



## ASSESSMENT REPORT TITLE PAGE AND SUMMARY

TITLE OF REPORT: **DIAMOND DRILLING AND RECLAMATION ASSESSMENT  
REPORT ON THE LAVINGTON GOLD PROPERTY**

TOTAL COST: \$239,298.60

AUTHOR(S): **LEOPOLD J. LINDINGER**

SIGNATURE(S): "*LEOPOLD J. LINDINGER*"

NOTICE OF WORK PERMIT NUMBER(S)/DATE(S): **MX-4-666, 2014**

STATEMENT OF WORK EVENT NUMBER(S)/DATE(S): **5529401 03/NOV/2014**

YEAR OF WORK: **2014**

PROPERTY NAME: **LAVINGTON**

CLAIM NAME(S) (on which work was done): **539661**

COMMODITIES SOUGHT: **GOLD, COPPER**

MINERAL INVENTORY MINFILE NUMBER(S), IF KNOWN: **082LSW120**

MINING DIVISION: **VERNON**

NTS / BCGS: **082L025**

LATITUDE: **50° 16'**

LONGITUDE: **119° 08'**

UTM Zone: **11**      EASTING: **347500**      NORTHING: **5570000**

OWNER(S): **ASHER RESOURCES CORPORATION.**

MAILING ADDRESS: **1000 36 TORONTO STREET, TORONTO, ONTARIO M6P 1V9**

OPERATOR(S) **ASHER RESOURCES CORPORATION**

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REPORT KEYWORDS ***Cretaceous or early Tertiary aged volcanics in a west northwest steeply north dipping shear host similar aged gold-copper-silver mineralization associated with pyrite, quartz, sericite and tourmaline.***

REFERENCES TO PREVIOUS ASSESSMENT WORK AND ASSESSMENT REPORT  
NUMBERS: **19126, 19428, 19578, 20334, 26339, 29406, 30492, 31375.**

TYPE OF WORK IN THIS REPORT	EXTENT OF WORK (in metric units)	ON WHICH CLAIMS	PROJECT COSTS APPORTIONED (incl. support)
DRILLING (total metres, number of holes, size, storage location) <b>Core 987 m, HQ, 3 HO STORED 11U LES AT 347635E, 5570425N</b>		<b>539661</b>	\$216,174.60
RELATED TECHNICAL Sampling / Assaying		<b>539661</b>	\$20,124.00
PREPATORY / PHYSICAL Other	RECL AMA TION	<b>539661</b>	3000.00
		<b>TOTAL COST</b>	<b>239,298.60</b>

**DIAMOND DRILLING ASSESSMENT REPORT**

**on the**

**LAVINGTON GOLD PROPERTY**

**B. C. MINFILE NUMBER 082LSW120**

**VERNON HILL AREA, VERNON MINING DIVISION**

**BRITISH COLUMBIA, BCGS MAPSHEET 82L 025**

**Latitude 50'16" Longitude 119'08 W  
UTM: 347500 E 5570000 N; Zone 11(NAD 83)**

*For*

**ASHER RESOURCES CORP.  
155 Vine Ave Toronto ON M6P 1V9**

**By**

**LEOPOLD J. LINDINGER, P. Geo.**

**NOVEMBER 03, 2014**

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SUMMARY

The early stage Lavington Gold Property (B. C. MINFILE No. 082LSW120) is located nearly 10 kilometres east of Vernon, British Columbia. There is excellent access to the claims primarily via a network of logging roads up the Coldstream Creek valley. The property consists of four MTO claims, which cover an area approximately 3.25 km x 3.5 km totalling 1157 hectares.

The Lavington property protects a large 200-400+ metre wide x 2500+ metre long zone of intensely altered quartz-pyrite-sericite schist zone plus several other smaller often partially defined targets. Correlating strongly with this zone is an extensive Au (+As, Sb, Ag, W, Cd, Zn, Pb, Fe, La, Mn, P) in soil anomaly.

