	< 0.2	< 0.5	37	942	< 1	87	2	54	1.54	19	< 10	103	< 0.5	2	2.90	18	55	4.67	< 10	< 1	0.32	18
696169	< 5	< 0.2	< 0.5	40	970	< 1	75	2	58	1.48	14	< 10	101	< 0.5	< 2	2.92	15	56	4.12	< 10	< 1	0.30	19
696170	< 5	< 0.2	< 0.5	32	1410	2	83	< 2	51	1.27	15	< 10	91	< 0.5	< 2	3.14	16	40	4.59	< 10	< 1	0.28	18
696171	16	< 0.2	< 0.5	40	2440	< 1	158	6	181	1.60	49	< 10	91	< 0.5	< 2	3.50	31	71	9.12	< 10	< 1	0.30	11
696172	6	< 0.2	< 0.5	38	1380	< 1	87	3	112	1.35	34	< 10	82	< 0.5	< 2	2.93	17	51	5.16	< 10	< 1	0.26	15
696173	9	< 0.2	< 0.5	36	1630	< 1	123	3	192	1.21	35	< 10	74	< 0.5	< 2	3.17	20	36	6.53	< 10	< 1	0.25	13
696174	6	< 0.2	< 0.5	36	1350	< 1	84	< 2	52	1.12	16	< 10	78	< 0.5	< 2	2.54	14	32	4.82	< 10	< 1	0.25	17
696175	5	< 0.2	< 0.5	33	1650	< 1	96	3	159	1.26	18	< 10	93	< 0.5	< 2	2.95	14	37	5.57	< 10	< 1	0.30	14
696176	5	< 0.2	0.5	39	1290	2	99	< 2	238	1.22	24	< 10	97	< 0.5	< 2	2.35	18	36	4.92	< 10	< 1	0.30	16
696177	342	< 0.2	< 0.5	108	793	< 1	92	< 2	67	2.71	< 2	21	33	< 0.5	< 2	2.02	30	63	5.61	< 10	< 1	0.05	< 10
696178	10	< 0.2	< 0.5	30	2790	< 1	283	4	145	1.08	34	< 10	74	< 0.5	< 2	3.34	31	25	8.94	< 10	< 1	0.25	< 10
696179	9	< 0.2	1.0	23	3200	< 1	330	5	261	1.07	41	< 10	50	< 0.5	< 2	3.47	32	25	10.1	< 10	< 1	0.24	< 10
696180	10	< 0.2	< 0.5	29	2180	< 1	121	5	119	1.26	29	< 10	86	< 0.5	< 2	2.94	23	28	6.99	< 10	< 1	0.30	11
696181	10	< 0.2	< 0.5	32	2260	< 1	123	3	101	1.29	38	< 10	91	< 0.5	< 2	3.22	21	30	7.04	< 10	< 1	0.30	14
696182	7	< 0.2	< 0.5	33	1420	< 1	78	2	63	1.21	37	< 10	92	< 0.5	3	2.45	18	28	4.44	< 10	< 1	0.29	21
696183	6	< 0.2	< 0.5	27	3190	< 1	122	2	114	1.45	35	< 10	85	< 0.5	< 2	3.54	22	34	9.45	< 10	< 1	0.29	12
696184	13	< 0.2	< 0.5	27	2880	< 1	161	6	68	0.89	44	< 10	58	< 0.5	< 2	3.31	30	23	9.04	< 10	< 1	0.20	< 10
696185	12	< 0.2	< 0.5	27	2240	< 1	122	6	65	0.86	42	< 10	57	< 0.5	3	2.86	24	20	6.92	< 10	< 1	0.19	< 10
696186	11	< 0.2	< 0.5	34	1680	< 1	81	3	70	0.99	44	< 10	50	< 0.5	< 2	4.25	24	23	6.18	< 10	< 1	0.17	< 10
696187	< 5	< 0.2	< 0.5	1	104	< 1	< 1	< 2	18	5.18	< 2	13	11	0.6	< 2	0.19	< 1	< 1	0.58	10	< 1	1.47	< 10
696188	7	< 0.2	< 0.5	26	1130	< 1	85	3	45	0.86	36	< 10	61	< 0.5	< 2	2.65	19	22	3.73	< 10	< 1	0.20	15
696189	< 5	< 0.2	< 0.5	30	1380	< 1	79	< 2	59	0.96	35	< 10	76	< 0.5	< 2	2.27	16	24	4.30	< 10	< 1	0.22	21



## Results

## Activation Laboratories Ltd.

## Report: A18-03897

Analyte Symbol	Au	Ag	Cd	Cu	Mn	Mo	Ni	Pb	Zn	Al	As	B	Ba	Be	Bi	Ca	Co	Cr	Fe	Ga	Hg	K	La
Unit Symbol	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm
Lower Limit	5	0.2	0.5	1	5	1	1	2	2	0.01	2	10	10	0.5	2	0.01	1	1	0.01	10	1	0.01	10
Method Code	FA-AA	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
696190	5	< 0.2	< 0.5	32	1210	< 1	70	3	53	1.02	21	< 10	77	< 0.5	< 2	2.29	15	25	4.03	< 10	< 1	0.22	20
696191	35	< 0.2	< 0.5	51	1180	< 1	149	6	56	1.24	79	< 10	63	< 0.5	< 2	2.43	40	36	5.29	< 10	< 1	0.26	12
696192	23	< 0.2	< 0.5	35	1200	< 1	93	5	64	1.30	25	< 10	85	< 0.5	< 2	2.09	22	31	6.05	< 10	< 1	0.25	14
696193	14	< 0.2	< 0.5	35	1420	< 1	132	3	99	1.55	33	< 10	92	< 0.5	< 2	3.69	29	66	6.67	< 10	< 1	0.28	10
696194	7	< 0.2	< 0.5	34	2300	< 1	209	5	91	2.41	55	< 10	11	< 0.5	< 2	2.81	60	13	15.4	< 10	< 1	0.14	< 10
696195	8	< 0.2	< 0.5	24	1890	< 1	176	4	70	2.07	61	< 10	11	< 0.5	< 2	2.31	47	6	15.0	< 10	< 1	0.14	< 10
696196	10	< 0.2	< 0.5	25	1880	< 1	170	6	71	2.07	62	< 10	11	< 0.5	< 2	2.31	44	6	15.0	< 10	< 1	0.14	< 10
696197	10	< 0.2	< 0.5	25	2240	< 1	168	5	86	1.07	55	< 10	13	< 0.5	< 2	3.05	41	3	12.2	< 10	< 1	0.19	< 10
696198	7	< 0.2	< 0.5	28	1670	< 1	135	5	110	1.15	54	< 10	13	< 0.5	< 2	2.95	38	4	11.3	< 10	< 1	0.26	< 10
696199	8	< 0.2	< 0.5	33	1700	< 1	188	7	111	1.61	84	< 10	< 10	< 0.5	< 2	2.21	49	6	15.7	< 10	< 1	0.22	< 10
696200	6	< 0.2	< 0.5	28	2540	< 1	136	6	89	1.12	61	< 10	13	< 0.5	< 2	3.13	38	4	14.6	< 10	< 1	0.17	< 10
696201	7	< 0.2	< 0.5	28	2550	< 1	150	7	103	1.33	73	< 10	< 10	< 0.5	< 2	2.55	42	5	16.3	< 10	< 1	0.20	< 10
696202	8	< 0.2	0.5	24	2840	< 1	123	7	152	2.51	61	< 10	< 10	< 0.5	< 2	1.51	35	6	17.1	< 10	< 1	0.19	< 10
696203	10	< 0.2	< 0.5	27	2920	< 1	118	5	153	2.31	69	< 10	< 10	< 0.5	< 2	1.83	37	7	17.5	< 10	< 1	0.16	< 10
696204	9	< 0.2	< 0.5	25	2530	< 1	117	10	111	1.54	86	< 10	< 10	< 0.5	< 2	1.43	39	6	15.9	< 10	< 1	0.19	< 10
696205	< 5	< 0.2	< 0.5	< 1	110	< 1	< 1	< 2	18	5.32	< 2	14	13	0.6	< 2	0.19	< 1	< 1	0.60	10	< 1	1.51	< 10
696206	14	0.2	0.8	28	2770	< 1	122	10	92	2.12	98	< 10	< 10	< 0.5	< 2	1.64	37	7	18.5	< 10	< 1	0.19	< 10
696207	15	< 0.2	0.7	29	3850	< 1	116	10	135	1.71	87	< 10	11	< 0.5	< 2	1.48	35	5	18.0	< 10	< 1	0.16	< 10
696208	12	0.2	< 0.5	29	4260	< 1	107	12	89	1.30	85	< 10	< 10	< 0.5	< 2	1.15	31	6	17.9	< 10	< 1	0.20	< 10
696209	11	0.2	< 0.5	32	5510	< 1	110	12	111	1.41	77	< 10	11	< 0.5	< 2	0.81	34	5	22.3	< 10	< 1	0.14	< 10
696210	< 5	< 0.2	< 0.5	19	3300	< 1	42	< 2	80	2.09	< 2	< 10	40	< 0.5	< 2	3.00	14	5	9.51	< 10	< 1	0.28	< 10
696211	< 5	< 0.2	< 0.5	16	6100	< 1	24	< 2	130	1.92	< 2	< 10	50	< 0.5	< 2	3.00	11	5	12.8	< 10	< 1	0.17	< 10
696212	< 5	< 0.2	< 0.5	18	4910	< 1	21	< 2	54	1.79	2	< 10	44	< 0.5	< 2	3.67	12	5	10.7	< 10	< 1	0.14	< 10
696213	5	< 0.2	< 0.5	16	6600	< 1	21	< 2	57	1.54	< 2	< 10	43	< 0.5	< 2	3.02	12	4	12.9	< 10	< 1	0.13	< 10
696214	341	< 0.2	< 0.5	104	801	< 1	90	2	64	2.35	< 2	22	33	< 0.5	< 2	2.01	34	64	4.78	< 10	< 1	0.04	< 10
696215	5	< 0.2	< 0.5	16	4160	< 1	34	< 2	56	1.77	< 2	< 10	61	< 0.5	< 2	3.17	13	5	9.46	< 10	< 1	0.20	10
696216	< 5	< 0.2	< 0.5	13	6480	< 1	23	< 2	63	1.95	< 2	< 10	47	< 0.5	< 2	3.08	9	4	13.7	< 10	< 1	0.15	< 10
696217	5	< 0.2	< 0.5	16	2630	< 1	33	< 2	60	1.78	< 2	< 10	65	< 0.5	< 2	2.87	12	4	7.45	< 10	< 1	0.22	12
696218	< 5	< 0.2	< 0.5	30	5410	< 1	58	4	77	1.74	< 2	< 10	30	< 0.5	< 2	3.04	25	5	14.0	< 10	< 1	0.21	< 10
696219	< 5	< 0.2	< 0.5	18	8530	< 1	48	4	95	2.27	< 2	< 10	48	0.5	< 2	2.97	13	6	18.5	< 10	< 1	0.28	< 10
696220	10	0.2	0.5	20	4940	< 1	98	9	68	1.35	176	< 10	13	< 0.5	< 2	2.28	38	5	18.9	< 10	< 1	0.11	< 10
696221	9	0.3	< 0.5	13	7350	< 1	80	9	86	0.74	164	< 10	15	< 0.5	< 2	2.05	32	4	21.3	< 10	< 1	0.10	< 10
696222	10	< 0.2	< 0.5	12	7820	< 1	78	8	89	0.69	154	< 10	15	< 0.5	< 2	2.06	30	3	22.0	< 10	2	0.10	< 10
696223	7	< 0.2	< 0.5	17	4340	< 1	66	5	83	1.78	19	< 10	27	< 0.5	< 2	2.24	19	4	12.6	< 10	< 1	0.17	< 10
696224	7	< 0.2	< 0.5	21	4240	< 1	84	6	89	1.65	24	< 10	27	< 0.5	< 2	2.77	24	5	12.1	< 10	< 1	0.18	< 10
696225	< 5	< 0.2	< 0.5	21	3630	< 1	80	3	108	1.43	5	< 10	55	< 0.5	< 2	3.00	19	6	8.71	< 10	< 1	0.19	< 10
696226	< 5	< 0.2	< 0.5	27	4910	< 1	106	< 2	119	2.25	6	< 10	34	< 0.5	< 2	3.22	24	5	14.3	< 10	< 1	0.13	< 10
696227	16	< 0.2	< 0.5	54	4310	< 1	219	10	126	1.70	85	< 10	15	< 0.5	< 2	2.93	60	6	18.4	< 10	< 1	0.11	< 10
696228	16	< 0.2	< 0.5	38	3620	< 1	189	8	99	2.03	72	< 10	16	< 0.5	< 2	2.56	45	6	15.1	< 10	< 1	0.14	< 10
696229	17	< 0.2	0.6	25	3760	< 1	148	6	93	1.99	64	< 10	18	< 0.5	< 2	2.57	33	4	13.7	< 10	< 1	0.18	< 10
696230	14	0.3	< 0.5	25	3380	< 1	171	11	85	2.08	125	< 10	13	< 0.5	< 2	2.27	33	3	17.1	< 10	< 1	0.17	< 10
696231	11	< 0.2	0.6	34	4530	< 1	159	10	105	2.07	94	< 10	15	< 0.5	< 2	2.92	35	5	17.2	< 10	< 1	0.14	< 10

Analyte Symbol	Au	Ag	Cd	Cu	Mn	Mo	Ni	Pb	Zn	Al	As	B	Ba	Be	Bi	Ca	Co	Cr	Fe	Ga	Hg	K	La
Unit Symbol	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm
Lower Limit	5	0.2	0.5	1	5	1	1	2	2	0.01	2	10	10	0.5	2	0.01	1	1	0.01	10	1	0.01	10
Method Code	FA-AA	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
696232	5	< 0.2	< 0.5	2	133	< 1	< 1	2	20	4.90	< 2	15	13	0.6	< 2	0.21	< 1	3	0.63	10	< 1	1.61	< 10
696233	6	< 0.2	0.7	47	3910	< 1	122	6	126	1.89	42	< 10	19	0.6	< 2	3.04	24	5	13.7	< 10	< 1	0.14	< 10
696234	11	< 0.2	< 0.5	49	3280	< 1	201	12	182	1.51	101	< 10	12	< 0.5	< 2	1.56	53	5	16.1	< 10	< 1	0.19	< 10
696235	< 5	< 0.2	< 0.5	15	2990	< 1	79	2	126	2.40	17	< 10	66	< 0.5	< 2	2.45	16	6	9.31	< 10	< 1	0.25	10
696236	5	< 0.2	< 0.5	29	4580	< 1	110	3	105	2.10	31	< 10	26	< 0.5	< 2	2.97	27	6	14.7	< 10	< 1	0.13	< 10
696237	6	0.2	0.7	26	4600	< 1	133	8	126	1.87	61	< 10	17	< 0.5	< 2	2.42	35	7	16.1	10	< 1	0.16	< 10
696238	14	< 0.2	< 0.5	25	4820	< 1	178	9	203	1.58	117	< 10	13	< 0.5	< 2	2.16	48	6	18.9	< 10	< 1	0.14	< 10
696239	< 5	< 0.2	0.5	17	6840	< 1	82	4	155	1.15	37	< 10	27	< 0.5	< 2	2.45	22	5	16.6	< 10	< 1	0.11	< 10
696240	6	< 0.2	< 0.5	21	3310	< 1	119	5	75	1.56	51	< 10	15	< 0.5	< 2	2.58	35	5	13.0	< 10	< 1	0.18	< 10
696241	1820	0.3	< 0.5	168	874	< 1	92	7	68	3.71	8	17	32	< 0.5	< 2	3.28	37	143	5.29	10	< 1	0.09	< 10
696242	7	< 0.2	< 0.5	23	2960	< 1	109	5	60	1.49	51	< 10	23	< 0.5	< 2	2.92	32	6	10.4	< 10	< 1	0.23	< 10
696243	20	< 0.2	< 0.5	34	2310	< 1	191	10	69	1.44	119	< 10	11	< 0.5	< 2	2.42	66	5	13.6	< 10	< 1	0.21	< 10
696244	24	0.3	< 0.5	46	3510	< 1	278	11	108	1.24	180	< 10	< 10	< 0.5	< 2	1.02	79	7	21.4	< 10	< 1	0.13	< 10
696245	26	0.4	< 0.5	32	2880	< 1	322	7	123	1.28	216	< 10	< 10	< 0.5	< 2	0.83	84	7	20.4	< 10	< 1	0.14	< 10
696246	9	< 0.2	< 0.5	4	4650	< 1	71	5	59	1.80	44	< 10	26	< 0.5	< 2	3.41	21	4	13.5	< 10	< 1	0.20	< 10
696247	19	0.5	< 0.5	9	8600	< 1	109	7	55	0.86	140	< 10	14	< 0.5	< 2	2.11	24	4	28.4	< 10	< 1	0.09	< 10
696248	8	0.4	< 0.5	7	9330	< 1	90	9	77	0.25	121	< 10	< 10	< 0.5	< 2	1.10	25	7	27.0	< 10	< 1	< 0.01	< 10
696249	14	0.4	0.7	11	7430	< 1	172	14	102	0.28	165	< 10	< 10	< 0.5	< 2	0.57	46	11	26.3	< 10	< 1	< 0.01	< 10
696250	13	0.3	< 0.5	12	7630	< 1	163	11	103	0.27	159	< 10	< 10	< 0.5	< 2	0.57	43	13	26.3	< 10	< 1	< 0.01	< 10
696251	14	< 0.2	< 0.5	7	6760	4	137	8	62	0.31	94	< 10	< 10	< 0.5	< 2	0.78	37	11	18.5	< 10	< 1	< 0.01	< 10
696252	13	0.4	< 0.5	12	8440	< 1	125	11	68	0.30	97	< 10	< 10	< 0.5	< 2	1.44	29	10	23.0	< 10	< 1	< 0.01	< 10

Analyte Symbol	Mg	Na	P	S	Sb	Sc	Sr	Ti	Th	Te	Tl	U	V	W	Y	Zr
Unit Symbol	%	%	%	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	0.01	0.001	0.001	0.01	2	1	1	0.01	20	1	2	10	1	10	1	1
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
696148	0.84	0.231	0.165	0.05	< 2	5	157	< 0.01	< 20	5	< 2	< 10	35	< 10	6	2
696149	1.05	0.240	0.172	0.07	< 2	6	176	< 0.01	< 20	< 1	< 2	< 10	33	< 10	6	2
696150	1.26	0.174	0.146	0.10	< 2	6	161	< 0.01	< 20	< 1	< 2	< 10	25	< 10	6	4
696151	1.65	0.163	0.152	0.05	3	8	183	< 0.01	< 20	< 1	< 2	< 10	28	< 10	6	4
696152	2.01	0.194	0.132	0.05	< 2	8	237	< 0.01	< 20	1	< 2	< 10	28	< 10	6	4
696153	1.02	0.137	0.157	0.04	2	5	126	< 0.01	< 20	3	< 2	< 10	20	< 10	6	3
696154	1.29	0.170	0.136	0.08	< 2	6	142	< 0.01	< 20	3	< 2	< 10	24	< 10	6	3
696155	1.28	0.290	0.142	0.03	< 2	7	184	< 0.01	< 20	1	< 2	< 10	34	< 10	6	3
696156	0.05	3.28	0.002	< 0.01	3	< 1	27	< 0.01	< 20	1	< 2	< 10	< 1	< 10	3	2
696157	1.43	0.155	0.122	0.02	< 2	5	150	< 0.01	< 20	3	< 2	< 10	20	< 10	6	4
696158	1.21	0.136	0.142	0.05	< 2	5	142	< 0.01	< 20	2	< 2	< 10	20	< 10	5	4
696159	1.12	0.121	0.130	0.04	< 2	5	127	< 0.01	< 20	< 1	< 2	< 10	22	< 10	6	4
696160	1.48	0.135	0.117	0.04	2	6	151	< 0.01	< 20	8	< 2	< 10	24	< 10	6	4
696161	1.45	0.111	0.096	0.08	3	5	171	< 0.01	< 20	1	< 2	< 10	18	< 10	5	7
696162	1.85	0.139	0.120	0.05	< 2	7	164	< 0.01	< 20	2	< 2	< 10	28	< 10	7	3
696163	1.16	0.150	0.123	0.13	< 2	7	128	< 0.01	< 20	8	< 2	< 10	28	< 10	5	4
696164	1.05	0.167	0.147	0.08	< 2	6	131	< 0.01	< 20	4	< 2	< 10	28	< 10	6	3
696165	0.69	0.175	0.173	0.08	< 2	4	118	< 0.01	< 20	3	< 2	< 10	22	< 10	6	2
696166	0.69	0.193	0.172	0.11	< 2	5	126	< 0.01	< 20	8	< 2	< 10	25	< 10	6	2
696167	0.85	0.159	0.150	0.07	< 2	5	133	< 0.01	< 20	< 1	< 2	< 10	19	< 10	6	3
696168	0.85	0.229	0.148	0.11	< 2	6	142	< 0.01	< 20	3	< 2	< 10	27	< 10	6	3
696169	0.89	0.199	0.145	0.05	3	6	133	< 0.01	< 20	2	< 2	< 10	25	< 10	6	3
696170	0.99	0.189	0.134	0.08	< 2	5	136	< 0.01	< 20	4	< 2	< 10	21	< 10	6	3
696171	1.45	0.217	0.135	0.61	5	8	163	< 0.01	< 20	7	< 2	< 10	31	< 10	6	5
696172	0.95	0.206	0.153	0.20	2	6	132	< 0.01	< 20	< 1	< 2	< 10	24	< 10	6	3
696173	1.00	0.223	0.118	0.31	< 2	6	131	< 0.01	< 20	< 1	< 2	< 10	23	< 10	6	5
696174	0.78	0.196	0.139	0.08	< 2	4	122	< 0.01	< 20	1	< 2	< 10	18	< 10	6	3
696175	0.96	0.231	0.129	0.22	< 2	6	137	< 0.01	< 20	< 1	< 2	< 10	23	< 10	6	4
696176	0.75	0.222	0.132	0.26	< 2	5	117	< 0.01	< 20	< 1	< 2	< 10	22	< 10	6	4
696177	2.34	0.173	0.085	0.08	< 2	5	49	0.30	< 20	9	< 2	< 10	109	< 10	14	7
696178	1.45	0.200	0.081	1.05	4	6	129	< 0.01	< 20	2	< 2	< 10	22	< 10	5	11
696179	1.72	0.184	0.082	1.41	5	6	126	< 0.01	< 20	3	< 2	< 10	22	< 10	5	13
696180	1.18	0.217	0.121	0.91	3	5	123	< 0.01	< 20	2	< 2	< 10	23	< 10	6	5
696181	1.13	0.225	0.150	0.58	2	5	135	< 0.01	< 20	< 1	< 2	< 10	23	< 10	6	4
696182	0.70	0.222	0.172	0.20	< 2	4	114	< 0.01	< 20	4	< 2	< 10	20	< 10	6	3
696183	1.45	0.238	0.148	0.35	3	6	154	< 0.01	< 20	7	< 2	< 10	26	< 10	6	4
696184	1.39	0.147	0.137	0.92	4	5	131	< 0.01	< 20	< 1	< 2	< 10	17	< 10	6	6
696185	1.06	0.131	0.163	0.88	< 2	4	129	< 0.01	< 20	< 1	< 2	< 10	14	< 10	6	5
696186	1.29	0.123	0.131	0.95	3	4	186	< 0.01	< 20	4	< 2	< 10	14	< 10	6	6
696187	0.05	3.23	0.001	< 0.01	< 2	< 1	24	< 0.01	< 20	2	< 2	< 10	< 1	< 10	3	2
696188	0.80	0.125	0.152	0.27	2	4	126	< 0.01	< 20	5	< 2	< 10	13	< 10	6	3
696189	0.80	0.136	0.141	0.07	< 2	4	104	< 0.01	< 20	< 1	< 2	< 10	17	< 10	6	3

Analyte Symbol	Mg	Na	P	S	Sb	Sc	Sr	Ti	Th	Te	Tl	U	V	W	Y	Zr
Unit Symbol	%	%	%	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	0.01	0.001	0.001	0.01	2	1	1	0.01	20	1	2	10	1	10	1	1
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
696190	0.80	0.143	0.132	0.09	< 2	3	112	< 0.01	< 20	< 1	< 2	< 10	15	< 10	6	3
696191	0.84	0.166	0.178	1.17	< 2	4	129	< 0.01	< 20	5	< 2	< 10	19	< 10	7	4
696192	0.90	0.155	0.133	0.93	3	4	104	< 0.01	< 20	3	< 2	< 10	22	< 10	6	6
696193	1.51	0.159	0.134	0.63	2	6	146	< 0.01	< 20	2	< 2	< 10	28	< 10	6	4
696194	1.27	0.043	0.068	9.27	7	6	162	< 0.01	< 20	5	< 2	< 10	55	< 10	4	19
696195	0.99	0.064	0.074	10.3	5	3	115	< 0.01	< 20	2	< 2	< 10	29	< 10	4	19
696196	0.98	0.067	0.073	10.1	8	3	113	< 0.01	< 20	8	< 2	< 10	29	< 10	4	19
696197	0.86	0.059	0.081	9.23	5	2	154	< 0.01	< 20	5	< 2	< 10	11	< 10	4	20
696198	0.76	0.088	0.090	8.68	4	2	164	< 0.01	< 20	7	< 2	< 10	11	< 10	4	22
696199	0.74	0.078	0.068	12.7	8	2	125	< 0.01	< 20	< 1	< 2	< 10	19	< 10	3	23
696200	0.97	0.067	0.067	10.9	4	2	155	< 0.01	< 20	6	< 2	< 10	14	< 10	3	20
696201	1.01	0.072	0.059	12.7	7	2	110	< 0.01	< 20	11	< 2	< 10	16	< 10	3	21
696202	0.83	0.065	0.073	10.2	7	4	90	< 0.01	< 20	< 1	< 2	< 10	39	< 10	4	26
696203	0.87	0.053	0.073	11.5	7	4	114	< 0.01	< 20	5	< 2	< 10	34	< 10	3	24
696204	0.56	0.053	0.077	11.8	8	2	90	< 0.01	< 20	< 1	< 2	< 10	15	< 10	4	23
696205	0.05	3.27	0.001	0.03	< 2	< 1	26	< 0.01	< 20	1	< 2	< 10	< 1	< 10	3	2
696206	0.74	0.056	0.074	12.8	10	3	98	< 0.01	< 20	4	< 2	< 10	23	< 10	4	24
696207	0.71	0.048	0.058	10.6	9	3	94	< 0.01	< 20	1	< 2	< 10	22	< 10	3	21
696208	0.64	0.051	0.058	9.61	8	3	79	< 0.01	< 20	4	< 2	< 10	16	< 10	3	21
696209	0.72	0.038	0.054	10.1	11	3	55	< 0.01	< 20	2	< 2	< 10	22	< 10	4	19
696210	1.11	0.072	0.090	1.79	3	3	191	< 0.01	< 20	4	< 2	< 10	24	< 10	5	12
696211	1.51	0.053	0.077	1.46	5	5	199	< 0.01	< 20	2	< 2	< 10	28	< 10	4	17
696212	1.33	0.045	0.075	1.87	2	4	221	< 0.01	< 20	1	< 2	< 10	22	< 10	4	16
696213	1.48	0.043	0.071	1.68	5	4	188	< 0.01	< 20	< 1	< 2	< 10	20	< 10	4	16
696214	2.31	0.174	0.084	0.08	< 2	5	48	0.31	< 20	< 1	< 2	< 10	92	< 10	14	11
696215	1.28	0.060	0.082	1.26	3	4	207	< 0.01	< 20	4	< 2	< 10	22	< 10	4	15
696216	1.54	0.052	0.069	2.12	5	5	198	< 0.01	< 20	< 1	< 2	< 10	26	< 10	4	19
696217	1.02	0.071	0.097	1.62	2	4	175	< 0.01	< 20	< 1	< 2	< 10	21	< 10	4	16
696218	1.34	0.060	0.069	4.68	5	4	193	< 0.01	< 20	< 1	< 2	< 10	24	< 10	4	21
696219	1.89	0.068	0.055	3.04	5	6	193	< 0.01	< 20	< 1	< 2	< 10	36	< 10	4	24
696220	1.14	0.056	0.055	11.4	8	4	148	< 0.01	< 20	2	< 2	< 10	26	< 10	4	20
696221	1.44	0.042	0.041	9.70	10	5	134	< 0.01	< 20	< 1	< 2	< 10	20	< 10	4	18
696222	1.51	0.040	0.038	9.74	12	6	135	< 0.01	< 20	4	< 2	< 10	21	< 10	4	17
696223	1.09	0.053	0.079	4.73	5	3	140	< 0.01	< 20	1	< 2	< 10	22	< 10	4	21
696224	1.14	0.054	0.073	4.82	3	3	176	< 0.01	< 20	1	< 2	< 10	22	< 10	4	21
696225	0.98	0.067	0.077	2.19	3	3	189	< 0.01	< 20	6	< 2	< 10	19	< 10	4	18
696226	1.43	0.053	0.074	4.25	3	7	191	< 0.01	< 20	< 1	< 2	< 10	38	< 10	4	24
696227	1.17	0.047	0.052	11.5	6	5	184	< 0.01	< 20	< 1	< 2	< 10	28	< 10	4	23
696228	1.15	0.052	0.071	8.23	9	5	158	< 0.01	< 20	< 1	< 2	< 10	32	< 10	4	22
696229	1.16	0.054	0.070	7.40	5	4	155	< 0.01	< 20	4	< 2	< 10	27	< 10	4	23
696230	1.03	0.053	0.070	12.5	10	3	142	< 0.01	< 20	7	< 2	< 10	22	< 10	4	27
696231	1.22	0.050	0.063	11.1	8	4	184	< 0.01	< 20	< 1	< 2	< 10	28	< 10	4	26

Analyte Symbol	Mg	Na	P	S	Sb	Sc	Sr	Ti	Th	Te	Tl	U	V	W	Y	Zr
Unit Symbol	%	%	%	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	0.01	0.001	0.001	0.01	2	1	1	0.01	20	1	2	10	1	10	1	1
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
696232	0.06	3.76	0.001	0.03	< 2	< 1	27	< 0.01	< 20	2	< 2	< 10	< 1	< 10	4	2
696233	1.15	0.059	0.060	7.80	5	3	184	< 0.01	< 20	< 1	< 2	< 10	22	< 10	4	22
696234	0.67	0.063	0.064	11.0	4	3	101	< 0.01	< 20	2	< 2	< 10	18	< 10	4	25
696235	1.15	0.077	0.116	2.49	3	4	157	< 0.01	< 20	< 1	< 2	< 10	24	< 10	5	16
696236	1.32	0.052	0.068	6.35	5	5	169	< 0.01	< 20	< 1	< 2	< 10	31	< 10	4	23
696237	1.22	0.052	0.062	7.93	7	5	143	< 0.01	< 20	1	< 2	< 10	29	< 10	4	25
696238	1.15	0.045	0.050	11.6	8	4	129	< 0.01	< 20	4	< 2	< 10	24	< 10	4	25
696239	1.48	0.036	0.041	5.11	7	5	149	< 0.01	< 20	< 1	< 2	< 10	22	< 10	3	18
696240	1.04	0.055	0.070	7.70	4	4	155	< 0.01	< 20	1	< 2	< 10	23	< 10	4	24
696241	2.54	0.066	0.038	0.28	< 2	8	45	0.39	< 20	< 1	4	< 10	135	< 10	12	18
696242	0.97	0.067	0.081	5.48	3	3	159	< 0.01	< 20	< 1	< 2	< 10	18	< 10	4	25
696243	0.77	0.065	0.076	10.7	4	3	123	< 0.01	< 20	< 1	< 2	< 10	17	< 10	4	26
696244	0.51	0.038	0.042	17.1	9	4	56	< 0.01	< 20	7	< 2	< 10	20	< 10	4	22
696245	0.45	0.042	0.054	17.3	9	3	55	< 0.01	< 20	< 1	< 2	< 10	15	< 10	4	22
696246	1.43	0.056	0.082	4.77	4	4	180	< 0.01	< 20	5	< 2	< 10	20	< 10	6	23
696247	1.60	0.037	0.030	15.8	11	3	116	< 0.01	< 20	< 1	< 2	< 10	13	< 10	4	21
696248	1.51	0.020	0.005	12.9	10	2	63	< 0.01	< 20	< 1	< 2	< 10	13	< 10	4	13
696249	1.20	0.020	0.004	16.4	12	4	31	< 0.01	< 20	< 1	< 2	< 10	22	< 10	3	12
696250	1.22	0.021	0.004	15.8	13	4	31	< 0.01	< 20	< 1	< 2	< 10	22	< 10	3	13
696251	1.05	0.014	0.003	9.14	8	3	41	< 0.01	< 20	< 1	< 2	< 10	16	< 10	2	10
696252	1.33	0.017	0.004	11.3	11	4	81	< 0.01	< 20	6	< 2	< 10	18	< 10	2	12

Analyte Symbol	Au	Ag	Cd	Cu	Mn	Mo	Ni	Pb	Zn	Al	As	B	Ba	Be	Bi	Ca	Co	Cr	Fe	Ga	Hg	K	La
Unit Symbol	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm
Lower Limit	5	0.2	0.5	1	5	1	1	2	2	0.01	2	10	10	0.5	2	0.01	1	1	0.01	10	1	0.01	10
Method Code	FA-AA	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
GXR-1 Meas		30.2	2.3	1120	904	15	23	679	727	0.31	413	< 10	278	0.9	1410	0.74	5	8	20.4	< 10	5	0.03	< 10
GXR-1 Cert		31.0	3.30	1110	852	18.0	41.0	730	760	3.52	427	15.0	750	1.22	1380	0.960	8.20	12.0	23.6	13.8	3.90	0.050	7.50
GXR-1 Meas		31.5	2.3	1150	927	15	27	696	750	0.31	424	< 10	264	0.9	1460	0.77	6	7	20.9	< 10	2	0.03	< 10
GXR-1 Cert		31.0	3.30	1110	852	18.0	41.0	730	760	3.52	427	15.0	750	1.22	1380	0.960	8.20	12.0	23.6	13.8	3.90	0.050	7.50
GXR-6 Meas		< 0.2	< 0.5	75	1130	1	20	98	131	6.45	248	< 10	1180	1.0	< 2	0.16	14	87	4.90	20	< 1	1.10	12
GXR-6 Cert		1.30	1.00	66.0	1010	2.40	27.0	101	118	17.7	330	9.80	1300	1.40	0.290	0.180	13.8	96.0	5.58	35.0	0.0680	1.87	13.9
GXR-6 Meas		0.2	< 0.5	70	1140	3	19	105	130	7.42	250	< 10	1100	1.0	< 2	0.15	13	89	5.72	20	< 1	1.08	11
GXR-6 Cert		1.30	1.00	66.0	1010	2.40	27.0	101	118	17.7	330	9.80	1300	1.40	0.290	0.180	13.8	96.0	5.58	35.0	0.0680	1.87	13.9
OREAS 134b (AQUA REGIA) Meas		> 100	524	1330				> 5000	> 10000		246						122		10.6				
OREAS 134b (AQUA REGIA) Cert		204	563	1360				133000	177000		221						106		12.25				
OREAS 133a (Aqua Regia) Meas		95.5	264	294				> 5000	> 10000		137		< 10				22		6.28				
OREAS 133a (Aqua Regia) Cert		97	297	324				48600.00	106000.00		140		59				23		7.92				
OREAS 203 Meas	862																						
OREAS 203 Cert	871																						
OREAS 203 Meas	875																						
OREAS 203 Cert	871																						
OREAS 224 Meas	2220																						
OREAS 224 Cert	2150.00																						
OREAS 224 Meas	2240																						
OREAS 224 Cert	2150.00																						
OREAS 224 Meas	2120																						
OREAS 224 Cert	2150.00																						
OREAS 224 Meas	2200																						
OREAS 224 Cert	2150.00																						
696150 Orig		< 0.2	< 0.5	40	1410	< 1	94	< 2	71	1.47	36	< 10	71	< 0.5	< 2	3.60	20	72	5.76	< 10	< 1	0.25	14
696150 Dup		< 0.2	< 0.5	37	1400	< 1	94	< 2	66	1.47	35	< 10	73	< 0.5	5	3.56	21	73	5.70	< 10	< 1	0.25	14
696157 Orig	< 5																						
696157 Dup	< 5																						
696158 Orig		< 0.2	< 0.5	38	1380	< 1	104	< 2	57	1.22	70	< 10	63	< 0.5	< 2	3.36	20	49	5.32	< 10	< 1	0.20	18
696158 Dup		< 0.2	< 0.5	36	1360	< 1	101	< 2	58	1.21	69	< 10	64	< 0.5	< 2	3.32	20	48	5.26	< 10	< 1	0.20	18
696167 Orig	< 5																						
696167 Dup	< 5																						
696178 Orig	9																						
696178 Dup	11																						

Analyte Symbol	Au	Ag	Cd	Cu	Mn	Mo	Ni	Pb	Zn	Al	As	B	Ba	Be	Bi	Ca	Co	Cr	Fe	Ga	Hg	K	La
Unit Symbol	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm
Lower Limit	5	0.2	0.5	1	5	1	1	2	2	0.01	2	10	10	0.5	2	0.01	1	1	0.01	10	1	0.01	10
Method Code	FA-AA	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
696192 Orig	23																						
696192 Dup	23																						
696197 Orig	10	< 0.2	< 0.5	25	2240	< 1	168	5	86	1.07	55	< 10	13	< 0.5	< 2	3.05	41	3	12.2	< 10	< 1	0.19	< 10
696197 Split PREP DUP	9	< 0.2	< 0.5	24	2280	< 1	165	5	85	1.09	56	< 10	13	< 0.5	< 2	3.11	42	3	12.4	< 10	< 1	0.19	< 10
696197 Orig		< 0.2	< 0.5	23	2220	< 1	167	5	83	1.07	54	< 10	13	< 0.5	< 2	3.03	41	3	12.1	< 10	< 1	0.19	< 10
696197 Dup		< 0.2	< 0.5	27	2260	< 1	169	5	88	1.08	55	< 10	13	< 0.5	< 2	3.07	41	3	12.4	< 10	< 1	0.19	< 10
696201 Orig	6																						
696201 Dup	7																						
696210 Orig		< 0.2	< 0.5	20	3330	< 1	44	< 2	82	2.13	< 2	< 10	37	< 0.5	< 2	3.03	13	5	9.52	< 10	< 1	0.29	10
696210 Dup		< 0.2	< 0.5	18	3280	< 1	41	3	79	2.06	2	< 10	43	< 0.5	< 2	2.98	14	5	9.50	< 10	< 1	0.27	< 10
696211 Orig	< 5																						
696211 Dup	< 5																						
696213 Orig		< 0.2	< 0.5	16	6570	< 1	20	< 2	57	1.53	< 2	< 10	42	< 0.5	< 2	3.01	13	4	12.8	< 10	< 1	0.13	< 10
696213 Dup		< 0.2	< 0.5	15	6630	< 1	21	< 2	58	1.55	< 2	< 10	43	< 0.5	< 2	3.03	11	4	13.0	< 10	< 1	0.13	< 10
696226 Orig	< 5	< 0.2	< 0.5	27	4960	< 1	109	< 2	120	2.26	5	< 10	35	< 0.5	< 2	3.23	25	6	14.4	< 10	< 1	0.13	< 10
696226 Dup	< 5	< 0.2	< 0.5	26	4860	< 1	103	< 2	118	2.23	7	< 10	34	< 0.5	< 2	3.20	23	5	14.1	< 10	< 1	0.12	< 10
696236 Orig	5																						
696236 Dup	5																						
696238 Orig		0.2	0.7	25	4830	< 1	181	9	203	1.59	117	< 10	12	< 0.5	< 2	2.17	48	6	19.0	< 10	< 1	0.14	< 10
696238 Dup		< 0.2	< 0.5	25	4800	< 1	174	9	203	1.57	117	< 10	13	< 0.5	< 2	2.15	48	6	18.7	< 10	< 1	0.14	< 10
696246 Orig	8																						
696246 Dup	9																						
696247 Orig	19	0.5	< 0.5	9	8600	< 1	109	7	55	0.86	140	< 10	14	< 0.5	< 2	2.11	24	4	28.4	< 10	< 1	0.09	< 10
696247 Split PREP DUP	19	0.5	< 0.5	21	8500	< 1	98	7	58	0.84	138	< 10	13	< 0.5	4	2.04	27	3	27.9	< 10	< 1	0.09	< 10
696251 Orig		< 0.2	< 0.5	7	6780	4	136	8	62	0.31	95	< 10	< 10	< 0.5	< 2	0.79	36	11	18.6	< 10	< 1	< 0.01	< 10
696251 Dup		0.2	0.8	7	6740	4	138	8	62	0.31	93	< 10	< 10	< 0.5	< 2	0.78	37	12	18.5	< 10	< 1	< 0.01	< 10
Method Blank	< 5																						
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Method Blank		< 0.2	< 0.5	1	< 5	< 1	< 1	< 2	< 2	< 0.01	< 2	< 10	< 10	< 0.5	< 2	< 0.01	< 1	< 1	< 0.01	< 10	< 1	< 0.01	< 10
Method Blank		< 0.2	< 0.5	1	< 5	< 1	< 1	< 2	< 2	< 0.01	< 2	< 10	< 10	< 0.5	< 2	< 0.01	< 1	< 1	< 0.01	< 10	< 1	< 0.01	< 10
Method Blank		< 0.2	< 0.5	< 1	< 5	< 1	< 1	< 2	< 2	< 0.01	< 2	< 10	< 10	< 0.5	< 2	< 0.01	< 1	< 1	< 0.01	< 10	< 1	< 0.01	< 10
Method Blank		< 0.2	< 0.5	< 1	< 5	< 1	< 1	< 2	< 2	< 0.01	< 2	< 10	< 10	< 0.5	< 2	< 0.01	< 1	< 1	< 0.01	< 10	< 1	< 0.01	< 10

Analyte Symbol	Mg	Na	P	S	Sb	Sc	Sr	Ti	Th	Te	Tl	U	V	W	Y	Zr
Unit Symbol	%	%	%	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	0.01	0.001	0.001	0.01	2	1	1	0.01	20	1	2	10	1	10	1	1
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
GXR-1 Meas	0.14	0.053	0.043	0.20	73	1	180	< 0.01	< 20	11	< 2	28	65	133	26	15
GXR-1 Cert	0.217	0.0520	0.0650	0.257	122	1.58	275	0.036	2.44	13.0	0.390	34.9	80.0	164	32.0	38.0
GXR-1 Meas	0.14	0.053	0.041	0.21	73	1	167	< 0.01	< 20	10	< 2	29	67	131	26	15
GXR-1 Cert	0.217	0.0520	0.0650	0.257	122	1.58	275	0.036	2.44	13.0	0.390	34.9	80.0	164	32.0	38.0
GXR-6 Meas	0.41	0.097	0.036	0.09	6	25	35		< 20	< 1	2	< 10	141	< 10	6	16
GXR-6 Cert	0.609	0.104	0.0350	0.0160	3.60	27.6	35.0		5.30	0.0180	2.20	1.54	186	1.90	14.0	110
GXR-6 Meas	0.39	0.088	0.035	0.02	6	23	35		< 20	< 1	< 2	< 10	178	< 10	6	13
GXR-6 Cert	0.609	0.104	0.0350	0.0160	3.60	27.6	35.0		5.30	0.0180	2.20	1.54	186	1.90	14.0	110
OREAS 134b (AQUA REGIA) Meas				9.20												
OREAS 134b (AQUA REGIA) Cert				19.31												
OREAS 133a (Aqua Regia) Meas				6.72	126											
OREAS 133a (Aqua Regia) Cert				10.7	147											
OREAS 203 Meas																
OREAS 203 Cert																
OREAS 203 Meas																
OREAS 203 Cert																
OREAS 224 Meas																
OREAS 224 Cert																
OREAS 224 Meas																
OREAS 224 Cert																
OREAS 224 Meas																
OREAS 224 Cert																
OREAS 224 Meas																
OREAS 224 Cert																
696150 Orig	1.28	0.173	0.148	0.10	< 2	6	160	< 0.01	< 20	< 1	< 2	< 10	25	< 10	6	4
696150 Dup	1.25	0.176	0.144	0.10	< 2	6	162	< 0.01	< 20	< 1	< 2	< 10	25	< 10	6	4
696157 Orig																
696157 Dup																
696158 Orig	1.22	0.137	0.142	0.05	< 2	5	143	< 0.01	< 20	2	< 2	< 10	20	< 10	6	4
696158 Dup	1.21	0.136	0.141	0.05	< 2	5	141	< 0.01	< 20	2	< 2	< 10	20	< 10	5	4
696167 Orig																
696167 Dup																
696178 Orig																
696178 Dup																
696192 Orig																
696192 Dup																
696197 Orig	0.86	0.059	0.081	9.23	5	2	154	< 0.01	< 20	5	< 2	< 10	11	< 10	4	20



Analyte Symbol	Mg	Na	P	S	Sb	Sc	Sr	Ti	Th	Te	Tl	U	V	W	Y	Zr
Unit Symbol	%	%	%	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	0.01	0.001	0.001	0.01	2	1	1	0.01	20	1	2	10	1	10	1	1
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
696197 Split PREP DUP	0.87	0.060	0.081	9.27	5	2	158	< 0.01	< 20	3	< 2	< 10	11	< 10	4	21
696197 Orig	0.86	0.059	0.081	9.14	5	2	152	< 0.01	< 20	3	< 2	< 10	11	< 10	4	20
696197 Dup	0.87	0.060	0.082	9.32	4	2	156	< 0.01	< 20	7	< 2	< 10	11	< 10	4	20
696201 Orig																
696201 Dup																
696210 Orig	1.12	0.073	0.091	1.81	4	3	194	< 0.01	< 20	4	< 2	< 10	24	< 10	5	12
696210 Dup	1.10	0.072	0.089	1.78	3	3	189	< 0.01	< 20	3	< 2	< 10	24	< 10	4	12
696211 Orig																
696211 Dup																
696213 Orig	1.47	0.043	0.071	1.67	5	4	188	< 0.01	< 20	< 1	< 2	< 10	20	< 10	4	16
696213 Dup	1.48	0.043	0.072	1.68	5	4	188	< 0.01	< 20	3	< 2	< 10	20	< 10	4	16
696226 Orig	1.43	0.053	0.074	4.34	4	7	196	< 0.01	< 20	< 1	< 2	< 10	39	< 10	4	24
696226 Dup	1.43	0.053	0.073	4.16	3	7	187	< 0.01	< 20	2	< 2	< 10	38	< 10	4	24
696236 Orig																
696236 Dup																
696238 Orig	1.16	0.045	0.051	11.4	6	4	128	< 0.01	< 20	5	< 2	< 10	24	< 10	4	25
696238 Dup	1.14	0.046	0.050	11.8	9	4	130	< 0.01	< 20	3	< 2	< 10	25	< 10	4	25
696246 Orig																
696246 Dup																
696247 Orig	1.60	0.037	0.030	15.8	11	3	116	< 0.01	< 20	< 1	< 2	< 10	13	< 10	4	21
696247 Split PREP DUP	1.57	0.036	0.030	16.2	9	3	118	< 0.01	< 20	< 1	< 2	< 10	13	< 10	3	21
696251 Orig	1.06	0.014	0.003	9.17	8	3	41	< 0.01	< 20	< 1	< 2	< 10	16	< 10	2	10
696251 Dup	1.05	0.015	0.003	9.11	8	3	41	< 0.01	< 20	< 1	< 2	< 10	16	< 10	2	10
Method Blank																
Method Blank																
Method Blank																
Method Blank																
Method Blank																
Method Blank																
Method Blank																
Method Blank	< 0.01	0.009	< 0.001	< 0.01	< 2	< 1	< 1	< 0.01	< 20	2	< 2	< 10	< 1	< 10	< 1	< 1
Method Blank	< 0.01	0.012	< 0.001	< 0.01	< 2	< 1	< 1	< 0.01	< 20	2	< 2	< 10	< 1	< 10	< 1	< 1
Method Blank	< 0.01	0.011	< 0.001	< 0.01	< 2	< 1	< 1	< 0.01	< 20	1	< 2	< 10	< 1	< 10	< 1	< 1
Method Blank	< 0.01	0.011	< 0.001	< 0.01	< 2	< 1	< 1	< 0.01	< 20	2	< 2	< 10	< 1	< 10	< 1	< 1



**Date Submitted:** 28-Mar-18  
**Invoice No.:** A18-03909  
**Invoice Date:** 15-Jun-18  
**Your Reference:** 81 Lucas

**Noble Mineral Exploration**  
**2500-120 Adelaide Street West**  
**Toronto ON M5H 1T1**  
**Canada**

**ATTN: Randy Singh (inv-cc)**

## CERTIFICATE OF ANALYSIS

105 Rock samples were submitted for analysis.

The following analytical package(s) were requested:

Code 1A2-Timmins Au - Fire Assay AA

Code 1E3-Timmins Aqua Regia ICP(AQUAGEO)

REPORT      **A18-03909**

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

Notes:

If value exceeds upper limit we recommend reassay by fire assay gravimetric-Code 1A3.

Values which exceed the upper limit should be assayed for accurate numbers.

CERTIFIED BY:

A handwritten signature in black ink, appearing to read "Elitsa Hrischeva".

---

Elitsa Hrischeva, Ph.D.  
Quality Control

**ACTIVATION LABORATORIES LTD.**  
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## Results

## Activation Laboratories Ltd.

## Report: A18-03909

Analyte Symbol	Au	Ag	Cd	Cu	Mn	Mo	Ni	Pb	Zn	Al	As	B	Ba	Be	Bi	Ca	Co	Cr	Fe	Ga	Hg	K	La
Unit Symbol	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm
Lower Limit	5	0.2	0.5	1	5	1	1	2	2	0.01	2	10	10	0.5	2	0.01	1	1	0.01	10	1	0.01	10
Method Code	FA-AA	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
696253	12	0.2	0.9	17	7190	< 1	143	7	75	1.42	47	< 10	16	< 0.5	< 2	2.62	28	6	19.7	< 10	1	0.11	< 10
696254	9	< 0.2	< 0.5	20	6220	< 1	128	4	74	1.29	18	< 10	17	< 0.5	< 2	3.02	25	6	16.1	< 10	< 1	0.11	< 10
696255	6	< 0.2	< 0.5	10	6900	< 1	79	3	93	1.91	< 2	< 10	18	< 0.5	< 2	2.88	13	5	15.2	< 10	< 1	0.04	< 10
696256	7	< 0.2	< 0.5	14	5070	< 1	282	4	97	1.98	36	< 10	15	< 0.5	< 2	2.33	36	5	17.1	< 10	< 1	0.06	< 10
696257	8	< 0.2	< 0.5	17	2210	< 1	368	4	67	1.22	56	< 10	14	< 0.5	< 2	2.65	41	6	12.6	< 10	< 1	0.12	< 10
696258	7	< 0.2	0.6	22	1900	< 1	369	6	65	1.32	73	< 10	11	< 0.5	< 2	2.19	44	7	15.7	< 10	< 1	0.13	< 10
696259	< 5	< 0.2	< 0.5	1	147	< 1	< 1	< 2	18	4.35	< 2	11	13	0.6	< 2	0.18	< 1	4	0.86	10	< 1	1.42	< 10
696260	8	< 0.2	< 0.5	14	2140	< 1	313	4	77	1.30	65	< 10	13	< 0.5	< 2	2.37	38	7	14.1	< 10	< 1	0.14	< 10
696261	10	< 0.2	< 0.5	24	2230	< 1	369	6	91	1.41	79	< 10	10	< 0.5	< 2	2.16	59	7	16.0	< 10	< 1	0.13	< 10
696262	7	< 0.2	< 0.5	24	2310	< 1	329	7	102	1.48	80	< 10	< 10	< 0.5	< 2	2.09	57	8	16.4	< 10	< 1	0.11	< 10
696263	6	< 0.2	0.9	20	2060	< 1	288	3	190	1.52	54	< 10	14	< 0.5	< 2	2.16	55	7	12.2	< 10	< 1	0.15	< 10
696264	8	< 0.2	< 0.5	36	2460	< 1	273	8	214	1.49	58	< 10	12	< 0.5	< 2	2.33	54	7	14.2	< 10	< 1	0.11	< 10
696265	7	0.3	0.9	32	1640	< 1	514	11	249	1.20	118	< 10	12	< 0.5	< 2	1.85	76	7	16.1	< 10	< 1	0.13	< 10
696266	6	< 0.2	< 0.5	15	1620	< 1	369	6	84	0.65	77	< 10	11	< 0.5	< 2	2.07	55	9	11.4	< 10	< 1	0.14	< 10
696267	1810	0.3	< 0.5	157	822	< 1	85	6	65	3.48	10	16	31	< 0.5	< 2	3.09	35	134	4.94	10	< 1	0.08	< 10
696268	18	< 0.2	4.5	27	2880	< 1	272	4	2290	1.30	77	< 10	13	< 0.5	< 2	2.83	43	10	13.7	< 10	< 1	0.13	< 10
696269	19	0.3	6.1	21	1730	< 1	269	5	3950	1.07	112	< 10	10	< 0.5	< 2	1.90	50	11	15.3	< 10	< 1	0.17	< 10
696270	17	0.3	< 0.5	19	1220	< 1	254	8	235	0.91	119	< 10	< 10	< 0.5	< 2	1.43	53	9	14.1	< 10	< 1	0.14	< 10
696271	10	< 0.2	< 0.5	26	2370	< 1	218	6	255	1.63	68	< 10	10	< 0.5	< 2	2.06	44	8	14.0	< 10	< 1	0.12	< 10
696272	7	< 0.2	0.8	10	5320	< 1	67	3	190	2.82	7	< 10	24	< 0.5	< 2	3.13	9	7	12.6	< 10	< 1	0.10	< 10
696273	8	< 0.2	< 0.5	12	4430	< 1	50	< 2	169	2.14	8	< 10	29	< 0.5	< 2	2.92	14	10	10.6	< 10	< 1	0.11	< 10
696274	7	0.3	< 0.5	16	2640	< 1	179	9	212	1.34	77	< 10	< 10	< 0.5	< 2	2.08	38	6	13.9	< 10	< 1	0.14	< 10
696275	7	< 0.2	< 0.5	12	4150	< 1	118	3	79	1.26	42	< 10	12	< 0.5	< 2	2.70	23	8	13.4	< 10	< 1	0.09	< 10
696276	6	0.2	< 0.5	14	4110	< 1	146	3	79	1.25	56	< 10	11	< 0.5	< 2	2.65	31	8	15.8	< 10	< 1	0.09	< 10
696277	7	< 0.2	< 0.5	20	6950	< 1	85	2	213	2.51	18	< 10	16	< 0.5	< 2	2.20	20	7	18.2	< 10	< 1	0.07	< 10
696278	13	< 0.2	< 0.5	14	2390	3	149	6	129	0.80	62	< 10	13	< 0.5	< 2	2.70	38	4	11.3	< 10	< 1	0.19	< 10
696279	8	< 0.2	< 0.5	21	2620	< 1	226	6	91	0.88	53	< 10	10	< 0.5	< 2	2.93	44	5	13.7	< 10	< 1	0.15	< 10
696280	7	< 0.2	< 0.5	16	2870	< 1	225	7	57	1.30	53	< 10	12	< 0.5	< 2	2.02	34	6	16.7	< 10	< 1	0.11	< 10
696281	8	< 0.2	< 0.5	13	4270	< 1	166	4	95	2.07	61	< 10	11	< 0.5	< 2	2.10	32	7	18.3	< 10	< 1	0.10	< 10
696282	16	0.3	< 0.5	19	1930	< 1	228	10	162	1.36	106	< 10	< 10	< 0.5	< 2	1.53	57	11	16.8	< 10	< 1	0.10	< 10
696283	350	< 0.2	< 0.5	96	749	< 1	86	< 2	62	2.15	< 2	19	31	< 0.5	< 2	1.86	32	61	4.46	< 10	< 1	0.04	< 10
696284	10	< 0.2	< 0.5	17	2840	< 1	195	5	104	1.75	64	< 10	< 10	< 0.5	< 2	1.96	48	9	16.0	< 10	< 1	0.09	< 10
696285	8	< 0.2	< 0.5	19	3600	< 1	200	8	102	1.67	59	< 10	11	< 0.5	< 2	2.12	39	7	17.2	< 10	< 1	0.07	< 10
696286	8	< 0.2	< 0.5	14	2910	< 1	219	6	72	1.35	54	< 10	< 10	< 0.5	< 2	1.95	37	6	16.5	< 10	< 1	0.11	< 10
696287	7	< 0.2	< 0.5	26	3320	< 1	193	5	100	1.52	49	< 10	< 10	< 0.5	< 2	2.29	39	7	15.9	< 10	< 1	0.08	< 10
696288	7	0.3	0.6	14	1940	< 1	240	8	214	1.38	68	< 10	< 10	< 0.5	< 2	1.82	59	8	14.3	< 10	< 1	0.14	< 10
696289	8	< 0.2	< 0.5	15	1710	< 1	211	3	91	1.51	48	< 10	11	< 0.5	< 2	1.77	48	9	12.6	< 10	< 1	0.12	< 10
696290	10	< 0.2	< 0.5	16	4030	< 1	174	5	165	1.79	55	< 10	10	< 0.5	< 2	2.14	44	8	17.3	< 10	< 1	0.07	< 10
696291	10	< 0.2	< 0.5	15	5270	< 1	143	3	108	1.81	40	< 10	13	< 0.5	< 2	2.56	30	7	17.6	< 10	< 1	0.07	< 10
696292	10	< 0.2	< 0.5	14	5070	< 1	138	5	105	1.73	38	< 10	13	< 0.5	< 2	2.47	29	6	16.9	< 10	< 1	0.07	< 10
696293	9	< 0.2	< 0.5	15	5490	< 1	143	8	130	1.87	46	< 10	12	< 0.5	< 2	2.32	30	5	18.4	< 10	< 1	0.12	< 10
696294	10	< 0.2	< 0.5	13	2040	< 1	271	10	264	1.23	119	< 10	< 10	< 0.5	< 2	1.34	67	7	17.2	< 10	1	0.16	< 10

## Results

## Activation Laboratories Ltd.

## Report: A18-03909

Analyte Symbol	Au	Ag	Cd	Cu	Mn	Mo	Ni	Pb	Zn	Al	As	B	Ba	Be	Bi	Ca	Co	Cr	Fe	Ga	Hg	K	La
Unit Symbol	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm
Lower Limit	5	0.2	0.5	1	5	1	1	2	2	0.01	2	10	10	0.5	2	0.01	1	1	0.01	10	1	0.01	10
Method Code	FA-AA	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
696295	10	< 0.2	< 0.5	16	1560	< 1	232	11	275	1.09	120	< 10	< 10	< 0.5	< 2	1.49	68	9	16.8	< 10	< 1	0.16	< 10
696296	11	0.3	< 0.5	14	3090	< 1	210	6	239	1.45	103	< 10	10	< 0.5	< 2	2.05	53	10	19.0	< 10	< 1	0.12	< 10
696297	12	< 0.2	< 0.5	15	3370	< 1	177	8	167	1.68	94	< 10	10	< 0.5	< 2	2.16	39	8	18.4	< 10	< 1	0.11	< 10
696298	12	0.2	< 0.5	15	3590	< 1	197	5	151	1.74	85	< 10	< 10	< 0.5	< 2	2.08	50	7	19.0	< 10	< 1	0.12	< 10
696299	12	< 0.2	< 0.5	14	2650	< 1	190	8	176	1.67	81	< 10	10	< 0.5	< 2	2.08	56	8	16.4	< 10	< 1	0.13	< 10
696300	5	< 0.2	< 0.5	< 1	126	< 1	< 1	< 2	17	4.49	< 2	14	12	0.6	< 2	0.19	< 1	3	0.66	10	< 1	1.50	< 10
696301	13	0.3	0.6	15	2650	< 1	200	10	207	0.97	111	< 10	< 10	< 0.5	< 2	1.82	49	7	18.0	< 10	2	0.13	< 10
696302	17	0.2	0.9	6	2690	< 1	163	6	353	1.30	70	< 10	14	< 0.5	< 2	2.45	48	5	14.2	< 10	< 1	0.11	< 10
696303	24	0.5	0.6	22	1820	< 1	227	12	471	1.27	134	< 10	< 10	< 0.5	< 2	1.52	66	10	19.4	< 10	1	0.13	< 10
696304	7	< 0.2	< 0.5	11	3680	< 1	145	5	161	0.64	72	< 10	12	< 0.5	< 2	2.41	38	3	13.7	< 10	< 1	0.15	< 10
696305	11	< 0.2	< 0.5	17	4910	< 1	87	4	72	2.19	42	< 10	17	< 0.5	< 2	3.26	21	6	16.1	< 10	< 1	0.11	< 10
696306	8	< 0.2	< 0.5	9	5510	< 1	70	3	61	2.72	38	< 10	19	< 0.5	< 2	3.00	18	5	16.4	< 10	< 1	0.09	< 10
696307	< 5	< 0.2	< 0.5	5	5950	< 1	32	3	52	2.90	12	< 10	30	< 0.5	< 2	3.08	10	4	13.4	< 10	< 1	0.08	< 10
696308	344	< 0.2	< 0.5	103	790	< 1	89	< 2	65	2.31	< 2	20	34	< 0.5	< 2	1.99	34	62	4.70	< 10	< 1	0.04	< 10
696309	14	0.2	< 0.5	22	7190	< 1	55	6	56	2.16	36	< 10	20	< 0.5	< 2	3.30	18	4	16.5	< 10	< 1	0.05	< 10
696310	18	< 0.2	< 0.5	18	3980	< 1	130	6	28	1.10	72	< 10	11	< 0.5	< 2	3.05	28	4	14.3	< 10	< 1	0.11	< 10
696311	11	< 0.2	< 0.5	11	4690	< 1	80	4	43	2.76	40	< 10	17	< 0.5	< 2	2.84	20	10	14.9	< 10	< 1	0.10	< 10
696312	11	< 0.2	< 0.5	18	5360	< 1	52	3	77	3.05	24	< 10	21	< 0.5	< 2	3.11	14	7	14.4	< 10	< 1	0.05	< 10
696313	12	< 0.2	< 0.5	18	3660	< 1	82	7	79	2.58	28	< 10	19	< 0.5	< 2	2.67	25	6	12.5	< 10	< 1	0.08	< 10
696314	15	< 0.2	< 0.5	24	2830	< 1	92	8	73	1.92	34	< 10	18	< 0.5	< 2	2.46	25	6	11.3	< 10	< 1	0.10	< 10
696315	15	< 0.2	< 0.5	33	2300	< 1	64	3	83	0.99	24	< 10	28	< 0.5	< 2	2.77	23	6	7.08	< 10	< 1	0.13	< 10
696316	10	< 0.2	< 0.5	20	2410	< 1	60	< 2	94	2.19	3	< 10	36	< 0.5	3	2.53	19	6	7.48	< 10	< 1	0.12	10
696317	5	< 0.2	< 0.5	21	2420	< 1	63	< 2	96	2.19	3	< 10	36	< 0.5	< 2	2.53	21	7	7.51	< 10	< 1	0.12	< 10
696318	10	< 0.2	< 0.5	36	1690	< 1	74	< 2	106	1.51	9	< 10	38	< 0.5	< 2	1.93	26	6	6.26	< 10	< 1	0.13	< 10
696319	6	< 0.2	< 0.5	27	2130	< 1	76	< 2	77	1.71	14	< 10	38	< 0.5	< 2	2.40	23	5	6.94	< 10	< 1	0.13	< 10
696320	6	< 0.2	< 0.5	21	2110	1	64	< 2	81	2.37	6	< 10	37	< 0.5	< 2	2.05	19	7	7.17	< 10	< 1	0.12	< 10
696321	7	< 0.2	< 0.5	17	2090	1	72	< 2	75	2.13	17	< 10	37	< 0.5	< 2	2.31	18	6	7.71	< 10	< 1	0.13	< 10
696322	18	< 0.2	< 0.5	29	1210	< 1	177	8	75	0.87	96	< 10	13	< 0.5	< 2	1.94	31	5	9.55	< 10	< 1	0.13	< 10
696323	17	< 0.2	< 0.5	31	1010	< 1	178	4	65	1.31	87	< 10	14	< 0.5	< 2	1.80	31	3	9.79	< 10	< 1	0.18	< 10
696324	16	< 0.2	< 0.5	28	1250	< 1	157	4	60	1.15	71	< 10	22	< 0.5	< 2	2.06	31	4	7.21	< 10	< 1	0.17	< 10
696325	16	< 0.2	< 0.5	37	1600	< 1	152	< 2	63	1.40	52	< 10	18	< 0.5	< 2	2.25	26	4	9.57	< 10	< 1	0.13	< 10
696326	< 5	< 0.2	< 0.5	< 1	116	< 1	< 1	< 2	17	4.43	< 2	14	12	0.6	< 2	0.19	< 1	3	0.62	10	< 1	1.53	< 10
696327	14	< 0.2	< 0.5	32	1330	< 1	151	5	79	1.47	60	< 10	17	< 0.5	< 2	1.98	28	5	10.0	< 10	< 1	0.13	< 10
696328	15	< 0.2	< 0.5	29	1080	< 1	166	7	86	1.04	65	< 10	16	< 0.5	< 2	2.02	30	3	9.35	< 10	< 1	0.16	< 10
696329	15	< 0.2	< 0.5	32	933	< 1	214	5	102	1.26	90	< 10	16	< 0.5	< 2	1.94	32	5	9.78	< 10	< 1	0.17	< 10
696330	17	0.2	< 0.5	964	951	< 1	265	9	152	1.00	119	< 10	13	< 0.5	< 2	1.78	38	4	10.4	< 10	< 1	0.19	< 10
696331	14	< 0.2	< 0.5	33	1090	< 1	228	5	158	1.16	85	< 10	12	< 0.5	< 2	2.08	31	5	9.60	< 10	< 1	0.17	< 10
696332	13	< 0.2	< 0.5	32	1110	< 1	156	6	116	1.32	44	< 10	15	< 0.5	< 2	1.80	25	5	8.99	< 10	< 1	0.16	< 10
696333	13	< 0.2	< 0.5	26	1040	< 1	147	< 2	92	1.27	35	< 10	22	< 0.5	< 2	1.80	24	5	6.53	< 10	< 1	0.17	< 10
696334	11	< 0.2	< 0.5	29	1490	< 1	296	2	97	1.44	26	< 10	29	< 0.5	< 2	2.68	29	5	7.48	< 10	< 1	0.16	< 10
696335	12	< 0.2	< 0.5	26	1180	< 1	296	3	138	1.20	25	< 10	30	< 0.5	< 2	2.40	33	4	6.18	< 10	< 1	0.19	< 10
696336	15	< 0.2	< 0.5	26	927	< 1	403	5	119	0.97	76	< 10	14	< 0.5	< 2	2.09	43	2	8.60	< 10	< 1	0.19	< 10

Analyte Symbol	Au	Ag	Cd	Cu	Mn	Mo	Ni	Pb	Zn	Al	As	B	Ba	Be	Bi	Ca	Co	Cr	Fe	Ga	Hg	K	La
Unit Symbol	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm
Lower Limit	5	0.2	0.5	1	5	1	1	2	2	0.01	2	10	10	0.5	2	0.01	1	1	0.01	10	1	0.01	10
Method Code	FA-AA	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
696337	12	< 0.2	< 0.5	32	890	2	189	5	180	0.92	57	< 10	28	< 0.5	< 2	2.39	29	4	5.37	< 10	< 1	0.20	< 10
696338	339	< 0.2	< 0.5	101	773	< 1	90	2	63	2.41	< 2	23	33	< 0.5	< 2	2.09	34	65	4.68	< 10	< 1	0.05	< 10
696339	12	< 0.2	< 0.5	33	773	1	242	3	117	0.94	49	< 10	22	< 0.5	< 2	2.07	28	3	5.81	< 10	< 1	0.21	< 10
696340	14	< 0.2	< 0.5	24	797	< 1	315	5	123	0.98	72	< 10	13	< 0.5	< 2	1.88	39	3	8.52	< 10	< 1	0.20	< 10
696341	12	< 0.2	< 0.5	29	867	< 1	465	9	192	1.11	108	< 10	< 10	< 0.5	< 2	1.52	60	4	11.6	< 10	< 1	0.17	< 10
696342	12	< 0.2	< 0.5	31	838	1	409	8	166	1.18	86	< 10	13	< 0.5	< 2	1.67	62	5	9.45	< 10	< 1	0.18	< 10
696343	12	< 0.2	< 0.5	20	1060	< 1	236	5	119	1.13	40	< 10	18	< 0.5	< 2	2.09	37	4	7.63	< 10	< 1	0.18	< 10
696344	14	< 0.2	< 0.5	20	983	< 1	147	5	104	0.89	37	< 10	23	< 0.5	< 2	2.06	27	3	5.77	< 10	< 1	0.20	< 10
696345	10	< 0.2	< 0.5	28	943	< 1	118	5	123	0.94	33	< 10	24	< 0.5	2	1.87	27	4	6.09	< 10	< 1	0.19	< 10
696346	7	< 0.2	< 0.5	28	947	< 1	114	5	121	0.95	32	< 10	23	< 0.5	< 2	1.88	27	4	6.08	< 10	< 1	0.19	< 10
696347	7	< 0.2	< 0.5	35	1110	< 1	94	3	128	1.39	26	< 10	27	< 0.5	< 2	2.08	26	4	6.69	< 10	< 1	0.21	11
696348	12	< 0.2	1.1	37	1010	< 1	113	9	310	1.23	54	< 10	13	< 0.5	< 2	1.78	33	5	9.47	< 10	< 1	0.19	< 10
696349	9	< 0.2	< 0.5	26	1300	< 1	54	< 2	89	1.56	11	< 10	55	< 0.5	< 2	2.65	20	5	5.09	< 10	< 1	0.25	13
696350	9	< 0.2	< 0.5	32	1300	< 1	61	2	59	1.23	12	< 10	46	< 0.5	3	2.52	21	4	4.99	< 10	< 1	0.23	12
696351	10	< 0.2	< 0.5	35	1530	< 1	79	4	71	1.48	22	< 10	36	< 0.5	< 2	2.49	24	5	6.17	< 10	< 1	0.25	11
696352	8	< 0.2	< 0.5	18	3320	< 1	82	< 2	91	2.82	8	< 10	29	< 0.5	< 2	2.60	14	7	10.6	< 10	< 1	0.10	< 10
696353	16	< 0.2	< 0.5	24	1360	< 1	129	5	51	1.06	47	< 10	16	< 0.5	< 2	2.17	32	4	7.69	< 10	< 1	0.19	< 10
696354	19	< 0.2	< 0.5	25	1120	3	156	5	56	1.01	68	< 10	15	< 0.5	< 2	2.22	38	4	8.11	< 10	< 1	0.19	< 10
696355	< 5	< 0.2	< 0.5	2	79	< 1	< 1	4	15	3.58	< 2	11	< 10	< 0.5	< 2	0.14	< 1	3	0.44	< 10	< 1	1.16	< 10
696356	14	< 0.2	< 0.5	22	915	< 1	142	5	61	0.81	66	< 10	13	< 0.5	< 2	1.88	34	4	8.12	< 10	< 1	0.17	< 10
696357	26	< 0.2	< 0.5	26	844	< 1	169	6	96	0.87	77	< 10	12	< 0.5	< 2	1.70	44	4	8.46	< 10	< 1	0.19	< 10

Analyte Symbol	Mg	Na	P	S	Sb	Sc	Sr	Ti	Th	Te	Tl	U	V	W	Y	Zr
Unit Symbol	%	%	%	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	0.01	0.001	0.001	0.01	2	1	1	0.01	20	1	2	10	1	10	1	1
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
696253	1.40	0.038	0.041	8.32	7	4	139	< 0.01	< 20	< 1	< 2	< 10	23	< 10	4	21
696254	1.25	0.052	0.048	6.66	6	4	158	< 0.01	< 20	< 1	< 2	< 10	22	< 10	3	21
696255	1.50	0.034	0.055	2.63	4	6	168	< 0.01	< 20	< 1	< 2	< 10	33	< 10	3	17
696256	1.27	0.036	0.055	8.48	8	7	139	< 0.01	< 20	< 1	< 2	< 10	42	< 10	3	22
696257	0.89	0.055	0.076	10.2	4	3	152	< 0.01	< 20	10	< 2	< 10	18	< 10	4	21
696258	0.79	0.055	0.071	14.4	6	2	121	< 0.01	< 20	< 1	4	< 10	16	< 10	4	24
696259	0.05	3.41	0.001	0.04	< 2	< 1	23	< 0.01	< 20	< 1	< 2	< 10	< 1	< 10	3	1
696260	0.84	0.057	0.078	12.1	5	2	137	< 0.01	< 20	3	< 2	< 10	17	< 10	4	24
696261	0.84	0.050	0.069	14.4	6	2	127	< 0.01	< 20	6	< 2	< 10	16	< 10	3	24
696262	0.85	0.043	0.064	14.7	7	2	124	< 0.01	< 20	4	< 2	< 10	17	< 10	3	23
696263	0.82	0.054	0.083	9.48	5	2	124	< 0.01	< 20	< 1	< 2	< 10	14	< 10	4	22
696264	0.83	0.043	0.068	11.6	7	2	133	< 0.01	< 20	3	< 2	< 10	18	< 10	3	21
696265	0.68	0.043	0.067	15.0	6	2	106	< 0.01	< 20	< 1	< 2	< 10	14	< 10	3	23
696266	0.56	0.048	0.067	10.5	4	2	117	< 0.01	< 20	2	< 2	< 10	7	< 10	3	19
696267	2.38	0.063	0.036	0.26	< 2	7	42	0.37	< 20	5	4	< 10	126	< 10	11	17
696268	0.91	0.048	0.064	11.3	4	2	160	< 0.01	< 20	< 1	< 2	< 10	15	< 10	4	21
696269	0.60	0.051	0.079	15.1	4	2	108	< 0.01	< 20	< 1	< 2	< 10	11	< 10	3	24
696270	0.48	0.043	0.069	14.2	5	2	88	< 0.01	< 20	< 1	2	< 10	12	< 10	3	22
696271	0.82	0.043	0.069	11.4	6	3	119	< 0.01	< 20	< 1	< 2	< 10	22	< 10	3	22
696272	1.50	0.044	0.067	3.25	4	5	191	< 0.01	< 20	< 1	< 2	< 10	32	< 10	4	19
696273	1.22	0.042	0.072	2.97	4	4	181	< 0.01	< 20	< 1	< 2	< 10	27	< 10	4	17
696274	0.77	0.047	0.072	11.3	6	2	120	< 0.01	< 20	< 1	< 2	< 10	14	< 10	3	21
696275	1.01	0.040	0.053	8.41	4	2	146	< 0.01	< 20	4	< 2	< 10	16	< 10	3	18
696276	0.99	0.040	0.053	12.0	6	3	152	< 0.01	< 20	1	< 2	< 10	15	< 10	3	19
696277	1.44	0.039	0.069	6.08	10	4	137	< 0.01	< 20	2	< 2	< 10	31	< 10	5	20
696278	0.64	0.073	0.101	9.58	4	2	167	< 0.01	< 20	< 1	< 2	< 10	8	< 10	4	22
696279	0.86	0.058	0.070	11.5	5	2	178	< 0.01	< 20	6	< 2	< 10	10	< 10	4	21
696280	0.77	0.042	0.060	14.5	7	2	129	< 0.01	< 20	< 1	< 2	< 10	14	< 10	3	19
696281	1.16	0.038	0.068	12.3	8	3	139	< 0.01	< 20	< 1	< 2	< 10	25	< 10	4	21
696282	0.64	0.037	0.053	15.8	8	2	98	< 0.01	< 20	< 1	< 2	< 10	25	< 10	3	19
696283	2.13	0.158	0.078	0.18	< 2	5	45	0.28	< 20	4	< 2	< 10	84	< 10	13	11
696284	0.88	0.035	0.059	12.7	7	4	122	< 0.01	< 20	< 1	< 2	< 10	31	< 10	3	19
696285	0.99	0.028	0.051	13.1	6	3	137	< 0.01	< 20	< 1	< 2	< 10	22	< 10	3	18
696286	0.82	0.038	0.052	13.9	7	3	125	< 0.01	< 20	< 1	< 2	< 10	20	< 10	3	19
696287	0.95	0.035	0.054	11.6	6	3	144	< 0.01	< 20	< 1	< 2	< 10	25	< 10	3	17
696288	0.72	0.046	0.067	12.6	5	3	117	< 0.01	< 20	5	< 2	< 10	20	< 10	3	19
696289	0.74	0.040	0.071	10.3	5	3	112	< 0.01	< 20	3	< 2	< 10	21	< 10	3	18
696290	1.10	0.029	0.053	11.9	7	5	148	< 0.01	< 20	< 1	< 2	< 10	38	< 10	3	18
696291	1.24	0.027	0.053	10.7	7	4	173	< 0.01	< 20	< 1	< 2	< 10	28	< 10	3	18
696292	1.19	0.026	0.050	10.1	6	4	164	< 0.01	< 20	10	< 2	< 10	28	< 10	3	18
696293	1.22	0.038	0.051	10.9	8	3	155	< 0.01	< 20	< 1	< 2	< 10	25	< 10	3	21
696294	0.53	0.046	0.052	16.0	7	2	90	< 0.01	< 20	8	< 2	< 10	20	< 10	3	21

Analyte Symbol	Mg	Na	P	S	Sb	Sc	Sr	Ti	Th	Te	Tl	U	V	W	Y	Zr
Unit Symbol	%	%	%	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	0.01	0.001	0.001	0.01	2	1	1	0.01	20	1	2	10	1	10	1	1
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
696295	0.50	0.045	0.058	17.3	8	2	102	< 0.01	< 20	< 1	< 2	< 10	16	< 10	3	22
696296	0.81	0.037	0.055	17.1	5	3	137	< 0.01	< 20	< 1	< 2	< 10	27	< 10	3	20
696297	0.95	0.036	0.051	14.4	8	4	136	< 0.01	< 20	< 1	< 2	< 10	31	< 10	3	21
696298	0.94	0.039	0.051	15.2	8	4	129	< 0.01	< 20	4	< 2	< 10	35	< 10	3	22
696299	0.82	0.038	0.061	13.8	6	4	131	< 0.01	< 20	4	< 2	< 10	29	< 10	3	20
696300	0.05	3.45	< 0.001	0.03	< 2	< 1	25	< 0.01	< 20	< 1	< 2	< 10	< 1	< 10	3	2
696301	0.60	0.048	0.049	17.5	7	3	113	< 0.01	< 20	6	< 2	< 10	16	< 10	2	19
696302	0.78	0.036	0.075	11.6	7	3	144	< 0.01	< 20	4	< 2	< 10	17	< 10	3	19
696303	0.54	0.039	0.038	19.4	9	3	97	< 0.01	< 20	< 1	< 2	< 10	26	< 10	2	20
696304	0.82	0.043	0.073	10.5	6	2	134	< 0.01	< 20	< 1	< 2	< 10	7	< 10	3	16
696305	1.22	0.043	0.055	9.09	5	6	196	< 0.01	< 20	< 1	< 2	< 10	38	< 10	3	19
696306	1.36	0.034	0.068	7.72	5	4	190	< 0.01	< 20	6	< 2	< 10	33	< 10	4	19
696307	1.36	0.037	0.068	3.34	5	4	183	< 0.01	< 20	< 1	< 2	< 10	30	< 10	4	17
696308	2.29	0.173	0.083	0.09	< 2	5	48	0.30	< 20	< 1	< 2	< 10	90	< 10	14	9
696309	1.35	0.029	0.043	5.98	6	3	183	< 0.01	< 20	< 1	< 2	< 10	26	< 10	3	16
696310	0.78	0.053	0.043	11.2	6	2	146	< 0.01	< 20	< 1	< 2	< 10	16	< 10	3	17
696311	1.12	0.043	0.062	7.62	5	4	153	< 0.01	< 20	< 1	< 2	< 10	29	< 10	4	20
696312	1.24	0.038	0.060	5.61	7	5	157	< 0.01	< 20	4	< 2	< 10	37	< 10	4	21
696313	1.09	0.056	0.070	5.87	4	7	113	< 0.01	< 20	7	< 2	< 10	44	< 10	3	20
696314	0.95	0.054	0.066	6.46	3	3	94	< 0.01	< 20	< 1	< 2	< 10	25	< 10	3	17
696315	0.82	0.061	0.064	4.17	< 2	2	98	< 0.01	< 20	3	< 2	< 10	12	< 10	3	15
696316	1.18	0.060	0.090	1.61	< 2	4	86	< 0.01	< 20	< 1	< 2	< 10	26	< 10	4	12
696317	1.17	0.061	0.090	1.66	< 2	4	85	< 0.01	< 20	2	< 2	< 10	26	< 10	4	12
696318	0.75	0.065	0.079	2.53	< 2	3	64	< 0.01	< 20	4	< 2	< 10	17	< 10	4	13
696319	0.97	0.073	0.085	2.55	2	3	70	< 0.01	< 20	3	< 2	< 10	21	< 10	4	15
696320	1.16	0.074	0.084	1.39	3	4	64	< 0.01	< 20	< 1	< 2	< 10	28	< 10	4	14
696321	1.20	0.074	0.087	2.53	< 2	3	69	< 0.01	< 20	< 1	< 2	< 10	24	< 10	4	16
696322	0.65	0.060	0.068	8.49	4	2	59	< 0.01	< 20	< 1	< 2	< 10	9	< 10	3	17
696323	0.75	0.080	0.092	8.10	3	2	58	< 0.01	< 20	10	< 2	< 10	12	< 10	4	20
696324	0.76	0.073	0.091	5.12	< 2	2	63	< 0.01	< 20	< 1	< 2	< 10	11	< 10	4	17
696325	0.92	0.077	0.075	6.80	2	3	56	< 0.01	< 20	< 1	2	< 10	15	< 10	4	18
696326	0.05	3.53	0.001	0.02	< 2	< 1	25	< 0.01	< 20	2	2	< 10	< 1	< 10	4	2
696327	0.91	0.076	0.076	7.43	2	2	47	< 0.01	< 20	< 1	< 2	< 10	16	< 10	4	17
696328	0.73	0.070	0.095	7.93	4	2	56	< 0.01	< 20	< 1	2	< 10	10	< 10	4	17
696329	0.84	0.071	0.088	7.97	3	2	47	< 0.01	< 20	< 1	< 2	< 10	12	< 10	5	19
696330	0.61	0.086	0.096	9.68	4	2	51	< 0.01	< 20	< 1	< 2	< 10	8	< 10	4	22
696331	0.77	0.087	0.081	8.56	4	2	48	< 0.01	< 20	< 1	< 2	< 10	12	< 10	5	21
696332	0.82	0.076	0.083	6.97	3	2	41	< 0.01	< 20	2	3	< 10	14	< 10	4	20
696333	0.80	0.085	0.086	4.46	< 2	2	44	< 0.01	< 20	< 1	< 2	< 10	13	< 10	4	18
696334	1.19	0.105	0.087	4.50	< 2	3	57	< 0.01	< 20	5	< 2	< 10	15	< 10	5	21
696335	0.85	0.108	0.087	4.10	2	2	66	< 0.01	< 20	< 1	< 2	< 10	11	< 10	5	20
696336	0.77	0.095	0.096	7.94	3	2	68	< 0.01	< 20	1	< 2	< 10	7	< 10	5	28

Analyte Symbol	Mg	Na	P	S	Sb	Sc	Sr	Ti	Th	Te	Tl	U	V	W	Y	Zr
Unit Symbol	%	%	%	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	0.01	0.001	0.001	0.01	2	1	1	0.01	20	1	2	10	1	10	1	1
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
696337	0.87	0.100	0.093	4.15	< 2	2	66	< 0.01	< 20	< 1	< 2	< 10	7	< 10	5	18
696338	2.27	0.196	0.082	0.09	< 2	6	55	0.32	< 20	3	< 2	< 10	94	< 10	14	11
696339	0.70	0.105	0.096	4.80	3	2	63	< 0.01	< 20	< 1	< 2	< 10	7	< 10	4	19
696340	0.65	0.107	0.094	7.96	3	2	56	< 0.01	< 20	< 1	< 2	< 10	9	< 10	4	23
696341	0.69	0.103	0.078	10.9	4	2	48	< 0.01	< 20	4	< 2	< 10	10	< 10	4	23
696342	0.69	0.096	0.087	8.30	4	2	54	< 0.01	< 20	< 1	< 2	< 10	11	< 10	4	23
696343	0.79	0.098	0.081	5.85	4	2	59	< 0.01	< 20	< 1	< 2	< 10	11	< 10	4	19
696344	0.69	0.096	0.093	4.61	2	2	54	< 0.01	< 20	< 1	< 2	< 10	8	< 10	5	19
696345	0.60	0.093	0.085	4.84	< 2	2	47	< 0.01	< 20	< 1	< 2	< 10	8	< 10	4	17
696346	0.61	0.096	0.083	4.93	< 2	2	48	< 0.01	< 20	< 1	< 2	< 10	8	< 10	4	17
696347	0.86	0.096	0.098	4.49	3	2	47	< 0.01	< 20	7	< 2	< 10	11	< 10	5	19
696348	0.67	0.085	0.090	8.19	3	2	42	< 0.01	< 20	< 1	< 2	< 10	10	< 10	4	21
696349	0.79	0.113	0.115	2.37	< 2	2	65	< 0.01	< 20	< 1	< 2	< 10	12	< 10	5	9
696350	0.73	0.101	0.103	2.82	< 2	2	61	< 0.01	< 20	< 1	< 2	< 10	9	< 10	4	13
696351	0.78	0.105	0.102	3.59	< 2	2	64	< 0.01	< 20	2	< 2	< 10	12	< 10	4	17
696352	1.12	0.043	0.078	3.38	3	4	61	< 0.01	< 20	1	< 2	< 10	32	< 10	4	16
696353	0.65	0.082	0.084	6.01	4	2	54	< 0.01	< 20	< 1	< 2	< 10	9	< 10	3	19
696354	0.68	0.092	0.084	6.46	< 2	2	58	< 0.01	< 20	5	< 2	< 10	9	< 10	4	20
696355	0.04	2.61	< 0.001	< 0.01	< 2	< 1	18	< 0.01	< 20	4	< 2	< 10	< 1	< 10	3	2
696356	0.54	0.093	0.084	7.13	2	1	57	< 0.01	< 20	< 1	< 2	< 10	6	< 10	3	19
696357	0.50	0.094	0.083	7.74	4	1	55	< 0.01	< 20	1	< 2	< 10	6	< 10	3	20



Analyte Symbol	Au	Ag	Cd	Cu	Mn	Mo	Ni	Pb	Zn	Al	As	B	Ba	Be	Bi	Ca	Co	Cr	Fe	Ga	Hg	K	La	
Unit Symbol	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	
Lower Limit	5	0.2	0.5	1	5	1	1	2	2	0.01	2	10	10	0.5	2	0.01	1	1	0.01	10	1	0.01	10	
Method Code	FA-AA	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	
GXR-1 Meas		30.2	2.3	1120	904	15	23	679	727	0.31	413	< 10	278	0.9	1410	0.74	5	8	20.4	< 10	5	0.03	< 10	
GXR-1 Cert		31.0	3.30	1110	852	18.0	41.0	730	760	3.52	427	15.0	750	1.22	1380	0.960	8.20	12.0	23.6	13.8	3.90	0.050	7.50	
GXR-1 Meas		31.5	2.3	1150	927	15	27	696	750	0.31	424	< 10	264	0.9	1460	0.77	6	7	20.9	< 10	2	0.03	< 10	
GXR-1 Cert		31.0	3.30	1110	852	18.0	41.0	730	760	3.52	427	15.0	750	1.22	1380	0.960	8.20	12.0	23.6	13.8	3.90	0.050	7.50	
GXR-6 Meas		< 0.2	< 0.5	75	1130	1	20	98	131	6.45	248	< 10	1180	1.0	< 2	0.16	14	87	4.90	20	< 1	1.10	12	
GXR-6 Cert		1.30	1.00	66.0	1010	2.40	27.0	101	118	17.7	330	9.80	1300	1.40	0.290	0.180	13.8	96.0	5.58	35.0	0.0680	1.87	13.9	
OREAS 134b (AQUA REGIA) Meas		> 100	524	1330				> 5000	> 10000		246						122		10.6					
OREAS 134b (AQUA REGIA) Cert		204	563	1360				133000	177000		221						106		12.25					
OREAS 133a (Aqua Regia) Meas		95.5	264	294				> 5000	> 10000		137		< 10				22		6.28					
OREAS 133a (Aqua Regia) Cert		97	297	324				48600.00	106000.00		140		59				23		7.92					
OREAS 203 Meas	860																							
OREAS 203 Cert	871																							
OREAS 203 Meas	873																							
OREAS 203 Cert	871																							
OREAS 203 Meas	898																							
OREAS 203 Cert	871																							
OREAS 203 Meas	902																							
OREAS 203 Cert	871																							
OREAS 224 Meas	2080																							
OREAS 224 Cert	2150.000																							
OREAS 224 Meas	2100																							
OREAS 224 Cert	2150.000																							
OREAS 224 Meas	2140																							
OREAS 224 Cert	2150.000																							
OREAS 224 Meas	2070																							
OREAS 224 Cert	2150.000																							
696262 Orig	7																							
696262 Dup	6																							
696272 Orig	6																							
696272 Dup	8																							
696282 Orig	15	0.3	< 0.5	20	2010	< 1	238	11	167	1.42	112	< 10	< 10	< 0.5	< 2	1.58	60	12	17.7	< 10	< 1	0.11	< 10	
696282 Dup	17	0.2	< 0.5	18	1850	< 1	217	9	156	1.29	99	< 10	< 10	< 0.5	< 2	1.48	54	11	15.9	< 10	< 1	0.10	< 10	
696283 Orig		< 0.2	< 0.5	96	761	< 1	86	< 2	63	2.13	< 2	19	32	< 0.5	< 2	1.85	32	59	4.51	< 10	< 1	0.04	< 10	
696283 Dup		< 0.2	< 0.5	95	737	< 1	85	< 2	61	2.16	< 2	19	31	< 0.5	< 2	1.87	32	63	4.41	< 10	< 1	0.04	< 10	

Analyte Symbol	Au	Ag	Cd	Cu	Mn	Mo	Ni	Pb	Zn	Al	As	B	Ba	Be	Bi	Ca	Co	Cr	Fe	Ga	Hg	K	La
Unit Symbol	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm
Lower Limit	5	0.2	0.5	1	5	1	1	2	2	0.01	2	10	10	0.5	2	0.01	1	1	0.01	10	1	0.01	10
Method Code	FA-AA	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
696297 Orig	12																						
696297 Dup	11																						
696302 Orig	17																						
696302 Split PREP DUP	18																						
696307 Orig	< 5																						
696307 Dup	< 5																						
696317 Orig	5																						
696317 Dup	5																						
696324 Orig		< 0.2	< 0.5	28	1250	< 1	157	3	61	1.16	72	< 10	22	< 0.5	< 2	2.07	31	4	7.24	< 10	< 1	0.17	< 10
696324 Dup		< 0.2	< 0.5	28	1250	< 1	156	5	60	1.14	69	< 10	21	< 0.5	< 2	2.06	31	4	7.18	< 10	< 1	0.17	< 10
696329 Orig		0.2	< 0.5	32	936	< 1	214	6	101	1.26	91	< 10	15	< 0.5	< 2	1.95	31	5	9.81	< 10	< 1	0.16	< 10
696329 Dup		< 0.2	< 0.5	32	930	< 1	215	3	102	1.26	90	< 10	16	< 0.5	< 2	1.93	32	5	9.74	< 10	< 1	0.17	< 10
696332 Orig	14																						
696332 Dup	12																						
696333 Orig		< 0.2	< 0.5	25	1020	< 1	142	< 2	90	1.20	33	< 10	22	< 0.5	< 2	1.76	24	4	6.38	< 10	< 1	0.15	< 10
696333 Dup		< 0.2	< 0.5	27	1060	1	152	3	94	1.34	38	< 10	22	< 0.5	< 2	1.83	25	5	6.67	< 10	< 1	0.18	< 10
696341 Orig		0.3	< 0.5	29	862	< 1	461	8	192	1.11	107	< 10	< 10	< 0.5	< 2	1.60	58	4	11.6	< 10	< 1	0.17	< 10
696341 Dup		< 0.2	< 0.5	29	871	< 1	470	9	193	1.11	109	< 10	< 10	< 0.5	< 2	1.45	61	4	11.7	< 10	< 1	0.17	< 10
696342 Orig	11																						
696342 Dup	12																						
696352 Orig	8																						
696352 Split PREP DUP	9																						
696352 Orig	8																						
696352 Dup	8																						
Method Blank	< 5																						
Method Blank	< 5																						
Method Blank	< 5																						
Method Blank	5																						
Method Blank	5																						
Method Blank	< 5																						
Method Blank	< 5																						
Method Blank	< 5																						
Method Blank		< 0.2	< 0.5	1	< 5	< 1	< 1	< 2	< 2	< 0.01	< 2	< 10	< 10	< 0.5	< 2	< 0.01	< 1	< 1	< 0.01	< 10	< 1	< 0.01	< 10
Method Blank		< 0.2	< 0.5	1	< 5	< 1	< 1	< 2	< 2	< 0.01	< 2	< 10	< 10	< 0.5	< 2	< 0.01	< 1	< 1	< 0.01	< 10	< 1	< 0.01	< 10
Method Blank		< 0.2	< 0.5	< 1	< 5	< 1	< 1	< 2	< 2	< 0.01	< 2	< 10	< 10	< 0.5	< 2	< 0.01	< 1	< 1	< 0.01	< 10	< 1	< 0.01	< 10
Method Blank		< 0.2	< 0.5	< 1	< 5	< 1	< 1	< 2	< 2	< 0.01	< 2	< 10	< 10	< 0.5	< 2	< 0.01	< 1	< 1	< 0.01	< 10	< 1	< 0.01	< 10

Analyte Symbol	Mg	Na	P	S	Sb	Sc	Sr	Ti	Th	Te	Tl	U	V	W	Y	Zr
Unit Symbol	%	%	%	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	0.01	0.001	0.001	0.01	2	1	1	0.01	20	1	2	10	1	10	1	1
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
GXR-1 Meas	0.14	0.053	0.043	0.20	73	1	180	< 0.01	< 20	11	< 2	28	65	133	26	15
GXR-1 Cert	0.217	0.0520	0.0650	0.257	122	1.58	275	0.036	2.44	13.0	0.390	34.9	80.0	164	32.0	38.0
GXR-1 Meas	0.14	0.053	0.041	0.21	73	1	167	< 0.01	< 20	10	< 2	29	67	131	26	15
GXR-1 Cert	0.217	0.0520	0.0650	0.257	122	1.58	275	0.036	2.44	13.0	0.390	34.9	80.0	164	32.0	38.0
GXR-6 Meas	0.41	0.097	0.036	0.09	6	25	35		< 20	< 1	2	< 10	141	< 10	6	16
GXR-6 Cert	0.609	0.104	0.0350	0.0160	3.60	27.6	35.0		5.30	0.0180	2.20	1.54	186	1.90	14.0	110
OREAS 134b (AQUA REGIA) Meas				9.20												
OREAS 134b (AQUA REGIA) Cert				19.31												
OREAS 133a (Aqua Regia) Meas				6.72	126											
OREAS 133a (Aqua Regia) Cert				10.7	147											
OREAS 203 Meas																
OREAS 203 Cert																
OREAS 203 Meas																
OREAS 203 Cert																
OREAS 203 Meas																
OREAS 203 Cert																
OREAS 203 Meas																
OREAS 203 Cert																
OREAS 224 Meas																
OREAS 224 Cert																
OREAS 224 Meas																
OREAS 224 Cert																
OREAS 224 Meas																
OREAS 224 Cert																
696262 Orig																
696262 Dup																
696272 Orig																
696272 Dup																
696282 Orig	0.67	0.038	0.055	16.5	8	2	101	< 0.01	< 20	< 1	< 2	< 10	26	< 10	3	19
696282 Dup	0.60	0.035	0.050	15.0	7	2	94	< 0.01	< 20	3	< 2	< 10	24	< 10	2	18
696283 Orig	2.12	0.156	0.078	0.20	< 2	5	44	0.28	< 20	3	2	< 10	84	< 10	13	11
696283 Dup	2.13	0.160	0.078	0.17	< 2	5	46	0.29	< 20	5	< 2	< 10	85	< 10	13	10
696297 Orig																
696297 Dup																
696302 Orig																

Analyte Symbol	Mg	Na	P	S	Sb	Sc	Sr	Ti	Th	Te	Tl	U	V	W	Y	Zr
Unit Symbol	%	%	%	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	0.01	0.001	0.001	0.01	2	1	1	0.01	20	1	2	10	1	10	1	1
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
696302 Split PREP DUP																
696307 Orig																
696307 Dup																
696317 Orig																
696317 Dup																
696324 Orig	0.76	0.073	0.091	5.13	3	2	62	< 0.01	< 20	7	< 2	< 10	11	< 10	4	17
696324 Dup	0.76	0.072	0.092	5.12	< 2	2	63	< 0.01	< 20	< 1	< 2	< 10	11	< 10	4	17
696329 Orig	0.84	0.071	0.088	7.92	3	2	48	< 0.01	< 20	< 1	< 2	< 10	12	< 10	5	19
696329 Dup	0.83	0.071	0.087	8.02	4	2	47	< 0.01	< 20	< 1	< 2	< 10	12	< 10	5	19
696332 Orig																
696332 Dup																
696333 Orig	0.78	0.078	0.084	4.28	2	2	42	< 0.01	< 20	2	< 2	< 10	12	< 10	4	17
696333 Dup	0.82	0.092	0.087	4.63	< 2	2	46	< 0.01	< 20	< 1	< 2	< 10	14	< 10	5	20
696341 Orig	0.69	0.103	0.078	10.9	5	2	49	< 0.01	< 20	2	< 2	< 10	10	< 10	4	23
696341 Dup	0.70	0.103	0.079	10.9	4	2	48	< 0.01	< 20	6	< 2	< 10	10	< 10	4	23
696342 Orig																
696342 Dup																
696352 Orig																
696352 Split PREP DUP																
696352 Orig																
696352 Dup																
Method Blank																
Method Blank																
Method Blank																
Method Blank																
Method Blank																
Method Blank																
Method Blank																
Method Blank	< 0.01	0.009	< 0.001	< 0.01	< 2	< 1	< 1	< 0.01	< 20	2	< 2	< 10	< 1	< 10	< 1	< 1
Method Blank	< 0.01	0.012	< 0.001	< 0.01	< 2	< 1	< 1	< 0.01	< 20	2	< 2	< 10	< 1	< 10	< 1	< 1
Method Blank	< 0.01	0.011	< 0.001	< 0.01	< 2	< 1	< 1	< 0.01	< 20	1	< 2	< 10	< 1	< 10	< 1	< 1
Method Blank	< 0.01	0.011	< 0.001	< 0.01	< 2	< 1	< 1	< 0.01	< 20	2	< 2	< 10	< 1	< 10	< 1	< 1



**Date Submitted:** 28-Mar-18  
**Invoice No.:** A18-03911  
**Invoice Date:** 13-Jun-18  
**Your Reference:** 81 Lucas

**Noble Mineral Exploration**  
**2500-120 Adelaide Street West**  
**Toronto ON M5H 1T1**  
**Canada**

**ATTN: Randy Singh (inv-cc)**

## CERTIFICATE OF ANALYSIS

105 Rock samples were submitted for analysis.

The following analytical package(s) were requested:

Code 1A2-Timmins Au - Fire Assay AA

Code 1E3-Timmins Aqua Regia ICP(AQUAGEO)

REPORT      **A18-03911**

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

Notes:

If value exceeds upper limit we recommend reassay by fire assay gravimetric-Code 1A3.

Values which exceed the upper limit should be assayed for accurate numbers.

CERTIFIED BY:

A handwritten signature in black ink, appearing to be "Emmanuel Esemé". The signature is written in a cursive, somewhat stylized font.

Emmanuel Esemé , Ph.D.  
Quality Control

**ACTIVATION LABORATORIES LTD.**  
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## Results

## Activation Laboratories Ltd.

## Report: A18-03911

Analyte Symbol	Au	Ag	Cd	Cu	Mn	Mo	Ni	Pb	Zn	Al	As	B	Ba	Be	Bi	Ca	Co	Cr	Fe	Ga	Hg	K	La
Unit Symbol	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm
Lower Limit	5	0.2	0.5	1	5	1	1	2	2	0.01	2	10	10	0.5	2	0.01	1	1	0.01	10	1	0.01	10
Method Code	FA-AA	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
696463	< 5	< 0.2	< 0.5	40	4220	< 1	171	4	254	1.59	41	< 10	33	< 0.5	< 2	2.37	36	38	10.6	< 10	< 1	0.11	12
696464	5	< 0.2	< 0.5	44	6630	< 1	139	2	194	1.58	38	< 10	24	< 0.5	< 2	2.61	30	37	15.0	< 10	< 1	0.06	< 10
696465	8	< 0.2	< 0.5	44	4670	< 1	163	4	187	1.53	74	< 10	34	< 0.5	< 2	2.88	32	37	11.5	< 10	< 1	0.12	< 10
696466	140	< 0.2	< 0.5	43	2570	< 1	231	6	151	1.22	220	< 10	23	< 0.5	< 2	3.23	39	30	10.4	< 10	< 1	0.10	< 10
696467	260	< 0.2	0.6	18	4730	2	83	4	57	0.16	598	< 10	< 10	< 0.5	< 2	2.65	10	24	11.1	< 10	< 1	< 0.01	< 10
696468	264	< 0.2	< 0.5	18	4730	1	78	5	58	0.15	602	< 10	< 10	< 0.5	< 2	2.62	10	22	11.0	< 10	< 1	< 0.01	< 10
696469	48	< 0.2	< 0.5	5	4030	2	17	< 2	35	0.04	96	< 10	< 10	< 0.5	< 2	0.58	1	35	8.03	< 10	< 1	< 0.01	< 10
696470	417	0.3	0.5	18	6050	2	199	11	100	0.12	404	< 10	< 10	< 0.5	< 2	1.09	17	21	16.5	< 10	< 1	< 0.01	< 10
696471	15	< 0.2	< 0.5	6	1960	3	15	< 2	33	0.05	42	< 10	< 10	< 0.5	< 2	0.99	2	41	4.43	< 10	< 1	< 0.01	< 10
696472	174	< 0.2	< 0.5	6	4660	1	52	2	83	0.12	486	< 10	< 10	< 0.5	< 2	0.97	5	28	9.94	< 10	< 1	< 0.01	< 10
696473	33	< 0.2	< 0.5	2	4770	< 1	17	< 2	68	0.05	153	< 10	< 10	< 0.5	< 2	2.99	< 1	28	9.78	< 10	< 1	< 0.01	< 10
696474	47	< 0.2	< 0.5	4	4490	2	10	3	39	0.05	132	< 10	11	< 0.5	< 2	1.21	1	31	9.16	< 10	< 1	< 0.01	< 10
696475	114	< 0.2	< 0.5	10	4820	3	97	4	196	0.16	451	< 10	11	< 0.5	< 2	1.39	9	27	12.6	< 10	< 1	< 0.01	< 10
696476	5	0.3	< 0.5	14	167	< 1	3	< 2	28	4.53	6	11	10	0.7	< 2	0.24	< 1	6	0.96	10	< 1	1.45	< 10
696477	107	< 0.2	< 0.5	7	3100	4	78	4	100	0.09	295	< 10	18	< 0.5	< 2	3.97	7	25	7.77	< 10	< 1	< 0.01	< 10
696478	418	0.4	< 0.5	32	7580	3	244	22	208	0.39	632	< 10	< 10	< 0.5	< 2	1.31	33	16	22.6	< 10	1	< 0.01	< 10
696479	378	1.0	< 0.5	62	5540	< 1	242	37	143	0.39	486	< 10	< 10	< 0.5	5	0.72	41	11	28.6	< 10	2	< 0.01	< 10
696480	1000	1.5	0.5	88	1920	< 1	74	75	311	0.17	375	< 10	< 10	< 0.5	< 2	0.60	32	9	20.2	< 10	< 1	0.04	< 10
696481	304	0.7	8.8	618	129	5	140	47	5850	0.25	328	< 10	< 10	< 0.5	< 2	0.06	100	16	9.11	< 10	< 1	0.11	< 10
696482	206	0.9	< 0.5	53	3420	< 1	202	23	321	0.33	417	< 10	< 10	< 0.5	< 2	0.49	37	16	21.1	< 10	< 1	0.04	< 10
696483	439	0.8	< 0.5	21	4680	< 1	80	14	69	0.09	379	< 10	< 10	< 0.5	< 2	0.58	15	15	20.9	< 10	2	< 0.01	< 10
696484	100	< 0.2	< 0.5	15	2350	2	24	9	120	0.07	151	< 10	10	< 0.5	3	0.79	6	31	6.30	< 10	< 1	< 0.01	< 10
696485	86	< 0.2	< 0.5	6	3500	2	43	5	64	0.05	226	< 10	< 10	< 0.5	< 2	0.73	6	35	7.53	< 10	< 1	< 0.01	< 10
696486	1770	0.3	< 0.5	156	811	1	89	5	65	3.63	7	18	34	< 0.5	< 2	3.33	37	140	5.10	10	< 1	0.09	< 10
696487	110	< 0.2	< 0.5	6	5190	1	57	5	93	0.07	307	< 10	< 10	< 0.5	< 2	0.62	6	30	11.7	< 10	< 1	< 0.01	< 10
696488	200	< 0.2	< 0.5	10	3730	3	111	8	73	0.06	226	< 10	< 10	< 0.5	< 2	1.02	12	32	10.3	< 10	< 1	< 0.01	< 10
696489	642	0.5	< 0.5	15	4590	1	54	13	44	0.15	320	< 10	< 10	< 0.5	< 2	1.00	7	26	12.0	< 10	< 1	< 0.01	< 10
696490	38	< 0.2	< 0.5	3	1050	3	41	< 2	44	0.02	60	< 10	< 10	< 0.5	2	2.43	5	36	2.59	< 10	< 1	< 0.01	< 10
696491	329	0.2	< 0.5	9	4350	2	39	7	77	0.06	217	< 10	< 10	< 0.5	< 2	1.38	4	29	10.1	< 10	< 1	< 0.01	< 10
696492	2710	2.1	< 0.5	45	4310	< 1	94	39	60	0.20	910	< 10	< 10	< 0.5	< 2	1.85	28	8	22.4	< 10	1	0.02	< 10
696493	605	0.5	< 0.5	14	2730	< 1	260	12	129	1.02	508	< 10	11	< 0.5	< 2	2.87	36	8	15.3	< 10	< 1	0.10	< 10
696494	660	0.5	0.7	19	2760	< 1	313	14	125	0.91	802	< 10	< 10	< 0.5	< 2	2.19	42	6	18.7	< 10	< 1	0.08	< 10
696495	666	0.6	1.0	20	2890	< 1	329	15	130	0.95	838	< 10	< 10	< 0.5	< 2	2.27	43	6	19.6	< 10	< 1	0.08	< 10
696496	362	0.3	< 0.5	17	4580	< 1	198	9	127	0.85	765	< 10	21	< 0.5	< 2	3.07	30	5	15.4	< 10	< 1	0.10	< 10
696497	936	0.5	< 0.5	23	2140	< 1	396	15	125	0.88	806	< 10	11	< 0.5	< 2	2.99	60	6	15.5	< 10	< 1	0.12	< 10
696498	693	0.4	< 0.5	24	4760	< 1	214	17	102	0.62	919	< 10	11	< 0.5	< 2	1.94	36	15	19.7	< 10	< 1	0.07	< 10
696499	1410	1.1	< 0.5	34	2280	< 1	310	30	68	0.54	776	< 10	< 10	< 0.5	< 2	1.88	46	12	18.6	< 10	< 1	0.07	< 10
696500	2090	1.3	< 0.5	41	2380	< 1	271	44	48	0.50	585	< 10	< 10	< 0.5	< 2	2.03	36	9	19.7	< 10	< 1	0.09	< 10
696501	698	0.7	0.7	20	2270	< 1	299	21	54	0.52	560	< 10	14	< 0.5	< 2	2.84	36	13	12.6	< 10	< 1	0.06	< 10
696502	1740	0.3	< 0.5	153	777	< 1	89	7	65	3.55	8	17	30	< 0.5	< 2	3.19	36	137	4.96	10	< 1	0.09	< 10
696503	872	0.5	< 0.5	18	3370	< 1	277	15	85	0.69	569	< 10	13	< 0.5	< 2	2.55	31	14	14.2	< 10	< 1	0.07	< 10
696504	610	0.6	< 0.5	17	1270	< 1	411	17	78	0.77	1190	< 10	11	< 0.5	< 2	1.60	51	11	12.3	< 10	< 1	0.08	< 10

Results

Activation Laboratories Ltd.

Report: A18-03911

Analyte Symbol	Au	Ag	Cd	Cu	Mn	Mo	Ni	Pb	Zn	Al	As	B	Ba	Be	Bi	Ca	Co	Cr	Fe	Ga	Hg	K	La
Unit Symbol	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm
Lower Limit	5	0.2	0.5	1	5	1	1	2	2	0.01	2	10	10	0.5	2	0.01	1	1	0.01	10	1	0.01	10
Method Code	FA-AA	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
696505	1300	1.2	0.6	31	6100	20	187	30	87	0.44	1520	< 10	< 10	< 0.5	< 2	1.53	35	16	22.4	< 10	< 1	0.02	< 10
696506	1560	1.2	< 0.5	33	1830	3	149	31	106	0.11	975	< 10	< 10	< 0.5	< 2	1.64	26	39	14.1	< 10	< 1	< 0.01	< 10
696507	2110	1.5	1.6	57	6340	< 1	115	33	1280	0.36	657	< 10	< 10	< 0.5	2	1.32	23	13	23.5	< 10	< 1	< 0.01	< 10
696508	1080	0.9	1.1	43	2930	< 1	70	25	694	0.24	503	< 10	< 10	< 0.5	< 2	2.39	15	44	13.1	< 10	< 1	< 0.01	< 10
696509	4190	2.3	< 0.5	72	1560	< 1	96	87	167	0.23	361	< 10	< 10	< 0.5	< 2	0.39	45	19	18.5	< 10	< 1	0.04	< 10
696510	294	0.4	1.0	35	1360	3	109	21	596	0.41	227	< 10	21	< 0.5	5	0.20	59	48	6.60	< 10	< 1	0.07	< 10
696511	383	0.3	< 0.5	15	2610	< 1	157	12	115	0.74	271	< 10	24	< 0.5	< 2	0.61	42	33	8.52	< 10	< 1	0.15	< 10
696512	< 5	< 0.2	< 0.5	< 1	117	< 1	< 1	< 2	17	4.54	2	13	13	0.6	< 2	0.19	< 1	2	0.61	10	< 1	1.47	< 10
696513	2410	1.5	< 0.5	33	2420	< 1	99	27	52	0.35	267	< 10	< 10	< 0.5	< 2	1.84	28	10	13.2	< 10	< 1	0.10	< 10
696514	2060	1.3	< 0.5	34	1560	< 1	117	27	47	0.48	315	< 10	11	< 0.5	< 2	1.45	29	18	12.6	< 10	< 1	0.12	< 10
696515	293	< 0.2	< 0.5	7	2250	< 1	117	10	55	0.45	223	< 10	33	< 0.5	< 2	1.59	27	29	5.66	< 10	< 1	0.10	< 10
696516	160	< 0.2	< 0.5	8	2040	< 1	151	7	37	0.51	379	< 10	46	< 0.5	2	2.80	26	38	3.55	< 10	< 1	0.14	< 10
696517	164	< 0.2	< 0.5	5	1640	< 1	44	4	31	0.63	156	< 10	39	< 0.5	3	3.08	16	16	4.76	< 10	< 1	0.16	< 10
696518	461	0.4	< 0.5	9	837	< 1	87	10	34	0.56	193	< 10	18	< 0.5	< 2	2.24	25	7	8.44	< 10	< 1	0.12	< 10
696519	207	0.2	< 0.5	8	998	< 1	67	6	47	0.80	149	< 10	28	< 0.5	4	2.85	21	5	6.80	< 10	< 1	0.14	< 10
696520	3420	1.6	< 0.5	31	1630	< 1	86	30	40	0.42	3880	< 10	< 10	< 0.5	< 2	1.51	21	14	13.6	< 10	< 1	0.08	< 10
696521	3660	1.4	< 0.5	30	1630	< 1	84	30	39	0.43	3830	< 10	< 10	< 0.5	< 2	1.49	21	21	13.7	< 10	< 1	0.08	< 10
696522	4280	2.3	< 0.5	56	1920	< 1	114	42	44	0.20	5840	< 10	< 10	< 0.5	< 2	0.42	18	17	17.8	< 10	< 1	< 0.01	< 10
696523	> 5000	1.9	< 0.5	52	3450	< 1	86	47	57	0.25	6510	< 10	< 10	< 0.5	< 2	0.08	17	13	22.1	< 10	< 1	< 0.01	< 10
696524	2500	0.8	< 0.5	21	1900	< 1	44	26	39	0.29	2670	< 10	< 10	< 0.5	< 2	0.09	12	29	12.0	< 10	< 1	0.01	< 10
696525	797	< 0.2	< 0.5	10	2140	< 1	24	6	40	0.17	6770	< 10	< 10	< 0.5	3	0.07	7	33	6.91	< 10	< 1	< 0.01	< 10
696526	199	< 0.2	< 0.5	2	1770	< 1	11	3	14	0.07	3640	< 10	< 10	< 0.5	< 2	1.12	3	53	2.75	< 10	< 1	< 0.01	< 10
696527	843	< 0.2	< 0.5	6	2370	< 1	35	5	36	0.16	8390	< 10	< 10	< 0.5	< 2	0.46	7	27	6.71	< 10	< 1	< 0.01	< 10
696528	2640	1.2	< 0.5	29	1450	< 1	73	29	39	0.29	> 10000	< 10	< 10	< 0.5	< 2	0.07	17	43	12.1	< 10	< 1	< 0.01	< 10
696529	4650	2.2	< 0.5	58	1600	< 1	67	62	26	0.12	5760	< 10	< 10	< 0.5	< 2	0.06	15	21	16.5	< 10	< 1	< 0.01	< 10
696530	2170	1.2	< 0.5	33	6060	< 1	49	28	48	0.17	3480	< 10	< 10	< 0.5	< 2	0.10	13	38	17.5	< 10	< 1	0.01	< 10
696531	1740	0.3	< 0.5	166	828	< 1	88	7	66	3.58	17	17	32	< 0.5	< 2	3.17	36	137	5.30	< 10	< 1	0.09	< 10
696532	3960	2.0	< 0.5	46	6160	< 1	63	37	84	0.15	4040	< 10	< 10	< 0.5	< 2	0.10	30	23	20.6	< 10	< 1	0.01	< 10
696533	3410	2.4	< 0.5	51	1180	< 1	113	39	88	0.20	2420	< 10	< 10	< 0.5	< 2	0.09	32	41	18.6	< 10	2	0.04	< 10
696534	3370	2.4	< 0.5	66	266	< 1	54	45	123	0.11	862	< 10	< 10	< 0.5	< 2	0.06	29	33	18.5	< 10	< 1	0.03	< 10
696535	1680	1.3	< 0.5	38	4330	1	72	27	38	0.29	3480	< 10	< 10	< 0.5	< 2	2.12	27	11	17.7	< 10	2	0.06	< 10
696536	1780	1.1	< 0.5	30	1850	< 1	53	22	25	0.38	1430	< 10	13	< 0.5	< 2	1.59	25	25	10.3	< 10	< 1	0.11	< 10
696537	1500	0.8	< 0.5	23	1270	< 1	59	20	28	0.34	318	< 10	17	< 0.5	3	1.76	35	19	7.57	< 10	< 1	0.14	< 10
696538	2040	1.3	< 0.5	37	1360	< 1	52	29	34	0.41	604	< 10	12	< 0.5	< 2	1.63	28	18	10.3	< 10	< 1	0.15	< 10
696539	1270	0.8	< 0.5	21	1590	< 1	62	22	29	0.33	946	< 10	13	< 0.5	< 2	2.09	27	17	9.84	< 10	< 1	0.13	< 10
696540	< 5	< 0.2	< 0.5	2	131	< 1	< 1	< 2	17	4.77	< 2	13	13	0.6	< 2	0.20	< 1	2	0.74	10	< 1	1.52	< 10
696541	2880	2.0	< 0.5	64	1290	< 1	54	67	89	0.24	499	< 10	< 10	< 0.5	< 2	0.79	34	12	18.1	< 10	< 1	0.09	< 10
696542	757	0.4	< 0.5	11	288	3	13	12	29	0.08	326	< 10	11	< 0.5	2	0.03	5	40	4.37	< 10	< 1	0.02	< 10
696543	68	< 0.2	< 0.5	9	1520	< 1	31	16	28	1.11	194	< 10	38	0.6	2	2.90	13	26	5.53	< 10	< 1	0.13	< 10
696544	6	< 0.2	< 0.5	4	1280	< 1	30	< 2	19	0.55	267	< 10	50	< 0.5	< 2	2.65	13	17	3.05	< 10	< 1	0.15	13
696545	32	< 0.2	< 0.5	3	2500	< 1	75	< 2	40	0.65	870	< 10	36	< 0.5	2	4.75	25	32	5.98	< 10	< 1	0.11	< 10
696546	20	< 0.2	< 0.5	11	2330	< 1	90	2	64	0.81	754	< 10	49	< 0.5	< 2	4.13	26	35	6.27	< 10	< 1	0.15	< 10

Analyte Symbol	Au	Ag	Cd	Cu	Mn	Mo	Ni	Pb	Zn	Al	As	B	Ba	Be	Bi	Ca	Co	Cr	Fe	Ga	Hg	K	La
Unit Symbol	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm
Lower Limit	5	0.2	0.5	1	5	1	1	2	2	0.01	2	10	10	0.5	2	0.01	1	1	0.01	10	1	0.01	10
Method Code	FA-AA	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
696547	110	< 0.2	< 0.5	9	2200	< 1	85	< 2	75	1.09	2960	< 10	36	< 0.5	3	4.60	28	40	6.77	< 10	< 1	0.11	< 10
696548	95	< 0.2	< 0.5	19	1390	< 1	82	< 2	40	0.50	3340	< 10	43	< 0.5	< 2	3.36	23	37	3.79	< 10	< 1	0.12	10
696549	121	< 0.2	< 0.5	20	1510	< 1	91	< 2	47	0.53	4040	< 10	46	< 0.5	< 2	3.46	24	47	4.15	< 10	< 1	0.13	10
696550	6	< 0.2	< 0.5	19	1440	< 1	76	< 2	48	0.48	173	< 10	42	< 0.5	4	4.17	20	41	3.58	< 10	< 1	0.12	< 10
696551	13	< 0.2	< 0.5	14	830	< 1	76	< 2	32	0.51	134	< 10	42	< 0.5	< 2	3.24	23	56	2.97	< 10	< 1	0.12	11
696552	< 5	< 0.2	< 0.5	37	1500	< 1	112	2	38	0.63	145	< 10	47	< 0.5	< 2	3.70	29	27	5.65	< 10	< 1	0.14	< 10
696553	< 5	< 0.2	< 0.5	25	1500	< 1	91	< 2	55	0.87	66	< 10	33	< 0.5	< 2	3.65	25	37	6.97	< 10	< 1	0.09	< 10
696554	< 5	< 0.2	< 0.5	41	1400	< 1	105	< 2	66	1.13	76	< 10	34	< 0.5	< 2	3.38	24	42	6.17	< 10	< 1	0.09	< 10
696555	< 5	< 0.2	< 0.5	36	1130	< 1	104	< 2	64	0.95	91	< 10	35	< 0.5	2	3.27	28	42	4.78	< 10	< 1	0.09	< 10
696556	14	< 0.2	< 0.5	39	1440	< 1	101	3	99	1.10	86	< 10	39	< 0.5	3	4.17	26	51	6.20	< 10	< 1	0.10	< 10
696557	347	< 0.2	< 0.5	125	881	< 1	106	< 2	75	2.74	< 2	28	42	< 0.5	< 2	2.37	39	75	5.73	< 10	< 1	0.05	< 10
696558	25	< 0.2	< 0.5	29	926	< 1	113	4	201	0.87	63	< 10	50	< 0.5	3	3.01	25	24	4.52	< 10	< 1	0.14	< 10
696559	14	< 0.2	< 0.5	35	524	< 1	96	< 2	124	0.95	59	< 10	48	< 0.5	< 2	2.13	23	29	3.70	< 10	< 1	0.12	11
696560	136	0.3	< 0.5	17	6150	< 1	241	10	147	0.36	318	< 10	< 10	< 0.5	< 2	0.16	46	19	22.9	< 10	1	< 0.01	< 10
696561	22	< 0.2	< 0.5	14	9150	< 1	140	4	206	0.39	105	< 10	15	< 0.5	< 2	0.17	24	34	17.6	< 10	< 1	0.02	< 10
696562	114	< 0.2	< 0.5	15	5720	1	106	5	175	0.31	171	< 10	15	< 0.5	< 2	0.23	17	41	12.7	< 10	< 1	0.01	< 10
696563	204	0.2	< 0.5	28	5590	1	234	10	225	0.68	425	< 10	13	< 0.5	< 2	0.16	29	39	18.3	< 10	< 1	0.03	< 10
696564	62	< 0.2	< 0.5	10	6090	< 1	96	3	86	0.12	97	< 10	< 10	< 0.5	< 2	0.46	11	41	13.6	< 10	< 1	< 0.01	< 10
696565	8	< 0.2	< 0.5	1	127	< 1	< 1	< 2	17	4.74	< 2	12	11	0.6	2	0.19	< 1	1	0.59	10	< 1	1.50	< 10
696566	21	< 0.2	< 0.5	4	6070	< 1	80	5	86	0.19	84	< 10	< 10	< 0.5	< 2	0.69	9	39	13.6	< 10	< 1	< 0.01	< 10
696567	20	< 0.2	< 0.5	1	3910	< 1	64	3	68	0.06	67	< 10	< 10	< 0.5	< 2	1.02	7	47	8.96	< 10	< 1	< 0.01	< 10



Analyte Symbol	Mg	Na	P	S	Sb	Sc	Sr	Ti	Th	Te	Tl	U	V	W	Y	Zr	Au
Unit Symbol	%	%	%	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	g/tonne
Lower Limit	0.01	0.001	0.001	0.01	2	1	1	0.01	20	1	2	10	1	10	1	1	0.03
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	FA- GRA
696463	1.03	0.073	0.108	3.16	5	6	118	< 0.01	< 20	2	< 2	< 10	34	< 10	4	14	
696464	1.45	0.042	0.067	4.10	7	7	117	< 0.01	< 20	< 1	< 2	< 10	38	< 10	3	15	
696465	1.23	0.063	0.102	3.38	6	7	128	< 0.01	< 20	3	< 2	< 10	36	< 10	4	16	
696466	1.22	0.047	0.116	5.50	8	4	151	< 0.01	< 20	< 1	< 2	< 10	26	< 10	5	15	
696467	1.32	0.013	0.004	4.37	5	4	97	< 0.01	< 20	< 1	< 2	< 10	18	< 10	3	9	
696468	1.30	0.013	0.004	4.27	6	4	96	< 0.01	< 20	< 1	< 2	< 10	18	< 10	3	9	
696469	0.75	0.013	0.002	1.61	3	2	25	< 0.01	< 20	3	< 2	< 10	8	< 10	1	3	
696470	1.37	0.013	0.001	8.35	11	5	52	< 0.01	< 20	< 1	< 2	< 10	20	< 10	2	10	
696471	0.51	0.013	0.001	0.83	< 2	2	49	< 0.01	< 20	< 1	< 2	< 10	7	< 10	1	3	
696472	1.03	0.014	0.002	2.12	4	4	40	< 0.01	< 20	< 1	< 2	< 10	13	< 10	2	6	
696473	1.91	0.014	0.002	0.90	3	6	108	< 0.01	< 20	< 1	< 2	< 10	17	< 10	2	8	
696474	1.13	0.015	0.002	1.07	3	2	52	< 0.01	< 20	< 1	< 2	< 10	9	< 10	1	4	
696475	1.60	0.014	0.003	3.02	6	4	64	< 0.01	< 20	< 1	< 2	< 10	19	< 10	2	7	
696476	0.08	3.50	0.002	0.05	< 2	< 1	24	< 0.01	< 20	< 1	< 2	< 10	1	< 10	3	1	
696477	2.06	0.020	0.002	3.36	4	4	182	< 0.01	< 20	< 1	< 2	< 10	11	< 10	3	6	
696478	1.83	0.016	0.004	10.6	22	6	75	< 0.01	< 20	< 1	< 2	< 10	26	< 10	3	13	
696479	1.10	0.016	0.005	20.0	45	4	25	< 0.01	< 20	< 1	< 2	< 10	23	< 10	2	14	
696480	0.46	0.017	0.004	18.3	39	1	26	< 0.01	< 20	< 1	< 2	< 10	8	< 10	1	11	
696481	0.03	0.028	0.014	10.3	17	< 1	8	< 0.01	< 20	< 1	< 2	< 10	4	< 10	1	16	
696482	0.66	0.017	0.004	17.2	36	3	21	< 0.01	< 20	< 1	< 2	< 10	16	< 10	1	12	
696483	0.78	0.013	0.003	14.8	33	3	20	< 0.01	< 20	< 1	< 2	< 10	12	< 10	2	10	
696484	0.62	0.012	0.002	2.79	6	2	32	< 0.01	< 20	< 1	< 2	< 10	6	< 10	< 1	3	
696485	0.78	0.013	0.002	2.07	5	2	30	< 0.01	< 20	< 1	< 2	< 10	8	< 10	1	3	
696486	2.46	0.066	0.037	0.26	< 2	8	47	0.38	< 20	1	< 2	< 10	173	< 10	12	19	
696487	1.12	0.012	0.002	4.06	8	3	29	< 0.01	< 20	< 1	< 2	< 10	10	< 10	1	5	
696488	0.84	0.013	0.003	4.90	10	1	28	< 0.01	< 20	7	< 2	< 10	8	< 10	2	5	
696489	1.03	0.013	0.005	5.74	15	2	32	< 0.01	< 20	< 1	< 2	< 10	10	< 10	2	6	
696490	0.92	0.013	< 0.001	0.71	3	< 1	89	< 0.01	< 20	2	< 2	< 10	2	< 10	1	2	
696491	1.03	0.012	0.001	3.80	7	2	48	< 0.01	< 20	< 1	< 2	< 10	8	< 10	2	5	
696492	1.14	0.018	0.004	18.2	52	2	81	< 0.01	< 20	< 1	< 2	< 10	9	< 10	2	12	
696493	1.74	0.062	0.051	10.2	15	4	121	< 0.01	< 20	< 1	< 2	< 10	20	< 10	4	21	
696494	1.43	0.053	0.055	13.9	19	4	96	< 0.01	< 20	< 1	< 2	< 10	19	< 10	3	21	
696495	1.49	0.056	0.057	14.9	19	4	101	< 0.01	< 20	< 1	< 2	< 10	20	< 10	3	22	
696496	1.92	0.077	0.080	7.42	10	4	139	< 0.01	< 20	< 1	< 2	< 10	19	< 10	4	21	
696497	1.40	0.072	0.059	12.6	16	3	137	< 0.01	< 20	< 1	< 2	< 10	18	< 10	4	22	
696498	1.67	0.081	0.051	12.3	16	4	85	< 0.01	< 20	< 1	< 2	< 10	19	< 10	4	26	
696499	1.32	0.053	0.058	15.9	27	2	102	< 0.01	< 20	3	< 2	< 10	13	< 10	3	22	
696500	1.10	0.067	0.045	19.3	30	2	95	< 0.01	< 20	< 1	< 2	< 10	11	< 10	3	22	
696501	1.61	0.061	0.064	10.3	18	2	126	< 0.01	< 20	4	< 2	< 10	13	< 10	3	18	
696502	2.41	0.061	0.036	0.27	< 2	7	43	0.37	< 20	8	< 2	< 10	169	< 10	11	19	
696503	1.46	0.058	0.053	10.1	16	4	122	< 0.01	< 20	4	< 2	< 10	17	< 10	3	21	

Analyte Symbol	Mg	Na	P	S	Sb	Sc	Sr	Ti	Th	Te	Tl	U	V	W	Y	Zr	Au
Unit Symbol	%	%	%	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	g/tonne
Lower Limit	0.01	0.001	0.001	0.01	2	1	1	0.01	20	1	2	10	1	10	1	1	0.03
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	FA- GRA
696504	0.67	0.067	0.080	11.8	16	2	78	< 0.01	< 20	< 1	< 2	< 10	12	< 10	3	23	
696505	1.40	0.024	0.017	14.4	29	4	73	< 0.01	< 20	< 1	< 2	< 10	19	< 10	2	14	
696506	0.75	0.016	0.002	13.4	26	3	63	< 0.01	< 20	< 1	< 2	< 10	17	< 10	1	6	
696507	1.22	0.015	0.006	16.1	32	4	45	< 0.01	< 20	< 1	< 2	< 10	24	< 10	3	12	
696508	1.04	0.014	0.005	10.7	19	5	82	< 0.01	< 20	< 1	< 2	< 10	24	< 10	4	7	
696509	0.16	0.023	0.013	18.8	37	2	21	< 0.01	< 20	< 1	< 2	< 10	7	< 10	2	15	3.85
696510	0.09	0.030	0.050	4.81	9	3	20	< 0.01	< 20	< 1	< 2	< 10	7	< 10	3	16	
696511	0.19	0.043	0.153	4.97	7	3	49	< 0.01	< 20	< 1	< 2	< 10	8	< 10	7	20	
696512	0.05	3.51	0.001	0.03	< 2	< 1	24	< 0.01	< 20	< 1	< 2	< 10	< 1	< 10	3	1	
696513	1.33	0.045	0.065	12.6	17	3	158	< 0.01	< 20	5	< 2	< 10	7	< 10	4	30	
696514	0.66	0.046	0.076	13.4	15	2	102	< 0.01	< 20	8	< 2	< 10	8	< 10	4	33	
696515	0.56	0.048	0.087	3.50	4	3	100	< 0.01	< 20	5	< 2	< 10	6	< 10	5	21	
696516	1.03	0.049	0.118	2.03	3	3	163	< 0.01	< 20	3	< 2	< 10	9	< 10	6	11	
696517	1.07	0.066	0.127	3.04	2	2	155	< 0.01	< 20	2	< 2	< 10	8	< 10	5	13	
696518	0.80	0.053	0.106	7.82	10	2	110	< 0.01	< 20	< 1	< 2	< 10	6	< 10	4	25	
696519	0.98	0.069	0.100	5.13	6	3	130	< 0.01	< 20	5	< 2	< 10	9	< 10	4	18	
696520	0.56	0.050	0.050	13.1	17	3	77	< 0.01	< 20	3	< 2	< 10	7	< 10	3	17	3.72
696521	0.55	0.051	0.051	12.9	16	3	78	< 0.01	< 20	5	< 2	< 10	8	< 10	3	17	3.38
696522	0.16	0.015	0.005	17.6	30	4	22	< 0.01	< 20	< 1	< 2	< 10	13	< 10	2	9	4.50
696523	0.10	0.015	0.008	18.2	29	5	10	< 0.01	< 20	< 1	< 2	< 10	15	< 10	4	13	6.20
696524	0.06	0.016	0.011	10.6	13	3	21	< 0.01	< 20	< 1	< 2	< 10	11	< 10	2	7	
696525	0.03	0.016	0.002	5.23	5	2	6	< 0.01	< 20	< 1	< 2	< 10	3	< 10	2	3	
696526	0.41	0.017	0.001	1.80	< 2	1	67	< 0.01	< 20	< 1	< 2	< 10	2	< 10	1	1	
696527	0.17	0.016	0.002	5.07	6	2	28	< 0.01	< 20	< 1	< 2	< 10	3	< 10	2	3	
696528	0.04	0.017	0.007	11.7	17	2	8	< 0.01	< 20	< 1	< 2	< 10	4	< 10	2	6	
696529	0.07	0.015	0.003	17.3	30	1	6	< 0.01	< 20	< 1	< 2	< 10	5	< 10	1	7	5.40
696530	0.55	0.014	0.003	12.8	22	1	5	< 0.01	< 20	< 1	< 2	< 10	6	< 10	2	10	
696531	2.43	0.063	0.037	0.31	< 2	7	43	0.38	< 20	6	< 2	< 10	175	< 10	12	20	
696532	0.46	0.017	0.003	18.3	39	1	6	< 0.01	< 20	< 1	< 2	< 10	7	< 10	2	10	4.23
696533	0.09	0.022	0.003	19.4	48	1	7	< 0.01	< 20	< 1	< 2	< 10	6	< 10	1	12	4.45
696534	0.03	0.021	0.004	> 20.0	45	< 1	6	< 0.01	< 20	< 1	4	< 10	4	< 10	< 1	11	3.45
696535	0.97	0.036	0.043	14.8	22	2	117	< 0.01	< 20	< 1	< 2	< 10	7	< 10	3	20	
696536	0.53	0.057	0.093	10.2	16	2	93	< 0.01	< 20	< 1	< 2	< 10	7	< 10	4	21	
696537	0.57	0.055	0.129	7.55	11	2	112	< 0.01	< 20	2	< 2	< 10	6	< 10	5	32	
696538	0.57	0.061	0.136	10.4	17	2	95	< 0.01	< 20	< 1	< 2	< 10	7	< 10	5	26	
696539	0.67	0.055	0.098	9.56	13	2	109	< 0.01	< 20	< 1	< 2	< 10	6	< 10	4	25	
696540	0.05	3.44	0.001	0.05	< 2	< 1	25	< 0.01	< 20	2	< 2	< 10	< 1	< 10	4	1	
696541	0.24	0.041	0.065	18.0	26	1	47	< 0.01	< 20	< 1	< 2	< 10	5	< 10	3	22	
696542	0.01	0.023	0.005	4.20	5	< 1	4	< 0.01	< 20	< 1	< 2	< 10	2	< 10	< 1	4	
696543	1.12	0.058	0.054	1.50	2	5	131	< 0.01	< 20	< 1	< 2	< 10	15	< 10	6	21	
696544	0.78	0.081	0.082	0.96	< 2	3	124	< 0.01	< 20	< 1	< 2	< 10	7	< 10	5	6	
696545	1.62	0.064	0.087	1.68	< 2	6	198	< 0.01	< 20	4	< 2	< 10	14	< 10	6	13	

Analyte Symbol	Mg	Na	P	S	Sb	Sc	Sr	Ti	Th	Te	Tl	U	V	W	Y	Zr	Au
Unit Symbol	%	%	%	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	g/tonne
Lower Limit	0.01	0.001	0.001	0.01	2	1	1	0.01	20	1	2	10	1	10	1	1	0.03
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	FA- GRA
696546	1.63	0.101	0.130	0.79	2	9	169	< 0.01	< 20	< 1	< 2	< 10	26	< 10	6	4	
696547	1.65	0.065	0.110	0.85	< 2	8	188	< 0.01	< 20	5	< 2	< 10	28	< 10	6	5	
696548	0.88	0.084	0.133	0.60	2	6	130	< 0.01	< 20	< 1	< 2	< 10	16	< 10	5	4	
696549	0.92	0.091	0.131	0.74	< 2	6	137	< 0.01	< 20	3	< 2	< 10	17	< 10	6	4	
696550	1.12	0.080	0.163	0.44	< 2	5	137	< 0.01	< 20	< 1	< 2	< 10	20	< 10	7	3	
696551	0.84	0.076	0.137	0.24	< 2	5	121	< 0.01	< 20	2	< 2	< 10	14	< 10	6	2	
696552	1.24	0.092	0.136	0.87	3	7	126	< 0.01	< 20	< 1	< 2	< 10	18	< 10	6	4	
696553	1.35	0.077	0.089	1.47	< 2	6	116	< 0.01	< 20	< 1	< 2	< 10	26	< 10	5	8	
696554	1.15	0.073	0.094	1.60	< 2	7	111	< 0.01	< 20	< 1	< 2	< 10	36	< 10	5	10	
696555	1.06	0.071	0.114	0.92	< 2	7	102	< 0.01	< 20	< 1	< 2	< 10	29	< 10	5	5	
696556	1.42	0.084	0.110	1.51	< 2	6	127	< 0.01	< 20	< 1	< 2	< 10	29	< 10	6	5	
696557	2.65	0.227	0.095	0.09	< 2	6	63	0.34	< 20	< 1	< 2	< 10	136	< 10	16	14	
696558	0.90	0.081	0.130	1.76	< 2	4	103	< 0.01	< 20	< 1	< 2	< 10	18	< 10	5	4	
696559	0.67	0.076	0.089	1.03	< 2	4	76	< 0.01	< 20	< 1	< 2	< 10	18	< 10	4	5	
696560	0.73	0.014	0.008	13.9	25	6	7	< 0.01	< 20	< 1	< 2	< 10	22	< 10	2	11	
696561	1.29	0.014	0.006	2.88	9	6	6	< 0.01	< 20	< 1	< 2	< 10	18	< 10	2	11	
696562	0.87	0.014	0.005	3.77	8	5	11	< 0.01	< 20	< 1	< 2	< 10	19	< 10	1	8	
696563	0.71	0.017	0.053	5.92	11	7	58	< 0.01	< 20	< 1	< 2	< 10	25	< 10	3	14	
696564	1.00	0.012	0.003	3.52	8	5	21	< 0.01	< 20	< 1	< 2	< 10	16	< 10	1	6	
696565	0.05	3.56	0.001	0.02	< 2	< 1	24	< 0.01	< 20	4	< 2	< 10	< 1	< 10	4	< 1	
696566	1.06	0.016	0.004	3.18	8	5	26	< 0.01	< 20	< 1	< 2	< 10	17	< 10	2	8	
696567	0.92	0.014	0.003	1.91	5	5	32	< 0.01	< 20	< 1	< 2	< 10	16	< 10	2	5	

Analyte Symbol	Au	Ag	Cd	Cu	Mn	Mo	Ni	Pb	Zn	Al	As	B	Ba	Be	Bi	Ca	Co	Cr	Fe	Ga	Hg	K	La
Unit Symbol	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm
Lower Limit	5	0.2	0.5	1	5	1	1	2	2	0.01	2	10	10	0.5	2	0.01	1	1	0.01	10	1	0.01	10
Method Code	FA-AA	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
GXR-1 Meas		29.5	2.5	1180	896	14	27	705	760	0.29	374	11	283	0.9	1390	0.73	6	7	21.6	< 10	5	0.03	< 10
GXR-1 Cert		31.0	3.30	1110	852	18.0	41.0	730	760	3.52	427	15.0	750	1.22	1380	0.960	8.20	12.0	23.6	13.8	3.90	0.050	7.50
GXR-1 Meas		30.6	2.2	1180	922	15	30	727	756	0.31	384	11	239	0.9	1470	0.75	5	7	21.9	< 10	4	0.03	< 10
GXR-1 Cert		31.0	3.30	1110	852	18.0	41.0	730	760	3.52	427	15.0	750	1.22	1380	0.960	8.20	12.0	23.6	13.8	3.90	0.050	7.50
GXR-6 Meas		< 0.2	< 0.5	66	1100	1	17	103	125	6.51	240	< 10	1190	1.0	< 2	0.15	14	88	4.96	20	< 1	1.08	12
GXR-6 Cert		1.30	1.00	66.0	1010	2.40	27.0	101	118	17.7	330	9.80	1300	1.40	0.290	0.180	13.8	96.0	5.58	35.0	0.0680	1.87	13.9
OREAS 134b (AQUA REGIA) Meas		> 100	595	1380				> 5000	> 10000		228						119		11.2				
OREAS 134b (AQUA REGIA) Cert		204	563	1360				133000	177000		221						106		12.25				
OXN117 Meas																							
OXN117 Cert																							
SN75 Meas																							
SN75 Cert																							
OREAS 203 Meas	865																						
OREAS 203 Cert	871																						
OREAS 203 Meas	903																						
OREAS 203 Cert	871																						
OREAS 203 Meas	902																						
OREAS 203 Cert	871																						
OREAS 203 Meas	894																						
OREAS 203 Cert	871																						
OREAS 203 Meas	914																						
OREAS 203 Cert	871																						
OREAS 224 Meas	2070																						
OREAS 224 Cert	2150.00																						
OREAS 224 Meas	2170																						
OREAS 224 Cert	2150.00																						
OREAS 224 Meas	2120																						
OREAS 224 Cert	2150.00																						
OREAS 224 Meas	2120																						
OREAS 224 Cert	2150.00																						
OREAS 224 Meas	2160																						
OREAS 224 Cert	2150.00																						
696465 Orig		< 0.2	0.7	45	4710	< 1	167	4	190	1.55	75	< 10	35	< 0.5	< 2	2.91	32	38	11.6	< 10	< 1	0.12	< 10
696465 Dup		< 0.2	< 0.5	42	4640	< 1	158	3	184	1.50	72	< 10	33	< 0.5	< 2	2.84	32	36	11.4	< 10	< 1	0.12	< 10
696472 Orig	164																						

Analyte Symbol	Au	Ag	Cd	Cu	Mn	Mo	Ni	Pb	Zn	Al	As	B	Ba	Be	Bi	Ca	Co	Cr	Fe	Ga	Hg	K	La
Unit Symbol	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm
Lower Limit	5	0.2	0.5	1	5	1	1	2	2	0.01	2	10	10	0.5	2	0.01	1	1	0.01	10	1	0.01	10
Method Code	FA-AA	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
696472 Dup	184																						
696473 Orig		< 0.2	< 0.5	2	4690	< 1	17	< 2	68	0.05	149	< 10	< 10	< 0.5	< 2	2.91	1	28	9.61	< 10	< 1	< 0.01	< 10
696473 Dup		< 0.2	< 0.5	2	4840	1	18	2	69	0.05	156	< 10	< 10	< 0.5	< 2	3.06	< 1	28	9.96	< 10	< 1	< 0.01	< 10
696482 Orig	205																						
696482 Dup	207																						
696492 Orig	2720																						
696492 Dup	2710																						
696507 Orig	1980																						
696507 Dup	2240																						
696512 Orig	< 5	< 0.2	< 0.5	< 1	117	< 1	< 1	< 2	17	4.54	2	13	13	0.6	< 2	0.19	< 1	2	0.61	10	< 1	1.47	< 10
696512 Split PREP DUP	< 5	< 0.2	< 0.5	< 1	114	< 1	< 1	< 2	18	4.44	< 2	12	12	0.6	< 2	0.19	< 1	2	0.62	10	< 1	1.45	< 10
696512 Split PREP DUP		< 0.2	< 0.5	< 1	114	< 1	< 1	< 2	18	4.44	< 2	12	12	0.6	< 2	0.19	< 1	2	0.62	10	< 1	1.45	< 10
696516 Orig	158																						
696516 Dup	162																						
696525 Orig		< 0.2	< 0.5	12	2160	< 1	20	6	41	0.17	6820	< 10	< 10	< 0.5	3	0.07	7	31	6.95	< 10	< 1	< 0.01	< 10
696525 Dup		< 0.2	< 0.5	8	2120	< 1	28	6	38	0.17	6730	< 10	< 10	< 0.5	2	0.07	7	36	6.86	< 10	< 1	< 0.01	< 10
696526 Orig	204																						
696526 Dup	194																						
696528 Orig		1.3	< 0.5	28	1430	< 1	71	30	39	0.29	> 10000	< 10	< 10	< 0.5	< 2	0.07	17	43	11.9	< 10	< 1	< 0.01	< 10
696528 Dup		1.1	< 0.5	29	1460	< 1	76	28	40	0.29	9840	< 10	< 10	< 0.5	< 2	0.07	17	42	12.2	< 10	< 1	< 0.01	< 10
696541 Orig	2900	1.9	< 0.5	62	1260	< 1	53	65	87	0.24	494	< 10	< 10	< 0.5	< 2	0.78	35	9	17.7	< 10	< 1	0.09	< 10
696541 Dup	2850	2.1	< 0.5	65	1320	< 1	56	68	91	0.24	504	< 10	< 10	< 0.5	< 2	0.80	33	14	18.6	< 10	1	0.09	< 10
696551 Orig	10																						
696551 Dup	15																						
696553 Orig		< 0.2	< 0.5	25	1510	< 1	93	< 2	56	0.87	68	< 10	34	< 0.5	2	3.70	25	37	7.01	< 10	< 1	0.09	< 10
696553 Dup		< 0.2	< 0.5	25	1500	< 1	89	< 2	55	0.86	65	< 10	32	< 0.5	< 2	3.60	24	37	6.94	< 10	< 1	0.09	< 10
696561 Orig	21																						
696561 Dup	22																						
696562 Orig	114	< 0.2	< 0.5	15	5720	1	106	5	175	0.31	171	< 10	15	< 0.5	< 2	0.23	17	41	12.7	< 10	< 1	0.01	< 10
696562 Split PREP DUP	116	< 0.2	< 0.5	16	6060	1	107	5	183	0.32	168	< 10	14	< 0.5	< 2	0.24	18	45	13.1	< 10	< 1	< 0.01	< 10
696566 Orig		< 0.2	< 0.5	4	6010	< 1	77	4	86	0.19	84	< 10	< 10	< 0.5	< 2	0.68	10	39	13.5	< 10	< 1	< 0.01	< 10
696566 Dup		< 0.2	< 0.5	4	6120	< 1	82	6	86	0.19	85	< 10	< 10	< 0.5	< 2	0.70	9	38	13.7	< 10	< 1	< 0.01	< 10
Method Blank	< 5																						
Method Blank	< 5																						
Method Blank	< 5																						
Method Blank	< 5																						
Method Blank	< 5																						
Method Blank	< 5																						
Method Blank	< 5																						
Method Blank	< 5																						

Analyte Symbol	Au	Ag	Cd	Cu	Mn	Mo	Ni	Pb	Zn	Al	As	B	Ba	Be	Bi	Ca	Co	Cr	Fe	Ga	Hg	K	La
Unit Symbol	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm
Lower Limit	5	0.2	0.5	1	5	1	1	2	2	0.01	2	10	10	0.5	2	0.01	1	1	0.01	10	1	0.01	10
Method Code	FA-AA	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
Method Blank																							
Method Blank	< 5																						
Method Blank	< 5																						
Method Blank		< 0.2	< 0.5	< 1	< 5	< 1	< 1	< 2	< 2	< 0.01	< 2	< 10	< 10	< 0.5	< 2	< 0.01	< 1	< 1	< 0.01	< 10	< 1	< 0.01	< 10
Method Blank		< 0.2	< 0.5	< 1	< 5	< 1	< 1	< 2	< 2	< 0.01	< 2	< 10	< 10	< 0.5	< 2	< 0.01	< 1	< 1	< 0.01	< 10	< 1	< 0.01	< 10
Method Blank		< 0.2	< 0.5	< 1	< 5	< 1	< 1	< 2	< 2	< 0.01	< 2	< 10	< 10	< 0.5	< 2	< 0.01	< 1	< 1	< 0.01	< 10	< 1	< 0.01	< 10
Method Blank		< 0.2	< 0.5	< 1	< 5	< 1	< 1	< 2	< 2	< 0.01	< 2	< 10	< 10	< 0.5	< 2	< 0.01	< 1	< 1	< 0.01	< 10	< 1	< 0.01	< 10

Analyte Symbol	Mg	Na	P	S	Sb	Sc	Sr	Ti	Th	Te	Tl	U	V	W	Y	Zr	Au
Unit Symbol	%	%	%	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	g/tonne
Lower Limit	0.01	0.001	0.001	0.01	2	1	1	0.01	20	1	2	10	1	10	1	1	0.03
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	FA- GRA
GXR-1 Meas	0.13	0.050	0.041	0.20	86	1	163	< 0.01	< 20	8	< 2	30	81	137	26	16	
GXR-1 Cert	0.217	0.0520	0.0650	0.257	122	1.58	275	0.036	2.44	13.0	0.390	34.9	80.0	164	32.0	38.0	
GXR-1 Meas	0.14	0.050	0.041	0.21	84	1	167	< 0.01	< 20	10	< 2	30	85	145	27	16	
GXR-1 Cert	0.217	0.0520	0.0650	0.257	122	1.58	275	0.036	2.44	13.0	0.390	34.9	80.0	164	32.0	38.0	
GXR-6 Meas	0.40	0.087	0.035	0.02	3	24	35		< 20	< 1	2	< 10	187	< 10	6	16	
GXR-6 Cert	0.609	0.104	0.0350	0.0160	3.60	27.6	35.0		5.30	0.0180	2.20	1.54	186	1.90	14.0	110	
OREAS 134b (AQUA REGIA) Meas				15.3													
OREAS 134b (AQUA REGIA) Cert				19.31													
OXN117 Meas																	7.77
OXN117 Cert																	7.679
SN75 Meas																	8.79
SN75 Cert																	8.67
OREAS 203 Meas																	
OREAS 203 Cert																	
OREAS 203 Meas																	
OREAS 203 Cert																	
OREAS 203 Meas																	
OREAS 203 Cert																	
OREAS 203 Meas																	
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OREAS 203 Meas																	
OREAS 203 Cert																	
OREAS 224 Meas																	
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OREAS 224 Meas																	
OREAS 224 Cert																	
OREAS 224 Meas																	
OREAS 224 Cert																	
OREAS 224 Meas																	
OREAS 224 Cert																	
OREAS 224 Meas																	
OREAS 224 Cert																	
696465 Orig	1.24	0.064	0.103	3.41	6	7	129	< 0.01	< 20	4	< 2	< 10	36	< 10	4	16	
696465 Dup	1.21	0.063	0.101	3.34	7	6	127	< 0.01	< 20	1	< 2	< 10	35	< 10	4	16	
696472 Orig																	
696472 Dup																	
696473 Orig	1.86	0.014	0.002	0.89	3	6	106	< 0.01	< 20	10	< 2	< 10	17	< 10	2	8	
696473 Dup	1.96	0.014	0.002	0.92	3	6	110	< 0.01	< 20	< 1	< 2	< 10	18	< 10	2	8	

Analyte Symbol	Mg	Na	P	S	Sb	Sc	Sr	Ti	Th	Te	Tl	U	V	W	Y	Zr	Au
Unit Symbol	%	%	%	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	g/tonne
Lower Limit	0.01	0.001	0.001	0.01	2	1	1	0.01	20	1	2	10	1	10	1	1	0.03
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	FA- GRA
696482 Orig																	
696482 Dup																	
696492 Orig																	
696492 Dup																	
696507 Orig																	
696507 Dup																	
696512 Orig	0.05	3.51	0.001	0.03	< 2	< 1	24	< 0.01	< 20	< 1	< 2	< 10	< 1	< 10	3	1	
696512 Split PREP DUP	0.05	3.46	0.001	0.04	< 2	< 1	23	< 0.01	< 20	< 1	< 2	< 10	< 1	< 10	3	< 1	
696512 Split PREP DUP	0.05	3.46	0.001	0.04	< 2	< 1	23	< 0.01	< 20	< 1	< 2	< 10	< 1	< 10	3	< 1	
696516 Orig																	
696516 Dup																	
696525 Orig	0.03	0.016	0.002	5.27	6	2	6	< 0.01	< 20	< 1	< 2	< 10	3	< 10	2	3	
696525 Dup	0.03	0.016	0.002	5.20	4	2	6	< 0.01	< 20	< 1	< 2	< 10	3	< 10	2	3	
696526 Orig																	
696526 Dup																	
696528 Orig	0.04	0.018	0.007	11.7	18	1	8	< 0.01	< 20	< 1	< 2	< 10	4	< 10	2	6	
696528 Dup	0.03	0.016	0.007	11.7	17	2	8	< 0.01	< 20	3	< 2	< 10	4	< 10	2	6	
696541 Orig	0.23	0.042	0.064	17.9	25	1	46	< 0.01	< 20	< 1	< 2	< 10	6	< 10	3	21	
696541 Dup	0.24	0.040	0.066	18.2	28	1	48	< 0.01	< 20	< 1	< 2	< 10	5	< 10	3	22	
696551 Orig																	
696551 Dup																	
696553 Orig	1.38	0.078	0.090	1.50	< 2	6	117	< 0.01	< 20	< 1	< 2	< 10	26	< 10	5	8	
696553 Dup	1.33	0.076	0.087	1.43	< 2	6	115	< 0.01	< 20	3	< 2	< 10	25	< 10	5	8	
696561 Orig																	
696561 Dup																	
696562 Orig	0.87	0.014	0.005	3.77	8	5	11	< 0.01	< 20	< 1	< 2	< 10	19	< 10	1	8	
696562 Split PREP DUP	0.92	0.013	0.005	3.58	9	5	11	< 0.01	< 20	< 1	< 2	< 10	20	< 10	1	8	
696566 Orig	1.04	0.018	0.003	3.16	7	5	25	< 0.01	< 20	5	< 2	< 10	17	< 10	2	8	
696566 Dup	1.08	0.014	0.004	3.20	9	6	26	< 0.01	< 20	< 1	< 2	< 10	17	< 10	2	8	
Method Blank																	
Method Blank																	
Method Blank																	
Method Blank																	
Method Blank																	
Method Blank																	
Method Blank																	< 0.03
Method Blank																	< 0.03
Method Blank																	



Analyte Symbol	Mg	Na	P	S	Sb	Sc	Sr	Ti	Th	Te	Tl	U	V	W	Y	Zr	Au
Unit Symbol	%	%	%	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	g/tonne
Lower Limit	0.01	0.001	0.001	0.01	2	1	1	0.01	20	1	2	10	1	10	1	1	0.03
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	FA- GRA
Method Blank																	
Method Blank	< 0.01	0.010	< 0.001	< 0.01	< 2	< 1	< 1	< 0.01	< 20	2	< 2	< 10	< 1	< 10	< 1	< 1	
Method Blank	< 0.01	0.013	< 0.001	< 0.01	< 2	< 1	< 1	< 0.01	< 20	< 1	< 2	< 10	< 1	< 10	< 1	< 1	
Method Blank	< 0.01	0.013	< 0.001	< 0.01	< 2	< 1	< 1	< 0.01	< 20	< 1	< 2	< 10	< 1	< 10	< 1	< 1	
Method Blank	< 0.01	0.012	< 0.001	< 0.01	< 2	< 1	< 1	< 0.01	< 20	< 1	< 2	< 10	< 1	< 10	< 1	< 1	



**Date Submitted:** 28-Mar-18  
**Invoice No.:** A18-03913  
**Invoice Date:** 25-Jun-18  
**Your Reference:** 81 Lucas

**Noble Mineral Exploration**  
**2500-120 Adelaide Street West**  
**Toronto ON M5H 1T1**  
**Canada**

**ATTN: Randy Singh (inv-cc)**

## CERTIFICATE OF ANALYSIS

105 Rock samples were submitted for analysis.

The following analytical package(s) were requested:

Code 1A2-Timmins Au - Fire Assay AA

Code 1E3-Timmins Aqua Regia ICP(AQUAGEO)

REPORT      **A18-03913**

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

Notes:

If value exceeds upper limit we recommend reassay by fire assay gravimetric-Code 1A3.

Values which exceed the upper limit should be assayed for accurate numbers.

CERTIFIED BY:

A handwritten signature in black ink, appearing to read "Emmanuel Esemé". The signature is written in a cursive style with a horizontal line underneath it.

Emmanuel Esemé , Ph.D.  
Quality Control

**ACTIVATION LABORATORIES LTD.**  
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Analyte Symbol	Au	Ag	Cd	Cu	Mn	Mo	Ni	Pb	Zn	Al	As	B	Ba	Be	Bi	Ca	Co	Cr	Fe	Ga	Hg	K	La
Unit Symbol	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm
Lower Limit	5	0.2	0.5	1	5	1	1	2	2	0.01	2	10	10	0.5	2	0.01	1	1	0.01	10	1	0.01	10
Method Code	FA-AA	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
696568	35	< 0.2	< 0.5	6	3510	2	95	3	99	0.06	161	< 10	< 10	< 0.5	< 2	1.23	12	35	9.35	< 10	< 1	< 0.01	< 10
696569	47	< 0.2	< 0.5	3	2630	2	64	5	124	0.03	182	< 10	< 10	< 0.5	< 2	2.03	7	33	6.87	< 10	< 1	< 0.01	< 10
696570	184	< 0.2	< 0.5	6	4560	< 1	165	5	118	0.05	275	< 10	10	< 0.5	< 2	1.39	19	25	13.1	< 10	< 1	< 0.01	< 10
696571	53	< 0.2	< 0.5	5	3650	2	67	3	97	0.03	143	< 10	10	< 0.5	< 2	1.42	6	41	8.83	< 10	< 1	< 0.01	< 10
696572	96	< 0.2	< 0.5	7	5570	< 1	119	3	87	0.06	149	< 10	< 10	< 0.5	< 2	1.87	13	18	12.7	< 10	< 1	< 0.01	< 10
696573	328	< 0.2	< 0.5	106	775	< 1	93	< 2	66	2.47	< 2	24	35	< 0.5	< 2	2.14	35	66	4.92	< 10	< 1	0.05	< 10
696574	172	< 0.2	< 0.5	124	5730	2	147	12	222	0.13	217	< 10	12	< 0.5	< 2	1.01	19	26	13.8	< 10	< 1	< 0.01	< 10
696575	129	< 0.2	< 0.5	23	9130	< 1	105	5	164	0.09	202	< 10	12	< 0.5	< 2	0.40	10	19	17.4	< 10	< 1	< 0.01	< 10
696576	202	< 0.2	< 0.5	18	4330	1	73	5	95	0.08	281	< 10	14	< 0.5	< 2	1.61	10	32	10.4	< 10	< 1	< 0.01	< 10
696577	2680	1.6	< 0.5	177	3500	< 1	109	72	248	0.37	386	< 10	< 10	< 0.5	3	0.90	52	6	21.4	< 10	1	0.05	< 10
696578	1470	0.7	< 0.5	43	4630	1	212	25	215	0.65	546	< 10	< 10	< 0.5	< 2	1.34	37	12	17.6	< 10	1	0.08	< 10
696579	735	0.6	< 0.5	45	6190	1	126	21	206	0.31	518	< 10	< 10	< 0.5	< 2	0.15	38	12	17.5	< 10	< 1	0.03	< 10
696580	1280	1.0	1.0	43	7580	< 1	200	19	167	0.60	1210	< 10	< 10	< 0.5	3	0.18	43	13	25.1	< 10	1	0.05	< 10
696581	1960	1.8	< 0.5	36	6530	< 1	243	20	169	0.79	866	< 10	< 10	< 0.5	2	0.24	54	11	27.7	< 10	2	0.06	< 10
696582	1460	1.4	< 0.5	28	5540	< 1	291	14	146	0.77	974	< 10	< 10	< 0.5	< 2	0.50	58	15	25.5	< 10	3	0.07	< 10
696583	946	0.8	< 0.5	49	3970	< 1	275	15	135	0.91	1260	< 10	< 10	< 0.5	< 2	1.24	48	10	18.6	< 10	< 1	0.07	< 10
696584	642	0.5	< 0.5	24	5610	< 1	172	8	146	0.83	1570	< 10	12	< 0.5	< 2	1.43	32	16	17.3	< 10	< 1	0.09	< 10
696585	625	0.4	< 0.5	25	5770	< 1	175	11	151	0.77	1710	< 10	12	< 0.5	< 2	1.46	34	12	18.1	< 10	1	0.06	< 10
696586	1740	1.1	< 0.5	32	5680	< 1	221	12	165	0.78	1530	< 10	< 10	< 0.5	< 2	1.08	45	13	23.7	< 10	1	0.04	< 10
696587	968	0.6	< 0.5	29	5610	< 1	249	11	135	1.24	772	< 10	< 10	< 0.5	< 2	1.15	39	19	21.3	< 10	2	0.08	< 10
696588	108	< 0.2	< 0.5	17	1280	< 1	220	4	67	0.82	305	< 10	63	< 0.5	3	2.49	35	15	4.18	< 10	< 1	0.17	19
696589	172	< 0.2	< 0.5	32	586	< 1	328	8	53	0.53	296	< 10	36	< 0.5	3	2.62	47	12	4.57	< 10	< 1	0.13	15
696590	93	< 0.2	< 0.5	26	639	1	272	7	58	0.60	247	< 10	50	< 0.5	4	3.44	42	15	3.73	< 10	< 1	0.14	14
696591	122	< 0.2	< 0.5	15	769	1	263	7	55	0.51	227	< 10	44	< 0.5	2	3.34	39	18	4.08	< 10	< 1	0.12	11
696592	65	< 0.2	< 0.5	20	524	< 1	239	3	38	0.64	265	< 10	61	< 0.5	< 2	2.95	35	14	2.84	< 10	< 1	0.15	20
696593	66	< 0.2	< 0.5	21	767	< 1	235	3	47	0.59	229	< 10	50	< 0.5	< 2	3.09	35	14	3.00	< 10	< 1	0.12	19
696594	5	< 0.2	< 0.5	1	146	< 1	< 1	< 2	18	4.77	< 2	12	11	0.6	< 2	0.20	< 1	4	0.87	10	< 1	1.52	< 10
696595	56	< 0.2	< 0.5	19	724	< 1	195	5	32	0.53	202	< 10	51	< 0.5	< 2	3.43	31	14	2.71	< 10	< 1	0.12	20
696596	126	< 0.2	< 0.5	41	949	< 1	301	8	59	0.62	242	< 10	25	< 0.5	5	3.16	50	13	5.84	< 10	< 1	0.13	< 10
696597	47	< 0.2	< 0.5	26	1340	< 1	231	6	43	0.73	149	< 10	44	< 0.5	< 2	2.88	44	17	4.63	< 10	< 1	0.12	14
696598	57	< 0.2	< 0.5	34	2360	< 1	251	5	62	1.27	148	< 10	25	< 0.5	< 2	3.03	42	23	8.79	< 10	< 1	0.11	< 10
696599	50	< 0.2	< 0.5	35	979	< 1	244	5	46	0.72	216	< 10	41	< 0.5	4	2.82	44	14	4.45	< 10	< 1	0.12	12
696600	36	< 0.2	< 0.5	28	1710	< 1	173	3	58	0.70	153	< 10	49	< 0.5	< 2	4.08	34	14	5.51	< 10	< 1	0.13	11
696601	163	0.2	< 0.5	16	4340	< 1	229	11	145	0.44	229	< 10	22	< 0.5	< 2	2.55	49	11	14.1	< 10	< 1	0.08	< 10
696602	327	< 0.2	< 0.5	102	760	< 1	90	< 2	64	2.36	< 2	22	34	< 0.5	< 2	2.06	34	63	4.80	< 10	< 1	0.04	< 10
696603	314	0.3	< 0.5	25	1890	< 1	188	14	51	0.52	235	< 10	11	< 0.5	< 2	2.27	36	11	11.9	< 10	< 1	0.12	< 10
696604	32	< 0.2	< 0.5	27	1290	< 1	99	4	38	0.51	102	< 10	36	< 0.5	< 2	2.79	24	3	4.23	< 10	< 1	0.10	< 10
696605	116	< 0.2	< 0.5	14	668	1	67	4	41	0.85	108	< 10	51	< 0.5	2	0.88	23	8	3.63	< 10	< 1	0.17	< 10
696606	852	< 0.2	< 0.5	19	479	< 1	60	5	30	0.41	265	< 10	17	< 0.5	< 2	1.67	30	5	7.22	< 10	< 1	0.12	< 10
696607	296	0.2	< 0.5	13	702	< 1	49	4	33	0.50	151	< 10	20	< 0.5	< 2	2.29	21	5	7.36	< 10	< 1	0.13	< 10
696608	234	< 0.2	< 0.5	21	2920	< 1	58	5	49	0.91	144	< 10	23	< 0.5	< 2	2.54	26	4	10.9	< 10	< 1	0.09	< 10
696609	779	< 0.2	< 0.5	21	4440	< 1	93	6	82	1.80	330	< 10	11	< 0.5	< 2	0.28	32	7	14.6	< 10	< 1	0.09	< 10

## Results

## Activation Laboratories Ltd.

## Report: A18-03913

Analyte Symbol	Au	Ag	Cd	Cu	Mn	Mo	Ni	Pb	Zn	Al	As	B	Ba	Be	Bi	Ca	Co	Cr	Fe	Ga	Hg	K	La
Unit Symbol	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm
Lower Limit	5	0.2	0.5	1	5	1	1	2	2	0.01	2	10	10	0.5	2	0.01	1	1	0.01	10	1	0.01	10
Method Code	FA-AA	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
696610	2900	0.8	< 0.5	19	3300	< 1	119	10	74	0.48	2770	< 10	< 10	< 0.5	< 2	0.09	31	10	22.8	< 10	< 1	0.02	< 10
696611	2810	0.8	< 0.5	18	3320	< 1	115	12	73	0.47	2740	< 10	< 10	< 0.5	< 2	0.08	32	12	23.1	< 10	< 1	0.02	< 10
696612	1730	0.6	< 0.5	23	7840	< 1	134	8	79	0.18	690	< 10	< 10	< 0.5	9	0.14	36	5	29.7	< 10	1	< 0.01	< 10
696613	2160	0.8	< 0.5	28	4470	< 1	122	23	73	0.20	986	< 10	< 10	< 0.5	3	0.12	30	12	25.0	< 10	< 1	< 0.01	< 10
696614	811	< 0.2	< 0.5	19	1980	1	50	9	37	0.29	375	< 10	< 10	< 0.5	< 2	0.06	13	32	10.4	< 10	< 1	< 0.01	< 10
696615	1400	0.5	< 0.5	44	4710	1	68	12	58	0.21	2450	< 10	< 10	< 0.5	< 2	0.08	20	25	18.2	< 10	< 1	0.02	< 10
696616	1470	0.7	0.7	33	9570	< 1	82	17	67	0.31	1180	< 10	< 10	< 0.5	4	0.17	18	5	> 30.0	< 10	2	0.01	< 10
696617	75	< 0.2	< 0.5	6	3360	2	9	< 2	38	0.10	203	< 10	14	< 0.5	< 2	0.19	5	30	6.95	< 10	< 1	< 0.01	< 10
696618	1160	0.8	< 0.5	46	4300	< 1	32	11	55	0.19	494	< 10	< 10	< 0.5	< 2	0.10	21	14	23.1	< 10	< 1	0.02	< 10
696619	< 5	< 0.2	< 0.5	< 1	139	< 1	< 1	< 2	18	4.83	< 2	13	11	0.6	< 2	0.19	< 1	1	0.78	10	< 1	1.54	< 10
696620	1500	0.8	< 0.5	43	370	1	34	18	54	0.12	349	< 10	< 10	< 0.5	< 2	0.03	21	32	14.4	< 10	< 1	0.03	< 10
696621	3240	0.8	< 0.5	43	421	< 1	30	19	57	0.27	479	< 10	< 10	< 0.5	< 2	0.07	28	7	17.2	< 10	1	0.06	< 10
696622	1620	0.9	0.6	17	112	< 1	28	10	28	0.17	479	< 10	< 10	< 0.5	< 2	0.02	32	13	16.8	< 10	1	0.06	< 10
696623	> 5000	1.3	< 0.5	40	60	< 1	22	23	52	0.29	413	< 10	< 10	< 0.5	< 2	0.07	28	9	17.1	< 10	< 1	0.07	< 10
696624	> 5000	1.3	< 0.5	47	82	< 1	22	25	62	0.27	447	< 10	< 10	< 0.5	< 2	0.03	25	14	17.3	< 10	2	0.07	< 10
696625	1800	0.3	< 0.5	171	860	< 1	93	5	71	3.72	11	17	33	< 0.5	< 2	3.26	39	144	5.52	10	< 1	0.09	< 10
696626	> 5000	1.5	< 0.5	50	59	< 1	13	30	41	0.20	442	< 10	< 10	< 0.5	< 2	0.03	21	8	17.3	< 10	1	0.06	< 10
696627	> 5000	1.3	< 0.5	47	78	< 1	17	38	43	0.18	444	< 10	< 10	< 0.5	< 2	0.02	21	10	17.4	< 10	2	0.06	< 10
696628	1380	0.7	< 0.5	30	195	2	60	21	110	0.37	1530	< 10	< 10	< 0.5	< 2	0.04	20	33	10.6	< 10	< 1	0.03	< 10
696629	389	< 0.2	< 0.5	9	78	5	18	8	97	0.22	147	< 10	20	< 0.5	< 2	0.06	9	38	3.53	< 10	< 1	0.05	< 10
696630	67	< 0.2	< 0.5	25	1220	3	140	4	63	0.31	390	< 10	20	< 0.5	< 2	1.26	28	31	6.23	< 10	< 1	0.05	< 10
696631	333	< 0.2	< 0.5	106	770	< 1	91	< 2	65	2.35	< 2	23	33	< 0.5	< 2	2.05	34	64	4.92	< 10	< 1	0.04	< 10
696632	158	< 0.2	< 0.5	12	3500	< 1	88	< 2	59	0.46	4030	< 10	29	< 0.5	3	5.94	21	21	8.50	< 10	< 1	0.08	< 10
696633	12	< 0.2	< 0.5	21	2140	< 1	50	< 2	55	0.61	406	< 10	41	< 0.5	< 2	3.59	18	24	5.75	< 10	< 1	0.13	11
696634	26	< 0.2	< 0.5	16	2110	< 1	84	< 2	37	0.43	655	< 10	36	< 0.5	< 2	6.25	21	17	4.99	< 10	< 1	0.10	11
696635	< 5	< 0.2	< 0.5	38	743	< 1	104	< 2	108	0.63	260	< 10	56	< 0.5	< 2	3.10	29	19	2.59	< 10	< 1	0.15	21
696636	< 5	< 0.2	< 0.5	32	530	< 1	84	3	25	0.44	177	< 10	42	< 0.5	< 2	2.37	22	16	1.89	< 10	< 1	0.11	21
696637	10	< 0.2	< 0.5	38	1160	< 1	113	< 2	29	0.57	230	< 10	51	< 0.5	< 2	3.69	28	19	3.61	< 10	< 1	0.14	20
696638	< 5	< 0.2	< 0.5	19	1120	< 1	144	< 2	24	0.54	278	< 10	48	< 0.5	< 2	3.89	38	16	3.63	< 10	< 1	0.13	19
696639	< 5	< 0.2	< 0.5	3	4260	< 1	86	2	59	0.53	156	< 10	39	< 0.5	< 2	6.29	25	18	11.2	< 10	< 1	0.11	< 10
696640	< 5	< 0.2	< 0.5	3	139	< 1	2	< 2	19	4.60	9	11	11	0.6	< 2	0.24	< 1	3	0.79	10	< 1	1.45	< 10
696641	< 5	< 0.2	< 0.5	10	2480	< 1	85	< 2	75	0.59	184	< 10	46	< 0.5	2	4.68	30	16	6.94	< 10	< 1	0.13	14
696642	< 5	< 0.2	< 0.5	6	2680	< 1	96	3	44	0.47	274	< 10	39	< 0.5	2	5.11	27	14	6.93	< 10	< 1	0.11	13
696643	8	< 0.2	< 0.5	28	2120	< 1	67	< 2	45	0.59	405	< 10	44	< 0.5	< 2	4.16	23	18	7.06	< 10	< 1	0.13	12
696644	45	< 0.2	< 0.5	50	1520	< 1	87	2	81	0.53	1810	< 10	47	< 0.5	3	3.25	24	17	4.58	< 10	< 1	0.13	11
696645	12	< 0.2	< 0.5	21	2150	< 1	51	< 2	132	0.72	423	< 10	56	< 0.5	< 2	3.41	18	18	7.18	< 10	< 1	0.16	18
696646	6	< 0.2	< 0.5	33	2230	< 1	57	< 2	47	0.49	111	< 10	35	< 0.5	< 2	4.15	18	18	5.52	< 10	< 1	0.10	14
696647	< 5	< 0.2	< 0.5	29	1520	< 1	36	< 2	25	0.61	66	< 10	44	< 0.5	< 2	2.76	16	23	4.56	< 10	< 1	0.12	12
696648	< 5	< 0.2	< 0.5	25	2910	< 1	52	< 2	38	0.57	71	< 10	42	< 0.5	< 2	4.41	20	20	7.70	< 10	< 1	0.12	13
696649	< 5	< 0.2	< 0.5	30	2900	< 1	78	< 2	107	0.68	70	< 10	45	< 0.5	< 2	4.70	25	22	7.39	< 10	< 1	0.13	15
696650	< 5	< 0.2	< 0.5	30	2930	< 1	77	< 2	110	0.60	70	< 10	40	< 0.5	< 2	4.77	25	20	7.44	< 10	< 1	0.11	14
696651	< 5	< 0.2	< 0.5	34	2080	< 1	38	< 2	41	0.67	29	< 10	48	< 0.5	< 2	3.53	17	17	5.72	< 10	< 1	0.13	19

Analyte Symbol	Au	Ag	Cd	Cu	Mn	Mo	Ni	Pb	Zn	Al	As	B	Ba	Be	Bi	Ca	Co	Cr	Fe	Ga	Hg	K	La
Unit Symbol	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm
Lower Limit	5	0.2	0.5	1	5	1	1	2	2	0.01	2	10	10	0.5	2	0.01	1	1	0.01	10	1	0.01	10
Method Code	FA-AA	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
696652	10	< 0.2	< 0.5	34	1740	< 1	49	2	130	0.68	27	< 10	39	< 0.5	< 2	3.51	21	20	5.49	< 10	< 1	0.10	17
696653	5	< 0.2	< 0.5	30	1980	< 1	49	< 2	170	0.73	22	< 10	44	< 0.5	< 2	4.21	20	20	5.27	< 10	< 1	0.12	16
696654	7	< 0.2	< 0.5	29	2820	< 1	61	< 2	47	0.90	18	< 10	42	< 0.5	< 2	4.16	22	31	7.14	< 10	< 1	0.10	17
696655	< 5	< 0.2	< 0.5	31	3300	< 1	79	< 2	95	2.27	18	< 10	40	< 0.5	< 2	3.77	25	71	9.26	< 10	< 1	0.11	14
696656	< 5	< 0.2	< 0.5	38	2270	2	64	2	82	2.33	21	< 10	37	< 0.5	< 2	2.55	25	76	7.81	< 10	< 1	0.10	19
696657	< 5	< 0.2	< 0.5	39	1780	< 1	75	3	54	1.39	21	< 10	52	< 0.5	< 2	4.06	24	48	5.16	< 10	< 1	0.14	21
696658	< 5	< 0.2	< 0.5	45	717	< 1	137	< 2	29	0.53	46	< 10	62	< 0.5	< 2	3.08	36	13	2.47	< 10	< 1	0.17	28
696659	< 5	< 0.2	< 0.5	44	665	< 1	179	2	30	0.59	62	< 10	65	< 0.5	< 2	3.66	44	15	2.38	< 10	< 1	0.18	23
696660	332	< 0.2	< 0.5	112	813	< 1	98	< 2	69	2.53	< 2	25	39	< 0.5	< 2	2.16	36	68	5.26	< 10	< 1	0.05	< 10
696661	< 5	< 0.2	< 0.5	40	1080	< 1	140	< 2	51	0.66	41	< 10	45	< 0.5	< 2	5.09	31	20	3.58	< 10	< 1	0.13	19
696662	15	< 0.2	< 0.5	36	1460	< 1	191	< 2	90	1.68	28	< 10	44	< 0.5	5	4.61	39	53	6.65	< 10	< 1	0.13	20
696663	< 5	< 0.2	< 0.5	44	995	< 1	191	3	63	1.10	59	< 10	51	< 0.5	2	3.72	44	32	4.45	< 10	< 1	0.14	21
696664	< 5	< 0.2	< 0.5	50	942	< 1	152	< 2	35	0.69	109	< 10	69	< 0.5	< 2	3.50	36	18	2.96	< 10	< 1	0.20	23
696665	7	< 0.2	< 0.5	36	994	< 1	142	< 2	56	0.52	135	< 10	47	< 0.5	< 2	4.10	30	19	3.45	< 10	< 1	0.14	18
696666	< 5	< 0.2	< 0.5	34	800	< 1	158	2	44	0.67	217	< 10	65	< 0.5	< 2	3.25	38	22	2.68	< 10	< 1	0.18	24
696667	< 5	< 0.2	< 0.5	58	1410	< 1	148	3	28	0.64	173	< 10	62	< 0.5	< 2	2.83	35	19	3.45	< 10	< 1	0.18	22
696668	< 5	< 0.2	< 0.5	38	1810	< 1	149	3	26	0.53	182	< 10	47	< 0.5	2	3.63	42	14	4.31	< 10	< 1	0.14	19
696669	< 5	< 0.2	< 0.5	39	1800	< 1	121	< 2	87	1.26	63	< 10	42	< 0.5	4	3.74	32	46	5.05	< 10	< 1	0.13	12
696670	< 5	< 0.2	< 0.5	< 1	102	< 1	< 1	< 2	17	4.29	< 2	12	11	0.6	< 2	0.19	< 1	1	0.57	10	< 1	1.43	< 10
696671	< 5	< 0.2	< 0.5	26	530	< 1	126	2	33	0.83	45	< 10	64	< 0.5	< 2	2.29	27	16	3.34	< 10	< 1	0.25	24
696672	< 5	< 0.2	< 0.5	27	848	< 1	196	7	35	0.61	80	< 10	42	< 0.5	< 2	3.27	40	12	5.08	< 10	< 1	0.15	15

## Results

## Activation Laboratories Ltd.

Report: A18-03913

Analyte Symbol	Mg	Na	P	S	Sb	Sc	Sr	Ti	Th	Te	Tl	U	V	W	Y	Zr	Au	Au + 100 mesh	Au - 100 mesh (A)	Au - 100 mesh (B)	Total Au	+ 100 mesh	- 100 mesh
Unit Symbol	%	%	%	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	g/tonne	g/mt	g/mt	g/mt	g/mt	g	g
Lower Limit	0.01	0.001	0.001	0.01	2	1	1	0.01	20	1	2	10	1	10	1	1	0.03	0.03	0.03	0.03	0.03		
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	FA- GRA	FA-MeT	FA-MeT	FA-MeT	FA-MeT	FA-MeT	FA-MeT
696568	0.99	0.015	0.002	2.08	5	6	40	< 0.01	< 20	< 1	< 2	< 10	22	< 10	2	7							
696569	1.11	0.014	0.001	1.89	2	6	59	< 0.01	< 20	< 1	< 2	< 10	19	< 10	2	8							
696570	1.24	0.014	0.003	5.76	11	6	32	< 0.01	< 20	3	< 2	< 10	22	< 10	3	12							
696571	1.12	0.014	0.002	2.05	4	5	45	< 0.01	< 20	< 1	< 2	< 10	17	< 10	2	7							
696572	1.36	0.014	0.002	3.56	8	4	63	< 0.01	< 20	< 1	< 2	< 10	19	< 10	3	9							
696573	2.35	0.195	0.084	0.09	< 2	6	55	0.33	< 20	< 1	< 2	< 10	124	< 10	14	14							
696574	1.11	0.016	0.004	3.91	9	4	30	< 0.01	< 20	< 1	< 2	< 10	16	< 10	3	9							
696575	1.38	0.014	0.005	3.37	9	6	15	< 0.01	< 20	< 1	< 2	< 10	25	< 10	2	8							
696576	0.94	0.015	0.002	4.08	6	4	55	< 0.01	< 20	< 1	< 2	< 10	10	< 10	2	8							
696577	0.62	0.027	0.018	17.6	26	2	43	< 0.01	< 20	< 1	< 2	< 10	11	< 10	2	16							
696578	0.86	0.035	0.029	12.7	17	4	95	< 0.01	< 20	< 1	< 2	< 10	16	< 10	4	20							
696579	0.48	0.028	0.014	11.0	16	6	10	< 0.01	< 20	< 1	< 2	< 10	20	< 10	3	16							
696580	1.18	0.039	0.030	13.5	24	8	16	< 0.01	< 20	< 1	< 2	< 10	37	< 10	4	21							
696581	0.88	0.044	0.044	16.4	34	8	19	< 0.01	< 20	< 1	< 2	< 10	33	< 10	4	26							
696582	0.90	0.044	0.039	17.5	32	6	31	< 0.01	< 20	< 1	< 2	< 10	29	< 10	3	21							
696583	0.98	0.050	0.050	13.0	21	5	74	< 0.01	< 20	< 1	< 2	< 10	24	< 10	3	22							
696584	1.17	0.058	0.047	9.17	16	6	86	< 0.01	< 20	3	< 2	< 10	27	< 10	4	21							
696585	1.21	0.045	0.047	9.67	15	6	85	< 0.01	< 20	4	< 2	< 10	24	< 10	4	21							
696586	1.17	0.037	0.016	15.3	28	8	62	< 0.01	< 20	< 1	< 2	< 10	47	< 10	3	20							
696587	1.28	0.069	0.098	11.1	19	8	75	< 0.01	< 20	5	< 2	< 10	35	< 10	4	25							
696588	0.83	0.126	0.171	1.98	5	4	110	< 0.01	< 20	< 1	< 2	< 10	17	< 10	6	4							
696589	0.79	0.103	0.154	3.48	12	3	113	< 0.01	< 20	< 1	< 2	< 10	12	< 10	5	12							
696590	1.14	0.119	0.146	2.32	9	3	131	< 0.01	< 20	1	< 2	< 10	16	< 10	5	6							
696591	1.05	0.095	0.179	2.51	12	3	140	< 0.01	< 20	1	< 2	< 10	12	539	5	7							
696592	0.95	0.123	0.161	1.38	5	3	130	< 0.01	< 20	< 1	< 2	< 10	15	< 10	5	2							
696593	0.98	0.105	0.166	1.16	3	3	130	< 0.01	< 20	3	2	< 10	13	< 10	6	2							
696594	0.05	3.57	0.001	< 0.01	< 2	< 1	24	< 0.01	< 20	< 1	< 2	< 10	< 1	< 10	4	< 1							
696595	1.13	0.110	0.158	1.08	4	3	124	< 0.01	< 20	< 1	< 2	< 10	16	< 10	6	3							
696596	0.91	0.117	0.137	4.38	12	3	126	< 0.01	< 20	< 1	< 2	< 10	16	< 10	5	15							
696597	0.81	0.092	0.143	2.52	7	3	116	< 0.01	< 20	< 1	< 2	< 10	16	< 10	5	10							
696598	1.02	0.096	0.122	4.52	5	4	130	< 0.01	< 20	5	< 2	< 10	26	< 10	4	19							
696599	0.88	0.084	0.154	2.55	7	3	118	< 0.01	< 20	4	< 2	< 10	15	< 10	5	4							
696600	1.28	0.097	0.132	1.83	6	4	170	< 0.01	< 20	< 1	< 2	< 10	15	< 10	5	6							
696601	0.95	0.052	0.084	4.86	15	8	99	< 0.01	< 20	< 1	< 2	< 10	21	< 10	6	21							
696602	2.25	0.187	0.081	0.09	< 2	5	54	0.31	< 20	3	< 2	< 10	121	< 10	13	15							
696603	1.00	0.093	0.070	10.0	16	3	94	< 0.01	< 20	3	< 2	< 10	13	< 10	4	20							
696604	0.81	0.087	0.097	1.13	3	3	113	< 0.01	< 20	< 1	< 2	< 10	8	< 10	4	9							
696605	0.21	0.127	0.112	2.30	4	2	75	< 0.01	< 20	< 1	< 2	< 10	12	< 10	4	13							
696606	0.53	0.069	0.087	6.80	12	1	86	< 0.01	< 20	< 1	< 2	< 10	5	< 10	4	16							