Asher Resources Corp. (Asher) has an Option Agreement dated Oct 20, 2011 to acquire the Lavington Gold property by making staged cash payments totalling \$165,000 and issuing share allotments totalling 262500 Asher shares to Aurion Resources Ltd. (Aurion). Asher is also obligated to assume the remaining cash payments totalling \$75000 and share allotments totalling 55000 shares of Asher prior to October 12, 2013 to the current tenure owner Cazador Resources Ltd. (Cazador) who has an underlying Option Agreement with Aurion. Also, a 4% NSR is in force with 2% to both Aurion and Cazador each of which one half could be purchased for \$1,000,000 within 240 days of commercial production. Asher is also obligated to complete at least \$200,000 of exploration work (as amended) by June 30, 2014. After exercise of the option, an annual advance royalty payment of \$40,000 will become payable to Cazador beginning on October 12, 2014.

The LAV occurrence was discovered by a regional silt sampling program completed by Minequest Exploration Associates Ltd. In 1985. Shortly thereafter Goldquest Minerals Corp. acquired the property.

In 1988-1990 BP Resources Canada Limited who optioned the property, completed several programs of coarse spaced gridding, and three stages of multielement soil sampling covering over a 7 square kilometre area, followed by a widely spaced shallow 8 hole diamond drillhole program within a 1200 by 400 metre area.

The soil sampling outlined an over 2000 by 200-400 metres wide gold, indicator element and base metal anomaly, and along the edges of the sampled area partially outlined several smaller ones.

The BP drilling program was the most successful program to outline gold mineralization with intersections ranging from 0.2 g/t over 4 metres to 0.54 g/t gold over a drilled width of 34 metres and possible true width of 15-20 metres. This latter intersection is within a larger 125 metre (drilled width) zone averaging 307 ppb gold. This included a 2 metres interval, which returned 2.5 g/t Au, 3.8 g/t Ag and 0.15% Cu.

The gold encountered in drill core was found to be associated with sheared sulphidic zones that host white quartz veins, stockworks, grey quartz veins and silicified zones and is strongly

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associated with iron, arsenic, lead, zinc and copper with weaker associations with silver and antimony. Crosscutting metal associations indicate several episodes of metal deposition may have occurred. BP recommended additional drilling, however BP relinquished the property in 1991 and the claims lapsed between 1993 and 1995.

In 1999 the core area of the occurrence was staked by L. Caron and J. Kemp who completed additional rock sampling. For the first time mercury was analyzed for and was found to be anomalous from rocks in several areas. The claim was allowed to lapse.

Between 2006 and 2009 Adam Travis repeatedly acquired the mineral tenure over and around the occurrence. In 2007 he collected 16 rock samples from altered zones on the property and confirmed the style and extent of mineralized and altered zones on the property. In November 2007 Sawdee Ventures through Walcott Geophysics Ltd. completed a 1.3 km long north striking Induced Polarization (I.P.) test line on the east end of the main zone to test whether or not I.P. could be an effective tool in determining areas of potential higher grade (gold) mineralization within the large alteration system. This test line indicated that lower resistivity's (<200 Ohm metres) and modest relative chargeability's (20 msec) outlined the known mineralized zones.

In January 2008 Travis transferred ownership of the tenures to Cazador a private company owned by himself.

In the fall of 2009 Cazador optioned the Lavington Property to Aurion. Aurion completed a \$104,027 program which comprising a total of 15.6 line km's of I.P. surveying and total field ground magnetics over the core area of the property. Also completed were 4 lines of soil sampling using the IP stations in the center of the surveyed area totalling 193 soil samples. This work confirmed the location and nature of the gold and multielement anomaly first noted by BP in 1989 but more importantly for the first time outlined the geophysical signature of the area. The I.P. survey partially outlined an open ended 1500 metre long by 200+ metres wide west-northwesterly trending zone of moderate chargeability and lower resistivity that coincided with the strongly altered sericite schist areas hosting elevated gold, arsenic and iron sulphides in soils, rock, and drill core. Several other anomalies were produced that require additional work.