## Results

## Activation Laboratories Ltd.

Report: A18-03913

Analyte Symbol	Mg	Na	P	S	Sb	Sc	Sr	Ti	Th	Te	Tl	U	V	W	Y	Zr	Au	Au + 100 mesh	Au - 100 mesh (A)	Au - 100 mesh (B)	Total Au	+ 100 mesh	- 100 mesh
Unit Symbol	%	%	%	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	g/tonne	g/mt	g/mt	g/mt	g/mt	g	g
Lower Limit	0.01	0.001	0.001	0.01	2	1	1	0.01	20	1	2	10	1	10	1	1	0.03	0.03	0.03	0.03	0.03		
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	FA-GRA	FA-MeT	FA-MeT	FA-MeT	FA-MeT	FA-MeT	FA-MeT
696607	0.72	0.092	0.095	6.36	11	2	110	< 0.01	< 20	5	< 2	< 10	8	< 10	4	18							
696608	0.81	0.087	0.080	5.85	8	3	104	< 0.01	< 20	2	< 2	< 10	14	< 10	4	18							
696609	0.33	0.083	0.090	8.10	13	4	56	< 0.01	< 20	< 1	< 2	< 10	29	< 10	4	19							
696610	0.54	0.023	0.021	17.3	37	5	16	< 0.01	< 20	1	2	< 10	24	< 10	1	13							
696611	0.53	0.024	0.020	17.6	36	5	15	< 0.01	< 20	3	< 2	< 10	23	< 10	1	13							
696612	1.08	0.016	0.006	17.4	48	4	6	< 0.01	< 20	< 1	< 2	< 10	18	< 10	2	13							
696613	0.56	0.017	0.003	18.3	41	4	5	< 0.01	< 20	< 1	< 2	< 10	18	< 10	2	12							
696614	0.17	0.015	0.017	8.04	15	3	8	< 0.01	< 20	< 1	< 2	< 10	9	< 10	1	5							
696615	0.55	0.017	0.006	12.7	24	2	6	< 0.01	< 20	< 1	< 2	< 10	8	< 10	1	10							
696616	1.22	0.017	0.009	16.9	32	3	10	< 0.01	< 20	< 1	< 2	< 10	15	< 10	2	15							
696617	0.40	0.021	0.008	2.02	4	2	12	< 0.01	< 20	< 1	< 2	< 10	4	< 10	< 1	4							
696618	0.50	0.019	0.011	18.1	39	3	10	< 0.01	< 20	< 1	< 2	< 10	10	< 10	< 1	11							
696619	0.06	3.56	< 0.001	0.08	< 2	< 1	24	< 0.01	< 20	< 1	4	< 10	< 1	< 10	4	1							
696620	0.01	0.025	0.006	15.7	31	< 1	6	< 0.01	< 20	1	3	< 10	4	< 10	< 1	8							
696621	0.05	0.031	0.014	19.4	44	< 1	10	< 0.01	< 20	< 1	3	< 10	5	< 10	2	19	3.25						
696622	< 0.01	0.026	0.005	18.6	49	< 1	7	< 0.01	< 20	< 1	4	< 10	3	< 10	1	18							
696623	0.02	0.031	0.014	19.7	38	< 1	10	< 0.01	< 20	< 1	3	< 10	3	< 10	1	18	5.23						
696624	0.01	0.029	0.005	19.3	51	< 1	8	< 0.01	< 20	1	< 2	< 10	5	< 10	< 1	16	7.59						
696625	2.56	0.067	0.039	0.30	< 2	8	44	0.37	< 20	< 1	< 2	< 10	176	< 10	12	18							
696626	0.01	0.025	0.006	18.9	47	< 1	7	< 0.01	< 20	< 1	3	< 10	4	< 10	< 1	17	10.1	10.5	10.3	10.1	10.2	20.09	475.60
696627	0.01	0.023	0.005	19.0	45	< 1	9	< 0.01	< 20	< 1	< 2	< 10	4	< 10	< 1	16	8.50						
696628	0.02	0.021	0.021	10.8	18	1	21	< 0.01	< 20	< 1	< 2	< 10	7	< 10	< 1	8							
696629	0.01	0.025	0.018	3.25	6	< 1	13	< 0.01	< 20	4	< 2	< 10	3	< 10	< 1	7							
696630	0.40	0.039	0.024	4.79	< 2	2	65	< 0.01	< 20	< 1	< 2	< 10	5	< 10	2	10							
696631	2.27	0.183	0.082	0.09	< 2	5	52	0.30	< 20	9	< 2	< 10	122	< 10	14	15							
696632	2.14	0.075	0.078	0.72	< 2	9	184	< 0.01	< 20	< 1	< 2	< 10	20	< 10	5	10							
696633	1.17	0.100	0.119	0.29	< 2	6	124	< 0.01	< 20	< 1	< 2	< 10	18	< 10	6	4							
696634	1.83	0.075	0.111	0.11	< 2	7	183	< 0.01	< 20	< 1	< 2	< 10	18	< 10	6	4							
696635	0.70	0.117	0.155	0.17	< 2	4	96	< 0.01	< 20	5	< 2	< 10	18	< 10	5	2							
696636	0.50	0.085	0.159	0.07	< 2	3	74	< 0.01	< 20	9	< 2	< 10	9	< 10	5	2							
696637	1.02	0.118	0.144	0.07	< 2	7	112	< 0.01	< 20	4	< 2	< 10	23	< 10	6	2							
696638	0.91	0.103	0.210	0.20	< 2	6	130	< 0.01	< 20	< 1	< 2	< 10	15	< 10	8	2							
696639	2.25	0.116	0.123	0.35	4	10	193	< 0.01	< 20	4	< 2	< 10	20	< 10	9	6							
696640	0.07	3.46	0.003	0.03	< 2	< 1	25	< 0.01	< 20	< 1	< 2	< 10	< 1	< 10	3	< 1							
696641	1.32	0.135	0.181	0.27	2	8	144	< 0.01	< 20	< 1	< 2	< 10	17	< 10	9	4							
696642	1.56	0.105	0.153	0.26	< 2	8	151	< 0.01	< 20	6	< 2	< 10	16	< 10	9	4							
696643	1.14	0.153	0.241	0.67	< 2	7	139	< 0.01	< 20	< 1	< 2	< 10	17	< 10	8	3							
696644	0.86	0.157	0.171	1.05	< 2	5	118	< 0.01	< 20	< 1	< 2	< 10	15	< 10	7	3							
696645	1.14	0.172	0.180	0.34	< 2	7	123	< 0.01	< 20	2	< 2	< 10	19	< 10	8	4							

Analyte Symbol	Mg	Na	P	S	Sb	Sc	Sr	Ti	Th	Te	Tl	U	V	W	Y	Zr	Au	Au + 100 mesh	Au - 100 mesh (A)	Au - 100 mesh (B)	Total Au	+ 100 mesh	- 100 mesh
Unit Symbol	%	%	%	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	g/tonne	g/mt	g/mt	g/mt	g/mt	g	g
Lower Limit	0.01	0.001	0.001	0.01	2	1	1	0.01	20	1	2	10	1	10	1	1	0.03	0.03	0.03	0.03	0.03		
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	FA- GRA	FA-MeT	FA-MeT	FA-MeT	FA-MeT	FA-MeT	FA-MeT
696646	1.47	0.098	0.118	0.04	< 2	7	124	< 0.01	< 20	< 1	< 2	< 10	20	< 10	5	4							
696647	0.81	0.110	0.119	0.13	< 2	5	90	< 0.01	< 20	< 1	< 2	< 10	20	< 10	5	5							
696648	1.59	0.097	0.118	0.04	< 2	8	123	< 0.01	< 20	< 1	< 2	< 10	23	< 10	5	6							
696649	1.66	0.115	0.116	0.05	< 2	9	138	< 0.01	< 20	< 1	< 2	< 10	25	< 10	5	5							
696650	1.69	0.099	0.118	0.05	< 2	9	136	< 0.01	< 20	< 1	< 2	< 10	24	< 10	5	6							
696651	1.10	0.111	0.131	0.03	< 2	6	109	< 0.01	< 20	< 1	< 2	< 10	18	< 10	5	5							
696652	1.09	0.100	0.130	0.07	< 2	6	101	< 0.01	< 20	< 1	< 2	< 10	20	< 10	4	5							
696653	1.03	0.120	0.122	0.04	< 2	6	107	< 0.01	< 20	4	< 2	< 10	20	< 10	5	5							
696654	1.30	0.106	0.130	0.06	2	8	117	< 0.01	< 20	6	< 2	< 10	28	< 10	5	5							
696655	1.64	0.072	0.109	0.06	4	11	114	< 0.01	< 20	< 1	< 2	< 10	66	< 10	5	7							
696656	1.12	0.070	0.141	0.07	3	7	85	< 0.01	< 20	< 1	< 2	< 10	59	< 10	5	5							
696657	1.19	0.102	0.141	0.05	< 2	5	125	< 0.01	< 20	< 1	< 2	< 10	37	< 10	5	4							
696658	0.49	0.106	0.174	0.08	< 2	3	91	< 0.01	< 20	< 1	< 2	< 10	13	< 10	5	3							
696659	0.48	0.121	0.164	0.10	< 2	3	108	< 0.01	< 20	3	< 2	< 10	13	< 10	5	4							
696660	2.44	0.201	0.089	0.09	< 2	6	55	0.33	< 20	4	< 2	< 10	126	< 10	15	18							
696661	1.04	0.091	0.142	0.07	< 2	4	153	< 0.01	< 20	< 1	< 2	< 10	17	< 10	6	5							
696662	1.54	0.105	0.135	0.11	< 2	10	127	< 0.01	< 20	< 1	< 2	< 10	50	< 10	5	5							
696663	0.96	0.106	0.156	0.16	< 2	8	113	< 0.01	< 20	10	< 2	< 10	32	< 10	5	4							
696664	0.76	0.148	0.175	0.11	< 2	3	124	< 0.01	< 20	< 1	< 2	< 10	15	< 10	6	3							
696665	0.84	0.103	0.134	0.04	< 2	5	121	< 0.01	< 20	< 1	< 2	< 10	17	< 10	5	4							
696666	0.60	0.132	0.160	0.03	< 2	4	110	< 0.01	< 20	< 1	< 2	< 10	18	< 10	5	2							
696667	0.57	0.143	0.157	0.04	< 2	3	101	< 0.01	< 20	< 1	< 2	< 10	15	< 10	5	3							
696668	0.77	0.109	0.149	0.05	< 2	4	116	< 0.01	< 20	1	< 2	< 10	13	< 10	5	4							
696669	1.01	0.111	0.131	0.09	3	8	114	< 0.01	< 20	3	< 2	< 10	37	< 10	5	4							
696670	0.05	3.47	0.002	< 0.01	< 2	< 1	23	< 0.01	< 20	< 1	< 2	< 10	< 1	< 10	3	< 1							
696671	0.65	0.146	0.158	1.94	< 2	2	105	0.01	< 20	6	< 2	< 10	17	< 10	5	10							
696672	0.86	0.121	0.161	3.54	4	2	123	< 0.01	< 20	< 1	< 2	< 10	14	< 10	5	14							



Analyte Symbol	Total Weight
Unit Symbol	g
Lower Limit	
Method Code	FA-MeT
696568	
696569	
696570	
696571	
696572	
696573	
696574	
696575	
696576	
696577	
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696596	
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696598	
696599	
696600	
696601	
696602	
696603	
696604	
696605	
696606	
696607	
696608	

Analyte Symbol	Total Weight
Unit Symbol	g
Lower Limit	
Method Code	FA-MeT
696609	
696610	
696611	
696612	
696613	
696614	
696615	
696616	
696617	
696618	
696619	
696620	
696621	
696622	
696623	
696624	
696625	
696626	495.60
696627	
696628	
696629	
696630	
696631	
696632	
696633	
696634	
696635	
696636	
696637	
696638	
696639	
696640	
696641	
696642	
696643	
696644	
696645	
696646	
696647	
696648	
696649	
696650	

Analyte Symbol	Total Weight
Unit Symbol	g
Lower Limit	
Method Code	FA-MeT
696651	
696652	
696653	
696654	
696655	
696656	
696657	
696658	
696659	
696660	
696661	
696662	
696663	
696664	
696665	
696666	
696667	
696668	
696669	
696670	
696671	
696672	

Analyte Symbol	Au	Ag	Cd	Cu	Mn	Mo	Ni	Pb	Zn	Al	As	B	Ba	Be	Bi	Ca	Co	Cr	Fe	Ga	Hg	K	La
Unit Symbol	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm
Lower Limit	5	0.2	0.5	1	5	1	1	2	2	0.01	2	10	10	0.5	2	0.01	1	1	0.01	10	1	0.01	10
Method Code	FA-AA	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
GXR-1 Meas		29.5	2.5	1180	896	14	27	705	760	0.29	374	11	283	0.9	1390	0.73	6	7	21.6	< 10	5	0.03	< 10
GXR-1 Cert		31.0	3.30	1110	852	18.0	41.0	730	760	3.52	427	15.0	750	1.22	1380	0.960	8.20	12.0	23.6	13.8	3.90	0.050	7.50
GXR-1 Meas		30.6	2.2	1180	922	15	30	727	756	0.31	384	11	239	0.9	1470	0.75	5	7	21.9	< 10	4	0.03	< 10
GXR-1 Cert		31.0	3.30	1110	852	18.0	41.0	730	760	3.52	427	15.0	750	1.22	1380	0.960	8.20	12.0	23.6	13.8	3.90	0.050	7.50
GXR-6 Meas		< 0.2	< 0.5	66	1100	1	17	103	125	6.51	240	< 10	1190	1.0	< 2	0.15	14	88	4.96	20	< 1	1.08	12
GXR-6 Cert		1.30	1.00	66.0	1010	2.40	27.0	101	118	17.7	330	9.80	1300	1.40	0.290	0.180	13.8	96.0	5.58	35.0	0.0680	1.87	13.9
OREAS 134b (AQUA REGIA) Meas		> 100	595	1380				> 5000	> 10000		228						119		11.2				
OREAS 134b (AQUA REGIA) Cert		204	563	1360				133000	177000		221						106		12.25				
OXN117 Meas																							
OXN117 Cert																							
SN75 Meas																							
SN75 Cert																							
OREAS 203 Meas	893																						
OREAS 203 Cert	871																						
OREAS 203 Meas	853																						
OREAS 203 Cert	871																						
OREAS 203 Meas	874																						
OREAS 203 Cert	871																						
OREAS 203 Meas	871																						
OREAS 203 Cert	871																						
OREAS 224 Meas	2170																						
OREAS 224 Cert	2150.00																						
OREAS 224 Meas	2130																						
OREAS 224 Cert	2150.00																						
OREAS 224 Meas	2160																						
OREAS 224 Cert	2150.00																						
OREAS 224 Meas	2120																						
OREAS 224 Cert	2150.00																						
696577 Orig	2610																						
696577 Dup	2750																						
696587 Orig	948																						
696587 Dup	987																						
696597 Orig	45	< 0.2	< 0.5	26	1340	< 1	226	5	43	0.72	146	< 10	43	< 0.5	< 2	2.83	44	16	4.60	< 10	< 1	0.12	14
696597 Dup	48	< 0.2	< 0.5	27	1340	1	237	8	43	0.74	152	< 10	45	< 0.5	< 2	2.92	45	17	4.66	< 10	< 1	0.13	14
696598 Orig		< 0.2	< 0.5	35	2410	< 1	257	3	62	1.29	152	< 10	24	< 0.5	< 2	3.06	43	24	9.00	< 10	< 1	0.11	< 10
696598 Dup		< 0.2	< 0.5	33	2300	< 1	245	7	61	1.26	144	< 10	25	< 0.5	< 2	3.00	41	23	8.59	< 10	< 1	0.11	< 10

Analyte Symbol	Au	Ag	Cd	Cu	Mn	Mo	Ni	Pb	Zn	Al	As	B	Ba	Be	Bi	Ca	Co	Cr	Fe	Ga	Hg	K	La
Unit Symbol	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm
Lower Limit	5	0.2	0.5	1	5	1	1	2	2	0.01	2	10	10	0.5	2	0.01	1	1	0.01	10	1	0.01	10
Method Code	FA-AA	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
696612 Orig	1710																						
696612 Dup	1750																						
696617 Orig	75	< 0.2	< 0.5	6	3360	2	9	< 2	38	0.10	203	< 10	14	< 0.5	< 2	0.19	5	30	6.95	< 10	< 1	< 0.01	< 10
696617 Split PREP DUP	70	< 0.2	< 0.5	8	3520	3	12	3	40	0.11	202	< 10	12	< 0.5	< 2	0.19	5	41	7.46	< 10	< 1	0.01	< 10
696621 Orig	3250																						
696621 Dup	3240																						
696632 Orig	154																						
696632 Dup	162																						
696638 Orig		< 0.2	< 0.5	19	1120	< 1	145	< 2	24	0.55	278	< 10	48	< 0.5	< 2	3.86	38	16	3.65	< 10	< 1	0.13	19
696638 Dup		< 0.2	< 0.5	18	1120	< 1	143	< 2	23	0.54	277	< 10	48	< 0.5	3	3.92	38	16	3.61	< 10	< 1	0.13	19
696643 Orig		< 0.2	< 0.5	27	2080	< 1	66	3	46	0.59	404	< 10	44	< 0.5	< 2	4.17	23	18	6.92	< 10	< 1	0.13	12
696643 Dup		< 0.2	< 0.5	29	2150	< 1	69	< 2	45	0.59	407	< 10	45	< 0.5	4	4.16	24	18	7.19	< 10	< 1	0.13	12
696646 Orig	5																						
696646 Dup	6																						
696647 Orig		< 0.2	< 0.5	30	1520	< 1	36	< 2	26	0.58	64	< 10	41	< 0.5	< 2	2.69	16	22	4.54	< 10	< 1	0.12	11
696647 Dup		< 0.2	< 0.5	29	1530	< 1	37	< 2	24	0.64	67	< 10	46	< 0.5	5	2.83	17	23	4.57	< 10	< 1	0.13	12
696655 Orig		< 0.2	< 0.5	31	3270	< 1	77	< 2	94	2.25	18	< 10	40	< 0.5	< 2	3.77	26	71	9.11	< 10	< 1	0.11	14
696655 Dup		< 0.2	< 0.5	32	3340	< 1	80	< 2	97	2.28	18	< 10	41	< 0.5	< 2	3.78	25	71	9.42	< 10	< 1	0.11	14
696656 Orig	< 5																						
696656 Dup	< 5																						
696666 Orig	< 5																						
696666 Dup	< 5																						
696667 Orig	< 5	< 0.2	< 0.5	58	1410	< 1	148	3	28	0.64	173	< 10	62	< 0.5	< 2	2.83	35	19	3.45	< 10	< 1	0.18	22
696667 Split PREP DUP	< 5	< 0.2	< 0.5	56	1430	< 1	147	< 2	30	0.51	179	< 10	50	< 0.5	< 2	2.88	37	14	3.46	< 10	< 1	0.14	22
Method Blank	< 5																						
Method Blank	< 5																						
Method Blank	< 5																						
Method Blank	< 5																						
Method Blank	< 5																						
Method Blank	< 5																						
Method Blank	< 5																						
Method Blank	< 5																						
Method Blank		< 0.2	< 0.5	< 1	< 5	< 1	< 1	< 2	< 2	< 0.01	< 2	< 10	< 10	< 0.5	< 2	< 0.01	< 1	< 1	< 0.01	< 10	< 1	< 0.01	< 10
Method Blank		< 0.2	< 0.5	< 1	< 5	< 1	< 1	< 2	< 2	< 0.01	< 2	< 10	< 10	< 0.5	< 2	< 0.01	< 1	< 1	< 0.01	< 10	< 1	< 0.01	< 10
Method Blank		< 0.2	< 0.5	< 1	< 5	< 1	< 1	< 2	< 2	< 0.01	< 2	< 10	< 10	< 0.5	< 2	< 0.01	< 1	< 1	< 0.01	< 10	< 1	< 0.01	< 10
Method Blank		< 0.2	< 0.5	< 1	< 5	< 1	< 1	< 2	< 2	< 0.01	< 2	< 10	< 10	< 0.5	< 2	< 0.01	< 1	< 1	< 0.01	< 10	< 1	< 0.01	< 10
Method Blank																							
Method Blank																							
Method Blank																							
Method Blank																							

Analyte Symbol	Mg	Na	P	S	Sb	Sc	Sr	Ti	Th	Te	Tl	U	V	W	Y	Zr	Au	Total Au	Total Weight
Unit Symbol	%	%	%	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	g/tonne	g/mt	g
Lower Limit	0.01	0.001	0.001	0.01	2	1	1	0.01	20	1	2	10	1	10	1	1	0.03	0.03	
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	FA- GRA	FA-MeT	FA-MeT
GXR-1 Meas	0.13	0.050	0.041	0.20	86	1	163	< 0.01	< 20	8	< 2	30	81	137	26	16			
GXR-1 Cert	0.217	0.0520	0.0650	0.257	122	1.58	275	0.036	2.44	13.0	0.390	34.9	80.0	164	32.0	38.0			
GXR-1 Meas	0.14	0.050	0.041	0.21	84	1	167	< 0.01	< 20	10	< 2	30	85	145	27	16			
GXR-1 Cert	0.217	0.0520	0.0650	0.257	122	1.58	275	0.036	2.44	13.0	0.390	34.9	80.0	164	32.0	38.0			
GXR-6 Meas	0.40	0.087	0.035	0.02	3	24	35		< 20	< 1	2	< 10	187	< 10	6	16			
GXR-6 Cert	0.609	0.104	0.0350	0.0160	3.60	27.6	35.0		5.30	0.0180	2.20	1.54	186	1.90	14.0	110			
OREAS 134b (AQUA REGIA) Meas				15.3															
OREAS 134b (AQUA REGIA) Cert				19.31															
OXN117 Meas																	7.60	7.81	
OXN117 Cert																	7.679	7.679	
SN75 Meas																	8.80		
SN75 Cert																	8.67		
OREAS 203 Meas																			
OREAS 203 Cert																			
OREAS 203 Meas																			
OREAS 203 Cert																			
OREAS 203 Meas																			
OREAS 203 Cert																			
OREAS 203 Meas																			
OREAS 203 Cert																			
OREAS 224 Meas																			
OREAS 224 Cert																			
OREAS 224 Meas																			
OREAS 224 Cert																			
OREAS 224 Meas																			
OREAS 224 Cert																			
696577 Orig																			
696577 Dup																			
696587 Orig																			
696587 Dup																			
696597 Orig	0.79	0.092	0.141	2.49	8	3	115	< 0.01	< 20	< 1	< 2	< 10	16	< 10	5	10			
696597 Dup	0.82	0.093	0.145	2.55	6	3	116	< 0.01	< 20	< 1	< 2	< 10	16	< 10	5	10			
696598 Orig	1.05	0.096	0.125	4.64	5	4	132	< 0.01	< 20	3	< 2	< 10	26	< 10	4	19			
696598 Dup	1.00	0.096	0.120	4.40	5	4	128	< 0.01	< 20	6	< 2	< 10	25	< 10	4	19			
696612 Orig																			
696612 Dup																			

Analyte Symbol	Mg	Na	P	S	Sb	Sc	Sr	Ti	Th	Te	Tl	U	V	W	Y	Zr	Au	Total Au	Total Weight
Unit Symbol	%	%	%	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	g/tonne	g/mt	g
Lower Limit	0.01	0.001	0.001	0.01	2	1	1	0.01	20	1	2	10	1	10	1	1	0.03	0.03	
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	FA- GRA	FA-MeT	FA-MeT
696617 Orig	0.40	0.021	0.008	2.02	4	2	12	< 0.01	< 20	< 1	< 2	< 10	4	< 10	< 1	4			
696617 Split PREP DUP	0.40	0.017	0.008	2.03	4	2	13	< 0.01	< 20	< 1	< 2	< 10	4	< 10	< 1	4			
696621 Orig																			
696621 Dup																			
696632 Orig																			
696632 Dup																			
696638 Orig	0.90	0.103	0.208	0.19	< 2	6	129	< 0.01	< 20	< 1	< 2	< 10	15	< 10	8	2			
696638 Dup	0.92	0.102	0.212	0.20	< 2	6	131	< 0.01	< 20	< 1	< 2	< 10	15	< 10	8	2			
696643 Orig	1.14	0.153	0.243	0.66	< 2	7	139	< 0.01	< 20	< 1	< 2	< 10	17	< 10	8	3			
696643 Dup	1.13	0.153	0.240	0.68	< 2	7	139	< 0.01	< 20	< 1	< 2	< 10	17	< 10	9	3			
696646 Orig																			
696646 Dup																			
696647 Orig	0.79	0.104	0.116	0.12	< 2	5	87	< 0.01	< 20	< 1	< 2	< 10	19	< 10	5	4			
696647 Dup	0.84	0.115	0.122	0.13	< 2	6	92	< 0.01	< 20	< 1	< 2	< 10	21	< 10	5	6			
696655 Orig	1.63	0.071	0.108	0.06	2	11	115	< 0.01	< 20	< 1	< 2	< 10	66	< 10	5	7			
696655 Dup	1.65	0.073	0.110	0.06	5	11	114	< 0.01	< 20	< 1	< 2	< 10	66	< 10	5	7			
696656 Orig																			
696656 Dup																			
696666 Orig																			
696666 Dup																			
696667 Orig	0.57	0.143	0.157	0.04	< 2	3	101	< 0.01	< 20	< 1	< 2	< 10	15	< 10	5	3			
696667 Split PREP DUP	0.59	0.110	0.158	0.04	< 2	3	96	< 0.01	< 20	< 1	< 2	< 10	12	< 10	5	4			
Method Blank																			
Method Blank																			
Method Blank																			
Method Blank																			
Method Blank																			
Method Blank																			
Method Blank																			
Method Blank	< 0.01	0.010	< 0.001	< 0.01	< 2	< 1	< 1	< 0.01	< 20	2	< 2	< 10	< 1	< 10	< 1	< 1			
Method Blank	< 0.01	0.013	< 0.001	< 0.01	< 2	< 1	< 1	< 0.01	< 20	< 1	< 2	< 10	< 1	< 10	< 1	< 1			
Method Blank	< 0.01	0.013	< 0.001	< 0.01	< 2	< 1	< 1	< 0.01	< 20	< 1	< 2	< 10	< 1	< 10	< 1	< 1			
Method Blank	< 0.01	0.012	< 0.001	< 0.01	< 2	< 1	< 1	< 0.01	< 20	< 1	< 2	< 10	< 1	< 10	< 1	< 1			
Method Blank																	< 0.03		
Method Blank																	< 0.03		
Method Blank																	< 0.03	0.00000	
Method Blank																	< 0.03	0.00000	



**Date Submitted:** 28-Mar-18  
**Invoice No.:** A18-03915  
**Invoice Date:** 14-Jun-18  
**Your Reference:** 81 Lucas

**Noble Mineral Exploration**  
**2500-120 Adelaide Street West**  
**Toronto ON M5H 1T1**  
**Canada**

**ATTN: Randy Singh (inv-cc)**

## CERTIFICATE OF ANALYSIS

105 Rock samples were submitted for analysis.

The following analytical package(s) were requested:

Code 1A2-Timmins Au - Fire Assay AA

Code 1E3-Timmins Aqua Regia ICP(AQUAGEO)

REPORT      **A18-03915**

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

Notes:

If value exceeds upper limit we recommend reassay by fire assay gravimetric-Code 1A3.

Values which exceed the upper limit should be assayed for accurate numbers.

Footnote: Sample 696432 is INS for AR.

CERTIFIED BY:

A handwritten signature in black ink, appearing to read "Emmanuel Esemé". The signature is stylized and somewhat cursive.

Emmanuel Esemé , Ph.D.  
Quality Control

**ACTIVATION LABORATORIES LTD.**  
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E-MAIL Timmins@actlabs.com ACTLABS GROUP WEBSITE www.actlabs.com



## Results

## Activation Laboratories Ltd.

## Report: A18-03915

Analyte Symbol	Au	Ag	Cd	Cu	Mn	Mo	Ni	Pb	Zn	Al	As	B	Ba	Be	Bi	Ca	Co	Cr	Fe	Ga	Hg	K	La
Unit Symbol	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm
Lower Limit	5	0.2	0.5	1	5	1	1	2	2	0.01	2	10	10	0.5	2	0.01	1	1	0.01	10	1	0.01	10
Method Code	FA-AA	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
696358	12	2.1	< 0.5	42	428	< 1	322	21	212	0.48	189	< 10	< 10	< 0.5	< 2	0.59	54	9	18.9	< 10	< 1	0.09	< 10
696359	< 5	1.2	< 0.5	96	1440	1	93	2	83	0.88	39	< 10	26	< 0.5	3	2.88	30	5	7.36	< 10	< 1	0.13	< 10
696360	< 5	1.1	< 0.5	37	1480	< 1	72	< 2	55	1.29	12	< 10	30	< 0.5	< 2	2.81	18	6	6.83	< 10	< 1	0.12	< 10
696361	< 5	1.0	< 0.5	58	1280	< 1	67	< 2	44	0.94	12	< 10	31	< 0.5	< 2	2.65	23	5	6.27	< 10	< 1	0.13	< 10
696362	< 5	1.0	< 0.5	34	1070	< 1	86	2	43	0.89	23	< 10	34	< 0.5	2	2.27	28	4	5.29	< 10	< 1	0.14	< 10
696363	< 5	1.0	< 0.5	12	1620	< 1	51	2	70	0.86	12	< 10	42	< 0.5	< 2	1.75	15	5	4.42	< 10	< 1	0.16	11
696364	< 5	1.1	< 0.5	1	119	< 1	< 1	< 2	18	4.26	< 2	13	11	0.6	< 2	0.18	< 1	2	0.73	10	< 1	1.44	< 10
696365	10	2.2	< 0.5	60	1180	< 1	112	30	153	0.62	176	< 10	< 10	< 0.5	< 2	0.13	46	8	20.4	< 10	< 1	0.05	< 10
696366	5	2.0	0.8	56	497	< 1	129	37	237	0.46	177	< 10	< 10	< 0.5	< 2	0.05	57	16	19.6	< 10	< 1	0.04	< 10
696367	< 5	1.1	< 0.5	28	1990	< 1	52	3	81	1.07	12	< 10	40	< 0.5	< 2	1.64	22	4	7.42	< 10	< 1	0.18	< 10
696368	1790	1.4	< 0.5	164	762	< 1	86	7	63	3.43	9	16	31	< 0.5	< 2	3.07	35	133	5.45	10	< 1	0.09	< 10
696369	< 5	1.0	< 0.5	24	1410	< 1	42	< 2	37	1.16	4	< 10	40	< 0.5	3	2.58	16	4	4.97	< 10	< 1	0.15	< 10
696370	< 5	1.0	< 0.5	35	2680	< 1	48	< 2	39	1.49	2	< 10	46	< 0.5	< 2	3.50	17	5	6.80	< 10	< 1	0.18	< 10
696371	< 5	1.1	< 0.5	27	1330	6	65	4	39	1.07	27	< 10	41	< 0.5	< 2	2.38	27	4	5.36	< 10	< 1	0.16	< 10
696372	< 5	1.1	< 0.5	30	1630	< 1	79	< 2	33	1.20	19	< 10	34	< 0.5	2	2.78	25	3	7.42	< 10	< 1	0.15	< 10
696373	< 5	1.1	< 0.5	30	1850	< 1	96	< 2	40	1.46	20	< 10	33	< 0.5	< 2	3.18	26	4	8.88	< 10	< 1	0.14	< 10
696374	< 5	1.1	< 0.5	20	2620	< 1	56	< 2	28	0.87	8	< 10	36	< 0.5	< 2	3.80	21	4	7.30	< 10	< 1	0.13	< 10
696375	< 5	1.0	< 0.5	12	2620	< 1	50	3	31	0.99	6	< 10	39	< 0.5	2	4.04	11	3	7.14	< 10	< 1	0.14	< 10
696376	13	1.2	< 0.5	22	4150	< 1	121	7	46	1.39	77	< 10	17	< 0.5	< 2	3.01	25	4	16.5	< 10	< 1	0.08	< 10
696377	13	1.1	0.6	22	4400	< 1	81	8	30	0.92	71	< 10	20	< 0.5	< 2	3.41	23	4	14.5	< 10	< 1	0.10	< 10
696378	46	1.5	< 0.5	48	4150	< 1	150	10	24	0.65	225	< 10	11	< 0.5	< 2	2.67	43	3	20.8	< 10	< 1	0.08	< 10
696379	62	1.5	< 0.5	43	3360	< 1	147	14	28	0.83	215	< 10	12	< 0.5	< 2	3.12	37	6	18.1	< 10	< 1	0.08	< 10
696380	60	1.5	< 0.5	43	3440	< 1	150	14	28	0.82	222	< 10	12	< 0.5	< 2	2.27	38	6	18.2	< 10	< 1	0.08	< 10
696381	161	2.2	< 0.5	64	2050	< 1	227	19	48	0.72	325	< 10	< 10	< 0.5	< 2	2.14	54	7	19.2	< 10	< 1	0.08	< 10
696382	< 5	1.1	< 0.5	45	818	< 1	55	< 2	30	1.21	23	< 10	38	< 0.5	< 2	2.24	17	49	3.71	< 10	< 1	0.13	< 10
696383	< 5	1.0	< 0.5	39	1240	< 1	78	< 2	44	1.51	26	< 10	37	< 0.5	< 2	3.50	26	53	5.10	< 10	< 1	0.14	< 10
696384	< 5	1.1	< 0.5	12	790	< 1	22	< 2	59	0.58	16	< 10	26	< 0.5	< 2	2.00	9	47	2.37	< 10	< 1	0.08	< 10
696385	< 5	1.0	< 0.5	40	1530	< 1	72	< 2	80	1.50	32	< 10	38	< 0.5	< 2	3.10	34	52	5.56	< 10	< 1	0.13	< 10
696386	< 5	1.2	< 0.5	2	114	< 1	< 1	< 2	18	4.09	< 2	12	10	0.6	< 2	0.18	< 1	2	0.70	< 10	< 1	1.40	< 10
696387	< 5	1.1	< 0.5	38	1500	< 1	91	< 2	69	1.68	32	< 10	36	< 0.5	3	3.03	39	54	5.96	< 10	< 1	0.13	< 10
696388	< 5	0.9	< 0.5	33	1410	< 1	68	< 2	67	1.60	14	< 10	32	< 0.5	2	3.26	27	50	5.77	< 10	< 1	0.11	< 10
696389	< 5	1.0	< 0.5	31	1620	< 1	67	< 2	62	1.45	14	< 10	34	< 0.5	< 2	3.63	27	47	5.73	< 10	< 1	0.12	< 10
696390	< 5	0.9	< 0.5	30	1710	< 1	64	< 2	65	1.52	9	< 10	38	< 0.5	< 2	3.67	23	58	5.91	< 10	< 1	0.12	< 10
696391	< 5	1.1	< 0.5	35	1190	2	108	< 2	53	1.89	21	< 10	40	< 0.5	< 2	3.10	30	77	5.97	< 10	< 1	0.13	< 10
696392	< 5	1.0	< 0.5	41	827	< 1	114	< 2	83	1.73	< 2	< 10	50	< 0.5	3	2.08	27	122	4.50	< 10	< 1	0.15	21
696393	< 5	1.0	< 0.5	41	817	< 1	70	< 2	71	1.53	< 2	< 10	55	< 0.5	< 2	1.92	17	112	3.99	< 10	< 1	0.16	20
696394	< 5	1.0	< 0.5	45	738	< 1	91	< 2	70	1.74	< 2	< 10	54	< 0.5	3	2.26	22	120	4.45	< 10	< 1	0.16	18
696395	< 5	1.0	< 0.5	38	839	< 1	56	< 2	91	2.09	< 2	< 10	49	< 0.5	< 2	2.01	20	134	5.75	< 10	< 1	0.14	19
696396	327	1.1	< 0.5	112	737	< 1	89	< 2	67	2.33	< 2	22	34	< 0.5	< 2	2.03	35	63	5.27	< 10	< 1	0.05	< 10
696397	5	0.9	< 0.5	43	634	3	100	< 2	58	1.64	< 2	< 10	61	< 0.5	4	1.91	25	102	3.93	< 10	< 1	0.20	16
696398	5	1.0	< 0.5	40	815	1	98	< 2	70	1.70	< 2	< 10	51	< 0.5	3	2.22	24	125	4.65	< 10	< 1	0.16	19
696399	24	1.1	0.6	20	5420	< 1	204	3	64	1.61	102	< 10	32	< 0.5	< 2	2.36	31	13	14.3	< 10	< 1	0.08	< 10

## Results

## Activation Laboratories Ltd.

## Report: A18-03915

Analyte Symbol	Au	Ag	Cd	Cu	Mn	Mo	Ni	Pb	Zn	Al	As	B	Ba	Be	Bi	Ca	Co	Cr	Fe	Ga	Hg	K	La
Unit Symbol	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm
Lower Limit	5	0.2	0.5	1	5	1	1	2	2	0.01	2	10	10	0.5	2	0.01	1	1	0.01	10	1	0.01	10
Method Code	FA-AA	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
696400	14	1.1	< 0.5	14	5500	< 1	118	3	40	1.12	72	< 10	43	< 0.5	< 2	2.06	14	9	12.1	< 10	< 1	0.12	< 10
696401	8	1.1	< 0.5	13	5870	< 1	115	3	40	1.23	43	< 10	40	< 0.5	< 2	2.29	13	8	12.4	< 10	< 1	0.10	< 10
696402	23	1.3	< 0.5	24	3640	< 1	246	9	50	1.21	131	< 10	17	< 0.5	< 2	1.50	35	10	13.4	< 10	< 1	0.10	< 10
696403	330	1.1	< 0.5	105	749	< 1	89	< 2	63	2.30	< 2	22	34	< 0.5	< 2	2.01	34	63	5.26	< 10	< 1	0.05	< 10
696404	19	1.1	< 0.5	17	4620	< 1	155	4	46	1.08	93	< 10	30	< 0.5	< 2	2.41	22	7	11.5	< 10	< 1	0.10	< 10
696405	28	1.2	< 0.5	36	4650	< 1	223	6	58	1.22	104	< 10	26	< 0.5	< 2	1.82	16	9	13.1	< 10	< 1	0.11	< 10
696406	103	1.4	< 0.5	23	3050	< 1	325	13	46	1.02	312	< 10	16	< 0.5	< 2	1.27	40	8	13.5	< 10	< 1	0.10	< 10
696407	28	1.1	< 0.5	13	5280	< 1	138	< 2	47	1.08	87	< 10	36	< 0.5	< 2	1.77	19	7	12.0	< 10	< 1	0.10	< 10
696408	135	1.5	< 0.5	29	2450	< 1	391	14	46	1.01	379	< 10	11	< 0.5	< 2	1.03	47	10	14.5	< 10	< 1	0.11	< 10
696409	51	1.3	0.5	24	5370	< 1	181	4	64	1.37	194	< 10	20	< 0.5	< 2	2.12	27	10	15.4	< 10	< 1	0.09	< 10
696410	25	1.2	< 0.5	21	5270	< 1	119	< 2	66	1.39	95	< 10	29	< 0.5	< 2	2.06	18	12	12.3	< 10	< 1	0.07	< 10
696411	26	1.0	< 0.5	21	5950	< 1	87	3	77	1.32	98	< 10	20	< 0.5	< 2	2.22	15	11	12.5	< 10	< 1	0.04	< 10
696412	21	1.0	1.1	21	6040	< 1	92	< 2	78	1.35	98	< 10	20	< 0.5	< 2	2.26	16	9	12.7	< 10	< 1	0.04	< 10
696413	67	1.2	< 0.5	21	4550	1	183	6	61	1.37	250	< 10	24	< 0.5	< 2	2.02	26	10	12.3	< 10	< 1	0.08	< 10
696414	164	1.4	< 0.5	24	5090	< 1	107	11	68	1.10	344	< 10	24	< 0.5	< 2	2.02	24	6	13.5	< 10	< 1	0.08	< 10
696415	52	1.2	< 0.5	12	3750	< 1	60	5	67	1.09	58	< 10	29	< 0.5	< 2	2.60	19	4	11.7	< 10	< 1	0.13	< 10
696416	118	1.2	< 0.5	23	1970	< 1	44	6	47	1.00	74	< 10	40	< 0.5	< 2	2.28	14	7	8.02	< 10	< 1	0.16	< 10
696417	20	1.0	< 0.5	17	1100	< 1	27	< 2	35	0.54	31	< 10	62	< 0.5	< 2	1.86	11	8	3.11	< 10	< 1	0.15	11
696418	10	1.0	< 0.5	12	962	< 1	24	< 2	30	0.64	31	< 10	65	< 0.5	< 2	1.67	7	4	3.08	< 10	< 1	0.17	< 10
696419	10	1.0	< 0.5	11	1360	< 1	23	< 2	31	0.65	34	< 10	63	< 0.5	< 2	1.95	8	5	3.47	< 10	< 1	0.16	< 10
696420	22	1.1	< 0.5	9	621	3	31	3	49	0.46	52	< 10	60	< 0.5	< 2	1.19	12	13	1.80	< 10	< 1	0.15	10
696421	6	0.9	< 0.5	7	4760	< 1	60	3	105	0.99	23	< 10	27	< 0.5	< 2	2.93	9	4	13.1	< 10	< 1	0.06	< 10
696422	12	0.5	< 0.5	23	5500	< 1	98	6	85	0.79	82	< 10	42	< 0.5	< 2	2.36	23	11	14.2	< 10	< 1	0.10	< 10
696423	< 5	0.5	< 0.5	2	121	< 1	< 1	< 2	16	3.55	< 2	10	< 10	< 0.5	< 2	0.17	< 1	1	0.64	< 10	< 1	1.25	< 10
696424	6	0.5	< 0.5	4	7890	< 1	42	< 2	58	1.05	31	< 10	34	< 0.5	< 2	2.83	15	8	17.4	< 10	< 1	0.07	< 10
696425	5	0.8	< 0.5	3	9160	< 1	85	5	100	0.79	163	< 10	23	< 0.5	3	2.43	24	14	25.7	< 10	< 1	0.04	< 10
696426	6	1.2	< 0.5	7	10000	< 1	194	11	83	0.31	327	< 10	< 10	< 0.5	< 2	1.56	49	8	> 30.0	< 10	< 1	< 0.01	< 10
696427	122	0.7	< 0.5	6	7770	< 1	129	10	76	0.19	189	< 10	< 10	< 0.5	< 2	0.50	37	14	22.8	< 10	< 1	< 0.01	< 10
696428	112	0.6	< 0.5	6	9420	< 1	159	5	176	0.61	180	< 10	10	< 0.5	< 2	0.30	31	18	26.7	< 10	< 1	< 0.01	< 10
696429	115	0.7	< 0.5	14	8740	< 1	249	3	196	1.43	71	< 10	10	< 0.5	7	0.49	25	30	28.3	< 10	< 1	0.01	< 10
696430	149	0.7	< 0.5	13	7960	< 1	227	6	140	0.66	129	< 10	13	< 0.5	< 2	0.79	33	15	26.4	< 10	< 1	0.02	< 10
696431	197	0.8	< 0.5	11	8550	< 1	169	7	81	0.32	142	< 10	< 10	< 0.5	< 2	1.42	29	13	26.0	< 10	< 1	< 0.01	< 10
696432	1770																						
696433	185	0.7	< 0.5	12	8140	< 1	232	7	96	0.54	235	< 10	< 10	< 0.5	< 2	0.71	49	11	29.5	< 10	< 1	< 0.01	< 10
696434	71	0.7	< 0.5	4	9100	< 1	126	3	84	0.76	89	< 10	< 10	< 0.5	< 2	1.70	26	19	25.0	< 10	< 1	< 0.01	< 10
696435	44	0.6	0.6	7	8010	< 1	123	5	92	0.64	109	< 10	10	< 0.5	< 2	1.30	21	25	22.8	< 10	< 1	0.01	< 10
696436	11	0.7	< 0.5	4	10600	< 1	112	6	126	1.25	98	< 10	13	0.5	4	0.71	16	16	27.6	< 10	< 1	0.02	< 10
696437	5	0.6	< 0.5	6	8640	< 1	99	3	144	1.70	37	< 10	19	< 0.5	< 2	2.46	19	13	23.3	< 10	< 1	0.03	< 10
696438	< 5	0.5	< 0.5	< 1	9440	< 1	59	3	129	1.96	20	< 10	17	0.5	< 2	1.93	11	10	24.3	< 10	< 1	0.02	< 10
696439	13	0.5	< 0.5	7	7880	< 1	93	3	110	0.60	87	< 10	14	< 0.5	< 2	1.16	18	20	19.1	< 10	< 1	0.02	< 10
696440	24	0.5	0.6	9	3620	< 1	144	10	47	0.32	171	< 10	< 10	< 0.5	< 2	0.50	26	31	15.6	< 10	< 1	< 0.01	< 10
696441	24	0.5	0.5	9	3570	< 1	143	9	47	0.31	183	< 10	< 10	< 0.5	< 2	0.49	28	24	15.7	< 10	< 1	< 0.01	< 10

Analyte Symbol	Au	Ag	Cd	Cu	Mn	Mo	Ni	Pb	Zn	Al	As	B	Ba	Be	Bi	Ca	Co	Cr	Fe	Ga	Hg	K	La
Unit Symbol	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm
Lower Limit	5	0.2	0.5	1	5	1	1	2	2	0.01	2	10	10	0.5	2	0.01	1	1	0.01	10	1	0.01	10
Method Code	FA-AA	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
696442	14	0.5	0.5	12	4030	< 1	153	11	138	0.48	140	< 10	26	< 0.5	< 2	0.15	28	27	14.3	< 10	< 1	0.05	13
696443	< 5	0.7	< 0.5	< 1	7120	< 1	195	4	294	2.01	63	< 10	13	0.7	< 2	0.43	17	18	24.8	10	< 1	0.01	23
696444	34	0.6	0.5	16	5400	3	274	12	199	1.04	206	< 10	17	< 0.5	2	0.57	45	34	21.3	< 10	< 1	0.02	< 10
696445	28	0.5	0.9	29	4510	55	178	3	421	0.98	144	< 10	14	< 0.5	< 2	0.20	41	28	13.5	< 10	< 1	0.01	< 10
696446	120	0.5	0.6	76	2110	13	230	13	397	0.62	333	< 10	19	< 0.5	< 2	0.27	63	28	10.9	< 10	< 1	0.03	< 10
696447	90	0.5	0.6	65	7250	6	144	7	158	0.84	230	< 10	22	< 0.5	3	0.84	24	19	20.7	< 10	< 1	0.02	< 10
696448	140	0.5	< 0.5	34	7240	< 1	101	4	208	0.88	1370	< 10	< 10	< 0.5	< 2	1.45	20	17	21.4	< 10	< 1	< 0.01	< 10
696449	< 5	0.4	< 0.5	1	103	< 1	< 1	< 2	16	4.00	< 2	12	12	0.5	< 2	0.17	< 1	1	0.58	< 10	< 1	1.36	< 10
696450	100	0.5	0.5	17	5530	2	76	3	165	0.71	945	< 10	10	< 0.5	< 2	2.13	15	26	14.6	< 10	< 1	< 0.01	< 10
696451	51	0.5	< 0.5	20	7020	3	142	4	265	0.56	214	< 10	< 10	< 0.5	< 2	0.96	27	27	17.0	< 10	< 1	< 0.01	< 10
696452	250	0.8	< 0.5	34	7000	< 1	197	6	119	0.35	327	< 10	< 10	< 0.5	< 2	0.56	41	19	26.8	< 10	< 1	< 0.01	< 10
696453	300	0.9	< 0.5	33	5970	< 1	181	9	103	0.13	364	< 10	< 10	< 0.5	< 2	0.47	32	20	26.9	< 10	< 1	< 0.01	< 10
696454	353	0.6	0.6	15	6290	< 1	183	15	207	0.29	366	< 10	< 10	< 0.5	3	1.27	39	21	25.3	< 10	< 1	< 0.01	< 10
696455	567	0.8	< 0.5	19	4170	< 1	238	17	193	0.12	538	< 10	< 10	< 0.5	< 2	1.20	83	18	25.0	< 10	< 1	< 0.01	< 10
696456	94	0.7	2.1	54	8430	6	387	9	1230	0.72	341	< 10	< 10	< 0.5	< 2	1.43	64	20	28.7	< 10	< 1	< 0.01	< 10
696457	79	0.6	1.1	29	4430	< 1	261	17	185	0.19	323	< 10	< 10	< 0.5	< 2	1.05	52	40	23.6	< 10	< 1	< 0.01	< 10
696458	10	0.8	< 0.5	25	4870	< 1	206	9	108	0.78	486	< 10	11	< 0.5	< 2	0.91	71	15	26.8	< 10	< 1	0.03	< 10
696459	10	0.7	< 0.5	23	4740	< 1	205	8	102	0.78	490	< 10	11	< 0.5	< 2	0.87	68	13	26.1	< 10	< 1	0.03	< 10
696460	1810	0.7	< 0.5	162	782	< 1	87	6	63	3.48	12	16	31	< 0.5	< 2	3.11	35	134	5.54	10	< 1	0.09	< 10
696461	5	0.6	< 0.5	21	7010	< 1	146	6	141	1.09	298	< 10	15	< 0.5	< 2	1.46	44	16	27.9	< 10	< 1	0.02	< 10
696462	24	0.4	1.6	47	3640	< 1	182	8	343	1.64	65	< 10	40	< 0.5	< 2	1.51	40	42	11.4	< 10	< 1	0.13	12

Analyte Symbol	Mg	Na	P	S	Sb	Sc	Sr	Ti	Th	Te	Tl	U	V	W	Y	Zr
Unit Symbol	%	%	%	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	0.01	0.001	0.001	0.01	2	1	1	0.01	20	1	2	10	1	10	1	1
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
696358	0.21	0.049	0.018	> 20.0	9	1	20	< 0.01	< 20	2	< 2	< 10	10	< 10	1	13
696359	0.88	0.072	0.086	4.60	2	2	63	< 0.01	< 20	1	< 2	< 10	9	< 10	4	14
696360	0.90	0.066	0.086	2.47	< 2	2	65	< 0.01	< 20	< 1	< 2	< 10	13	< 10	3	13
696361	0.75	0.064	0.099	3.09	< 2	2	67	< 0.01	< 20	4	< 2	< 10	9	< 10	3	14
696362	0.64	0.066	0.104	2.62	< 2	2	67	< 0.01	< 20	2	< 2	< 10	8	< 10	3	12
696363	0.42	0.068	0.105	0.74	< 2	1	58	< 0.01	< 20	5	< 2	< 10	6	< 10	4	9
696364	0.05	3.18	0.001	0.07	< 2	< 1	23	< 0.01	< 20	< 1	< 2	< 10	< 1	< 10	3	2
696365	0.07	0.044	0.026	19.4	10	1	28	< 0.01	< 20	8	< 2	< 10	9	< 10	2	13
696366	0.05	0.029	0.011	> 20.0	12	< 1	13	< 0.01	< 20	13	< 2	< 10	9	< 10	< 1	12
696367	0.38	0.078	0.098	2.88	< 2	2	69	< 0.01	< 20	< 1	< 2	< 10	8	< 10	4	14
696368	2.35	0.061	0.036	0.28	< 2	7	41	0.36	< 20	4	< 2	< 10	149	< 10	11	18
696369	0.73	0.083	0.103	1.30	< 2	2	84	< 0.01	< 20	< 1	< 2	< 10	10	< 10	3	11
696370	0.95	0.081	0.093	1.45	< 2	2	100	< 0.01	< 20	5	< 2	< 10	15	< 10	3	12
696371	0.64	0.068	0.095	2.01	< 2	2	77	< 0.01	< 20	< 1	< 2	< 10	9	< 10	3	12
696372	0.81	0.070	0.099	3.60	2	2	93	< 0.01	< 20	< 1	< 2	< 10	11	< 10	3	15
696373	0.87	0.077	0.097	3.63	< 2	2	111	< 0.01	< 20	< 1	< 2	< 10	14	< 10	3	16
696374	0.87	0.059	0.081	2.78	< 2	2	117	< 0.01	< 20	< 1	< 2	< 10	9	< 10	3	13
696375	0.96	0.074	0.087	2.02	< 2	2	132	< 0.01	< 20	< 1	< 2	< 10	10	< 10	4	14
696376	1.30	0.049	0.062	8.05	9	3	95	< 0.01	< 20	3	< 2	< 10	17	< 10	4	17
696377	1.31	0.047	0.055	6.92	5	3	113	< 0.01	< 20	2	< 2	< 10	11	< 10	5	16
696378	1.53	0.042	0.038	14.7	12	2	82	< 0.01	< 20	8	< 2	< 10	11	< 10	4	17
696379	1.24	0.045	0.051	13.1	9	3	93	< 0.01	< 20	9	4	< 10	10	< 10	4	17
696380	1.24	0.043	0.051	13.0	12	3	77	< 0.01	< 20	< 1	< 2	< 10	10	< 10	4	17
696381	0.89	0.040	0.037	17.7	17	2	62	< 0.01	< 20	7	< 2	< 10	8	< 10	3	17
696382	0.95	0.064	0.146	0.21	< 2	6	58	< 0.01	< 20	4	< 2	< 10	32	< 10	5	5
696383	1.55	0.061	0.131	0.09	< 2	9	77	< 0.01	< 20	3	< 2	< 10	39	< 10	6	6
696384	0.70	0.058	0.076	0.05	< 2	4	60	< 0.01	< 20	2	< 2	< 10	13	< 10	4	8
696385	1.05	0.073	0.119	0.08	< 2	6	109	< 0.01	< 20	5	< 2	< 10	32	< 10	6	8
696386	0.05	3.12	0.001	0.02	< 2	< 1	22	< 0.01	< 20	1	< 2	< 10	< 1	< 10	3	1
696387	1.07	0.075	0.134	0.14	< 2	7	111	< 0.01	< 20	3	< 2	< 10	35	< 10	6	6
696388	1.00	0.060	0.131	0.06	< 2	7	107	< 0.01	< 20	4	< 2	< 10	36	< 10	6	6
696389	1.25	0.059	0.131	0.05	< 2	9	122	< 0.01	< 20	< 1	< 2	< 10	35	< 10	6	7
696390	1.37	0.064	0.122	0.06	< 2	10	111	< 0.01	< 20	2	< 2	< 10	42	< 10	6	8
696391	1.61	0.054	0.144	0.60	2	8	59	< 0.01	< 20	6	< 2	< 10	46	< 10	6	8
696392	1.10	0.063	0.207	0.05	< 2	5	45	< 0.01	< 20	6	< 2	< 10	36	< 10	7	3
696393	0.93	0.071	0.209	0.03	< 2	5	52	< 0.01	< 20	< 1	< 2	< 10	33	< 10	6	3
696394	1.13	0.069	0.210	0.03	< 2	4	48	< 0.01	< 20	5	< 2	< 10	35	< 10	7	3
696395	1.12	0.067	0.195	0.02	< 2	6	52	< 0.01	< 20	3	< 2	< 10	45	< 10	7	4
696396	2.32	0.178	0.085	0.08	< 2	5	50	0.30	< 20	4	< 2	< 10	106	< 10	14	21
696397	0.99	0.069	0.200	0.08	< 2	4	44	< 0.01	< 20	4	< 2	< 10	32	< 10	7	3
696398	1.16	0.065	0.194	0.07	< 2	5	50	< 0.01	< 20	< 1	< 2	< 10	39	< 10	7	4
696399	1.16	0.071	0.061	3.76	6	4	148	< 0.01	< 20	3	< 2	< 10	20	< 10	3	16

Analyte Symbol	Mg	Na	P	S	Sb	Sc	Sr	Ti	Th	Te	Tl	U	V	W	Y	Zr
Unit Symbol	%	%	%	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	0.01	0.001	0.001	0.01	2	1	1	0.01	20	1	2	10	1	10	1	1
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
696400	0.99	0.061	0.060	2.63	4	2	131	< 0.01	< 20	< 1	< 2	< 10	10	< 10	3	14
696401	1.02	0.058	0.056	2.26	6	2	145	< 0.01	< 20	1	< 2	< 10	12	< 10	3	13
696402	0.59	0.051	0.056	6.78	6	2	91	< 0.01	< 20	3	< 2	< 10	11	< 10	3	17
696403	2.27	0.173	0.084	0.10	< 2	5	49	0.31	< 20	7	< 2	< 10	105	< 10	13	18
696404	0.92	0.053	0.055	4.11	4	2	147	< 0.01	< 20	2	< 2	< 10	10	< 10	3	14
696405	0.85	0.055	0.060	4.68	6	2	115	< 0.01	< 20	4	< 2	< 10	11	< 10	3	18
696406	0.59	0.049	0.062	8.94	7	2	78	< 0.01	< 20	9	< 2	< 10	10	< 10	3	18
696407	0.93	0.052	0.057	3.14	4	2	104	< 0.01	< 20	4	< 2	< 10	10	< 10	3	15
696408	0.49	0.052	0.058	11.0	12	1	65	< 0.01	< 20	8	< 2	< 10	10	< 10	3	18
696409	1.09	0.065	0.055	6.26	8	3	111	< 0.01	< 20	5	< 2	< 10	14	< 10	3	17
696410	1.05	0.079	0.062	2.85	4	3	110	< 0.01	< 20	< 1	< 2	< 10	16	< 10	3	17
696411	1.17	0.041	0.059	2.39	4	3	111	< 0.01	< 20	9	< 2	< 10	15	< 10	3	14
696412	1.19	0.042	0.061	2.40	3	3	113	< 0.01	< 20	7	< 2	< 10	16	< 10	3	14
696413	0.95	0.073	0.060	4.92	6	3	108	< 0.01	< 20	5	< 2	< 10	16	< 10	3	18
696414	1.04	0.060	0.048	4.90	8	3	108	< 0.01	< 20	4	< 2	< 10	14	< 10	3	19
696415	1.11	0.070	0.066	3.95	5	4	140	< 0.01	< 20	2	< 2	< 10	20	< 10	3	15
696416	0.75	0.060	0.070	3.45	4	2	122	< 0.01	< 20	4	< 2	< 10	10	< 10	3	21
696417	0.46	0.067	0.078	0.71	< 2	2	108	< 0.01	< 20	2	< 2	< 10	6	< 10	4	11
696418	0.49	0.060	0.063	0.61	< 2	1	97	< 0.01	< 20	1	< 2	< 10	4	< 10	3	11
696419	0.51	0.067	0.070	0.50	< 2	1	110	< 0.01	< 20	1	< 2	< 10	5	< 10	3	10
696420	0.30	0.064	0.085	0.40	< 2	< 1	68	< 0.01	< 20	< 1	< 2	< 10	4	< 10	4	8
696421	1.99	0.069	0.045	0.40	4	8	153	< 0.01	< 20	< 1	< 2	< 10	23	< 10	3	15
696422	1.37	0.054	0.100	2.43	4	5	125	< 0.01	< 20	5	< 2	< 10	19	< 10	3	14
696423	0.05	2.93	0.001	0.02	< 2	< 1	20	< 0.01	< 20	1	< 2	< 10	< 1	< 10	3	1
696424	1.72	0.047	0.048	2.16	5	4	128	< 0.01	< 20	8	< 2	< 10	13	< 10	4	17
696425	2.33	0.028	0.015	5.89	14	6	112	< 0.01	< 20	8	< 2	< 10	18	< 10	4	20
696426	2.12	0.016	0.006	14.0	25	8	63	< 0.01	< 20	12	< 2	< 10	23	< 10	3	17
696427	1.20	0.014	0.005	8.32	12	5	18	< 0.01	< 20	3	< 2	< 10	15	< 10	3	12
696428	1.75	0.014	0.007	5.17	13	13	9	< 0.01	< 20	5	< 2	< 10	42	< 10	4	17
696429	1.99	0.015	0.015	6.45	11	18	19	< 0.01	< 20	8	< 2	< 10	72	< 10	4	20
696430	1.79	0.020	0.009	8.66	12	13	29	< 0.01	< 20	< 1	< 2	< 10	43	< 10	4	18
696431	1.73	0.014	0.009	8.75	14	7	49	< 0.01	< 20	9	< 2	< 10	23	< 10	3	13
696432																
696433	1.63	0.016	0.004	13.0	16	9	26	< 0.01	< 20	13	< 2	< 10	34	< 10	4	18
696434	2.09	0.014	0.012	6.10	13	10	78	< 0.01	< 20	6	< 2	< 10	40	< 10	3	15
696435	1.91	0.015	0.004	6.58	12	12	67	< 0.01	< 20	< 1	< 2	< 10	45	< 10	3	20
696436	2.11	0.015	0.016	4.76	11	9	32	< 0.01	< 20	14	< 2	< 10	29	< 10	3	21
696437	2.21	0.016	0.026	3.22	7	10	126	< 0.01	< 20	< 1	< 2	< 10	35	< 10	4	20
696438	2.40	0.017	0.028	2.39	6	9	81	< 0.01	< 20	< 1	< 2	< 10	34	< 10	4	18
696439	1.51	0.016	0.011	4.40	9	7	57	< 0.01	< 20	8	< 2	< 10	24	< 10	3	16
696440	0.70	0.013	0.002	9.99	15	4	24	< 0.01	< 20	< 1	< 2	< 10	16	< 10	2	12
696441	0.70	0.013	0.002	10.3	13	4	23	< 0.01	< 20	4	< 2	< 10	16	< 10	2	12

Analyte Symbol	Mg	Na	P	S	Sb	Sc	Sr	Ti	Th	Te	Tl	U	V	W	Y	Zr
Unit Symbol	%	%	%	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	0.01	0.001	0.001	0.01	2	1	1	0.01	20	1	2	10	1	10	1	1
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
696442	0.62	0.017	0.005	6.70	11	5	8	< 0.01	< 20	3	< 2	< 10	15	< 10	5	26
696443	2.40	0.013	0.006	2.70	11	15	20	< 0.01	< 20	< 1	< 2	< 10	58	< 10	10	66
696444	1.31	0.016	0.009	9.92	14	11	31	< 0.01	< 20	6	< 2	< 10	46	< 10	2	19
696445	0.89	0.017	0.016	3.34	7	12	11	< 0.01	< 20	5	< 2	< 10	45	< 10	3	13
696446	0.38	0.039	0.031	6.48	11	5	18	< 0.01	< 20	3	< 2	< 10	23	< 10	2	13
696447	1.58	0.019	0.009	6.75	10	9	46	< 0.01	< 20	< 1	< 2	< 10	37	< 10	2	16
696448	2.07	0.016	0.004	7.23	10	9	77	< 0.01	< 20	13	< 2	< 10	40	< 10	3	19
696449	0.05	3.16	< 0.001	0.02	< 2	< 1	21	< 0.01	< 20	< 1	< 2	< 10	< 1	< 10	3	1
696450	1.50	0.022	0.004	4.81	7	8	107	< 0.01	< 20	1	< 2	< 10	29	< 10	2	15
696451	1.25	0.014	0.005	4.63	7	6	38	< 0.01	< 20	7	< 2	< 10	22	< 10	2	10
696452	1.20	0.014	0.005	15.2	23	5	21	< 0.01	< 20	6	< 2	< 10	20	< 10	2	12
696453	1.12	0.015	0.004	17.7	31	5	18	< 0.01	< 20	6	< 2	< 10	15	< 10	2	12
696454	1.55	0.014	0.003	15.9	18	7	61	< 0.01	< 20	5	< 2	< 10	23	< 10	2	15
696455	1.33	0.014	0.002	18.5	35	5	57	< 0.01	< 20	1	< 2	< 10	15	< 10	2	11
696456	2.20	0.013	0.005	11.5	18	12	74	< 0.01	< 20	14	< 2	< 10	30	< 10	2	15
696457	0.93	0.015	0.002	17.9	20	3	52	< 0.01	< 20	3	< 2	< 10	14	< 10	1	11
696458	1.08	0.021	0.011	18.6	28	5	50	< 0.01	< 20	3	< 2	< 10	20	< 10	2	13
696459	1.04	0.022	0.011	18.1	26	4	47	< 0.01	< 20	12	< 2	< 10	19	< 10	2	13
696460	2.37	0.062	0.037	0.30	< 2	7	43	0.37	< 20	7	< 2	< 10	149	< 10	11	18
696461	1.68	0.021	0.016	14.6	20	7	76	< 0.01	< 20	14	< 2	< 10	25	< 10	2	15
696462	0.75	0.062	0.107	3.77	5	6	85	< 0.01	< 20	< 1	< 2	< 10	28	< 10	5	14

Analyte Symbol	Au	Ag	Cd	Cu	Mn	Mo	Ni	Pb	Zn	Al	As	B	Ba	Be	Bi	Ca	Co	Cr	Fe	Ga	Hg	K	La
Unit Symbol	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm
Lower Limit	5	0.2	0.5	1	5	1	1	2	2	0.01	2	10	10	0.5	2	0.01	1	1	0.01	10	1	0.01	10
Method Code	FA-AA	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
GXR-1 Meas		30.6	2.3	1180	814	15	25	716	705	0.30	416	10	357	0.9	1510	0.75	6	7	22.5	< 10	2	0.03	< 10
GXR-1 Cert		31.0	3.30	1110	852	18.0	41.0	730	760	3.52	427	15.0	750	1.22	1380	0.960	8.20	12.0	23.6	13.8	3.90	0.050	7.50
GXR-1 Meas		29.9	2.2	1130	821	14	27	698	688	0.29	393	< 10	421	0.9	1460	0.73	5	6	21.8	< 10	3	0.03	< 10
GXR-1 Cert		31.0	3.30	1110	852	18.0	41.0	730	760	3.52	427	15.0	750	1.22	1380	0.960	8.20	12.0	23.6	13.8	3.90	0.050	7.50
GXR-6 Meas		0.7	< 0.5	76	1060	1	21	106	127	6.40	261	< 10	1140	1.0	< 2	0.15	15	89	5.47	20	< 1	1.09	11
GXR-6 Cert		1.30	1.00	66.0	1010	2.40	27.0	101	118	17.7	330	9.80	1300	1.40	0.290	0.180	13.8	96.0	5.58	35.0	0.0680	1.87	13.9
GXR-6 Meas		0.6	< 0.5	69	1080	1	17	104	125	6.47	269	< 10	1150	1.0	< 2	0.15	15	89	5.47	20	< 1	1.10	11
GXR-6 Cert		1.30	1.00	66.0	1010	2.40	27.0	101	118	17.7	330	9.80	1300	1.40	0.290	0.180	13.8	96.0	5.58	35.0	0.0680	1.87	13.9
OREAS 134b (AQUA REGIA) Meas		> 100	559	1380				> 5000	> 10000		242						120		11.6				
OREAS 134b (AQUA REGIA) Cert		204	563	1360				133000	177000		221						106		12.25				
OREAS 133a (Aqua Regia) Meas		99.5	287	322				> 5000	> 10000		145		18				24		7.58				
OREAS 133a (Aqua Regia) Cert		97	297	324				48600.00	106000.00		140		59				23		7.92				
OREAS 203 Meas	858																						
OREAS 203 Cert	871																						
OREAS 203 Meas	871																						
OREAS 203 Cert	871																						
OREAS 203 Meas	841																						
OREAS 203 Cert	871																						
OREAS 203 Meas	854																						
OREAS 203 Cert	871																						
OREAS 224 Meas	2140																						
OREAS 224 Cert	2150.00																						
OREAS 224 Meas	2170																						
OREAS 224 Cert	2150.00																						
OREAS 224 Meas	2120																						
OREAS 224 Cert	2150.00																						
OREAS 224 Meas	2160																						
OREAS 224 Cert	2150.00																						
696360 Orig		1.1	< 0.5	37	1490	< 1	73	< 2	56	1.30	11	< 10	30	< 0.5	< 2	2.82	18	6	6.88	< 10	< 1	0.12	< 10
696360 Dup		1.2	< 0.5	36	1470	< 1	71	< 2	55	1.28	13	< 10	30	< 0.5	< 2	2.79	17	5	6.77	< 10	< 1	0.12	< 10
696367 Orig	< 5																						
696367 Dup	< 5																						
696368 Orig		1.4	< 0.5	165	770	< 1	86	6	64	3.44	9	16	32	< 0.5	< 2	3.08	36	133	5.51	10	< 1	0.09	< 10
696368 Dup		1.4	< 0.5	163	754	< 1	85	7	63	3.42	9	16	30	< 0.5	< 2	3.05	35	132	5.39	10	< 1	0.08	< 10

Analyte Symbol	Au	Ag	Cd	Cu	Mn	Mo	Ni	Pb	Zn	Al	As	B	Ba	Be	Bi	Ca	Co	Cr	Fe	Ga	Hg	K	La
Unit Symbol	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm
Lower Limit	5	0.2	0.5	1	5	1	1	2	2	0.01	2	10	10	0.5	2	0.01	1	1	0.01	10	1	0.01	10
Method Code	FA-AA	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
696377 Orig	13																						
696377 Dup	12																						
696387 Orig	< 5																						
696387 Dup	< 5																						
696402 Orig	22																						
696402 Dup	23																						
696407 Orig	28																						
696407 Split PREP DUP	27																						
696408 Orig		1.5	< 0.5	27	2470	< 1	392	14	44	1.01	380	< 10	11	< 0.5	< 2	1.03	47	10	14.5	< 10	< 1	0.11	< 10
696408 Dup		1.5	< 0.5	31	2430	< 1	390	13	48	1.01	378	< 10	11	< 0.5	< 2	1.02	47	11	14.4	< 10	< 1	0.11	< 10
696411 Orig	23																						
696411 Dup	29																						
696421 Orig	5	1.0	0.5	9	4780	< 1	61	2	106	1.00	23	< 10	27	< 0.5	< 2	2.94	8	4	13.2	< 10	< 1	0.06	< 10
696421 Dup	6	0.9	< 0.5	6	4740	< 1	59	3	103	0.98	24	< 10	27	< 0.5	< 2	2.91	10	4	13.0	< 10	< 1	0.06	< 10
696424 Orig		0.5	< 0.5	3	7940	< 1	45	3	58	1.06	30	< 10	34	< 0.5	< 2	2.85	15	7	17.5	< 10	< 1	0.07	< 10
696424 Dup		0.5	< 0.5	4	7850	< 1	38	< 2	57	1.04	31	< 10	34	< 0.5	< 2	2.82	15	8	17.3	< 10	< 1	0.07	< 10
696436 Orig	12																						
696436 Dup	10																						
696437 Orig		0.6	< 0.5	6	8690	< 1	103	3	144	1.71	38	< 10	19	< 0.5	< 2	2.47	19	13	23.5	< 10	< 1	0.03	< 10
696437 Dup		0.7	0.7	6	8590	< 1	95	3	143	1.69	37	< 10	19	< 0.5	< 2	2.45	18	13	23.1	< 10	< 1	0.03	< 10
696446 Orig	120																						
696446 Dup	119																						
696449 Orig		0.4	< 0.5	1	110	< 1	< 1	< 2	16	4.06	2	12	12	0.5	< 2	0.17	< 1	1	0.60	< 10	< 1	1.37	< 10
696449 Dup		0.4	< 0.5	1	95	< 1	< 1	< 2	16	3.95	< 2	12	12	0.5	< 2	0.17	< 1	1	0.55	< 10	< 1	1.34	< 10
696456 Orig	92																						
696456 Dup	95																						
696457 Orig	79																						
696457 Split PREP DUP	88																						
Method Blank	< 5																						
Method Blank	< 5																						
Method Blank	< 5																						
Method Blank	< 5																						
Method Blank	< 5																						
Method Blank	< 5																						
Method Blank	< 5																						
Method Blank	< 5																						
Method Blank		0.5	< 0.5	< 1	< 5	< 1	< 1	< 2	< 2	< 0.01	< 2	< 10	< 10	< 0.5	< 2	< 0.01	< 1	< 1	< 0.01	< 10	< 1	< 0.01	< 10
Method Blank		1.2	< 0.5	< 1	< 5	< 1	< 1	< 2	< 2	< 0.01	< 2	< 10	< 10	< 0.5	< 2	< 0.01	< 1	< 1	< 0.01	< 10	< 1	< 0.01	< 10
Method Blank		0.5	< 0.5	< 1	< 5	< 1	< 1	< 2	< 2	< 0.01	< 2	< 10	< 10	< 0.5	< 2	< 0.01	< 1	< 1	< 0.01	< 10	< 1	< 0.01	< 10
Method Blank		0.5	< 0.5	< 1	< 5	< 1	< 1	< 2	< 2	< 0.01	< 2	< 10	< 10	< 0.5	< 2	< 0.01	< 1	< 1	< 0.01	< 10	< 1	< 0.01	< 10



Analyte Symbol	Mg	Na	P	S	Sb	Sc	Sr	Ti	Th	Te	Tl	U	V	W	Y	Zr
Unit Symbol	%	%	%	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	0.01	0.001	0.001	0.01	2	1	1	0.01	20	1	2	10	1	10	1	1
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
GXR-1 Meas	0.14	0.052	0.041	0.21	85	1	170	< 0.01	< 20	15	< 2	29	76	143	26	15
GXR-1 Cert	0.217	0.0520	0.0650	0.257	122	1.58	275	0.036	2.44	13.0	0.390	34.9	80.0	164	32.0	38.0
GXR-1 Meas	0.13	0.052	0.040	0.20	80	1	163	< 0.01	< 20	16	< 2	27	73	132	25	14
GXR-1 Cert	0.217	0.0520	0.0650	0.257	122	1.58	275	0.036	2.44	13.0	0.390	34.9	80.0	164	32.0	38.0
GXR-6 Meas	0.40	0.089	0.036	0.04	< 2	23	36		< 20	< 1	< 2	< 10	167	< 10	6	14
GXR-6 Cert	0.609	0.104	0.0350	0.0160	3.60	27.6	35.0		5.30	0.0180	2.20	1.54	186	1.90	14.0	110
GXR-6 Meas	0.40	0.089	0.037	0.02	3	23	35		< 20	< 1	< 2	< 10	168	< 10	6	15
GXR-6 Cert	0.609	0.104	0.0350	0.0160	3.60	27.6	35.0		5.30	0.0180	2.20	1.54	186	1.90	14.0	110
OREAS 134b (AQUA REGIA) Meas				15.5												
OREAS 134b (AQUA REGIA) Cert				19.31												
OREAS 133a (Aqua Regia) Meas				10.4	132											
OREAS 133a (Aqua Regia) Cert				10.7	147											
OREAS 203 Meas																
OREAS 203 Cert																
OREAS 203 Meas																
OREAS 203 Cert																
OREAS 203 Meas																
OREAS 203 Cert																
OREAS 203 Meas																
OREAS 203 Cert																
OREAS 224 Meas																
OREAS 224 Cert																
OREAS 224 Meas																
OREAS 224 Cert																
OREAS 224 Meas																
OREAS 224 Cert																
OREAS 224 Meas																
OREAS 224 Cert																
696360 Orig	0.91	0.065	0.087	2.48	3	2	65	< 0.01	< 20	< 1	< 2	< 10	13	< 10	3	13
696360 Dup	0.90	0.066	0.086	2.47	< 2	2	65	< 0.01	< 20	6	< 2	< 10	13	< 10	3	13
696367 Orig																
696367 Dup																
696368 Orig	2.36	0.062	0.036	0.29	< 2	7	41	0.36	< 20	4	2	< 10	149	< 10	11	18
696368 Dup	2.33	0.060	0.036	0.26	< 2	7	42	0.36	< 20	5	< 2	< 10	150	< 10	11	18
696377 Orig																
696377 Dup																
696387 Orig																

Analyte Symbol	Mg	Na	P	S	Sb	Sc	Sr	Ti	Th	Te	Tl	U	V	W	Y	Zr
Unit Symbol	%	%	%	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	0.01	0.001	0.001	0.01	2	1	1	0.01	20	1	2	10	1	10	1	1
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
696387 Dup																
696402 Orig																
696402 Dup																
696407 Orig																
696407 Split PREP DUP																
696408 Orig	0.49	0.051	0.058	11.0	10	1	66	< 0.01	< 20	10	< 2	< 10	10	< 10	3	19
696408 Dup	0.48	0.052	0.058	11.0	13	1	65	< 0.01	< 20	6	< 2	< 10	10	< 10	3	18
696411 Orig																
696411 Dup																
696421 Orig	2.00	0.069	0.045	0.40	4	8	154	< 0.01	< 20	< 1	< 2	< 10	23	< 10	3	15
696421 Dup	1.98	0.068	0.045	0.40	4	8	152	< 0.01	< 20	3	< 2	< 10	23	< 10	3	14
696424 Orig	1.73	0.047	0.048	2.18	5	4	129	< 0.01	< 20	4	< 2	< 10	13	< 10	4	17
696424 Dup	1.71	0.046	0.048	2.14	5	4	128	< 0.01	< 20	12	< 2	< 10	13	< 10	4	17
696436 Orig																
696436 Dup																
696437 Orig	2.23	0.016	0.026	3.21	6	10	126	< 0.01	< 20	3	< 2	< 10	35	< 10	4	20
696437 Dup	2.19	0.016	0.026	3.23	9	10	126	< 0.01	< 20	< 1	< 2	< 10	34	< 10	4	20
696446 Orig																
696446 Dup																
696449 Orig	0.05	3.14	< 0.001	0.02	< 2	< 1	21	< 0.01	< 20	< 1	< 2	< 10	< 1	< 10	3	1
696449 Dup	0.05	3.17	< 0.001	0.01	< 2	< 1	20	< 0.01	< 20	< 1	< 2	< 10	< 1	< 10	3	1
696456 Orig																
696456 Dup																
696457 Orig																
696457 Split PREP DUP																
Method Blank																
Method Blank																
Method Blank																
Method Blank																
Method Blank																
Method Blank																
Method Blank																
Method Blank	< 0.01	0.010	< 0.001	< 0.01	< 2	< 1	< 1	< 0.01	< 20	1	< 2	< 10	< 1	< 10	< 1	< 1
Method Blank	< 0.01	0.012	< 0.001	< 0.01	< 2	< 1	< 1	< 0.01	< 20	2	< 2	< 10	< 1	< 10	< 1	< 1
Method Blank	< 0.01	0.010	< 0.001	< 0.01	< 2	< 1	< 1	< 0.01	< 20	2	< 2	< 10	< 1	< 10	< 1	< 1
Method Blank	< 0.01	0.010	< 0.001	< 0.01	< 2	< 1	< 1	< 0.01	< 20	3	< 2	< 10	< 1	< 10	< 1	< 1



**Date Submitted:** 28-Mar-18  
**Invoice No.:** A18-03922  
**Invoice Date:** 14-Jun-18  
**Your Reference:** 81 Lucas

**Noble Mineral Exploration**  
**2500-120 Adelaide Street West**  
**Toronto ON M5H 1T1**  
**Canada**

**ATTN: Randy Singh (inv-cc)**

## CERTIFICATE OF ANALYSIS

105 Rock samples were submitted for analysis.

The following analytical package(s) were requested:

Code 1A2-Timmins Au - Fire Assay AA

Code 1E3-Timmins Aqua Regia ICP(AQUAGEO)

REPORT **A18-03922**

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

Notes:

If value exceeds upper limit we recommend reassay by fire assay gravimetric-Code 1A3.

Values which exceed the upper limit should be assayed for accurate numbers.

Footnote: Insufficient material for sample 696677 and 696705

CERTIFIED BY:

A handwritten signature in black ink, appearing to be "Emmanuel Esemé". The signature is written in a cursive style with a horizontal line underneath.

Emmanuel Esemé, Ph.D.  
Quality Control

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## Results

## Activation Laboratories Ltd.

## Report: A18-03922

Analyte Symbol	Au	Ag	Cd	Cu	Mn	Mo	Ni	Pb	Zn	Al	As	B	Ba	Be	Bi	Ca	Co	Cr	Fe	Ga	Hg	K	La
Unit Symbol	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm
Lower Limit	5	0.2	0.5	1	5	1	1	2	2	0.01	2	10	10	0.5	2	0.01	1	1	0.01	10	1	0.01	10
Method Code	FA-AA	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
696673	< 5	0.3	< 0.5	18	830	< 1	110	< 2	23	0.64	41	< 10	52	< 0.5	2	2.53	26	17	4.12	< 10	< 1	0.16	17
696674	7	0.4	< 0.5	37	1840	< 1	198	5	49	1.06	94	< 10	23	< 0.5	< 2	4.28	38	24	11.1	< 10	< 1	0.16	< 10
696675	< 5	0.4	< 0.5	23	1690	< 1	149	5	38	1.01	63	< 10	29	< 0.5	< 2	3.57	27	20	9.28	< 10	< 1	0.14	< 10
696676	< 5	0.3	< 0.5	10	943	< 1	64	< 2	18	0.67	19	< 10	67	< 0.5	< 2	3.06	16	3	3.44	< 10	< 1	0.16	14
696677	317																						
696678	< 5	0.3	< 0.5	26	912	< 1	75	< 2	22	0.88	21	< 10	79	< 0.5	< 2	3.31	17	4	3.54	< 10	< 1	0.20	12
696679	< 5	0.3	< 0.5	24	1120	< 1	60	< 2	20	0.52	46	< 10	46	< 0.5	2	3.67	16	6	3.90	< 10	< 1	0.12	< 10
696680	< 5	0.3	< 0.5	13	1100	4	63	< 2	14	0.50	63	< 10	47	< 0.5	< 2	3.64	13	3	3.12	< 10	< 1	0.12	13
696681	< 5	0.3	< 0.5	28	879	< 1	89	< 2	17	0.65	86	< 10	60	< 0.5	< 2	3.42	19	2	3.33	< 10	< 1	0.16	13
696682	17	0.3	< 0.5	27	2100	< 1	79	3	61	0.84	69	< 10	47	< 0.5	< 2	1.67	28	3	7.04	< 10	< 1	0.15	< 10
696683	11	0.5	< 0.5	19	3480	< 1	56	< 2	57	1.46	74	< 10	31	< 0.5	< 2	1.87	24	3	12.4	< 10	< 1	0.10	< 10
696684	10	0.4	< 0.5	12	3560	< 1	59	< 2	64	1.12	30	< 10	41	< 0.5	< 2	1.28	28	5	9.87	< 10	< 1	0.12	10
696685	15	0.4	< 0.5	12	4210	< 1	59	3	67	1.31	40	< 10	34	< 0.5	< 2	1.41	27	5	12.3	< 10	< 1	0.12	< 10
696686	14	0.5	< 0.5	12	4200	< 1	60	< 2	66	1.30	41	< 10	35	< 0.5	< 2	1.40	28	4	12.2	< 10	< 1	0.12	< 10
696687	494	0.5	1.2	20	4200	< 1	95	8	67	1.80	418	< 10	16	< 0.5	< 2	0.32	34	7	17.5	< 10	< 1	0.11	< 10
696688	209	0.7	< 0.5	23	4150	< 1	96	6	52	1.03	352	< 10	< 10	< 0.5	< 2	0.78	38	6	21.9	< 10	< 1	0.16	< 10
696689	5	0.7	< 0.5	11	6790	< 1	95	5	63	1.04	245	< 10	14	< 0.5	< 2	1.63	30	6	24.7	< 10	< 1	0.13	< 10
696690	49	0.6	< 0.5	12	6880	< 1	105	2	73	0.97	365	< 10	10	< 0.5	2	0.30	36	7	26.5	< 10	< 1	0.11	< 10
696691	1850	0.7	< 0.5	6	6480	< 1	103	6	59	0.76	1380	< 10	< 10	< 0.5	4	0.20	30	5	29.5	< 10	< 1	0.07	< 10
696692	1390	0.6	< 0.5	2	2110	< 1	125	3	35	0.27	867	< 10	< 10	< 0.5	< 2	0.10	52	6	24.0	< 10	< 1	0.01	< 10
696693	798	0.6	< 0.5	3	7310	< 1	109	5	69	0.21	542	< 10	< 10	< 0.5	5	0.20	29	8	> 30.0	< 10	< 1	< 0.01	< 10
696694	856	0.6	< 0.5	3	6750	< 1	103	7	72	0.14	631	< 10	< 10	< 0.5	2	0.17	24	6	> 30.0	< 10	< 1	< 0.01	< 10
696695	234	0.7	< 0.5	5	7550	< 1	113	5	75	0.08	632	< 10	< 10	< 0.5	7	0.18	29	6	> 30.0	< 10	< 1	< 0.01	< 10
696696	317	0.6	< 0.5	4	7110	< 1	108	4	51	0.09	573	< 10	< 10	< 0.5	2	0.17	31	5	> 30.0	< 10	< 1	< 0.01	< 10
696697	< 5	0.4	< 0.5	< 1	120	< 1	< 1	< 2	16	4.24	< 2	14	14	0.6	< 2	0.18	< 1	2	0.68	< 10	< 1	1.44	< 10
696698	1730	0.8	< 0.5	4	6790	< 1	100	8	65	0.15	836	< 10	< 10	< 0.5	3	0.16	24	6	> 30.0	< 10	< 1	< 0.01	< 10
696699	3900	0.8	< 0.5	6	7050	< 1	96	5	57	0.15	710	< 10	< 10	< 0.5	< 2	0.16	29	4	> 30.0	< 10	< 1	< 0.01	< 10
696700	3210	0.8	< 0.5	6	6010	< 1	95	6	45	0.13	716	< 10	< 10	< 0.5	< 2	0.14	34	5	28.7	< 10	< 1	< 0.01	< 10
696701	4100	0.8	< 0.5	9	4560	< 1	123	8	57	0.11	855	< 10	< 10	< 0.5	4	0.11	34	14	26.1	< 10	< 1	< 0.01	< 10
696702	3920	1.0	< 0.5	14	2060	< 1	108	11	36	0.06	803	< 10	< 10	< 0.5	< 2	0.95	14	37	16.0	< 10	< 1	< 0.01	< 10
696703	3430	1.0	< 0.5	12	4750	2	143	11	51	0.06	982	< 10	< 10	< 0.5	< 2	0.97	20	20	21.5	< 10	< 1	< 0.01	< 10
696704	574	0.6	< 0.5	12	6140	< 1	72	7	65	0.30	298	< 10	< 10	< 0.5	< 2	0.56	22	27	20.3	< 10	< 1	< 0.01	< 10
696705	1800																						
696706	1330	0.9	< 0.5	16	3580	< 1	100	8	44	0.14	540	< 10	< 10	< 0.5	2	0.71	28	19	23.1	< 10	< 1	< 0.01	< 10
696707	2640	1.0	< 0.5	14	3760	< 1	115	12	55	0.15	1010	< 10	< 10	< 0.5	< 2	0.51	34	11	24.8	< 10	< 1	< 0.01	< 10
696708	1130	0.8	< 0.5	9	7300	< 1	135	11	59	0.27	1000	< 10	< 10	< 0.5	3	0.88	33	8	28.2	< 10	< 1	< 0.01	< 10
696709	1260	0.7	< 0.5	13	3140	3	82	14	60	0.19	1190	< 10	< 10	< 0.5	< 2	0.81	25	27	14.8	< 10	< 1	< 0.01	< 10
696710	2030	0.9	< 0.5	19	6540	4	99	20	82	0.30	2920	< 10	< 10	< 0.5	< 2	0.58	25	18	24.5	< 10	< 1	< 0.01	< 10
696711	1190	0.6	< 0.5	10	943	< 1	31	8	39	0.12	913	< 10	< 10	< 0.5	< 2	0.44	15	48	7.22	< 10	< 1	0.01	< 10
696712	3280	1.8	< 0.5	57	6410	< 1	188	27	94	0.83	3370	< 10	< 10	< 0.5	< 2	0.29	51	35	26.5	< 10	< 1	0.01	< 10
696713	3330	1.8	< 0.5	58	6580	< 1	193	26	95	0.86	3400	< 10	< 10	< 0.5	4	0.30	52	37	26.7	< 10	< 1	0.01	< 10
696714	> 5000	2.2	< 0.5	39	252	< 1	14	35	42	0.34	445	< 10	< 10	< 0.5	< 2	0.03	23	16	19.6	< 10	< 1	0.09	< 10

## Results

## Activation Laboratories Ltd.

## Report: A18-03922

Analyte Symbol	Au	Ag	Cd	Cu	Mn	Mo	Ni	Pb	Zn	Al	As	B	Ba	Be	Bi	Ca	Co	Cr	Fe	Ga	Hg	K	La
Unit Symbol	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm
Lower Limit	5	0.2	0.5	1	5	1	1	2	2	0.01	2	10	10	0.5	2	0.01	1	1	0.01	10	1	0.01	10
Method Code	FA-AA	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
696715	2560	1.9	< 0.5	37	251	< 1	30	36	64	0.50	411	< 10	< 10	< 0.5	< 2	0.04	31	39	18.4	< 10	< 1	0.10	< 10
696716	3030	1.7	< 0.5	51	532	< 1	36	47	121	0.21	473	< 10	< 10	< 0.5	< 2	0.05	29	28	18.3	< 10	< 1	0.05	< 10
696717	849	1.0	< 0.5	32	599	< 1	78	17	37	0.52	298	< 10	11	< 0.5	< 2	0.71	48	10	12.8	< 10	< 1	0.13	< 10
696718	305	0.9	< 0.5	41	498	< 1	69	12	31	0.50	255	< 10	14	< 0.5	< 2	1.90	34	9	12.0	< 10	< 1	0.13	< 10
696719	219	0.6	< 0.5	22	717	< 1	43	9	28	0.61	168	< 10	20	< 0.5	< 2	2.39	27	7	8.77	< 10	< 1	0.14	< 10
696720	37	0.5	< 0.5	18	422	< 1	45	5	30	0.56	115	< 10	28	< 0.5	< 2	2.22	24	5	6.23	< 10	< 1	0.14	< 10
696721	< 5	0.4	< 0.5	2	116	< 1	< 1	< 2	18	4.46	3	15	13	0.6	< 2	0.19	< 1	3	0.72	10	< 1	1.49	< 10
696722	111	0.8	< 0.5	35	355	< 1	56	9	31	0.57	200	< 10	15	< 0.5	< 2	1.89	34	7	9.59	< 10	< 1	0.15	< 10
696723	30	0.4	< 0.5	12	830	< 1	40	< 2	28	0.50	96	< 10	33	< 0.5	3	3.79	19	4	6.43	< 10	< 1	0.13	< 10
696724	133	0.8	< 0.5	40	384	< 1	66	12	30	0.43	278	< 10	11	< 0.5	< 2	1.79	34	7	13.5	< 10	< 1	0.12	< 10
696725	120	0.7	< 0.5	30	284	< 1	53	12	30	0.61	188	< 10	13	< 0.5	< 2	1.79	27	7	11.2	< 10	< 1	0.17	< 10
696726	205	1.0	< 0.5	54	228	< 1	58	19	30	0.47	311	< 10	< 10	< 0.5	< 2	1.23	35	10	17.2	< 10	< 1	0.13	< 10
696727	203	0.9	< 0.5	52	225	1	55	19	28	0.46	305	< 10	< 10	< 0.5	< 2	1.23	34	9	16.9	< 10	< 1	0.13	< 10
696728	88	0.7	< 0.5	34	296	< 1	47	9	21	0.61	202	< 10	10	< 0.5	< 2	1.48	25	8	11.6	< 10	< 1	0.16	< 10
696729	138	0.6	< 0.5	20	338	< 1	51	9	28	0.64	141	< 10	15	< 0.5	< 2	1.81	24	7	8.40	< 10	< 1	0.17	< 10
696730	181	0.6	< 0.5	29	612	< 1	64	10	40	0.48	163	< 10	17	< 0.5	< 2	2.69	26	8	9.78	< 10	< 1	0.13	< 10
696731	102	0.4	< 0.5	15	859	< 1	54	5	35	0.59	113	< 10	21	< 0.5	< 2	3.32	25	5	7.82	< 10	< 1	0.13	< 10
696732	108	0.5	< 0.5	20	574	< 1	55	5	35	0.54	130	< 10	22	< 0.5	< 2	2.69	43	5	6.52	< 10	< 1	0.15	< 10
696733	358	0.4	< 0.5	107	730	< 1	91	< 2	62	2.32	< 2	23	36	< 0.5	< 2	2.05	34	66	5.24	< 10	< 1	0.05	< 10
696734	93	0.5	< 0.5	16	389	< 1	52	6	25	0.73	110	< 10	24	< 0.5	3	1.87	36	5	5.64	< 10	< 1	0.20	< 10
696735	71	0.4	< 0.5	15	748	< 1	42	5	27	0.57	91	< 10	37	< 0.5	< 2	3.56	28	5	5.47	< 10	< 1	0.17	< 10
696736	49	0.4	< 0.5	20	414	< 1	35	5	28	0.63	75	< 10	33	< 0.5	< 2	2.23	20	4	4.79	< 10	< 1	0.19	< 10
696737	36	0.4	< 0.5	18	384	< 1	33	5	26	0.57	72	< 10	37	< 0.5	< 2	2.22	20	4	4.61	< 10	< 1	0.17	< 10
696738	16	0.4	< 0.5	25	429	< 1	43	3	33	0.63	77	< 10	38	< 0.5	< 2	2.30	24	5	4.72	< 10	< 1	0.19	< 10
696739	24	0.4	< 0.5	23	559	< 1	34	4	28	0.68	70	< 10	48	< 0.5	2	2.74	20	4	4.74	< 10	< 1	0.21	< 10
696740	19	0.5	< 0.5	21	713	< 1	47	6	35	0.51	102	< 10	33	< 0.5	< 2	2.72	28	5	6.22	< 10	< 1	0.15	< 10
696741	28	0.5	< 0.5	17	662	< 1	48	7	32	0.53	89	< 10	32	< 0.5	< 2	2.59	25	4	5.84	< 10	< 1	0.16	< 10
696742	34																						
696743	33																						
696744	54																						
696745	31	0.4	< 0.5	26	1330	< 1	36	< 2	36	0.61	87	< 10	32	< 0.5	< 2	3.11	17	6	6.88	< 10	< 1	0.09	< 10
696746	22	0.4	< 0.5	28	1960	< 1	31	4	265	0.76	87	< 10	33	< 0.5	3	3.63	13	12	6.63	< 10	< 1	0.09	< 10
696747	46	0.4	< 0.5	29	1230	< 1	43	3	77	0.68	76	< 10	31	< 0.5	< 2	2.74	20	9	6.56	< 10	< 1	0.09	< 10
696748	24	0.4	< 0.5	23	1120	< 1	38	< 2	40	0.68	77	< 10	41	< 0.5	< 2	2.76	17	14	5.35	< 10	< 1	0.12	< 10
696749	31	0.4	< 0.5	21	1340	< 1	36	< 2	39	0.64	94	< 10	40	< 0.5	< 2	3.28	15	8	5.58	< 10	< 1	0.12	< 10
696750	19	0.4	< 0.5	24	994	< 1	43	< 2	42	0.64	65	< 10	34	< 0.5	< 2	2.43	20	12	5.34	< 10	< 1	0.09	< 10
696751	15	0.4	< 0.5	26	944	< 1	34	2	41	0.64	40	< 10	30	< 0.5	< 2	2.23	18	9	5.21	< 10	< 1	0.08	< 10
696752	< 5	0.4	< 0.5	< 1	103	< 1	< 1	< 2	15	4.33	< 2	12	11	0.6	< 2	0.18	< 1	2	0.61	10	< 1	1.40	< 10
696753	20	0.3	< 0.5	22	1060	< 1	37	< 2	42	0.82	41	< 10	37	< 0.5	< 2	2.74	16	9	5.51	< 10	< 1	0.11	< 10
696754	16	0.4	< 0.5	15	980	< 1	28	< 2	46	0.94	36	< 10	33	< 0.5	< 2	2.34	13	9	5.69	< 10	< 1	0.09	< 10
696755	18	0.4	< 0.5	20	1190	< 1	34	< 2	37	0.82	49	< 10	33	< 0.5	< 2	2.54	17	9	6.32	< 10	< 1	0.10	< 10
696756	174	0.5	< 0.5	21	2620	< 1	50	7	49	1.11	244	< 10	28	< 0.5	< 2	3.57	19	8	9.54	< 10	< 1	0.19	< 10

Analyte Symbol	Au	Ag	Cd	Cu	Mn	Mo	Ni	Pb	Zn	Al	As	B	Ba	Be	Bi	Ca	Co	Cr	Fe	Ga	Hg	K	La
Unit Symbol	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm
Lower Limit	5	0.2	0.5	1	5	1	1	2	2	0.01	2	10	10	0.5	2	0.01	1	1	0.01	10	1	0.01	10
Method Code	FA-AA	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
696757	107	0.5	< 0.5	31	2400	< 1	60	4	60	1.32	142	< 10	20	< 0.5	< 2	3.45	25	5	11.3	< 10	< 1	0.15	< 10
696758	2430	1.6	< 0.5	33	3830	< 1	68	19	44	0.68	1770	< 10	11	< 0.5	< 2	2.38	25	4	20.4	< 10	< 1	0.09	< 10
696759	> 5000	2.8	< 0.5	44	5500	< 1	55	44	33	0.26	2240	< 10	< 10	< 0.5	< 2	2.42	18	2	20.6	< 10	< 1	0.02	< 10
696760	< 5	0.4	< 0.5	2	134	< 1	< 1	< 2	17	4.22	5	14	14	0.6	< 2	0.20	< 1	3	0.65	< 10	< 1	1.43	< 10
696761	> 5000	3.0	< 0.5	68	7860	< 1	68	42	41	0.12	1460	< 10	< 10	< 0.5	3	1.83	23	2	26.7	< 10	< 1	0.01	< 10
696762	3950	1.7	< 0.5	40	5930	< 1	80	26	53	0.84	1760	< 10	< 10	< 0.5	< 2	1.42	26	4	23.8	< 10	< 1	0.07	< 10
696763	836	0.9	< 0.5	13	7670	< 1	48	7	64	1.27	377	< 10	15	< 0.5	3	1.64	21	4	23.8	< 10	< 1	0.05	< 10
696764	1110	1.2	< 0.5	17	4590	< 1	61	13	65	0.68	595	< 10	< 10	< 0.5	4	1.29	35	4	23.4	< 10	< 1	0.05	< 10
696765	714	1.5	< 0.5	16	6140	< 1	65	10	59	0.68	354	< 10	11	< 0.5	< 2	1.64	26	4	25.7	< 10	< 1	0.05	< 10
696766	136	0.8	< 0.5	10	7690	< 1	35	3	69	1.12	174	< 10	23	< 0.5	< 2	1.72	11	4	20.6	< 10	< 1	0.09	< 10
696767	694	0.8	< 0.5	14	4180	< 1	54	9	44	0.77	362	< 10	14	< 0.5	< 2	1.39	25	7	19.9	< 10	< 1	0.08	< 10
696768	713	0.9	< 0.5	14	4230	< 1	54	8	45	0.78	378	< 10	12	< 0.5	< 2	1.37	26	7	20.6	< 10	< 1	0.08	< 10
696769	189	0.7	< 0.5	6	6830	< 1	43	4	68	0.98	186	< 10	16	< 0.5	< 2	1.64	15	5	21.3	< 10	< 1	0.07	< 10
696770	314	0.5	< 0.5	7	5590	< 1	34	4	52	0.95	275	< 10	22	< 0.5	< 2	1.94	16	8	15.9	< 10	< 1	0.07	< 10
696771	336	0.4	< 0.5	110	770	< 1	96	< 2	64	2.32	< 2	23	35	< 0.5	< 2	2.08	35	72	5.48	< 10	< 1	0.05	< 10
696772	589	0.7	< 0.5	24	3340	< 1	84	9	47	1.01	529	< 10	12	< 0.5	< 2	2.08	31	6	20.2	< 10	< 1	0.11	< 10
696773	148	0.8	< 0.5	16	2910	< 1	97	9	46	1.13	283	< 10	< 10	< 0.5	< 2	1.41	36	5	20.6	< 10	< 1	0.18	< 10
696774	256	0.7	< 0.5	15	3670	< 1	86	5	54	1.14	216	< 10	14	< 0.5	< 2	2.40	31	4	18.5	< 10	< 1	0.15	< 10
696775	302	0.7	< 0.5	19	3240	< 1	94	5	51	1.08	260	< 10	13	< 0.5	< 2	1.93	32	4	18.6	< 10	< 1	0.15	< 10
696776	1020	1.0	< 0.5	31	3590	< 1	95	9	52	1.10	377	< 10	13	< 0.5	< 2	2.62	32	5	19.7	< 10	< 1	0.13	< 10
696777	455	0.5	< 0.5	20	1850	< 1	59	3	38	0.87	442	< 10	20	< 0.5	< 2	2.85	25	13	9.41	< 10	< 1	0.20	< 10

Analyte Symbol	Mg	Na	P	S	Sb	Sc	Sr	Ti	Th	Te	Tl	U	V	W	Y	Zr	Au
Unit Symbol	%	%	%	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	g/tonne
Lower Limit	0.01	0.001	0.001	0.01	2	1	1	0.01	20	1	2	10	1	10	1	1	0.03
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	FA- GRA
696673	0.59	0.127	0.151	2.27	< 2	2	104	< 0.01	< 20	6	< 2	< 10	10	< 10	4	11	
696674	1.36	0.136	0.121	7.37	6	4	156	< 0.01	< 20	7	< 2	< 10	26	< 10	4	17	
696675	0.98	0.122	0.132	5.68	4	3	133	< 0.01	< 20	< 1	< 2	< 10	19	< 10	4	15	
696676	0.72	0.136	0.096	0.93	< 2	2	125	< 0.01	< 20	1	< 2	< 10	9	< 10	4	10	
696677																	
696678	0.81	0.173	0.115	0.74	< 2	3	147	< 0.01	< 20	4	< 2	< 10	11	< 10	4	7	
696679	0.93	0.100	0.090	0.88	< 2	2	132	< 0.01	< 20	2	< 2	< 10	7	< 10	4	12	
696680	0.92	0.091	0.118	0.22	< 2	2	131	< 0.01	< 20	3	< 2	< 10	7	< 10	4	8	
696681	0.85	0.121	0.102	0.49	< 2	2	137	< 0.01	< 20	< 1	< 2	< 10	8	< 10	4	8	
696682	0.43	0.114	0.106	2.70	4	2	84	< 0.01	< 20	< 1	< 2	< 10	9	< 10	5	15	
696683	0.61	0.096	0.089	3.96	3	3	80	< 0.01	< 20	7	< 2	< 10	18	< 10	4	12	
696684	0.35	0.099	0.097	2.84	3	2	65	< 0.01	< 20	6	< 2	< 10	13	< 10	4	11	
696685	0.42	0.087	0.090	4.05	4	2	68	< 0.01	< 20	5	< 2	< 10	13	< 10	4	12	
696686	0.42	0.087	0.089	4.06	6	2	68	< 0.01	< 20	< 1	< 2	< 10	13	< 10	4	12	
696687	0.30	0.058	0.085	10.1	13	4	43	< 0.01	< 20	7	< 2	< 10	22	< 10	4	15	
696688	0.65	0.062	0.074	16.1	25	3	45	< 0.01	< 20	5	< 2	< 10	16	< 10	3	21	
696689	1.27	0.051	0.048	14.0	18	5	76	< 0.01	< 20	10	< 2	< 10	27	< 10	3	20	
696690	0.92	0.048	0.041	15.2	22	5	22	< 0.01	< 20	9	< 2	< 10	35	< 10	4	19	
696691	1.05	0.036	0.027	18.1	38	7	16	< 0.01	< 20	5	< 2	< 10	40	< 10	3	18	
696692	0.33	0.021	0.008	> 20.0	56	4	8	< 0.01	< 20	12	< 2	< 10	22	< 10	1	9	
696693	1.05	0.017	0.019	18.4	43	7	20	< 0.01	< 20	8	< 2	< 10	28	< 10	3	12	
696694	1.04	0.016	0.026	17.5	49	5	8	< 0.01	< 20	12	< 2	< 10	21	< 10	3	12	
696695	1.14	0.017	0.020	17.9	49	7	6	< 0.01	< 20	11	< 2	< 10	24	< 10	3	13	
696696	1.08	0.015	0.012	19.1	58	4	7	< 0.01	< 20	4	< 2	< 10	14	< 10	2	12	
696697	0.05	3.12	< 0.001	0.11	< 2	< 1	23	< 0.01	< 20	< 1	< 2	< 10	< 1	< 10	3	2	
696698	1.01	0.023	0.028	16.9	39	5	6	< 0.01	< 20	< 1	< 2	< 10	19	< 10	3	12	
696699	1.12	0.019	0.019	18.7	44	5	7	< 0.01	< 20	11	< 2	< 10	18	< 10	3	12	3.70
696700	0.91	0.015	0.014	19.9	50	4	8	< 0.01	< 20	8	< 2	< 10	17	< 10	2	10	3.56
696701	0.75	0.017	0.010	18.7	49	7	4	< 0.01	< 20	5	< 2	< 10	27	< 10	2	10	3.63
696702	0.61	0.019	0.002	13.9	42	4	37	< 0.01	< 20	5	< 2	< 10	13	< 10	1	7	3.55
696703	1.15	0.022	0.002	14.4	38	5	42	< 0.01	< 20	2	< 2	< 10	16	< 10	2	11	3.10
696704	1.05	0.015	0.005	9.95	22	6	26	0.02	< 20	6	< 2	< 10	32	< 10	3	11	
696705																	
696706	0.71	0.017	0.003	18.4	41	3	32	< 0.01	< 20	4	< 2	< 10	13	< 10	1	9	
696707	0.71	0.014	0.002	19.7	49	3	25	< 0.01	< 20	8	< 2	< 10	14	< 10	1	10	
696708	1.23	0.017	0.005	17.2	32	4	42	< 0.01	< 20	11	< 2	< 10	20	< 10	3	12	
696709	0.62	0.017	0.001	10.9	19	3	43	< 0.01	< 20	3	< 2	< 10	12	< 10	2	8	
696710	1.04	0.019	0.003	16.4	28	3	29	< 0.01	< 20	4	< 2	< 10	15	< 10	2	12	
696711	0.18	0.020	< 0.001	5.91	11	< 1	22	< 0.01	< 20	8	< 2	< 10	5	< 10	< 1	4	
696712	0.97	0.022	0.009	19.4	33	6	13	< 0.01	< 20	9	< 2	< 10	44	< 10	3	16	3.03
696713	0.99	0.022	0.009	18.9	36	6	13	< 0.01	< 20	3	< 2	< 10	45	< 10	3	16	3.18

Analyte Symbol	Mg	Na	P	S	Sb	Sc	Sr	Ti	Th	Te	Tl	U	V	W	Y	Zr	Au
Unit Symbol	%	%	%	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	g/tonne
Lower Limit	0.01	0.001	0.001	0.01	2	1	1	0.01	20	1	2	10	1	10	1	1	0.03
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	FA- GRA
696714	0.03	0.047	0.008	> 20.0	46	< 1	13	< 0.01	< 20	2	3	< 10	4	< 10	< 1	16	5.64
696715	0.07	0.040	0.008	19.4	39	1	13	< 0.01	< 20	< 1	< 2	< 10	11	< 10	1	18	
696716	0.02	0.030	0.014	19.3	30	< 1	11	< 0.01	< 20	5	2	< 10	5	< 10	< 1	11	2.94
696717	0.17	0.082	0.088	13.0	20	< 1	46	< 0.01	< 20	6	< 2	< 10	5	< 10	3	17	
696718	0.49	0.088	0.075	11.6	20	1	84	< 0.01	< 20	3	< 2	< 10	6	< 10	3	17	
696719	0.75	0.101	0.092	7.37	12	1	84	< 0.01	< 20	< 1	< 2	< 10	6	< 10	5	16	
696720	0.58	0.120	0.102	4.98	8	2	93	< 0.01	< 20	< 1	< 2	< 10	8	< 10	4	14	
696721	0.05	3.19	0.001	0.05	< 2	< 1	26	< 0.01	< 20	< 1	< 2	< 10	< 1	< 10	3	2	
696722	0.48	0.129	0.086	9.14	18	1	86	< 0.01	< 20	2	< 2	< 10	7	< 10	3	16	
696723	1.20	0.111	0.084	4.15	6	2	128	< 0.01	< 20	2	< 2	< 10	9	< 10	4	12	
696724	0.50	0.094	0.071	14.1	27	1	72	< 0.01	< 20	6	< 2	< 10	6	< 10	3	15	
696725	0.48	0.123	0.091	11.2	16	1	86	< 0.01	< 20	1	< 2	< 10	7	< 10	3	16	
696726	0.34	0.095	0.063	18.6	31	< 1	62	< 0.01	< 20	2	< 2	< 10	5	< 10	2	16	
696727	0.34	0.092	0.062	18.2	30	< 1	62	< 0.01	< 20	4	< 2	< 10	5	< 10	2	16	
696728	0.40	0.116	0.089	12.0	15	1	70	< 0.01	< 20	1	2	< 10	6	< 10	3	16	
696729	0.48	0.126	0.097	7.64	10	1	81	< 0.01	< 20	2	< 2	< 10	7	< 10	4	15	
696730	0.76	0.097	0.079	8.80	13	2	98	< 0.01	< 20	4	< 2	< 10	8	< 10	4	14	
696731	0.97	0.105	0.076	5.47	9	3	113	< 0.01	< 20	8	< 2	< 10	11	< 10	3	12	
696732	0.74	0.111	0.091	4.93	8	2	105	< 0.01	< 20	< 1	< 2	< 10	10	< 10	4	13	
696733	2.30	0.180	0.084	0.09	< 2	5	51	0.32	< 20	4	< 2	< 10	106	< 10	13	20	
696734	0.51	0.138	0.102	4.52	8	2	88	< 0.01	< 20	< 1	< 2	< 10	10	< 10	4	14	
696735	1.15	0.125	0.090	3.37	7	3	124	< 0.01	< 20	< 1	< 2	< 10	12	< 10	4	12	
696736	0.61	0.129	0.103	3.54	5	1	96	< 0.01	< 20	< 1	< 2	< 10	8	< 10	4	12	
696737	0.56	0.121	0.107	3.25	5	1	95	< 0.01	< 20	< 1	< 2	< 10	7	< 10	4	11	
696738	0.59	0.132	0.108	3.30	4	2	100	< 0.01	< 20	2	< 2	< 10	9	< 10	4	13	
696739	0.73	0.147	0.099	2.89	4	2	112	< 0.01	< 20	< 1	< 2	< 10	10	< 10	4	12	
696740	0.71	0.115	0.091	4.52	8	3	97	< 0.01	< 20	3	< 2	< 10	11	< 10	3	12	
696741	0.64	0.113	0.094	4.09	5	2	97	< 0.01	< 20	< 1	< 2	< 10	10	< 10	3	12	
696742																	
696743																	
696744																	
696745	0.73	0.066	0.085	3.45	2	2	99	< 0.01	< 20	5	< 2	< 10	8	< 10	3	10	
696746	0.86	0.073	0.080	2.12	< 2	2	125	< 0.01	< 20	4	< 2	< 10	11	< 10	3	9	
696747	0.74	0.062	0.087	3.44	2	2	94	< 0.01	< 20	2	< 2	< 10	10	< 10	3	10	
696748	0.77	0.079	0.097	2.39	< 2	2	106	< 0.01	< 20	4	< 2	< 10	9	< 10	4	10	
696749	0.92	0.076	0.095	2.34	< 2	3	120	< 0.01	< 20	4	< 2	< 10	10	< 10	4	10	
696750	0.67	0.065	0.093	2.55	3	2	91	< 0.01	< 20	4	< 2	< 10	8	< 10	3	9	
696751	0.61	0.059	0.087	2.45	2	1	86	< 0.01	< 20	6	< 2	< 10	8	< 10	3	8	
696752	0.05	3.12	0.001	0.01	< 2	< 1	24	< 0.01	< 20	< 1	< 2	< 10	< 1	< 10	3	2	
696753	0.78	0.076	0.105	2.13	< 2	2	106	< 0.01	< 20	< 1	< 2	< 10	9	< 10	4	10	
696754	0.71	0.065	0.105	2.17	< 2	2	96	< 0.01	< 20	1	< 2	< 10	11	< 10	4	10	
696755	0.72	0.083	0.092	3.04	< 2	2	99	< 0.01	< 20	< 1	< 2	< 10	11	< 10	4	11	



Analyte Symbol	Mg	Na	P	S	Sb	Sc	Sr	Ti	Th	Te	Tl	U	V	W	Y	Zr	Au
Unit Symbol	%	%	%	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	g/tonne
Lower Limit	0.01	0.001	0.001	0.01	2	1	1	0.01	20	1	2	10	1	10	1	1	0.03
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	FA- GRA
696756	1.28	0.117	0.069	5.19	4	4	139	< 0.01	< 20	2	< 2	< 10	20	< 10	4	17	
696757	1.04	0.084	0.066	6.89	8	3	133	< 0.01	< 20	2	< 2	< 10	23	< 10	4	15	
696758	1.14	0.037	0.006	19.2	21	2	132	< 0.01	< 20	7	< 2	< 10	11	< 10	3	18	
696759	1.51	0.019	0.003	18.0	41	2	150	< 0.01	< 20	4	< 2	< 10	8	< 10	2	10	6.34
696760	0.06	3.15	0.001	0.08	< 2	< 1	25	< 0.01	< 20	1	< 2	< 10	< 1	< 10	3	1	
696761	1.99	0.023	0.002	19.1	49	3	94	< 0.01	< 20	10	< 2	< 10	14	< 10	2	11	6.19
696762	1.49	0.034	0.007	18.4	28	3	78	< 0.01	< 20	8	< 2	< 10	14	< 10	2	19	4.14
696763	1.76	0.028	0.013	12.8	15	2	75	< 0.01	< 20	4	< 2	< 10	13	< 10	3	17	
696764	1.03	0.026	0.008	17.7	27	2	57	< 0.01	< 20	4	< 2	< 10	9	< 10	2	14	
696765	1.43	0.024	0.009	17.5	34	2	73	< 0.01	< 20	13	< 2	< 10	11	< 10	2	14	
696766	1.81	0.037	0.013	6.89	12	3	81	< 0.01	< 20	5	< 2	< 10	13	< 10	3	19	
696767	1.02	0.032	0.010	14.0	20	2	69	< 0.01	< 20	< 1	< 2	< 10	9	< 10	2	16	
696768	1.02	0.033	0.010	14.7	17	2	69	< 0.01	< 20	5	< 2	< 10	10	< 10	2	17	
696769	1.70	0.032	0.012	9.34	12	3	74	< 0.01	< 20	3	< 2	< 10	13	< 10	2	17	
696770	1.29	0.043	0.019	7.14	9	1	85	< 0.01	< 20	4	< 2	< 10	6	< 10	2	15	
696771	2.32	0.181	0.086	0.12	< 2	5	51	0.33	< 20	3	< 2	< 10	110	< 10	14	22	
696772	0.98	0.043	0.051	15.6	16	2	92	< 0.01	< 20	3	< 2	< 10	13	< 10	3	18	
696773	0.80	0.062	0.048	17.2	21	2	71	< 0.01	< 20	5	< 2	< 10	17	< 10	2	20	
696774	1.10	0.054	0.051	12.8	18	3	109	< 0.01	< 20	2	< 2	< 10	19	< 10	3	18	
696775	0.95	0.055	0.062	13.5	16	3	87	< 0.01	< 20	< 1	< 2	< 10	16	< 10	3	18	
696776	1.10	0.054	0.052	14.8	22	3	112	< 0.01	< 20	3	< 2	< 10	20	< 10	3	18	
696777	0.80	0.081	0.082	6.65	8	2	128	< 0.01	< 20	3	< 2	< 10	13	< 10	4	17	

Analyte Symbol	Au	Ag	Cd	Cu	Mn	Mo	Ni	Pb	Zn	Al	As	B	Ba	Be	Bi	Ca	Co	Cr	Fe	Ga	Hg	K	La
Unit Symbol	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm
Lower Limit	5	0.2	0.5	1	5	1	1	2	2	0.01	2	10	10	0.5	2	0.01	1	1	0.01	10	1	0.01	10
Method Code	FA-AA	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
GXR-1 Meas		30.6	2.3	1180	814	15	25	716	705	0.30	416	10	357	0.9	1510	0.75	6	7	22.5	< 10	2	0.03	< 10
GXR-1 Cert		31.0	3.30	1110	852	18.0	41.0	730	760	3.52	427	15.0	750	1.22	1380	0.960	8.20	12.0	23.6	13.8	3.90	0.050	7.50
GXR-1 Meas		29.9	2.2	1130	821	14	27	698	688	0.29	393	< 10	421	0.9	1460	0.73	5	6	21.8	< 10	3	0.03	< 10
GXR-1 Cert		31.0	3.30	1110	852	18.0	41.0	730	760	3.52	427	15.0	750	1.22	1380	0.960	8.20	12.0	23.6	13.8	3.90	0.050	7.50
GXR-6 Meas		0.7	< 0.5	76	1060	1	21	106	127	6.40	261	< 10	1140	1.0	< 2	0.15	15	89	5.47	20	< 1	1.09	11
GXR-6 Cert		1.30	1.00	66.0	1010	2.40	27.0	101	118	17.7	330	9.80	1300	1.40	0.290	0.180	13.8	96.0	5.58	35.0	0.0680	1.87	13.9
GXR-6 Meas		0.6	< 0.5	69	1080	1	17	104	125	6.47	269	< 10	1150	1.0	< 2	0.15	15	89	5.47	20	< 1	1.10	11
GXR-6 Cert		1.30	1.00	66.0	1010	2.40	27.0	101	118	17.7	330	9.80	1300	1.40	0.290	0.180	13.8	96.0	5.58	35.0	0.0680	1.87	13.9
OREAS 134b (AQUA REGIA) Meas		> 100	559	1380				> 5000	> 10000		242						120		11.6				
OREAS 134b (AQUA REGIA) Cert		204	563	1360				133000	177000		221						106		12.25				
OREAS 133a (Aqua Regia) Meas		99.5	287	322				> 5000	> 10000		145		18				24		7.58				
OREAS 133a (Aqua Regia) Cert		97	297	324				48600.00	106000.00		140		59				23		7.92				
OXN117 Meas																							
OXN117 Cert																							
SN75 Meas																							
SN75 Cert																							
OREAS 203 Meas	854																						
OREAS 203 Cert	871																						
OREAS 203 Meas	878																						
OREAS 203 Cert	871																						
OREAS 203 Meas	885																						
OREAS 203 Cert	871																						
OREAS 203 Meas	914																						
OREAS 203 Cert	871																						
OREAS 203 Meas	921																						
OREAS 203 Cert	871																						
OREAS 224 Meas	2110																						
OREAS 224 Cert	2150.00																						
OREAS 224 Meas	2180																						
OREAS 224 Cert	2150.00																						
OREAS 224 Meas	2200																						
OREAS 224 Cert	2150.00																						
OREAS 224 Meas	2200																						
OREAS 224 Cert	2150.00																						

Analyte Symbol	Au	Ag	Cd	Cu	Mn	Mo	Ni	Pb	Zn	Al	As	B	Ba	Be	Bi	Ca	Co	Cr	Fe	Ga	Hg	K	La
Unit Symbol	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm
Lower Limit	5	0.2	0.5	1	5	1	1	2	2	0.01	2	10	10	0.5	2	0.01	1	1	0.01	10	1	0.01	10
Method Code	FA-AA	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
OREAS 224 Meas	2260																						
OREAS 224 Cert	2150.000																						
696673 Orig		0.3	< 0.5	18	833	< 1	111	6	23	0.64	40	< 10	52	< 0.5	3	2.52	26	17	4.11	< 10	< 1	0.16	17
696673 Dup		0.3	< 0.5	19	828	< 1	109	< 2	23	0.65	41	< 10	52	< 0.5	2	2.54	26	17	4.13	< 10	< 1	0.16	18
696682 Orig	17																						
696682 Dup	17																						
696692 Orig	1380																						
696692 Dup	1400																						
696702 Orig	4210																						
696702 Dup	3640																						
696704 Orig		0.7	< 0.5	13	6150	< 1	71	7	66	0.30	301	< 10	< 10	< 0.5	< 2	0.56	23	27	20.4	< 10	< 1	< 0.01	< 10
696704 Dup		0.6	< 0.5	11	6130	< 1	73	8	65	0.30	296	< 10	11	< 0.5	< 2	0.56	22	26	20.2	< 10	< 1	< 0.01	< 10
696717 Orig	846																						
696717 Dup	852																						
696722 Orig	111	0.8	< 0.5	35	355	< 1	56	9	31	0.57	200	< 10	15	< 0.5	< 2	1.89	34	7	9.59	< 10	< 1	0.15	< 10
696722 Split PREP DUP	111	0.7	< 0.5	33	340	< 1	57	9	29	0.52	193	< 10	14	< 0.5	< 2	1.85	32	8	9.45	< 10	< 1	0.14	< 10
696727 Orig	204																						
696727 Dup	202																						
696737 Orig	36																						
696737 Dup	36																						
696748 Orig		0.3	< 0.5	23	1110	< 1	37	3	40	0.67	76	< 10	40	< 0.5	3	2.75	17	18	5.33	< 10	< 1	0.12	< 10
696748 Dup		0.4	< 0.5	23	1130	< 1	39	< 2	40	0.69	78	< 10	41	< 0.5	< 2	2.77	17	11	5.37	< 10	< 1	0.12	< 10
696752 Orig	< 5																						
696752 Dup	< 5																						
696753 Orig		0.3	< 0.5	22	1050	< 1	39	< 2	42	0.81	43	< 10	36	< 0.5	< 2	2.71	16	10	5.45	< 10	< 1	0.10	< 10
696753 Dup		0.4	< 0.5	22	1080	< 1	36	< 2	43	0.83	40	< 10	37	< 0.5	< 2	2.78	16	9	5.57	< 10	< 1	0.11	< 10
696757 Orig		0.5	< 0.5	29	2390	< 1	59	3	60	1.31	139	< 10	17	< 0.5	< 2	3.43	23	5	11.2	< 10	< 1	0.15	< 10
696757 Dup		0.6	< 0.5	33	2420	< 1	61	4	60	1.33	144	< 10	23	< 0.5	< 2	3.46	26	5	11.4	< 10	< 1	0.15	< 10
696762 Orig	3890																						
696762 Dup	4010																						
696765 Orig		1.5	< 0.5	16	6150	< 1	62	11	59	0.68	355	< 10	10	< 0.5	< 2	1.64	27	4	25.8	< 10	< 1	0.05	< 10
696765 Dup		1.5	< 0.5	16	6130	< 1	68	10	60	0.68	353	< 10	11	< 0.5	< 2	1.65	25	4	25.6	< 10	< 1	0.05	< 10
696772 Orig	589	0.7	< 0.5	24	3340	< 1	84	9	47	1.01	529	< 10	12	< 0.5	< 2	2.08	31	6	20.2	< 10	< 1	0.11	< 10
696772 Split PREP DUP	600	0.7	< 0.5	23	3340	< 1	85	9	49	1.00	527	< 10	11	< 0.5	< 2	2.06	33	5	20.0	< 10	< 1	0.11	< 10
696772 Orig	583																						
696772 Dup	595																						
Method Blank	< 5																						
Method Blank	< 5																						
Method Blank	< 5																						
Method Blank	< 5																						

Analyte Symbol	Au	Ag	Cd	Cu	Mn	Mo	Ni	Pb	Zn	Al	As	B	Ba	Be	Bi	Ca	Co	Cr	Fe	Ga	Hg	K	La
Unit Symbol	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm
Lower Limit	5	0.2	0.5	1	5	1	1	2	2	0.01	2	10	10	0.5	2	0.01	1	1	0.01	10	1	0.01	10
Method Code	FA-AA	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
Method Blank	< 5																						
Method Blank	< 5																						
Method Blank	< 5																						
Method Blank	< 5																						
Method Blank	< 5																						
Method Blank	8																						
Method Blank																							
Method Blank																							
Method Blank		0.5	< 0.5	< 1	< 5	< 1	< 1	< 2	< 2	< 0.01	< 2	< 10	< 10	< 0.5	< 2	< 0.01	< 1	< 1	< 0.01	< 10	< 1	< 0.01	< 10
Method Blank		1.2	< 0.5	< 1	< 5	< 1	< 1	< 2	< 2	< 0.01	< 2	< 10	< 10	< 0.5	< 2	< 0.01	< 1	< 1	< 0.01	< 10	< 1	< 0.01	< 10
Method Blank		0.5	< 0.5	< 1	< 5	< 1	< 1	< 2	< 2	< 0.01	< 2	< 10	< 10	< 0.5	< 2	< 0.01	< 1	< 1	< 0.01	< 10	< 1	< 0.01	< 10
Method Blank		0.5	< 0.5	< 1	< 5	< 1	< 1	< 2	< 2	< 0.01	< 2	< 10	< 10	< 0.5	< 2	< 0.01	< 1	< 1	< 0.01	< 10	< 1	< 0.01	< 10
Method Blank																							
Method Blank																							

Analyte Symbol	Mg	Na	P	S	Sb	Sc	Sr	Ti	Th	Te	Tl	U	V	W	Y	Zr	Au
Unit Symbol	%	%	%	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	g/tonne
Lower Limit	0.01	0.001	0.001	0.01	2	1	1	0.01	20	1	2	10	1	10	1	1	0.03
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	FA- GRA
GXR-1 Meas	0.14	0.052	0.041	0.21	85	1	170	< 0.01	< 20	15	< 2	29	76	143	26	15	
GXR-1 Cert	0.217	0.0520	0.0650	0.257	122	1.58	275	0.036	2.44	13.0	0.390	34.9	80.0	164	32.0	38.0	
GXR-1 Meas	0.13	0.052	0.040	0.20	80	1	163	< 0.01	< 20	16	< 2	27	73	132	25	14	
GXR-1 Cert	0.217	0.0520	0.0650	0.257	122	1.58	275	0.036	2.44	13.0	0.390	34.9	80.0	164	32.0	38.0	
GXR-6 Meas	0.40	0.089	0.036	0.04	< 2	23	36		< 20	< 1	< 2	< 10	167	< 10	6	14	
GXR-6 Cert	0.609	0.104	0.0350	0.0160	3.60	27.6	35.0		5.30	0.0180	2.20	1.54	186	1.90	14.0	110	
GXR-6 Meas	0.40	0.089	0.037	0.02	3	23	35		< 20	< 1	< 2	< 10	168	< 10	6	15	
GXR-6 Cert	0.609	0.104	0.0350	0.0160	3.60	27.6	35.0		5.30	0.0180	2.20	1.54	186	1.90	14.0	110	
OREAS 134b (AQUA REGIA) Meas				15.5													
OREAS 134b (AQUA REGIA) Cert				19.31													
OREAS 133a (Aqua Regia) Meas				10.4	132												
OREAS 133a (Aqua Regia) Cert				10.7	147												
OXN117 Meas																	7.60
OXN117 Cert																	7.679
SN75 Meas																	8.80
SN75 Cert																	8.67
OREAS 203 Meas																	0.87
OREAS 203 Cert																	0.871
OREAS 203 Meas																	
OREAS 203 Cert																	
OREAS 203 Meas																	
OREAS 203 Cert																	
OREAS 203 Meas																	
OREAS 203 Cert																	
OREAS 203 Meas																	
OREAS 203 Cert																	
OREAS 224 Meas																	2.19
OREAS 224 Cert																	2.150
OREAS 224 Meas																	
OREAS 224 Cert																	
OREAS 224 Meas																	
OREAS 224 Cert																	
OREAS 224 Meas																	
OREAS 224 Cert																	
OREAS 224 Meas																	
OREAS 224 Cert																	

Analyte Symbol	Mg	Na	P	S	Sb	Sc	Sr	Ti	Th	Te	Tl	U	V	W	Y	Zr	Au
Unit Symbol	%	%	%	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	g/tonne
Lower Limit	0.01	0.001	0.001	0.01	2	1	1	0.01	20	1	2	10	1	10	1	1	0.03
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	FA- GRA
696673 Orig	0.58	0.127	0.149	2.27	< 2	2	103	< 0.01	< 20	6	< 2	< 10	10	< 10	4	11	
696673 Dup	0.59	0.127	0.152	2.26	2	2	104	< 0.01	< 20	5	< 2	< 10	10	< 10	5	11	
696682 Orig																	
696682 Dup																	
696692 Orig																	
696692 Dup																	
696702 Orig																	
696702 Dup																	
696704 Orig	1.06	0.015	0.005	9.93	23	6	26	0.02	< 20	7	< 2	< 10	32	< 10	3	11	
696704 Dup	1.05	0.015	0.005	9.97	21	6	26	0.02	< 20	4	< 2	< 10	32	< 10	3	11	
696717 Orig																	
696717 Dup																	
696722 Orig	0.48	0.129	0.086	9.14	18	1	86	< 0.01	< 20	2	< 2	< 10	7	< 10	3	16	
696722 Split PREP DUP	0.47	0.115	0.084	8.93	16	1	84	< 0.01	< 20	3	< 2	< 10	7	< 10	3	15	
696727 Orig																	
696727 Dup																	
696737 Orig																	
696737 Dup																	
696748 Orig	0.76	0.078	0.097	2.39	< 2	2	106	< 0.01	< 20	3	< 2	< 10	9	< 10	4	10	
696748 Dup	0.77	0.080	0.098	2.38	< 2	2	106	< 0.01	< 20	5	< 2	< 10	9	< 10	4	10	
696752 Orig																	
696752 Dup																	
696753 Orig	0.78	0.077	0.103	2.11	< 2	2	105	< 0.01	< 20	< 1	< 2	< 10	8	< 10	4	10	
696753 Dup	0.79	0.075	0.106	2.15	5	2	107	< 0.01	< 20	2	5	< 10	9	< 10	4	10	
696757 Orig	1.03	0.084	0.065	6.82	8	3	132	< 0.01	< 20	2	< 2	< 10	23	< 10	4	15	
696757 Dup	1.05	0.084	0.066	6.96	8	3	134	< 0.01	< 20	1	< 2	< 10	24	< 10	4	15	
696762 Orig																	
696762 Dup																	
696765 Orig	1.44	0.024	0.009	17.5	32	2	73	< 0.01	< 20	11	< 2	< 10	11	< 10	2	14	
696765 Dup	1.43	0.024	0.009	17.4	36	2	74	< 0.01	< 20	14	< 2	< 10	11	< 10	2	14	
696772 Orig	0.98	0.043	0.051	15.6	16	2	92	< 0.01	< 20	3	< 2	< 10	13	< 10	3	18	
696772 Split PREP DUP	0.97	0.042	0.050	15.8	18	2	94	< 0.01	< 20	5	< 2	< 10	13	< 10	3	18	
696772 Orig																	
696772 Dup																	
Method Blank																	
Method Blank																	
Method Blank																	
Method Blank																	
Method Blank																	
Method Blank																	

Analyte Symbol	Mg	Na	P	S	Sb	Sc	Sr	Ti	Th	Te	Tl	U	V	W	Y	Zr	Au
Unit Symbol	%	%	%	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	g/tonne
Lower Limit	0.01	0.001	0.001	0.01	2	1	1	0.01	20	1	2	10	1	10	1	1	0.03
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	FA- GRA
Method Blank																	
Method Blank																	
Method Blank																	
Method Blank																	
Method Blank																	< 0.03
Method Blank																	< 0.03
Method Blank	< 0.01	0.010	< 0.001	< 0.01	< 2	< 1	< 1	< 0.01	< 20	1	< 2	< 10	< 1	< 10	< 1	< 1	
Method Blank	< 0.01	0.012	< 0.001	< 0.01	< 2	< 1	< 1	< 0.01	< 20	2	< 2	< 10	< 1	< 10	< 1	< 1	
Method Blank	< 0.01	0.010	< 0.001	< 0.01	< 2	< 1	< 1	< 0.01	< 20	2	< 2	< 10	< 1	< 10	< 1	< 1	
Method Blank	< 0.01	0.010	< 0.001	< 0.01	< 2	< 1	< 1	< 0.01	< 20	3	< 2	< 10	< 1	< 10	< 1	< 1	
Method Blank																	< 0.03
Method Blank																	< 0.03



**Date Submitted:** 28-Mar-18  
**Invoice No.:** A18-03948  
**Invoice Date:** 22-Jun-18  
**Your Reference:** 81 Lucas

**Noble Mineral Exploration**  
**2500-120 Adelaide Street West**  
**Toronto ON M5H 1T1**  
**Canada**

**ATTN: Randy Singh (inv-cc)**

## CERTIFICATE OF ANALYSIS

105 Rock samples were submitted for analysis.

The following analytical package(s) were requested:

Code 1A2-Timmins Au - Fire Assay AA

Code 1E3-Timmins Aqua Regia ICP(AQUAGEO)

REPORT      **A18-03948**

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

Notes:

If value exceeds upper limit we recommend reassay by fire assay gravimetric-Code 1A3.

Values which exceed the upper limit should be assayed for accurate numbers.

Footnote: Sample 696799 is INS

CERTIFIED BY:

A handwritten signature in black ink, appearing to read "Emmanuel Esemé". The signature is stylized with a large, sweeping 'E' and 'S'.

Emmanuel Esemé , Ph.D.  
Quality Control

**ACTIVATION LABORATORIES LTD.**  
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## Results

## Activation Laboratories Ltd.

## Report: A18-03948

Analyte Symbol	Au	Ag	Cd	Cu	Mn	Mo	Ni	Pb	Zn	Al	As	B	Ba	Be	Bi	Ca	Co	Cr	Fe	Ga	Hg	K	La
Unit Symbol	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm
Lower Limit	5	0.2	0.5	1	5	1	1	2	2	0.01	2	10	10	0.5	2	0.01	1	1	0.01	10	1	0.01	10
Method Code	FA-AA	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
696778	242	1.2	< 0.5	24	2300	< 1	49	4	47	1.10	414	< 10	< 10	< 0.5	< 2	3.06	21	11	9.38	< 10	< 1	0.21	< 10
696779	1920	2.2	< 0.5	34	1380	< 1	50	21	86	0.43	1300	< 10	< 10	< 0.5	< 2	1.34	26	23	12.7	< 10	< 1	0.14	< 10
696780	< 5	1.2	< 0.5	< 1	98	< 1	< 1	< 2	19	4.85	< 2	16	11	0.6	< 2	0.20	< 1	< 1	0.46	10	< 1	1.67	< 10
696781	3890	2.3	< 0.5	37	3120	< 1	76	20	43	0.70	1880	< 10	< 10	< 0.5	< 2	2.34	35	5	15.5	< 10	< 1	0.24	< 10
696782	3570	2.6	< 0.5	41	3930	< 1	82	30	35	0.56	3110	< 10	< 10	< 0.5	< 2	2.21	30	8	17.1	< 10	< 1	0.21	< 10
696783	> 5000	3.5	< 0.5	60	2630	< 1	93	49	27	0.47	2370	< 10	< 10	< 0.5	< 2	1.75	33	8	17.7	< 10	< 1	0.21	< 10
696784	> 5000	2.9	< 0.5	46	3410	< 1	77	38	47	0.42	3300	< 10	< 10	< 0.5	< 2	1.80	28	9	17.8	< 10	< 1	0.18	< 10
696785	> 5000	3.3	< 0.5	56	2320	< 1	52	55	91	0.18	5730	< 10	< 10	< 0.5	< 2	0.30	51	12	19.1	< 10	< 1	0.05	< 10
696786	1580	1.9	< 0.5	23	1590	< 1	55	19	41	0.07	2460	< 10	< 10	< 0.5	< 2	0.30	12	40	8.74	< 10	< 1	0.01	< 10
696787	3400	2.5	< 0.5	35	1460	< 1	89	36	67	0.07	3530	< 10	< 10	< 0.5	< 2	0.38	26	40	12.3	< 10	< 1	0.01	< 10
696788	2570	2.1	< 0.5	25	2710	4	103	24	53	0.07	3870	< 10	< 10	< 0.5	< 2	1.00	19	40	12.0	< 10	< 1	0.01	< 10
696789	2020	1.6	< 0.5	18	2030	13	25	12	30	0.03	2600	< 10	< 10	< 0.5	< 2	1.13	9	42	7.60	< 10	< 1	< 0.01	< 10
696790	2040	1.8	< 0.5	19	2100	14	26	14	32	0.03	2720	< 10	< 10	< 0.5	< 2	1.20	9	46	7.85	< 10	< 1	< 0.01	< 10
696791	2350	2.2	< 0.5	27	2310	18	51	16	76	0.07	2820	< 10	< 10	< 0.5	< 2	1.14	18	50	10.6	< 10	< 1	< 0.01	< 10
696792	2180	2.1	< 0.5	21	2470	26	79	14	63	0.07	2330	< 10	< 10	< 0.5	< 2	1.24	21	44	11.0	< 10	< 1	< 0.01	< 10
696793	1330	1.9	< 0.5	19	926	8	63	18	38	0.05	876	< 10	< 10	< 0.5	< 2	0.51	10	68	6.97	< 10	< 1	0.01	< 10
696794	2530	2.5	< 0.5	26	881	61	51	19	47	0.05	1960	< 10	< 10	< 0.5	< 2	0.41	14	69	8.36	< 10	< 1	< 0.01	< 10
696795	326	1.2	< 0.5	6	1300	7	14	4	18	0.16	451	< 10	18	< 0.5	< 2	1.45	5	65	3.14	< 10	< 1	0.06	< 10
696796	343	1.3	< 0.5	11	1330	< 1	39	4	35	0.42	345	< 10	18	< 0.5	< 2	4.43	22	15	6.08	< 10	< 1	0.15	< 10
696797	700	1.3	< 0.5	19	605	< 1	44	6	35	0.51	226	< 10	11	< 0.5	< 2	2.28	28	8	5.74	< 10	< 1	0.20	< 10
696798	280	1.2	< 0.5	32	746	< 1	63	6	39	1.34	203	< 10	14	< 0.5	< 2	2.42	31	25	5.30	< 10	< 1	0.33	< 10
696799	317																						
696800	115	1.1	< 0.5	92	1300	< 1	79	3	312	2.58	156	< 10	31	0.7	< 2	2.94	36	38	5.43	< 10	< 1	0.23	< 10
696801	220	1.1	< 0.5	11	1350	< 1	40	3	39	0.78	2200	< 10	14	< 0.5	< 2	2.64	19	12	5.65	< 10	< 1	0.30	< 10
696802	192	1.2	1.2	101	1480	< 1	105	4	686	2.87	235	< 10	14	0.5	< 2	3.32	41	98	8.27	< 10	< 1	0.13	< 10
696803	915	1.7	0.5	46	2780	< 1	83	12	62	0.98	915	< 10	< 10	< 0.5	< 2	2.26	39	11	16.7	< 10	< 1	0.17	< 10
696804	1400	1.7	< 0.5	32	4970	< 1	55	13	55	0.24	1670	< 10	< 10	< 0.5	< 2	2.44	16	24	16.2	< 10	1	0.03	< 10
696805	2330	1.6	< 0.5	57	1440	< 1	193	13	223	1.46	2060	< 10	< 10	0.7	< 2	1.31	43	66	12.8	< 10	< 1	0.10	< 10
696806	428	1.0	< 0.5	22	2600	< 1	93	< 2	159	0.98	8400	< 10	30	< 0.5	< 2	4.36	24	51	7.29	< 10	< 1	0.17	< 10
696807	258	0.9	< 0.5	25	2010	< 1	101	< 2	135	1.16	6110	< 10	26	< 0.5	< 2	3.42	26	52	6.53	< 10	< 1	0.23	< 10
696808	310	1.0	< 0.5	10	1440	< 1	64	< 2	60	0.90	8170	< 10	25	< 0.5	< 2	2.72	18	39	4.11	< 10	< 1	0.31	11
696809	248	1.0	< 0.5	13	1670	< 1	95	< 2	90	1.10	5740	< 10	21	< 0.5	< 2	2.93	23	40	5.53	< 10	< 1	0.31	< 10
696810	< 5	1.2	< 0.5	< 1	117	< 1	< 1	< 2	21	5.03	18	18	12	0.6	< 2	0.21	< 1	< 1	0.55	10	< 1	1.75	< 10
696811	184	1.0	< 0.5	13	1640	< 1	86	< 2	89	1.07	4860	< 10	22	< 0.5	< 2	2.83	24	37	5.40	< 10	< 1	0.30	< 10
696812	> 5000	2.4	< 0.5	37	511	< 1	34	33	106	0.40	867	< 10	< 10	< 0.5	< 2	0.12	30	17	19.3	< 10	< 1	0.11	< 10
696813	4370	2.9	0.7	49	596	< 1	45	34	265	0.16	555	< 10	< 10	< 0.5	< 2	0.07	41	12	20.1	< 10	< 1	0.03	< 10
696814	1730	1.8	< 0.5	32	1240	3	90	22	219	0.32	803	< 10	< 10	< 0.5	< 2	0.05	59	25	18.8	< 10	< 1	0.03	< 10
696815	1890	2.1	< 0.5	39	2230	< 1	86	30	169	0.28	664	< 10	< 10	< 0.5	< 2	0.07	51	19	21.1	< 10	< 1	0.01	< 10
696816	472	1.4	< 0.5	19	4680	< 1	82	11	61	0.71	469	< 10	< 10	< 0.5	< 2	1.93	34	11	18.1	< 10	< 1	0.11	< 10
696817	465	1.4	< 0.5	18	4740	< 1	83	11	60	0.72	472	< 10	< 10	< 0.5	< 2	1.93	35	11	18.4	< 10	< 1	0.12	< 10
696818	370	1.4	< 0.5	12	6070	< 1	87	7	58	0.14	285	< 10	< 10	< 0.5	< 2	0.98	31	12	24.1	< 10	1	< 0.01	< 10
696819	90	1.2	< 0.5	11	5880	< 1	87	6	66	0.25	235	< 10	< 10	< 0.5	< 2	0.99	24	19	22.4	< 10	< 1	< 0.01	< 10

## Results

## Activation Laboratories Ltd.

## Report: A18-03948

Analyte Symbol	Au	Ag	Cd	Cu	Mn	Mo	Ni	Pb	Zn	Al	As	B	Ba	Be	Bi	Ca	Co	Cr	Fe	Ga	Hg	K	La
Unit Symbol	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm
Lower Limit	5	0.2	0.5	1	5	1	1	2	2	0.01	2	10	10	0.5	2	0.01	1	1	0.01	10	1	0.01	10
Method Code	FA-AA	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
696820	158	1.1	1.0	14	4600	< 1	65	8	70	0.24	329	< 10	< 10	< 0.5	< 2	0.85	21	16	23.0	< 10	< 1	0.01	< 10
696821	33	1.1	< 0.5	16	4720	< 1	66	7	77	0.23	335	< 10	< 10	< 0.5	< 2	0.70	25	16	23.6	< 10	< 1	< 0.01	< 10
696822	21	0.9	0.8	12	6700	1	72	6	94	0.41	285	< 10	< 10	< 0.5	< 2	0.39	26	19	24.5	< 10	< 1	< 0.01	< 10
696823	54	1.0	< 0.5	20	1740	1	76	9	121	0.43	358	< 10	< 10	< 0.5	< 2	0.34	42	22	19.0	< 10	< 1	0.03	< 10
696824	1700	1.0	0.5	10	4700	35	45	5	65	0.17	187	< 10	< 10	< 0.5	< 2	0.34	18	46	13.8	< 10	< 1	< 0.01	< 10
696825	1870	1.4	< 0.5	171	918	< 1	95	4	73	3.85	9	19	28	< 0.5	< 2	3.44	38	148	5.71	10	< 1	0.09	< 10
696826	397	1.2	< 0.5	17	1550	14	70	7	53	0.13	661	< 10	< 10	< 0.5	< 2	0.35	28	53	11.1	< 10	< 1	< 0.01	< 10
696827	29	2.4	< 0.5	4	2420	3	19	< 2	45	0.10	159	< 10	< 10	< 0.5	5	0.47	6	73	5.59	< 10	< 1	< 0.01	< 10
696828	178	1.1	< 0.5	13	948	5	53	4	43	0.08	230	< 10	< 10	< 0.5	< 2	0.21	14	70	7.46	< 10	< 1	0.01	< 10
696829	986	1.2	< 0.5	30	4540	< 1	68	12	88	0.15	707	< 10	< 10	< 0.5	< 2	0.39	29	19	23.6	< 10	< 1	< 0.01	< 10
696830	1940	1.4	0.7	29	963	< 1	28	24	158	0.19	860	< 10	< 10	< 0.5	< 2	0.43	34	20	18.5	< 10	< 1	0.04	< 10
696831	44	1.0	< 0.5	12	1280	< 1	35	< 2	39	0.61	98	< 10	33	< 0.5	< 2	2.66	17	15	4.29	< 10	< 1	0.15	< 10
696832	15	1.0	< 0.5	15	1470	< 1	31	< 2	61	0.90	78	< 10	37	< 0.5	< 2	3.02	13	8	5.01	< 10	< 1	0.19	< 10
696833	16	0.9	< 0.5	14	1900	< 1	27	< 2	67	0.98	35	< 10	39	< 0.5	< 2	3.50	12	10	5.06	< 10	< 1	0.17	< 10
696834	< 5	1.1	< 0.5	1	147	< 1	< 1	< 2	20	5.22	< 2	14	12	0.6	< 2	0.21	< 1	7	0.84	10	< 1	1.63	< 10
696835	20	1.0	< 0.5	16	1590	< 1	32	< 2	43	0.88	60	< 10	32	< 0.5	< 2	3.20	16	7	5.51	< 10	< 1	0.16	< 10
696836	50	1.1	< 0.5	21	1270	< 1	43	< 2	39	0.78	127	< 10	18	< 0.5	< 2	2.35	20	13	6.08	< 10	< 1	0.17	< 10
696837	290	1.3	< 0.5	18	2670	< 1	61	6	44	0.76	189	< 10	< 10	< 0.5	< 2	3.32	27	9	13.0	< 10	< 1	0.12	< 10
696838	134	1.0	0.5	15	3210	< 1	72	5	52	1.12	219	< 10	< 10	< 0.5	< 2	2.95	23	6	14.7	< 10	< 1	0.10	< 10
696839	112	1.2	0.9	24	2120	< 1	107	9	50	1.08	193	< 10	< 10	< 0.5	< 2	2.30	39	7	18.4	< 10	< 1	0.09	< 10
696840	21	1.2	< 0.5	25	2540	< 1	91	5	59	1.27	143	< 10	< 10	< 0.5	< 2	3.04	33	10	15.7	< 10	< 1	0.13	< 10
696841	7	1.1	< 0.5	26	1130	< 1	62	2	46	0.79	86	< 10	10	< 0.5	< 2	2.31	35	8	8.45	< 10	< 1	0.16	< 10
696842	< 5	1.1	< 0.5	22	1680	< 1	49	< 2	62	1.00	46	< 10	16	< 0.5	< 2	3.22	22	7	7.79	< 10	< 1	0.16	< 10
696843	< 5	1.1	0.7	20	2150	< 1	97	8	50	0.77	189	< 10	< 10	< 0.5	< 2	2.03	38	13	17.3	< 10	< 1	0.11	< 10
696844	7	1.1	0.6	20	2170	< 1	99	8	51	0.78	194	< 10	< 10	< 0.5	< 2	2.20	38	13	17.6	< 10	< 1	0.11	< 10
696845	< 5	1.0	< 0.5	11	2130	< 1	51	14	39	0.78	82	< 10	< 10	< 0.5	< 2	3.21	23	9	9.24	< 10	< 1	0.14	< 10
696846	10	1.0	< 0.5	16	1330	< 1	59	4	38	0.87	111	< 10	< 10	< 0.5	< 2	2.26	27	7	10.6	< 10	< 1	0.15	< 10
696847	12	1.1	0.8	22	1640	< 1	101	6	44	0.75	218	< 10	< 10	< 0.5	< 2	2.15	45	12	17.9	< 10	< 1	0.13	< 10
696848	20	1.1	0.6	19	1780	< 1	71	4	38	0.92	189	< 10	< 10	< 0.5	< 2	2.39	31	13	15.9	< 10	< 1	0.20	< 10
696849	6	1.1	1.2	22	1530	< 1	87	7	52	0.96	211	< 10	< 10	< 0.5	< 2	1.88	37	10	17.7	< 10	< 1	0.19	< 10
696850	5	1.0	1.2	22	1400	< 1	91	8	47	0.96	227	< 10	< 10	< 0.5	< 2	1.67	42	9	18.5	< 10	< 1	0.15	< 10
696851	8	1.0	0.8	26	1370	< 1	105	8	47	0.90	249	< 10	< 10	< 0.5	< 2	1.29	45	10	19.8	< 10	< 1	0.18	< 10
696852	6	1.0	0.6	18	2700	< 1	103	4	52	0.95	166	< 10	< 10	< 0.5	< 2	2.37	32	13	16.7	< 10	< 1	0.15	< 10
696853	318	6.6	< 0.5	113	864	< 1	101	51	82	2.62	4	28	33	< 0.5	< 2	2.24	38	71	5.48	< 10	< 1	0.05	< 10
696854	8	1.0	< 0.5	16	3270	< 1	97	4	44	0.78	199	< 10	< 10	< 0.5	< 2	2.26	30	13	18.3	< 10	< 1	0.12	< 10
696855	8	1.1	0.8	15	3040	< 1	70	2	46	1.04	106	< 10	< 10	< 0.5	< 2	2.80	26	13	12.3	< 10	< 1	0.15	< 10
696856	< 5	1.0	0.9	9	6120	< 1	47	< 2	69	1.35	37	< 10	21	< 0.5	< 2	3.25	18	11	13.6	< 10	< 1	0.15	< 10
696857	6	1.0	0.9	11	5290	< 1	71	< 2	63	1.22	109	< 10	< 10	< 0.5	< 2	2.18	25	11	18.1	< 10	< 1	0.15	< 10
696858	6	1.0	0.7	14	3170	< 1	87	8	68	0.77	255	< 10	< 10	< 0.5	< 2	1.44	76	10	21.0	< 10	< 1	0.14	< 10
696859	< 5	1.0	0.7	11	5650	< 1	55	< 2	73	1.21	92	< 10	< 10	< 0.5	< 2	2.54	26	6	14.9	< 10	< 1	0.19	< 10
696860	< 5	1.0	0.7	9	6940	< 1	48	< 2	74	1.36	45	< 10	13	< 0.5	< 2	2.56	22	5	16.5	< 10	< 1	0.11	< 10
696861	10	0.9	0.7	14	6280	< 1	52	< 2	65	1.37	57	< 10	12	< 0.5	< 2	2.52	24	5	15.5	< 10	< 1	0.16	< 10

## Results

## Activation Laboratories Ltd.

## Report: A18-03948

Analyte Symbol	Au	Ag	Cd	Cu	Mn	Mo	Ni	Pb	Zn	Al	As	B	Ba	Be	Bi	Ca	Co	Cr	Fe	Ga	Hg	K	La
Unit Symbol	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm
Lower Limit	5	0.2	0.5	1	5	1	1	2	2	0.01	2	10	10	0.5	2	0.01	1	1	0.01	10	1	0.01	10
Method Code	FA-AA	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
696862	9	1.0	0.6	9	9160	< 1	33	< 2	67	1.06	43	< 10	15	< 0.5	< 2	2.71	20	5	18.7	< 10	< 1	0.10	< 10
696863	< 5	1.1	< 0.5	< 1	126	< 1	< 1	< 2	20	4.92	< 2	14	11	0.6	< 2	0.20	< 1	2	0.69	10	< 1	1.62	< 10
696864	< 5	1.0	< 0.5	5	8670	< 1	27	< 2	69	1.37	20	< 10	28	< 0.5	< 2	2.17	15	7	16.7	< 10	< 1	0.17	< 10
696865	< 5	1.0	0.8	7	8210	< 1	33	5	72	1.29	76	< 10	11	< 0.5	< 2	1.96	19	7	18.1	< 10	< 1	0.18	< 10
696866	7	1.2	0.9	23	4400	< 1	101	11	80	1.02	241	< 10	< 10	< 0.5	< 2	1.38	36	6	23.9	< 10	< 1	0.11	< 10
696867	9	1.0	0.8	24	2940	< 1	87	12	78	0.97	249	< 10	< 10	< 0.5	< 2	1.68	43	11	22.0	< 10	< 1	0.17	< 10
696868	10	1.0	< 0.5	15	3070	< 1	78	9	57	0.96	223	< 10	< 10	< 0.5	< 2	1.84	33	10	21.6	< 10	< 1	0.14	< 10
696869	10	1.0	0.9	9	3850	< 1	70	16	60	0.77	263	< 10	< 10	< 0.5	< 2	0.93	35	8	23.9	< 10	< 1	0.09	< 10
696870	12	1.2	0.6	3	9080	< 1	80	16	53	0.15	322	< 10	< 10	< 0.5	< 2	1.37	23	3	> 30.0	< 10	< 1	< 0.01	< 10
696871	10	1.2	< 0.5	3	9720	< 1	93	23	54	0.11	369	< 10	< 10	< 0.5	< 2	1.07	31	3	> 30.0	< 10	< 1	0.01	< 10
696872	16	1.2	< 0.5	6	8810	< 1	77	19	58	0.13	330	< 10	< 10	< 0.5	3	1.24	26	8	30.0	< 10	< 1	< 0.01	< 10
696873	16	1.1	< 0.5	4	9050	< 1	69	17	52	0.13	332	< 10	< 10	< 0.5	< 2	1.23	25	7	> 30.0	< 10	< 1	< 0.01	< 10
696874	9	1.1	0.7	4	4840	4	81	12	54	0.13	435	< 10	< 10	< 0.5	< 2	0.41	40	18	25.2	< 10	< 1	< 0.01	< 10
696875	42	1.2	< 0.5	5	3370	51	109	10	24	0.07	381	< 10	< 10	< 0.5	< 2	0.65	12	35	19.5	< 10	< 1	< 0.01	< 10
696876	133	0.9	< 0.5	4	5400	94	83	11	35	0.09	285	< 10	< 10	< 0.5	< 2	0.87	18	29	20.9	< 10	< 1	< 0.01	< 10
696877	143	1.2	< 0.5	6	4330	35	80	14	27	0.06	410	< 10	< 10	< 0.5	< 2	0.66	23	26	23.1	< 10	< 1	< 0.01	< 10
696878	150	1.2	< 0.5	7	6590	100	75	11	42	0.05	270	< 10	< 10	< 0.5	< 2	0.62	14	26	22.5	< 10	< 1	< 0.01	< 10
696879	1840	1.4	< 0.5	169	933	< 1	92	5	75	3.71	7	18	26	< 0.5	< 2	3.28	38	143	5.77	10	< 1	0.09	< 10
696880	1150	1.5	< 0.5	18	7920	20	80	24	57	0.16	435	< 10	< 10	< 0.5	< 2	0.48	32	14	27.2	< 10	< 1	< 0.01	< 10
696881	2470	1.8	< 0.5	25	7750	< 1	70	27	53	0.20	751	< 10	< 10	< 0.5	< 2	1.08	26	11	26.8	< 10	< 1	< 0.01	< 10
696882	1650	1.7	< 0.5	32	8800	4	65	19	67	0.42	2260	< 10	< 10	< 0.5	< 2	0.68	20	16	25.9	< 10	< 1	< 0.01	< 10

Analyte Symbol	Mg	Na	P	S	Sb	Sc	Sr	Ti	Th	Te	Tl	U	V	W	Y	Zr	Au
Unit Symbol	%	%	%	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	g/tonne
Lower Limit	0.01	0.001	0.001	0.01	2	1	1	0.01	20	1	2	10	1	10	1	1	0.03
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	FA- GRA
696778	0.90	0.086	0.077	6.71	6	3	125	< 0.01	< 20	1	< 2	< 10	20	< 10	4	19	
696779	0.41	0.071	0.030	13.9	17	1	71	< 0.01	< 20	2	< 2	< 10	7	< 10	2	20	
696780	0.05	3.80	0.001	0.01	< 2	< 1	22	< 0.01	< 20	< 1	< 2	< 10	< 1	< 10	4	1	
696781	0.97	0.100	0.049	15.4	19	3	134	< 0.01	< 20	5	< 2	< 10	13	< 10	4	31	3.79
696782	1.14	0.080	0.039	16.9	18	3	149	< 0.01	< 20	5	< 2	< 10	10	< 10	4	32	3.88
696783	0.71	0.060	0.038	18.5	33	1	111	< 0.01	< 20	8	2	< 10	7	< 10	3	33	5.01
696784	0.76	0.058	0.017	18.2	28	2	115	< 0.01	< 20	4	< 2	< 10	7	< 10	3	26	5.45
696785	0.14	0.027	0.002	19.5	41	< 1	20	< 0.01	< 20	9	< 2	< 10	4	< 10	2	17	5.17
696786	0.12	0.019	0.001	8.46	15	< 1	17	< 0.01	< 20	< 1	< 2	< 10	2	< 10	1	5	
696787	0.16	0.018	< 0.001	13.6	25	< 1	23	< 0.01	< 20	10	< 2	< 10	2	< 10	1	8	3.46
696788	0.39	0.018	< 0.001	12.1	19	1	59	< 0.01	< 20	11	< 2	< 10	3	< 10	2	7	
696789	0.46	0.014	< 0.001	7.61	9	< 1	59	< 0.01	< 20	1	< 2	< 10	3	< 10	1	4	
696790	0.49	0.014	< 0.001	8.03	10	< 1	60	< 0.01	< 20	< 1	< 2	< 10	3	< 10	1	4	
696791	0.49	0.016	< 0.001	10.7	18	1	57	< 0.01	< 20	5	< 2	< 10	5	< 10	1	6	
696792	0.47	0.017	< 0.001	10.9	17	< 1	70	< 0.01	< 20	8	< 2	< 10	4	< 10	2	6	
696793	0.18	0.020	< 0.001	7.44	16	< 1	24	< 0.01	< 20	< 1	< 2	< 10	2	< 10	< 1	4	
696794	0.14	0.016	< 0.001	8.67	20	< 1	18	< 0.01	< 20	< 1	< 2	< 10	2	< 10	< 1	4	
696795	0.42	0.031	0.015	2.28	3	< 1	57	< 0.01	< 20	2	< 2	< 10	4	< 10	1	5	
696796	1.58	0.074	0.084	3.95	7	4	157	< 0.01	< 20	< 1	< 2	< 10	12	< 10	4	15	
696797	0.68	0.081	0.100	5.05	8	1	88	< 0.01	< 20	5	< 2	< 10	8	< 10	4	16	
696798	0.93	0.215	0.111	3.61	5	6	114	< 0.01	< 20	1	< 2	< 10	45	18	6	15	
696799																	
696800	1.26	0.468	0.087	1.78	< 2	15	122	0.13	< 20	< 1	< 2	< 10	121	< 10	12	6	
696801	0.72	0.111	0.103	4.18	3	2	117	< 0.01	< 20	< 1	< 2	< 10	13	< 10	4	17	
696802	1.59	0.489	0.072	3.77	5	24	140	0.03	< 20	< 1	< 2	< 10	166	< 10	14	30	
696803	0.92	0.055	0.057	13.0	16	2	111	< 0.01	< 20	11	< 2	< 10	14	< 10	4	24	
696804	1.16	0.017	0.003	11.9	18	2	124	< 0.01	< 20	8	< 2	< 10	10	< 10	2	13	
696805	0.86	0.043	0.025	9.47	12	11	59	< 0.01	< 20	4	< 2	< 10	85	< 10	7	22	
696806	1.48	0.086	0.110	2.55	3	6	180	< 0.01	< 20	3	< 2	< 10	28	< 10	5	11	
696807	1.13	0.106	0.155	2.38	< 2	6	136	< 0.01	< 20	4	< 2	< 10	29	< 10	6	7	
696808	0.81	0.120	0.160	2.22	< 2	4	121	< 0.01	< 20	< 1	< 2	< 10	21	< 10	6	4	
696809	0.88	0.123	0.191	2.85	3	5	134	< 0.01	< 20	< 1	< 2	< 10	22	< 10	7	5	
696810	0.06	3.83	0.002	0.03	< 2	< 1	25	< 0.01	< 20	< 1	< 2	< 10	< 1	< 10	4	2	
696811	0.85	0.106	0.187	2.74	2	5	135	< 0.01	< 20	2	< 2	< 10	21	< 10	7	5	
696812	0.06	0.041	0.020	19.9	38	< 1	16	< 0.01	< 20	7	< 2	< 10	6	< 10	1	19	5.80
696813	0.04	0.019	0.005	> 20.0	53	< 1	6	< 0.01	< 20	8	2	< 10	4	< 10	< 1	11	3.86
696814	0.05	0.019	0.007	18.4	36	< 1	6	< 0.01	< 20	6	< 2	< 10	6	< 10	1	11	
696815	0.18	0.014	0.004	18.1	49	< 1	4	< 0.01	< 20	7	< 2	< 10	7	< 10	< 1	10	
696816	1.05	0.034	0.052	12.5	18	2	81	< 0.01	< 20	1	< 2	< 10	14	< 10	3	16	
696817	1.05	0.037	0.052	12.7	18	2	82	< 0.01	< 20	6	< 2	< 10	14	< 10	3	17	
696818	1.04	0.017	0.003	15.2	40	2	39	< 0.01	< 20	13	< 2	< 10	13	< 10	2	11	

Analyte Symbol	Mg	Na	P	S	Sb	Sc	Sr	Ti	Th	Te	Tl	U	V	W	Y	Zr	Au
Unit Symbol	%	%	%	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	g/tonne
Lower Limit	0.01	0.001	0.001	0.01	2	1	1	0.01	20	1	2	10	1	10	1	1	0.03
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	FA- GRA
696819	1.08	0.015	0.003	13.4	31	2	26	< 0.01	< 20	7	< 2	< 10	10	< 10	2	11	
696820	0.89	0.015	0.004	16.3	53	1	36	< 0.01	< 20	10	< 2	< 10	6	< 10	1	11	
696821	0.95	0.016	0.004	15.9	51	1	29	< 0.01	< 20	7	< 2	< 10	7	< 10	1	11	
696822	0.96	0.013	0.006	14.4	34	1	16	< 0.01	< 20	8	< 2	< 10	8	< 10	1	13	
696823	0.33	0.018	0.009	16.4	40	< 1	14	< 0.01	< 20	3	< 2	< 10	6	< 10	< 1	11	
696824	0.77	0.013	0.002	7.39	18	< 1	13	< 0.01	< 20	3	< 2	< 10	6	< 10	1	7	
696825	2.61	0.067	0.040	0.29	< 2	8	43	0.41	< 20	3	2	< 10	173	< 10	12	20	
696826	0.27	0.015	0.001	9.83	28	< 1	14	< 0.01	< 20	4	< 2	< 10	5	< 10	< 1	5	
696827	0.40	0.017	0.001	2.09	4	< 1	19	< 0.01	< 20	6	< 2	< 10	4	< 10	< 1	3	
696828	0.15	0.021	0.001	6.38	17	< 1	9	< 0.01	< 20	6	< 2	< 10	2	< 10	< 1	5	
696829	0.63	0.014	0.002	17.8	51	< 1	17	< 0.01	< 20	10	< 2	< 10	5	< 10	< 1	11	
696830	0.19	0.020	0.004	18.3	41	< 1	24	< 0.01	< 20	6	< 2	< 10	4	< 10	< 1	14	
696831	0.71	0.054	0.107	2.00	2	1	113	< 0.01	< 20	< 1	< 2	< 10	7	< 10	4	10	
696832	0.85	0.066	0.113	1.83	< 2	2	128	< 0.01	< 20	7	< 2	< 10	10	< 10	4	7	
696833	0.99	0.063	0.104	1.03	< 2	2	142	< 0.01	< 20	10	< 2	< 10	12	< 10	4	7	
696834	0.06	3.83	0.001	0.06	< 2	< 1	24	< 0.01	< 20	< 1	2	< 10	< 1	< 10	4	2	
696835	0.88	0.073	0.107	2.05	< 2	2	134	< 0.01	< 20	< 1	< 2	< 10	10	< 10	4	10	
696836	0.63	0.071	0.110	3.78	3	1	102	< 0.01	< 20	2	< 2	< 10	9	< 10	4	17	
696837	0.91	0.056	0.080	10.5	7	2	141	< 0.01	< 20	5	< 2	< 10	11	< 10	3	20	
696838	1.01	0.050	0.068	9.79	8	2	145	< 0.01	< 20	2	< 2	< 10	16	< 10	3	17	
696839	0.77	0.046	0.055	15.2	15	2	112	< 0.01	< 20	17	< 2	< 10	16	< 10	2	19	
696840	0.97	0.059	0.074	11.0	8	2	131	< 0.01	< 20	< 1	< 2	< 10	19	< 10	3	23	
696841	0.58	0.082	0.104	6.26	5	1	110	< 0.01	< 20	2	< 2	< 10	8	< 10	4	20	
696842	0.88	0.081	0.100	4.05	3	2	143	< 0.01	< 20	< 1	< 2	< 10	13	< 10	4	16	
696843	0.65	0.058	0.057	14.4	15	2	103	< 0.01	< 20	9	< 2	< 10	13	< 10	2	17	
696844	0.66	0.057	0.059	14.8	15	2	108	< 0.01	< 20	5	< 2	< 10	13	< 10	2	18	
696845	0.83	0.072	0.083	6.08	6	1	152	< 0.01	< 20	4	< 2	< 10	9	< 10	3	16	
696846	0.61	0.075	0.108	8.08	8	1	105	< 0.01	< 20	5	< 2	< 10	10	< 10	4	19	
696847	0.65	0.070	0.057	15.6	17	1	113	< 0.01	< 20	3	< 2	< 10	11	< 10	2	20	
696848	0.72	0.096	0.061	14.4	11	2	124	< 0.01	< 20	6	< 2	< 10	14	< 10	3	20	
696849	0.56	0.091	0.062	16.3	15	1	99	< 0.01	< 20	8	< 2	< 10	12	< 10	3	21	
696850	0.56	0.073	0.058	16.9	16	1	88	< 0.01	< 20	12	3	< 10	13	< 10	2	21	
696851	0.44	0.086	0.048	18.4	19	1	78	< 0.01	< 20	6	2	< 10	12	< 10	2	20	
696852	0.84	0.072	0.053	13.3	12	2	111	< 0.01	< 20	5	< 2	< 10	13	< 10	3	18	
696853	2.55	0.207	0.084	0.12	< 2	6	51	0.33	< 20	7	< 2	< 10	123	< 10	14	9	
696854	0.91	0.056	0.039	14.4	15	2	100	< 0.01	< 20	14	< 2	< 10	13	< 10	2	16	
696855	0.97	0.071	0.063	7.98	8	2	124	< 0.01	< 20	11	< 2	< 10	12	< 10	3	16	
696856	1.57	0.064	0.064	3.33	5	3	154	< 0.01	< 20	< 1	< 2	< 10	19	< 10	3	14	
696857	1.23	0.057	0.057	9.16	10	3	109	< 0.01	< 20	2	< 2	< 10	15	< 10	3	17	
696858	0.70	0.055	0.044	17.2	19	2	77	< 0.01	< 20	21	< 2	< 10	11	< 10	2	17	
696859	1.34	0.076	0.077	6.09	8	3	122	< 0.01	< 20	9	< 2	< 10	15	< 10	4	17	
696860	1.58	0.051	0.074	4.89	6	3	118	< 0.01	< 20	13	< 2	< 10	15	< 10	4	18	

Analyte Symbol	Mg	Na	P	S	Sb	Sc	Sr	Ti	Th	Te	Tl	U	V	W	Y	Zr	Au
Unit Symbol	%	%	%	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	g/tonne
Lower Limit	0.01	0.001	0.001	0.01	2	1	1	0.01	20	1	2	10	1	10	1	1	0.03
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	FA- GRA
696861	1.46	0.066	0.069	5.11	6	3	124	< 0.01	< 20	9	< 2	< 10	18	< 10	4	18	
696862	1.76	0.048	0.057	4.29	7	3	138	< 0.01	< 20	13	< 2	< 10	14	< 10	3	17	
696863	0.06	3.68	0.001	0.02	< 2	< 1	24	< 0.01	< 20	< 1	< 2	< 10	< 1	< 10	4	2	
696864	1.68	0.080	0.068	2.57	6	3	118	< 0.01	< 20	9	< 2	< 10	17	< 10	3	17	
696865	1.42	0.072	0.056	5.72	11	3	109	< 0.01	< 20	8	< 2	< 10	17	< 10	3	19	
696866	0.91	0.047	0.038	17.7	23	2	79	< 0.01	< 20	13	< 2	< 10	13	< 10	2	22	
696867	0.68	0.067	0.043	18.8	22	2	98	< 0.01	< 20	7	< 2	< 10	11	< 10	2	24	
696868	0.76	0.056	0.042	17.6	19	1	103	< 0.01	< 20	6	< 2	< 10	11	< 10	2	22	
696869	0.71	0.040	0.024	18.5	21	1	55	< 0.01	< 20	6	< 2	< 10	9	< 10	2	20	
696870	1.90	0.015	0.003	17.1	48	< 1	77	< 0.01	< 20	14	< 2	< 10	7	< 10	2	13	
696871	2.03	0.016	0.005	16.9	52	1	55	< 0.01	< 20	12	< 2	< 10	6	< 10	3	13	
696872	1.53	0.013	0.003	16.8	47	1	62	< 0.01	< 20	27	< 2	< 10	9	< 10	2	11	
696873	1.54	0.012	0.003	16.3	50	1	61	< 0.01	< 20	11	< 2	< 10	9	< 10	2	12	
696874	0.76	0.012	0.004	18.9	50	1	20	< 0.01	< 20	7	< 2	< 10	12	< 10	1	10	
696875	0.62	0.013	0.001	16.0	42	< 1	27	< 0.01	< 20	7	< 2	< 10	6	< 10	< 1	8	
696876	0.93	0.016	0.001	13.5	25	1	37	< 0.01	< 20	4	< 2	< 10	7	< 10	1	8	
696877	0.79	0.016	0.001	17.6	41	< 1	31	< 0.01	< 20	5	< 2	< 10	7	< 10	1	9	
696878	1.10	0.013	0.002	13.2	29	1	26	< 0.01	< 20	10	< 2	< 10	9	< 10	2	9	
696879	2.56	0.063	0.038	0.29	< 2	8	43	0.38	< 20	9	< 2	< 10	164	< 10	12	20	
696880	1.22	0.013	0.002	16.8	45	2	20	< 0.01	< 20	12	< 2	< 10	12	< 10	2	12	
696881	1.30	0.016	0.002	17.2	48	1	53	< 0.01	< 20	6	< 2	< 10	8	< 10	2	11	
696882	1.27	0.014	0.004	14.4	31	2	34	< 0.01	< 20	15	< 2	< 10	10	< 10	2	15	

Analyte Symbol	Au	Ag	Cd	Cu	Mn	Mo	Ni	Pb	Zn	Al	As	B	Ba	Be	Bi	Ca	Co	Cr	Fe	Ga	Hg	K	La
Unit Symbol	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm
Lower Limit	5	0.2	0.5	1	5	1	1	2	2	0.01	2	10	10	0.5	2	0.01	1	1	0.01	10	1	0.01	10
Method Code	FA-AA	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
GXR-1 Meas		28.6	3.2	1070	976	14	24	706	827	0.29	377	< 10	196	0.8	1390	0.73	7	7	22.8	< 10	3	0.03	< 10
GXR-1 Cert		31.0	3.30	1110	852	18.0	41.0	730	760	3.52	427	15.0	750	1.22	1380	0.960	8.20	12.0	23.6	13.8	3.90	0.050	7.50
OREAS 134b (AQUA REGIA) Meas		> 100	641	1350				> 5000	> 10000		235						120		12.3				
OREAS 134b (AQUA REGIA) Cert		204	563	1360				133000	177000		221						106		12.25				
OREAS 133a (Aqua Regia) Meas		95.5	329	316				> 5000	> 10000		146		< 10				25		8.00				
OREAS 133a (Aqua Regia) Cert		97	297	324				48600.00	106000.00		140		59				23		7.92				
OXN117 Meas																							
OXN117 Cert																							
OXN117 Meas																							
OXN117 Cert																							
OxP116 Meas																							
OxP116 Cert																							
OxP116 Meas																							
OxP116 Cert																							
OREAS 203 Meas	900																						
OREAS 203 Cert	871																						
OREAS 203 Meas	848																						
OREAS 203 Cert	871																						
OREAS 203 Meas	840																						
OREAS 203 Cert	871																						
OREAS 203 Meas	845																						
OREAS 203 Cert	871																						
OREAS 203 Meas	826																						
OREAS 203 Cert	871																						
OREAS 224 Meas	2190																						
OREAS 224 Cert	2150.00																						
OREAS 224 Meas	2230																						
OREAS 224 Cert	2150.00																						
OREAS 224 Meas	2230																						
OREAS 224 Cert	2150.00																						
OREAS 224 Meas	2190																						
OREAS 224 Cert	2150.00																						
OREAS 224 Meas	2070																						
OREAS 224 Cert	2150.00																						

Analyte Symbol	Au	Ag	Cd	Cu	Mn	Mo	Ni	Pb	Zn	Al	As	B	Ba	Be	Bi	Ca	Co	Cr	Fe	Ga	Hg	K	La
Unit Symbol	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm
Lower Limit	5	0.2	0.5	1	5	1	1	2	2	0.01	2	10	10	0.5	2	0.01	1	1	0.01	10	1	0.01	10
Method Code	FA-AA	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
	00																						
696780 Orig		1.2	< 0.5	4	99	< 1	< 1	< 2	20	4.68	< 2	17	12	0.6	< 2	0.20	< 1	< 1	0.45	10	< 1	1.66	< 10
696780 Dup		1.1	< 0.5	< 1	98	< 1	< 1	< 2	17	5.01	< 2	15	11	0.6	< 2	0.20	< 1	< 1	0.47	10	< 1	1.68	< 10
696787 Orig	3370																						
696787 Dup	3420																						
696788 Orig		2.2	< 0.5	25	2740	4	104	25	54	0.07	3840	< 10	< 10	< 0.5	< 2	0.99	19	39	12.1	< 10	< 1	0.01	< 10
696788 Dup		2.0	< 0.5	26	2690	3	102	23	53	0.07	3910	< 10	< 10	< 0.5	< 2	1.01	20	41	11.8	< 10	< 1	0.01	< 10
696807 Orig	260																						
696807 Dup	255																						
696822 Orig	21																						
696822 Dup	21																						
696827 Orig	29	2.4	< 0.5	4	2420	3	19	< 2	45	0.10	159	< 10	< 10	< 0.5	5	0.47	6	73	5.59	< 10	< 1	< 0.01	< 10
696827 Split PREP DUP	30	1.0	< 0.5	6	2410	3	18	< 2	47	0.10	157	< 10	< 10	< 0.5	< 2	0.48	6	72	5.55	< 10	< 1	< 0.01	< 10
696827 Split PREP DUP		1.0	< 0.5	6	2410	3	18	< 2	47	0.10	157	< 10	< 10	< 0.5	< 2	0.48	6	72	5.55	< 10	< 1	< 0.01	< 10
696831 Orig	44																						
696831 Dup	44																						
696840 Orig		1.2	< 0.5	25	2530	< 1	90	5	60	1.27	142	< 10	< 10	< 0.5	< 2	2.97	33	9	15.6	< 10	< 1	0.13	< 10
696840 Dup		1.2	0.7	24	2560	< 1	92	5	59	1.27	144	< 10	< 10	< 0.5	< 2	3.10	33	10	15.9	< 10	< 1	0.13	< 10
696841 Orig	7																						
696841 Dup	6																						
696843 Orig		1.1	0.7	20	2150	< 1	99	8	50	0.76	189	< 10	< 10	< 0.5	< 2	2.00	38	13	17.2	< 10	< 1	0.11	< 10
696843 Dup		1.1	0.6	20	2150	< 1	96	9	49	0.77	189	< 10	< 10	< 0.5	< 2	2.07	39	13	17.3	< 10	< 1	0.11	< 10
696856 Orig	< 5	1.0	1.1	9	6120	< 1	47	< 2	69	1.35	37	< 10	22	< 0.5	< 2	3.24	19	11	13.6	< 10	< 1	0.15	< 10
696856 Dup	< 5	1.0	0.7	9	6110	< 1	48	< 2	69	1.35	38	< 10	19	< 0.5	< 2	3.26	18	11	13.6	< 10	< 1	0.15	< 10
696866 Orig	7																						
696866 Dup	6																						
696868 Orig		0.9	< 0.5	15	3090	< 1	75	9	56	0.95	222	< 10	< 10	< 0.5	< 2	1.81	32	10	21.8	< 10	< 1	0.14	< 10
696868 Dup		1.1	< 0.5	15	3050	< 1	81	10	58	0.97	224	< 10	< 10	< 0.5	< 2	1.86	33	11	21.4	< 10	< 1	0.14	< 10
696876 Orig	132																						
696876 Dup	133																						
696877 Orig	143	1.2	< 0.5	6	4330	35	80	14	27	0.06	410	< 10	< 10	< 0.5	< 2	0.66	23	26	23.1	< 10	< 1	< 0.01	< 10
696877 Split PREP DUP	144	1.2	0.6	6	4310	34	75	13	61	0.05	395	< 10	< 10	< 0.5	< 2	0.63	22	27	22.9	< 10	< 1	< 0.01	< 10
696881 Orig		1.8	< 0.5	25	7850	< 1	67	28	52	0.20	754	< 10	< 10	< 0.5	< 2	1.09	26	11	27.0	< 10	< 1	< 0.01	< 10
696881 Dup		1.8	< 0.5	24	7640	< 1	73	25	55	0.19	747	< 10	< 10	< 0.5	< 2	1.07	26	10	26.5	< 10	< 1	< 0.01	< 10
Method Blank	< 5																						
Method Blank	< 5																						
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Method Blank	< 5																						
Method Blank	< 5																						
Method Blank	< 5																						



Analyte Symbol	Au	Ag	Cd	Cu	Mn	Mo	Ni	Pb	Zn	Al	As	B	Ba	Be	Bi	Ca	Co	Cr	Fe	Ga	Hg	K	La
Unit Symbol	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm
Lower Limit	5	0.2	0.5	1	5	1	1	2	2	0.01	2	10	10	0.5	2	0.01	1	1	0.01	10	1	0.01	10
Method Code	FA-AA	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
Method Blank	< 5																						
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Method Blank																							
Method Blank		< 0.2	< 0.5	< 1	< 5	< 1	< 1	< 2	< 2	< 0.01	< 2	< 10	< 10	< 0.5	< 2	< 0.01	< 1	< 1	< 0.01	< 10	< 1	< 0.01	< 10
Method Blank		0.3	< 0.5	< 1	< 5	< 1	< 1	< 2	< 2	< 0.01	< 2	< 10	< 10	< 0.5	3	< 0.01	< 1	< 1	< 0.01	< 10	< 1	< 0.01	< 10

Analyte Symbol	Mg	Na	P	S	Sb	Sc	Sr	Ti	Th	Te	Tl	U	V	W	Y	Zr	Au
Unit Symbol	%	%	%	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	g/tonne
Lower Limit	0.01	0.001	0.001	0.01	2	1	1	0.01	20	1	2	10	1	10	1	1	0.03
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	FA- GRA
GXR-1 Meas	0.13	0.050	0.039	0.19	87	1	172	< 0.01	< 20	20	2	26	77	134	25	17	
GXR-1 Cert	0.217	0.0520	0.0650	0.257	122	1.58	275	0.036	2.44	13.0	0.390	34.9	80.0	164	32.0	38.0	
OREAS 134b (AQUA REGIA) Meas				15.3													
OREAS 134b (AQUA REGIA) Cert				19.31													
OREAS 133a (Aqua Regia) Meas				10.6	140												
OREAS 133a (Aqua Regia) Cert				10.7	147												
OXN117 Meas																	7.86
OXN117 Cert																	7.679
OXN117 Meas																	7.45
OXN117 Cert																	7.679
OxP116 Meas																	15.0
OxP116 Cert																	14.92
OxP116 Meas																	14.6
OxP116 Cert																	14.92
OREAS 203 Meas																	
OREAS 203 Cert																	
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OREAS 224 Meas																	
OREAS 224 Cert																	
696780 Orig	0.05	3.85	0.001	0.02	< 2	< 1	22	< 0.01	< 20	< 1	< 2	< 10	< 1	< 10	4	1	
696780 Dup	0.05	3.75	0.001	0.01	< 2	< 1	23	< 0.01	< 20	< 1	< 2	< 10	< 1	< 10	4	1	

Analyte Symbol	Mg	Na	P	S	Sb	Sc	Sr	Ti	Th	Te	Tl	U	V	W	Y	Zr	Au
Unit Symbol	%	%	%	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	g/tonne
Lower Limit	0.01	0.001	0.001	0.01	2	1	1	0.01	20	1	2	10	1	10	1	1	0.03
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	FA- GRA
696787 Orig																	
696787 Dup																	
696788 Orig	0.39	0.018	< 0.001	12.0	18	1	60	< 0.01	< 20	9	< 2	< 10	3	< 10	2	7	
696788 Dup	0.40	0.019	< 0.001	12.3	20	1	58	< 0.01	< 20	12	< 2	< 10	3	< 10	2	7	
696807 Orig																	
696807 Dup																	
696822 Orig																	
696822 Dup																	
696827 Orig	0.40	0.017	0.001	2.09	4	< 1	19	< 0.01	< 20	6	< 2	< 10	4	< 10	< 1	3	
696827 Split PREP DUP	0.41	0.017	0.001	2.09	5	< 1	19	< 0.01	< 20	6	< 2	< 10	4	< 10	< 1	3	
696827 Split PREP DUP	0.41	0.017	0.001	2.09	5	< 1	19	< 0.01	< 20	6	< 2	< 10	4	< 10	< 1	3	
696831 Orig																	
696831 Dup																	
696840 Orig	0.97	0.059	0.074	10.9	7	2	131	< 0.01	< 20	4	< 2	< 10	20	< 10	3	23	
696840 Dup	0.98	0.059	0.075	11.1	9	2	132	< 0.01	< 20	< 1	< 2	< 10	18	< 10	3	23	
696841 Orig																	
696841 Dup																	
696843 Orig	0.65	0.058	0.058	14.5	15	2	103	< 0.01	< 20	12	< 2	< 10	13	< 10	2	17	
696843 Dup	0.65	0.058	0.057	14.4	15	2	103	< 0.01	< 20	5	2	< 10	13	< 10	2	18	
696856 Orig	1.57	0.064	0.063	3.32	5	3	153	< 0.01	< 20	< 1	< 2	< 10	19	< 10	3	14	
696856 Dup	1.58	0.063	0.064	3.35	4	3	154	< 0.01	< 20	< 1	< 2	< 10	19	< 10	3	14	
696866 Orig																	
696866 Dup																	
696868 Orig	0.75	0.056	0.042	17.3	19	1	103	< 0.01	< 20	2	< 2	< 10	11	< 10	2	22	
696868 Dup	0.77	0.057	0.043	17.9	19	1	103	< 0.01	< 20	9	< 2	< 10	11	< 10	2	22	
696876 Orig																	
696876 Dup																	
696877 Orig	0.79	0.016	0.001	17.6	41	< 1	31	< 0.01	< 20	5	< 2	< 10	7	< 10	1	9	
696877 Split PREP DUP	0.75	0.015	0.001	17.7	39	< 1	31	< 0.01	< 20	5	< 2	< 10	7	< 10	1	9	
696881 Orig	1.32	0.017	0.002	17.3	49	1	54	< 0.01	< 20	6	< 2	< 10	8	< 10	2	12	
696881 Dup	1.29	0.016	0.002	17.1	48	1	53	< 0.01	< 20	6	< 2	< 10	8	< 10	2	11	
Method Blank																	
Method Blank																	
Method Blank																	
Method Blank																	
Method Blank																	
Method Blank																	
Method Blank																	
Method Blank																	

Analyte Symbol	Mg	Na	P	S	Sb	Sc	Sr	Ti	Th	Te	Tl	U	V	W	Y	Zr	Au
Unit Symbol	%	%	%	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	g/tonne
Lower Limit	0.01	0.001	0.001	0.01	2	1	1	0.01	20	1	2	10	1	10	1	1	0.03
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	FA- GRA
Method Blank																	< 0.03
Method Blank																	< 0.03
Method Blank																	
Method Blank																	
Method Blank																	< 0.03
Method Blank																	< 0.03
Method Blank	< 0.01	0.011	< 0.001	< 0.01	< 2	< 1	< 1	< 0.01	< 20	< 1	< 2	< 10	< 1	< 10	< 1	< 1	
Method Blank	< 0.01	0.003	< 0.001	< 0.01	< 2	< 1	< 1	< 0.01	< 20	6	< 2	< 10	< 1	< 10	< 1	< 1	



**Date Submitted:** 28-Mar-18  
**Invoice No.:** A18-03949  
**Invoice Date:** 04-Jun-18  
**Your Reference:** 81 Lucas

**Noble Mineral Exploration**  
**2500-120 Adelaide Street West**  
**Toronto ON M5H 1T1**  
**Canada**

**ATTN: Randy Singh (inv-cc)**

## CERTIFICATE OF ANALYSIS

38 Rock samples were submitted for analysis.

The following analytical package(s) were requested:

Code 1A2-Timmins Au - Fire Assay AA

Code 1E3-Timmins Aqua Regia ICP(AQUAGEO)

REPORT **A18-03949**

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

Notes:

If value exceeds upper limit we recommend reassay by fire assay gravimetric-Code 1A3.