In June 2010 Aurion engaged the author to complete a sight exam as part of due diligence to complete a 43-101 report on the property. The soil samples he took were inconclusive, however two rock samples taken within the zone returned anomalous gold and indicator elements. He also observed that in many areas over the central mineralized zone that returned lower than expected gold and indicator element results were overlain by remnants of a distal till sheet that hosts little of the underlying material and conversely sites that hosted mineralized basal till often produced anomalous results.

5 kilometres east of Lavington the Thong gold-silver arsenic occurrence was discovered in 1989 by Noranda following up Minequest's 1983 and 1984 work. During 1989 the east side of Bardolph Lake was gridded and soil sampled. A northwest trending 800 metre long weak gold anomaly was partially outlined. This anomaly was partially coincident with silver and arsenic the only other elements plotted.

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The Lavington property is located within a package of rocks assigned to the Nicola, Slocan and Harper Creek Group portions of the Quesnel Terrane, an extensive long lived obducted volcanic and sedimentary island arc complex ranging from mid Paleozoic to mid Jurassic in age. Outcropping gneisses and schists in the center of the property may be even older. These rocks occur as tectonically transported remnants underlain by pericratonic high grade metamorphic rocks of the Shuswap metamorphic complex. Small and large Jurassic intrusives outcrop near the property to the east. These older rocks are in turn overlain by Eocene Kamloops Group felsic to mafic intrusives, extrusives and derived sediments and later Miocene basalts. Locally glacial and recent cover is thick.

Within the Nicola Group rocks on the property is a felsic and intermediate tuff unit that grades into, or has been juxtaposed against a pyritic black argillite assigned to the Slocan Group. The tuffs are moderately to often strongly sericite-quartz-pyrite altered and appear sheared. The argillites are highly sheared and host thin beds of strongly altered tuffs. The volcanic rocks are preferentially mineralized with gold, arsenic, copper and other indicator and base metal elements over an at least 6 km sq. area centered on a 2500 by 200-400 WNW trending steeply dipping quartz sericite zone.

Previous workers have suggested that the Lavington property exhibits many of the characteristics of an intrusion related gold-copper system and more specifically a transitional porphyry-epithermal subvolcanic Au - Ag (+Cu, As, Sb, Pb, Zn) system. Equity silver is one such deposit.

In June 2014 three HQ diameter diamond drill holes were completed totalling 987.7 metres. They both undercut and explored to the north for additional gold and gold deposit indicator elements. All three holes were successful in expanding the known gold mineralization at Lavington. Additionally large zones of anomalous arsenic intersected north of the Lavington Main zone suggest deeper gold mineralization may be present at depth. This work has been filed under MTO Event No 5529401.

For hole L14-01 true widths are estimated to be 30% of drilled widths and for holes L14-02 and L14-03 true widths are 70 to 75% of drilled widths.

Hole L14-01 was collared approximately 35 meters SSE of historic hole 90-07 and drilled at a bearing of 028 degrees, a dip of -45 degrees and to a depth of 245.7 meters into the south side of the Lavington Main Zone. Beginning at the overburden-bedrock contact at 19 metres from surface to a depth of 79 metres (60 metres core length) the hole intersected an average grade of 0.49 g/t gold. This included a 6 meter intercept reporting 1.16 g/t gold and two more two meter intercepts returning greater than 1 g/t gold.

Hole L14-02 was collared 440 metres north of and drilled towards (due south) hole L14-01 at a dip of -45 and to a depth of 507.8 meters. Multiple mineralized zones were encountered over a 280 meter horizontal width including the Lavington Main Zone (LMZ) from 409 to 505 metres. A new zone north of the Lavington main zone returned 112 meters grading 0.173 g/t gold, including 22 meters grading 0.297 g/t gold. The first gold intersection grading over 100 ppb



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over 2 metres was intersected at 24.6 m. The Lavington main zone hosts 94.5 m grading 0.227 g/t gold including 24.5 m grading 0.617 g/t gold and 0.051% copper and 2 meters grading 1.6 g/t gold and 0.09% copper. The LMZ here also hosts multigram silver values.