Values which exceed the upper limit should be assayed for accurate numbers.

CERTIFIED BY:

A handwritten signature in black ink, appearing to read "Emmanuel Esemé". The signature is stylized with a large, sweeping 'E' and 'S'.

Emmanuel Esemé , Ph.D.  
Quality Control

**ACTIVATION LABORATORIES LTD.**  
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## Results

## Activation Laboratories Ltd.

## Report: A18-03949

Analyte Symbol	Au	Ag	Cd	Cu	Mn	Mo	Ni	Pb	Zn	Al	As	B	Ba	Be	Bi	Ca	Co	Cr	Fe	Ga	Hg	K	La
Unit Symbol	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm
Lower Limit	5	0.2	0.5	1	5	1	1	2	2	0.01	2	10	10	0.5	2	0.01	1	1	0.01	10	1	0.01	10
Method Code	FA-AA	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
696883	1460	0.4	< 0.5	20	2020	24	23	13	38	0.08	1170	< 10	< 10	< 0.5	< 2	0.48	21	23	11.4	< 10	< 1	0.01	< 10
696884	397	< 0.2	< 0.5	3	3020	4	3	< 2	23	0.15	361	< 10	11	< 0.5	< 2	0.71	1	34	6.90	< 10	< 1	0.02	< 10
696885	226	< 0.2	< 0.5	9	1080	7	9	5	28	0.07	308	< 10	< 10	< 0.5	4	0.48	4	39	4.45	< 10	< 1	0.01	< 10
696886	395	< 0.2	< 0.5	10	3060	9	17	5	32	0.07	153	< 10	< 10	< 0.5	< 2	0.55	9	38	9.50	< 10	< 1	< 0.01	< 10
696887	382	< 0.2	< 0.5	11	3120	9	18	6	33	0.08	156	< 10	< 10	< 0.5	< 2	0.56	9	35	9.71	< 10	< 1	< 0.01	< 10
696888	52	< 0.2	< 0.5	11	5730	4	8	< 2	32	0.11	67	< 10	< 10	< 0.5	< 2	0.16	4	36	12.5	< 10	< 1	< 0.01	< 10
696889	141	< 0.2	< 0.5	15	1390	4	18	10	43	0.07	262	< 10	< 10	< 0.5	< 2	0.20	23	34	12.9	< 10	< 1	< 0.01	< 10
696890	34	< 0.2	< 0.5	11	5690	2	8	< 2	33	0.08	112	< 10	< 10	< 0.5	< 2	0.55	3	27	11.8	< 10	< 1	< 0.01	< 10
696891	796	0.4	< 0.5	25	4100	7	33	15	60	0.08	814	< 10	< 10	< 0.5	< 2	0.47	34	18	17.6	< 10	< 1	< 0.01	< 10
696892	702	0.2	< 0.5	21	2210	7	19	13	37	0.14	1120	< 10	< 10	< 0.5	< 2	0.62	16	22	10.9	< 10	< 1	< 0.01	< 10
696893	2190	0.8	< 0.5	48	2560	< 1	40	30	87	0.32	1160	< 10	< 10	< 0.5	< 2	0.65	26	10	19.6	< 10	< 1	0.03	< 10
696894	13	< 0.2	< 0.5	13	705	< 1	34	< 2	33	1.56	71	< 10	155	< 0.5	< 2	2.69	14	7	2.94	< 10	< 1	0.56	14
696895	6	< 0.2	< 0.5	10	198	< 1	< 1	< 2	15	3.94	< 2	12	13	0.5	< 2	0.16	< 1	7	1.52	< 10	< 1	1.31	< 10
696896	21	< 0.2	< 0.5	15	808	< 1	22	< 2	31	2.01	128	13	189	< 0.5	< 2	2.57	12	12	3.74	< 10	< 1	0.70	14
696897	60	< 0.2	< 0.5	15	811	< 1	29	< 2	61	0.94	133	< 10	87	< 0.5	< 2	3.06	13	5	3.43	< 10	< 1	0.30	11
696898	13	< 0.2	< 0.5	21	410	1	72	< 2	38	2.10	111	13	161	< 0.5	< 2	2.14	19	4	2.94	< 10	< 1	0.59	17
696899	46	< 0.2	< 0.5	21	647	< 1	139	< 2	51	1.49	277	< 10	102	< 0.5	3	2.54	26	4	4.23	< 10	< 1	0.40	12
696900	61	< 0.2	< 0.5	23	689	< 1	246	< 2	56	1.25	395	< 10	62	< 0.5	< 2	2.64	41	3	5.11	< 10	< 1	0.23	16
696901	44	< 0.2	< 0.5	23	708	< 1	205	< 2	41	1.65	303	< 10	87	< 0.5	< 2	2.76	36	4	5.10	< 10	< 1	0.37	14
696902	34	< 0.2	< 0.5	15	1050	< 1	211	< 2	52	0.99	269	< 10	46	< 0.5	< 2	3.98	31	2	5.67	< 10	< 1	0.20	< 10
696903	21	< 0.2	< 0.5	17	1070	< 1	221	< 2	135	1.77	200	< 10	36	< 0.5	< 2	3.46	33	4	7.52	< 10	< 1	0.15	< 10
696904	13	< 0.2	< 0.5	14	1150	< 1	221	< 2	85	1.92	163	< 10	42	< 0.5	< 2	3.60	32	3	7.34	< 10	< 1	0.18	13
696905	601	< 0.2	< 0.5	15	1190	< 1	212	< 2	78	1.59	364	< 10	34	< 0.5	< 2	4.10	32	3	7.67	< 10	< 1	0.14	11
696906	340	< 0.2	< 0.5	106	686	< 1	87	< 2	59	2.29	< 2	20	34	< 0.5	< 2	1.98	34	62	5.18	< 10	< 1	0.05	< 10
696907	126	< 0.2	< 0.5	15	942	< 1	249	2	70	1.35	337	< 10	47	< 0.5	< 2	3.61	39	3	6.33	< 10	< 1	0.19	13
696908	5	< 0.2	< 0.5	22	541	< 1	193	< 2	55	0.96	60	< 10	73	< 0.5	< 2	2.68	34	2	3.36	< 10	< 1	0.27	18
696909	5	< 0.2	< 0.5	21	602	< 1	161	< 2	52	0.61	51	< 10	58	< 0.5	< 2	2.85	28	2	3.00	< 10	< 1	0.21	16
696910	< 5	< 0.2	< 0.5	19	478	< 1	106	< 2	61	0.88	54	< 10	60	< 0.5	< 2	2.34	24	2	2.90	< 10	< 1	0.21	19
696911	< 5	< 0.2	< 0.5	15	1050	< 1	97	< 2	83	1.82	44	< 10	25	< 0.5	< 2	3.42	22	4	7.66	< 10	< 1	0.09	13
696912	< 5	< 0.2	< 0.5	18	726	< 1	102	2	86	1.23	55	< 10	39	< 0.5	< 2	2.88	23	4	4.62	< 10	< 1	0.13	15
696913	8	< 0.2	< 0.5	12	1400	< 1	123	< 2	136	1.15	83	< 10	21	< 0.5	< 2	3.95	26	3	8.94	< 10	< 1	0.06	< 10
696914	43	< 0.2	< 0.5	20	992	< 1	101	< 2	88	0.91	615	< 10	39	< 0.5	< 2	3.29	26	3	6.14	< 10	< 1	0.13	12
696915	47	< 0.2	< 0.5	18	951	< 1	96	3	86	0.87	590	< 10	37	< 0.5	< 2	3.19	25	3	5.92	< 10	< 1	0.12	11
696916	22	< 0.2	< 0.5	17	635	< 1	90	3	51	0.53	137	< 10	56	< 0.5	< 2	2.83	27	2	3.98	< 10	< 1	0.18	11
696917	17	< 0.2	< 0.5	20	669	< 1	118	4	39	0.72	143	< 10	56	< 0.5	< 2	2.48	34	3	4.24	< 10	< 1	0.19	11
696918	22	< 0.2	< 0.5	20	740	< 1	102	< 2	52	0.80	115	< 10	52	< 0.5	< 2	2.63	27	3	4.22	< 10	< 1	0.17	12
696919	33	< 0.2	< 0.5	15	563	< 1	97	< 2	34	0.47	180	< 10	55	< 0.5	< 2	2.58	26	3	3.00	< 10	< 1	0.18	14
696920	13	< 0.2	< 0.5	23	572	< 1	93	< 2	51	0.56	143	< 10	57	< 0.5	< 2	3.12	24	2	3.47	< 10	< 1	0.21	17

Analyte Symbol	Mg	Na	P	S	Sb	Sc	Sr	Ti	Th	Te	Tl	U	V	W	Y	Zr
Unit Symbol	%	%	%	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	0.01	0.001	0.001	0.01	2	1	1	0.01	20	1	2	10	1	10	1	1
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
696883	0.44	0.018	< 0.001	9.54	16	< 1	28	< 0.01	< 20	< 1	< 2	< 10	4	< 10	1	7
696884	0.57	0.016	0.001	3.31	3	< 1	39	< 0.01	< 20	< 1	< 2	< 10	3	< 10	2	7
696885	0.23	0.014	0.001	3.03	4	< 1	24	< 0.01	< 20	< 1	< 2	< 10	2	< 10	< 1	3
696886	0.55	0.014	0.002	4.67	9	< 1	26	< 0.01	< 20	< 1	< 2	< 10	3	< 10	< 1	4
696887	0.56	0.015	0.002	4.71	9	< 1	26	< 0.01	< 20	3	< 2	< 10	3	< 10	< 1	5
696888	0.97	0.014	0.002	2.69	5	< 1	6	< 0.01	< 20	< 1	< 2	< 10	4	< 10	1	5
696889	0.25	0.016	< 0.001	11.3	20	< 1	10	< 0.01	< 20	< 1	< 2	< 10	4	< 10	< 1	6
696890	1.00	0.013	0.002	2.74	5	< 1	24	< 0.01	< 20	< 1	< 2	< 10	6	< 10	2	5
696891	0.73	0.017	0.002	12.0	18	< 1	23	< 0.01	< 20	< 1	< 2	< 10	8	< 10	1	8
696892	0.44	0.017	0.002	7.97	13	< 1	25	< 0.01	< 20	< 1	< 2	< 10	5	< 10	2	6
696893	0.49	0.022	0.006	16.7	28	1	31	< 0.01	< 20	2	< 2	< 10	7	< 10	2	12
696894	0.82	0.233	0.100	0.44	< 2	3	160	< 0.01	< 20	< 1	< 2	< 10	19	< 10	6	10
696895	0.04	3.00	0.001	0.03	< 2	< 1	23	< 0.01	< 20	< 1	< 2	< 10	< 1	< 10	3	3
696896	0.76	0.322	0.093	0.48	< 2	4	176	< 0.01	< 20	< 1	< 2	< 10	28	< 10	5	14
696897	0.89	0.135	0.103	0.56	< 2	3	168	< 0.01	< 20	< 1	< 2	< 10	14	< 10	4	14
696898	0.83	0.293	0.101	0.58	< 2	4	177	< 0.01	< 20	< 1	< 2	< 10	25	< 10	5	12
696899	0.89	0.188	0.092	1.46	< 2	3	150	< 0.01	< 20	< 1	< 2	< 10	19	< 10	5	17
696900	1.03	0.109	0.112	1.98	< 2	3	125	< 0.01	< 20	< 1	< 2	< 10	15	< 10	5	15
696901	1.01	0.186	0.093	1.73	3	4	125	< 0.01	< 20	< 1	< 2	< 10	20	< 10	5	17
696902	1.21	0.096	0.084	1.48	2	3	126	< 0.01	< 20	< 1	< 2	< 10	13	< 10	4	12
696903	1.33	0.090	0.085	1.35	2	5	102	< 0.01	< 20	< 1	< 2	< 10	26	< 10	4	15
696904	1.40	0.104	0.089	0.84	3	5	110	< 0.01	< 20	< 1	< 2	< 10	27	< 10	4	13
696905	1.42	0.107	0.088	1.41	3	6	120	< 0.01	< 20	< 1	< 2	< 10	25	< 10	4	15
696906	2.26	0.184	0.081	0.08	< 2	5	51	0.31	< 20	3	< 2	< 10	103	< 10	13	23
696907	1.18	0.117	0.093	1.50	3	5	107	< 0.01	< 20	< 1	< 2	< 10	20	< 10	4	14
696908	0.87	0.103	0.104	0.80	< 2	2	87	< 0.01	< 20	4	< 2	< 10	11	< 10	4	13
696909	0.76	0.072	0.108	0.60	< 2	2	88	< 0.01	< 20	< 1	< 2	< 10	7	< 10	4	12
696910	0.79	0.089	0.116	0.36	< 2	2	84	< 0.01	< 20	< 1	< 2	< 10	11	< 10	5	11
696911	1.43	0.182	0.082	0.36	< 2	8	119	< 0.01	< 20	< 1	< 2	< 10	35	< 10	5	15
696912	1.17	0.087	0.097	0.32	< 2	5	101	< 0.01	< 20	< 1	< 2	< 10	23	< 10	4	13
696913	1.46	0.146	0.078	0.76	2	9	117	< 0.01	< 20	3	< 2	< 10	27	< 10	4	15
696914	1.14	0.099	0.095	0.90	2	7	117	< 0.01	< 20	2	< 2	< 10	20	< 10	5	15
696915	1.10	0.092	0.092	0.87	2	6	113	< 0.01	< 20	< 1	< 2	< 10	19	< 10	4	14
696916	0.76	0.070	0.112	1.26	< 2	3	105	< 0.01	< 20	< 1	< 2	< 10	9	< 10	4	14
696917	0.74	0.089	0.095	1.68	3	2	101	< 0.01	< 20	< 1	< 2	< 10	10	< 10	4	17
696918	0.85	0.093	0.096	1.21	3	4	104	< 0.01	< 20	3	< 2	< 10	14	< 10	4	15
696919	0.71	0.071	0.098	0.98	< 2	2	92	< 0.01	< 20	< 1	< 2	< 10	6	< 10	4	12
696920	0.78	0.074	0.105	0.92	< 2	2	100	< 0.01	< 20	3	< 2	< 10	6	< 10	4	11

Analyte Symbol	Au	Ag	Cd	Cu	Mn	Mo	Ni	Pb	Zn	Al	As	B	Ba	Be	Bi	Ca	Co	Cr	Fe	Ga	Hg	K	La
Unit Symbol	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm
Lower Limit	5	0.2	0.5	1	5	1	1	2	2	0.01	2	10	10	0.5	2	0.01	1	1	0.01	10	1	0.01	10
Method Code	FA-AA	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
GXR-1 Meas		29.0	1.8	1110	758	14	26	682	649	0.29	363	< 10	319	0.9	1420	0.71	7	6	21.2	< 10	3	0.03	< 10
GXR-1 Cert		31.0	3.30	1110	852	18.0	41.0	730	760	3.52	427	15.0	750	1.22	1380	0.960	8.20	12.0	23.6	13.8	3.90	0.050	7.50
GXR-1 Meas		31.3	2.8	1230	827	15	32	751	710	0.33	411	10	244	0.9	1550	0.78	6	7	23.8	< 10	6	0.03	< 10
GXR-1 Cert		31.0	3.30	1110	852	18.0	41.0	730	760	3.52	427	15.0	750	1.22	1380	0.960	8.20	12.0	23.6	13.8	3.90	0.050	7.50
GXR-6 Meas		< 0.2	< 0.5	66	970	1	19	98	114	6.21	243	< 10	1090	1.0	< 2	0.15	14	84	5.22	20	< 1	1.05	11
GXR-6 Cert		1.30	1.00	66.0	1010	2.40	27.0	101	118	17.7	330	9.80	1300	1.40	0.290	0.180	13.8	96.0	5.58	35.0	0.0680	1.87	13.9
GXR-6 Meas		< 0.2	< 0.5	71	1050	3	20	106	122	6.68	252	< 10	1170	1.0	< 2	0.15	15	92	5.60	20	< 1	1.14	12
GXR-6 Cert		1.30	1.00	66.0	1010	2.40	27.0	101	118	17.7	330	9.80	1300	1.40	0.290	0.180	13.8	96.0	5.58	35.0	0.0680	1.87	13.9
OREAS 134b (AQUA REGIA) Meas		> 100	596	1490				> 5000	> 10000		245						127		12.5				
OREAS 134b (AQUA REGIA) Cert		204	563	1360				133000	177000		221						106		12.25				
OREAS 133a (Aqua Regia) Meas		> 100	291	334				> 5000	> 10000		139		18				24		7.84				
OREAS 133a (Aqua Regia) Cert		97	297	324				48600.00	106000.00		140		59				23		7.92				
OREAS 203 Meas	859																						
OREAS 203 Cert	871																						
OREAS 203 Meas	891																						
OREAS 203 Cert	871																						
OREAS 224 Meas	2080																						
OREAS 224 Cert	2150.000																						
OREAS 224 Meas	2120																						
OREAS 224 Cert	2150.000																						
696883 Orig		0.4	< 0.5	21	2020	24	24	14	39	0.08	1170	< 10	< 10	< 0.5	< 2	0.48	21	24	11.5	< 10	< 1	0.01	< 10
696883 Dup		0.4	< 0.5	20	2020	24	22	12	38	0.08	1160	< 10	< 10	< 0.5	< 2	0.48	20	21	11.4	< 10	< 1	0.01	< 10
696888 Orig		< 0.2	< 0.5	11	5710	4	8	< 2	32	0.11	66	< 10	< 10	< 0.5	< 2	0.16	3	36	12.4	< 10	< 1	< 0.01	< 10
696888 Dup		< 0.2	< 0.5	11	5750	4	8	< 2	32	0.11	68	< 10	< 10	< 0.5	< 2	0.17	5	35	12.5	< 10	< 1	< 0.01	< 10
696892 Orig	713	0.2	< 0.5	20	2200	7	17	13	36	0.14	1100	< 10	< 10	< 0.5	< 2	0.61	16	23	10.8	< 10	< 1	< 0.01	< 10
696892 Dup	690	0.2	< 0.5	21	2220	8	20	13	37	0.14	1130	< 10	< 10	< 0.5	< 2	0.62	15	21	10.9	< 10	< 1	< 0.01	< 10
696900 Orig		< 0.2	< 0.5	23	680	< 1	244	< 2	56	1.24	392	< 10	62	< 0.5	< 2	2.61	40	3	5.07	< 10	< 1	0.23	16
696900 Dup		< 0.2	< 0.5	23	699	< 1	247	< 2	56	1.26	398	< 10	62	< 0.5	< 2	2.67	42	3	5.16	< 10	< 1	0.23	16
696902 Orig	38																						
696902 Dup	30																						
696912 Orig	< 5																						
696912 Dup	< 5																						
Method Blank	< 5																						
Method Blank	< 5																						
Method Blank	< 5																						



Analyte Symbol	Au	Ag	Cd	Cu	Mn	Mo	Ni	Pb	Zn	Al	As	B	Ba	Be	Bi	Ca	Co	Cr	Fe	Ga	Hg	K	La
Unit Symbol	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm
Lower Limit	5	0.2	0.5	1	5	1	1	2	2	0.01	2	10	10	0.5	2	0.01	1	1	0.01	10	1	0.01	10
Method Code	FA-AA	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
Method Blank	< 5																						
Method Blank		< 0.2	< 0.5	< 1	< 5	< 1	< 1	< 2	< 2	< 0.01	< 2	< 10	< 10	< 0.5	< 2	< 0.01	< 1	< 1	< 0.01	< 10	< 1	< 0.01	< 10
Method Blank		< 0.2	< 0.5	< 1	< 5	< 1	< 1	< 2	< 2	< 0.01	< 2	< 10	< 10	< 0.5	< 2	< 0.01	< 1	< 1	< 0.01	< 10	< 1	< 0.01	< 10
Method Blank		< 0.2	< 0.5	< 1	< 5	< 1	< 1	< 2	< 2	< 0.01	< 2	< 10	< 10	< 0.5	< 2	< 0.01	< 1	< 1	< 0.01	< 10	< 1	< 0.01	< 10
Method Blank		< 0.2	< 0.5	< 1	< 5	< 1	< 1	< 2	< 2	< 0.01	< 2	< 10	< 10	< 0.5	< 2	< 0.01	< 1	< 1	< 0.01	< 10	< 1	< 0.01	< 10

Analyte Symbol	Mg	Na	P	S	Sb	Sc	Sr	Ti	Th	Te	Tl	U	V	W	Y	Zr
Unit Symbol	%	%	%	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	0.01	0.001	0.001	0.01	2	1	1	0.01	20	1	2	10	1	10	1	1
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
GXR-1 Meas	0.13	0.052	0.038	0.20	80	1	166	< 0.01	< 20	10	< 2	24	71	134	24	14
GXR-1 Cert	0.217	0.0520	0.0650	0.257	122	1.58	275	0.036	2.44	13.0	0.390	34.9	80.0	164	32.0	38.0
GXR-1 Meas	0.14	0.053	0.042	0.21	86	1	179	< 0.01	< 20	14	< 2	27	78	152	27	16
GXR-1 Cert	0.217	0.0520	0.0650	0.257	122	1.58	275	0.036	2.44	13.0	0.390	34.9	80.0	164	32.0	38.0
GXR-6 Meas	0.39	0.086	0.034	0.02	3	23	34		< 20	< 1	< 2	< 10	155	< 10	6	15
GXR-6 Cert	0.609	0.104	0.0350	0.0160	3.60	27.6	35.0		5.30	0.0180	2.20	1.54	186	1.90	14.0	110
GXR-6 Meas	0.42	0.093	0.036	0.02	2	25	36		< 20	2	< 2	< 10	168	< 10	6	16
GXR-6 Cert	0.609	0.104	0.0350	0.0160	3.60	27.6	35.0		5.30	0.0180	2.20	1.54	186	1.90	14.0	110
OREAS 134b (AQUA REGIA) Meas				14.8												
OREAS 134b (AQUA REGIA) Cert				19.31												
OREAS 133a (Aqua Regia) Meas				10.3	149											
OREAS 133a (Aqua Regia) Cert				10.7	147											
OREAS 203 Meas																
OREAS 203 Cert																
OREAS 203 Meas																
OREAS 203 Cert																
OREAS 224 Meas																
OREAS 224 Cert																
OREAS 224 Meas																
OREAS 224 Cert																
696883 Orig	0.44	0.019	< 0.001	9.56	15	< 1	28	< 0.01	< 20	< 1	< 2	< 10	4	< 10	1	7
696883 Dup	0.44	0.018	< 0.001	9.52	17	< 1	28	< 0.01	< 20	2	< 2	< 10	4	< 10	1	7
696888 Orig	0.97	0.013	0.002	2.66	6	< 1	6	< 0.01	< 20	5	< 2	< 10	4	< 10	1	5
696888 Dup	0.97	0.015	0.002	2.71	4	< 1	6	< 0.01	< 20	< 1	< 2	< 10	4	< 10	1	5
696892 Orig	0.43	0.016	0.002	7.90	13	< 1	25	< 0.01	< 20	< 1	< 2	< 10	5	< 10	2	6
696892 Dup	0.44	0.017	0.002	8.03	12	< 1	26	< 0.01	< 20	2	< 2	< 10	6	< 10	2	6
696900 Orig	1.02	0.109	0.111	1.95	3	3	124	< 0.01	< 20	< 1	< 2	< 10	15	< 10	5	15
696900 Dup	1.05	0.109	0.113	2.00	< 2	3	127	< 0.01	< 20	< 1	< 2	< 10	16	< 10	5	15
696902 Orig																
696902 Dup																
696912 Orig																
696912 Dup																
Method Blank																
Method Blank																
Method Blank																
Method Blank																
Method Blank	< 0.01	0.010	< 0.001	< 0.01	< 2	< 1	< 1	< 0.01	< 20	< 1	< 2	< 10	< 1	< 10	< 1	< 1

Analyte Symbol	Mg	Na	P	S	Sb	Sc	Sr	Ti	Th	Te	Tl	U	V	W	Y	Zr
Unit Symbol	%	%	%	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	0.01	0.001	0.001	0.01	2	1	1	0.01	20	1	2	10	1	10	1	1
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
Method Blank	< 0.01	0.012	< 0.001	< 0.01	< 2	< 1	< 1	< 0.01	< 20	1	< 2	< 10	< 1	< 10	< 1	< 1
Method Blank	< 0.01	0.012	< 0.001	< 0.01	< 2	< 1	< 1	< 0.01	< 20	1	< 2	< 10	< 1	< 10	< 1	< 1
Method Blank	< 0.01	0.010	< 0.001	< 0.01	< 2	< 1	< 1	< 0.01	< 20	2	< 2	< 10	< 1	< 10	< 1	< 1

## **APPENDIX IV**

### **Drill Logs**



**Diamond Drill Log**

HOLE NO.		LUC-18-07									
EXPLORATION COMPANY					UTM NAD 83 ZONE 17N				TARGET DEPTH (m)		
Noble Mineral Exploration					PLANNED COORDINATES		FINAL COORDINATES		0		
START DATE	COMPLETION DATE	START DATE LOGGED	END DATE LOGGED	EASTING (m)	EASTING (m)		TARGET DESCRIPTION				
16-Feb-18	19-Feb-18	18-Feb-18	21-Feb-18	484065.00	484062.78		0				
DRILLING COMPANY		DRILL RIG		LOGGED BY		NORTHING (m)		NORTHING (m)		TARGET RESULTS	
NPLH Drilling				Edwin Escarraga		5407036.00		5407034.32		0	
TARGET NAME		AZIMUTH (°)		DIP (°)		ELEVATION (m)	TYPE	ELEVATION (m)	TYPE	0	
Lucas - South East		225		-45		0.00	Planned	0.00	SXBlue		
COMMENTS											
METERAGE			ROCK TYPE	ROCK CODE	DESCRIPTION						
FROM m	TO m	LENGTH m									
0	34.8	34.8	Overburden	OVB							
34.8	44.3	9.5	Intermediate Tuff	ITUFF	Grey, intermediate (dacite?) crystal lapilli tuff.						
44.3	48	3.7	Felsic Tuff	FTUFF	Light grey, pale greenish felsic crystal lapilli tuff.						
48	49	1	Fault	FLT	Loss of core, very crumbled rock						
49	57.6	8.6	Felsic Tuff	FTUFF	Light grey, pale greenish felsic crystal lapilli tuff.						
57.6	59.64	2.04	Fault	FLT	Loss of core, strongly fractured and crumbly rock.						
59.64	63	3.36	Felsic Tuff	FTUFF	Light grey, pale greenish, medium grained felsic crystal lapilli tuff.						
63	75	12	Mineralized Tuff	PTUFF	Black, graphitic and locally cherty sulphide-rich lapilli tuff. Up to 25% pyrite.						
75	89	14	Sulphide Zone	SULZ	Black, cherty sulphide-rich zone. No remains of original texture. Locally brecciated.						
89	92.65	3.65	Fault	FLT	Fault zone, lost core. Fractured upper contact.						
92.65	94.6	1.95	Volcaniclastic Sediments	VOLSED	Grey, black fine interbedded volcanoseds.						
94.6	96.35	1.75	Fault	FLT	Fault Gouge, No core recovered.						
96.35	96.7	0.35	Volcaniclastic Sediments	VOLSED	Grey, black fine interbedded volcanoseds.						
96.7	100.5	3.8	Felsic Volcanics	FVOL	Strongly foliated, light pale green to grey interbanded fine grained felsic volcanics.						
100.5	102	1.5	Fault	FLT	Core not recovered, crumbly pieces.						
102	105	3	Felsic Tuff	FTUFF	Grey, felsic crystal lapilli tuff.						
105	106.65	1.65	Diabase	DIA	Black medium grained, moderately magnetic diabase dyke.						
106.65	116.5	9.85	Felsic Tuff	FTUFF	Grey, felsic crystal lapilli tuff.						
116.5	123.84	7.34	Volcaniclastic Sediments	VOLSED	Gradational upper contact. Black fine interbedded volcanoseds.						
123.84	127.1	3.26	Felsic Tuff	FTUFF	Grey, pale green felsic crystal lapilli tuff.						
127.1	140	12.9	Felsic Volcanics	FVOL	Light grey homogeneous felsic volcanics.						
140	159.5	19.5	Felsic Tuff	FTUFF	Grey-pale green Felsic crystal lapilli tuff. Larger quartz crystals <5mm, locally stretched and elongated						
159.5	176	16.5	Intermediate Tuff	ITUFF	Grey-dark grey intermediate crystal, lithic lapilli tuff. Healed crackle breccia with abundant sulphide and graphite increasing						
176	178.9	2.9	Sulphide Zone	SULZ	Semi-massive sulphide zone with quartz veining, and abundant graphite. Faulted.						
178.9	217.25	38.35	Felsic to Intermediate Volcanics	FIVOL	Pale green-light grey banded, f-g, felsic to intermediate volcanic flow.						
217.25	222.83	5.58	Intermediate Tuff	ITUFF	Green-dark green intermediate crystal lapilli tuff.						
222.83	EOH										



**NOBLE  
MINERAL**  
EXPLORATION INC.

HOLE NO.

**LUC-18-07**

EXPLORATION COMPANY

**Noble Mineral Exploration**

DRILLING COMPANY

**NPLH Drilling**

Mag Declination

-10.4

LOGGED BY

Edwin Escarraga

DEPTH_m	MEASURED					CORRECTED				COMMENTS
	AZ	DIP	MAG FIELD	SURVEY_TYPE	FLAG	AZ	DIP	SURVEY_TYPE	FLAG	
48	235.4	-46.4	55622	Reflex		225	-46.4	Reflex		
75	233.9	-46.5	55290	Reflex		223.5	-46.5	Reflex		
126	233.4	-46.9	55633	Reflex		223	-46.9	Reflex		
177	230.3	-46.6	55530	Reflex		219.9	-46.6	Reflex		
222	230.4	-45	55440	Reflex		220	-45	Reflex		



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**Noble Mineral Exploration**

DRILLING COMPANY

**NPLH Drilling**

LOGGED BY

Edwin Escarraga

METERAGE

FROM_m	TO_m	LENGTH_m	ALT_1	STY_1	INT_1	ALT_2	STY_2	INT_2	ALT_3	STY_3	INT_3	COMMENTS
34.8	44.3	9.5	Sericite	Pervasive	Weak	Chlorite	Pervasive	Very Weak				
42.1	42.35	0.25							Calcite	Stringers	Weak	
42.7	42.75	0.05							Calcite	Veinlet (width < 1	Weak	
44.3	48	3.7	Sericite	Pervasive	Moderate	Calcite	Patchy	Weak				
44.3	44.5	0.2							Calcite	Stringers	Weak	
49	57.6	8.6	Sericite	Pervasive	Moderate	Calcite	Pervasive	Moderate	Ankerite	Interstitial / Inter	Very Weak	greenish-brown v.f.g ankerite? Around quartz crystals
59.64	63	3.36	Sericite	Pervasive	Moderate	Chlorite	Beds / Interbedded	Weak				
63	75	12	Graphite	Pervasive	Strong	Chert	Patchy	Moderate				Graphite decreases and Chert patches increases downhole
75	89	14							Hematite	Patchy	Moderate	
63	75	12							Quartz	Veinlets (width < 1	Weak	Semi-flat?
75	89	14	Chert	Pervasive	Strong	Graphite	Patchy	Moderate	Quartz	Stringers	Moderate	Quartz veinlets and stringers
92.65	94.6	1.95	Hematite	Fracture Filled	Very Weak	Chlorite	Disseminated	Weak				
96.35	96.7	0.35	Chlorite	Disseminated	Weak							
96.7	100.5	3.8	Sericite	Pervasive	Weak							
102	105	3	Sericite	Pervasive	Very Weak							
105	106.5	1.5	Leucoxene	Disseminated	Weak							
106.65	116.5	9.85	Sericite	Pervasive	Very Weak							
116.5	119.6	3.1	Graphite	Pervasive	Weak							
119.6	120.6	1	Hematite	Pervasive	Moderate							
120.6	123.84	3.24	Graphite	Pervasive	Weak	Carbonate	Veinlets (width < 1	Moderate				Carbonate Veinlets and Stringers
123.84	127.1	3.26	Sericite	Pervasive	Moderate	Carbonate	Veinlets (width < 1	Weak				Carb-Qtz veinlets and stringers
127.1	140	12.9	Sericite	Disseminated	Very Weak							
132	133	1				Carbonate	Veinlets (width < 1	Weak				Carb-Qtz veinlets and stringers
139.45	139.55	0.1				Carbonate	Veinlets (width < 1	Moderate				Carb-Qtz veinlets and stringers
140		-140	Sericite	Pervasive	Moderate	Quartz	Veinlets (width < 1	Weak				Quartz stringers and veinlets
144	144.3	0.3							Hematite	Stringers	Weak	
159.6	176	16.4	Sericite	Pervasive	Weak							
159.6	165.5	5.9				Hematite	Pervasive	Strong				
170.58	176	5.42				Chert	Pervasive	Moderate	Graphite	Disseminated	Weak	Graphite content increases downhole
176	178.9	2.9	Graphite	Pervasive	Strong							
178.9	217.25	38.35	Sericite	Pervasive	Moderate	Chlorite	Disseminated	Weak				
217.25	222.83	5.58	Sericite	Pervasive	Moderate	Chlorite	Disseminated	Weak				



HOLE NO.

LUC-18-07

EXPLORATION COMPANY

Noble Mineral Exploration

DRILLING COMPANY

NPLH Drilling

LOGGED BY

Edwin Escarraga

METERAGE			MIN_1	STY_1	PERCENT_1	MIN_2	STY_2	PERCENT_2	MIN_3	STY_3	PERCENT_3	COMMENTS
FROM_m	TO_m	LENGTH_m										
34.8	44.3	9.5	Pyrite	Disseminated	Tr							v.f.g predominantly along foliation
44.3	48	3.7	Pyrite	Stringers	1	Pyrite	Disseminated	Tr				"stringers" along foliation
49	57.6	8.6	Pyrite	Stringers	Tr	Pyrite	Nodules	Tr				v.f.g. Increasing downhole up to 1%
59.64	63	3.36	Pyrite	Disseminated	Tr							v.f.g. Py associated mostly with chloritic bands
63	75	12	Pyrite	Bleb	15	Pyrite	Euhedral	5				Blebby-semi-massive and coarse grained euhedral
75	84	9	Pyrite	Bleb	20	Pyrite	Stringers	10	Pyrite	Euhedral	1	Coarse grained blebby pyrite and very fine grained v
84	85.45	1.45	Pyrite	Semi-massive	50							
85.45	85.75	0.3	Pyrite	Patchy	10							Associated hematite alteration
85.75	86	0.25	Pyrite	Semi-massive	50							
86	89	3	Pyrite	Semi-massive	10	Pyrite	Stringers	15				
92.65	94.6	1.95	Pyrite	Band	3							Bands and lenses interbedded, parallel to Foliation
96.35	96.7	0.35	Pyrite	Band	3							
96.7	100.5	3.8	Pyrite	Disseminated	Tr							
102	105	3	Pyrite	Disseminated	Tr							
105	106.65	1.65	Magnetite	Disseminated								
106.65	116.5	9.85	Pyrite	Band	1							v.f.g in thin bands interbedded, parallel to Foliation
116.5	119.6	3.1	Pyrite	Band	10							bands fine grained parallel to foliation
119.6	120.6	1	Pyrite	Semi-massive	25							Blebby/patchy with semi-massive sections
120.6	123.84	3.24	Pyrite	Euhedral	5							coarse grained
123.84	127.1	3.26	Pyrite	Disseminated	1							Up to 3% @ 125m
127.1	140	12.9	Pyrite	Disseminated	Tr							
139.45	140	0.55				Pyrite	Bleb	20				
140	159.5	19.5	Pyrite	Disseminated	1							Amount decreasing gradually downhole
159.5	165.5	6	Pyrite	Fracture Filled	5	Pyrite	Euhedral	1				more like "stringers" In a red hematized zone
165.5	170.58	5.08	Pyrite	Stringers	3							
170.58	176	5.42	Pyrite	Patchy	10							In an area that gets progressively more graphitic
176	178.9	2.9	Pyrite	Semi-massive	40							as massive blebs and stringers
178.9	217.25	38.35	Pyrite	Disseminated	Tr	Pyrite	Euhedral	Tr				
217.25	222.83	5.58	Pyrite	Disseminated	Tr							





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HOLE NO.

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**Noble Mineral Exploration**

DRILLING COMPANY

LOGGED BY

**NPLH Drilling**

METERAGE

STRUCTURE

INTENSITY

ANGLE\_TCA

COMMENTS

FROM m

TO m

LENGTH m

FROM m	TO m	LENGTH m	STRUCTURE	INTENSITY	ANGLE_TCA	COMMENTS
39.6	39.61	0.01	Foliation	Strong	65	Locally crenulated
39.65	39.66	0.01	Crenulation	Moderate	50	
43.64	43.65	0.01	Crenulation	Moderate	50	
45	45.01	0.01	Crenulation	Moderate	70	
45	48	3	Fracture	Moderate		
48	49	1	Fault	FLT		
52.5	52.51	0.01	Foliation	Moderate	60	
55.5	57.6	2.1	Blocky	Strong		
57.6	59.64	2.04	Fault	FLT		
61.65	61.8	0.15	Elongated Fragments	Moderate		
63	68	5	Blocky	Moderate		
71.2	71.4	0.2	Fracture	Moderate		
72	72.3	0.3	Blocky	Moderate		
88	89	1	Fracture	Strong		
92.7	92.71	0.01	Foliation	Strong	55	
94.6	96.35	1.75	Fault	FLT		
96.7	100.5	3.8	Blocky	Moderate		
98	98.01	0.01	Foliation	Strong	58	
100.5	102	1.5	Fault	FLT		
103	103.01	0.01	Foliation	Strong	58	
113	113.01	0.01	Foliation	Moderate	70	
120	120.6	0.6	Fracture	Weak		
119	119.01	0.01	Foliation	Moderate	66	
126	126.01	0.01	Foliation	Moderate	68	
134.5	135	0.5	Fracture	Moderate		
149	149.01	0.01	Foliation	Moderate	45	Locally crenulated
159.5	176	16.5	Foliation	Strong		healed crackle breccia throughout
178	178.9	0.9	Fault	FLT		very graphitic core in crumbles
178.9	184	5.1	Fracture	Strong		
184	186.3	2.3	Fracture	Very Strong		
202	204	2	Fracture	Strong		
206	207	1	Fault	FLT		Fault? Or strongly fractured
211.5	212.55	1.05	Fracture	Strong		
215.7	215.8	0.1	Fold	Strong		
219	219.01	0.01	Foliation	Strong	54	



HOLE NO.

LUC-18-07

EXPLORATION COMPANY

Noble Mineral Exploration

DRILLING COMPANY

NPLH Drilling

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METERAGE			VEIN_1	STY_1	PERCENT_1	VEIN_2	STY_2	PERCENT_2	VEIN_3	STY_3	PERCENT_3	COMMENTS
FROM_m	TO_m	LENGTH_m										
66.75	66.8	0.05	Quartz	Vein (width greater or equal to 1cm)								Vuggy
85.45	85.75	0.3	Quartz	Vein (width greater or equal to 1cm)								Lithic fragments within it with vuggy texture
86	86.2	0.2	Quartz	Stockwork								Locally with vuggy texture
119.6	120.6	1	Carbonate-Quartz	Veinlets (width <	10							
170.58	176	5.42	Quartz	Veinlets (width <	2							more like cherty bands
178.3	178.9	0.6	Quartz	Veins (width grea	40							Strongly fractured
178.9	188	9.1	Quartz	Veins (width grea	15							Veins and veinlet, locally stockwork-like
197.4	197.5	0.1	Quartz	Vein (width greater or equal to 1cm)								
206	206.7	0.7	Quartz	Vein (width greater or equal to 1cm)								White Quartz, barren with tourmaline
209	215.5	6.5	Quartz	Stockwork	10							Locally with coarse veins and irregular veinlets
217.5	222.83	5.33	Carbonate-Quartz	Veinlets (width <	5							Veinlets and stringers



**NOBLE  
MINERAL**  
EXPLORATION INC.

HOLE NO.

**LUC-18-07**

EXPLORATION COMPANY

**Noble Mineral Exploration**

DRILLING COMPANY

**NPLH Drilling**

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Edwin Escarraga

METERAGE			SAMPLE_NO	SAMPLE_TYPE	AU_ppb	AG_ppm	CU_per	BATCH #	COMMENTS
FROM_m	TO_m	LENGTH_m							
36	37.3	1.3	691501					3	February 22 2018
37.3	38	0.7	691502					3	February 22 2018
38	39	1	691503					3	February 22 2018
39	40	1	691504					3	February 22 2018
40	41	1	691505					3	February 22 2018
41	42	1	691506					3	February 22 2018
42	42	0	691507	OREAS 15d				3	February 22 2018
42	43	1	691508					3	February 22 2018
43	44.3	1.3	691509					3	February 22 2018
44.3	45	0.7	691510					3	February 22 2018
45	45	0	691511	Blank				3	February 22 2018
45	46	1	691512					3	February 22 2018
46	48	2	691513					3	February 22 2018
49.1	50	0.9	691514					3	February 22 2018
50	51	1	691515					3	February 22 2018
51	52	1	691516					3	February 22 2018
52	53	1	691517					3	February 22 2018
53	54	1	691518					3	February 22 2018
54	55	1	691519					3	February 22 2018
55	56	1	691520					3	February 22 2018
56	57	1	691521					3	February 22 2018
57	57.6	0.6	691522					3	February 22 2018
59.64	61	1.36	691523					3	February 22 2018
61	61	0	691524	Duplicate				3	February 22 2018
61	62	1	691525					3	February 22 2018
62	63	1	691526					3	February 22 2018
63	63.5	0.5	691527			15		1	RUSHED (February 19 2018)
63.5	64	0.5	691528			10		1	RUSHED (February 19 2018)
64	64.8	0.8	691529			9		1	RUSHED (February 19 2018)
64.8	66	1.2	691530			9		1	RUSHED (February 19 2018)
66	66	0	691531	Blank		< 5		1	RUSHED (February 19 2018)
66	66.5	0.5	691532			10		1	RUSHED (February 19 2018)
66.5	67	0.5	691533			19		1	RUSHED (February 19 2018)
67	67.5	0.5	691534			26		1	RUSHED (February 19 2018)

67.5	68	0.5	691535		26		1	RUSHED (February 19 2018)
68	68.5	0.5	691536		12		1	RUSHED (February 19 2018)
68.5	69	0.5	691537		14		1	RUSHED (February 19 2018)
69	69.5	0.5	691538		14		1	RUSHED (February 19 2018)
69.5	70	0.5	691539		17		1	RUSHED (February 19 2018)
70	70.5	0.5	691540		27		1	RUSHED (February 19 2018)
70.5	71	0.5	691541		16		1	RUSHED (February 19 2018)
71	71.5	0.5	691542		15		1	RUSHED (February 19 2018)
71.5	72	0.5	691543		18		1	RUSHED (February 19 2018)
72	72	0	691544	OREAS 16b	2270		1	RUSHED (February 19 2018)
72	72.5	0.5	691545		33		1	RUSHED (February 19 2018)
72.5	73	0.5	691546		30		1	RUSHED (February 19 2018)
73	73.5	0.5	691547		27		1	RUSHED (February 19 2018)
73.5	74	0.5	691548		20		1	RUSHED (February 19 2018)
74	74.5	0.5	691549		24		1	RUSHED (February 19 2018)
74.5	75	0.5	691550		42		1	RUSHED (February 19 2018)
75	75.5	0.5	691551		38		1	RUSHED (February 19 2018)
75.5	76	0.5	691552		49		1	RUSHED (February 19 2018)
76	76.5	0.5	691553		86		1	RUSHED (February 19 2018)
76.5	77	0.5	691554		66		1	RUSHED (February 19 2018)
77	77	0	691555	Blank	< 5		1	RUSHED (February 19 2018)
77	77.5	0.5	691556		91		1	RUSHED (February 19 2018)
77.5	78	0.5	691557		12		1	RUSHED (February 19 2018)
78	78.5	0.5	691558		36		1	RUSHED (February 19 2018)
78.5	79	0.5	691559		18		1	RUSHED (February 19 2018)
79	79.5	0.5	691560		62		1	RUSHED (February 19 2018)
79.5	80	0.5	691561		56		1	RUSHED (February 19 2018)
80	80.5	0.5	691562		51		2	RUSHED (February 19 2018)
80.5	81	0.5	691563		37		2	RUSHED (February 19 2018)
81	81.5	0.5	691564		21		2	RUSHED (February 19 2018)
81.5	82	0.5	691565		34		2	RUSHED (February 19 2018)
82	82	0	691566	Blank	< 5		2	RUSHED (February 19 2018)
82	82.5	0.5	691567		393		2	RUSHED (February 19 2018)
82.5	83	0.5	691568		54		2	RUSHED (February 19 2018)
83	83.5	0.5	691569		112		2	RUSHED (February 19 2018)
83.5	84	0.5	691570		60		2	RUSHED (February 19 2018)
84	84.5	0.5	691571		516		2	RUSHED (February 19 2018)
84.5	84.5	0	691572	OREAS 221	1100		2	RUSHED (February 19 2018)
84.5	85	0.5	691573		1810		2	RUSHED (February 19 2018)
85	85.45	0.45	691574		3920		2	RUSHED (February 19 2018)
85.45	86	0.55	691575		1540		2	RUSHED (February 19 2018)
86	86.5	0.5	691576		720		2	RUSHED (February 19 2018)
86.5	86.5	0	691577	Blank	5		2	RUSHED (February 19 2018)
86.5	87	0.5	691578		158		2	RUSHED (February 19 2018)
87	87.5	0.5	691579		1800		2	RUSHED (February 19 2018)
87.5	88	0.5	691580		208		2	RUSHED (February 19 2018)
88	88.5	0.5	691581		261		2	RUSHED (February 19 2018)
88.5	88.5	0	691582	Duplicate	248		2	RUSHED (February 19 2018)

88.5	89	0.5	691583		14			2	RUSHED (February 19 2018)
92.65	94	1.35	691584					3	February 22 2018
94	94.6	0.6	691585					3	February 22 2018
96.35	96.7	0.35	691586					3	February 22 2018
96.7	98	1.3	691587					3	February 22 2018
98	99	1	691588					3	February 22 2018
99	100	1	691589					3	February 22 2018
100	100.5	0.5	691590					3	February 22 2018
102	103	1	691591					3	February 22 2018
103	104	1	691592					3	February 22 2018
104	105	1	691593					4	February 22 2018
105	106	1	691594					4	February 22 2018
106	106.5	0.5	691595					4	February 22 2018
106.5	108	1.5	691596					4	February 22 2018
108	109	1	691597					4	February 22 2018
109	110	1	691598					4	February 22 2018
110	111	1	691599					4	February 22 2018
111	112	1	691600					4	February 22 2018
112	113	1	691601					4	February 22 2018
113	114	1	691602					4	February 22 2018
114	115	1	691603					4	February 22 2018
115	116	1	691604					4	February 22 2018
116	116.5	0.5	691605					4	February 22 2018
116.5	116.5	0	691606	Blank				4	February 22 2018
116.5	117	0.5	691607					4	February 22 2018
117	118	1	691608					4	February 22 2018
118	119	1	691609					4	February 22 2018
119	119.6	0.6	691610					4	February 22 2018
119.6	120	0.4	691611					4	February 22 2018
120	120.6	0.6	691612					4	February 22 2018
120.6	121	0.4	691613					4	February 22 2018
121	122	1	691614					4	February 22 2018
122	123	1	691615					4	February 22 2018
123	123.84	0.84	691616					4	February 22 2018
123.84	125	1.16	691617					4	February 22 2018
125	126	1	691618					4	February 22 2018
126	127.1	1.1	691619					4	February 22 2018
127.1	127.1	0	691620	OREAS 221				4	February 22 2018
127.1	128	0.9	691621					4	February 22 2018
128	129	1	691622					4	February 22 2018
129	130	1	691623					4	February 22 2018
130	131	1	691624					4	February 22 2018
131	132	1	691625					4	February 22 2018
132	133	1	691626					4	February 22 2018
133	134	1	691627					4	February 22 2018
134	135	1	691628					5	February 22 2018
135	136	1	691629					5	February 22 2018
136	137	1	691630					5	February 22 2018

137	138	1	691631					5	February 22 2018
138	139	1	691632					5	February 22 2018
139	140	1	691633					5	February 22 2018
140	140	0	691634	Duplicate				5	February 22 2018
140	141	1	691635					5	February 22 2018
141	142	1	691636					5	February 22 2018
142	143	1	691637					5	February 22 2018
143	144	1	691638					5	February 22 2018
144	145	1	691639					5	February 22 2018
145	146	1	691640					5	February 22 2018
146	147	1	691641					5	February 22 2018
147	148	1	691642					5	February 22 2018
148	149	1	691643					5	February 22 2018
149	150	1	691644					5	February 22 2018
150	151	1	691645					5	February 22 2018
151	152	1	691646					5	February 22 2018
152	153	1	691647					5	February 22 2018
153	154	1	691648					5	February 22 2018
154	155	1	691649					5	February 22 2018
155	155	0	691650	OREAS 223				5	February 22 2018
155	156	1	691651					5	February 22 2018
156	157	1	691652					5	February 22 2018
157	158	1	691653					5	February 22 2018
158	159.5	1.5	691654					5	February 22 2018
159.5	161	1.5	691655					5	February 22 2018
161	162	1	691656					5	February 22 2018
162	162	0	691657	Duplicate				5	February 22 2018
162	163	1	691658					5	February 22 2018
163	164	1	691659					5	February 22 2018
164	165	1	691660					5	February 22 2018
165	165.5	0.5	691661					5	February 22 2018
165.5	166	0.5	691662					5	February 22 2018
166	167	1	691663					6	February 22 2018
167	168	1	691664					6	February 22 2018
168	169	1	691665					6	February 22 2018
169	170	1	691666					6	February 22 2018
170	170.58	0.58	691667					6	February 22 2018
170.58	171	0.42	691668					6	February 22 2018
171	171.5	0.5	691669					6	February 22 2018
171.5	172	0.5	691670					6	February 22 2018
172	172	0	691671	Blank				6	February 22 2018
172	172.45	0.45	691672					6	February 22 2018
172.45	173	0.55	691673					6	February 22 2018
173	173.5	0.5	691674					6	February 22 2018
173.5	174	0.5	691675					6	February 22 2018
174	174.5	0.5	691676					6	February 22 2018
174.5	175	0.5	691677					6	February 22 2018
175	175.5	0.5	691678					6	February 22 2018

175.5	176	0.5	691679					6	February 22 2018
176	176.5	0.5	691680					6	February 22 2018
176.5	177	0.5	691681					6	February 22 2018
177	177.5	0.5	691682					6	February 22 2018
177.5	178	0.5	691683					6	February 22 2018
178	178.9	0.9	691684					6	February 22 2018
178.9	180	1.1	691685					6	February 22 2018
180	180	0	691686	OREAS 221				6	February 22 2018
180	181	1	691687					6	February 22 2018
181	182	1	691688					6	February 22 2018
182	183	1	691689					6	February 22 2018
183	184	1	691690					6	February 22 2018
184	185	1	691691					6	February 22 2018
185	186	1	691692					6	February 22 2018
186	187	1	691693					6	February 22 2018
187	188	1	691694					6	February 22 2018
188	189	1	691695					6	February 22 2018
189	190	1	691696					6	February 22 2018
190	191	1	691697					6	February 22 2018
191	191	0	691698	Blank				7	February 22 2018
191	192	1	691699					7	February 22 2018
192	193	1	691700					7	February 22 2018
193	194	1	691701					7	February 22 2018
194	195	1	691702					7	February 22 2018
195	196	1	691703					7	February 22 2018
196	197	1	691704					7	February 22 2018
197	198	1	691705					7	February 22 2018
198	198	0	691706	OREAS 221				7	February 22 2018
198	199	1	691707					7	February 22 2018
199	200	1	691708					7	February 22 2018
200	201	1	691709					7	February 22 2018
201	202	1	691710					7	February 22 2018
202	204	2	691711					7	February 22 2018
204	205	1	691712					7	February 22 2018
205	206	1	691713					7	February 22 2018
206	207	1	691714					7	February 22 2018
207	208	1	691715					7	February 22 2018
208	208	0	691716	Blank				7	February 22 2018
208	209	1	691717					7	February 22 2018
209	210	1	691718					7	February 22 2018
210	211	1	691719					7	February 22 2018
211	212	1	691720					7	February 22 2018
212	213	1	691721					7	February 22 2018
213	214	1	691722					7	February 22 2018
214	215	1	691723					7	February 22 2018
215	216	1	691724					7	February 22 2018
216	217.25	1.25	691725					7	February 22 2018
217.25	218	0.75	691726					7	February 22 2018

218	219	1	691727					7	February 22 2018
219	220	1	691728					7	February 22 2018
220	221	1	691729					7	February 22 2018
221	222	1	691730					7	February 22 2018
222	222.83	0.83	691731					7	February 22 2018





**NOBLE  
MINERAL**  
EXPLORATION INC.

**Diamond Drill Log**

HOLE NO.		LUC-18-08							
EXPLORATION COMPANY				UTM NAD 83 ZONE 17N				TARGET DEPTH (m)	
Noble Mineral Exploration				PLANNED COORDINATES		FINAL COORDINATES		0	
START DATE	COMPLETION DATE	START DATE LOGGED	END DATE LOGGED	EASTING (m)		EASTING (m)		TARGET DESCRIPTION	
19-Feb-18	21-Feb-18	21-Feb-17	22-Feb-17	484065.00		484063.55		0	
DRILLING COMPANY		DRILL RIG		NORTHING (m)		NORTHING (m)		TARGET RESULTS	
NPLH Drilling				5407036.00		5407034.74		0	
TARGET NAME		AZIMUTH (°)		DIP (°)		ELEVATION (m)	TYPE	ELEVATION (m)	TYPE
Lucas - South East		225		-60		0.00	Planned	0.00	SXBlue
COMMENTS									
METERAGE			ROCK TYPE	ROCK CODE	DESCRIPTION				
FROM m	TO m	LENGTH m							
0	33	33	Overburden	OVB					
33	50.05	17.05	Intermediate Tuff	ITUFF	Grey, intermediate (dacite?) crystal lapilli tuff.				
50.05	67.4	17.35	Felsic Tuff	FTUFF	Light grey crystal lapilli tuff.				
67.4	74.15	6.75	Intermediate Tuff	ITUFF	Grey to dark grey intermediate crystal lapilli tuff. Sulphide content increasing downhole				
74.15	81.8	7.65	Volcaniclastic Sediments	VOLSED	Banded, strongly foliated, black and grey graphitic volcanosed. Moderate Pyrite mineralization				
81.8	106	24.2	Felsic Tuff	FTUFF	Light grey-pale green f-g felsic tuff. Locally very coarse grained, almost porphyritic texture.				
106	118.15	12.15	Intermediate Tuff	ITUFF	Grey-dark grey intermediate crystal tuff, near the center with the appearance of a quartz dacitic porphyry.				
118.15	119.3	1.15	Volcaniclastic Sediments	VOLSED	Banded, strongly foliated, black and grey graphitic volcanosed.				
119.3	120.55	1.25	Diabase	DIA	Black-dark grey medium grained diabase. Moderately magnetic. Chilled Upper and lower contacts				
120.55	122.3	1.75	Volcaniclastic Sediments	VOLSED	Banded, strongly foliated, black and grey graphitic volcanosed.				
122.3	132.58	10.28	Intermediate Volcanics	IVOL	Grey, very fine grained intermediate volcanic, flow? Moderate pyrite mineralization in the top half				
132.58	136.5	3.92	Intermediate Tuff	ITUFF	Grey-dark grey intermediate crystal tuff, strongly foliated with crystals stretched				
136.5	162.6	26.1	Intermediate Volcanics	IVOL	Grey, very fine grained intermediate volcanic, flow?. Increasing sulphide content near LC				
162.6	172.8	10.2	Mineralized Tuff	PTUFF	Grey-dark grey intermediate crystal tuff, locally with the appearance porphyry texture.				
172.8	177.3	4.5	Intermediate Volcanics	IVOL	Grey-green, massive, featureless, fine grained intermediate volcanics				
177.3	189	11.7	Intermediate Tuff	ITUFF	Grey, Intermediate lapilli-tuff. Crackle texture increases with depth.				
189	198.2	9.2	Mineralized Tuff	PTUFF	Grey, lithic lapilli-block breccia tuff. Crackle texture throughout. Chert content significant				
198.2	201	2.8	Sulphide Zone	SULZ	Sulphide-rich zone with abundant chert				
201	202	1	Fault	FLT	Fault zone. Strongly graphitic and gouge.				
202	202.5	0.5	Sulphide Zone	SULZ	Sulphide-rich zone with abundant chert				
202.5	222	19.5	Felsic Volcanics	FVOL	Light green strongly foliated and banded felsic flow. Strong Foliation and folding within it.				
222	EOH								



**NOBLE  
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HOLE NO.

**LUC-18-08**

EXPLORATION COMPANY

**Noble Mineral Exploration**

DRILLING COMPANY

**NPLH Drilling**

LOGGED BY

Edwin Escarraga

METERAGE

FROM m	TO m	LENGTH m	ALT_1	STY_1	INT_1	ALT_2	STY_2	INT_2	ALT_3	STY_3	INT_3	COMMENTS
33	50.05	17.05	Sericite	Pervasive	Weak	Chlorite	Disseminated	Very Weak				
50.05	67.4	17.35	Sericite	Disseminated	Weak	Sericite	Fracture Filled	Weak				Filling microfractures of quartz crystals
67.4	74.15	6.75	Sericite	Disseminated	Weak	Graphite	Disseminated	Weak				Graphite increasing downhole
74.15	81.8	7.65	Graphite	Pervasive	Moderate	Sericite	Disseminated	Weak	Quartz	Veinlets (width <	Very Weak	
81.8	106	24.2	Sericite	Pervasive	Weak	Carbonate	Stringers	Very Weak	Quartz	Stringers	Very Weak	
106	118.5	12.5	Sericite	Pervasive	Weak	Carbonate	Stringers	Weak	Quartz	Stringers	Very Weak	
118.15	119.3	1.15	Graphite	Pervasive	Moderate	Carbonate	Stringers	Weak				
119.3	120.55	1.25	Leucoxene	Disseminated	Weak							
120.55	122.3	1.75	Graphite	Pervasive	Moderate	Carbonate	Stringers	Weak				
122.3	126	3.7	Sericite	Pervasive	Weak	Graphite	Disseminated	Very Weak	Carbonate	Stringers	Very Weak	
126	132.58	6.58	Sericite	Pervasive	Weak	Carbonate	Disseminated	Very Weak				
132.58	136.5	3.92	Sericite	Pervasive	Moderate							
136.4	136.5	0.1				Hematite	Banded	Moderate				
136.5	139	2.5	Sericite	Pervasive	Strong	Carbonate	Stringers	Moderate				
139	162.6	23.6	Sericite	Pervasive	Weak	Carbonate	Stringers	Very Weak				
156	156.45	0.45							Hematite	Banded	Weak	
162.6	172.8	10.2	Carbonate	Disseminated	Weak	Hematite	Stringers	Weak				Carb as stringers and interstitial between py grains
172.8	177.3	4.5	Carbonate	Stringers	Weak							Stringers and veinlets
177.3	189	11.7	Carbonate	Stringers	Weak	Quartz	Stringers	Very Weak				
189	198.2	9.2	Chert	Interstitial / Inter	Weak							
202.5	222	19.5	Sericite	Pervasive	Moderate	Quartz	Stringers	Moderate				
198.2	201	2.8	Chert	Pervasive	Strong							
201	202	1	Graphite	Pervasive	Strong							



**NOBLE  
MINERAL**  
EXPLORATION INC.

HOLE NO.

LUC-18-08

EXPLORATION COMPANY

Noble Mineral Exploration

DRILLING COMPANY

NPLH Drilling

LOGGED BY

Edwin Escarraga

METERAGE			MIN_1	STY_1	PERCENT_1	MIN_2	STY_2	PERCENT_2	MIN_3	STY_3	PERCENT_3	COMMENTS
FROM m	TO m	LENGTH m										
33	50.05	17.05	Pyrite	Stringers	1							in stringers or thin bands parallel to foliation
50.05	67.4	17.35	Pyrite	Stringers	1							in stringers or thin bands parallel to foliation. Up to 3% near LC
67.4	72.3	4.9	Pyrite	Stringers	3							increasing downhole
72.3	74.15	1.85	Pyrite	Band	10							Up to 10% in thin bands parallel to foliation
74.15	81.8	7.65	Pyrite	Disseminated	10	Pyrite	Euhedral	2				Coarse grained euhedral post fine grained disseminated
81.8	83	1.2	Pyrite	Band	3							
83	96	13	Pyrite	Band	1							
96	106	10	Pyrite	Disseminated	Tr							
106	111	5	Pyrite	Band	3							thin bands parallel to foliation
111	118.5	7.5	Pyrite	Stringers	1	Pyrite	Disseminated	Tr				Stringers f-g parallel to foliation
118.5	119.3	0.8	Pyrite	Band	10							thin bands parallel to foliation
120.55	122.3	1.75	Pyrite	Band	10							thin bands parallel to foliation
122.3	127	4.7	Pyrite	Band	10	Pyrite	Bleb	5				Up to 15% total
127	132.58	5.58	Pyrite	Band	5							bands are parallel to foliation
132.58	136.5	3.92	Pyrite	Band	5	Pyrite	Bleb	3				Up to 15% near the LC
136.5	144	7.5	Pyrite	Disseminated	Tr							
144	156	12	Pyrite	Band	3							thin bands parallel to foliation
156	156.5	0.5	Pyrite	Band	10							thin bands parallel to foliation
156.5	159.8	3.3	Pyrite	Band	3							thin bands parallel to foliation
159.8	162.6	2.8	Pyrite	Band	8	Pyrite	Bleb	2				thin bands parallel to foliation
162.6	172.8	10.2	Pyrite	Bleb	15	Pyrite	Band	5				Up to 25% near LC
172.8	177.3	4.5	Pyrite	Stringers	3							Stringers f-g parallel to foliation
177.3	189	11.7	Pyrite	Band	3							Up to 5%
189	198.2	9.2	Pyrite	Band	10							
198.2	201	2.8	Pyrite	Semi-massive	40							
202	202.5	0.5	Pyrite	Semi-massive	30							
202.5	222	19.5	Pyrite	Disseminated	Tr							



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Mag Declination

-10.4

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DEPTH_m	MEASURED					CORRECTED				COMMENTS
	AZ	DIP	MAG FIELD	SURVEY_TYPE	FLAG	AZ	DIP	SURVEY_TYPE	FLAG	
51	236.6	-59.4	55930	Reflex		226.2	-59.4	Reflex	55930	
105	230.6	-58.4	55460	Reflex		220.2	-58.4	Reflex	55460	
156	224.9	-56.8	55648	Reflex		214.5	-56.8	Reflex	55648	
201	222.7	-55.9	55710	Reflex		212.3	-55.9	Reflex	55710	



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**NPLH Drilling**

METERAGE			STRUCTURE	INTENSITY	ANGLE_TCA	COMMENTS
FROM m	TO m	LENGTH m				
36.75	36.8	0.05	Shear	Strong		Strongly foliated and sheared, gouge (very localized effect)
40	40.01	0.01	Foliation	Strong	57	
44	45	1	Fracture	Strong		Blocky and fractured along foliation planes (discs)
45	49	4	Blocky	Moderate		
54	55	1	Blocky	Moderate		
61.5	62	0.5	Blocky	Moderate		
78.3	78.31	0.01	Foliation	Moderate	55	
94	94.01	0.01	Foliation	Moderate	60	
95.5	96	0.5	Fracture	Strong		Blocky and fractured along foliation planes (discs)
100	100.01	0.01	Foliation	Moderate	59	
115	115.01	0.01	Foliation	Moderate	60	
119	119.01	0.01	Foliation	Moderate	60	
121.5	121.51	0.01	Foliation	Moderate	64	In a very blocky section
120.55	121.5	0.95	Fracture	Strong		Blocky and fractured along foliation planes (discs)
125	125.01	0.01	Foliation	Moderate	64	
135	135.01	0.01	Foliation	Moderate	61	
142	142.01	0.01	Foliation	Moderate	64	
138	141	3	Fracture	Moderate		
146.5	146.7	0.2	Fold	Moderate		Folding and crenulation
175.5	175.51	0.01	Foliation	Weak	56	
201	202	1	Fault	Very Strong		
202	202.5	0.5	Fracture	Very Strong		
202.5	222	19.5	Fold	Very Strong		Crenulated, folded and contorted throughout





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NPLH Drilling

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METERAGE

FROM_m	TO_m	LENGTH_m	SAMPLE_NO	SAMPLE_TYPE	AU_ppm	AG_ppm	CU_per	BATCH #	COMMENTS
34	35	1	691732					7	February 22 2018
35	36	1	691733					8	February 23 2018
36	37	1	691734					8	February 23 2018
36	37	1	691735	Duplicate				8	February 23 2018
37	38	1	691736					8	February 23 2018
38	39	1	691737					8	February 23 2018
39	40	1	691738					8	February 23 2018
40	41	1	691739					8	February 23 2018
41	42	1	691740					8	February 23 2018
42	43	1	691741					8	February 23 2018
43	44	1	691742					8	February 23 2018
44	45	1	691743					8	February 23 2018
45	46	1	691744					8	February 23 2018
46	47	1	691745					8	February 23 2018
47	48	1	691746					8	February 23 2018
48	49	1	691747					8	February 23 2018
49	50.05	1.05	691748					8	February 23 2018
50.05	51	0.95	691749					8	February 23 2018
51	51	0	691750	Blank				8	February 23 2018
51	52	1	691751					8	February 23 2018
52	53	1	691752					8	February 23 2018
53	54	1	691753					8	February 23 2018
54	55	1	691754					8	February 23 2018
55	56	1	691755					8	February 23 2018
56	57	1	691756					8	February 23 2018
57	58	1	691757					8	February 23 2018
58	59	1	691758					8	February 23 2018
59	60	1	691759					8	February 23 2018
60	61	1	691760					8	February 23 2018
61	61	0	691761	OREAS 221				8	February 23 2018
61	62	1	691762					8	February 23 2018
62	63	1	691763					8	February 23 2018
63	64	1	691764					8	February 23 2018
64	65	1	691765					8	February 23 2018
65	66	1	691766					8	February 23 2018
66	67.4	1.4	691767					8	February 23 2018

67.4	68	0.6	691768					9	February 23 2018
68	69	1	691769					9	February 23 2018
69	70	1	691770					9	February 23 2018
70	71	1	691771					9	February 23 2018
71	72	1	691772					9	February 23 2018
72	73	1	691773					9	February 23 2018
72	73	1	691774	Duplicate				9	February 23 2018
73	74.15	1.15	691775					9	February 23 2018
74.15	75	0.85	691776					9	February 23 2018
75	76	1	691777					9	February 23 2018
76	77	1	691778					9	February 23 2018
77	78	1	691779					9	February 23 2018
78	78	0	691780	Blank				9	February 23 2018
78	79	1	691781					9	February 23 2018
79	80	1	691782					9	February 23 2018
80	81	1	691783					9	February 23 2018
81	81.8	0.8	691784					9	February 23 2018
81.8	83	1.2	691785					9	February 23 2018
83	84	1	691786					9	February 23 2018
84	85	1	691787					9	February 23 2018
85	85	0	691788	Blank				9	February 23 2018
85	86	1	691789					9	February 23 2018
86	87	1	691790					9	February 23 2018
87	88	1	691791					9	February 23 2018
88	89	1	691792					9	February 23 2018
89	90	1	691793					9	February 23 2018
90	91	1	691794					9	February 23 2018
91	92	1	691795					9	February 23 2018
92	93	1	691796					9	February 23 2018
93	94	1	691797					9	February 23 2018
94	95	1	691798					9	February 23 2018
95	95	0	691799	OREAS 223				9	February 23 2018
95	96	1	691800					9	February 23 2018
96	97	1	691801					9	February 23 2018
97	98	1	691802					9	February 23 2018
98	99	1	691803					10	February 23 2018
99	100	1	691804					10	February 23 2018
100	101	1	691805					10	February 23 2018
101	102	1	691806					10	February 23 2018
102	103	1	691807					10	February 23 2018
103	104	1	691808					10	February 23 2018
104	105	1	691809					10	February 23 2018
105	106	1	691810					10	February 23 2018
106	106	0	691811	Blank				10	February 23 2018
106	107	1	691812					10	February 23 2018
107	108	1	691813					10	February 23 2018
108	109	1	691814					10	February 23 2018
109	110	1	691815					10	February 23 2018
110	111	1	691816					10	February 23 2018
111	112	1	691817					10	February 23 2018



112	113	1	691818					10	February 23 2018
113	114	1	691819					10	February 23 2018
114	115	1	691820					10	February 23 2018
115	116	1	691821					10	February 23 2018
116	117	1	691822					10	February 23 2018
117	118.15	1.15	691823					10	February 23 2018
118.15	118.15	0	691824	OREAS 221				10	February 23 2018
118.15	119.3	1.15	691825					10	February 23 2018
119.3	120.55	1.25	691826					10	February 23 2018
120.55	121	0.45	691827					10	February 23 2018
121	122.3	1.3	691828					10	February 23 2018
122.3	122.3	0	691829	Blank				10	February 23 2018
122.3	123	0.7	691830					10	February 23 2018
123	124	1	691831					10	February 23 2018
124	125	1	691832					10	February 23 2018
125	126	1	691833					10	February 23 2018
125	126	1	691834	Duplicate				10	February 23 2018
126	127	1	691835					10	February 23 2018
127	128	1	691836					10	February 23 2018
128	129	1	691837					10	February 23 2018
129	130	1	691838					11	February 24 2018
130	131	1	691839					11	February 24 2018
131	132	1	691840					11	February 24 2018
132	132.58	0.58	691841					11	February 24 2018
132.58	133	0.42	691842					11	February 24 2018
133	134	1	691843					11	February 24 2018
134	135	1	691844					11	February 24 2018
135	136	1	691845					11	February 24 2018
136	136.5	0.5	691846					11	February 24 2018
136.5	137	0.5	691847					11	February 24 2018
137	137	0	691848	OREAS 15d				11	February 24 2018
137	138	1	691849					11	February 24 2018
138	139	1	691850					11	February 24 2018
139	140	1	691851					11	February 24 2018
140	141	1	691852					11	February 24 2018
141	142	1	691853					11	February 24 2018
142	143	1	691854					11	February 24 2018
143	144	1	691855					11	February 24 2018
144	145	1	691856					11	February 24 2018
145	146	1	691857					11	February 24 2018
146	147	1	691858					11	February 24 2018
146	147	1	691859	Duplicate				11	February 24 2018
147	148	1	691860					11	February 24 2018
148	149	1	691861					11	February 24 2018
149	150	1	691862					11	February 24 2018
150	151	1	691863					11	February 24 2018
151	152	1	691864					11	February 24 2018
152	153	1	691865					11	February 24 2018
153	154	1	691866					11	February 24 2018
154	155	1	691867					11	February 24 2018

155	156	1	691868					11	February 24 2018
156	156.45	0.45	691869					11	February 24 2018
156.45	157	0.55	691870					11	February 24 2018
157	158	1	691871					11	February 24 2018
158	159	1	691872					11	February 24 2018
159	160	1	691873					12	February 24 2018
160	161	1	691874					12	February 24 2018
161	162	1	691875					12	February 24 2018
162	162.6	0.6	691876					12	February 24 2018
162.6	163	0.4	691877					12	February 24 2018
163	163.5	0.5	691878					12	February 24 2018
163.5	164	0.5	691879					12	February 24 2018
164	164.5	0.5	691880					12	February 24 2018
164.5	165	0.5	691881					12	February 24 2018
165	165	0	691882	OREAS 221				12	February 24 2018
165	165.5	0.5	691883					12	February 24 2018
165.5	166	0.5	691884					12	February 24 2018
166	166.5	0.5	691885					12	February 24 2018
166.5	167	0.5	691886					12	February 24 2018
167	167.5	0.5	691887					12	February 24 2018
167.5	168	0.5	691888					12	February 24 2018
168	168.5	0.5	691889					12	February 24 2018
168.5	169	0.5	691890					12	February 24 2018
169	169.5	0.5	691891					12	February 24 2018
169.5	170	0.5	691892					12	February 24 2018
170	170.5	0.5	691893					12	February 24 2018
170.5	171	0.5	691894					12	February 24 2018
171	171.5	0.5	691895					12	February 24 2018
171.5	172	0.5	691896					12	February 24 2018
172	172.8	0.8	691897					12	February 24 2018
172.8	174	1.2	691898					12	February 24 2018
174	174	0	691899	Blank				12	February 24 2018
174	175	1	691900					12	February 24 2018
175	176	1	691901					12	February 24 2018
176	177.3	1.3	691902					12	February 24 2018
177.3	178	0.7	691903					12	February 24 2018
178	179	1	691904					12	February 24 2018
179	180	1	691905					12	February 24 2018
180	181	1	691906					12	February 24 2018
181	182	1	691907					12	February 24 2018
182	183	1	691908					13	February 24 2018
183	184	1	691909					13	February 24 2018
184	185	1	691910					13	February 24 2018
184	185	1	691911	Duplicate				13	February 24 2018
185	186	1	691912					13	February 24 2018
186	187	1	691913					13	February 24 2018
187	188	1	691914					13	February 24 2018
188	189	1	691915					13	February 24 2018
189	189.5	0.5	691916					13	February 24 2018
189.5	189.5	0	691917	OREAS 216				13	February 24 2018

189.5	190	0.5	691918					13	February 24 2018
190	190.5	0.5	691919					13	February 24 2018
190.5	191.5	1	691920					13	February 24 2018
191.5	192	0.5	691921					13	February 24 2018
192	192.5	0.5	691922					13	February 24 2018
192.5	193	0.5	691923					13	February 24 2018
193	193.5	0.5	691924					13	February 24 2018
193.5	194	0.5	691925					13	February 24 2018
194	194.5	0.5	691926					13	February 24 2018
194.5	195	0.5	691927					13	February 24 2018
195	195.5	0.5	691928					13	February 24 2018
195.5	196	0.5	691929					13	February 24 2018
196	196	0	691930	Blank				13	February 24 2018
196	196.5	0.5	691931					13	February 24 2018
196.5	197	0.5	691932					13	February 24 2018
197	197.5	0.5	691933					13	February 24 2018
197.5	198.2	0.7	691934					13	February 24 2018
198.2	198.6	0.4	691935					13	February 24 2018
198.6	199	0.4	691936					13	February 24 2018
199	199.5	0.5	691937					13	February 24 2018
199.5	200	0.5	691938					13	February 24 2018
200	200.5	0.5	691939					13	February 24 2018
200.5	200.5	0	691940	OREAS 223				13	February 24 2018
200.5	201	0.5	691941					13	February 24 2018
201	201.5	0.5	691942					13	February 24 2018
201.5	202	0.5	691943					14	February 26 2018
202	202.5	0.5	691944					14	February 26 2018
202.5	203	0.5	691945					14	February 26 2018
203	204	1	691946					14	February 26 2018
204	204	0	691947	Blank				14	February 26 2018
204	205	1	691948					14	February 26 2018
205	206	1	691949					14	February 26 2018
206	207	1	691950					14	February 26 2018
207	208	1	691951					14	February 26 2018
208	209	1	691952					14	February 26 2018
209	210	1	691953					14	February 26 2018
210	211	1	691954					14	February 26 2018
211	212	1	691955					14	February 26 2018
212	213	1	691956					14	February 26 2018
213	214	1	691957					14	February 26 2018
214	215	1	691958					14	February 26 2018
215	216	1	691959					14	February 26 2018
216	217	1	691960					14	February 26 2018
217	218	1	691961					14	February 26 2018
218	219	1	691962					14	February 26 2018
219	220	1	691963					14	February 26 2018
220	221	1	691964					14	February 26 2018
221	221	0	691965	Blank				14	February 26 2018
221	222	1	691966					14	February 26 2018



Diamond Drill Log

HOLE NO.		LUC-18-09					
EXPLORATION COMPANY				UTM NAD 83 ZONE 17N		TARGET DEPTH (m)	
Noble Mineral Exploration				PLANNED COORDINATES	FINAL COORDINATES	0	
START DATE	COMPLETION DATE	START DATE LOGGED	END DATE LOGGED	EASTING (m)	EASTING (m)	TARGET DESCRIPTION	
21-Feb-18	23-Feb-18	22-Feb-18	25-Feb-18	484116.00	484121.41	0	
DRILLING COMPANY		DRILL RIG		NORTHING (m)		0	
NPLH Drilling		Edwin Escarraga		5407030.00	5407029.56	TARGET RESULTS	
TARGET NAME		AZIMUTH (°)		DIP (°)	ELEVATION (m)	TYPE	ELEVATION (m)
Lucas - South East		225		-45	0.00	Planned	0.00 SXBlue

COMMENTS

METERAGE			ROCK TYPE	ROCK CODE	DESCRIPTION
FROM m	TO m	LENGTH m			
0	37	37	Overburden	OVB	
37	40.85	3.85	Felsic Tuff	FTUFF	Pale green-light grey strongly foliated and sheared crystal-lithic felsic lapilli tuff.
40.85	50	9.15	Intermediate Tuff	ITUFF	Grey intermediate crystal lapilli tuff. Strongly foliated.
50	68	18	Felsic to Intermediate Tuff	FITUFF	Interbanded pale green-light grey crystal lapilli tuff. Locally fine grained with flow appearance
68	76	8	Intermediate Tuff	ITUFF	Grey intermediate crystal, lapilli tuff. Pervasive Carb alteration and locally with Qtz eyes with the appearance of porphyry texture.
76	79.55	3.55	Volcaniclastic Sediments	VOLSED	Grey, black fine interbedded volcanosed. Gradational upper and lower contacts.
79.55	120.45	40.9	Felsic to Intermediate Tuff	FITUFF	Pale green crystal felsic to intermediate lapilli tuff. Pervasive Carb alteration and locally with Qtz eyes with appearance of porphyry
120.45	125.35	4.9	Volcaniclastic Sediments	VOLSED	Grey, black fine interbedded volcanosed. Gradational upper contact.
125.35	126.8	1.45	Diabase	DIA	Black medium grained, moderately magnetic diabase dyke. Chilled margins.
126.8	129.3	2.5	Volcaniclastic Sediments	VOLSED	Grey, black fine interbedded volcanosed. Gradational lower contact.
129.3	135.6	6.3	Mineralized Tuff	PTUFF	Grey intermediate crystal lapilli tuff. Abundant sulphide mineralization.
135.6	147.45	11.85	Intermediate Volcanics	IVOL	Grey-f-g homogeneous intermediate volcanics. Gradational lower contact to tuffaceous unit.
147.45	155	7.55	Intermediate Tuff	ITUFF	Grey-dark grey intermediate crystal, lapilli tuff.
155	160.55	5.55	Volcaniclastic Sediments	VOLSED	Grey, dark grey fine interbedded volcanoseds?. Gradational upper and lower contact. Less graphitic and more competent than
160.55	167.45	6.9	Intermediate Tuff	ITUFF	Grey-dark grey intermediate crystal, lithic lapilli-block tuff. Lithic and crystal fragments are stretched and elongated. Gradational
167.45	174.35	6.9	Felsic to Intermediate Tuff	FITUFF	Grey-green crystal felsic to intermediate lapilli tuff. locally with Qtz eyes with appearance of porphyry texture
174.35	193	18.65	Intermediate Tuff	ITUFF	Grey, lithic block breccia tuff. >1cm angular lithic clasts. Sulphides up to 10% locally. Gradational lower contact
193	207.5	14.5	Mineralized Tuff	PTUFF	Dark Grey to black intermediate lapilli-block tuff. Crackle breccia throughout. Chert content increasing downhole.
207.5	219	11.5	Sulphide Zone	SULZ	Semi-massive sulphide zone with strong chert alteration. Upper contact weakly magnetic. Lower contact is faulted.
219	219.8	0.8	Fault	FLT	Faulted zone. Crumbly rock and sandy grind.
219.8	222.8	3	Quartz Zone	QTZZN	White quartz flooding zone in a dark grey-black cherty matrix.
222.8	224.5	1.7	Sulphide Zone	SULZ	Semi-massive sulphide zone with strong chert alteration.
224.5	237	12.5	Felsic Volcanics	FVOL	Pale green-light grey banded, f-g, felsic volcanic flow.
237	237.5	0.5	Fault	FLT	Faulted zone.
237.5	258	20.5	Felsic Volcanics	FVOL	Pale green-light grey banded, f-g, felsic volcanic flow.