Hole L14-03 was collared 450 meters west of hole L14-02 and drilled towards (south) at a -45 degree dip to 233.5 metres depth and under historic holes 89-01 (in part) and 90-06. This hole intersected anomalous gold values in drill core from the collar. Deeper in the hole was a 77.4 m intersection grading 0.128 ppm gold including 6 meters grading 0.286 g/t gold and 0.039% copper within what is probably the LMZ.

The results indicate that the Lavington property hosts one known west northwest striking steeply north dipping, 30 to 50 metre wide by at least 600 metre long by at least 400 m deep shear hosted gold zone. This zone is topographically recessive. To the north a discreet 40 to 60 metre wide over 500 metre long west striking steeply north dipping arsenic +/- weak gold and silver zone was intersected hosted by topographically positive silicified and biotite altered volcanic or subvolcanic rocks characterized here by a high resistivity, moderate chargeability and lead, zinc arsenic in soil anomalies. The pattern of the zinc, lead and arsenic within silicified host rocks here suggest that this area is part of an alteration shell that overlies deeper gold+/-copper mineralization and/or an unrecognized buried porphyry copper deposit possibly located northeast of the 2014 drilling. The larger pattern of the soil anomalies of the Lavington zone and tentatively the results of the drilling suggest that the mineralizing system, in addition to being elongated in an east west direction may be tilted to the east or more likely west. The QAQC procedures used included blanks and standards indicate no significant laboratory issues with the returned values averaging 5 to 105 higher than the published values.

The size of the main exploration target, the presence of several other targets and the preliminary near surface level of exploration to date indicates the discovery potential for sizeable yet to be discovered zones of higher grade gold and porphyry related base metal mineralization exists under the extensive areas of variable alteration and known mineralization on the Lavington property.

Additional exploration work is recommended at Lavington. Additional surface work including property wide geological mapping, focussed rock and soil geochemistry and focussed IP programs should be completed prior to additional drill testing. In the area of the Thong gold-arsenic in soil anomaly further prospecting is recommended.

Recommended is a \$500,000 phase 2 exploration program. A surface program budgeted at \$75,000 would extend to the northeast and west the 2009 grid to cover additional anomalous areas partially outlined from the historic soil sampling and geophysical results. These extension areas would then be tested with IP and ground magnetic programs. Property scale and detailed geological mapping should also be completed. Also recommended is a \$425,000 diamond drilling program totalling 1700 metres in four to five holes, primarily to test along strike and at depth the still open ended gold-copper mineralized zones and into untested resistivity and chargeability anomalies. A results contingent phase 3 up to \$1,000,000 program would then be recommended.

## INTRODUCTION

This technical report has been prepared for Asher Resources Corp.. It has been prepared in compliance with the requirements of the British Columbia Mineral Tenure Act and Regulations. This report follows the format for technical reports as recommended in Regulation Section 16. Headings follow those as suggested in the Regulations.

In preparing this report, the author has relied on several technical reports detailing work on and around the Lavington Property since 1967. These reports, filed by agents of the Minister of Mines in their Annual Reports, and by industry in support of assessment work requirements, are available in the BC Ministry of Energy and Mines public files websites. Citations for these, and other supporting documentation are contained in the references appended to this report.

The author's familiarity with the Property is based on reviewing of the existing literature and a personal inspection completed on June 23, 2010 and the diamond drilling program completed during June 2014 and presented in this report.