**NOBLE  
MINERAL**  
EXPLORATION INC.

HOLE NO.		LUC-18-09										
EXPLORATION COMPANY												
Noble Mineral Exploration												
DRILLING COMPANY												LOGGED BY
NPLH Drilling												Edwin Escarraga
METERAGE			ALT_1	STY_1	INT_1	ALT_2	STY_2	INT_2	ALT_3	STY_3	INT_3	COMMENTS
FROM m	TO m	LENGTH m										
37	40.85	3.85	Sericite	Pervasive	Strong	Quartz	Stringers	Weak	Carbonate	Stringers	Very Weak	Quartz-carb stringers and veinlets
40.85	48	7.15	Sericite	Pervasive	Weak	Quartz	Veinlets (width <	Weak				
48	49	1	Sericite	Pervasive	Moderate							
50	68	18	Sericite	Pervasive	Moderate	Chlorite	Pervasive	Weak				
68	76	8	Carbonate	Pervasive	Moderate	Sericite	Disseminated	Weak				
76	79.55	3.55	Graphite	Pervasive	Moderate	Carbonate	Pervasive	Moderate				
79.55	120.45	40.9	Carbonate	Pervasive	Moderate	Carbonate	Stringers	Weak	Sericite	Pervasive	Weak	
120.45	125.35	4.9	Graphite	Pervasive	Moderate	Carbonate	Stringers	Weak				
125	125.35	0.35							Hematite	Banded	Moderate	
125.35	126.8	1.45	Leucoxene	Disseminated	Very weak							
126.8	129.3	2.5	Graphite	Pervasive	Moderate	Carbonate	Stringers	Weak				
129.3	135.6	6.3	Silicified	Pervasive	Weak	Carbonate	Stringers	Very Weak				
135.6	147.45	11.85	Silicified	Pervasive	Weak	Carbonate	Stringers	Weak				
147.45	155	7.55	Silicified	Pervasive	Weak	Sericite	Pervasive	Weak	Carbonate	Stringers	Very Weak	
155	160.55	5.55	Carbonate	Stringers	Weak	Graphite	Pervasive	Weak				
160.55	167.45	6.9	Carbonate	Pervasive	Weak	Carbonate	Stringers	Very Weak				
167.45	174.35	6.9	Sericite	Disseminated	Weak	Carbonate	Stringers	Weak				
174.35	193	18.65	Silicified	Pervasive	Moderate	Carbonate	Stringers	Weak				
193	207.5	14.5	Silicified	Pervasive	Moderate							
207.5	219	11.5	Chert	Pervasive	Very Strong	Quartz	Stringers	Weak				
219.8	222.8	3	Chert	Pervasive	Very Strong	Quartz	Stringers	Weak				
222.8	224.4	1.6	Chert	Pervasive	Very Strong							
224.4	258	33.6	Sericite	Pervasive	Moderate	Chlorite	Pervasive	Moderate	Quartz	Stringers	Weak	



**NOBLE  
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METERAGE			MIN_1	STY_1	PERCENT_1	MIN_2	STY_2	PERCENT_2	MIN_3	STY_3	PERCENT_3	COMMENTS
FROM m	TO m	LENGTH m										
37	40.85	3.85	Pyrite	Disseminated	0.01							
40.85	50	9.15	Pyrite	Disseminated	1							locally coarse-grained euhedral
50	68	18	Pyrite	Disseminated	0.01	Pyrite	Euhedral	0.01				
68	76	8	Pyrite	Band	2							Thin bands parallel to foliation
76	79.55	3.55	Pyrite	Disseminated	2							
79.55	120.45	40.9	Pyrite	Disseminated	0.01							
120.45	125.35	4.9	Pyrite	Band	10							Thin bands parallel to foliation
126.8	129.3	2.5	Pyrite	Band	10							Thin bands parallel to foliation
129.3	135.6	6.3	Pyrite	Band	10	Pyrite	Bleb	5				Locally up to 20%
135.6	147.45	11.85	Pyrite	Band	1							
147.45	155	7.55	Pyrite	Disseminated	1							
155	160.55	5.55	Pyrite	Disseminated	1							
160.5	167.45	6.95	Pyrite	Band	5							Thin bands parallel to foliation, up to 10% near LC
167.45	174.35	6.9	Pyrite	Band	5							Thin bands parallel to foliation
174.35	180	5.65	Pyrite	Disseminated	2							
180	184	4	Pyrite	Band	8	Pyrite	Disseminated	2				Thin bands parallel to foliation
184	193	9	Pyrite	Disseminated	1							
193	203	10	Pyrite	Stringers	10	Pyrite	Fracture Filled	5				Up to 15%
203	207.5	4.5	Pyrite	Stringers	10	Pyrite	Patchy	15				
207.5	216.5	9	Pyrite	Band	20	Pyrite	Bleb	10				Up to 35%
216.5	217.55	1.05	Pyrite	Semi-massive	60							
217.55	219	1.45	Pyrite	Band	20	Pyrite	Bleb	10				Up to 35%
219	219.8	0.8	Pyrite	Disseminated	5							
219.8	222.8	3	Pyrite	Disseminated	5							
222.8	224.5	1.7	Pyrite	Semi-massive	60							
224.5	258	33.5	Pyrite	Disseminated	0.01							



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Mag Declination

-10.4

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DEPTH_m	MEASURED					CORRECTED				COMMENTS
	AZ	DIP	MAG FIELD	SURVEY_TYPE	FLAG	AZ	DIP	SURVEY_TYPE	FLAG	
48	234.9	-46.3	55768	Reflex		224.5	-46.4	Reflex		
99	231.5	-45.3	55328	Reflex		221.1	-45.3	Reflex		
150	228.8	-44.5	55298	Reflex		218.4	-44.5	Reflex		
201	225.2	-43.3	55888	Reflex		214.8	-43.3	Reflex		
						-10.4	0	Reflex		



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LOGGED BY

METERAGE

FROM m

TO m

LENGTH m

STRUCTURE

INTENSITY

ANGLE\_TCA

COMMENTS

37	39	2	Shear	Strong	75	
39.8	40.3	0.5	Fracture	Moderate		
42.8	43.3	0.5	Fracture	Moderate		
45.7	45.85	0.15	Fracture	Moderate		
50.2	50.21	0.01	Foliation	Moderate	70	
52.5	53	0.5	Fault	Strong		
57.65	57.7	0.05	Fault Gouge	Moderate		
67.5	68	0.5	Fracture	Strong		
77	77.01	0.01	Foliation	Moderate	70	
80	80.01	0.01	Foliation	Moderate		
78.5	79	0.5	Fracture	Moderate		
84	86	2	Blocky	Moderate		
88	90	2	Fracture	Moderate		
102.5	102.6	0.1	Fold	Strong		Strongly foliated, crenulated and folded
124	124.01	0.01	Foliation	Moderate	68	
128	128.01	0.01	Foliation	Moderate	71	
127	127.3	0.3	Blocky	Moderate		Small section fractured
131	131.01	0.01	Foliation	Moderate	66	
139.6	139.61	0.01	Crenulation	Moderate		
143.7	143.71	0.01	Foliation	Moderate	77	
152	152.01	0.01	Foliation	Moderate	68	
157	157.01	0.01	Foliation	Moderate	68	
171.2	171.21	0.01	Foliation	Moderate	64	
210	211.8	1.8	Fracture	Moderate		
219	219.8	0.8	Fault	Very Strong		
219.8	222.8	3	Fracture	Very Strong		
222.8	224.5	1.7	Fracture	Strong		
224.5	226	1.5	Fracture	Strong		
237	237.5	0.5	Fault	Very Strong		
246	247	1	Fracture	Strong		
226	228	2	Fold	Very Strong		
237.5	238	0.5	Fold	Strong		





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METERAGE			VEIN_1	STY_1	PERCENT_1	VEIN_2	STY_2	PERCENT_2	VEIN_3	STY_3	PERCENT_3	COMMENTS
FROM m	TO m	LENGTH m										
38.7	38.75	0.05	Quartz	Veinlet (width < 1cm)								
43	44.5	1.5	Quartz	Veins (width greater or equal to 1cm)	50							
58.9	59.05	0.15	Carbonate-Quartz	Vein (width greater or equal to 1cm)								
52	52.1	0.1	Quartz	Vein (width greater or equal to 1cm)								
64.9	65	0.1	Carbonate-Quartz	Vein (width greater or equal to 1cm)								
100.7	101.5	0.8	Carbonate	Vein (width greater or equal to 1cm)								Somewhat planar sheet semi-parallel to core axis
102.65	102.8	0.15	Quartz-carbonate	Vein (width greater or equal to 1cm)								
165.6	165.65	0.05	Carbonate-Quartz	Vein (width greater or equal to 1cm)								
218	218.55	0.55	Quartz	Stockwork								Quartz flooding
219.8	222.8	3	Quartz	Stockwork								Quartz flooding
230	258	28	Quartz	Veins (width greater or equal to 1cm)	5							Veins and veinlets, irregular



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METERAGE

FROM_m	TO_m	LENGTH_m	SAMPLE_NO	SAMPLE_TYPE	AU_ppm	AG_ppm	Cu_per	Batch	COMMENTS
37	38	1	691967					14	February 26 2018
38	39	1	691968					14	February 26 2018
39	40	1	691969					14	February 26 2018
40	40.85	0.85	691970					14	February 26 2018
40.85	42	1.15	691971					14	February 26 2018
42	43	1	691972					14	February 26 2018
43	44	1	691973					14	February 26 2018
44	44.5	0.5	691974					14	February 26 2018
44.5	45	0.5	691975					14	February 26 2018
45	45	0	691976	Duplicate				14	February 26 2018
45	46	1	691977					14	February 26 2018
46	47	1	691978					15	February 26 2018
47	48	1	691979					15	February 26 2018
48	49	1	691980					15	February 26 2018
49	50	1	691981					15	February 26 2018
50	51	1	691982					15	February 26 2018
51	52	1	691983					15	February 26 2018
52	53	1	691984					15	February 26 2018
53	54	1	691985					15	February 26 2018
54	55	1	691986					15	February 26 2018
55	56	1	691987					15	February 26 2018
56	57	1	691988					15	February 26 2018
57	58	1	691989					15	February 26 2018
58	59.1	1.1	691990					15	February 26 2018
59.1	60	0.9	691991					15	February 26 2018
60	60	0	691992	OREAS 15d				15	February 26 2018
60	61	1	691993					15	February 26 2018
61	62	1	691994					15	February 26 2018
62	63	1	691995					15	February 26 2018
63	64	1	691996					15	February 26 2018
64	65	1	691997					15	February 26 2018
65	66	1	691998					15	February 26 2018
66	67	1	691999					15	February 26 2018
67	68	1	692000					15	February 26 2018
68	69	1	692001					15	February 26 2018
69	69	0	692002	Blank				15	February 26 2018

69	70	1	692003					15	February 26 2018
70	71	1	692004					15	February 26 2018
71	72	1	692005					15	February 26 2018
72	73	1	692006					15	February 26 2018
73	74	1	692007					15	February 26 2018
74	75	1	692008					15	February 26 2018
75	76	1	692009					15	February 26 2018
76	76	0	692010	Duplicate				15	February 26 2018
76	77	1	692011					15	February 26 2018
77	78	1	692012					15	February 26 2018
78	79	1	692013					16	February 26 2018
79	79.5	0.5	692014					16	February 26 2018
79.5	81	1.5	692015					16	February 26 2018
81	82	1	692016					16	February 26 2018
82	83	1	692017					16	February 26 2018
83	84	1	692018					16	February 26 2018
84	85	1	692019					16	February 26 2018
85	86	1	692020					16	February 26 2018
86	87	1	692021					16	February 26 2018
87	88	1	692022					16	February 26 2018
88	88	0	692023	OREAS 221				16	February 26 2018
88	89	1	692024					16	February 26 2018
89	90	1	692025					16	February 26 2018
90	91	1	692026					16	February 26 2018
91	92	1	692027					16	February 26 2018
92	93	1	692028					16	February 26 2018
93	94	1	692029					16	February 26 2018
94	95	1	692030					16	February 26 2018
95	96	1	692031					16	February 26 2018
96	97	1	692032					16	February 26 2018
97	98	1	692033					16	February 26 2018
98	99	1	692034					16	February 26 2018
99	100	1	692035					16	February 26 2018
100	100	0	692036	Blank				16	February 26 2018
100	100.7	0.7	692037					16	February 26 2018
100.7	101.6	0.9	692038					16	February 26 2018
101.6	103	1.4	692039					16	February 26 2018
103	104	1	692040					16	February 26 2018
104	105	1	692041					16	February 26 2018
105	106	1	692042					16	February 26 2018
106	107	1	692043					16	February 26 2018
107	108	1	692044					16	February 26 2018
108	109	1	692045					16	February 26 2018
109	110	1	692046					16	February 26 2018
110	111	1	692047					16	February 26 2018
111	112	1	692048					17	February 28 2018
112	113	1	692049					17	February 28 2018
113	113	0	692050	Duplicate				17	February 28 2018
113	114	1	692051					17	February 28 2018
114	115	1	692052					17	February 28 2018

115	116	1	692053					17	February 28 2018
116	117	1	692054					17	February 28 2018
117	118	1	692055					17	February 28 2018
118	119	1	692056					17	February 28 2018
119	120.45	1.45	692057					17	February 28 2018
120.45	121	0.55	692058					17	February 28 2018
121	122	1	692059					17	February 28 2018
122	123	1	692060					17	February 28 2018
123	124	1	692061					17	February 28 2018
124	124	0	692062	OREAS 221				17	February 28 2018
124	125.35	1.35	692063					17	February 28 2018
125.35	126.8	1.45	692064					17	February 28 2018
126.8	128	1.2	692065					17	February 28 2018
128	129.3	1.3	692066					17	February 28 2018
129.3	130	0.7	692067					17	February 28 2018
130	131	1	692068					17	February 28 2018
131	132	1	692069					17	February 28 2018
132	133	1	692070					17	February 28 2018
133	133	0	692071	Blank				17	February 28 2018
133	134	1	692072					17	February 28 2018
134	135	1	692073					17	February 28 2018
135	135.5	0.5	692074					17	February 28 2018
135.5	137	1.5	692075					17	February 28 2018
137	138	1	692076					17	February 28 2018
138	139	1	692077					17	February 28 2018
139	140	1	692078					17	February 28 2018
140	141	1	692079					17	February 28 2018
141	142	1	692080					17	February 28 2018
142	143	1	692081					17	February 28 2018
143	144	1	692082					17	February 28 2018
144	145	1	692083					18	February 28 2018
145	145	0	692084	OREAS 16b				18	February 28 2018
145	146	1	692085					18	February 28 2018
146	147.45	1.45	692086					18	February 28 2018
147.45	148	0.55	692087					18	February 28 2018
148	149	1	692088					18	February 28 2018
149	150	1	692089					18	February 28 2018
150	151	1	692090					18	February 28 2018
151	151	0	692091	Duplicate				18	February 28 2018
151	152	1	692092					18	February 28 2018
152	153	1	692093					18	February 28 2018
153	154	1	692094					18	February 28 2018
154	155	1	692095					18	February 28 2018
155	156	1	692096					18	February 28 2018
156	157	1	692097					18	February 28 2018
157	158	1	692098					18	February 28 2018
158	159	1	692099					18	February 28 2018
159	159	0	692100	Blank				18	February 28 2018
159	160	1	692101					18	February 28 2018
160	160.55	0.55	692102					18	February 28 2018

160.55	162	1.45	692103					18	February 28 2018
162	163	1	692104					18	February 28 2018
163	164	1	692105					18	February 28 2018
164	165	1	692106					18	February 28 2018
165	166	1	692107					18	February 28 2018
166	167	1	692108					18	February 28 2018
167	167.45	0.45	692109					18	February 28 2018
167.45	168	0.55	692110					18	February 28 2018
168	168	0	692111	OREAS 15d				18	February 28 2018
168	169	1	692112					18	February 28 2018
169	170	1	692113					18	February 28 2018
170	171	1	692114					18	February 28 2018
171	172	1	692115					18	February 28 2018
172	173	1	692116					18	February 28 2018
173	174.35	1.35	692117					18	February 28 2018
174.35	175	0.65	692118					19	February 28 2018
175	175	0	692119	Blank				19	February 28 2018
175	176	1	692120					19	February 28 2018
176	177	1	692121					19	February 28 2018
177	178	1	692122					19	February 28 2018
178	179	1	692123					19	February 28 2018
179	180	1	692124					19	February 28 2018
180	181	1	692125					19	February 28 2018
181	182	1	692126					19	February 28 2018
182	183	1	692127					19	February 28 2018
183	184	1	692128					19	February 28 2018
184	185	1	692129					19	February 28 2018
185	186	1	692130					19	February 28 2018
186	186	0	692131	Duplicate				19	February 28 2018
186	187	1	692132					19	February 28 2018
187	188	1	692133					19	February 28 2018
188	189	1	692134					19	February 28 2018
189	190	1	692135					19	February 28 2018
190	191	1	692136					19	February 28 2018
191	192	1	692137					19	February 28 2018
192	193	1	692138					19	February 28 2018
193	194	1	692139					19	February 28 2018
194	194.5	0.5	692140					19	February 28 2018
194.5	195	0.5	692141					19	February 28 2018
195	195	0	692142	OREAS 221				19	February 28 2018
195	195.5	0.5	692143					19	February 28 2018
195.5	196	0.5	692144					19	February 28 2018
196	196.5	0.5	692145					19	February 28 2018
196.5	197	0.5	692146					19	February 28 2018
197	197.5	0.5	692147					19	February 28 2018
197.5	198	0.5	692148					19	February 28 2018
198	198.5	0.5	692149					19	February 28 2018
198.5	199	0.5	692150					19	February 28 2018
199	199.5	0.5	692151					19	February 28 2018
199.5	200	0.5	692152					19	February 28 2018

200	200.5	0.5	692153					20	February 28 2018
200.5	200.5	0	692154	Blank				20	February 28 2018
200.5	201	0.5	692155					20	February 28 2018
201	201.5	0.5	692156					20	February 28 2018
201.5	202	0.5	692157					20	February 28 2018
202	202.5	0.5	692158					20	February 28 2018
202.5	203	0.5	692159					20	February 28 2018
203	203.5	0.5	692160					20	February 28 2018
203.5	204	0.5	692161					20	February 28 2018
204	204.5	0.5	692162					20	February 28 2018
204.5	205	0.5	692163					20	February 28 2018
205	205.5	0.5	692164					20	February 28 2018
205.5	206	0.5	692165					20	February 28 2018
206	206.5	0.5	692166					20	February 28 2018
206.5	207	0.5	692167					20	February 28 2018
207	207	0	692168	Duplicate				20	February 28 2018
207	207.5	0.5	692169					20	February 28 2018
207.5	208	0.5	692170					20	February 28 2018
208	208.5	0.5	692171					20	February 28 2018
208.5	209	0.5	692172					20	February 28 2018
209	209.5	0.5	692173					20	February 28 2018
209.5	210	0.5	692174					20	February 28 2018
210	210.5	0.5	692175					20	February 28 2018
210.5	211	0.5	692176					20	February 28 2018
211	211.5	0.5	692177					20	February 28 2018
211.5	212	0.5	692178					20	February 28 2018
212	212.5	0.5	692179					20	February 28 2018
212.5	212.5	0	692180	OREAS 216				20	February 28 2018
212.5	213	0.5	692181					20	February 28 2018
213	213.5	0.5	692182					20	February 28 2018
213.5	214	0.5	692183					20	February 28 2018
214	214.5	0.5	692184					20	February 28 2018
214.5	215	0.5	692185					20	February 28 2018
215	215.5	0.5	692186					20	February 28 2018
215.5	216	0.5	692187					20	February 28 2018
216	216	0	692188	Blank				21	February 28 2018
216	216.45	0.45	692189					21	February 28 2018
216.45	217	0.55	692190					21	February 28 2018
217	217.55	0.55	692191					21	February 28 2018
217.55	218	0.45	692192					21	February 28 2018
218	218.55	0.55	692193					21	February 28 2018
218.55	219	0.45	692194					21	February 28 2018
219	219	0	692195	OREAS 221				21	February 28 2018
219	219.8	0.8	692196					21	February 28 2018
219.8	221	1.2	692197					21	February 28 2018
221	221.5	0.5	692198					21	February 28 2018
221.5	222.8	1.3	692199					21	February 28 2018
222.8	223.5	0.7	692200					21	February 28 2018
223.5	223.5	0	692201	Blank				21	February 28 2018
223.5	224	0.5	692202					21	February 28 2018

224	224.5	0.5	692203					21	February 28 2018
224.5	226	1.5	692204					21	February 28 2018
226	227	1	692205					21	February 28 2018
227	228	1	692206					21	February 28 2018
228	229	1	692207					21	February 28 2018
229	230	1	692208					21	February 28 2018
230	231	1	692209					21	February 28 2018
231	232	1	692210					21	February 28 2018
232	233	1	692211					21	February 28 2018
233	234	1	692212					21	February 28 2018
234	235	1	692213					21	February 28 2018
235	236	1	692214					21	February 28 2018
236	237	1	692215					21	February 28 2018
237	238	1	692216					21	February 28 2018
238	239	1	692217					21	February 28 2018
239	239	0	692218	Duplicate				21	February 28 2018
239	240	1	692219					21	February 28 2018
240	241	1	692220					21	February 28 2018
241	242	1	692221					21	February 28 2018
242	243	1	692222					21	February 28 2018
243	244	1	692223					22	March 2 2018
244	245	1	692224					22	March 2 2018
245	246	1	692225					22	March 2 2018
246	247	1	692226					22	March 2 2018
247	248	1	692227					22	March 2 2018
248	249	1	692228					22	March 2 2018
249	250	1	692229					22	March 2 2018
250	250	0	692230	OREAS 221				22	March 2 2018
250	251	1	692231					22	March 2 2018
251	252	1	692232					22	March 2 2018
252	253	1	692233					22	March 2 2018
253	254	1	692234					22	March 2 2018
254	255	1	692235					22	March 2 2018
255	256	1	692236					22	March 2 2018
256	257	1	692237					22	March 2 2018
257	258	1	692238					22	March 2 2018



**NOBLE  
MINERAL**  
EXPLORATION INC.

**Diamond Drill Log**

HOLE NO.		LUC-18-10									
EXPLORATION COMPANY					UTM NAD 83 ZONE 17N				TARGET DEPTH (m)		
Noble Mineral Exploration					PLANNED COORDINATES		FINAL COORDINATES		0		
START DATE	COMPLETION DATE	START DATE LOGGED	END DATE LOGGED	EASTING (m)	EASTING (m)		TARGET DESCRIPTION				
23-Feb-18	25-Feb-18	26-Feb-18	27-Feb-18	484139.00	484135.05		0				
DRILLING COMPANY		DRILL RIG	LOGGED BY	NORTHING (m)		NORTHING (m)		TARGET RESULTS			
NPLH Drilling		Edwin Escarraga		5406968.00		5406964.78		0			
TARGET NAME	AZIMUTH (°)		DIP (°)	ELEVATION (m)	TYPE	ELEVATION (m)	TYPE	0			
Lucas - South East	225		-45	0.00	Planned	0.00	SXBlue				
COMMENTS											
METERAGE			ROCK TYPE	ROCK CODE	DESCRIPTION						
FROM m	TO m	LENGTH m									
0	42.5	42.5	Overburden	OVB							
42.5	60.9		Felsic to Intermediate Tuff	FITUFF	Grey, greenish felsic to intermediate crystal lapilli tuff. Locally laminated. Gradual lower contact						
60.9	67.75	6.85	Volcaniclastic Sediments	VOLSED	Grey, black fine interbedded volcanosed. Upper and lower contacts are gradual into tuffs. Volcanic content is higher than previous						
67.75	74.8	7.05	Intermediate Tuff	ITUFF	Grey intermediate crystal, lapilli tuff. Graphitic lamination locally and Quartz eyes crystals throughout.						
74.8	76.25	1.45	Diabase	DIA	Black medium grained, moderately magnetic diabase dyke. Chilled margins						
76.25	89.6	13.35	Intermediate Tuff	ITUFF	Grey-dark grey intermediate crystal, lapilli tuff. Abundant pyrite content increasing downhole. Lower contact is gradational						
89.6	102.2	12.6	Intermediate Volcanics	IVOL	Light grey, fine grained grained homogeneous intermediate volcanics. Faulted lower contact?						
102.2	104	1.8	Fault	FLT	Strongly Fractured and moderate loss of core.						
104	113.3	9.3	Volcaniclastic Sediments	VOLSED	Black, grey fine interbedded volcanoseds.						
113.3	125.9	12.6	Sulphide Zone	SULZ	Healed Brecciated zone. Abundant lithic fragments. Sulphide content is high at the UC but decreasing downhole and the amount of						
125.9	126.1	0.2	Fault	FLT	Fault Gouge, crumbly rock.						
126.1	149	22.9	Intermediate tuff	ITUFF	Grey-dark grey intermediate crystal, lithic lapilli tuff. Healed crackle breccia with abundant sulphide and graphite increasing						
149	152.07	3.07	Volcaniclastic Sediments	VOLSED	Grey, black fine interbedded volcanoseds. Gradational Upper and LC						
152.07	161	8.93	Mineralized Tuff	PTUFF	Dark grey intermediate lithic lapilli-block mineralized tuff. Healed crackle breccia with abundant sulphide increasing downhole						
161	174.5	13.5	Sulphide Zone	SULZ	Black cherty zone with sections of semi-massive pyrite.						
174.5	176	1.5	Fault	FLT	Strongly Fractured and moderate loss of core. Minor fault gouge						
176	185.3	9.3	Sulphide Zone	SULZ	Black cherty zone with sections of semi-massive pyrite.						
185.3	187	1.7	Fault	FLT	Fault Gouge, crumbly rock. Strongly fractured zone						
187	198.6	11.6	Felsic to Intermediate Volcan	FIVOL	Pale green-light grey banded, f-g, felsic to intermediate volcanic flow.						
198.6	199.65	1.05	Quartz Vein	QV	White barren Irregular quartz vein.						
199.65	202	2.35	Fault	FLT	Strongly fractured, crumbly rock. Fault zone						
202	205.2	3.2	Felsic to Intermediate Volcan	FIVOL	Pale green-light grey banded, f-g, felsic to intermediate volcanic flow.						
205.2	206.4	1.2	Quartz Vein	QV	White barren Irregular quartz vein, with tourmaline.						
206.4	222	15.6	Felsic Tuff	FTUFF	Pale green-light grey banded, f-g, felsic tuff.						
222	EOH										





**NOBLE  
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EXPLORATION INC.

NOBLE MINERAL EXPLORATION INC.												
HOLE NO.			LUC-18-10									
EXPLORATION COMPANY												
Noble Mineral Exploration												
DRILLING COMPANY												LOGGED BY
NPLH Drilling												Edwin Escarraga
METERAGE			ALT_1	STY_1	INT_1	ALT_2	STY_2	INT_2	ALT_3	STY_3	INT_3	COMMENTS
FROM m	TO m	LENGTH m										
42.5	60.9	18.4	Sericite	Pervasive	Weak	Carbonate	Stringers	Weak				
60.9	67.75	6.85	Graphite	Banded	Moderate	Carbonate	Stringers	Moderate	Sericite	Pervasive	Very Weak	
67.75	68.5	0.75	Sericite	Pervasive	Moderate	Carbonate	Pervasive	Moderate	Chlorite	Disseminated	Weak	
68.5	74.6	6.1	Carbonate	Pervasive	Moderate	Sericite	Pervasive	Weak	Graphite	Banded	Weak	
74.6	74.8	0.2	Hematite	Banded	Moderate							
74.8	89.6	14.8	Carbonate	Pervasive	Moderate	Sericite	Pervasive	Weak	Graphite	Banded	Very Weak	
89.6	102.2	12.6	Carbonate	Pervasive	Moderate							
102.2	113.3	11.1	Graphite	Banded	Moderate	Carbonate	Stringers	Weak	Quartz	Veinlets (width <	Weak	
113.3	117	3.7	Hematite	Patchy	Strong	Silicified	Pervasive	Moderate	Quartz	Veinlets (width <	Weak	
117	125.9	8.9	Chert	Pervasive	Very Strong							
126.1	149	22.9	Silicified	Pervasive	Moderate	Sericite	Pervasive	Weak	Carbonate	Stringers	Weak	
149	152.07	3.07	Silicified	Pervasive	Moderate	Sericite	Pervasive	Weak	Graphite	Banded	Weak	
152.07	161	8.93	Silicified	Pervasive	Moderate							
161	174.5	13.5	Chert	Pervasive	Very Strong	Quartz	Stringers	Moderate				
176	185.3	9.3	Chert	Pervasive	Very Strong	Quartz	Stringers	Moderate				
187	198.6	11.6	Sericite	Pervasive	Moderate	Chlorite	Pervasive	Weak				
199.65	205.2	5.55	Sericite	Pervasive	Strong	Chlorite	Pervasive	Moderate				
206.4	222	15.6	Sericite	Pervasive	Strong	Chlorite	Pervasive	Moderate	Carbonate	Stringers	Weak	



**NOBLE  
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HOLE NO.

LUC-18-10

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Noble Mineral Exploration

DRILLING COMPANY

NPLH Drilling

LOGGED BY

Edwin Escarraga

METERAGE			MIN_1	STY_1	PERCENT_1	MIN_2	STY_2	PERCENT_2	MIN_3	STY_3	PERCENT_3	COMMENTS
FROM m	TO m	LENGTH m										
42.5	60.9	18.4	Pyrite	Disseminated	0.01							
60.9	67	6.1	Pyrite	Band	3	Pyrite	Disseminated	1				
67	67.75	0.75	Pyrite	Band	10							
67.75	72	4.25	Pyrite	Disseminated	1							
72	73	1	Pyrite	Band	10							
73	74.8	1.8	Pyrite	Disseminated	3							
74.8	81	6.2	Pyrite	Disseminated	5							
81	84	3	Pyrite	Band	10							
84	89.6	5.6	Pyrite	Band	20							Locally coarse grained and in blebs
89.6	102.2	12.6	Pyrite	Disseminated	1							
102.2	113.3	11.1	Pyrite	Disseminated	2							
113.3	116	2.7	Pyrite	Band	25							Fine grained and fracture controlled
116	120	4	Pyrite	Fracture Filled	10							Fracture controlled and disseminated
120	120.3	0.3	Pyrite	Semi-massive	50							
120.3	125.9	5.6	Pyrite	Fracture Filled	3							Fracture controlled and disseminated
126.1	131.6	5.5	Pyrite	Disseminated	2							
131.6	137.1	5.5	Pyrite	Band	15							Banded and disseminated fine grained
137.1	149	11.9	Pyrite	Patchy	5							
149	152.07	3.07	Pyrite	Band	15							
152.07	157.5	5.43	Pyrite	Fracture Filled	10	Pyrite	Band	5				Up to 15%
157.5	161	3.5	Pyrite	Band	15	Pyrite	Bleb	5				Up to 20%
161	164	3	Pyrite	Bed	30							Thick bands and Fracture filling
164	171.9	7.9	Pyrite	Band	10	Pyrite	Fracture Filled	5				
171.9	174.5	2.6	Pyrite	Semi-massive	40							Locally massive
174.5	176	1.5	Pyrite	Semi-massive	30							In strongly fractured, possibly faulted zone
176	185.3	9.3	Pyrite	Bleb	25							Blebbly, patchy and coarse grained
187	198.6	11.6	Pyrite	Disseminated	0.01							
202	205.2	3.2	Pyrite	Disseminated	0.01							
206.4	222	15.6	Pyrite	Disseminated	1							



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**Noble Mineral Exploration**

DRILLING COMPANY

**NPLH Drilling**

Mag Declination

-10.4

LOGGED BY

Edwin Escarraga

DEPTH_m	MEASURED					CORRECTED				COMMENTS
	AZ	DIP	MAG FIELD	SURVEY_TYPE	FLAG	AZ	DIP	SURVEY_TYPE	FLAG	
54	238.5	-48.8	55862	Reflex		228.1	-46.4	Reflex		
105	235.5	-48	55582	Reflex		225.1	-48	Reflex		
156	234	-47.1	55821	Reflex		223.6	-47.1	Reflex		
207	233.6	-47	55563	Reflex		223.2	-47	Reflex		



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**Noble Mineral Exploration**

DRILLING COMPANY

**NPLH Drilling**

LOGGED BY

METERAGE			STRUCTURE	INTENSITY	ANGLE_TCA	COMMENTS
FROM_m	TO_m	LENGTH_m				
50.1	50.6	0.5	Fracture	Moderate		
53.8	54.3	0.5	Fracture	Strong		
56	56.7	0.7	Fracture	Strong		
67	67.01	0.01	Foliation	Moderate	64	
78	78.01	0.01	Foliation	Moderate	64	
92	92.01	0.01	Foliation	Weak	62	
96	96.01	0.01	Foliation	Weak	61	
47	49	2	Fold	Strong		locally crenulated
109	109.1	0.1	Foliation	Moderate	67	
125.9	126.1	0.2	Fault	Strong		
145.5	146.5	1	Fracture	Moderate		
148.6	148.65	0.05	Fault	Strong		Small section of very grinded core (fault?)
153	156	3	Fracture	Moderate		Smaller sections with very crumbled core
174.5	176	1.5	Fault	Strong		
185.3	187	1.7	Fault	Very Strong		Fault breccia and fault gouge
187.51	193	5.49	Fracture	Very Strong		
187.5	187.51	0.01	Fold	Very Strong		
193.05	193.1	0.05	Crenulation	Very Strong		
199.65	202	2.35	Fault	Very Strong		
205.6	207	1.4	Fracture	Strong		





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DRILLING COMPANY

**NPLH Drilling**

LOGGED BY

Edwin Escarraga

METERAGE

FROM_m	TO_m	LENGTH_m	SAMPLE_NO	SAMPLE_TYPE	AU_ppm	AG_ppm	Cu_per	Batch	COMMENTS
44	45	1	692239					22	March 2 2018
45	46	1	692240					22	March 2 2018
46	47	1	692241					22	March 2 2018
47	48	1	692242					22	March 2 2018
48	49	1	692243					22	March 2 2018
49	50	1	692244					22	March 2 2018
50	51	1	692245					22	March 2 2018
51	52	1	692246					22	March 2 2018
52	53	1	692247					22	March 2 2018
53	53	0	692248	OREAS 221				22	March 2 2018
53	54	1	692249					22	March 2 2018
54	55	1	692250					22	March 2 2018
55	56	1	692251					22	March 2 2018
56	57	1	692252					22	March 2 2018
57	58	1	692253					22	March 2 2018
58	59	1	692254					22	March 2 2018
59	60	1	692255					22	March 2 2018
60	60.9	0.9	692256					22	March 2 2018
60.9	60.9	0	692257	Blank				22	March 2 2018
60.9	62	1.1	692258					23	March 2 2018
62	63	1	692259					23	March 2 2018
63	64	1	692260					23	March 2 2018
64	65	1	692261					23	March 2 2018
65	66	1	692262					23	March 2 2018
66	67	1	692263					23	March 2 2018
67	67.75	0.75	692264					23	March 2 2018
67	67.75	0.75	692265	Duplicate				23	March 2 2018
67.75	69	1.25	692266					23	March 2 2018
69	70	1	692267					23	March 2 2018
70	71	1	692268					23	March 2 2018
71	72	1	692269					23	March 2 2018
72	73	1	692270					23	March 2 2018
73	74	1	692271					23	March 2 2018
74	74.8	0.8	692272					23	March 2 2018
74.8	76.25	1.45	692273					23	March 2 2018
76.25	77	0.75	692274					23	March 2 2018

77	78	1	692275					23	March 2 2018
78	79	1	692276					23	March 2 2018
79	80	1	692277					23	March 2 2018
80	80	0	692278	OREAS 15d				23	March 2 2018
80	81	1	692279					23	March 2 2018
81	82	1	692280					23	March 2 2018
82	83	1	692281					23	March 2 2018
83	84	1	692282					23	March 2 2018
84	85	1	692283					23	March 2 2018
85	86	1	692284					23	March 2 2018
86	87	1	692285					23	March 2 2018
86	87	1	692286	Duplicate				23	March 2 2018
87	88	1	692287					23	March 2 2018
88	89	1	692288					23	March 2 2018
89	89.6	0.6	692289					23	March 2 2018
89.6	91	1.4	692290					23	March 2 2018
91	92	1	692291					23	March 2 2018
92	93	1	692292					23	March 2 2018
93	94	1	692293					24	March 2 2018
94	94	0	692294	Blank				24	March 2 2018
94	95	1	692295					24	March 2 2018
95	96	1	692296					24	March 2 2018
96	97	1	692297					24	March 2 2018
97	98	1	692298					24	March 2 2018
98	99	1	692299					24	March 2 2018
99	100	1	692300					24	March 2 2018
100	101	1	692301					24	March 2 2018
101	102.2	1.2	692302					24	March 2 2018
102.2	103	0.8	692303					24	March 2 2018
103	104	1	692304					24	March 2 2018
104	105	1	692305					24	March 2 2018
105	105	0	692306	OREAS 15d				24	March 2 2018
105	106	1	692307					24	March 2 2018
106	107	1	692308					24	March 2 2018
107	108	1	692309					24	March 2 2018
108	109	1	692310					24	March 2 2018
109	110	1	692311					24	March 2 2018
110	111	1	692312					24	March 2 2018
111	112	1	692313					24	March 2 2018
112	113.3	1.3	692314					24	March 2 2018
113.3	113.3	0	692315	Blank				24	March 2 2018
113.3	114	0.7	692316					24	March 2 2018
114	114.5	0.5	692317					24	March 2 2018
114.5	115	0.5	692318					24	March 2 2018
114.5	115	0.5	692319	Duplicate				24	March 2 2018
115	115.5	0.5	692320					24	March 2 2018
115.5	116	0.5	692321					24	March 2 2018
116	116.5	0.5	692322					24	March 2 2018
116.5	117	0.5	692323					24	March 2 2018
117	117.5	0.5	692324					24	March 2 2018

117.5	118	0.5	692325					24	March 2 2018
118	118	0	692326	OREAS 16b				24	March 2 2018
118	118.5	0.5	692327					24	March 2 2018
118.5	119	0.5	692328					25	March 5 2018
119	119.5	0.5	692329					25	March 5 2018
119.5	120	0.5	692330					25	March 5 2018
120	120.5	0.5	692331					25	March 5 2018
120.5	120.5	0	692332	Blank				25	March 5 2018
120.5	121	0.5	692333					25	March 5 2018
121	121.5	0.5	692334					25	March 5 2018
121.5	122	0.5	692335					25	March 5 2018
122	123	1	692336					25	March 5 2018
123	123.5	0.5	692337					25	March 5 2018
123.5	124	0.5	692338					25	March 5 2018
124	124.5	0.5	692339					25	March 5 2018
124.5	125	0.5	692340					25	March 5 2018
125	125.9	0.9	692341					25	March 5 2018
125	125.9	0.9	692342	Duplicate				25	March 5 2018
125.9	127	1.1	692343					25	March 5 2018
127	128	1	692344					25	March 5 2018
128	129	1	692345					25	March 5 2018
129	130	1	692346					25	March 5 2018
130	131	1	692347					25	March 5 2018
131	131.6	0.6	692348					25	March 5 2018
131.6	132	0.4	692349					25	March 5 2018
132	133	1	692350					25	March 5 2018
133	134	1	692351					25	March 5 2018
134	135	1	692352					25	March 5 2018
135	136	1	692353					25	March 5 2018
136	137.1	1.1	692354					25	March 5 2018
137.1	138	0.9	692355					25	March 5 2018
138	138	0	692356	OREAS 221				25	March 5 2018
138	139	1	692357					25	March 5 2018
139	140	1	692358					25	March 5 2018
140	141	1	692359					25	March 5 2018
141	142	1	692360					25	March 5 2018
142	143	1	692361					25	March 5 2018
143	144	1	692362					25	March 5 2018
144	145	1	692363					26	March 5 2018
145	146	1	692364					26	March 5 2018
146	147	1	692365					26	March 5 2018
147	148	1	692366					26	March 5 2018
148	148	0	692367	Blank				26	March 5 2018
148	149	1	692368					26	March 5 2018
149	150	1	692369					26	March 5 2018
150	151	1	692370					26	March 5 2018
151	152.07	1.07	692371					26	March 5 2018
152.07	152.5	0.43	692372					26	March 5 2018
152.07	152.5	0.43	692373	Duplicate				26	March 5 2018
152.5	153	0.5	692374					26	March 5 2018



153	153.5	0.5	692375					26	March 5 2018
153.5	154	0.5	692376					26	March 5 2018
154	154.5	0.5	692377					26	March 5 2018
154.5	155	0.5	692378					26	March 5 2018
155	155.5	0.5	692379					26	March 5 2018
155.5	156	0.5	692380					26	March 5 2018
156	156.5	0.5	692381					26	March 5 2018
156.5	157	0.5	692382					26	March 5 2018
157	157	0	692383	OREAS 223				26	March 5 2018
157	157.5	0.5	692384					26	March 5 2018
157.5	158	0.5	692385					26	March 5 2018
158	158.5	0.5	692386					26	March 5 2018
158.5	159	0.5	692387					26	March 5 2018
159	159.5	0.5	692388					26	March 5 2018
159.5	160	0.5	692389					26	March 5 2018
160	160.5	0.5	692390					26	March 5 2018
160.5	161	0.5	692391					26	March 5 2018
161	161.5	0.5	692392					26	March 5 2018
161.5	161.5	0	692393	Blank				26	March 5 2018
161.5	162	0.5	692394					26	March 5 2018
162	162.5	0.5	692395					26	March 5 2018
162.5	163	0.5	692396					26	March 5 2018
163	163.5	0.5	692397					26	March 5 2018
163.5	164	0.5	692398					27	March 5 2018
164	164.5	0.5	692399					27	March 5 2018
164.5	165	0.5	692400					27	March 5 2018
165	165.5	0.5	692401					27	March 5 2018
165	165.5	0.5	692402	Duplicate				27	March 5 2018
165.5	166	0.5	692403					27	March 5 2018
166	166.5	0.5	692404					27	March 5 2018
166.5	167	0.5	692405					27	March 5 2018
167	167.5	0.5	692406					27	March 5 2018
167.5	168	0.5	692407					27	March 5 2018
168	168.5	0.5	692408					27	March 5 2018
168.5	169	0.5	692409					27	March 5 2018
169	169	0	692410	OREAS 221				27	March 5 2018
169	169.5	0.5	692411					27	March 5 2018
169.5	170	0.5	692412					27	March 5 2018
170	170.5	0.5	692413					27	March 5 2018
170.5	171	0.5	692414					27	March 5 2018
171	171.5	0.5	692415					27	March 5 2018
171.5	172	0.5	692416					27	March 5 2018
172	172.5	0.5	692417					27	March 5 2018
172.5	172.5	0	692418	Blank				27	March 5 2018
172.5	173	0.5	692419					27	March 5 2018
173	173.5	0.5	692420					27	March 5 2018
173.5	174	0.5	692421					27	March 5 2018
174	174.5	0.5	692422					27	March 5 2018
174	174.5	0.5	692423	Duplicate				27	March 5 2018
174.5	175	0.5	692424					27	March 5 2018

175	175.5	0.5	692425					27	March 5 2018
175.5	176	0.5	692426					27	March 5 2018
176	176.5	0.5	692427					27	March 5 2018
176.5	177	0.5	692428					27	March 5 2018
177	177.5	0.5	692429					27	March 5 2018
177.5	178	0.5	692430					27	March 5 2018
178	178.5	0.5	692431					27	March 5 2018
178.5	179	0.5	692432					27	March 5 2018
179	179.5	0.5	692433					28	March 5 2018
179.5	179.5	0	692434	OREAS 16b				28	March 5 2018
179.5	180	0.5	692435					28	March 5 2018
180	180.5	0.5	692436					28	March 5 2018
180.5	181	0.5	692437					28	March 5 2018
181	181.5	0.5	692438					28	March 5 2018
181.5	182	0.5	692439					28	March 5 2018
182	182.5	0.5	692440					28	March 5 2018
182.5	183	0.5	692441					28	March 5 2018
183	183.5	0.5	692442					28	March 5 2018
183.5	184	0.5	692443					28	March 5 2018
184	184.5	0.5	692444					28	March 5 2018
184.5	184.5	0	692445	Blank				28	March 5 2018
184.5	185	0.5	692446					28	March 5 2018
185	185.3	0.3	692447					28	March 5 2018
187	188	1	692448					28	March 5 2018
188	189	1	692449					28	March 5 2018
189	190	1	692450					28	March 5 2018
190	191	1	692451					28	March 5 2018
191	192	1	692452					28	March 5 2018
192	193	1	692453					28	March 5 2018
193	194	1	692454					28	March 5 2018
194	195	1	692455					28	March 5 2018
194	195	1	692456	Duplicate				28	March 5 2018
195	196	1	692457					28	March 5 2018
196	197	1	692458					28	March 5 2018
197	198	1	692459					28	March 5 2018
198	198.6	0.6	692460					28	March 5 2018
198.6	199.65	1.05	692461					28	March 5 2018
199.65	201	1.35	692462					28	March 5 2018
201	202	1	692463					28	March 5 2018
202	203	1	692464					28	March 5 2018
203	204	1	692465					28	March 5 2018
204	205	1	692466					28	March 5 2018
205	205	0	692467	OREAS 221				28	March 5 2018
205	206	1	692468					29	March 5 2018
206	207	1	692469					29	March 5 2018
207	208	1	692470					29	March 5 2018
208	209	1	692471					29	March 5 2018
209	210	1	692472					29	March 5 2018
210	211	1	692473					29	March 5 2018
211	212	1	692474					29	March 5 2018

212	213	1	692475					29	March 5 2018
213	214	1	692476					29	March 5 2018
214	214	0	692477	Blank				29	March 5 2018
214	215	1	692478					29	March 5 2018
215	216	1	692479					29	March 5 2018
216	217	1	692480					29	March 5 2018
217	218	1	692481					29	March 5 2018
218	219	1	692482					29	March 5 2018
219	220	1	692483					29	March 5 2018
220	221	1	692484					29	March 5 2018
220	221	1	692485	Duplicate				29	March 5 2018
221	222	1	692486					29	March 5 2018



**NOBLE  
MINERAL**  
EXPLORATION INC.

**Diamond Drill Log**

HOLE NO.		LUC-18-11									
EXPLORATION COMPANY					UTM NAD 83 ZONE 17N				TARGET DEPTH (m)		
Noble Mineral Exploration					PLANNED COORDINATES		FINAL COORDINATES		0		
START DATE	COMPLETION DATE	START DATE LOGGED	END DATE LOGGED	EASTING (m)	EASTING (m)	TARGET DESCRIPTION					
25-Feb-18	27-Feb-18	27-Feb-18	1-Mar-18	484035.00	484015.41	0					
DRILLING COMPANY		DRILL RIG	LOGGED BY	NORTHING (m)	NORTHING (m)	TARGET RESULTS					
NPLH Drilling			Edwin Escarraga	5407150.00	5407126.21	0					
TARGET NAME	AZIMUTH (°)		DIP (°)	ELEVATION (m)	TYPE	ELEVATION (m)	TYPE	0			
Lucas - South East	225		-45	0.00	Planned	0.00	SXBlue				
COMMENTS											
METERAGE			ROCK TYPE	ROCK CODE	DESCRIPTION						
FROM m	TO m	LENGTH m									
0	33.65	33.65	Overburden	OVB							
33.65	60.7	27.05	Intermediate Tuff	ITUFF	Grey, intermediate lithic block-lapilli tuff. Abundant lithic fragments elongated and stretched with foliation.						
60.7	61.15	0.45	Diabase	DIA	Black medium grained, moderately magnetic diabase dyke.						
61.15	78.95	17.8	Intermediate Tuff	ITUFF	Grey, intermediate lithic block lapilli tuff. Abundant lithic fragments elongated and stretched with foliation. Gradual lower contact.						
78.95	89.15	10.2	Volcaniclastic Sediments	VOLSED	Grey, black fine interbedded volcanosed.						
89.15	109.9	20.75	Intermediate Tuff	ITUFF	Dark Grey laminated finer grained intermediate crystal-lithic lapilli tuff. Gradual lower contact						
109.9	123.4	13.5	Felsic to Intermediate Tuff	FITUFF	Grey, spotty medium grained felsic to intermediate crystal lapilli tuff or Porphyry? Quartz eyes and plag crystals.						
123.4	131.9	8.5	Volcaniclastic Sediments	VOLSED	Grey, black fine interlaminated volcanoseds. Locally abundant crystal fragments and coarse grained pyrite						
131.9	135.6	3.7	Intermediate Tuff	ITUFF	Grey laminated intermediate crystal-lithic lapilli tuff. Gradual lower contact						
135.6	145.75	10.15	Volcaniclastic Sediments	VOLSED	Grey, black fine interlaminated volcanoseds. Locally coarse grained pyrite						
145.75	152	6.25	Intermediate Tuff	ITUFF	Dark Grey brecciated intermediate lithic lapilli tuff. Intense healed breccia and crackle breccia texture. Fragments are intensely						
152	153.1	1.1	Altered Peridotite	APER	Altered peridotite dyke or lamprophyre? Medium grained black mafic minerals in green groundmass						
153.1	162	8.9	Intermediate Tuff	ITUFF	Dark Grey brecciated intermediate lithic lapilli tuff. Intense healed breccia and crackle breccia texture. Fragments are intensely						
162	163	1	Fault	FLT	Strongly Fractured and grounded core. Minor gouge.						
163	166.35	3.35	Volcaniclastic Sediments	VOLSED	Dark grey, fine interlaminated volcanoseds.						
166.35	168.9	2.55	Quartz zone	QTZZN	Intense quartz flooding. Brecciated pieces of the hosting rock throughout						
168.9	179	10.1	Intermediate Tuff	ITUFF	Grey brecciated intermediate lithic lapilli tuff. Fragments are intensely stretched and elongated. Intense hematite staining caused						
179	188.75	9.75	Mineralized Tuff	PTUFF	Light grey and dark grey Mineralized tuff. Strong sulphide mineralization. Locally strongly brecciated and with patchy alteration.						
188.75	193.9	5.15	Sulphide Zone	SULZ	Pyrite content increases downhole finishing with massive to semi-massive pyrite. Faulted lower contact, strong quartz flooding.						
193.9	194.45	0.55	Altered Peridotite	APER	Altered peridotite or UM dyke						
194.45	196	1.55	Fault	FLT	Crumbly, strongly fractured core.						
196	198.5	2.5	Quartz Zone	QTZZN	Predominantly barren pure white quartz vein. At the upper contact minor sulphides and tourmaline?						
198.5	220	21.5	Felsic to Intermediate Volcan	FIVOL	Pale green-light grey strongly laminated f-g, felsic to intermediate volcanic flow. Gradational lower contact.						
220	249	29	Felsic to Intermediate Tuff	FITUFF	Green-dark green felsic to intermediate crystal lapilli tuff.						
249	EOH										



**NOBLE  
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Noble Mineral Exploration

DRILLING COMPANY

NPLH Drilling

LOGGED BY

Edwin Escarraga

METERAGE

FROM m	TO m	LENGTH m	ALT_1	STY_1	INT_1	ALT_2	STY_2	INT_2	ALT_3	STY_3	INT_3	COMMENTS
33.65	60.7	27.05	Sericite	Pervasive	Weak	Chlorite	Pervasive	Very Weak	Carbonate	Veinlets (width < 1cm)		Veinlets and stringers
61.15	78.95	17.8	Sericite	Pervasive	Weak	Chlorite	Pervasive	Very Weak	Carbonate	Veinlets (width < 1cm)		Veinlets and stringers
78.95	89.15	10.2	Graphite	Banded	Weak	Quartz	Veinlets (width <	Weak				Dark brown-green vein like alteration at 79.1 (anke
89.15	109.9	20.75	Sericite	Pervasive	Moderate	Carbonate	Stringers	Weak	Quartz	Veinlets (width < 1cm)		Veinlets and stringers
109.9	123.4	13.5	Carbonate	Pervasive	Moderate	Sericite	Pervasive	Weak	Carbonate	Stringers	Very Weak	
123.4	131.9	8.5	Graphite	Banded	Moderate	Carbonate	Pervasive	Moderate				Carbonate is pervasive and in stringers
131.9	135.6	3.7	Sericite	Pervasive	Moderate	Carbonate	Pervasive	Weak				
135.6	145.75	10.15	Graphite	Banded	Weak	Sericite	Pervasive	Weak				
145.75	152	6.25	Graphite	Fracture Filled	Strong	Silicified	Pervasive	Weak				
153.1	162	8.9	Graphite	Fracture Filled	Strong	Silicified	Pervasive	Weak				
153.1	154.5	1.4							Hematite	Interstitial / Inter	Strong	hematite staining, due to proximity to UM dyke?
159.7	161.3	1.6							Hematite	Interstitial / Inter	Strong	hematite staining, due to UM dyke
163	166.35	3.35	Silicified	Pervasive	Moderate							
168.9	179	10.1	Silicified	Pervasive	Weak	Sericite	Pervasive	Weak				
179	183.75	4.75	Silicified	Pervasive	Moderate							
183.75	188.75	5	Sericite	Pervasive	Weak							
188.75	193.9	5.15	Chert	Patchy	Moderate							
198.5	220	21.5	Sericite	Pervasive	Strong	Quartz	Stringers	Moderate				Quartz stringers and veinlets throughout
220	249	29	Sericite	Pervasive	Strong							



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METERAGE			MIN_1	STY_1	PERCENT_1	MIN_2	STY_2	PERCENT_2	MIN_3	STY_3	PERCENT_3	COMMENTS
FROM m	TO m	LENGTH m										
33.65	66.7	33.05	Pyrite	Disseminated	0.01							v.f.g predominantly along foliation
61.15	78.95	17.8	Pyrite	Disseminated	0.01							
78.95	89.15	10.2	Pyrite	Euhedral	1							Coarse grained up to 3% near the LC
89.15	109.9	20.75	Pyrite	Band	2	Pyrite	Disseminated	1				
109.9	123.4	13.5	Pyrite	Band	2							Almost striped-like
123.4	131.9	8.5	Pyrite	Euhedral	3							Coarse grained euhedral
131.9	135.6	3.7	Pyrite	Disseminated	0.01							
135.6	145.75	10.15	Pyrite	Euhedral	3							Coarse grained euhedral
145.75	152	6.25	Pyrite	Band	2							
153.1	162	8.9	Pyrite	Fracture Filled	5							Fracture filled and banded
163.1	163.3	0.2	Pyrite	Semi-massive	20							
166.35	168.9	2.55	Pyrite	Fracture Filled	5							
168.9	179	10.1	Pyrite	Band	5	Pyrite	Disseminated	3				Patches of semi-massive.
179	182.75	3.75	Pyrite	Fracture Filled	15	Pyrite	Semi-massive	10				
182.75	186.3	3.55	Pyrite	Disseminated	2							
186.3	188.75	2.45	Pyrite	Band	10							
188.75	193.9	5.15	Pyrite	Semi-massive	60							with quartz flooding around it
198.5	220	21.5	Pyrite	Disseminated	0.01							
220	249	29	Pyrite	Disseminated	0.01							



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**Noble Mineral Exploration**

DRILLING COMPANY

**NPLH Drilling**

Mag Declination

-10.4

LOGGED BY

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DEPTH_m	MEASURED					CORRECTED				COMMENTS
	AZ	DIP	MAG FIELD	SURVEY_TYPE	FLAG	AZ	DIP	SURVEY_TYPE	FLAG	
42	239.4	-45.7	55845	Reflex		229	-46.4	Reflex		
93	237.5	45.8	55653	Reflex		227.1	-46.5	Reflex		
144	235.1	-45.8	55640	Reflex		224.7	-46.9	Reflex		
198	233.7	-45.2	55618	Reflex		223.3	-46.6	Reflex		



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**NPLH Drilling**

LOGGED BY

METERAGE			STRUCTURE	INTENSITY	ANGLE_TCA	COMMENTS
FROM m	TO m	LENGTH m				
46	46.01	0.01	Foliation	Moderate	66	Locally crenulated
47.3	47.7	0.4	Fracture	Moderate		Locally vuggy texture
58.6	58.8	0.2	Fracture	Moderate		
68	68.8	0.8	Fracture	Moderate		
95.8	96.2	0.4	Fracture	Moderate		Blocky
94	94.01	0.01	Foliation	Moderate	66	
107	107.1	0.1	Foliation	Moderate	60	
109	110	1	Fracture	Moderate		
130	130.01	0.01	Foliation	Moderate	60	
134.8	134.81	0.01	Foliation	Moderate	58	
142	142.01	0.01	Foliation	Moderate	44	
150	150.01	0.01	Foliation	Moderate	50	
158.7	159	0.3	Fracture	Moderate		
159	162	3	Fracture	Strong		
162	163	1	Fault	Strong		
163	163.5	0.5	Fracture	Strong		
165.1	165.11	0.01	Foliation	Strong	28	
173	173.5	0.5	Fracture	Moderate		
176.5	177	0.5	Fracture	Moderate		
184	184.6	0.6	Fracture	Moderate		
193.9	196	2.1	Fault	Very strong		
196.4	198	1.6	Fracture	Moderate		
201.3	201.31	0.01	Fold	Strong		Folded and crenulated
203	203.1	0.1	Foliation	Strong	37	
237	239	2	Fracture	Strong		
242	242.01	0.01	Foliation	Strong	66	





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METERAGE

FROM m	TO m	LENGTH m	VEIN_1	STY_1	PERCENT_1	VEIN_2	STY_2	PERCENT_2	VEIN_3	STY_3	PERCENT_3	COMMENTS
160.4	160.5	0.1	Quartz	Vein (width greater or equal to 1cm)								
160.65	160.9	0.25	Quartz	Vein (width greater or equal to 1cm)								
163.1	163.3	0.2	Quartz	Vein (width greater or equal to 1cm)								with semi-massive bands of sulphide
166.35	168.9	2.55	Quartz	Stockwork								Quartz Flooding
173	173.5	0.5	Quartz	Veins (width greater or equal to 1cm)				40				
176.4	177.1	0.7	Quartz	Veins (width greater or equal to 1cm)				60				
179	183.75	4.75	Quartz	Stockwork				50				Quartz flooding. Strong sulphide mineralization
191.3	192.55	1.25	Quartz	Stockwork				70				Quartz flooding. Strong sulphide mineralization
193.7	193.9	0.2	Quartz	Vein (width greater or equal to 1cm)								
196	198.5	2.5	Quartz	Vein (width greater or equal to 1cm)								
203.1	203.6	0.5	Quartz	Stockwork				40				Quartz flooding.
207	204.7	-2.3	Quartz	Stockwork				70				Quartz flooding.
205.7	206	0.3	Quartz	Stockwork				50				Quartz flooding. Rotated lithic fragments within
208.3	209	0.7	Quartz	Stockwork				50				Quartz flooding.
210	210.25	0.25	Quartz	Vein (width greater or equal to 1cm)								



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METERAGE

FROM_m	TO_m	LENGTH_m	SAMPLE_NO	SAMPLE_TYPE	AU_ppm	AG_ppm	CU_per	BATCH #	COMMENTS
34	35	1	692487					29	March 5 2018
35	36	1	692488					29	March 5 2018
36	37	1	692489					29	March 5 2018
37	38	1	692490					29	March 5 2018
38	39	1	692491					29	March 5 2018
39	40	1	692492					29	March 5 2018
40	41	1	692493					29	March 5 2018
41	42	1	692494					29	March 5 2018
41	42	1	692495	Duplicate				29	March 5 2018
42	43	1	692496					29	March 5 2018
43	44	1	692497					29	March 5 2018
44	45	1	692498					29	March 5 2018
45	46	1	692499					29	March 5 2018
46	47	1	692500					29	March 5 2018
47	48	1	693501					30	March 5 2018
48	49	1	693502					30	March 5 2018
49	50	1	693503					30	March 5 2018
50	51	1	693504					30	March 5 2018
51	51	0	693505	OREAS 221				30	March 5 2018
51	52	1	693506					30	March 5 2018
52	53	1	693507					30	March 5 2018
53	54	1	693508					30	March 5 2018
54	55	1	693509					30	March 5 2018
55	56	1	693510					30	March 5 2018
56	57	1	693511					30	March 5 2018
57	58	1	693512					30	March 5 2018
58	59	1	693513					30	March 5 2018
59	59	0	693514	Blank				30	March 5 2018
59	60	1	693515					30	March 5 2018
60	60.7	0.7	693516					30	March 5 2018
60.7	61.15	0.45	693517					30	March 5 2018
61.15	62	0.85	693518					30	March 5 2018
62	63	1	693519					30	March 5 2018
63	64	1	693520					30	March 5 2018
64	65	1	693521					30	March 5 2018
65	66	1	693522					30	March 5 2018

66	67	1	693523					30	March 5 2018
67	68	1	693524					30	March 5 2018
67	68	1	693525	Duplicate				30	March 5 2018
68	69	1	693526					30	March 5 2018
69	70	1	693527					30	March 5 2018
70	71	1	693528					30	March 5 2018
71	72	1	693529					30	March 5 2018
72	73	1	693530					30	March 5 2018
73	74	1	693531					30	March 5 2018
74	75	1	693532					30	March 5 2018
75	76	1	693533					30	March 5 2018
76	77	1	693534					30	March 5 2018
77	77	0	693535	OREAS 16b				30	March 5 2018
77	78	1	693536					30	March 5 2018
78	78.95	0.95	693537					30	March 5 2018
78.95	80	1.05	693538					31	March 5 2018
80	81	1	693539					31	March 5 2018
81	82	1	693540					31	March 5 2018
82	83	1	693541					31	March 5 2018
83	84	1	693542					31	March 5 2018
84	85	1	693543					31	March 5 2018
85	85	0	693544	Blank				31	March 5 2018
85	86	1	693545					31	March 5 2018
86	87	1	693546					31	March 5 2018
87	88	1	693547					31	March 5 2018
88	89.15	1.15	693548					31	March 5 2018
89.15	90	0.85	693549					31	March 5 2018
90	91	1	693550					31	March 5 2018
91	92	1	693551					31	March 5 2018
92	93	1	693552					31	March 5 2018
93	94	1	693553					31	March 5 2018
94	95	1	693554					31	March 5 2018
94	95	1	693555	Duplicate				31	March 5 2018
95	96	1	693556					31	March 5 2018
96	97	1	693557					31	March 5 2018
97	98	1	693558					31	March 5 2018
98	99	1	693559					31	March 5 2018
99	100	1	693560					31	March 5 2018
100	101	1	693561					31	March 5 2018
101	102	1	693562					31	March 5 2018
102	103	1	693563					31	March 5 2018
103	104	1	693564					31	March 5 2018
104	105	1	693565					31	March 5 2018
105	105	0	693566	OREAS 221				31	March 5 2018
105	106	1	693567					31	March 5 2018
106	107	1	693568					31	March 5 2018
107	108	1	693569					31	March 5 2018
108	109	1	693570					31	March 5 2018
109	109.9	0.9	693571					31	March 5 2018
109.9	111	1.1	693572					31	March 5 2018

111	112	1	693573					32	March 7 2018
112	113	1	693574					32	March 7 2018
113	114	1	693575					32	March 7 2018
114	114	0	693576	Blank				32	March 7 2018
114	115	1	693577					32	March 7 2018
115	116	1	693578					32	March 7 2018
116	117	1	693579					32	March 7 2018
117	118	1	693580					32	March 7 2018
118	119	1	693581					32	March 7 2018
119	120	1	693582					32	March 7 2018
120	121	1	693583					32	March 7 2018
120	121	1	693584	Duplicate				32	March 7 2018
121	122	1	693585					32	March 7 2018
122	123.4	1.4	693586					32	March 7 2018
123.4	124	0.6	693587					32	March 7 2018
124	125	1	693588					32	March 7 2018
125	126	1	693589					32	March 7 2018
126	127	1	693590					32	March 7 2018
127	128	1	693591					32	March 7 2018
128	129	1	693592					32	March 7 2018
129	130	1	693593					32	March 7 2018
130	130	0	693594	OREAS 223				32	March 7 2018
130	131	1	693595					32	March 7 2018
131	131.9	0.9	693596					32	March 7 2018
131.9	133	1.1	693597					32	March 7 2018
133	134	1	693598					32	March 7 2018
134	135	1	693599					32	March 7 2018
135	135.6	0.6	693600					32	March 7 2018
135.6	137	1.4	693601					32	March 7 2018
137	138	1	693602					32	March 7 2018
138	139	1	693603					32	March 7 2018
139	139	0	693604	Blank				32	March 7 2018
139	140	1	693605					32	March 7 2018
140	141	1	693606					32	March 7 2018
141	142	1	693607					32	March 7 2018
142	143	1	693608					33	March 7 2018
143	144	1	693609					33	March 7 2018
144	145	1	693610					33	March 7 2018
145	145.75	0.75	693611					33	March 7 2018
145.75	147	1.25	693612					33	March 7 2018
145.75	147	1.25	693613	Duplicate				33	March 7 2018
147	148	1	693614					33	March 7 2018
148	149	1	693615					33	March 7 2018
149	150	1	693616					33	March 7 2018
150	151	1	693617					33	March 7 2018
151	152	1	693618					33	March 7 2018
152	153.1	1.1	693619					33	March 7 2018
153.1	154	0.9	693620					33	March 7 2018
154	155	1	693621					33	March 7 2018
155	156	1	693622					33	March 7 2018

156	156	0	693623	OREAS 223				33	March 7 2018
156	157	1	693624					33	March 7 2018
157	158	1	693625					33	March 7 2018
158	159	1	693626					33	March 7 2018
159	160	1	693627					33	March 7 2018
160	161	1	693628					33	March 7 2018
161	162	1	693629					33	March 7 2018
162	163	1	693630					33	March 7 2018
163	163.5	0.5	693631					33	March 7 2018
163.5	164	0.5	693632					33	March 7 2018
164	164	0	693633	Blank				33	March 7 2018
164	165	1	693634					33	March 7 2018
165	166.35	1.35	693635					33	March 7 2018
166.35	167	0.65	693636					33	March 7 2018
167	168	1	693637					33	March 7 2018
168	168.9	0.9	693638					33	March 7 2018
168.9	170	1.1	693639					33	March 7 2018
170	171	1	693640					33	March 7 2018
171	172	1	693641					33	March 7 2018
172	173	1	693642					33	March 7 2018
173	174	1	693643					34	March 7 2018
174	175	1	693644					34	March 7 2018
175	176	1	693645					34	March 7 2018
175	176	1	693646	Duplicate				34	March 7 2018
176	177	1	693647					34	March 7 2018
177	178	1	693648					34	March 7 2018
178	179	1	693649					34	March 7 2018
179	179.5	0.5	693650					34	March 7 2018
179.5	180	0.5	693651					34	March 7 2018
180	180.5	0.5	693652					34	March 7 2018
180.5	181	0.5	693653					34	March 7 2018
181	181.5	0.5	693654					34	March 7 2018
181.5	182	0.5	693655					34	March 7 2018
182	182	0	693656	OREAS 221				34	March 7 2018
182	182.5	0.5	693657					34	March 7 2018
182.5	183	0.5	693658					34	March 7 2018
183	183.5	0.5	693659					34	March 7 2018
183.5	184	0.5	693660					34	March 7 2018
184	184	0	693661	Blank				34	March 7 2018
184	185	1	693662					34	March 7 2018
185	185.5	0.5	693663					34	March 7 2018
185.5	186	0.5	693664					34	March 7 2018
186	186.5	0.5	693665					34	March 7 2018
186.5	187	0.5	693666					34	March 7 2018
187	187.5	0.5	693667					34	March 7 2018
187	187.5	0.5	693668	Duplicate				34	March 7 2018
187.5	188	0.5	693669					34	March 7 2018
188	188.75	0.75	693670					34	March 7 2018
188.75	189.45	0.7	693671					34	March 7 2018
189.45	190	0.55	693672					34	March 7 2018

190	190.5	0.5	693673					34	March 7 2018
190.5	190.5	0	693674	Blank				34	March 7 2018
190.5	191	0.5	693675					34	March 7 2018
191	191.5	0.5	693676					34	March 7 2018
191.5	192	0.5	693677					34	March 7 2018
192	192.5	0.5	693678					35	March 7 2018
192.5	192.5	0	693679	OREAS 221				35	March 7 2018
192.5	193	0.5	693680					35	March 7 2018
193	193.5	0.5	693681					35	March 7 2018
193.5	193.9	0.4	693682					35	March 7 2018
196	197	1	693683					35	March 7 2018
197	198	1	693684					35	March 7 2018
198	198.5	0.5	693685					35	March 7 2018
198.5	200	1.5	693686					35	March 7 2018
200	201	1	693687					35	March 7 2018
201	202	1	693688					35	March 7 2018
202	203	1	693689					35	March 7 2018
203	204	1	693690					35	March 7 2018
204	205	1	693691					35	March 7 2018
204	204	0	693692	Blank				35	March 7 2018
205	206	1	693693					35	March 7 2018
206	207	1	693694					35	March 7 2018
207	208	1	693695					35	March 7 2018
208	209	1	693696					35	March 7 2018
209	210	1	693697					35	March 7 2018
210	211	1	693698					35	March 7 2018
211	212	1	693699					35	March 7 2018
212	213	1	693700					35	March 7 2018
212	213	1	693701	Duplicate				35	March 7 2018
213	214	1	693702					35	March 7 2018
214	215	1	693703					35	March 7 2018
215	216	1	693704					35	March 7 2018
216	217	1	693705					35	March 7 2018
217	218	1	693706					35	March 7 2018
218	219	1	693707					35	March 7 2018
219	220	1	693708					35	March 7 2018
220	221	1	693709					35	March 7 2018
221	221	0	693710	OREAS 221				35	March 7 2018
221	222	1	693711					35	March 7 2018
222	223	1	693712					35	March 7 2018
223	224	1	693713					36	March 7 2018
224	225	1	693714					36	March 7 2018
225	226	1	693715					36	March 7 2018
226	227	1	693716					36	March 7 2018
227	228	1	693717					36	March 7 2018
228	229	1	693718					36	March 7 2018
229	229	0	693719	Blank				36	March 7 2018
229	230	1	693720					36	March 7 2018
230	231	1	693721					36	March 7 2018
231	232	1	693722					36	March 7 2018

232	233	1	693723					36	March 7 2018
233	234	1	693724					36	March 7 2018
234	235	1	693725					36	March 7 2018
235	236	1	693726					36	March 7 2018
236	237	1	693727					36	March 7 2018
237	238	1	693728					36	March 7 2018
238	239	1	693729					36	March 7 2018
239	240	1	693730					36	March 7 2018
240	241	1	693731					36	March 7 2018
240	241	1	693732	Duplicate				36	March 7 2018
241	242	1	693733					36	March 7 2018
242	243	1	693734					36	March 7 2018
243	244	1	693735					36	March 7 2018
244	245	1	693736					36	March 7 2018
245	246	1	693737					36	March 7 2018
246	247	1	693738					36	March 7 2018
247	248	1	693739					36	March 7 2018
248	249	1	693740					36	March 7 2018
EOH	EOH								



**NOBLE  
MINERAL**  
EXPLORATION INC.

**Diamond Drill Log**

HOLE NO.		LUC-18-12									
EXPLORATION COMPANY				UTM NAD 83 ZONE 17N				TARGET DEPTH (m)			
Noble Mineral Exploration				PLANNED COORDINATES		FINAL COORDINATES		0			
START DATE	COMPLETION DATE	START DATE LOGGED	END DATE LOGGED	EASTING (m)		EASTING (m)		TARGET DESCRIPTION			
27-Feb-18	1-Mar-18	1-Mar-18	3-Mar-18	484187.00		484184.84		0			
DRILLING COMPANY		DRILL RIG		LOGGED BY		NORTHING (m)		NORTHING (m)		0	
NPLH Drilling		Edwin Escarraga		5406874.00		5406874.30		TARGET RESULTS			
TARGET NAME		AZIMUTH (°)		DIP (°)		ELEVATION (m)	TYPE	ELEVATION (m)	TYPE	0	
Lucas - South East		225		-45		0.00	Planned	0.00	SXBlue		
COMMENTS											
METERAGE			ROCK TYPE	ROCK CODE	DESCRIPTION						
FROM m	TO m	LENGTH m									
0	54	54	Overburden	OVB	Multiple origin boulders. One long section ~2m of mineralized chert was sent for assays as sample A and B.						
54	60.3	6.3	Intermediate Tuff	ITUFF	Grey intermediate crystal, lapilli tuff. Quartz crystals elongated and stretched. Two generations of crystals?						
60.3	66.75	6.45	Mineralized Tuff	PTUFF	Dark grey intermediate crystal lapilli mineralized tuff. Up to 30% sulphide. Lithic fragments near the end of the section						
66.75	76	9.25	Intermediate Volcanics	IVOL	Dark grey intermediate volcanics. Fine grained poorly laminated. Locally with lithic fragments near the end of the section.						
76	91.7	15.7	Volcaniclastic Sediments	VOLSED	Black, grey interbedded volcanosediments, locally with abundant >1cm lithic fragments. Gradual upper and lower contacts						
91.7	126.65	34.95	Intermediate Tuff	ITUFF	Healed Brecciated zone. Abundant lithic fragments. Up to 15% sulphide content, chert increases with depth. Locally weakly to						
126.65	139.55	12.9	Sulphide Zone	SULZ	Massive to semi-massive sulphide zone, with black cherty sections near the upper contact.						
139.55	140	0.45	Fault	FLT	Loss Core						
140	142.25	2.25	Sulphide Zone	SULZ	Black cherty zone with sections of bands/stripes of pyrite.						
142.25	143.5	1.25	Fault	FLT	Fault. Strongly fractured core.						
143.5	158	14.5	Felsic to Intermediate Volcanics	FIVOL	Light green to grey fine grained felsic volcanics.						
158	158.55	0.55	Quartz Zone	QTZZN	Quartz vein with lithic fragments						
158.55	185.2	26.65	Felsic to Intermediate Volcanics	FIVOL	Light green to grey fine grained felsic volcanics. Locally medium grained tuffaceous looking. Gradual lower contact						
185.2	228	42.8	Intermediate Tuff	ITUFF	Green-dark green intermediate crystal tuff. Locally strongly foliated and crenulated						
228	EOH										





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<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td style="width:15%;"><b>HOLE NO.</b></td> <td colspan="12" style="background-color: yellow; text-align: center;"><b>LUC-18-12</b></td> </tr> <tr> <td colspan="13" style="text-align: center;">EXPLORATION COMPANY</td> </tr> <tr> <td colspan="13" style="text-align: center;"><b>Noble Mineral Exploration</b></td> </tr> <tr> <td colspan="12" style="text-align: center;">DRILLING COMPANY</td> <td style="text-align: center;">LOGGED BY</td> </tr> <tr> <td colspan="12" style="text-align: center;"><b>NPLH Drilling</b></td> <td style="text-align: center;">Edwin Escarraga</td> </tr> <tr> <th colspan="3" style="text-align: center;">METERAGE</th> <th rowspan="2">ALT_1</th> <th rowspan="2">STY_1</th> <th rowspan="2">INT_1</th> <th rowspan="2">ALT_2</th> <th rowspan="2">STY_2</th> <th rowspan="2">INT_2</th> <th rowspan="2">ALT_3</th> <th rowspan="2">STY_3</th> <th rowspan="2">INT_3</th> <th rowspan="2">COMMENTS</th> </tr> <tr> <th>FROM m</th> <th>TO m</th> <th>LENGTH m</th> </tr> <tr> <td>54</td> <td>60.3</td> <td>6.3</td> <td>Sericite</td> <td>Pervasive</td> <td>Moderate</td> <td>Quartz</td> <td>Stringers</td> <td>Weak</td> <td>Carbonate</td> <td>Patchy</td> <td>Very Weak</td> <td></td> </tr> <tr> <td>60.3</td> <td>66.75</td> <td>6.45</td> <td>Sericite</td> <td>Pervasive</td> <td>Moderate</td> <td>Quartz</td> <td>Stringers</td> <td>Weak</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>66.75</td> <td>76</td> <td>9.25</td> <td>Sericite</td> <td>Pervasive</td> <td>Moderate</td> <td>Quartz</td> <td>Veinlet (width &lt;</td> <td>Very Weak</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>76</td> <td>91.7</td> <td>15.7</td> <td>Silicified</td> <td>Patchy</td> <td>Weak</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>91.7</td> <td>126.65</td> <td>34.95</td> <td>Silicified</td> <td>Patchy</td> <td>Weak</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>126.65</td> <td>132</td> <td>5.35</td> <td>Chert</td> <td>Pervasive</td> <td>Strong</td> <td>Quartz</td> <td>Stringers</td> <td>Weak</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>132</td> <td>139.55</td> <td>7.55</td> <td>Quartz</td> <td>Stringers</td> <td>Weak</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>140</td> <td>142.25</td> <td>2.25</td> <td>Chert</td> <td>Pervasive</td> <td>Strong</td> <td>Quartz</td> <td>Stringers</td> <td>Weak</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>143.5</td> <td>158</td> <td>14.5</td> <td>Sericite</td> <td>Pervasive</td> <td>Moderate</td> <td>Chlorite</td> <td>Pervasive</td> <td>Weak</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>158</td> <td>185.2</td> <td>27.2</td> <td>Sericite</td> <td>Pervasive</td> <td>Moderate</td> <td>Chlorite</td> <td>Pervasive</td> <td>Weak</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>185.2</td> <td>228</td> <td>42.8</td> <td>Sericite</td> <td>Pervasive</td> <td>Moderate</td> <td>Chlorite</td> <td>Pervasive</td> <td>Moderate</td> <td>Quartz</td> <td>Veinlets (width &lt;</td> <td>Weak</td> <td>Stringers and veinlets. Minor Carbonate stringers</td> </tr> </table>													<b>HOLE NO.</b>	<b>LUC-18-12</b>												EXPLORATION COMPANY													<b>Noble Mineral Exploration</b>													DRILLING COMPANY												LOGGED BY	<b>NPLH Drilling</b>												Edwin Escarraga	METERAGE			ALT_1	STY_1	INT_1	ALT_2	STY_2	INT_2	ALT_3	STY_3	INT_3	COMMENTS	FROM m	TO m	LENGTH m	54	60.3	6.3	Sericite	Pervasive	Moderate	Quartz	Stringers	Weak	Carbonate	Patchy	Very Weak		60.3	66.75	6.45	Sericite	Pervasive	Moderate	Quartz	Stringers	Weak					66.75	76	9.25	Sericite	Pervasive	Moderate	Quartz	Veinlet (width <	Very Weak					76	91.7	15.7	Silicified	Patchy	Weak								91.7	126.65	34.95	Silicified	Patchy	Weak								126.65	132	5.35	Chert	Pervasive	Strong	Quartz	Stringers	Weak					132	139.55	7.55	Quartz	Stringers	Weak								140	142.25	2.25	Chert	Pervasive	Strong	Quartz	Stringers	Weak					143.5	158	14.5	Sericite	Pervasive	Moderate	Chlorite	Pervasive	Weak					158	185.2	27.2	Sericite	Pervasive	Moderate	Chlorite	Pervasive	Weak					185.2	228	42.8	Sericite	Pervasive	Moderate	Chlorite	Pervasive	Moderate	Quartz	Veinlets (width <	Weak	Stringers and veinlets. Minor Carbonate stringers
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**NOBLE  
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HOLE NO.

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**Noble Mineral Exploration**

DRILLING COMPANY

**NPLH Drilling**

LOGGED BY

Edwin Escarraga

METERAGE			MIN_1	STY_1	PERCENT_1	MIN_2	STY_2	PERCENT_2	MIN_3	STY_3	PERCENT_3	COMMENTS
FROM m	TO m	LENGTH m										
54	60.3	6.3	Pyrite	Band	3	Pyrite	Disseminated	1				
60.3	66.75	6.45	Pyrite	Bleb	20	Pyrite	Nodules	10				
66.75	76	9.25	Pyrite	Disseminated	1							
76	91.7	15.7	Pyrite	Band	5							medium to coarse grained in patchy sections and b
91.7	110	18.3	Pyrite	Band	5	Pyrite	Disseminated	5				
110	113.7	3.7	Pyrite	Patchy	15							
113.7	126.65	12.95	Pyrite	Bleb	5							
126.65	132	5.35	Pyrite	Patchy	20							locally semi-massive
132	139.55	7.55	Pyrite	Semi-massive	80							
140	142.25	2.25	Pyrite	Patchy	15							locally up to 20%
143.5	158	14.5	Pyrite	Disseminated	0.01							
158	185.2	27.2	Pyrite	Disseminated	0.01							
185.2	228	42.8	Pyrite	Disseminated	0.01							



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DRILLING COMPANY

**NPLH Drilling**

Mag Declination

-10.4

LOGGED BY

Edwin Escarraga

DEPTH_m	MEASURED					CORRECTED				COMMENTS
	AZ	DIP	MAG FIELD	SURVEY_TYPE	FLAG	AZ	DIP	SURVEY_TYPE	FLAG	
63	240.5	-43.8	55934	Reflex		230.1	-46.4	Reflex		
114	237.5	43.7	55628	Reflex		227.1	43.7	Reflex		
165	237.4	43.1	55706	Reflex		227	43.1	Reflex		
216	236.9	-42.2	55591	Reflex		226.5	-42.2	Reflex		



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**Noble Mineral Exploration**

DRILLING COMPANY

LOGGED BY

**NPLH Drilling**

METERAGE

STRUCTURE

INTENSITY

ANGLE\_TCA

COMMENTS

FROM_m	TO_m	LENGTH_m	STRUCTURE	INTENSITY	ANGLE_TCA	COMMENTS
55	55.01	0.01	Foliation	Weak	49	
84	84.01	0.01	Foliation	Weak	48	
130.4	130.7	0.3	Fracture	Strong		
133	134	1	Fracture	Moderate		
139.55	140	0.45	Fault	Strong		
141.5	142.5	1	Fracture	Strong		
142.25	143.5	1.25	Fault	Very Strong		
143.5	144.8	1.3	Fracture	Strong		
149	149.01	0.01	Foliation	Moderate	70	
158	158.5	0.5	Fracture	Moderate		
173	173.01	0.01	Foliation	Moderate	58	
177.8	177.8	0	Fold	Strong		Small section of very grinded core (fault?)
182	182.01	0.01	Fold	Strong		Strongly folded and crenulated
195.25	196	0.75	Fracture	Moderate		
220	222	2	Blocky	Moderate		
226.5	227	0.5	Fracture	Strong		
221.7	221.71	0.01	Foliation	Moderate	50	



**NOBLE  
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**Noble Mineral Exploration**

DRILLING COMPANY

**NPLH Drilling**

LOGGED BY

Edwin Escarraga

METERAGE			VEIN_1	STY_1	PERCENT_1	VEIN_2	STY_2	PERCENT_2	VEIN_3	STY_3	PERCENT_3	COMMENTS
FROM m	TO m	LENGTH m										
67	67.05	0.05	Carbonate	Vein (width greater or equal to 1cm)								Vuggy Texture
89.65	89.75	0.1	Quartz	Vein (width greater or equal to 1cm)								
150	150.6	0.6	Quartz	Veinlets (width < 1cm)								
158	158.55	0.55	Quartz	Vein (width greater or equal to 1cm)								
177.65	177.8	0.15	Quartz	Vein (width greater or equal to 1cm)								
178.95	179	0.05	Quartz	Vein (width greater or equal to 1cm)								
182.2	182.35	0.15	Quartz	Stockwork								Quartz flooding
194	194.3	0.3	Quartz	Veinlets (width < 1cm)								Cut by extensional stringers of a beige colour
194.8	195.25	0.45	Quartz	Vein (width greater or equal to 1cm)								Strong sericite alteration in fractures
197.45	197.65	0.2	Quartz	Vein (width greater or equal to 1cm)								Strong sericite alteration in fractures



**NOBLE  
MINERAL**  
EXPLORATION INC.

HOLE NO.

LUC-18-12

EXPLORATION COMPANY

**Noble Mineral Exploration**

DRILLING COMPANY

**NPLH Drilling**

LOGGED BY

Edwin Escarraga

METERAGE

FROM_m	TO_m	LENGTH_m	SAMPLE_NO	SAMPLE_TYPE	AU_ppb	AG_ppm	Cu_per	Batch	COMMENTS
54	55	1	693741					36	March 7 2018
55	56	1	693742					36	March 7 2018
56	57	1	693743					36	March 7 2018
57	58	1	693744					36	March 7 2018
58	59	1	693745					36	March 7 2018
59	60.3	1.3	693746					36	March 7 2018
60.3	61	0.7	693747					37	March 8 2018
61	61	0	693748	Duplicate				37	March 8 2018
61	62	1	693749					36	March 7 2018
62	63	1	693750					37	March 8 2018
63	64	1	693751					37	March 8 2018
64	65	1	693752					37	March 8 2018
65	66	1	693753					37	March 8 2018
66	66.75	0.75	693754					37	March 8 2018
66.75	68	1.25	693755					37	March 8 2018
68	69	1	693756					37	March 8 2018
69	69	0	693757	OREAS 221				37	March 8 2018
69	70	1	693758					37	March 8 2018
70	71	1	693759					37	March 8 2018
71	72	1	693760					37	March 8 2018
72	73	1	693761					37	March 8 2018
73	74	1	693762					37	March 8 2018
74	75	1	693763					37	March 8 2018
75	76	1	693764					37	March 8 2018
76	77	1	693765					37	March 8 2018
77	78	1	693766					37	March 8 2018
78	78	0	693767	Blank				37	March 8 2018
78	79	1	693768					37	March 8 2018
79	80	1	693769					37	March 8 2018
80	81	1	693770					37	March 8 2018
81	82	1	693771					37	March 8 2018
82	83	1	693772					37	March 8 2018
83	84	1	693773					37	March 8 2018
84	85	1	693774					37	March 8 2018
85	86	1	693775					37	March 8 2018
86	86	0	693776	Duplicate				37	March 8 2018

86	87	1	693777					37	March 8 2018
87	88	1	693778					37	March 8 2018
88	89	1	693779					37	March 8 2018
89	90	1	693780					37	March 8 2018
90	91	1	693781					37	March 8 2018
91	92	1	693782					37	March 8 2018
92	93	1	693783					38	March 8 2018
93	94	1	693784					38	March 8 2018
94	95	1	693785					38	March 8 2018
95	96	1	693786					38	March 8 2018
96	97	1	693787					38	March 8 2018
97	97	0	693788	OREAS 16b				38	March 8 2018
97	98	1	693789					38	March 8 2018
98	99	1	693790					38	March 8 2018
99	100	1	693791					38	March 8 2018
100	101	1	693792					38	March 8 2018
101	102	1	693793					38	March 8 2018
102	103	1	693794					38	March 8 2018
103	104	1	693795					38	March 8 2018
104	105	1	693796					38	March 8 2018
105	106	1	693797					38	March 8 2018
106	107	1	693798					38	March 8 2018
107	107	0	693799	Blank				38	March 8 2018
107	108	1	693800					38	March 8 2018
108	109	1	693801					38	March 8 2018
109	110	1	693802					38	March 8 2018
110	110.5	0.5	693803					38	March 8 2018
110.5	111	0.5	693804					38	March 8 2018
111	111.5	0.5	693805					38	March 8 2018
111.5	112	0.5	693806					38	March 8 2018
112	112.5	0.5	693807					38	March 8 2018
112.5	113	0.5	693808					38	March 8 2018
113	113.5	0.5	693809					38	March 8 2018
113.5	113.5	0	693810	Duplicate				38	March 8 2018
113.5	114	0.5	693811					38	March 8 2018
114	114.5	0.5	693812					38	March 8 2018
114.5	115	0.5	693813					38	March 8 2018
115	115.55	0.55	693814					38	March 8 2018
115.55	116	0.45	693815					38	March 8 2018
116	116.5	0.5	693816					38	March 8 2018
116.5	117	0.5	693817					38	March 8 2018
117	117.5	0.5	693818					39	March 8 2018
117.5	117.5	0	693819	OREAS 16b				39	March 8 2018
117.5	118	0.5	693820					39	March 8 2018
118	118.5	0.5	693821					39	March 8 2018
118.5	119	0.5	693822					39	March 8 2018
119	119.5	0.5	693823					39	March 8 2018
119.5	120	0.5	693824					39	March 8 2018
120	120.5	0.5	693825					39	March 8 2018
120.5	121	0.5	693826					39	March 8 2018

121	121.5	0.5	693827					39	March 8 2018
121.5	121.5	0	693828	Blank				39	March 8 2018
121.5	122	0.5	693829					39	March 8 2018
122	122.5	0.5	693830					39	March 8 2018
122.5	123	0.5	693831					39	March 8 2018
123	123.5	0.5	693832					39	March 8 2018
123.5	124	0.5	693833					39	March 8 2018
124	124.5	0.5	693834					39	March 8 2018
124.5	125	0.5	693835					39	March 8 2018
125	125	0	693836	Duplicate				39	March 8 2018
125	125.5	0.5	693837					39	March 8 2018
125.5	126	0.5	693838					39	March 8 2018
126	126.65	0.65	693839					39	March 8 2018
126.65	127	0.35	693840					39	March 8 2018
127	127.5	0.5	693841					39	March 8 2018
127.5	128	0.5	693842					39	March 8 2018
128	128	0	693843	OREAS 216				39	March 8 2018
128	128.5	0.5	693844					39	March 8 2018
128.5	129	0.5	693845					39	March 8 2018
129	129.5	0.5	693846					39	March 8 2018
129.5	130	0.5	693847					39	March 8 2018
130	130.5	0.5	693848					39	March 8 2018
130.5	131	0.5	693849					39	March 8 2018
131	131.5	0.5	693850					39	March 8 2018
131.5	131.5	0	693851	Blank				39	March 8 2018
131.5	132	0.5	693852					39	March 8 2018
132	132.5	0.5	693853					40	March 12 2018
132.5	133	0.5	693854					40	March 12 2018
133	133.5	0.5	693855					40	March 12 2018
133.5	134	0.5	693856					40	March 12 2018
134	134.5	0.5	693857					40	March 12 2018
134.5	135	0.5	693858					40	March 12 2018
135	135.5	0.5	693859					40	March 12 2018
135.5	136	0.5	693860					40	March 12 2018
136	136	0	693861	OREAS 221				40	March 12 2018
136	136.5	0.5	693862					40	March 12 2018
136.5	137.5	1	693863					40	March 12 2018
137.5	138	0.5	693864					40	March 12 2018
138	138.5	0.5	693865					40	March 12 2018
138.5	138.5	0	693866	Duplicate				40	March 12 2018
138.5	139	0.5	693867					40	March 12 2018
139	139.55	0.55	693868					40	March 12 2018
140	140.5	0.5	693869					40	March 12 2018
140.5	141	0.5	693870					40	March 12 2018
141	141	0	693871	Blank				40	March 12 2018
141	141.5	0.5	693872					40	March 12 2018
141.5	142.25	0.75	693873					40	March 12 2018
144	145	1	693874					40	March 12 2018
145	146	1	693875					40	March 12 2018
146	147	1	693876					40	March 12 2018



147	147	0	693877	OREAS 221				40	March 12 2018
147	148	1	693878					40	March 12 2018
148	149	1	693879					40	March 12 2018
149	150	1	693880					40	March 12 2018
150	151	1	693881					40	March 12 2018
151	152	1	693882					40	March 12 2018
152	153	1	693883					40	March 12 2018
153	154	1	693884					40	March 12 2018
154	155	1	693885					40	March 12 2018
155	156	1	693886					40	March 12 2018
156	156	0	693887	Duplicate				40	March 12 2018
156	157	1	693888					41	March 12 2018
157	158	1	693889					41	March 12 2018
158	159	1	693890					41	March 12 2018
159	160	1	693891					41	March 12 2018
160	161	1	693892					41	March 12 2018
161	162	1	693893					41	March 12 2018
162	163	1	693894					41	March 12 2018
163	164	1	693895					41	March 12 2018
164	165	1	693896					41	March 12 2018
165	165	0	693897	Blank				41	March 12 2018
165	166	1	693898					41	March 12 2018
166	167	1	693899					41	March 12 2018
167	168	1	693900					41	March 12 2018
168	169	1	693901					41	March 12 2018
169	170	1	693902					41	March 12 2018
170	171	1	693903					41	March 12 2018
171	172	1	693904					41	March 12 2018
172	173	1	693905					41	March 12 2018
173	174	1	693906					41	March 12 2018
174	174	0	693907	OREAS 221				41	March 12 2018
174	175	1	693908					41	March 12 2018
175	176	1	693909					41	March 12 2018
176	177	1	693910					41	March 12 2018
177	178	1	693911					41	March 12 2018
178	179	1	693912					41	March 12 2018
179	180	1	693913					41	March 12 2018
180	181	1	693914					41	March 12 2018
181	182	1	693915					41	March 12 2018
182	183	1	693916					41	March 12 2018
183	183	0	693917	Blank				41	March 12 2018
183	184	1	693918					41	March 12 2018
184	185.2	1.2	693919					41	March 12 2018
185.2	186	0.8	693920					41	March 12 2018
186	187	1	693921					41	March 12 2018
187	188	1	693922					41	March 12 2018
188	189	1	693923					42	March 12 2018
189	190	1	693924					42	March 12 2018
190	191	1	693925					42	March 12 2018
191	192	1	693926					42	March 12 2018

192	192	0	693927	Duplicate				42	March 12 2018
192	193	1	693928					42	March 12 2018
193	194	1	693929					42	March 12 2018
194	194.7	0.7	693930					42	March 12 2018
194.7	196	1.3	693931					42	March 12 2018
196	197	1	693932					42	March 12 2018
197	198	1	693933					42	March 12 2018
198	199	1	693934					42	March 12 2018
199	200	1	693935					42	March 12 2018
200	200	0	693936	OREAS 221				42	March 12 2018
200	201	1	693937					42	March 12 2018
201	202	1	693938					42	March 12 2018
202	203	1	693939					42	March 12 2018
203	204	1	693940					42	March 12 2018
204	205	1	693941					42	March 12 2018
205	206	1	693942					42	March 12 2018
206	207	1	693943					42	March 12 2018
207	208	1	693944					42	March 12 2018
208	208	0	693945	Blank				42	March 12 2018
208	209	1	693946					42	March 12 2018
209	210	1	693947					42	March 12 2018
210	211	1	693948					42	March 12 2018
211	212	1	693949					42	March 12 2018
212	213	1	693950					42	March 12 2018
213	214	1	693951					42	March 12 2018
214	215	1	693952					42	March 12 2018
215	216	1	693953					42	March 12 2018
216	216	0	693954	Duplicate				42	March 12 2018
216	217	1	693955					42	March 12 2018
217	218	1	693956					42	March 12 2018
218	219	1	693957					42	March 12 2018
219	220	1	693958					43	March 12 2018
220	221	1	693959					43	March 12 2018
221	222	1	693960					43	March 12 2018
222	223	1	693961					43	March 12 2018
223	224	1	693962					43	March 12 2018
224	225	1	693963					43	March 12 2018
225	226	1	693964					43	March 12 2018
226	226	0	693965	OREAS 15d				43	March 12 2018
226	227	1	693966					43	March 12 2018
227	228	1	693967					43	March 12 2018
Casing	Sample A		542014			84			Rushed (March 3 2018)
Casing	Sample B		542015			91			Rushed (March 3 2018)



Diamond Drill Log

HOLE NO.		LUC-18-13									
EXPLORATION COMPANY					UTM NAD 83 ZONE 17N				TARGET DEPTH (m)		
Noble Mineral Exploration					PLANNED COORDINATES		FINAL COORDINATES		0		
START DATE	COMPLETION DATE	START DATE LOGGED	END DATE LOGGED	EASTING (m)	EASTING (m)		EASTING (m)		TARGET DESCRIPTION		
1-Mar-18	4-Mar-18	3-Mar-18	5-Mar-18	483959.00	483961.56		483961.56		0		
DRILLING COMPANY			DRILL RIG	LOGGED BY	NORTHING (m)		NORTHING (m)		0		
NPLH Drilling			Edwin Escarraga		5407140.00		5407141.44		TARGET RESULTS		
TARGET NAME		AZIMUTH (°)		DIP (°)	ELEVATION (m)	TYPE	ELEVATION (m)	TYPE	0		
Lucas - South East		225		-45	0.00	Planned	0.00	SXBlue			
COMMENTS											
METERAGE			ROCK TYPE	ROCK CODE	DESCRIPTION						
FROM m	TO m	LENGTH m									
0	36	36	Overburden	OVB							
36	43.5	7.5	Intermediate Tuff	ITUFF	Grey, intermediate lithic lapilli tuff. Abundant lithic fragments elongated and stretched with foliation.						
43.5	43.7	0.2	Diabase	DIA	Black medium grained, moderately magnetic diabase dyke.						
43.7	48.35	4.65	Intermediate Tuff	ITUFF	Grey, intermediate lithic lapilli tuff. Abundant lithic fragments elongated and stretched with foliation.						
48.35	48.6	0.25	Diabase	DIA	Black medium grained, moderately magnetic diabase dyke.						
48.6	50.9	2.3	Intermediate Tuff	ITUFF	Grey, intermediate lithic lapilli tuff. Abundant lithic fragments elongated and stretched with foliation.						
50.9	52.65	1.75	Intermediate Intrusives	IINT	light grey medium grained "salt and pepper" textured granodiorite. Upper contact shows and increase of mafic minerals, Lower						
52.65	66.95	14.3	Intermediate Tuff	ITUFF	Grey, intermediate lapilli lithic tuff. Near the UC lithic fragments are >4mm but size decreases downhole. Locally crackle breccia						
66.95	88.5	21.55	Intermediate Tuff	ITUFF	Tarnished red, strongly hematized tuff or volcanoclastic sediments? Predominantly with lapilli lithic fragments but occasionally						
88.5	90	1.5	Fault	FLT	Strongly Fractured and grounded core.						
90	101.25	11.25	Intermediate Tuff	ITUFF	Dark Grey locally brecciated intermediate lithic lapilli tuff. Fragments are intensely stretched and elongated						
101.25	102.7	1.45	Volcanoclastic Sediments	VOLSED	Dark grey, fine interlaminated volcanoseds.						
102.7	108	5.3	Intermediate Tuff	ITUFF	Tarnished red, strongly hematized crystal lapilli intermediate tuff or volcanics. Weakly magnetic.						
108	114.2	6.2	Intermediate Volcanics	IVOL	Dark grey, fine grained homogeneous intermediate volcanics? Locally with crystal lapilli texture. Weakly magnetic						
114.2	126	11.8	Mineralized Tuff	PTUFF	Cherty mineralized tuff. Abundant sulphide, moderate patchy chert. "shadow" hematite around lithic fragments. Smaller ~5cm						
126	130.65	4.65	Volcanoclastic Sediments	VOLSED	Dark grey, interlaminated volcanoseds. Crystal fragments of medium size. Upper and lower contacts are fractured						
130.65	143.75	13.1	Sulphide Zone	SULZ	Strong Chert mineralization throughout with semi-massive patches of pyrite. Strong crackle breccia throughout. Py mineralization						
143.75	145.1	1.35	Volcanoclastic Sediments	VOLSED	Black, graphite-rich fine grained volcanoseds.						
145.1	150.75	5.65	Mineralized Tuff	PTUFF	Dark grey to black lithic lapilli tuff, or volcanoclastic sediments. moderate quartz flooding. Faulted lower contact						
150.75	150.9	0.15	Fault	FLT	Crumbly, core and fault gouge.						
150.9	155.65	4.75	Quartz Zone	QTZZN	Quartz flooding with strong pyrite mineralization, cherty fragments. Disseminated arsenopyrite						
155.65	157.6	1.95	Mineralized Tuff	PTUFF	Grey lithic lapilli intermediate tuff. Strong pyrite mineralization in bands and patches.						
157.6	158.8	1.2	Quartz Zone	QTZZN	White barren quartz zone with fracture filled graphite.						
158.8	160.5	1.7	Fault	FLT	Major fault zone, with breccia, fault gouge and intense graphite alteration.						
160.5	180.85	20.35	Felsic to Intermediate Volcanic	FIVOL	Pale green-grey very fine grained locally laminated felsic to intermediate volcanic flow?						



**NOBLE  
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HOLE NO.

LUC-18-13

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DRILLING COMPANY

NPLH Drilling

LOGGED BY

Edwin Escarraga

METERAGE

FROM m	TO m	LENGTH m	ALT_1	STY_1	INT_1	ALT_2	STY_2	INT_2	ALT_3	STY_3	INT_3	COMMENTS
36	48.35	12.35	Sericite	Pervasive	Weak	Carbonate	Stringers	Very Weak				
48.6	50.9	2.3	Sericite	Pervasive	Weak	Carbonate	Stringers	Very Weak				
50.9	52.65	1.75	Sericite	Pervasive	Very Weak	Quartz	Stringers	Very Weak				
52.65	59	6.35	Sericite	Pervasive	Weak	Quartz	Stringers	Very Weak				
59	66.95	7.95							Silicified	Pervasive	Moderate	
66.95	87	20.05	Hematite	Pervasive	Strong	Silicified	Patchy	Weak				Hematite shows "shadows" around lithic fragments
90	101.25	11.25	Sericite	Pervasive	Moderate							
102.7	108	5.3	Hematite	Banded	Moderate	Sericite	Pervasive	Weak	Magnetite	Disseminated	Very Weak	
108	114.2	6.2	Silicified	Pervasive	Weak	Quartz	Stringers	Very Weak				
114.2	126	11.8	Chert	Patchy	Moderate	Hematite	Halo	Moderate	Quartz	Stringers	Weak	
126	130.65	4.65	Sericite	Pervasive	Weak	Graphite	Banded	Very Weak	Chlorite	Patchy	Weak	
130.65	139.4	8.75	Chert	Pervasive	Strong	Quartz	Stringers	Moderate				Stringers and veinlets
139.4	141.2	1.8	Silicified	Pervasive	Moderate	Sericite	Pervasive	Weak				
141.2	143.75	2.55	Chert	Pervasive	Strong	Quartz	Stringers	Weak				
143.75	145.1	1.35	Graphite	Pervasive	Very Strong							
145.1	150.75	5.65	Sericite	Pervasive	Weak	Quartz	Stringers	Moderate				
150.9	155.65	4.75	Chert	Fragments	Moderate	Quartz	Stringers	Moderate				
155.65	157.6	1.95	Sericite	Pervasive	Moderate	Quartz	Stringers	Moderate				Quartz stringers and veinlets throughout
157.6	158.8	1.2	Graphite	Fracture filled	Strong							
160.5	180.85	20.35	Sericite	Pervasive	Moderate	Chlorite	Pervasive	Moderate	Quartz	Veinlets (width <	Weak	



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**Noble Mineral Exploration**

DRILLING COMPANY

**NPLH Drilling**

LOGGED BY

**Edwin Escarraga**

METERAGE			MIN_1	STY_1	PERCENT_1	MIN_2	STY_2	PERCENT_2	MIN_3	STY_3	PERCENT_3	COMMENTS
FROM m	TO m	LENGTH m										
36	43.5	7.5	Pyrite	Disseminated	0.01							
43.7	48.35	4.65	Pyrite	Disseminated	0.01							
48.6	50.9	2.3	Pyrite	Disseminated	0.01							
50.9	52.65	1.75	Pyrite	Disseminated	1							
54.85	54.95	0.1	Pyrite	Semi-massive	40							
56.3	59	2.7	Pyrite	Band	5							
59	66.95	7.95	Pyrite	Fracture Filled	1							
66.95	87.5	20.55	Pyrite	Disseminated	5	Pyrite	Patchy	2	Pyrite	Band	1	
90	101.25	11.25	Pyrite	Patchy	2							Associated to some specific lithic kind than others?
101.25	102.7	1.45	Pyrite	Disseminated	3							Coarse grained
102.7	108	5.3	Pyrite	Patchy	5	Pyrite	Disseminated	2				Disseminated is medium to coarse grained
108	114.2	6.2	Pyrite	Disseminated	3							Coarse grained
114.2	126	11.8	Pyrite	Semi-massive	20	Pyrite	Patchy	10				Patches of semi-massive.
126	130.65	4.65	Pyrite	Disseminated	5							Medium grained
130.65	135.5	4.85	Pyrite	Fracture Filled	10	Pyrite	Disseminated	2				
135.5	137.5	2	Pyrite	Semi-massive	40							
137.5	142.35	4.85	Pyrite	Patchy	15							
142.35	143.75	1.4	Pyrite	Patchy	5							
143.75	145.1	1.35	Pyrite	Bleb	2	Pyrite	Disseminated	1				
145.1	150.75	5.65	Pyrite	Band	5	Pyrite	Patchy	5				
150.9	155.65	4.75	Pyrite	Semi-massive	20	Arsenopyrite	Disseminated	0.01				Visible disseminated Aspy between 151.6 and 153m
155.65	157.6	1.95	Pyrite	Patchy	8	Chalcopyrite	Speck	0.01				Cpy speck at 157.52?
157.6	158.8	1.2	Pyrite	Fracture Filled	2							
160.5	180.85	20.35	Pyrite	Disseminated	0.01							



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DRILLING COMPANY

**NPLH Drilling**

Mag Declination

-10.4

LOGGED BY

Edwin Escarraga

DEPTH_m	MEASURED					CORRECTED				COMMENTS
	AZ	DIP	MAG FIELD	SURVEY_TYPE	FLAG	AZ	DIP	SURVEY_TYPE	FLAG	
51	235.6	-46	55410	Reflex		225.2	-46	Reflex		
102	234.2	-46	55485	Reflex		223.8	-46	Reflex		
153	233.3	-45.9	55508	Reflex		222.9	-45.9	Reflex		



**NOBLE  
MINERAL**  
EXPLORATION INC.

HOLE NO.

**LUC-18-13**

EXPLORATION COMPANY

**Noble Mineral Exploration**

DRILLING COMPANY

LOGGED BY

**NPLH Drilling**

METERAGE

STRUCTURE

INTENSITY

ANGLE\_TCA

COMMENTS

FROM_m	TO_m	LENGTH_m	STRUCTURE	INTENSITY	ANGLE_TCA	COMMENTS
39.8	46.5	6.7	Fracture	Moderate		
53.85	53.9	0.05	Fault Gouge	Strong		Very localized
55.95	56	0.05	Fault Gouge	Strong		Very localized
88.5	90	1.5	Fault	Strong		
99	99.01	0.01	Foliation	Moderate	64	
104.8	107	2.2	Fracture	Moderate		
119	120	1	Fracture	Moderate		
125.8	126.1	0.3	Fracture	Moderate		
130	130.55	0.55	Fracture	Moderate		
136.2	136.7	0.5	Fracture	Moderate		
144	144.5	0.5	Fracture	Strong		
150.75	150.9	0.15	Fault	Moderate		
154.6	155.2	0.6	Fracture	Moderate		
157.6	158.8	1.2	Fracture	Strong		
158.8	160.5	1.7	Fault	Very strong		Fault gouge, crumbly core and graphite alteration
163	166	3	Fracture	Moderate		Strong at 165.8
168	168.01	0.01	Foliation	Moderate	59	
177.4	177.5	0.1	Fault	Strong		Crumbly core



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METERAGE

FROM m	TO m	LENGTH m	VEIN_1	STY_1	PERCENT_1	VEIN_2	STY_2	PERCENT_2	VEIN_3	STY_3	PERCENT_3	COMMENTS
124.55	124.65	0.1	Quartz	Vein (width greater or equal to 1cm)								
134.7	135.3	0.6	Quartz	Veinlets (width <		10						
150.9	155.65	4.75	Quartz	Stockwork		75						Quartz Flooding
157.6	158.8	1.2	Quartz	Vein (width greater or equal to 1cm)								





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METERAGE

FROM_m	TO_m	LENGTH_m	SAMPLE_NO	SAMPLE_TYPE	AU_ppm	AG_ppm	CU_per	BATCH #	COMMENTS
36	37	1	693968					43	March 12 2018
37	38	1	693969					43	March 12 2018
38	39	1	693970					43	March 12 2018
39	40	1	693971					43	March 12 2018
40	41	1	693972					43	March 12 2018
41	42	1	693973					43	March 12 2018
42	42	0	693974	Blank				43	March 12 2018
42	43	1	693975					43	March 12 2018
43	43.5	0.5	693976					43	March 12 2018
43.5	43.7	0.2	693977					43	March 12 2018
43.7	45	1.3	693978					43	March 12 2018
45	46	1	693979					43	March 12 2018
46	47	1	693980					43	March 12 2018
47	48.25	1.25	693981					43	March 12 2018
48.25	48.6	0.35	693982					43	March 12 2018
48.6	49	0.4	693983					43	March 12 2018
48.6	49	0.4	693984	Duplicate				43	March 12 2018
49	50	1	693985					43	March 12 2018
50	50.9	0.9	693986					43	March 12 2018
50.9	52	1.1	693987					43	March 12 2018
52	52.65	0.65	693988					43	March 12 2018
52.65	54	1.35	693989					43	March 12 2018
54	55	1	693990					43	March 12 2018
55	56	1	693991					43	March 12 2018
56	57	1	693992					43	March 12 2018
57	58	1	693993					44	March 12 2018
58	58	0	693994	OREAS 221				44	March 12 2018
58	59	1	693995					44	March 12 2018
59	60	1	693996					44	March 12 2018
60	61	1	693997					44	March 12 2018
61	62	1	693998					44	March 12 2018
62	63	1	693999					44	March 12 2018
63	64	1	694000					44	March 12 2018
64	65	1	694501					44	March 12 2018
65	66	1	694502					44	March 12 2018
66	66	0	694503	Blank				44	March 12 2018

66	66.95	0.95	694504					44	March 12 2018
66.95	68	1.05	694505					44	March 12 2018
68	69	1	694506					44	March 12 2018
69	70	1	694507					44	March 12 2018
70	71	1	694508					44	March 12 2018
71	72	1	694509					44	March 12 2018
72	73	1	694510					44	March 12 2018
73	74	1	694511					44	March 12 2018
74	75	1	694512					44	March 12 2018
74	75	1	694513	Duplicate				44	March 12 2018
75	76	1	694514					44	March 12 2018
76	77	1	694515					44	March 12 2018
77	78	1	694516					44	March 12 2018
78	79	1	694517					44	March 12 2018
79	80	1	694518					44	March 12 2018
80	81	1	694519					44	March 12 2018
81	82	1	694520					44	March 12 2018
82	83	1	694521					44	March 12 2018
83	83	0	694522	OREAS 15d				44	March 12 2018
83	84	1	694523					44	March 12 2018
84	85	1	694524					44	March 12 2018
85	86	1	694525					44	March 12 2018
86	87	1	694526					44	March 12 2018
87	88	1	694527					44	March 12 2018
88	89	1	694528					45	March 12 2018
89	90	1	694529					45	March 12 2018
90	91	1	694530					45	March 12 2018
91	92	1	694531					45	March 12 2018
92	93	1	694532					45	March 12 2018
93	93	0	694533	Blank				45	March 12 2018
93	94	1	694534					45	March 12 2018
94	95	1	694535					45	March 12 2018
95	96	1	694536					45	March 12 2018
96	97	1	694537					45	March 12 2018
97	98	1	694538					45	March 12 2018
98	99	1	694539					45	March 12 2018
99	100	1	694540					45	March 12 2018
100	101.25	1.25	694541					45	March 12 2018
100	101.25	1.25	694542	Duplicate				45	March 12 2018
101.25	102	0.75	694543					45	March 12 2018
102	102.7	0.7	694544					45	March 12 2018
102.7	104	1.3	694545					45	March 12 2018
104	105	1	694546					45	March 12 2018
105	106	1	694547					45	March 12 2018
106	107	1	694548					45	March 12 2018
107	108	1	694549					45	March 12 2018
108	108	0	694550	OREAS 220				45	March 12 2018
108	109	1	694551					45	March 12 2018
109	110	1	694552					45	March 12 2018
110	111	1	694553					45	March 12 2018

111	112	1	694554					45	March 12 2018
112	113	1	694555					45	March 12 2018
113	114.2	1.2	694556					45	March 12 2018
114.2	115	0.8	694557					45	March 12 2018
115	115	0	694558	Blank				45	March 12 2018
115	115.5	0.5	694559					45	March 12 2018
115.5	116	0.5	694560					45	March 12 2018
116	116.5	0.5	694561					45	March 12 2018
116.5	117	0.5	694562					45	March 12 2018
117	117.5	0.5	694563					46	March 12 2018
117	117.5	0.5	694564	Duplicate				46	March 12 2018
117.5	118	0.5	694565					46	March 12 2018
118	118.5	0.5	694566					46	March 12 2018
118.5	119	0.5	694567					46	March 12 2018
119	119.5	0.5	694568					46	March 12 2018
119.5	120	0.5	694569					46	March 12 2018
120	120.5	0.5	694570					46	March 12 2018
120.5	121	0.5	694571					46	March 12 2018
121	121.5	0.5	694572					46	March 12 2018
121.5	121.5	0	694573	OREAS 16b				46	March 12 2018
121.5	122	0.5	694574					46	March 12 2018
122	122.5	0.5	694575					46	March 12 2018
122.5	123	0.5	694576					46	March 12 2018
123	123.5	0.5	694577					46	March 12 2018
123.5	124	0.5	694578					46	March 12 2018
124	124.65	0.65	694579					46	March 12 2018
124.65	125	0.35	694580					46	March 12 2018
125	125.45	0.45	694581					46	March 12 2018
125.45	126	0.55	694582					46	March 12 2018
126	127	1	694583					46	March 12 2018
127	127	0	694584	Blank				46	March 12 2018
127	128	1	694585					46	March 12 2018
128	129	1	694586					46	March 12 2018
129	130.65	1.65	694587					46	March 12 2018
130.65	131.5	0.85	694588					46	March 12 2018
131.5	132	0.5	694589					46	March 12 2018
131.5	132	0.5	694590	Duplicate				46	March 12 2018
132	132.5	0.5	694591					46	March 12 2018
132.5	133	0.5	694592					46	March 12 2018
133	133.5	0.5	694593					46	March 12 2018
133.5	134	0.5	694594					46	March 12 2018
134	134.5	0.5	694595					46	March 12 2018
134.5	135	0.5	694596					46	March 12 2018
135	135.5	0.5	694597					46	March 12 2018
135.5	136	0.5	694598					47	March 13 2018
136	136.55	0.55	694599					47	March 13 2018
136.55	137	0.45	694600					47	March 13 2018
137	137.5	0.5	694601					47	March 13 2018
137.5	137.5	0	694602	OREAS 216				47	March 13 2018
137.5	138	0.5	694603					47	March 13 2018

138	138.5	0.5	694604					47	March 13 2018
138.5	138.5	0	694605	Blank				47	March 13 2018
138.5	139	0.5	694606					47	March 13 2018
139	139.5	0.5	694607					47	March 13 2018
139.5	140	0.5	694608					47	March 13 2018
140	140.5	0.5	694609					47	March 13 2018
140.5	141	0.5	694610					47	March 13 2018
141	141.5	0.5	694611					47	March 13 2018
141.5	142	0.5	694612					47	March 13 2018
142	142.5	0.5	694613					47	March 13 2018
142.5	143	0.5	694614					47	March 13 2018
143	143.75	0.75	694615					47	March 13 2018
143	143.75	0.75	694616	Duplicate				47	March 13 2018
143.75	145	1.25	694617					47	March 13 2018
145	146	1	694618					47	March 13 2018
146	147	1	694619					47	March 13 2018
147	147.5	0.5	694620					47	March 13 2018
147.5	148	0.5	694621					47	March 13 2018
148	149	1	694622					47	March 13 2018
149	150	1	694623					47	March 13 2018
150	150.75	0.75	694624					47	March 13 2018
150.75	151.5	0.75	694625					47	March 13 2018
151.5	151.5	0	694626	Duplicate				47	March 13 2018
151.5	152	0.5	694627					47	March 13 2018
152	152.5	0.5	694628					47	March 13 2018
152.5	153	0.5	694629					47	March 13 2018
153	153.5	0.5	694630					47	March 13 2018
153.5	154	0.5	694631					47	March 13 2018
154	154.5	0.5	694632					47	March 13 2018
154.5	155.65	1.15	694633					48	March 13 2018
155.65	156.5	0.85	694634					48	March 13 2018
156.5	157.6	1.1	694635					48	March 13 2018
157.6	157.6	0	694636	OREAS 223				48	March 13 2018
157.6	158.8	1.2	694637					48	March 13 2018
161	162	1	694638					48	March 13 2018
162	163	1	694639					48	March 13 2018
163	164	1	694640					48	March 13 2018
164	165	1	694641					48	March 13 2018
165	166	1	694642					48	March 13 2018
166	167	1	694643					48	March 13 2018
167	168	1	694644					48	March 13 2018
168	168	0	694645	Blank				48	March 13 2018
168	169	1	694646					48	March 13 2018
169	170	1	694647					48	March 13 2018
170	171	1	694648					48	March 13 2018
171	172	1	694649					48	March 13 2018
172	173	1	694650					48	March 13 2018
173	174	1	694651					48	March 13 2018
174	175	1	694652					48	March 13 2018
175	176	1	694653					48	March 13 2018

176	177	1	694654					48	March 13 2018
176	177	1	694655	Duplicate				48	March 13 2018
177	178	1	694656					48	March 13 2018
178	179	1	694657					48	March 13 2018
179	180	1	694658					48	March 13 2018
180	180.85	0.85	694659					48	March 13 2018



**NOBLE  
MINERAL**  
EXPLORATION INC.

**Diamond Drill Log**

HOLE NO.		LUC-18-14									
EXPLORATION COMPANY					UTM NAD 83 ZONE 17N				TARGET DEPTH (m)		
Noble Mineral Exploration					PLANNED COORDINATES		FINAL COORDINATES		0		
START DATE	COMPLETION DATE	START DATE LOGGED	END DATE LOGGED	EASTING (m)	EASTING (m)		EASTING (m)		TARGET DESCRIPTION		
4-Mar-18	6-Mar-18	5-Mar-18	6-Mar-18	483959.00	483961.77		483961.77		0		
DRILLING COMPANY		DRILL RIG		LOGGED BY		NORTHING (m)		NORTHING (m)		0	
NPLH Drilling		Edwin Escarraga		5407140.00		5407142.05		5407142.05		TARGET RESULTS	
TARGET NAME		AZIMUTH (°)		DIP (°)		ELEVATION (m)	TYPE	ELEVATION (m)	TYPE	0	
Lucas - South East		225		-60		0.00	Planned	0.00	SXBlue		
COMMENTS											
METERAGE			ROCK TYPE	ROCK CODE	DESCRIPTION						
FROM m	TO m	LENGTH m									
0	29	29	Overburden	OVB							
29	55	26	Intermediate Tuff	ITUFF	Grey, intermediate lithic lapilli tuff. Abundant lithic fragments elongated and stretched with foliation.						
55	55.3	0.3	Diabase	DIA	Black medium grained, moderately magnetic diabase dyke.						
55.3	65.5	10.2	Intermediate Tuff	ITUFF	Grey, intermediate lapilli lithic tuff. Gradual Lower contact. Pyrite content increasing drastically after 60m						
65.5	83.25	17.75	Intermediate Tuff	ITUFF	Tarnished red, strongly hematized tuff or volcanoclastic sediments? Predominantly with lapilli lithic fragments but occasionally						
83.25	83.55	0.3	Fault	FLT	Strongly Fractured and grounded core.						
83.55	88.2	4.65	Intermediate Tuff	ITUFF	Tarnished red, strongly hematized crystal lapilli intermediate tuff or volcanics. Weakly magnetic.						
88.2	90.4	2.2	Breccia	BX	Brecciated and silicified, proto textures unrecognizable. Healed and crackle breccia.						
90.4	107.3	16.9	Intermediate Tuff	ITUFF	Tarnished red, strongly hematized lithic lapilli-block intermediate tuff. Some sections have block size fragments (up to ~30 cm) of						
107.3	110.55	3.25	Volcanoclastic Sediments	VOLSED	Dark grey to black, interlaminated volcanosed. Crystal fragments of medium size. Gradual upper and lower contacts.						
110.55	113.9	3.35	Felsic to Intermediate Tuff	FITUFF	Light grey medium to coarse grained crystal lapilli tuff? Locally looks like a dacite dyke with abundant Quartz porphyroclasts.						
113.9	121.15	7.25	Volcanoclastic Sediments	VOLSED	Dark grey, interlaminated volcanosed. Crystal fragments of medium size. Gradual upper and lower contacts.						
121.15	121.7	0.55	Diabase	DIA	Black-grey, bleached fine grained, moderately magnetic diabase dyke.						
121.7	142.3	20.6	Volcanoclastic Sediments	VOLSED	Dark grey to black lithic lapilli tuff, or volcanoclastic sediments. Gradual upper and lower contacts						
142.3	156	13.7	Mineralized Tuff	PTUFF	Patchy sulphide mineralization in a lithic lapilli tuff, with local healed and crackle breccia. A section in the middle has strong chert						
156	162.6	6.6	Intermediate Volcanics	IVOL	Dark grey, laminated fine grained intermediate volcanics or volcanoclastic sediments? Locally with tuffaceous texture.						
162.6	175.1	12.5	Sulphide Zone	SULZ	Mineralized sections with massive to semi-massive and patchy pyrite. Locally chert contact increases. Abundant quartz stringers						
175.1	177.1	2	Quartz Zone	QTZZN	White quartz vein/flooding with strong sulphide mineralization.						
177.1	178.8	1.7	Fault	FLT	Fault gouge in the upper contacts. Strongly fractured and crumbly core. Remnants of a dark green diabase dyke strongly altered.						
178.8	181.55	2.75	Quartz Vein	QV	Barren, white Quartz vein. Strongly fractured and possibly within the fault.						
181.55	183.3	1.75	Fault	FLT	Fault gouge in upper contact. Strongly fractured and blocky.						
183.3	204	20.7	Felsic to Intermediate Volcan	FIVOL	Pale green and grey fine grained felsic to intermediate volcanics. Strongly foliated, locally strongly folded and crenulated.						
204	EOH										



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NPLH Drilling

LOGGED BY

Edwin Escarraga

METERAGE			ALT_1	STY_1	INT_1	ALT_2	STY_2	INT_2	ALT_3	STY_3	INT_3	COMMENTS
FROM m	TO m	LENGTH m										
29	55	26	Sericite	Pervasive	Weak	Carbonate	Zones	Very Weak				
55.3	65.5	10.2	Sericite	Pervasive	Weak							
65.5	83.2	17.7	Hematite	Pervasive	Strong							
83.55	88.2	4.65	Hematite	Pervasive	Strong	Sericite	Pervasive	Weak				
88.2	90.4	2.2	Silicified	Pervasive	Moderate							
90.4	107.3	16.9	Hematite	Pervasive	Moderate	Silicified	Patchy	Weak	Sericite	Pervasive	Weak	Hematite shows "shadows" around lithic fragments
107.3	110.55	3.25	Graphite	Pervasive	Weak	Sericite	Pervasive	Very Weak				
110.55	113.9	3.35	Sericite	Pervasive	Moderate							
113.9	121.15	7.25	Graphite	Pervasive	Weak							
121.7	142.3	20.6	Graphite	Pervasive	Weak	Sericite	Pervasive	Very Weak				
142.3	145	2.7	Silicified	Pervasive	Moderate	Quartz	Veinlets (width <	Very Weak				
145	149.75	4.75	Chert	Pervasive	Very Strong	Quartz	Veins (width grea	Moderate				Veins and veinlets. Stringers fracture filling
149.75	156	6.25	Silicified	Pervasive	Moderate	Sericite	Pervasive	Weak				
156	162.6	6.6	Silicified	Pervasive	Moderate	Quartz	Veinlets (width <	Weak				Veins and veinlets
162.6	171	8.4	Chert	Pervasive	Strong	Quartz	Veinlets (width <	Strong				Veins, veinlets and stringers
171	174.5	3.5	Silicified	Pervasive	Weak	Quartz	Stringers	Very Weak				
174.5	175.1	0.6	Chert	Pervasive	Moderate	Quartz	Stringers	Moderate				
175.1	177.1	2	Silicified	Pervasive	Moderate							
183.3	204	20.7	Sericite	Pervasive	Strong	Chlorite	Pervasive	Moderate	Quartz	Veinlets (width <	Weak	



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METERAGE

FROM m	TO m	LENGTH m	MIN_1	STY_1	PERCENT_1	MIN_2	STY_2	PERCENT_2	MIN_3	STY_3	PERCENT_3	COMMENTS
29	55	26	Pyrite	Disseminated	0.01							
55.3	59.7	4.4	Pyrite	Disseminated	1							
59.7	59.8	0.1	Pyrite	Semi-massive	50							
59.8	65.5	5.7	Pyrite	Band	5	Pyrite	Patchy	5				
65.5	75.6	10.1	Pyrite	Disseminated	2	Pyrite	Band	1				In thin lamination parallel to foliation
75.6	77	1.4	Pyrite	Patchy	5	Pyrite	Disseminated	2				Patches at the edges of (dacite dykes?)
77	83.2	6.2	Pyrite	Disseminated	2	Pyrite	Patchy	2				up to 25% at 81.65-82m
83.55	88.2	4.65	Pyrite	Band	2	Pyrite	Disseminated	1				
88.2	90.4	2.2	Pyrite	Disseminated	1							
90.4	107.3	16.9	Pyrite	Band	5	Pyrite	Disseminated	1				Associated to silicified-bleached bands parallel to foliation
107.3	110.55	3.25	Pyrite	Band	10	Pyrite	patchy	2				
110.55	113.9	3.35	Pyrite	Band	5	Pyrite	Disseminated	1				
113.9	121.15	7.25	Pyrite	Euhedral	5	Pyrite	Disseminated	2				euhedral crystals are medium grained
121.7	142.3	20.6	Pyrite	Disseminated	5	Pyrite	Euhedral	1				euhedral crystals are medium grained
142.3	149.75	7.45	Pyrite	Patchy	20	Pyrite	Fracture Filled	2	Arsenopyrite	Fracture Filled	0.01	silvery very fined grained Aspy? Or very fina grained micaceous m
149.75	156	6.25	Pyrite	Patchy	5	Pyrite	Disseminated	2				
156	162.6	6.6	Pyrite	Disseminated	3	Pyrite	Patchy	2				
162.6	167	4.4	Pyrite	Semi-massive	40	Pyrite	Disseminated	10				
167	169	2	Pyrite	Band	10	Pyrite	Disseminated	2				
169	170.25	1.25	Pyrite	Semi-massive	25	Arsenopyrite	Speck	0.01	VG	Speck		one speck at 169.5m (minor aspy near by)
170.25	175.1	4.85	Pyrite	Band	10	Pyrite	Disseminated	5	Arsenopyrite	Euhedral		at 174.6m
175.1	177.1	2	Pyrite	Semi-massive	20	Pyrite	Patchy	5				
183.3	204	20.7	Pyrite	Disseminated	0.01							





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**NPLH Drilling**

Mag Declination

-10.4

LOGGED BY

Edwin Escarraga

DEPTH_m	MEASURED					CORRECTED				COMMENTS
	AZ	DIP	MAG FIELD	SURVEY_TYPE	FLAG	AZ	DIP	SURVEY_TYPE	FLAG	
48	235.3	-59	55578	Reflex		224.9	-59	Reflex		
99	233	-58.4	55288	Reflex		222.6	-58.4	Reflex		
150	231.3	-58.4	55947	Reflex		220.9	-58.4	Reflex		
201	230.2	-58	55580	Reflex		219.8	-58	Reflex		



**NOBLE  
MINERAL**  
EXPLORATION INC.

HOLE NO.

**LUC-18-14**

EXPLORATION COMPANY

**Noble Mineral Exploration**

DRILLING COMPANY

**NPLH Drilling**

LOGGED BY

METERAGE

STRUCTURE

INTENSITY

ANGLE\_TCA

COMMENTS

FROM\_m

TO\_m

LENGTH\_m

FROM_m	TO_m	LENGTH_m	STRUCTURE	INTENSITY	ANGLE_TCA	COMMENTS
34	34.01	0.01	Foliation	Moderate	63	
65	65.01	0.01	Foliation	Moderate	65	
68.3	68.5	0.2	Fracture	Strong		Very localized
83.2	83.5	0.3	Fault	Strong		
86.7	88	1.3	Fracture	Moderate		
82.5	82.51	0.01	Foliation	Moderate	49	
90	92	2	Fracture	Moderate		
97.5	98	0.5	Fracture	Strong		Crumbly core. Fault?
101.65	101.7	0.05	Shear	Strong		Crenulated and microfaulted (gouge in the spot)
108.8	109	0.2	Fracture	Moderate		
109.1	109.11	0.01	Foliation	Moderate	65	
121	121.01	0.01	Foliation	Moderate	58	
149.75	150.15	0.4	Fracture	Moderate		
165	166	1	Fracture	Strong		
166.8	167.5	0.7	Fracture	Strong		
177.1	178.8	1.7	Fault	Very Strong		Fault gouge in UC
181.55	183.3	1.75	Fault	Very Strong		Fault gouge in UC
186.4	186.7	0.3	Fold	Strong		Crenulated as well
198	198.01	0.01	Foliation	Strong	52	





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EXPLORATION INC.

HOLE NO.

LUC-18-14

EXPLORATION COMPANY

Noble Mineral Exploration

DRILLING COMPANY

NPLH Drilling

LOGGED BY

Edwin Escarraga

METERAGE

FROM_m	TO_m	LENGTH_m	SAMPLE_NO	SAMPLE_TYPE	AU_ppm	AG_ppm	CU_per	BATCH #	COMMENTS
29	30	1	694660					48	March 13 2018
30	31	1	694661					48	March 13 2018
31	32	1	694662					48	March 13 2018
32	33	1	694663					48	March 13 2018
33	34	1	694664					48	March 13 2018
34	34	0	694665	OREAS 221				48	March 13 2018
34	35	1	694666					48	March 13 2018
35	36	1	694667					48	March 13 2018
36	37	1	694668					49	March 13 2018
37	38	1	694669					49	March 13 2018
38	39	1	694670					49	March 13 2018
39	40	1	694671					49	March 13 2018
40	41	1	694672					49	March 13 2018
41	42	1	694673					49	March 13 2018
42	43	1	694674					49	March 13 2018
42	43	1	694675	Duplicate				49	March 13 2018
43	44	1	694676					49	March 13 2018
44	45	1	694677					49	March 13 2018
45	46	1	694678					49	March 13 2018
46	47	1	694679					49	March 13 2018
47	48	1	694680					49	March 13 2018
48	49	1	694681					49	March 13 2018
49	50	1	694682					49	March 13 2018
50	51	1	694683					49	March 13 2018
51	52	1	694684					49	March 13 2018
52	52	0	694685	Blank				49	March 13 2018
52	53	1	694686					49	March 13 2018
53	54	1	694687					49	March 13 2018
54	55	1	694688					49	March 13 2018
55	55.3	0.3	694689					49	March 13 2018
55.3	56	0.7	694690					49	March 13 2018
56	57	1	694691					49	March 13 2018
57	58	1	694692					49	March 13 2018
58	59	1	694693					49	March 13 2018
59	60	1	694694					49	March 13 2018
60	61	1	694695					49	March 13 2018



100	101	1	694746					51	March 14 2018
101	102	1	694747					51	March 14 2018
102	103	1	694748					51	March 14 2018
103	104	1	694749					51	March 14 2018
104	105	1	694750					51	March 14 2018
105	105	0	694751	OREAS 221				51	March 14 2018
105	106	1	694752					51	March 14 2018
106	107.3	1.3	694753					51	March 14 2018
107.3	108	0.7	694754					51	March 14 2018
108	109	1	694755					51	March 14 2018
109	110	1	694756					51	March 14 2018
110	110.55	0.55	694757					51	March 14 2018
110.55	111	0.45	694758					51	March 14 2018
111	112	1	694759					51	March 14 2018
112	113	1	694760					51	March 14 2018
113	113.9	0.9	694761					51	March 14 2018
113.9	115	1.1	694762					51	March 14 2018
115	116	1	694763					51	March 14 2018
115	116	1	694764	Duplicate				51	March 14 2018
116	117	1	694765					51	March 14 2018
117	118	1	694766					51	March 14 2018
118	119	1	694767					51	March 14 2018
119	120	1	694768					51	March 14 2018
120	121.15	1.15	694769					51	March 14 2018
121.15	121.7	0.55	694770					51	March 14 2018
121.7	123	1.3	694771					51	March 14 2018
123	124	1	694772					51	March 14 2018
124	124	0	694773	Blank				52	March 14 2018
124	125	1	694774					52	March 14 2018
125	126	1	694775					52	March 14 2018
126	127	1	694776					52	March 14 2018
127	128	1	694777					52	March 14 2018
128	129	1	694778					52	March 14 2018
129	130	1	694779					52	March 14 2018
130	131	1	694780					52	March 14 2018
131	132	1	694781					52	March 14 2018
132	132	0	694782	OREAS 15d				52	March 14 2018
132	133	1	694783					52	March 14 2018
133	134	1	694784					52	March 14 2018
134	135	1	694785					52	March 14 2018
135	136	1	694786					52	March 14 2018
136	137	1	694787					52	March 14 2018
137	138	1	694788					52	March 14 2018
138	139	1	694789					52	March 14 2018
138	139	1	694790	Duplicate				52	March 14 2018
139	140	1	694791					52	March 14 2018
140	141	1	694792					52	March 14 2018
141	142.3	1.3	694793					52	March 14 2018
142.3	143	0.7	694794					52	March 14 2018
143	143.5	0.5	694795					52	March 14 2018

143.5	143.5	0	694796	OREAS 216				52	March 14 2018
143.5	144	0.5	694797					52	March 14 2018
144	144.5	0.5	694798					52	March 14 2018
144.5	145	0.5	694799					52	March 14 2018
145	145.5	0.5	694800					52	March 14 2018
145.5	145.5	0	694801	Blank				52	March 14 2018
145.5	146	0.5	694802					52	March 14 2018
146	146.5	0.5	694803					52	March 14 2018
146.5	147	0.5	694804					52	March 14 2018
147	147.5	0.5	694805					52	March 14 2018
147.5	148	0.5	694806					52	March 14 2018
148	148.5	0.5	694807					53	March 14 2018
148	148.5	0.5	694808	Duplicate				53	March 14 2018
148.5	149	0.5	694809					52	March 14 2018
149	149.75	0.75	694810					53	March 14 2018
149.75	150.5	0.75	694811					53	March 14 2018
150.5	151	0.5	694812					53	March 14 2018
151	151.5	0.5	694813					53	March 14 2018
151.5	151.5	0	694814	Blank				53	March 14 2018
151.5	152	0.5	694815					53	March 14 2018
152	152.5	0.5	694816					53	March 14 2018
152.5	153	0.5	694817					53	March 14 2018
153	153.5	0.5	694818					53	March 14 2018
153.5	154	0.5	694819					53	March 14 2018
154	154.5	0.5	694820					53	March 14 2018
154.5	155	0.5	694821					53	March 14 2018
155	155.5	0.5	694822					53	March 14 2018
155.5	155.5	0	694823	OREAS 221				53	March 14 2018
155.5	156	0.5	694824					53	March 14 2018
156	156.5	0.5	694825					53	March 14 2018
156.5	157	0.5	694826					53	March 14 2018
157	157.5	0.5	694827					53	March 14 2018
157.5	158	0.5	694828					53	March 14 2018
158	158.5	0.5	694829					53	March 14 2018
158.5	159	0.5	694830					53	March 14 2018
159	159.5	0.5	694831					53	March 14 2018
159.5	160	0.5	694832					53	March 14 2018
159.5	160	0.5	694833	Duplicate				53	March 14 2018
160	160.5	0.5	694834					53	March 14 2018
160.5	161	0.5	694835					53	March 14 2018
161	161.5	0.5	694836					53	March 14 2018
161.5	162	0.5	694837					53	March 14 2018
162	162.6	0.6	694838					53	March 14 2018
162.6	163	0.4	694839					53	March 14 2018
163	163.5	0.5	694840					53	March 14 2018
163.5	164	0.5	694841					53	March 14 2018
164	164	0	694842	Blank				53	March 14 2018
164	164.5	0.5	694843					54	March 16 2018
164.5	165	0.5	694844					54	March 16 2018
165	165.5	0.5	694845					54	March 16 2018

165.5	166	0.5	694846					54	March 16 2018
166	166.5	0.5	694847					54	March 16 2018
166.5	167	0.5	694848					54	March 16 2018
167	167.5	0.5	694849					54	March 16 2018
167.5	168	0.5	694850					54	March 16 2018
168	168	0	694851	OREAS 223				54	March 16 2018
168	168.5	0.5	694852					54	March 16 2018
168.5	169	0.5	694853					54	March 16 2018
169	169.6	0.6	694854					54	March 16 2018
169.6	170	0.4	694855					54	March 16 2018
170	170.5	0.5	694856					54	March 16 2018
170.5	170.5	0	694857	Blank				54	March 16 2018
170.5	171	0.5	694858					54	March 16 2018
171	171.5	0.5	694859					54	March 16 2018
171.5	172	0.5	694860					54	March 16 2018
172	172.5	0.5	694861					54	March 16 2018
172.5	173	0.5	694862					54	March 16 2018
173	173.5	0.5	694863					54	March 16 2018
173.5	173.5	0	694864	Duplicate				54	March 16 2018
173.5	174	0.5	694865					54	March 16 2018
174	174.5	0.5	694866					54	March 16 2018
174.5	175.1	0.6	694867					54	March 16 2018
175.1	176	0.9	694868					54	March 16 2018
176	176.5	0.5	694869					54	March 16 2018
176.5	177.1	0.6	694870					54	March 16 2018
177.1	177.1	0	694871	OREAS 216				54	March 16 2018
178.8	180	1.2	694872					54	March 16 2018
180	181	1	694873					54	March 16 2018
181	181.5	0.5	694874					54	March 16 2018
183.3	184	0.7	694875					54	March 16 2018
184	185	1	694876					54	March 16 2018
185	185	0	694877	Blank				54	March 16 2018
185	185.5	0.5	694878					55	March 16 2018
185.5	186	0.5	694879					55	March 16 2018
186	187	1	694880					55	March 16 2018
187	188	1	694881					55	March 16 2018
188	189	1	694882					55	March 16 2018
189	190	1	694883					55	March 16 2018
190	191	1	694884					55	March 16 2018
190	191	1	694885	Duplicate				55	March 16 2018
191	192	1	694886					55	March 16 2018
192	193	1	694887					55	March 16 2018
193	194	1	694888					55	March 16 2018
194	195	1	694889					55	March 16 2018
195	196	1	694890					55	March 16 2018
196	197	1	694891					55	March 16 2018
197	198	1	694892					55	March 16 2018
198	199	1	694893					55	March 16 2018
199	200	1	694894					55	March 16 2018
200	201	1	694895					55	March 16 2018



201	201	0	694896	OREAS 15d				55	March 16 2018
201	202	1	694897					55	March 16 2018
202	203	1	694898					55	March 16 2018
203	204	1	694899					55	March 16 2018



Diamond Drill Log

HOLE NO.		LUC-18-15									
EXPLORATION COMPANY					UTM NAD 83 ZONE 17N				TARGET DEPTH (m)		
Noble Mineral Exploration					PLANNED COORDINATES		FINAL COORDINATES		0		
START DATE	COMPLETION DATE	START DATE LOGGED	END DATE LOGGED	EASTING (m)	EASTING (m)		TARGET DESCRIPTION				
6-Mar-18	10-Mar-18	7-Mar-18	10-Mar-18	483956.00	483956.84		0				
DRILLING COMPANY		DRILL RIG	LOGGED BY	NORTHING (m)		NORTHING (m)		0			
NPLH Drilling			Edwin Escarraga	5407290.00		5407289.51		TARGET RESULTS			
TARGET NAME		AZIMUTH (°)	DIP (°)	ELEVATION (m)	TYPE	ELEVATION (m)	TYPE	0			
Lucas - South East		225	-45	0.00	Planned	0.00	SXBlue				
COMMENTS											
METERAGE			ROCK TYPE	ROCK CODE	DESCRIPTION						
FROM m	TO m	LENGTH m									
0	48		Overburden	OVB							
48	52.4	4.4	Intermediate to Mafic Tuff	IMTUFF	Dark grey intermediate to mafic crystal lapilli Dacite/andesite tuff. Abundant plagioclase porphyroclasts. Gradual lower contact is more altered.						
52.4	63.05	10.65	Intermediate Tuff	ITUFF	Grey crystal-lithic lapilli intermediate tuff. Disseminated py in stringer-like disseminated style						
63.05	63.75	0.7	Fault	FLT	Fault gouge in upper contact. Crumbly core. Loss of core.						
63.75	66.2	2.45	Sulphide Zone	SULZ	Semi-massive pyritic zone, with vuggy texture and abundant light brown massive goethite? near the UC						
66.2	70.65	4.45	Mineralized Tuff	PTUFF	Mineralized section with abundant chert. Hard to see original texture (tuff?).						
70.65	75.05	4.4	Sulphide Zone	SULZ	Massive to semi massive pyritic zone. Strongly fractured. Minor quartz stringers and veinlets.						
75.05	82.75	7.7	Mineralized Tuff	PTUFF	Mineralized section with abundant chert. Hard to see original texture (tuff?).						
82.75	88.6	5.85	Sulphide Zone	SULZ	Massive to semi massive pyritic zone. Brecciated texture and goethite alteration?. Minor quartz stringers and veinlets.						
88.6	90	1.4	Fault	FLT	Core not recovered.						
90	92.5	2.5	Sulphide Zone	SULZ	Massive to semi massive pyritic zone. Patchy goethite alteration? Minor quartz stringers and veinlets.						
92.5	97.4	4.9	Mineralized Tuff	PTUFF	Mineralized section with abundant chert. Hard to see original texture (tuff?). Vuggy texture throughout.						
97.4	100.2	2.8	Intermediate Tuff	ITUFF	Light grey medium grained crystal lapilli tuff? Looks porphyritic locally. UC is sheared, LC is gradual with intense chert alteration.						
100.2	109.45	9.25	Intermediate Volcanics	IVOL	Dark grey homogeneous intermediate volcanics. Locally tuffaceous						
109.45	135.25	25.8	Intermediate Tuff	ITUFF	Grey, intermediate lithic lapilli tuff. Abundant lithic fragments (>3cm) elongated and stretched with foliation. Sharp lower contact						
135.25	144.1	8.85	Felsic to Intermediate Volcan	FIVOL	Grey, very fine grained, homogeneous felsic to intermediate volcanics. Carbonate alteration in the form on veins, veinlets and stringers increased.						
144.1	146.15	2.05	Intermediate Tuff	ITUFF	Grey, intermediate crystal lapilli tuff. Strongly foliated. Locally with the porphyritic appearance. Lower contact is sheared.						
146.15	160.1	13.95	Felsic to Intermediate Volcan	FIVOL	Grey, very fine grained, homogeneous felsic to intermediate volcanics. Carbonate alteration in the form on veins, veinlets and stringers increased.						
160.1	163.25	3.15	Intermediate Tuff	ITUFF	Grey, intermediate crystal-lithic lapilli tuff. Strongly foliated. Lower contact is sharp.						
163.25	171.7	8.45	Felsic Volcanics	FVOL	Green-light grey very fine grained homogeneous felsic volcanics.						
171.7	187.2	15.5	Intermediate Tuff	ITUFF	Grey, intermediate lithic-crystal lapilli tuff. Strongly foliated. Lithic fragments stretched and elongated.						
187.2	187.7	0.5	Fault	FLT	Strongly Fractured and grounded core. Smokey quartz vein within the fault? Strongly fractured						
187.7	198.7	11	Felsic to Intermediate Volcan	FIVOL	Green- grey very fine grained, homogeneous felsic to intermediate volcanics. Quartz-carbonate alteration in the form on veins, veinlets and stringers						
198.7	208.5	9.8	Intermediate Tuff	ITUFF	Grey, intermediate crystal-lithic lapilli tuff. Strongly foliated. Lithic fragments stretched and elongated.						
208.5	211	2.5	Diabase	DIA	Dark grey fine grained, weakly magnetic diabase dyke.						
211	211.4	0.4	Intermediate Intrusives	IINT	Felsic to intermediate medium grained quartz porphyry? Not as strongly foliated as the unit above						
211.4	215	3.6	Intermediate to Mafic Volcan	IMVOL	Dark grey very fine grained, homogeneous intermediate to mafic volcanics. Locally tuffaceous near the LC.						
215	215.5	0.5	Fault	FLT	Strongly Fractured, crumbly core.						
215.5	234	18.5	Mineralized Tuff	PTUFF	Dark grey to black lithic lapilli tuff, although near the LC with an appearance of graphitic volcanoclastic sediments. Two 30 cm diabase dyke intruding n						
234	237.75	3.75	Sulphide Zone	SULZ	Semi-massive pyritic zone, locally with vuggy texture.						
237.75	238	0.25	Fault	FLT	Graphitic fault gouge						
238	244.3	6.3	Intermediate Tuff	ITUFF	Grey, intermediate crystal lapilli tuff. Strongly foliated locally sheared.						
244.3	246.7	2.4	Sulphide Zone	SULZ	Semi-massive pyritic zone, quartz stockwork at the UC						
246.7	269	22.3	Felsic to Intermediate Volcan	FIVOL	Strongly laminated pale green and grey very fine -grained felsic to intermediate volcanics.						
269	271	2	Sulphide Zone	SULZ	Sulphide-rich black volcanoclastic sediments? Quartz stockwork near the UC and LC.						

271	285	14	Intermediate Volcanics	IVOL	Dark grey--dark green laminated intermediate volcanics. Locally tuffaceous
285	EOH				



**NOBLE  
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EXPLORATION INC.

HOLE NO.		LUC-18-15										
EXPLORATION COMPANY												
Noble Mineral Exploration												
DRILLING COMPANY											LOGGED BY	
NPLH Drilling											Edwin Escarraga	
METERAGE			ALT_1	STY_1	INT_1	ALT_2	STY_2	INT_2	ALT_3	STY_3	INT_3	COMMENTS
FROM m	TO m	LENGTH m										
48	52.4	4.4	Sericite	Pervasive	Weak	Quartz	Stringers	Very Weak				
52.4	53.1	0.7	Hematite	Patchy	Moderate	Sericite	Pervasive	Moderate	Chlorite	Pervasive	Weak	
53.1	61.5	8.4	Sericite	Pervasive	Weak	Quartz	Stringers	Very Weak				
61.5	63.05	1.55	Hematite	Patchy	Moderate	Sericite	Pervasive	Weak				Hematite and limonite alteration?
63.75	64.9	1.15	Goethite	Patchy	Strong	Silicified	Pervasive	Moderate				
66.2	70.65	4.45	Chert	Pervasive	Strong	Quartz	Stringers	Very Weak				Stringers and veinlets
70.65	75.05	4.4	Hematite	Patchy	Moderate	Quartz	Stringers	Very Weak				
75.05	82.75	7.7	Chert	Pervasive	Strong	Sericite	Disseminated	Weak	Quartz	Stringers	Very Weak	Quartz stringers and veinlets.
82.75	84	1.25	Goethite	Patchy	Moderate	Silicified	Pervasive	Moderate				
84	82.5	-1.5	Hematite	Fracture filled	Weak	Quartz	Stringers	Very Weak				
82.5	88.6	6.1	Silicified	Pervasive	Moderate							
91	92.5	1.5	Goethite	Patchy	Moderate	Quartz	Stringers	Weak				Stringers and veinlets
92.5	94.7	2.2	Chert	Pervasive	Strong	Sericite	Disseminated	Weak				
94.7	97.4	2.7	Silicified	Pervasive	Weak	Quartz	Stringers	Weak				Stringers and veinlets
97.4	100.2	2.8	Sericite	Pervasive	Moderate	Quartz	Stringers	Very Weak				
100.2	101.5	1.3	Chert	Pervasive	Moderate	Sericite	Disseminated	Very Weak				
101.5	109.45	7.95	Sericite	Pervasive	Moderate	Quartz	Stringers	Weak				
109.45	135.25	25.8	Sericite	Pervasive	Moderate	Quartz	Stringers	Weak	Calcite	Patchy	Weak	Quartz veinlets
135.25	144.1	8.85	Sericite	Pervasive	Moderate	Calcite	Veinlets (width <	Moderate	Quartz	Stringers	Very Weak	
144.1	146.15	2.05	Sericite	Pervasive	Moderate	Calcite	Veinlets (width <	Moderate				
146.15	160.1	13.95	Sericite	Pervasive	Moderate	Calcite	Veinlets (width <	Moderate				
160.1	163.25	3.15	Sericite	Pervasive	Moderate	Quartz	Stringers	Weak				
163.25	171.7	8.45	Sericite	Pervasive	Weak	Chlorite	Pervasive	Very Weak	Calcite	Stringers	Very Weak	
171.7	187.2	15.5	Sericite	Pervasive	Moderate	Chlorite	Pervasive	Weak				
187.2	198.7	11.5	Sericite	Pervasive	Moderate	Quartz	Veinlets (width <	Weak	Calcite	Stringers	Weak	
198.7	207.6	8.9	Sericite	Pervasive	Moderate	Quartz	Veinlets (width <	Weak				
207.6	208.5	0.9	Hematite	Patchy	Strong	Sericite	Pervasive	Weak				
211	211.4	0.4	Sericite	Pervasive	Moderate							
211.4	215	3.6	Sericite	Pervasive	Moderate	Hematite	Patchy	Moderate				
215.5	234	18.5	Silicified	Patchy	Moderate	Hematite	Patchy	Weak				
234	237.75	3.75	Silicified	Patchy	Moderate	Hematite	Fracture Filled	Weak	Quartz	Veinlets (width <	Very Weak	
238	244.3	6.3	Sericite	Pervasive	Moderate							
244.3	246.7	2.4	Silicified	Patchy	Moderate							
246.7	269	22.3	Sericite	Pervasive	Moderate	Chlorite	Pervasive	Moderate				
269	271	2	Silicified	Pervasive	Moderate	Quartz	Stockwork	Moderate				
271	285	14	Sericite	Pervasive	Moderate	Chlorite	Pervasive	Moderate	Quartz	Stockwork	Weak	



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EXPLORATION INC.

HOLE NO.

**LUC-18-15**

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DRILLING COMPANY

**NPLH Drilling**

LOGGED BY

**Edwin Escarraga**

METERAGE			MIN_1	STY_1	PERCENT_1	MIN_2	STY_2	PERCENT_2	MIN_3	STY_3	PERCENT_3	COMMENTS
FROM m	TO m	LENGTH m										
48	52.4	4.4	Pyrite	Euhedral	1							medium to coarse-grained euhedral crystals
52.4	63.05	10.65	Pyrite	Disseminated	3							very fine grained in stringer-like dissemination
63.75	66.2	2.45	Pyrite	Semi-massive	30							
66.2	70.65	4.45	Pyrite	Band	5							Up to 10% near LC
70.65	75.05	4.4	Pyrite	Semi-massive	75							
75.05	78.8	3.75	Pyrite	Disseminated	3							
78.8	82.75	3.95	Pyrite	Veinlets (width <	10							
82.75	88.6	5.85	Pyrite	Semi-massive	60							
90	92.5	2.5	Pyrite	Semi-massive	70							
92.5	94.8	2.3	Pyrite	Disseminated	2							
94.8	96.25	1.45	Pyrite	Semi-massive	35							
96.25	97.4	1.15	Pyrite	Disseminated	10							
97.4	100.2	2.8	Pyrite	Disseminated	0.01							
100.2	109.45	9.25	Pyrite	Disseminated	3							wisps or stringer like
109.45	135.25	25.8	Pyrite	Disseminated	0.01							
135.25	144.1	8.85	Pyrite	Disseminated	0.01							
144.1	146.15	2.05	Pyrite	Disseminated	0.01							
146.15	160.1	13.95	Pyrite	Disseminated	0.01							
160.1	163.25	3.15	Pyrite	Disseminated	1	Pyrite	euhedral	0.01				euhedral medium to coarse grains
163.25	171.7	8.45	Pyrite	Euhedral	1							
171.7	187.2	15.5	Pyrite	Patchy	3	Pyrite	Disseminated	1				
187.2	198.7	11.5	Pyrite	Disseminated	0.01							
198.7	208.5	9.8	Pyrite	Disseminated	1							
208.5	211	2.5	Pyrite	Disseminated	0.01							
211.4	215	3.6	Pyrite	Patchy	2	Pyrite	Disseminated	1				
215.5	234	18.5	Pyrite	Patchy	10	Pyrite	Disseminated	5				
234	237.75	3.75	Pyrite	Semi-massive	50	Arsenopyrite	Disseminated	0.01				Trace aspy at 237 in a quartz veinlet?
238	244.3	6.3	Pyrite	Disseminated	0.01							
244.3	246.7	2.4	Pyrite	Bleb	20	Pyrite	Patchy	10				
246.7	269	22.3	Pyrite	Disseminated	0.01							Locally up to 1% near the LC
269	271	2	Pyrite	Patchy	10	Pyrite	Semi-massive	10				
271	285	14	Pyrite	Euhedral	1							medium grained euhedral pyrite, decreasing with depth



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MINERAL**  
EXPLORATION INC.

HOLE NO.

**LUC-18-15**

EXPLORATION COMPANY

**Noble Mineral Exploration**

DRILLING COMPANY

**NPLH Drilling**

Mag Declination

-10.4

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DEPTH_m	MEASURED					CORRECTED				COMMENTS
	AZ	DIP	MAG FIELD	SURVEY_TYPE	FLAG	AZ	DIP	SURVEY_TYPE	FLAG	
60	240.3	-46.1	55946	Reflex		229.9	-46.1	Reflex		
111	240	-45.8	55828	Reflex		229.6	-45.8	Reflex		
162	238.2	-45.1	55806	Reflex		227.8	-45.1	Reflex		
213	235.8	-44.7	55959	Reflex		225.4	-44.7	Reflex		
264	235.4	-44.1	55732	Reflex		225	-44.1	Reflex		



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**NPLH Drilling**

METERAGE

FROM m

TO m

LENGTH m

STRUCTURE

INTENSITY

ANGLE\_TCA

COMMENTS

FROM m	TO m	LENGTH m	STRUCTURE	INTENSITY	ANGLE_TCA	COMMENTS
52	52.01	0.01	Foliation	Weak	66	
62	63.05	1.05	Fracture	Moderate		
63.05	63.75	0.7	Fault	Very Strong		Fault gouge, crumbly core, loss core
70.65	72.55	1.9	Fracture	Very Strong		
75.05	77	1.95	Fracture	Moderate		
85	85.6	0.6	Fracture	Moderate		
87.6	88	0.4	Fracture	Strong		
88.6	90	1.4	Fault	Strong		Core not recovered
90.5	91.5	1	Fracture	Strong		
94	96.25	2.25	Fracture	Moderate		
97.4	97.45	0.05	Shear	Strong		gouge? Very localized
106.4	106.7	0.3	Fracture	Moderate		
109.7	110.3	0.6	Fracture	Moderate		
124	124.5	0.5	Fracture	Moderate		
146.2	146.21	0.01	Foliation	Moderate	74	
146.14	146.15	0.01	Shear	Strong		
152.1	152.11	0.01	Foliation	Moderate	60	
175	176	1	Blocky	Strong		
187.2	187.7	0.5	Fault	Strong		
188	189	1	Fracture	Very Strong		
190.7	192	1.3	Fracture	Moderate		
190.8	199.1	8.3	Shear	Strong		Fault gouge near the LC?
202.7	202.8	0.1	Fold	Strong		
203.2	203.25	0.05	Fold	Strong		
206.7	206.8	0.1	Fold	Strong		
215	215.5	0.5	Fault	Strong		
216.8	217.5	0.7	Fracture	Moderate		
237.75	238	0.25	Fault	Very Strong		Fault gouge
238	239	1	Fracture	Very Strong		
243.2	244.5	1.3	Fracture	Strong		
260	260.01	0.01	Foliation	Moderate	70	
269	271	2	Fracture	Moderate		
283	283.01	0.01	Foliation	Moderate		



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METERAGE

FROM m	TO m	LENGTH m	VEIN_1	STY_1	PERCENT_1	VEIN_2	STY_2	PERCENT_2	VEIN_3	STY_3	PERCENT_3	COMMENTS
72.55	72.8	0.25	Quartz	Vein (width greater or equal to 1cm)								
166	166.15	0.15	Carbonate-Quartz	Vein (width greater or equal to 1cm)				10				
187.2	187.35	0.15	Quartz	Stockwork								
219.85	219.9	0.05	Quartz	Vein (width greater or equal to 1cm)								
244.3	244.65	0.35	Quartz	Stockwork				40				
238.5	238.65	0.15	Quartz	Vein (width greater or equal to 1cm)				50				Strongly fractured and sheared (extension of the fault)
269	269.15	0.15	Quartz	Stockwork				50				
270.5	270.7	0.2	Quartz	Stockwork				50				
274.3	274.65	0.35	Quartz	Stockwork				50				With disseminated "spotty" sericite
281.7	281.9	0.2	Quartz	Stockwork				40				





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LOGGED BY

Edwin Escarraga

METERAGE

FROM_m	TO_m	LENGTH_m	SAMPLE_NO	SAMPLE_TYPE	AU_ppm	AG_ppm	CU_per	BATCH #	COMMENTS
49	50	1	694900					55	March 16 2018
50	51	1	694901					55	March 16 2018
51	52.4	1.4	694902					55	March 16 2018
52.4	53	0.6	694903					55	March 16 2018
53	54	1	694904					55	March 16 2018
54	55	1	694905					55	March 16 2018
55	56	1	694906					55	March 16 2018
56	57	1	694907					55	March 16 2018
57	58	1	694908					55	March 16 2018
57	58	1	694909	Duplicate				55	March 16 2018
58	59	1	694910					55	March 16 2018
59	60	1	694911					55	March 16 2018
60	61	1	694912					55	March 16 2018
61	62	1	694913					56	March 16 2018
62	63.05	1.05	694914					56	March 16 2018
63.75	64.5	0.75	694915					56	March 16 2018
64.5	64.5	0	694916	Duplicate				56	March 16 2018
64.5	65	0.5	694917					56	March 16 2018
65	65.5	0.5	694918					56	March 16 2018
65.5	66.2	0.7	694919					56	March 16 2018
66.2	67	0.8	694920					56	March 16 2018
67	67.6	0.6	694921					56	March 16 2018
67.6	68	0.4	694922					56	March 16 2018
68	68.5	0.5	694923					56	March 16 2018
68.5	68.5	0	694924	OREAS 15d				56	March 16 2018
68.5	69	0.5	694925					56	March 16 2018
69	69.5	0.5	694926					56	March 16 2018
69.5	70	0.5	694927					56	March 16 2018
70	70.65	0.65	694928					56	March 16 2018
70.65	71	0.35	694929					56	March 16 2018
71	71.5	0.5	694930					56	March 16 2018
71.5	72	0.5	694931					56	March 16 2018
72	72	0	694932	Blank				56	March 16 2018
72	72.55	0.55	694933					56	March 16 2018
72.55	73	0.45	694934					56	March 16 2018
73	73.5	0.5	694935					56	March 16 2018

73.5	74	0.5	694936					56	March 16 2018
74	74.5	0.5	694937					56	March 16 2018
74.5	75.05	0.55	694938					56	March 16 2018
75.05	75.5	0.45	694939					56	March 16 2018
75.05	75.5	0.45	694940	Duplicate				56	March 16 2018
75.5	76	0.5	694941					56	March 16 2018
76	76.5	0.5	694942					56	March 16 2018
76.5	77	0.5	694943					56	March 16 2018
77	77.5	0.5	694944					56	March 16 2018
77.5	78	0.5	694945					56	March 16 2018
78	78.5	0.5	694946					56	March 16 2018
78.5	79	0.5	694947					56	March 16 2018
79	79	0	694948	OREAS 216				57	March 19 2018
79	79.5	0.5	694949					57	March 19 2018
79.5	80	0.5	694950					57	March 19 2018
80	80.5	0.5	694951					57	March 19 2018
80.5	81	0.5	694952					57	March 19 2018
81	81.5	0.5	694953					57	March 19 2018
81.5	82	0.5	694954					57	March 19 2018
82	82.75	0.75	694955					57	March 19 2018
82.75	83.5	0.75	694956					57	March 19 2018
83.5	83.5	0	694957	Blank				57	March 19 2018
83.5	84	0.5	694958					57	March 19 2018
84	84.5	0.5	694959					57	March 19 2018
84.5	85	0.5	694960					57	March 19 2018
85	85.5	0.5	694961					57	March 19 2018
85.5	86	0.5	694962					57	March 19 2018
86	86.5	0.5	694963					57	March 19 2018
86.5	87	0.5	694964					57	March 19 2018
87	88	1	694965					57	March 19 2018
88	88	0	694966	OREAS 16b				57	March 19 2018
88	88.6	0.6	694967					57	March 19 2018
90	90.5	0.5	694968					57	March 19 2018
90.5	91	0.5	694969					57	March 19 2018
91	91.5	0.5	694970					57	March 19 2018
91.5	92	0.5	694971					57	March 19 2018
92	92.5	0.5	694972					57	March 19 2018
92.5	93	0.5	694973					57	March 19 2018
93	93.5	0.5	694974					57	March 19 2018
93	93.5	0.5	694975	Duplicate				57	March 19 2018
93.5	94	0.5	694976					57	March 19 2018
94	94.5	0.5	694977					57	March 19 2018
94.5	95	0.5	694978					57	March 19 2018
95	95.5	0.5	694979					57	March 19 2018
95.5	96.25	0.75	694980					57	March 19 2018
96.25	96.25	0	694981	Blank				57	March 19 2018
96.25	97.4	1.15	694982					57	March 19 2018
97.4	99	1.6	694983					58	March 19 2018
99	100.2	1.2	694984					58	March 19 2018
100.2	101	0.8	694985					58	March 19 2018

101	102	1	694986					58	March 19 2018
102	103	1	694987					58	March 19 2018
103	103	0	694988	OREAS 221				58	March 19 2018
103	104	1	694989					58	March 19 2018
104	105	1	694990					58	March 19 2018
105	106	1	694991					58	March 19 2018
106	107	1	694992					58	March 19 2018
107	108	1	694993					58	March 19 2018
108	109	1	694994					58	March 19 2018
109	109.45	0.45	694995					58	March 19 2018
109.45	110	0.55	694996					58	March 19 2018
109.45	110	0.55	694997	Duplicate				58	March 19 2018
110	111	1	694998					58	March 19 2018
111	112	1	694999					58	March 19 2018
112	113	1	695000					58	March 19 2018
113	114	1	695001					58	March 19 2018
114	115	1	695002					58	March 19 2018
115	116	1	695003					58	March 19 2018
116	117	1	695004					58	March 19 2018
117	118	1	695005					58	March 19 2018
118	118	0	695006	OREAS 221				58	March 19 2018
118	119	1	695007					58	March 19 2018
119	120	1	695008					58	March 19 2018
120	121	1	695009					58	March 19 2018
121	122	1	695010					58	March 19 2018
122	123	1	695011					58	March 19 2018
123	124	1	695012					58	March 19 2018
124	125	1	695013					58	March 19 2018
125	126	1	695014					58	March 19 2018
126	126	0	695015	Blank				58	March 19 2018
126	127	1	695016					58	March 19 2018
127	128	1	695017					58	March 19 2018
128	129	1	695018					59	March 19 2018
129	130	1	695019					59	March 19 2018
130	131	1	695020					59	March 19 2018
131	132	1	695021					59	March 19 2018
132	133	1	695022					59	March 19 2018
133	134	1	695023					59	March 19 2018
134	134	0	695024	Duplicate				59	March 19 2018
134	135.25	1.25	695025					59	March 19 2018
135.25	136	0.75	695026					59	March 19 2018
136	137	1	695027					59	March 19 2018
137	138	1	695028					59	March 19 2018
138	139	1	695029					59	March 19 2018
139	140	1	695030					59	March 19 2018
140	141	1	695031					59	March 19 2018
141	142	1	695032					59	March 19 2018
142	142	0	695033	OREAS 221				59	March 19 2018
142	143	1	695034					59	March 19 2018
143	144.1	1.1	695035					59	March 19 2018

144.1	145	0.9	695036					59	March 19 2018
145	146.15	1.15	695037					59	March 19 2018
146.15	147	0.85	695038					59	March 19 2018
147	148	1	695039					59	March 19 2018
148	149	1	695040					59	March 19 2018
149	150	1	695041					59	March 19 2018
149	150	1	695042	Duplicate				59	March 19 2018
150	151	1	695043					59	March 19 2018
151	152	1	695044					59	March 19 2018
152	153	1	695045					59	March 19 2018
153	154	1	695046					59	March 19 2018
154	155	1	695047					59	March 19 2018
155	156	1	695048					59	March 19 2018
156	157	1	695049					59	March 19 2018
157	158	1	695050					59	March 19 2018
158	158	0	695051	Blank				59	March 19 2018
158	159	1	695052					59	March 19 2018
159	160.1	1.1	695053					60	March 19 2018
160.1	161	0.9	695054					60	March 19 2018
161	162	1	695055					60	March 19 2018
162	163.25	1.25	695056					60	March 19 2018
163.25	164	0.75	695057					60	March 19 2018
164	165	1	695058					60	March 19 2018
165	165	0	695059	OREAS 221				60	March 19 2018
165	166	1	695060					60	March 19 2018
166	167	1	695061					60	March 19 2018
167	168	1	695062					60	March 19 2018
168	169	1	695063					60	March 19 2018
169	170	1	695064					60	March 19 2018
170	171	1	695065					60	March 19 2018
171	171.7	0.7	695066					60	March 19 2018
171.7	173	1.3	695067					60	March 19 2018
171.7	173	1.3	695068	Duplicate				60	March 19 2018
173	174	1	695069					60	March 19 2018
174	175	1	695070					60	March 19 2018
175	176	1	695071					60	March 19 2018
176	177	1	695072					60	March 19 2018
177	178	1	695073					60	March 19 2018
178	179	1	695074					60	March 19 2018
179	180	1	695075					60	March 19 2018
180	180	0	695076	Blank				60	March 19 2018
180	181	1	695077					60	March 19 2018
181	182	1	695078					60	March 19 2018
182	183	1	695079					60	March 19 2018
183	184	1	695080					60	March 19 2018
184	185	1	695081					60	March 19 2018
185	186	1	695082					60	March 19 2018
186	187.2	1.2	695083					60	March 19 2018
187.7	189	1.3	695084					60	March 19 2018
189	189	0	695085	OREAS 221				60	March 19 2018

189	190	1	695086					60	March 19 2018
190	191	1	695087					60	March 19 2018
191	192	1	695088					61	March 19 2018
192	193	1	695089					61	March 19 2018
193	194	1	695090					61	March 19 2018
194	195	1	695091					61	March 19 2018
195	196	1	695092					61	March 19 2018
195	196	1	695093	Duplicate				61	March 19 2018
196	197	1	695094					61	March 19 2018
197	198	1	695095					61	March 19 2018
198	198.7	0.7	695096					61	March 19 2018
198.7	200	1.3	695097					61	March 19 2018
200	201	1	695098					61	March 19 2018
201	202	1	695099					61	March 19 2018
202	203	1	695100					61	March 19 2018
203	204	1	695101					61	March 19 2018
204	204	0	695102	Blank				61	March 19 2018
204	205	1	695103					61	March 19 2018
205	206	1	695104					61	March 19 2018
206	207	1	695105					61	March 19 2018
207	208	1	695106					61	March 19 2018
208	208.5	0.5	695107					61	March 19 2018
208.5	209	0.5	695108					61	March 19 2018
209	210	1	695109					61	March 19 2018
210	211	1	695110					61	March 19 2018
211	212	1	695111					61	March 19 2018
212	212	0	695112	OREAS 221				61	March 19 2018
212	213	1	695113					61	March 19 2018
213	214	1	695114					61	March 19 2018
214	215	1	695115					61	March 19 2018
215	216	1	695116					61	March 19 2018
216	216.5	0.5	695117					61	March 19 2018
216.5	217	0.5	695118					61	March 19 2018
217	217.5	0.5	695119					61	March 19 2018
217.5	218	0.5	695120					61	March 19 2018
217.5	218	0.5	695121	Duplicate				61	March 19 2018
218	218.5	0.5	695122					61	March 19 2018
218.5	219	0.5	695123					62	March 19 2018
219	219.5	0.5	695124					62	March 19 2018
219.5	220	0.5	695125					62	March 19 2018
220	220.5	0.5	695126					62	March 19 2018
220.5	221	0.5	695127					62	March 19 2018
221	221.5	0.5	695128					62	March 19 2018
221.5	221.5	0	695129	OREAS 216				62	March 19 2018
221.5	222	0.5	695130					62	March 19 2018
222	222.5	0.5	695131					62	March 19 2018
222.5	223	0.5	695132					62	March 19 2018
223	223.5	0.5	695133					62	March 19 2018
223.5	224	0.5	695134					62	March 19 2018
224	224.5	0.5	695135					62	March 19 2018

224.5	225	0.5	695136					62	March 19 2018
225	225	0	695137	Blank				62	March 19 2018
225	225.5	0.5	695138					62	March 19 2018
225.5	226	0.5	695139					62	March 19 2018
226	226.5	0.5	695140					62	March 19 2018
226.5	227	0.5	695141					62	March 19 2018
227	227.5	0.5	695142					62	March 19 2018
227.5	228	0.5	695143					62	March 19 2018
228	228.5	0.5	695144					62	March 19 2018
228	228.5	0.5	695145	Duplicate				62	March 19 2018
228.5	229	0.5	695146					62	March 19 2018
229	229.5	0.5	695147					62	March 19 2018
229.5	230	0.5	695148					62	March 19 2018
230	230.5	0.5	695149					62	March 19 2018
230.5	231	0.5	695150					62	March 19 2018
231	231.5	0.5	695151					62	March 19 2018
231.5	232	0.5	695152					62	March 19 2018
232	232.3	0.3	695153					62	March 19 2018
232.3	233	0.7	695154					62	March 19 2018
233	233.35	0.35	695155					62	March 19 2018
233.35	233.35	0	695156	OREAS 16b				62	March 19 2018
233.35	233.5	0.15	695157					62	March 19 2018
233.5	234	0.5	695158					63	March 19 2018
234	234.5	0.5	695159					63	March 19 2018
234.5	235	0.5	695160					63	March 19 2018
235	235.5	0.5	695161					63	March 19 2018
235.5	236	0.5	695162					63	March 19 2018
236	236.5	0.5	695163					63	March 19 2018
236.5	236.5	0	695164	Blank				63	March 19 2018
236.5	237	0.5	695165					63	March 19 2018
237	237.75	0.75	695166					63	March 19 2018
237.75	239	1.25	695167					63	March 19 2018
239	240	1	695168					63	March 19 2018
240	241	1	695169					63	March 19 2018
241	242	1	695170					63	March 19 2018
242	243	1	695171					63	March 19 2018
243	244.3	1.3	695172					63	March 19 2018
244.3	245	0.7	695173					63	March 19 2018
244.3	245	0.7	695174	Duplicate				63	March 19 2018
245	245.5	0.5	695175					63	March 19 2018
245.5	246	0.5	695176					63	March 19 2018
246	246.7	0.7	695177					63	March 19 2018
246.7	248	1.3	695178					63	March 19 2018
248	248	0	695179	Blank				63	March 19 2018
248	249	1	695180					63	March 19 2018
249	250	1	695181					63	March 19 2018
250	251	1	695182					63	March 19 2018
251	252	1	695183					63	March 19 2018
252	253	1	695184					63	March 19 2018
253	254	1	695185					63	March 19 2018

254	255	1	695186					63	March 19 2018
255	256	1	695187					63	March 19 2018
256	257	1	695188					63	March 19 2018
257	257	0	695189	OREAS 221				63	March 19 2018
257	258	1	695190					63	March 19 2018
258	259	1	695191					63	March 19 2018
259	260	1	695192					63	March 19 2018
260	261	1	695193					64	March 19 2018
261	262	1	695194					64	March 19 2018
262	262	0	695195	Blank				64	March 19 2018
262	263	1	695196					64	March 19 2018
263	264	1	695197					64	March 19 2018
264	265	1	695198					64	March 19 2018
265	266	1	695199					64	March 19 2018
266	267	1	695200					64	March 19 2018
266	267	1	695201	Duplicate				64	March 19 2018
267	268	1	695202					64	March 19 2018
268	269	1	695203					64	March 19 2018
269	269.5	0.5	695204					64	March 19 2018
269.5	270	0.5	695205					64	March 19 2018
270	270.5	0.5	695206					64	March 19 2018
270.5	271	0.5	695207					64	March 19 2018
271	271	0	695208	Blank				64	March 19 2018
271	272	1	695209					64	March 19 2018
272	273	1	695210					64	March 19 2018
273	274	1	695211					64	March 19 2018
274	275	1	695212					64	March 19 2018
275	276	1	695213					64	March 19 2018
276	277	1	695214					64	March 19 2018
277	278	1	695215					64	March 19 2018
278	279	1	695216					64	March 19 2018
279	280	1	695217					64	March 19 2018
280	280	0	695218	OREAS 221				64	March 19 2018
280	281	1	695219					64	March 19 2018
281	282	1	695220					64	March 19 2018
282	283	1	695221					64	March 19 2018
283	284	1	695222					64	March 19 2018
284	285	1	695223					64	March 19 2018



**NOBLE  
MINERAL**  
EXPLORATION INC.

**Diamond Drill Log**

HOLE NO.		LUC-18-16									
EXPLORATION COMPANY					UTM NAD 83 ZONE 17N				TARGET DEPTH (m)		
Noble Mineral Exploration					PLANNED COORDINATES		FINAL COORDINATES		0		
START DATE	COMPLETION DATE	START DATE LOGGED	END DATE LOGGED	EASTING (m)	EASTING (m)		EASTING (m)		TARGET DESCRIPTION		
10-Mar-18	11-Mar-18	11-Mar-18	13-Mar-18	483846.00	483852.02		483852.02		0		
DRILLING COMPANY		DRILL RIG		LOGGED BY		NORTHING (m)		NORTHING (m)		0	
NPLH Drilling		Edwin Escarraga		5407320.00		5407322.89		5407322.89		TARGET RESULTS	
TARGET NAME		AZIMUTH (°)		DIP (°)		ELEVATION (m)	TYPE	ELEVATION (m)	TYPE	0	
Lucas - South East		225		-50		0.00	Planned	0.00	SXBlue		
COMMENTS											
METERAGE			ROCK TYPE	ROCK CODE	DESCRIPTION						
FROM m	TO m	LENGTH m									
0	60	60	Overburden	OVB	Boulders of all kinds, including massive sulphide.						
60	63.85	3.85	Fault	FLT	Strongly fractured, locally gouge, fault zone with fragments of black argillaceous volcanoclastic sediments.						
63.85	70.8	6.95	Intermediate Tuff	ITUFF	Grey crystal-lithic lapilli intermediate tuff. Minor lithic fragments are always stretched and elongated. Gradational lower contact.						
70.8	74.2	3.4	Intermediate to Mafic Volcan	IMVOL	Dark grey, fine grained intermediate to mafic volcanics. Gradual lower contact						
74.2	80.8	6.6	Intermediate to Mafic Tuff	IMTUFF	Dark grey-dark green lithic lapilli tuff, Quartz crystals are absent (unlike the other tuffs)						
80.8	91.3	10.5	Intermediate Tuff	ITUFF	Grey lithic lapilli intermediate tuff. Abundant lithic fragments. Sharp lower contact.						
91.3	92.6	1.3	Mafic Intrusives	MINT	Fine grained, dark green mafic intrusive? Lower contact against a more intermediate dyke?						
92.6	93	0.4	Intermediate Intrusives	IINT	Medium grained, grey intermediate intrusive. Up to 20% Quartz crystals. Is it a dyke? Rock is not foliated but it doesn't have clear c						
93	102.55	9.55	Intermediate to Mafic Tuff	IMTUFF	Dark grey-dark green lithic lapilli tuff, Quartz crystals are absent (unlike other tuffs). Gradual LC						
102.55	122.95	20.4	Volcaniclastic Sediments	VOLSED	Dark grey to black argillaceous volcanoclastic sediments, locally tuffaceous texture. Pyrite increases with depth.						
122.95	168.35	45.4	Intermediate Tuff	ITUFF	Grey lithic lapilli intermediate tuff. Lithic fragments are sparse and not throughout the whole unit. Near the LC the argillaceous cont						
168.35	178.6	10.25	Volcaniclastic Sediments	VOLSED	Black argillaceous volcanoclastic sediments, locally tuffaceous texture. Pyrite increases with depth. Gradual LC with Mineralized tuff						
178.6	187.8	9.2	Mineralized Tuff	PTUFF	Dark grey lithic lapilli tuff, Strong pyrite mineralization throughout.						
187.8	188.4	0.6	Sulphide Zone	SULZ	Massive to semi massive pyritic zone. Strongly fractured, and in faulted contact.						
188.4	189.1	0.7	Diabase	DIA	Dark grey fine grained, weakly magnetic diabase dyke.						
189.1	190.35	1.25	Fault	FLT	Major fault zone. Locally gouge and strong graphite alteration.						
190.35	201	10.65	Felsic to Intermediate Tuff	FITUFF	Light-grey to green felsic to intermediate lithic-crystal lapilli tuff. Locally brecciated.						
201	EOH										





**NOBLE  
MINERAL**  
EXPLORATION INC.

HOLE NO.

**LUC-18-16**

EXPLORATION COMPANY

**Noble Mineral Exploration**

DRILLING COMPANY

**NPLH Drilling**

LOGGED BY

Edwin Escarraga

METERAGE

FROM m	TO m	LENGTH m	ALT_1	STY_1	INT_1	ALT_2	STY_2	INT_2	ALT_3	STY_3	INT_3	COMMENTS
63.85	70.8	6.95	Sericite	Pervasive	Weak	Silicified	Patchy	Very Weak				
70.8	74.2	3.4	Sericite	Pervasive	Weak	Quartz	Stringers	Very Weak				
74.2	80.8	6.6	Sericite	Pervasive	Weak	Quartz	Veinlets (width <	Very Weak				
80.8	91.3	10.5	Sericite	Pervasive	Weak	Quartz	Veinlets (width <	Very Weak				
91.3	92.6	1.3	Sericite	Pervasive	Weak	Chlorite	Pervasive	Very Weak	Quartz	Veinlets (width <	Very Weak	
92.6	102.55	9.95	Sericite	Pervasive	Weak	Chlorite	Pervasive	Weak	Quartz	Veinlets (width <	Very Weak	
102.55	122.95	20.4	Silicified	Pervasive	Weak	Quartz	Veinlets (width <	Weak	Calcite	Stringers	Weak	
122.95	141	18.05	Calcite	Patchy	Moderate	Sericite	Pervasive	Weak	Quartz	Stringers	Very Weak	
141	146	5	Sericite	Pervasive	Weak	Hematite	Patchy	Weak	Calcite	Stringers	Weak	
146	157	11	Calcite	Patchy	Moderate	Sericite	Pervasive	Weak	Quartz	Stringers	Very Weak	
157	168.35	11.35	Sericite	Pervasive	Weak	Graphite	Interstitial / Inter	Weak	Calcite	Stringers	Weak	
168.35	178.6	10.25	Graphite	Pervasive	Moderate	Calcite	Stringers	Weak				
178.6	187	8.4	Silicified	Pervasive	Weak	Sericite	Pervasive	Weak				
187	187.8	0.8	Chert	Pervasive	Moderate	Quartz	Stringers	Moderate				
187.8	188.4	0.6	Quartz	Stringers	Moderate							
190.35	201	10.65	Sericite	Pervasive	Weak	Quartz	Veinlets (width <	Weak				



**NOBLE  
MINERAL**  
EXPLORATION INC.

HOLE NO.

**LUC-18-16**

EXPLORATION COMPANY

**Noble Mineral Exploration**

DRILLING COMPANY

**NPLH Drilling**

LOGGED BY

Edwin Escarraga

METERAGE

FROM m	TO m	LENGTH m	MIN_1	STY_1	PERCENT_1	MIN_2	STY_2	PERCENT_2	MIN_3	STY_3	PERCENT_3	COMMENTS
63.85	70.8	6.95	Pyrite	Patchy	0.01	Pyrite	Disseminated	0.01				
70.8	74.2	3.4	Pyrite	Patchy	1							
74.2	80.8	6.6	Pyrite	Disseminated	1	Pyrite	Band	0.01				
80.8	91.3	10.5	Pyrite	Patchy	1	Pyrite	Disseminated	0.01				
91.3	92.6	1.3	Pyrite	Disseminated	2							Disseminated Py is medium to coarse grained
93	102.55	9.55	Pyrite	Euhedral	1	Pyrite	Disseminated	1				Euhedral grains are coarse grained
102.55	122.95	20.4	Pyrite	Disseminated	5	Pyrite	Band	3				Locally euhedral coarse grains
122.95	141	18.05	Pyrite	Patchy	1	Pyrite	Fracture Filled	1				Very fine grained
141	146	5	Pyrite	Patchy	5	Pyrite	Fracture Filled	1				Very fine grained
146	168.35	22.35	Pyrite	Patchy	1	Pyrite	Fracture Filled	1				Very fine grained
168.35	178.6	10.25	Pyrite	Euhedral	5	Pyrite	Patchy	3				Euhedral grains are coarse grained
178.6	187.8	9.2	Pyrite	Band	10	Pyrite	Patchy	10				Up to 30% near LC
187.8	188.4	0.6	Pyrite	Semi-massive	60							
190.35	201	10.65	Pyrite	Disseminated	1							Py content decreases with depth



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EXPLORATION INC.

HOLE NO.

**LUC-18-15**

EXPLORATION COMPANY

**Noble Mineral Exploration**

DRILLING COMPANY

**NPLH Drilling**

Mag Declination

-10.4

LOGGED BY

Edwin Escarraga

DEPTH_m	MEASURED						CORRECTED				COMMENTS
	AZ	DIP	MAG FIELD	SURVEY_TYPE	FLAG	AZ	DIP	SURVEY_TYPE	FLAG		
96	254.4	-50.6	58568	Reflex	DO	244	-50.6	Reflex	DO	Azimuth off, use DO?	
147	237.7	-49.8	55652	Reflex		227.3	-49.8	Reflex			
198	237.1	-49.3	55939	Reflex		226.7	-49.3	Reflex			



**NOBLE  
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EXPLORATION INC.

HOLE NO.

**LUC-18-16**

EXPLORATION COMPANY

**Noble Mineral Exploration**

DRILLING COMPANY

LOGGED BY

**NPLH Drilling**

METERAGE

STRUCTURE

INTENSITY

ANGLE\_TCA

COMMENTS

FROM_m	TO_m	LENGTH_m	STRUCTURE	INTENSITY	ANGLE_TCA	COMMENTS
60	63.85	3.85	Fault	Strong		
110	110.01	0.01	Foliation	Moderate	60	
140	140.01	0.01	Foliation	Moderate	70	
133.55	133.75	0.2				Core not recovered
189.1	190.35	1.25	Fault	Very Strong		
187.8	188.5	0.7	Fracture	Strong		
197.8	197.81	0.01	Foliation	Moderate	60	



**NOBLE  
MINERAL**  
EXPLORATION INC.

HOLE NO.

**LUC-18-16**

EXPLORATION COMPANY

**Noble Mineral Exploration**

DRILLING COMPANY

**NPLH Drilling**

LOGGED BY

Edwin Escarraga

METERAGE

FROM m

TO m

LENGTH m

VEIN\_1

STY\_1

PERCENT\_1

VEIN\_2

STY\_2

PERCENT\_2

VEIN\_3

STY\_3

PERCENT\_3

COMMENTS

111.6

111.65

0.05

Quartz

Stockwork

50



**NOBLE  
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EXPLORATION INC.

HOLE NO.