Units of measure and conversion factors possibly used in this report include:

CAPACITY		1 sq. km.	=0.386102 sq. mi.
		MASS	
1 Can. gal.	=4.5461 litre	1 TROY oz.	=31.103 g.
VOLUME		1 g.	=0.03215 TROY oz.
1 cu. ft.	=0.0283 cu. m.	1 lb.	=0.4536 kg.
1 cu. m.	=35.315 cu. ft.	1 kg.	=2.2046 lb.
1 cu. m.	=1.30795 cu. yd.	1 (short) ton	=0.907 metric tonnes
LENGTHS		1 metric tonne	=1.1023 short tons
1 in.	=2.540 cm.	1 TROY oz./short ton	=34.2848 g./metric tonne
1 cm.	=0.3937 in.	1 g./metric tonne	=0.0292 TROY oz./short ton
1 ft.	=0.3048 m.		
1 m.	=3.2808 ft.		
1 yd.	=0.9144 m.		
1 m.	=1.09361 yd.		
1 mile:	=1.6093 km.		
1 km.	=0.6214 mile		
AREA			
1 sq. ft.	=0.0929 sq. m.		
1 sq. m.	=10.764 sq. ft.		
1 sq. yd.	=0.83613 sq. m.		
1 sq. m.	=1.19599 sq. yd.		
1 sq. mi.	=2.58999 sq. km.		

## PROPERTY DESCRIPTION AND LOCATION

The Lavington Property overlies a portion of the east side of Vernon Hill a small plateaued mountain less than 10 km east of Vernon, British Columbia and extends east for 5 kilometres across the lower Coldstream Valley onto the plateau on which Bardolph Lake is situated.

The Property is comprised of six contiguous mineral claims covering an area of 3139.26 hectares. The claims are located on Crown Land in the Vernon Mining Division on BCGS map sheets 083L025. The Property is centered on Latitude 50'16", Longitude 119'095 W and (NAD 83) UTM Zone 11U 351000 E 5570500 N.

The configuration of the various mineral claims is illustrated in Figure 2 and the claim information is as set out in Table 1 below.

**TABLE 1: CLAIM DETAILS**

<b>Tenure Number</b>	<b>Name</b>	<b>Good Until</b>	<b>Area (ha)</b>
539661	LAV GOLD 1	2025/08/20*	495.6525
539662	LAV GOLD 2	2023/08/20*	123.9388
539663	LAV GOLD 3	2023/08/20*	123.8873
642663	LAV GOLD 4	2023/08/20*	413.0936
1024967	EAST LAV	2023/02/28*	826.11
1024968	NE LAV	2023/02/28*	1156.58
<b>TOTAL AREA</b>			<b>3139.26</b>

The LAV GOLD 1-4 claims (“the Property”) currently owned by Cazador Resources Ltd. (Cazador), a private company wholly-owned by Adam Travis have been optioned pursuant to agreement details presented below. The EAST LAV and NE LAV claims acquired earlier this year are held in trust for Asher Resources Corp. by Leo J. Lindinger.

\*pending acceptance for assessment credit of the exploration work summarized in this report under MTO event No. 5524901.

### (Option Agreement 1)

By agreement dated October 12, 2009 Cazador signed a binding letter of intent (Option Agreement 1) granting Aurion Resources Ltd. (Aurion) an option to acquire a 100% interest in the Property located in the Vernon Hills area, Vernon Mining Division, British Columbia. Pursuant to the Agreement, Aurion can earn a 100% interest in the Property by completing CDN \$100,000 in exploration expenditures (completed), making staged cash payments totalling \$100,000 and issuing a total of 100,000 common shares in Aurion (Aurion Shares) over four years to Cazador as follows: (i) \$2000 (paid) and 10,000 Aurion Shares on signing (issued); (ii) \$8,000 (paid) and 15,000 Aurion Shares (issued) on or before October 12, 2010; (iii) \$15,000 (paid) and 20,000 Aurion Shares (issued) on or before October 12, 2011; (iv) \$25,000 (paid) and 25,000 Aurion Shares (issued) on or before October 12, 2012; and (v) \$50,000 and 30,000 Aurion Shares on or before October 12, 2013.