LUC-18-16

EXPLORATION COMPANY

**Noble Mineral Exploration**

DRILLING COMPANY

**NPLH Drilling**

LOGGED BY

Edwin Escarraga

METERAGE

FROM_m	TO_m	LENGTH_m	SAMPLE_NO	SAMPLE_TYPE	AU_ppm	AG_ppm	CU_per	BATCH #	COMMENTS
64	65	1	695224					64	March 19 2018
65	66	1	695225					64	March 19 2018
66	67	1	695226					64	March 19 2018
67	68	1	695227					64	March 19 2018
68	68	0	695228	Blank				65	March 19 2018
68	69	1	695229					65	March 19 2018
69	70	1	695230					65	March 19 2018
70	70.8	0.8	695231					65	March 19 2018
70.8	72	1.2	695232					65	March 19 2018
72	73	1	695233					65	March 19 2018
73	74.2	1.2	695234					65	March 19 2018
74.2	75	0.8	695235					65	March 19 2018
75	76	1	695236					65	March 19 2018
75	76	1	695237	Duplicate				65	March 19 2018
76	77	1	695238					65	March 19 2018
77	78	1	695239					65	March 19 2018
78	79	1	695240					65	March 19 2018
79	80	1	695241					65	March 19 2018
80	80.8	0.8	695242					65	March 19 2018
80.8	82	1.2	695243					65	March 19 2018
82	83	1	695244					65	March 19 2018
83	84	1	695245					65	March 19 2018
84	85	1	695246					65	March 19 2018
85	86	1	695247					65	March 19 2018
86	86	0	695248	OREAS 221				65	March 19 2018
86	87	1	695249					65	March 19 2018
87	88	1	695250					65	March 19 2018
88	89	1	695251					65	March 19 2018
89	90	1	695252					65	March 19 2018
90	91.3	1.3	695253					65	March 19 2018
91.3	92.6	1.3	695254					65	March 19 2018
92.6	93	0.4	695255					65	March 19 2018
93	94	1	695256					65	March 19 2018
94	94	0	695257	Blank				65	March 19 2018
94	95	1	695258					65	March 19 2018
95	96	1	695259					65	March 19 2018

96	97	1	695260					65	March 19 2018
97	98	1	695261					65	March 19 2018
98	99	1	695262					65	March 19 2018
99	100	1	695263					66	March 19 2018
100	101	1	695264					66	March 19 2018
101	102	1	695265					66	March 19 2018
101	102	1	695266	Duplicate				66	March 19 2018
102	102.55	0.55	695267					66	March 19 2018
102.55	103	0.45	695268					66	March 19 2018
103	104	1	695269					66	March 19 2018
104	105	1	695270					66	March 19 2018
105	106	1	695271					66	March 19 2018
106	107	1	695272					66	March 19 2018
107	108	1	695273					66	March 19 2018
108	108	0	695274	OREAS 221				66	March 19 2018
108	109	1	695275					66	March 19 2018
109	110	1	695276					66	March 19 2018
110	111	1	695277					66	March 19 2018
111	112	1	695278					66	March 19 2018
112	113	1	695279					66	March 19 2018
113	114	1	695280					66	March 19 2018
114	115	1	695281					66	March 19 2018
115	115	0	695282	Blank				66	March 19 2018
115	116	1	695283					66	March 19 2018
116	117	1	695284					66	March 19 2018
117	118	1	695285					66	March 19 2018
118	119	1	695286					66	March 19 2018
119	120	1	695287					66	March 19 2018
120	120	0	695288	OREAS 223				66	March 19 2018
120	121	1	695289					66	March 19 2018
121	122	1	695290					66	March 19 2018
122	122.95	0.95	695291					66	March 19 2018
122.95	124	1.05	695292					66	March 19 2018
124	125	1	695293					66	March 19 2018
125	126	1	695294					66	March 19 2018
126	127	1	695295					66	March 19 2018
127	128	1	695296					66	March 19 2018
128	129	1	695297					66	March 19 2018
129	129	0	695298	Blank				67	March 20 2018
129	130	1	695299					67	March 20 2018
130	131	1	695300					67	March 20 2018
131	132	1	695301					67	March 20 2018
132	133	1	695302					67	March 20 2018
133	134	1	695303					67	March 20 2018
134	135	1	695304					67	March 20 2018
135	136	1	695305					67	March 20 2018
135	136	1	695306	Duplicate				67	March 20 2018
136	137	1	695307					67	March 20 2018
137	138	1	695308					67	March 20 2018
138	139	1	695309					67	March 20 2018

139	140	1	695310					67	March 20 2018
140	141	1	695311					67	March 20 2018
141	142	1	695312					67	March 20 2018
142	143	1	695313					67	March 20 2018
143	144	1	695314					67	March 20 2018
144	145	1	695315					67	March 20 2018
145	146	1	695316					67	March 20 2018
146	146	0	695317	OREAS 221				67	March 20 2018
146	147	1	695318					67	March 20 2018
147	148	1	695319					67	March 20 2018
148	149	1	695320					67	March 20 2018
149	150	1	695321					67	March 20 2018
150	151	1	695322					67	March 20 2018
151	152	1	695323					67	March 20 2018
152	153	1	695324					67	March 20 2018
153	154	1	695325					67	March 20 2018
154	154	0	695326	Blank				67	March 20 2018
154	155	1	695327					67	March 20 2018
155	156	1	695328					67	March 20 2018
156	157	1	695329					67	March 20 2018
157	158	1	695330					67	March 20 2018
158	159	1	695331					67	March 20 2018
159	160	1	695332					67	March 20 2018
160	161	1	695333					68	March 20 2018
161	162	1	695334					68	March 20 2018
161	162	1	695335	Duplicate				68	March 20 2018
162	163	1	695336					68	March 20 2018
163	164	1	695337					68	March 20 2018
164	165	1	695338					68	March 20 2018
165	166	1	695339					68	March 20 2018
166	167	1	695340					68	March 20 2018
167	168.35	1.35	695341					68	March 20 2018
168.35	169	0.65	695342					68	March 20 2018
169	169	0	695343	OREAS 221				68	March 20 2018
169	169.5	0.5	695344					68	March 20 2018
169.5	170	0.5	695345					68	March 20 2018
170	170.5	0.5	695346					68	March 20 2018
170.5	171	0.5	695347					68	March 20 2018
171	171.5	0.5	695348					68	March 20 2018
171.5	172	0.5	695349					68	March 20 2018
172	172.5	0.5	695350					68	March 20 2018
172.5	173	0.5	695351					68	March 20 2018
173	173	0	695352	Blank				68	March 20 2018
173	173.5	0.5	695353					68	March 20 2018
173.5	174	0.5	695354					68	March 20 2018
174	174.5	0.5	695355					68	March 20 2018
174.5	175	0.5	695356					68	March 20 2018
175	175.5	0.5	695357					68	March 20 2018
175.5	176	0.5	695358					68	March 20 2018
176	176.5	0.5	695359					68	March 20 2018



176.5	177	0.5	695360					68	March 20 2018
176.5	177	0.5	695361	Duplicate				68	March 20 2018
177	177.5	0.5	695362					68	March 20 2018
177.5	178	0.5	695363					68	March 20 2018
178	178.6	0.6	695364					68	March 20 2018
178.6	179	0.4	695365					68	March 20 2018
179	179.5	0.5	695366					68	March 20 2018
179.5	180	0.5	695367					68	March 20 2018
180	180.5	0.5	695368					69	March 20 2018
180.5	180.5	0	695369	OREAS 223				69	March 20 2018
180.5	181	0.5	695370					69	March 20 2018
181	181.5	0.5	695371					69	March 20 2018
181.5	182	0.5	695372					69	March 20 2018
182	182.5	0.5	695373					69	March 20 2018
182.5	183	0.5	695374					69	March 20 2018
183	183.5	0.5	695375					69	March 20 2018
183.5	184	0.5	695376					69	March 20 2018
184	184.5	0.5	695377					69	March 20 2018
184.5	185	0.5	695378					69	March 20 2018
185	185	0	695379	Blank				69	March 20 2018
185	185.5	0.5	695380					69	March 20 2018
185.5	186	0.5	695381					69	March 20 2018
186	186.5	0.5	695382					69	March 20 2018
186.5	187	0.5	695383					69	March 20 2018
187	187.5	0.5	695384					69	March 20 2018
187.5	187.8	0.3	695385					69	March 20 2018
187.8	188	0.2	695386					69	March 20 2018
188	188	0	695387	OREAS 16b				69	March 20 2018
188	188.35	0.35	695388					69	March 20 2018
191	192	1	695389					69	March 20 2018
192	193	1	695390					69	March 20 2018
193	194	1	695391					69	March 20 2018
194	195	1	695392					69	March 20 2018
195	196	1	695393					69	March 20 2018
196	197	1	695394					69	March 20 2018
197	198	1	695395					69	March 20 2018
198	198	0	695396	Blank				69	March 20 2018
198	199	1	695397					69	March 20 2018
199	200	1	695398					69	March 20 2018
200	201	1	695399					69	March 20 2018



Diamond Drill Log

HOLE NO.		LUC-18-17									
EXPLORATION COMPANY					UTM NAD 83 ZONE 17N				TARGET DEPTH (m)		
Noble Mineral Exploration					PLANNED COORDINATES		FINAL COORDINATES		0		
START DATE	COMPLETION DATE	START DATE LOGGED	END DATE LOGGED	EASTING (m)	EASTING (m)		TARGET DESCRIPTION				
11-Mar-18	14-Mar-18	13-Mar-18	15-Mar-18	483846.00	483852.48		0				
DRILLING COMPANY		DRILL RIG	LOGGED BY	NORTHING (m)		NORTHING (m)		TARGET RESULTS			
NPLH Drilling			Edwin Escarraga	5407320.00		5407323.58		0			
TARGET NAME	AZIMUTH (°)		DIP (°)	ELEVATION (m)	TYPE	ELEVATION (m)	TYPE				
Lucas - South East	225		-70	0.00	Planned	0.00	SXBlue				
COMMENTS											
METERAGE			ROCK TYPE	ROCK CODE	DESCRIPTION						
FROM m	TO m	LENGTH m									
0	39	39	Overburden	OVB	Boulders of all kinds, including massive sulphide.						
39	44.15	5.15	Sulphide Zone	SULZ	Semi-massive sulphide-rich zone with patchy chert alteration and locally black argillaceous volcanoclastic sediment texture. Vuggy texture.						
44.15	46.2	2.05	Intermediate to Mafic Tuff	IMTUFF	Grey intermediate to mafic crystal lapilli tuff. UC is sheared and locally with gouge fault.						
46.2	50.5	4.3	Sulphide Zone	SULZ	Strongly fractured and altered sulphide zone, possibly through a faulted area. Locally with breccia texture						
50.5	65.55	15.05	Fault	FLT	Long section of strongly fractured core. Remnants of volcanoclastic sedimentary rocks. Core not recovered and core loss in multiple places.						
65.55	71.4	5.85	Volcaniclastic Sediments	VOLSED	Black, laminated argillaceous volcanoclastic sediments						
71.4	109.65	38.25	Intermediate Tuff	ITUFF	Grey lithic-crystal lapilli intermediate tuff. Abundant very coarse grained lithic fragments and quartz crystals.						
109.65	116.55	6.9	Intermediate to Mafic Volcanic	IMVOL	Dark grey, fine grained intermediate to mafic volcanics. Locally tuffaceous. Gradual lower contact						
116.55	129	12.45	Intermediate to Mafic Tuff	IMTUFF	Dark grey-dark green lithic-crystal lapilli tuff. Gradual LC.						
129	137.7	8.7	Volcaniclastic Sediments	VOLSED	Dark grey to black argillaceous volcanoclastic sediments, locally tuffaceous texture.						
137.7	148	10.3	Intermediate Tuff	ITUFF	Grey lithic lapilli intermediate tuff. Lithic fragments are sparse and not throughout the whole unit. Locally porphyritic texture? Strongly fractured.						
148	155.2	7.2	Intermediate to Mafic Volcanic	IMVOL	Dark green, fine grained intermediate to mafic volcanics. Strong pyrite mineralization very fine grained disseminated throughout. Locally brecciated.						
155.2	162	6.8	Intermediate Tuff	ITUFF	Grey lithic lapilli intermediate tuff. Coarse grained lithic fragments.						
162	181.1	19.1	Intermediate to Mafic Volcanic	IMVOL	Dark green, fine grained intermediate to mafic volcanics. Several small sections that are tuffaceous						
181.1	186.15	5.05	Intermediate Tuff	ITUFF	Grey lithic lapilli intermediate tuff. Coarse grained lithic fragments.						
186.15	211.75	25.6	Mineralized Tuff	PTUFF	Mineralized tuff or sulphide-rich volcanoclastic sediments. Lithic fragments are rare and instead there appears to be "banding" or layering.						
211.75	222.5	10.75	Volcaniclastic Sediments	VOLSED	Dark grey to black volcanoclastic sediments, strong pyrite mineralization and locally silicified.						
222.5	223.55	1.05	Sulphide Zone	SULZ	Massive to semi massive pyritic zone. Sharp LC.						
223.55	225	1.45	Diabase	DIA	Dark green to black, medium grained homogeneous Diabase dyke. Moderate to weakly magnetic						
225	227.25	2.25	Fault	FLT	Fault gouge, crumbly core and multiple rock fragments throughout.						
227.25	231.3	4.05	Intermediate Tuff	ITUFF	Grey, medium grained intermediate crystal lapilli tuff.						
231.3	273	41.7	Felsic to Intermediate Volcanic	FIVOL	Light-grey to pale green felsic to intermediate volcanics. Locally tuffaceous. Locally brecciated.						
273	EOH										



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METERAGE

FROM m	TO m	LENGTH m	ALT_1	STY_1	INT_1	ALT_2	STY_2	INT_2	ALT_3	STY_3	INT_3	COMMENTS
39	42	3	Graphite	Pervasive	Weak	Silicified	Pervasive	Weak				
42	44.15	2.15	Chert	Patchy	Moderate	Quartz	Stringers	Weak				
44.15	46.2	2.05	Sericite	Pervasive	Moderate							
46.2	50.5	4.3	Silicified	Pervasive	Moderate	Hematite	Pervasive	Very Weak	Quartz	Stringers	Very Weak	Hematite and/or Goethite?
60.55	71.4	10.85	Graphite	Pervasive	Moderate	Sericite	Pervasive	Very Weak	Quartz	Stringers	Very Weak	
71.4	109.65	38.25	Sericite	Pervasive	Weak	Calcite	Veinlets (width <	Weak	Quartz	Veinlets (width <	Weak	Calcite increases with depth
109.65	116.55	6.9	Chlorite	Pervasive	Weak	Quartz	Stringers	Very Weak				Quartz in stringers and veinlets
116.55	129	12.45	Chlorite	Pervasive	Weak	Sericite	Pervasive	Weak	Quartz	Stringers	Very Weak	
129	137.7	8.7	Sericite	Pervasive	Weak	Graphite	Patchy	Very Weak	Calcite	Stringers	Weak	
137.7	148	10.3	Sericite	Pervasive	Moderate	Calcite	Patchy	Weak	Calcite	Stringers	Very Weak	
148	155.2	7.2	Chlorite	Pervasive	Weak	Calcite	Stringers	Very Weak				
155.2	162	6.8	Sericite	Pervasive	Moderate	Calcite	Stringers	Weak				
162	173	11	Sericite	Pervasive	Weak	Chlorite	Pervasive	Weak				
173	174.5	1.5	Calcite	Stringers	Moderate	Sericite	Pervasive	Moderate				
174.5	181.1	6.6	Sericite	Pervasive	Weak	Chlorite	Pervasive	Weak	Calcite	Patchy	Weak	
181.1	186.15	5.05	Sericite	Pervasive	Weak	Calcite	Stringers	Weak				Calcite in stringers and veinlets
186.15	210.85	24.7	Sericite	Pervasive	Weak	Graphite	Interstitial / Inter	Weak	Calcite	Patchy	Weak	Calcite in stringers and veinlets
210.85	210.86	0.01	Fuchsite	Fracture Filled	Moderate							
211.75	222.5	10.75	Silicified	Pervasive	Weak	Graphite	Interstitial / Inter	Weak	Quartz	Stockwork	Very Weak	
222.5	223.55	1.05	Silicified	Patchy	Weak	Quartz	Stringers	Very Weak				
225	227.25	2.25	Graphite	Pervasive	Very Strong							
227.25	231.3	4.05	Sericite	Pervasive	Weak							
231.3	273	41.7	Sericite	Pervasive	Very Strong	Chlorite	Pervasive	Moderate	Quartz	Stringers	Moderate	Distinctive pale green rock (sericite +chlorite alteration, or sericite/ankerite)



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METERAGE			MIN_1	STY_1	PERCENT_1	MIN_2	STY_2	PERCENT_2	MIN_3	STY_3	PERCENT_3	COMMENTS
FROM m	TO m	LENGTH m										
39	42	3	Pyrite	Band	5	Pyrite	Patchy	5				
42	44	2	Pyrite	Semi-massive	40							
44.15	46.2	2.05	Pyrite	Band	3							
46.2	50.5	4.3	Pyrite	Semi-massive	30							
50.5	65.55	15.05	Pyrite	Patchy	15							Disseminated Py is medium to coarse grained
70	71.4	1.4	Pyrite	Band	3	Pyrite	Disseminated	1				
71.4	74.5	3.1	Pyrite	Euhedral	5							Locally euhedral coarse grains
74.5	109.65	35.15	Pyrite	Disseminated	0.01	Pyrite	Patchy	1				Patches associated to specific lithic fragments?
109.65	116.55	6.9	Pyrite	Disseminated	1							Very fine grained
116.55	129	12.45	Pyrite	Disseminated	0.01							Very fine grained
129	137.7	8.7	Pyrite	Euhedral	3	Pyrite	Patchy	2				Euhedral grains are medium to coarse grained. Patchy py associated w
137.7	148	10.3	Pyrite	Patchy	5	Pyrite	Disseminated	2				Patches and bands up to 3 cm thick
148	155.2	7.2	Pyrite	Disseminated	5							Very fine grained
155.2	162	6.8	Pyrite	Patchy	1	Pyrite	Disseminated	0.01				
162	168.9	6.9	Pyrite	Disseminated	1							
168.9	175.5	6.6	Pyrite	Patchy	5	Pyrite	Disseminated	2				
175.5	181.1	5.6	Pyrite	Disseminated	2							
181.1	186.15	5.05	Pyrite	Disseminated	0.01							
186.15	196.5	10.35	Pyrite	Band	12	Pyrite	Disseminated	3				
196.15	199.4	3.25	Pyrite	Disseminated	3							
199.4	211.75	12.35	Pyrite	Band	12	Pyrite	Disseminated	3				
211.75	222.5	10.75	Pyrite	Band	12	Pyrite	Disseminated	3				
222.5	223.55	1.05	Pyrite	Semi-massive	40							
227.25	231.3	4.05	Pyrite	Euhedral	0.01							Locally euhedral coarse grains
231.3	273	41.7	Pyrite	Disseminated	0.01							



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Mag Declination

-10.4

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DEPTH_m	MEASURED					CORRECTED				COMMENTS
	AZ	DIP	MAG FIELD	SURVEY_TYPE	FLAG	AZ	DIP	SURVEY_TYPE	FLAG	
72	238.4	-71.1	56141	Reflex		228	-71.1	Reflex		
123	232.1	-68.6	55884	Reflex		221.7	-68.6	Reflex		
174	226.1	-66.4	56053	Reflex		215.7	-66.4	Reflex		
225	216.9	-65.6	56750	Reflex		206.5	-65.6	Reflex		



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METERAGE

STRUCTURE

INTENSITY

ANGLE\_TCA

COMMENTS

FROM m

TO m

LENGTH m

FROM m	TO m	LENGTH m	STRUCTURE	INTENSITY	ANGLE_TCA	COMMENTS
39	44.15	5.15	Fracture	Strong		
44.15	44.45	0.3	Shear	Strong		
46	48.5	2.5	Fracture	Moderate		
48.5	50.5	2	Fracture	Very Strong		
50.5	65.55	15.05	Fault	Very Strong		Sections of core not recovered, LC with fault gouge
68.4	70.5	2.1	Fracture	Strong		
111.2	111.21	0.01	Shear	Strong	52	
112	112.01	0.01	Foliation	Moderate	48	
116	116.55	0.55	Fracture	Moderate		
132	134	2	Fracture	Strong		
139	140	1	Fracture	Moderate		
146	146.01	0.01	Foliation	Moderate	67	
176	176.01	0.01	Foliation	Moderate	70	
182	182.2	0.2	Fold	Moderate		Folded and crenulated
183.8	184	0.2	Fold	Moderate		Folded and crenulated
197	197.01	0.01	Foliation	Moderate	72	
196.3	196.4	0.1	Fold	Moderate		Folded, crenulated and microfaulted
201.4	201.5	0.1	Fold	Moderate		Folded, crenulated and microfaulted
214	214.01	0.01	Foliation	Moderate	51	
222	222.01	0.01	Foliation	Moderate	64	
225	227.25	2.25	Fault	Very Strong		
240	240.01	0.01	Foliation	Strong	47	Strong lineation perpendicular to foliation plane
242	242.01	0.01	Fold	Strong		
245.8	245.85	0.05	Fold	Moderate		Folded and crenulated
266.5	266.54	0.04	Shear	Moderate		



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METERAGE

FROM m	TO m	LENGTH m	VEIN_1	STY_1	PERCENT_1	VEIN_2	STY_2	PERCENT_2	VEIN_3	STY_3	PERCENT_3	COMMENTS
49.55	50.5	0.95	Quartz	Veins (width grea	30							
63	64	1	Quartz	Vein (width greater or equal to 1cm)								
157.2	157.3	0.1	Quartz-Carbonat	Vein (width greater or equal to 1cm)								30 deg TCA
173	174	1	Quartz-Carbonat	Stringers	15							
184	184.25	0.25	Quartz-Carbonat	Stockwork	40							
243	244.3	1.3	Quartz	Stockwork	35							
264.5	268	3.5	Quartz	Stockwork	25							



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METERAGE

FROM_m	TO_m	LENGTH_m	SAMPLE_NO	SAMPLE_TYPE	AU_ppm	AG_ppm	CU_per	BATCH #	COMMENTS
39	40	1	695400					69	March 20 2018
40	41	1	695401					69	March 20 2018
41	42	1	695402					69	March 20 2018
42	42.5	0.5	695403					70	March 21 2018
42.5	42.5	0	695404	OREAS 223				70	March 21 2018
42.5	43	0.5	695405					70	March 21 2018
43	43.5	0.5	695406					70	March 21 2018
43.5	44.15	0.65	695407					70	March 21 2018
44.15	45	0.85	695408					70	March 21 2018
45	46.2	1.2	695409					70	March 21 2018
46.2	47	0.8	695410					70	March 21 2018
47	47	0	695411	Blank				70	March 21 2018
47	47.5	0.5	695412					70	March 21 2018
47.5	48	0.5	695413					70	March 21 2018
48	49	1	695414					70	March 21 2018
49	49.55	0.55	695415					70	March 21 2018
49.55	50	0.45	695416					70	March 21 2018
49.55	50	0.45	695417	Duplicate				70	March 21 2018
50	50.5	0.5	695418					70	March 21 2018
50.5	52	1.5	695419					70	March 21 2018
52	54	2	695420					70	March 21 2018
63	65.1	2.1	695421					70	March 21 2018
65.1	67	1.9	695422					70	March 21 2018
67	68	1	695423					70	March 21 2018
68	69	1	695424					70	March 21 2018
69	70	1	695425					70	March 21 2018
70	71	1	695426					70	March 21 2018
71	71.4	0.4	695427					70	March 21 2018
71.4	71.4	0	695428	OREAS 218				70	March 21 2018
71.4	73	1.6	695429					70	March 21 2018
73	74	1	695430					70	March 21 2018
74	75	1	695431					70	March 21 2018
75	76	1	695432					70	March 21 2018
76	77	1	695433					70	March 21 2018
77	78	1	695434					70	March 21 2018
78	79	1	695435					70	March 21 2018



79	80	1	695436					70	March 21 2018
80	80	0	695437	Blank				70	March 21 2018
80	81	1	695438					71	March 21 2018
81	82	1	695439					71	March 21 2018
82	83	1	695440					71	March 21 2018
83	84	1	695441					71	March 21 2018
84	85	1	695442					71	March 21 2018
85	86	1	695443					71	March 21 2018
86	87	1	695444					71	March 21 2018
87	88	1	695445					71	March 21 2018
88	89	1	695446					71	March 21 2018
88	89	1	695447	Duplicate				71	March 21 2018
89	90	1	695448					71	March 21 2018
90	91	1	695449					71	March 21 2018
91	92	1	695450					71	March 21 2018
92	93	1	695451					71	March 21 2018
93	94	1	695452					71	March 21 2018
94	95	1	695453					71	March 21 2018
95	96	1	695454					71	March 21 2018
96	96	0	695455	OREAS 218				71	March 21 2018
96	97	1	695456					71	March 21 2018
97	98	1	695457					71	March 21 2018
98	99	1	695458					71	March 21 2018
99	100	1	695459					71	March 21 2018
100	101	1	695460					71	March 21 2018
101	102	1	695461					71	March 21 2018
102	103	1	695462					71	March 21 2018
103	104	1	695463					71	March 21 2018
104	105	1	695464					71	March 21 2018
105	105	0	695465	Blank				71	March 21 2018
105	106	1	695466					71	March 21 2018
106	107	1	695467					71	March 21 2018
107	108	1	695468					71	March 21 2018
108	109	1	695469					71	March 21 2018
109	109.65	0.65	695470					71	March 21 2018
109.65	111	1.35	695471					71	March 21 2018
111	112	1	695472					71	March 21 2018
112	113	1	695473					72	March 21 2018
113	113	0	695474	OREAS 218				72	March 21 2018
113	114	1	695475					72	March 21 2018
114	115	1	695476					72	March 21 2018
115	116	1	695477					72	March 21 2018
116	116.55	0.55	695478					72	March 21 2018
116.55	118	1.45	695479					72	March 21 2018
118	119	1	695480					72	March 21 2018
119	120	1	695481					72	March 21 2018
120	121	1	695482					72	March 21 2018
120	121	1	695483	Duplicate				72	March 21 2018
121	122	1	695484					72	March 21 2018
122	123	1	695485					72	March 21 2018

123	124	1	695486					72	March 21 2018
124	125	1	695487					72	March 21 2018
125	126	1	695488					72	March 21 2018
126	127	1	695489					72	March 21 2018
127	128	1	695490					72	March 21 2018
128	129	1	695491					72	March 21 2018
129	129	0	695492	Blank				72	March 21 2018
129	130	1	695493					72	March 21 2018
130	131	1	695494					72	March 21 2018
131	132	1	695495					72	March 21 2018
132	133	1	695496					72	March 21 2018
133	134	1	695497					72	March 21 2018
134	135	1	695498					72	March 21 2018
135	136	1	695499					72	March 21 2018
136	137	1	695500					72	March 21 2018
137	137	0	696001	OREAS 218				72	March 21 2018
137	137.7	0.7	696002					72	March 21 2018
137.7	139	1.3	696003					72	March 21 2018
139	140	1	696004					72	March 21 2018
140	141	1	696005					72	March 21 2018
141	142	1	696006					72	March 21 2018
142	143	1	696007					72	March 21 2018
143	143.7	0.7	696008					73	March 22 2018
143.7	143.7	0	696009	Blank				73	March 22 2018
143.7	144	0.3	696010					73	March 22 2018
144	145	1	696011					73	March 22 2018
145	146	1	696012					73	March 22 2018
146	147	1	696013					73	March 22 2018
147	148	1	696014					73	March 22 2018
148	149	1	696015					73	March 22 2018
149	150	1	696016					73	March 22 2018
150	151	1	696017					73	March 22 2018
150	151	1	696018	Duplicate				73	March 22 2018
151	152	1	696019					73	March 22 2018
152	153	1	696020					73	March 22 2018
153	154	1	696021					73	March 22 2018
154	155.2	1.2	696022					73	March 22 2018
155.2	156	0.8	696023					73	March 22 2018
156	157	1	696024					73	March 22 2018
157	158	1	696025					73	March 22 2018
158	159	1	696026					73	March 22 2018
159	159	0	696027	OREAS 218				73	March 22 2018
159	160	1	696028					73	March 22 2018
160	161	1	696029					73	March 22 2018
161	162	1	696030					73	March 22 2018
162	163	1	696031					73	March 22 2018
163	164	1	696032					73	March 22 2018
164	165	1	696033					73	March 22 2018
165	166	1	696034					73	March 22 2018
166	167	1	696035					73	March 22 2018



198.5	199	0.5	696086					75	March 22 2018
199	199.4	0.4	696087					75	March 22 2018
199.4	200	0.6	696088					75	March 22 2018
200	200	0	696089	Blank				75	March 22 2018
200	200.5	0.5	696090					75	March 22 2018
200.5	201	0.5	696091					75	March 22 2018
201	201.5	0.5	696092					75	March 22 2018
201.5	202	0.5	696093					75	March 22 2018
202	202.5	0.5	696094					75	March 22 2018
202.5	203	0.5	696095					75	March 22 2018
203	203.5	0.5	696096					75	March 22 2018
203.5	204	0.5	696097					75	March 22 2018
204	204	0	696098	OREAS 223				75	March 22 2018
204	204.5	0.5	696099					75	March 22 2018
204.5	205	0.5	696100					75	March 22 2018
205	205.5	0.5	696101					75	March 22 2018
205.5	206	0.5	696102					75	March 22 2018
206	206.5	0.5	696103					75	March 22 2018
206.5	207	0.5	696104					75	March 22 2018
207	207.5	0.5	696105					75	March 22 2018
207	207.5	0.5	696106	Duplicate				75	March 22 2018
207.5	208	0.5	696107					75	March 22 2018
208	208.5	0.5	696108					75	March 22 2018
208.5	209	0.5	696109					75	March 22 2018
209	209.5	0.5	696110					75	March 22 2018
209.5	210	0.5	696111					75	March 22 2018
210	210.5	0.5	696112					75	March 22 2018
210.5	211	0.5	696113					76	March 22 2018
211	211.75	0.75	696114					76	March 22 2018
211.75	211.75	0	696115	Blank				76	March 22 2018
211.75	212.45	0.7	696116					76	March 22 2018
212.45	213	0.55	696117					76	March 22 2018
213	213.5	0.5	696118					76	March 22 2018
213.5	214	0.5	696119					76	March 22 2018
214	214.5	0.5	696120					76	March 22 2018
214.5	215	0.5	696121					76	March 22 2018
215	215.5	0.5	696122					76	March 22 2018
215.5	215.5	0	696123	OREAS 223				76	March 22 2018
215.5	216	0.5	696124					76	March 22 2018
216	216.5	0.5	696125					76	March 22 2018
216.5	217	0.5	696126					76	March 22 2018
217	217.5	0.5	696127					76	March 22 2018
217.5	218	0.5	696128					76	March 22 2018
218	218.5	0.5	696129					76	March 22 2018
218.5	219	0.5	696130					76	March 22 2018
219	219.5	0.5	696131					76	March 22 2018
219	219.5	0.5	696132	Duplicate				76	March 22 2018
219.5	220	0.5	696133					76	March 22 2018
220	220.5	0.5	696134					76	March 22 2018
220.5	221	0.5	696135					76	March 22 2018

221	221.5	0.5	696136					76	March 22 2018
221.5	222	0.5	696137					76	March 22 2018
222	222.5	0.5	696138					76	March 22 2018
222.5	222.5	0	696139	Blank				76	March 22 2018
222.5	223	0.5	696140					76	March 22 2018
223	223.55	0.55	696141					76	March 22 2018
223.55	225	1.45	696142					76	March 22 2018
227.25	228	0.75	696143					76	March 22 2018
228	229	1	696144					76	March 22 2018
229	230	1	696145					76	March 22 2018
230	230	0	696146	OREAS 217				76	March 22 2018
230	231.3	1.3	696147					76	March 22 2018
231.3	232	0.7	696148					77	
232	233	1	696149					77	
233	234	1	696150					77	
234	235	1	696151					77	
235	236	1	696152					77	
236	237	1	696153					77	
237	238	1	696154					77	
238	239	1	696155					77	
239	239	0	696156	Blank				77	
239	240	1	696157					77	
240	241	1	696158					77	
241	242	1	696159					77	
242	243	1	696160					77	
243	244	1	696161					77	
244	245	1	696162					77	
245	246	1	696163					77	
246	247	1	696164					77	
247	248	1	696165					77	
247	248	1	696166	Duplicate				77	
248	249	1	696167					77	
249	250	1	696168					77	
250	251	1	696169					77	
251	252	1	696170					77	
252	253	1	696171					77	
253	254	1	696172					77	
254	255	1	696173					77	
255	256	1	696174					77	
256	257	1	696175					77	
257	258	1	696176					77	
258	258	0	696177	OREAS 217				77	
258	259	1	696178					77	
259	260	1	696179					77	
260	261	1	696180					77	
261	262	1	696181					77	
262	263	1	696182					77	
263	264	1	696183					78	
264	265	1	696184					78	
265	266	1	696185					78	

266	267	1	696186					78
267	267	0	696187	Blank				78
267	268	1	696188					78
268	269	1	696189					78
269	270	1	696190					78
270	271	1	696191					78
271	272	1	696192					78
272	273	1	696193					78



**NOBLE  
MINERAL**  
EXPLORATION INC.

**Diamond Drill Log**

HOLE NO.		LUC-18-18									
EXPLORATION COMPANY					UTM NAD 83 ZONE 17N				TARGET DEPTH (m)		
Noble Mineral Exploration					PLANNED COORDINATES		FINAL COORDINATES		0		
START DATE	COMPLETION DATE	START DATE LOGGED	END DATE LOGGED	EASTING (m)	EASTING (m)	TARGET DESCRIPTION					
14-Mar-18	16-Mar-18	16-Mar-18	17-Mar-18	0.00	484249.75	A-8 planned drillhole					
DRILLING COMPANY		DRILL RIG		NORTHING (m)		NORTHING (m)		TARGET RESULTS			
NPLH Drilling				0.00		5406799.21		0			
TARGET NAME		AZIMUTH (°)		DIP (°)	ELEVATION (m)	TYPE	ELEVATION (m)	TYPE	0		
Lucas - South East		225		-45	0.00	Planned	0.00	SXBlue			
COMMENTS											
METERAGE			ROCK TYPE	ROCK CODE	DESCRIPTION						
FROM m	TO m	LENGTH m									
0	30	30	Overburden	OVB	Multiple origin boulders. One long section ~2m of mineralized chert was sent for assays as sample A and B.						
30	31.2	1.2	Diabase	DIA	Dark grey medium-grained homogeneous diabase dyke. Moderate to strongly magnetic.						
31.2	45.2	14	Mineralized Tuff	PTUFF	Dark grey intermediate mineralized tuff or volcanoclastic sediments? (No defined lithic clasts, more like banded irregular lenses). Up to 30% sulphide.						
45.2	54	8.8	Volcaniclastic Sediments	VOLSED	Dark grey layered volcanoclastic sediments. Locally tuffaceous						
54	77.2	23.2	Mineralized Tuff	PTUFF	Dark grey intermediate mineralized tuff. Locally with healed breccia texture as well as semi-massive sulphide zones. Up to 30% sulphide.						
77.2	78.8	1.6	Volcaniclastic Sediments	VOLSED	Dark grey layered volcanoclastic sediments. Locally tuffaceous. Gradual LC						
78.8	114.2	35.4	Mineralized Tuff	PTUFF	Dark grey intermediate mineralized tuff. Locally with healed breccia texture as well as semi-massive sulphide zones. Up to 30% sulphide.						
114.2	123.8	9.6	Intermediate Volcanics	IVOL	Grey fine to medium grained intermediate volcanics or volcanoclastic sediments? ~40cm semi-massive sulphide section within						
123.8	126.6	2.8	Intermediate Tuff	ITUFF	Intermediate tuff or volcanoclastic sediments? LC is strongly fractured and blocky.						
126.6	127.2	0.6	Fault	FLT	Fault. Blocky core. Loss core						
127.2	129.25	2.05	Sulphide Zone	SULZ	Semi-massive sulphide section. Up to 60% py with minor qtz veinlets.						
129.25	136.8	7.55	Intermediate Volcanics	IVOL	grey fine to medium grained intermediate volcanics. Locally with crackle breccia texture						
136.8	139.9	3.1	Mineralized Tuff	PTUFF	Dark grey mineralized tuff. Locally with healed breccia texture. Up to 30% sulphide near LC. Faulted LC.						
139.9	144	4.1	Fault	FLT	Fault gouge and strong fracturing. UC has a 10 cm diabase dyke. The fracture core is green pale felsic volcanics.						
144	151	7	Felsic Volcanics	FVOL	Pale green, strongly folded and fractured felsic volcanics.						
151	151.6	0.6	Fault	FLT	Fault gouge and strong fracturing.						
151.6	151.9	0.3	Quartz Zone	QTZZN	Quartz vein with lithic fragments						
151.9	164.25	12.35	Felsic Volcanics	FVOL	Pale green, strongly folded and fractured felsic volcanics.						
164.25	EOH										



**NOBLE  
MINERAL**  
EXPLORATION INC.

NOBLE MINERAL EXPLORATION INC.												
HOLE NO.		LUC-18-18										
EXPLORATION COMPANY												
Noble Mineral Exploration												
DRILLING COMPANY												LOGGED BY
NPLH Drilling												Edwin Escarraga
METERAGE			ALT_1	STY_1	INT_1	ALT_2	STY_2	INT_2	ALT_3	STY_3	INT_3	COMMENTS
FROM m	TO m	LENGTH m										
31.2	45.2	14	Sericite	Pervasive	Weak	Quartz	Veinlets (width <	Weak				quartz stringers and veinlets
45.2	54	8.8	Sericite	Pervasive	Weak	Silicified	Patchy	Very Weak	Quartz	Stringers	Very Weak	quartz stringers and veinlets
54	77.2	23.2	Sericite	Pervasive	Weak	Chert	Patchy	Weak	Quartz	Stringers	Very Weak	
77.2	78.8	1.6	Sericite	Pervasive	Weak	Quartz	Stringers	Very Weak				
78.8	96	17.2	Sericite	Pervasive	Weak							
96	97.45	1.45	Silicified	Interstitial / Inter	Weak	Sericite	Pervasive	Weak				Locally silicified around some lithic fragments
97.45	104	6.55	Sericite	Pervasive	Weak							
104	114.2	10.2	Sericite	Pervasive	Weak	Quartz	Stringers	Weak				Quartz stringers and veinlets
114.2	126.6	12.4	Sericite	Pervasive	Weak	Quartz	Stringers	Weak	Calcite	Stringers	Very Weak	
127.9	129.25	1.35	Quartz	Stringers	Weak							
129.25	136.8	7.55	Sericite	Pervasive	Moderate	Quartz	Stringers	Very Weak				
136.8	139.9	3.1	Silicified	Patchy	Weak	Quartz	Stringers	Weak				
139.9	164.25	24.35	Sericite	Pervasive	Moderate	Chlorite	Pervasive	Moderate	Graphite	Fracture Filled	Weak	





**NOBLE  
MINERAL**  
EXPLORATION INC.

HOLE NO.

LUC-18-18

EXPLORATION COMPANY

Noble Mineral Exploration

DRILLING COMPANY

NPLH Drilling

LOGGED BY

Edwin Escarraga

METERAGE			MIN_1	STY_1	PERCENT_1	MIN_2	STY_2	PERCENT_2	MIN_3	STY_3	PERCENT_3	COMMENTS
FROM m	TO m	LENGTH m										
31.2	45.2	14	Pyrite	Band	10	Pyrite	Bleb	5				
45.2	54	8.8	Pyrite	Disseminated	3	Pyrite	Stringers	2				Py "stringers" are along foliation and "filling" the interstitial matrix
54	77.2	23.2	Pyrite	Band	15	Pyrite	Bleb	5				
77.2	78.8	1.6	Pyrite	Disseminated	3	Pyrite	Stringers	2				medium to coarse grained in patchy sections and bands parallel to foliation
78.8	91.2	12.4	Pyrite	Band	15	Pyrite	Bleb	5				
91.2	92.8	1.6	Pyrite	Semi-massive	25	Pyrite	Band	5				
92.8	98.6	5.8	Pyrite	Patchy	10	Pyrite	Bleb	3				at 96 m an orange brassy more metallic sulphide (still py or something)
98.6	101.9	3.3	Pyrite	Disseminated	5							locally semi-massive
101.9	105	3.1	Pyrite	Patchy	5							
105	107	2	Pyrite	Patchy	15							
107	114.2	7.2	Pyrite	Patchy	10	Pyrite	Disseminated	3				
114.2	121.5	7.3	Pyrite	Patchy	5							
121.5	121.85	0.35	Pyrite	Semi-massive	50							
121.85	123.8	1.95	Pyrite	Patchy	5							
123.8	126.6	2.8	Pyrite	Patchy	3	Pyrite	Disseminated	1				
127.9	129.25	1.35	Pyrite	Semi-massive	50							
129.25	136.8	7.55	Pyrite	Patchy	2	Pyrite	Disseminated	1				
136.8	139.9	3.1	Pyrite	Band	5	Pyrite	Bleb	5				
139.9	164.25	24.35	Pyrite	Disseminated	0.01							



**NOBLE  
MINERAL**  
EXPLORATION INC.

HOLE NO.

**LUC-18-18**

EXPLORATION COMPANY

**Noble Mineral Exploration**

DRILLING COMPANY

**NPLH Drilling**

Mag Declination

-10.4

LOGGED BY

Edwin Escarraga

DEPTH_m	MEASURED					CORRECTED				COMMENTS
	AZ	DIP	MAG FIELD	SURVEY_TYPE	FLAG	AZ	DIP	SURVEY_TYPE	FLAG	
42	239.8	-46.6	55862	Reflex		229.4	-46.4	Reflex		
93	239.2	-46.2	55593	Reflex		228.8	-46.2	Reflex		
156	240.1	-46	55742	Reflex		229.7	-46	Reflex		



**NOBLE  
MINERAL**  
EXPLORATION INC.

HOLE NO.

**LUC-18-18**

EXPLORATION COMPANY

**Noble Mineral Exploration**

DRILLING COMPANY

LOGGED BY

**NPLH Drilling**

METERAGE

STRUCTURE

INTENSITY

ANGLE\_TCA

COMMENTS

FROM_m	TO_m	LENGTH_m	STRUCTURE	INTENSITY	ANGLE_TCA	COMMENTS
30	31.2	1.2	Fracture	Moderate		
31.65	32	0.35	Fracture	Strong		
40.5	42.2	1.7	Fracture	Moderate		
43.1	45	1.9	Fracture	Moderate		
46	46.01	0.01	Foliation	Moderate	41	
64.5	65	0.5	Fracture	Strong		
107.25	107.4	0.15	Fracture	Moderate		
126.6	127.2	0.6	Fracture	Strong		
137.6	138	0.4	Fracture	Moderate	70	
139.9	144	4.1	Fault	Very strong		Fault gouge in the UC
148	151	3	Fold	Very strong		Multiple tight folds
151	151.6	0.6	Fault	Strong		Small section of very grinded core (fault?)
154	156.5	2.5	Fracture	Strong		
162	164	2	Fold	Very strong		Strongly folded and crenulated
158	158.01	0.01	Foliation	Very strong	5	





**NOBLE  
MINERAL**  
EXPLORATION INC.

HOLE NO.

LUC-18-18

EXPLORATION COMPANY

**Noble Mineral Exploration**

DRILLING COMPANY

**NPLH Drilling**

LOGGED BY

Edwin Escarraga

METERAGE			SAMPLE_NO	SAMPLE_TYPE	AU_ppb	AG_ppm	Cu_per	Batch	COMMENTS
FROM_m	TO_m	LENGTH_m							
31.2	32	0.8	696194					78	
32	33	1	696195					78	
32	33	1	696196	Duplicate				78	
33	34	1	696197					78	
34	35	1	696198					78	
35	36	1	696199					78	
36	37	1	696200					78	
37	38	1	696201					78	
38	39	1	696202					78	
39	40	1	696203					78	
40	41	1	696204					78	
41	41	0	696205	Blank				78	
41	42	1	696206					78	
42	43	1	696207					78	
43	44	1	696208					78	
44	45.2	1.2	696209					78	
45.2	46	0.8	696210					78	
46	47	1	696211					78	
47	48	1	696212					78	
48	49	1	696213					78	
49	49	0	696214	OREAS 217				78	
49	50	1	696215					78	
50	51	1	696216					78	
51	52	1	696217					78	
52	53	1	696218					79	
53	54	1	696219					79	
54	54.5	0.5	696220					79	
54.5	55	0.5	696221					79	
55	55	0	696222	Duplicate				79	
55	55.5	0.5	696223					79	
55.5	56	0.5	696224					79	
56	56.5	0.5	696225					79	
56.5	57	0.5	696226					79	
57	57.5	0.5	696227					79	
57.5	58	0.5	696228					79	
58	58.5	0.5	696229					79	

58.5	59	0.5	696230					79
59	59.5	0.5	696231					79
59.5	59.5	0	696232	Blank				79
59.5	60	0.5	696233					79
60	60.5	0.5	696234					79
60.5	61	0.5	696235					79
61	61.5	0.5	696236					79
61.5	62	0.5	696237					79
62	62.5	0.5	696238					79
62.5	63	0.5	696239					79
63	63.5	0.5	696240					79
63.5	63.5	0	696241	OREAS 223				79
63.5	64	0.5	696242					79
64	64.5	0.5	696243					79
64.5	65	0.5	696244					79
65	65.5	0.5	696245					79
65.5	66	0.5	696246					79
66	66.4	0.4	696247					79
66.4	67	0.6	696248					79
67	67.5	0.5	696249					79
67	67.5	0.5	696250	Duplicate				79
67.5	68	0.5	696251					79
68	68.45	0.45	696252					79
68.45	69	0.55	696253					80
69	69.5	0.5	696254					80
69.5	70	0.5	696255					80
70	70.5	0.5	696256					80
70.5	71	0.5	696257					80
71	71.5	0.5	696258					80
71.5	71.5	0	696259	Blank				80
71.5	72	0.5	696260					80
72	72.5	0.5	696261					80
72.5	73	0.5	696262					80
73	73.5	0.5	696263					80
73.5	74	0.5	696264					80
74	74.5	0.5	696265					80
74.5	75	0.5	696266					80
75	75	0	696267	OREAS 223				80
75	75.5	0.5	696268					80
75.5	76	0.5	696269					80
76	76.5	0.5	696270					80
76.5	77.2	0.7	696271					80
77.2	78	0.8	696272					80
78	78.8	0.8	696273					80
78.8	79.5	0.7	696274					80
78.8	79.5	0.7	696275	Duplicate				80
79.5	80	0.5	696276					80
80	80.5	0.5	696277					80
80.5	81	0.5	696278					80
81	81.5	0.5	696279					80

81.5	82	0.5	696280					80
82	82.5	0.5	696281					80
82.5	83	0.5	696282					80
83	83	0	696283	OREAS 217				80
83	84	1	696284					80
84	84.5	0.5	696285					80
84.5	85	0.5	696286					80
85	85.5	0.5	696287					80
85.5	86	0.5	696288					81
86	86.5	0.5	696289					81
86.5	87	0.5	696290					81
87	87.5	0.5	696291					81
87	87.5	0.5	696292	Duplicate				81
87.5	88	0.5	696293					81
88	88.5	0.5	696294					81
88.5	89	0.5	696295					81
89	89.5	0.5	696296					81
89.5	90	0.5	696297					81
90	90.5	0.5	696298					81
90.5	91	0.5	696299					81
91	91	0	696300	Blank				81
91	91.5	0.5	696301					81
91.5	92	0.5	696302					81
92	92.85	0.85	696303					81
92.85	94	1.15	696304					81
94	94.5	0.5	696305					81
94.5	95	0.5	696306					81
95	95.5	0.5	696307					81
95.5	95.5	0	696308	OREAS 217				81
95.5	96	0.5	696309					81
96	96.5	0.5	696310					81
96.5	97	0.5	696311					81
97	97.5	0.5	696312					81
97.5	98	0.5	696313					81
98	98.6	0.6	696314					81
98.6	99.5	0.9	696315					81
99.5	100	0.5	696316					81
99.5	100	0.5	696317	Duplicate				81
100	100.5	0.5	696318					81
100.5	101	0.5	696319					81
101	101.5	0.5	696320					81
101.5	101.9	0.4	696321					81
101.9	102.5	0.6	696322					81
102.5	103	0.5	696323					82
103	103.5	0.5	696324					82
103.5	104	0.5	696325					82
104	104	0	696326	Blank				82
104	104.5	0.5	696327					82
104.5	105	0.5	696328					82
105	105.5	0.5	696329					82

105.5	106	0.5	696330					82
106	106.5	0.5	696331					82
106.5	107	0.5	696332					82
107	107.5	0.5	696333					82
107.5	108	0.5	696334					82
108	108.5	0.5	696335					82
108.5	109	0.5	696336					82
109	109.5	0.5	696337					82
109.5	109.5	0	696338	OREAS 217				82
109.5	110	0.5	696339					82
110	110.5	0.5	696340					82
110.5	111	0.5	696341					82
111	111.5	0.5	696342					82
111.5	112	0.5	696343					82
112	112.5	0.5	696344					82
112.5	113	0.5	696345					82
112.5	113	0.5	696346	Duplicate				82
113	113.5	0.5	696347					82
113.5	114.2	0.7	696348					82
114.2	115	0.8	696349					82
115	116	1	696350					82
116	117	1	696351					82
117	118	1	696352					82
118	119	1	696353					82
119	120	1	696354					82
120	120	0	696355	Blank				82
120	121	1	696356					82
121	121.5	0.5	696357					82
121.5	121.85	0.35	696358					83
121.85	123	1.15	696359					83
123	123.8	0.8	696360					83
123.8	125	1.2	696361					83
125	126	1	696362					83
126	126.6	0.6	696363					83
126.6	126.6	0	696364	Blank				83
126.6	128.5	1.9	696365					83
128.5	129.25	0.75	696366					83
129.25	130	0.75	696367					83
130	130	0	696368	OREAS 223				83
130	131	1	696369					83
131	132	1	696370					83
132	133	1	696371					83
133	134	1	696372					83
134	135	1	696373					83
135	136	1	696374					83
136	136.8	0.8	696375					83
136.8	137.5	0.7	696376					83
137.5	138	0.5	696377					83
138	138.5	0.5	696378					83
138.5	139	0.5	696379					83



138.5	139	0.5	696380	Duplicate				83
139	139.9	0.9	696381					83
144	145	1	696382					83
145	146	1	696383					83
151.6	151.9	0.3	696384					83
151.9	153	1.1	696385					83
153	153	0	696386	Blank				83
153	154	1	696387					83
154	155	1	696388					83
155	156	1	696389					83
156	157	1	696390					83
157	158	1	696391					83
158	159	1	696392					83
159	160	1	696393					84
160	161	1	696394					84
161	162	1	696395					84
162	162	0	696396	OREAS 217				84
162	163	1	696397					84
163	164.25	1.25	696398					84



**NOBLE  
MINERAL**  
EXPLORATION INC.

**Diamond Drill Log**

HOLE NO.		LUC-18-19									
EXPLORATION COMPANY				UTM NAD 83 ZONE 17N				TARGET DEPTH (m)			
Noble Mineral Exploration				PLANNED COORDINATES		FINAL COORDINATES		0			
START DATE	COMPLETION DATE	START DATE LOGGED	END DATE LOGGED	EASTING (m)		EASTING (m)		TARGET DESCRIPTION			
16-Mar-18	18-Mar-18	18-Mar-18	19-Mar-18	0.00		483920.40		Twin of L-80-13			
DRILLING COMPANY		DRILL RIG		LOGGED BY		NORTHING (m)		NORTHING (m)		TARGET RESULTS	
NPLH Drilling		Edwin Escarraga		0.00		5407095.54		0			
TARGET NAME		AZIMUTH (°)		DIP (°)		ELEVATION (m)	TYPE	ELEVATION (m)	TYPE	0	
Lucas - South East		225		-70		0.00	Planned	0.00	SXBlue		
COMMENTS											
METERAGE			ROCK TYPE	ROCK CODE	DESCRIPTION						
FROM m	TO m	LENGTH m									
0	54	54	Overburden	OVB							
54	68.7	14.7	Intermediate Tuff	ITUFF	Tarnished red, hematized lithic crystal lapilli intermediate tuff. Sparse block size fragments (~8cm) of porphyry granodiorite?						
68.7	71.8	3.1	Volcaniclastic Sediments	VOLSED	Dark grey to black, interlaminated volcanoseds.						
71.8	72	0.2	Fault	FLT	Fault gouge and strongly fractured core.						
72	76.7	4.7	Volcaniclastic Sediments	VOLSED	Dark grey to black, interlaminated volcanoseds. Dyke at LC?						
76.7	85.5	8.8	Mineralized Tuff	PTUFF	Patchy sulphide mineralization in a tuff, with local healed and crackle breccia. strong patchy chert throughout						
85.5	88.8	3.3	Volcaniclastic Sediments	VOLSED	Dark grey to black, weakly interlaminated volcanoseds.						
88.8	95.35	6.55	Mineralized Tuff	PTUFF	Mineralized sections with massive to semi-massive and patchy pyrite. Chert content is moderate. Abundant quartz stringers and						
95.35	100.3	4.95	Volcaniclastic Sediments	VOLSED	Dark grey to black, weakly interlaminated volcanoseds or crystal tuff?						
100.3	120	19.7	Mineralized Tuff	PTUFF	Strong chert throughout, healed breccia and crackle breccia, original texture unrecognizable. Locally semi-massive pyrite sections						
120	132	12	Quartz Zone	QTZZN	White quartz vein/flooding with strong sulphide mineralization.						
132	137.3	5.3	Mineralized Tuff	PTUFF	Patchy sulphide mineralization in a lithic lapilli tuff, with local healed and crackle breccia. A section in the middle has strong chert						
137.3	138	0.7	Quartz Vein	QV	Barren, white Quartz vein. Strongly fractured.						
138	140.5	2.5	Fault	FLT	Fault gouge in the upper contacts. Strongly fractured and crumbly core held together in a graphitic matrix. Remnants of a dark						
140.5	153	12.5	Felsic to Intermediate Volcanic	FIVOL	Pale green and grey fine grained felsic to intermediate volcanics (felsic flow?). Strongly foliated, locally strongly folded and						
153	EOH										



**NOBLE  
MINERAL**  
EXPLORATION INC.

HOLE NO.

**LUC-18-19**

EXPLORATION COMPANY

**Noble Mineral Exploration**

DRILLING COMPANY

**NPLH Drilling**

LOGGED BY

**Edwin Escarraga**

METERAGE

METERAGE			ALT_1	STY_1	INT_1	ALT_2	STY_2	INT_2	ALT_3	STY_3	INT_3	COMMENTS
FROM m	TO m	LENGTH m										
54	68.7	14.7	Hematite	Pervasive	Moderate	Sericite	Pervasive	Weak	Quartz	Veinlets (width <	Weak	Quartz stringers and veinlets
68.7	76.1	7.4	Sericite	Pervasive	Weak	Quartz	Stringers	Weak	Graphite	Banded	Weak	Quartz stringers and veinlets
76.1	85.5	9.4	Chert	Pervasive	Strong	Quartz	Stringers	Moderate				Quartz stringers and veinlets, although mostly stockwork like, a
85.5	88.8	3.3	Silicified	Patchy	Moderate	Quartz	Veins (width grea	Weak				
88.8	91	2.2	Chert	Patchy	Moderate	Quartz	Veinlets (width <	Moderate				Quartz stringers and veinlets
91	95.35	4.35	Silicified	Patchy	Moderate	Quartz	Veinlets (width <	Weak				
95.35	100.3	4.95	Sericite	Pervasive	Moderate	Silicified	Patchy	Very Weak				Graphitic or argillaceous?
100.3	112	11.7	Chert	Pervasive	Strong	Quartz	Stringers	Weak				Quartz stringers and veinlets
112	113.5	1.5	Sericite	Pervasive	Moderate	Silicified	Patchy	Weak				
113.5	120	6.5	Chert	Pervasive	Strong	Quartz	Veins (width grea	Moderate				
120	132	12	Quartz	Stockwork	Strong	Sericite	Pervasive	Weak				
132	134.5	2.5	Chert	Pervasive	Moderate	Quartz	Veins (width grea	Moderate				Veins and veinlets. Stringers fracture filling
134.5	137.3	2.8	Silicified	Pervasive	Moderate	Sericite	Pervasive	Moderate	Quartz	Stringers	Moderate	
137.3	138	0.7	Hematite	Patchy	Moderate							
138	140.5	2.5	Graphite	Pervasive	Strong	Hematite	Patchy	Moderate				
140.5	153	12.5	Sericite	Pervasive	Moderate	Chlorite	Pervasive	Weak	Quartz	Stockwork	Weak	



HOLE NO.

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METERAGE			MIN_1	STY_1	PERCENT_1	MIN_2	STY_2	PERCENT_2	MIN_3	STY_3	PERCENT_3	COMMENTS
FROM m	TO m	LENGTH m										
54	68.7	14.7	Pyrite	Disseminated	3	Pyrite	Patchy	2				
68.7	71.8	3.1	Pyrite	Band	3	Pyrite	Disseminated	1				Bands are parallel to foliation, disseminated are medium size grains
72	74.5	2.5	Pyrite	Disseminated	1							
74.5	76.1	1.6	Pyrite	Euhedral	3	Pyrite	Disseminated	1				Euhedral grains are coarse grained near LC
76.1	78.6	2.5	Pyrite	Nodules	20	Pyrite	Disseminated	3				
78.6	85.5	6.9	Pyrite	Patchy	15	Pyrite	Disseminated	5				Locally smaller sections of semi-massive pyrite ~5-10cm
85.5	88.8	3.3	Pyrite	Disseminated	5							medium grained
88.8	91	2.2	Pyrite	Disseminated	8	Pyrite	Patchy	2				
91	95.35	4.35	Pyrite	Patchy	20	Pyrite	Disseminated	5				Locally semi-massive
95.35	100.3	4.95	Pyrite	Disseminated	5							locally medium grained
100.3	105.65	5.35	Pyrite	Disseminated	5							Increasing downhole
105.65	106.4	0.75	Pyrite	Semi-massive	60							
106.4	108	1.6	Pyrite	Band	25							Banded and patchy
108	111.45	3.45	Pyrite	Band	5							
111.45	114.7	3.25	Pyrite	Patchy	15	Pyrite	Fracture Filled	5				
114.7	115.8	1.1	Pyrite	Semi-massive	35							
115.8	117.8	2	Pyrite	Patchy	15	Pyrite	Band	5				
117.8	120	2.2	Pyrite	Semi-massive	40							
120	123.5	3.5	Pyrite	Band	15							
123.5	127.8	4.3	Pyrite	Band	5							
127.8	132	4.2	Arsenopyrite	Disseminated	1	Pyrite	Patchy	10	Pyrite	Disseminated	2	f-g Aspy within quartz stringers/stockwork
132	134.3	2.3	Pyrite	Semi-massive	20	Pyrite	Patchy	15	Arsenopyrite	Disseminated	0.01	
134.3	137.3	3	Pyrite	Patchy	10	Pyrite	Disseminated	5				
137.3	138	0.7	Pyrite	Disseminated	2							strongly oxidized
140.5	153	12.5	Pyrite	Disseminated	0.01							



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**Noble Mineral Exploration**

DRILLING COMPANY

**NPLH Drilling**

Mag Declination

-10.4

LOGGED BY

Edwin Escarraga

DEPTH_m	MEASURED					CORRECTED				COMMENTS
	AZ	DIP	MAG FIELD	SURVEY_TYPE	FLAG	AZ	DIP	SURVEY_TYPE	FLAG	
66	235.3	73.2	55877	Reflex		224.9	73.2	Reflex		
				Reflex		-10.4	0	Reflex		
153	233.2	71.7	55660	Reflex		222.8	71.7	Reflex		



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**NPLH Drilling**

LOGGED BY

METERAGE

FROM m	TO m	LENGTH m	STRUCTURE	INTENSITY	ANGLE_TCA	COMMENTS
55	55.5	0.5	Fracture	Moderate		
59	59.01	0.01	Foliation	Moderate	54	
62.4	62.6	0.2	Fracture	Moderate		
67.5	68.7	1.2	Fracture	Moderate		
85.5	88.8	3.3	Fracture	Moderate		
95.7	96	0.3	Fracture	Strong		Grinded core
71.8	72	0.2	Fault	Strong		
107	107.01	0.01	Foliation	Moderate	60	
119	121	2	Fracture	Strong		
123.4	125	1.6	Fracture	Strong		
131	134	3	Fracture	Strong		
138	140.5	2.5	Fault	Very Strong		Fault gouge crumble fragments held together in a graphitic matrix
152.8	152.85	0.05	Fault	Very Strong		Fault gouge , very localized
144.5	145.7	1.2	Fracture	Strong		
149.8	150	0.2	Fracture	Very Strong		Grinded core, localized gouge. Localized fault?
149	149.01	0.01	Foliation	Strong	40	
141	144	3	Fold	Strong		Folded and crenulated, locally foliation is parallel TCA





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DRILLING COMPANY

**NPLH Drilling**

LOGGED BY

Edwin Escarraga

METERAGE

FROM_m	TO_m	LENGTH_m	SAMPLE_NO	SAMPLE_TYPE	AU_ppm	AG_ppm	CU_per	BATCH #	COMMENTS
54	55	1	696399					84	
55	56	1	696400					84	
56	57	1	696401					84	
57	58	1	696402					84	
58	58	0	696403	OREAS 217				84	
58	59	1	696404					84	
59	60	1	696405					84	
60	61	1	696406					84	
61	62	1	696407					84	
62	63	1	696408					84	
63	64	1	696409					84	
64	65	1	696410					84	
65	66	1	696411					84	
65	66	1	696412	Duplicate				84	
66	67	1	696413					84	
67	68	1	696414					84	
68	68.7	0.7	696415					84	
68.7	70	1.3	696416					84	
70	71	1	696417					84	
71	71.8	0.8	696418					84	
72	73	1	696419					84	
73	74	1	696420					84	
74	75	1	696421					84	
75	76.1	1.1	696422					84	
76.1	76.1	0	696423	Blank				84	
76.1	76.7	0.6	696424					84	
76.7	77.5	0.8	696425					84	
77.5	78	0.5	696426					84	
78	78.5	0.5	696427					84	
78.5	79	0.5	696428					85	
79	79.5	0.5	696429					85	
79.5	80	0.5	696430					85	
80	80.5	0.5	696431					85	
80.5	80.5	0	696432	OREAS 223				85	
80.5	81	0.5	696433					85	
81	81.5	0.5	696434					85	



81.5	82	0.5	696435					85
82	83	1	696436					85
83	83.5	0.5	696437					85
83.5	84	0.5	696438					85
84	84.5	0.5	696439					85
84.5	85	0.5	696440					85
84.5	85	0.5	696441	Duplicate				85
85	85.5	0.5	696442					85
85.5	86	0.5	696443					85
86	87	1	696444					85
87	88	1	696445					85
88	88.8	0.8	696446					85
88.8	89.5	0.7	696447					85
89.5	90	0.5	696448					85
90	90	0	696449	Blank				85
90	90.5	0.5	696450					85
90.5	91	0.5	696451					85
91	91.5	0.5	696452					85
91.5	92	0.5	696453					85
92	92.5	0.5	696454					85
92.5	93	0.5	696455					85
93	93.5	0.5	696456					85
93.5	94	0.5	696457					85
94	94.5	0.5	696458					85
94.5	95	0.5	696459					85
95	95	0	696460	OREAS 223				85
95	95.35	0.35	696461					85
95.35	96	0.65	696462					85
96	97	1	696463					86
97	98	1	696464					86
98	99	1	696465					86
99	100.3	1.3	696466					86
100.3	101	0.7	696467					86
100.3	101	0.7	696468	Duplicate				86
101	101.5	0.5	696469					86
101.5	102	0.5	696470					86
102	102.5	0.5	696471					86
102.5	103	0.5	696472					86
103	103.5	0.5	696473					86
103.5	104	0.5	696474					86
104	104.5	0.5	696475					86
104.5	104.5	0	696476	Blank				86
104.5	105	0.5	696477					86
105	105.5	0.5	696478					86
105.5	106	0.5	696479					86
106	106.5	0.5	696480					86
106.5	107	0.5	696481					86
107	107.5	0.5	696482					86
107.5	108	0.5	696483					86
108	108.5	0.5	696484					86

108.5	109	0.5	696485					86
109	109	0	696486	OREAS 223				86
109	109.5	0.5	696487					86
109.5	110	0.5	696488					86
110	110.5	0.5	696489					86
110.5	111	0.5	696490					86
111	111.5	0.5	696491					86
111.5	112	0.5	696492					86
112	112.5	0.5	696493					86
112.5	113	0.5	696494					86
112.5	113	0.5	696495	Duplicate				86
113	113.5	0.5	696496					86
113.5	114	0.5	696497					86
114	114.5	0.5	696498					87
114.5	115	0.5	696499					87
115	115.5	0.5	696500					87
115.5	116	0.5	696501					87
116	116	0	696502	OREAS 223				87
116	116.5	0.5	696503					87
116.5	117	0.5	696504					87
117	117.5	0.5	696505					87
117.5	118	0.5	696506					87
118	118.5	0.5	696507					87
118.5	119	0.5	696508					87
119	120	1	696509					87
120	121.35	1.35	696510					87
121.35	122	0.65	696511					87
122	122	0	696512	Blank				87
122	122.5	0.5	696513					87
122.5	123	0.5	696514					87
123	124	1	696515					87
124	125.5	1.5	696516					87
125.5	126	0.5	696517					87
126	126.6	0.6	696518					87
126.6	127	0.4	696519					87
127	128	1	696520					87
127	128	1	696521	Duplicate				87
128	128.5	0.5	696522					87
128.5	129	0.5	696523					87
129	129.5	0.5	696524					87
129.5	130	0.5	696525					87
130	130.5	0.5	696526					87
130.5	131	0.5	696527					87
131	132	1	696528					87
132	132.5	0.5	696529					87
132.5	133	0.5	696530					87
133	133	0	696531	OREAS 223				87
133	133.5	0.5	696532					87
133.5	134	0.5	696533					88
134	134.5	0.5	696534					88

134.5	135	0.5	696535					88
135	135.5	0.5	696536					88
135.5	136	0.5	696537					88
136	136.5	0.5	696538					88
136.5	137	0.5	696539					88
137	137	0	696540	Blank				88
137	137.3	0.3	696541					88
137.3	138	0.7	696542					88
140.5	141	0.5	696543					88
141	141.5	0.5	696544					88
141.5	142	0.5	696545					88
142	142.5	0.5	696546					88
142.5	143	0.5	696547					88
143	144	1	696548					88
143	144	1	696549	Duplicate				88
144	145	1	696550					88
145	146	1	696551					88
146	147	1	696552					88
147	148	1	696553					88
148	149	1	696554					88
149	150	1	696555					88
150	151	1	696556					88
151	151	0	696557	OREAS 217				88
151	152	1	696558					88
152	153	1	696559					88



**NOBLE  
MINERAL**  
EXPLORATION INC.

**Diamond Drill Log**

HOLE NO.		LUC-18-20									
EXPLORATION COMPANY					UTM NAD 83 ZONE 17N				TARGET DEPTH (m)		
Noble Mineral Exploration					PLANNED COORDINATES		FINAL COORDINATES		0		
START DATE	COMPLETION DATE	START DATE LOGGED	END DATE LOGGED	EASTING (m)		EASTING (m)		TARGET DESCRIPTION			
18-Mar-18	19-Mar-18	19-Mar-18	20-Mar-18	0.00		483913.27		Twin of L-81-36			
DRILLING COMPANY		DRILL RIG		LOGGED BY		NORTHING (m)		NORTHING (m)		TARGET RESULTS	
NPLH Drilling				Edwin Escarraga		0.00		5407040.54		0	
TARGET NAME		AZIMUTH (°)		DIP (°)		ELEVATION (m)	TYPE	ELEVATION (m)	TYPE	0	
Lucas - South East		225		-75		0.00	Planned	0.00	SXBlue		
COMMENTS											
METERAGE			ROCK TYPE	ROCK CODE	DESCRIPTION						
FROM m	TO m	LENGTH m									
0	50	50	Overburden	OVB							
50	64.3	14.3	Mineralized Tuff	PTUFF	Patchy sulphide mineralization in a tuff, with local healed and crackle breccia. strong patchy chert throughout. From 58-64.3m Tarnished red lithic lapilli tuff						
64.3	75	10.7	Volcaniclastic sediments	VOLSED	Dark grey to black, weakly interlaminated volcanosediments or crystal tuff?. Locally very tuffaceous texture. Locally with porphyritic texture.						
75	81.35	6.35	Mineralized Tuff	PTUFF	Locally tarnished red, hematized lithic lapilli intermediate tuff. Healed and crackle breccia throughout						
81.35	89.6	8.25	Sulphide Zone	SULZ	Semi-massive sulphide section with patchy sections of chert and quartz flooding.						
89.6	92.3	2.7	Quartz zone	QTZZN	White quartz vein/flooding with strong sulphide mineralization. Strongly altered to hematite. LC is faulted						
92.3	97	4.7	Fault	FLT	Fault zone. Strongly fractured core. UC with gouge in what it seems may have been a diabase dyke. Further down is broken pieces quartz						
97	132	35	Felsic Volcanics	FVOL	Pale green and grey fine grained felsic to intermediate volcanics (felsic flow?). Strongly foliated, locally strongly folded and crenulated.						
132	EOH										



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DRILLING COMPANY

**NPLH Drilling**

LOGGED BY

Edwin Escarraga

METERAGE

METERAGE			ALT_1	STY_1	INT_1	ALT_2	STY_2	INT_2	ALT_3	STY_3	INT_3	COMMENTS
FROM m	TO m	LENGTH m										
50	57.5	7.5	Chert	Pervasive	Strong	Quartz	Stringers	Weak				Quartz stringers and veinlets. Preferred orientation
57.5	64.3	6.8	Hematite	Patchy	Moderate	Silicified	Pervasive	Moderate	Quartz	Stockwork	Weak	
64.3	75	10.7	Sericite	Pervasive	Weak	Quartz	Veinlets (width <	Weak				Quartz veinlets non mineralized
75	78	3	Sericite	Pervasive	Moderate	Quartz	Stringers	Weak				
78	81.35	3.35	Sericite	Pervasive	Moderate	Hematite	Patchy	Moderate				
81.35	89.6	8.25	Chert	Patchy	Moderate	Quartz	Stockwork	Moderate				
89.6	92.3	2.7	Hematite	Pervasive	Strong							
92.3	97	4.7	Sericite	Pervasive	Strong	Chlorite	Pervasive	Strong				Quartz stringers and veinlets
97	132	35	Sericite	Pervasive	Moderate	Chlorite	Pervasive	Moderate	Quartz	Veinlets (width < 1cm)		



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LOGGED BY

Edwin Escarraga

METERAGE

FROM m	TO m	LENGTH m	MIN_1	STY_1	PERCENT_1	MIN_2	STY_2	PERCENT_2	MIN_3	STY_3	PERCENT_3	COMMENTS
50	57.5	7.5	Pyrite	Disseminated	3	Pyrite	Patchy	2				
57.5	64.3	6.8	Pyrite	Patchy	15	Pyrite	Band	5				Locally sections up to ~15cm semi-massive
64.3	75	10.7	Pyrite	Disseminated	3	Pyrite	Patchy	2				
75	81.35	6.35	Pyrite	Patchy	10	Pyrite	Bleb	2				
81.35	89.6	8.25	Pyrite	Semi-massive	40	Pyrite	Nodules	10	Arsenopyrite	Disseminated	0.01	Aspy Between 82.5-83.7m
89.6	92.3	2.7	Pyrite	Disseminated	1							
97	109	12	Pyrite	Disseminated	0.01							
109	109.5	0.5	Arsenopyrite	Disseminated	0.01	Pyrite	Disseminated	0.01				
109.5	132	22.5	Pyrite	Disseminated	0.01							



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**Noble Mineral Exploration**

DRILLING COMPANY

**NPLH Drilling**

Mag Declination

-10.4

LOGGED BY

Edwin Escarraga

DEPTH_m	MEASURED					CORRECTED				COMMENTS
	AZ	DIP	MAG FIELD	SURVEY_TYPE	FLAG	AZ	DIP	SURVEY_TYPE	FLAG	
54	242.6	-76	55870	Reflex		232.2	-76	Reflex		
105	239.2	-75.6	56229	Reflex		228.8	-75.6	Reflex		



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LOGGED BY

**NPLH Drilling**

METERAGE

STRUCTURE

INTENSITY

ANGLE\_TCA

COMMENTS

FROM_m	TO_m	LENGTH_m	STRUCTURE	INTENSITY	ANGLE_TCA	COMMENTS
57.65	62	4.35	Fracture	Moderate		
65	65.01	0.01	Foliation	Moderate	54	
80.7	81.35	0.65	Fracture	Moderate		
89.6	92.3	2.7	Fracture	Strong		
92.3	97	4.7	Fault	Very Strong		Fault gouge in the UC
99	104.5	5.5	Fracture	Strong		Grinded core
106	106	0	Fracture	Moderate		
110	113	3	Blocky	Strong		
115	115.01	0.01	Foliation	Strong	27	







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DRILLING COMPANY

**NPLH Drilling**

LOGGED BY

Edwin Escarraga

METERAGE

FROM_m	TO_m	LENGTH_m	SAMPLE_NO	SAMPLE_TYPE	AU_ppm	AG_ppm	CU_per	BATCH #	COMMENTS
50	50.5	0.5	696560					88	
50.5	51	0.5	696561					88	
51	51.5	0.5	696562					88	
51.5	52	0.5	696563					88	
52	52.5	0.5	696564					88	
52.5	52.5	0	696565	Blank				88	
52.5	53	0.5	696566					88	
53	53.5	0.5	696567					88	
53.5	54	0.5	696568					89	
54	54.5	0.5	696569					89	
54.5	55	0.5	696570					89	
55	55.5	0.5	696571					89	
55.5	56	0.5	696572					89	
56	56	0	696573	OREAS 217				89	
56	56.5	0.5	696574					89	
56.5	57	0.5	696575					89	
57	57.5	0.5	696576					89	
57.5	58	0.5	696577					89	
58	59	1	696578					89	
59	60	1	696579					89	
60	60.5	0.5	696580					89	
60.5	61	0.5	696581					89	
61	62	1	696582					89	
62	62.5	0.5	696583					89	
62.5	63	0.5	696584					89	
62.5	63	0.5	696585	Duplicate				89	
63	63.5	0.5	696586					89	
63.5	64.3	0.8	696587					89	
64.3	65	0.7	696588					89	
65	66	1	696589					89	
66	67	1	696590					89	
67	67.35	0.35	696591					89	
67.35	68.1	0.75	696592					89	
68.1	69	0.9	696593					89	
69	69	0	696594	Blank				89	
69	70	1	696595					89	

70	71	1	696596					89
71	72	1	696597					89
72	73	1	696598					89
73	74	1	696599					89
74	75	1	696600					89
75	75.5	0.5	696601					89
75.5	75.5	0	696602	OREAS 217				89
75.5	76	0.5	696603					90
76	76.5	0.5	696604					90
76.5	77	0.5	696605					90
77	78	1	696606					90
78	79	1	696607					90
79	80	1	696608					90
80	81.35	1.35	696609					90
81.35	82	0.65	696610					90
81.35	82	0.65	696611	Duplicate				90
82	82.5	0.5	696612					90
82.5	83	0.5	696613					90
83	83.5	0.5	696614					90
83.5	84	0.5	696615					90
84	84.5	0.5	696616					90
84.5	85	0.5	696617					90
85	85.5	0.5	696618					90
85.5	85.5	0	696619	Blank				90
85.5	86	0.5	696620					90
86	86.7	0.7	696621					90
86.7	87.3	0.6	696622					90
87.3	88	0.7	696623					90
88	88.5	0.5	696624					90
88.5	88.5	0	696625	OREAS 223				90
88.5	89	0.5	696626					90
89	89.6	0.6	696627					90
89.6	91	1.4	696628					90
91	92.7	1.7	696629					90
93	95	2	696630					90
95	95	0	696631	OREAS 217				90
97	98	1	696632					90
98	99	1	696633					90
99	100	1	696634					90
100	101	1	696635					90
101	102	1	696636					90
102	103	1	696637					90
103	105	2	696638					91
105	106	1	696639					91
106	106	0	696640	Blank				91
106	107	1	696641					91
107	108	1	696642					91
108	109	1	696643					91
109	109.5	0.5	696644					91
109.5	110	0.5	696645					91

110	111	1	696646					91
111	112.1	1.1	696647					91
112.1	113	0.9	696648					91
113	114	1	696649					91
113	114	1	696650	Duplicate				91
114	115	1	696651					91
115	116	1	696652					91
116	117	1	696653					91
117	118	1	696654					91
118	119	1	696655					91
119	120	1	696656					91
120	121	1	696657					91
121	122	1	696658					91
122	123	1	696659					91
123	123	0	696660	OREAS 217				91
123	124	1	696661					91
124	125	1	696662					91
125	126	1	696663					91
126	127	1	696664					91
127	128	1	696665					91
128	129	1	696666					91
129	130	1	696667					91
130	131	1	696668					91
131	132	1	696669					91
132	132	0	696670	Blank				91



**NOBLE  
MINERAL**  
EXPLORATION INC.

**Diamond Drill Log**

HOLE NO.		LUC-18-21									
EXPLORATION COMPANY					UTM NAD 83 ZONE 17N				TARGET DEPTH (m)		
Noble Mineral Exploration					PLANNED COORDINATES		FINAL COORDINATES		0		
START DATE	COMPLETION DATE	START DATE LOGGED	END DATE LOGGED	EASTING (m)	EASTING (m)		TARGET DESCRIPTION				
19-Mar-18	21-Mar-18	20-Mar-18	22-Mar-18	0.00	483909.38		Twin of L-80-4. The collar has to be moved 12.5 m NE due to soft ground conditions. The hole was drilled at -70 to match the same interval that the				
DRILLING COMPANY		DRILL RIG		LOGGED BY		NORTHING (m)		NORTHING (m)		TARGET RESULTS	
NPLH Drilling				Edwin Escarraga		0.00		5406982.81		0	
TARGET NAME		AZIMUTH (°)		DIP (°)		ELEVATION (m)	TYPE	ELEVATION (m)	TYPE		
Lucas - South East		45		-70		0.00	Planned	0.00	SXBlue		
COMMENTS											
METERAGE			ROCK TYPE	ROCK CODE	DESCRIPTION						
FROM m	TO m	LENGTH m									
0	49	49	Overburden	OVB							
49	54.5	5.5	Felsic to Intermediate Tuff	FITUFF	Light grey crystal lapilli intermediate tuff. Quartz crystals give it the appearance of a porphyry texture.						
54.5	63.6	9.1	Intermediate Tuff	ITUFF	Grey lithic lapilli intermediate lapilli. Locally strongly brecciated (healed and crackle breccia)						
63.6	68	4.4	Fault	FLT	Strongly fractured zone, no fault gouge but extreme core loss.						
68	81.9	13.9	Sulphide Zone	SULZ	Semi-massive sulphide section with patchy sections of chert and quartz flooding. ~15 cm diabase dyke near the LC						
81.9	100.6	18.7	Mineralized Tuff	PTUFF	Grey-red-pink lithic lapilli tuff. Localized healed and crackle breccia throughout. Patchy hematite alteration						
100.6	106	5.4	Sulphide Zone	SULZ	Semi-massive sulphide section with patchy sections of chert.						
106	110.25	4.25	Mineralized Tuff	PTUFF	Grey-red lithic lapilli tuff. Strong healed breccia and crackle breccia texture.						
110.25	118	7.75	Sulphide Zone	SULZ	Semi-massive sulphide section with strong chert mineralization and quartz stockwork throughout.						
118	122.5	4.5	Mineralized Tuff	PTUFF	Grey to green lapilli tuff intruded multiple times by small ~10cm diabase dykes. Near the dykes strong hematite alteration						
122.5	125.3	2.8	Intermediate Tuff	ITUFF	Intermediate tuff or flow? Lithic fragments are very scarce, green homogeneous colour with abundant crackle breccia. Aspy present						
125.3	136	10.7	Sulphide Zone	SULZ	Strong chert mineralization in a predominantly semi-massive sulphide section.						
136	153	17	Mineralized Tuff	PTUFF	Grey lithic lapilli intermediate lapilli. Locally with crackle breccia						
153	164.8	11.8	Sulphide Zone	SULZ	Strong chert mineralization in a section with patchy to semi-massive sulphide sections						
164.8	189	24.2	Intermediate Volcanics	IVOL	Grey very fine grained intermediate volcanic flow? Predominantly laminated but locally with crystal-lapilli fragments						
189	EOH										



**NOBLE  
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EXPLORATION INC.

HOLE NO.

LUC-18-21

EXPLORATION COMPANY

Noble Mineral Exploration

DRILLING COMPANY

NPLH Drilling

LOGGED BY

Edwin Escarraga

METERAGE			ALT_1	STY_1	INT_1	ALT_2	STY_2	INT_2	ALT_3	STY_3	INT_3	COMMENTS
FROM_m	TO_m	LENGTH_m										
49	54.5	5.5	Sericite	Pervasive	Moderate							
54.5	59.5	5	Sericite	Pervasive	Moderate	Quartz	Stringers	Very Weak				
59.5	63.3	3.8	Sericite	Pervasive	Moderate							
63.3	66.9	3.6	Hematite	Fracture Filled	Moderate	Sericite	Pervasive	Moderate				
66.9	70	3.1	Silicified	Patchy	Moderate	Hematite	Fracture Filled	Moderate				
70	74.5	4.5	Chert	Patchy	Moderate	Quartz	Stringers	Weak				Quartz stringers and veinlets
74.5	80.25	5.75	Chert	Pervasive	Strong	Quartz	Veinlets (width <	Moderate				Quartz stringers and veinlets. Most prominent ones are almost parallel TC
80.25	81.9	1.65	Quartz	Pervasive	Moderate							
81.9	99	17.1	Sericite	Pervasive	Moderate	Silicified	Pervasive	Weak	Quartz	Stringers	Very Weak	
99	100.6	1.6	Sericite	Pervasive	Moderate	Hematite	Patchy	Weak				
100.6	106	5.4	Chert	Patchy	Moderate	Hematite	Patchy	Weak	Quartz	Stringers	Very Weak	
106	110.25	4.25	Silicified	Patchy	Moderate	Hematite	Patchy	Moderate				Is it hematite alteration or other alteration associated to the lithic fragmen
110.25	111	0.75	Chert	Pervasive	Strong	Quartz	Stockwork	Moderate				
111	113.5	2.5	Silicified	Patchy	Moderate							
113.5	118	4.5	Chert	Pervasive	Strong	Quartz	Stockwork	Strong				Quartz veinlets and stringers in the chert look like distensional veins
118	122.5	4.5	Silicified	Patchy	Moderate	Quartz	Stockwork	Moderate	Hematite	Patchy	Moderate	Hematite alteration in quartz vein and host rock, predominantly associate
122.5	125.3	2.8	Sericite	Pervasive	Moderate	Silicified	Patchy	Weak	Quartz	Stringers	Very Weak	m-g aspy along quartz stringers
125.3	129	3.7	Chert	Patchy	Weak	Quartz	Veinlets (width <	Weak				
129	136	7	Chert	Patchy	Moderate	Quartz	Stringers	Weak				
136	153	17	Sericite	Pervasive	Weak	Silicified	Patchy	Weak				
153	159.45	6.45	Silicified	Patchy	Moderate	Quartz	Stringers	Weak				
159.45	164.8	5.35	Chert	Pervasive	Strong	Quartz	Stockwork	Moderate				
164.8	180	15.2	Sericite	Pervasive	Moderate							
180	184	4		Grains	Moderate							
184	189	5	Sericite	Pervasive	Moderate							Chloritoid? fine grained crystals peppered throughout



**NOBLE  
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EXPLORATION INC.

HOLE NO.

**LUC-18-21**

EXPLORATION COMPANY

**Noble Mineral Exploration**

DRILLING COMPANY

**NPLH Drilling**

LOGGED BY

Edwin Escarraga

METERAGE			MIN_1	STY_1	PERCENT_1	MIN_2	STY_2	PERCENT_2	MIN_3	STY_3	PERCENT_3	COMMENTS
FROM m	TO m	LENGTH m										
49	54.5	5.5	Pyrite	Patchy	7	Pyrite	Disseminated	1				Increases near the LC
54.5	59.5	5	Pyrite	Disseminated	1							
59.5	62	2.5	Pyrite	Band	5	Pyrite	Disseminated	1				
62	66.9	4.9	Pyrite	Patchy	10							Increasing near the LC
66.9	70	3.1	Pyrite	Patchy	10							
70	74.5	4.5	Pyrite	Semi-massive	60							
74.5	80.25	5.75	Pyrite	Patchy	25	Pyrite	Disseminated	5	Arsenopyrite	Disseminated	0.01	Aspy at 79.3m in a flat (TCA) Quartz stockwork within a heavy chert zo
80.25	81.9	1.65	Pyrite	Semi-massive	40							
81.9	100.6	18.7	Pyrite	Patchy	10	Pyrite	Bleb	5				
100.6	106	5.4	Pyrite	Semi-massive	20	Pyrite	Patchy	10				
106	110.25	4.25	Pyrite	Patchy	15							
110.25	113.5	3.25	Pyrite	Patchy	25							Locally Semi-massive
113.5	118	4.5	Pyrite	Patchy	15	Arsenopyrite	Disseminated	0.1				Aspy always along with Py
118	122.5	4.5	Pyrite	Patchy	10							
122.5	125.3	2.8	Arsenopyrite	Disseminated	1							Aspy medium-grained on its own within quartz stringers parallel TCA
125.3	129	3.7	Pyrite	Semi-massive	45							
129	135	6	Pyrite	Patchy	25							
135	136	1	Pyrite	Semi-massive	40							
136	153	17	Pyrite	Patchy	10							Several up to ~15cm sections of semi-massive sulphide
153	156	3	Pyrite	Patchy	30							
156	159.45	3.45	Pyrite	Disseminated	20	Pyrite	Patchy	5				Very fine grained disseminated, almost sugary texture
159.45	164.8	5.35	Pyrite	Patchy	115	Arsenopyrite	Disseminated	0.01				Tr Aspy at 163.8m
164.8	189	24.2	Pyrite	Disseminated	0.1							



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DRILLING COMPANY

**NPLH Drilling**

Mag Declination

-10.4

LOGGED BY

Edwin Escarraga

DEPTH_m	MEASURED					CORRECTED				COMMENTS
	AZ	DIP	MAG FIELD	SURVEY_TYPE	FLAG	AZ	DIP	SURVEY_TYPE	FLAG	
60	56.2	-69.8	55871	Reflex		45.8	-69.8	Reflex		
123	59.2	-69.9	55899	Reflex		48.8	-69.9	Reflex		
189	62	-70.1	56034	Reflex		51.6	-70.1	Reflex		





**NOBLE  
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EXPLORATION INC.

HOLE NO.

**LUC-18-21**

EXPLORATION COMPANY

**Noble Mineral Exploration**

DRILLING COMPANY

LOGGED BY

**NPLH Drilling**

METERAGE

STRUCTURE

INTENSITY

ANGLE\_TCA

COMMENTS

FROM_m	TO_m	LENGTH_m	STRUCTURE	INTENSITY	ANGLE_TCA	COMMENTS
59.3	61	1.7	Fracture	Moderate		
63.6	68	4.4	Fracture	Very Strong		Faulted zone?
69.2	70.1	0.9	Fracture	Strong		
80.7	81.9	1.2	Fracture	Moderate		
125.3	126	0.7	Fracture	Strong		Faulted?
126.5	128.65	2.15	Fracture	Strong		
152.4	153	0.6	Fracture	Moderate		
167	167.01	0.01	Foliation	Strong	24	



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DRILLING COMPANY  
**NPLH Drilling**

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METERAGE			VEIN_1	STY_1	PERCENT_1	VEIN_2	STY_2	PERCENT_2	VEIN_3	STY_3	PERCENT_3	COMMENTS
FROM m	TO m	LENGTH m										
77.5	80	2.5	Quartz	Stockwork	40							
81.4	81.65	0.25	Quartz	Vein (width great	100							Semi-parallel TCA
100.9	101.5	0.6	Quartz	Stockwork	1							
113.5	118	4.5	Quartz	Stockwork	25							with diss py and minor Aspy
110.5	111	0.5	Quartz	Stockwork	10							
121.3	122.4	1.1	Quartz	Stockwork	25							Strongly fractured and oxidized vein near the end of the section
133.2	134	0.8	Quartz	Stockwork	10							
159.45	164.8	5.35	Quartz	Stockwork	10							



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DRILLING COMPANY

**NPLH Drilling**

LOGGED BY

Edwin Escarraga

METERAGE

FROM_m	TO_m	LENGTH_m	SAMPLE_NO	SAMPLE_TYPE	AU_ppm	AG_ppm	CU_per	BATCH #	COMMENTS
49	50	1	696671					91	
50	51	1	696672					91	
51	52	1	696673					92	
52	53	1	696674					92	
53	54.5	1.5	696675					92	
54.5	55	0.5	696676					92	
55	55	0	696677	OREAS 217				92	
55	56	1	696678					92	
56	57	1	696679					92	
57	58	1	696680					92	
58	59	1	696681					92	
59	60	1	696682					92	
60	61	1	696683					92	
61	62	1	696684					92	
62	63	1	696685					92	
62	63	1	696686	Duplicate				92	
63	66.9	3.9	696687					92	
66.9	68.5	1.6	696688					92	
68.5	69	0.5	696689					92	
69	70	1	696690					92	
70	70.5	0.5	696691					92	
70.5	71	0.5	696692					92	
71	71.5	0.5	696693					92	
71.5	72	0.5	696694					92	
72	72.5	0.5	696695					92	
72.5	73	0.5	696696					92	
73	73	0	696697	Blank				92	
73	73.5	0.5	696698					92	
73.5	74	0.5	696699					92	
74	74.5	0.5	696700					92	
74.5	75	0.5	696701					92	
75	75.5	0.5	696702					92	
75.5	76	0.5	696703					92	
76	76.5	0.5	696704					92	
76.5	76.5	0	696705	OREAS 223				92	
76.5	77	0.5	696706					92	

77	77.5	0.5	696707					92
77.5	78	0.5	696708					93
78	78.5	0.5	696709					93
78.5	79	0.5	696710					93
79	79.5	0.5	696711					93
79.5	80	0.5	696712					93
79.5	80	0.5	696713	Duplicate				93
80.25	81	0.75	696714					93
81	81.4	0.4	696715					93
81.4	81.9	0.5	696716					93
81.9	82.5	0.6	696717					93
82.5	83	0.5	696718					93
83	83.5	0.5	696719					93
83.5	84	0.5	696720					93
84	84	0	696721	Blank				93
84	84.5	0.5	696722					93
84.5	85	0.5	696723					93
85	85.5	0.5	696724					93
85.5	86	0.5	696725					93
86	86.5	0.5	696726					93
86	86.5	0.5	696727	Duplicate				93
86.5	87	0.5	696728					93
87	87.5	0.5	696729					93
87.5	88	0.5	696730					93
88	88.5	0.5	696731					93
88.5	89	0.5	696732					93
89	89	0	696733	OREAS 217				93
89	89.5	0.5	696734					93
89.5	90	0.5	696735					93
90	90.5	0.5	696736					93
90.5	91	0.5	696737					93
91	91.5	0.5	696738					93
91.5	92	0.5	696739					93
92	92.5	0.5	696740					93
92.5	93	0.5	696741					93
93	93.5	0.5	696742					94
93	93.5	0.5	696743	Duplicate				94
93.5	94	0.5	696744					93
94	94.5	0.5	696745					94
94.5	95	0.5	696746					94
95	95.5	0.5	696747					94
95.5	96	0.5	696748					94
96	96.5	0.5	696749					94
96.5	97	0.5	696750					94
97	97.5	0.5	696751					94
97.5	97.5	0	696752	Blank				94
97.5	98	0.5	696753					94
98	98.5	0.5	696754					94
98.5	99	0.5	696755					94
99	100	1	696756					94

100	100.6	0.6	696757					94
100.6	101	0.4	696758					94
101	101.5	0.5	696759					94
101.5	101.5	0	696760	Blank				94
101.5	102	0.5	696761					94
102	102.5	0.5	696762					94
102.5	103	0.5	696763					94
103	103.5	0.5	696764					94
103.5	104	0.5	696765					94
104	104.5	0.5	696766					94
104.5	105	0.5	696767					94
104.5	105	0.5	696768	Duplicate				94
105	105.5	0.5	696769					94
105.5	106	0.5	696770					94
106	106	0	696771	OREAS 217				94
106	106.5	0.5	696772					94
106.5	107	0.5	696773					94
107	107.5	0.5	696774					94
107.5	108	0.5	696775					94
108	109	1	696776					94
109	109.5	0.5	696777					94
109.5	110.25	0.75	696778					95
110.25	111	0.75	696779					95
111	111	0	696780	Blank				95
111	111.5	0.5	696781					95
111.5	112	0.5	696782					95
112	112.5	0.5	696783					95
112.5	113	0.5	696784					95
113	113.5	0.5	696785					95
113.5	114	0.5	696786					95
114	114.5	0.5	696787					95
114.5	115	0.5	696788					95
115	115.5	0.5	696789					95
115	115.5	0.5	696790	Duplicate				95
115.5	116	0.5	696791					95
116	116.5	0.5	696792					95
116.5	117	0.5	696793					95
117	117.5	0.5	696794					95
117.5	118	0.5	696795					95
118	118.5	0.5	696796					95
118.5	119	0.5	696797					95
119	119.5	0.5	696798					95
119.5	119.5	0	696799	OREAS 217				95
119.5	120	0.5	696800					95
120	120.5	0.5	696801					95
120.5	121	0.5	696802					95
121	121.5	0.5	696803					95
121.5	122	0.5	696804					95
122	122.5	0.5	696805					95
122.5	123	0.5	696806					95

123	123.5	0.5	696807					95
123.5	124	0.5	696808					95
124	124.5	0.5	696809					95
124.5	124.5	0	696810	Blank				95
124.5	125.3	0.8	696811					95
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145.5	146	0.5	696851					97
146	146.5	0.5	696852					97
146.5	146.5	0	696853	OREAS 217				97
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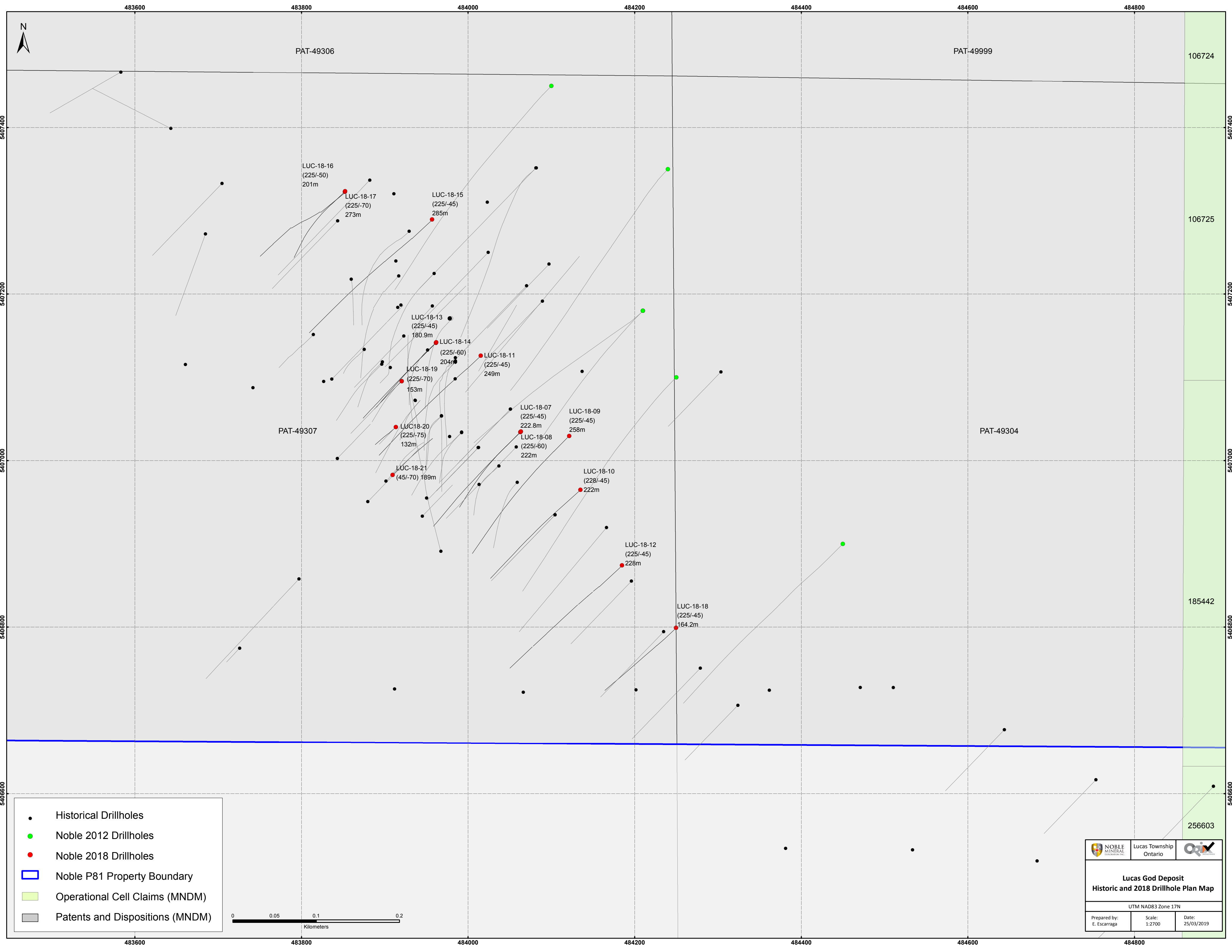
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183	184	1	696915	Duplicate				98
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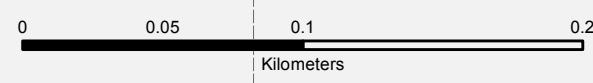


## **APPENDIX V**

### **Drillhole Map**



- Historical Drillholes
- Noble 2012 Drillholes
- Noble 2018 Drillholes
- ▭ Noble P81 Property Boundary
- ▭ Operational Cell Claims (MNDM)
- ▭ Patents and Dispositions (MNDM)



	Lucas Township Ontario	
<b>Lucas God Deposit</b> <b>Historic and 2018 Drillhole Plan Map</b>		
UTM NAD83 Zone 17N		
Prepared by: E. Escarraga	Scale: 1:2700	Date: 25/03/2019