Aurion is entitled to terminate the Agreement, at any time following the initial payment and share issuance and performance of the Obligations, the primary one being leaving the property in

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good standing for a minimum of one year following termination. To date Aurion has spent over \$105,000 in direct exploration expenditures.

Cazador retains a 2% NSR on the Lavington Property, with Aurion having an irrevocable option to purchase (buy down) half of the Net Smelter Royalty (1%) for \$1,000,000 at any time within 240 days of commercial production being achieved.

(Option Agreement 2)

Asher Resources Corp. (Asher) has entered into an Option Agreement dated October 20, 2011 (Option Agreement 2) by with Aurion to earn up to a 100% in the Property. On February 29, 2012 Asher received final Exchange approval of the Option Agreement with Aurion. The Agreement was amended on October 10, 2013. Pursuant to the amended Option Agreement, the Company can earn up to a 100% interest in LAV GOLD 1-4 claims by paying cash and issuing shares to the Optionor as follows:

- i) \$25,000 upon execution of the Option Agreement (paid);
- ii) \$15,000 and 62,500 common shares on February 28, 2012 (paid; 62,500 common shares issued with an ascribed fair value of \$21,250);
- iii) \$25,000 and 50,000 common shares on February 28, 2013 (paid; 50,000 common shares issued with an ascribed fair value of \$13,500);
- iv) Issue 650,000 common shares by October 31, 2013 (650,000 common shares issued with an ascribed fair value of \$221,000); and
- v) Complete a minimum of \$200,000 in exploration expenditures on the property by June 30, 2014. (completed)

Aurion also retains a two percent (2%) net smelter return royalty, for a total royalty burden of 4%., half of which may be purchased by the Company paying \$1,000,000 to each of Aurion and Cazador. (\$2,000,000 in total) within the time allowed. After exercise of the option, an annual advance royalty payment of \$40,000 will become payable to Cazador beginning on October 12, 2014.

Exploration work on mineral properties which involves mechanical work in British Columbia requires the filing of Notices of Work and Reclamation (NOW) with the Ministry of Energy, Mines and Petroleum Resources. The issuance of a permit facilitating such work may involve the posting of a reclamation bond. A permit and reclamation bond of \$3500 (MX-4-666) has been established to complete the exploration work detailed in this report.

Mineral claims in British Columbia may be kept in good standing by incurring assessment work or by paying cash-in-lieu of assessment work. The value of exploration and development required to maintain a mineral claim for one year is at least

- (a) \$5 per hectare for each of the first and second anniversary years,
- (b) \$10 per hectare for each of the third and fourth anniversary years,
- (c) \$15 per hectare for each of the fifth and sixth anniversary years, and
- (d) \$20 per hectare for each subsequent anniversary year.

Cash in lieu payments are for a minimum of 6 months and are double the work requirements.

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The claims are located within the Coldstream River drainage which supplies water to Lavington. Other than that the author is not aware of any specific environmental liabilities to which the mineral claims are subject. The claims are within the grazing lease of the Coldstream Ranch and the area is a highly used summer pasture for their cattle. To the extent known the Author is not aware of any other significant factors or risks that may affect access, title or right or ability to perform work on the property.





**ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE AND PHYSIOGRAPHY**

**(a) Topography, Elevation and Vegetation**

Within the Lavington property elevations range from 850 metres in the main valley bottom in the eastern portion of the claims to over 1300 metres in the central portion of the claims. Slopes are generally moderate, however small bluffs and steeper slopes do occur near the central portions of the claims. Vegetation on south slopes consists of beetle killed Jackpine forest. Mixed in with older pine and fir forest especially in recessive areas and north facing slopes are numerous small groves of crowded young cedar, fir and hemlock. Also observed on the property were several poorly maintained demonstration plots of differing tree species which are being monitored by forestry.

**(b) Access**

Conventional road access to the property is east from Vernon, B.C. on Highway 6 for about 13 km to the Noble Canyon Road at Lavington. The property is reached by taking the Noble Canyon road north up the Coldstream Creek valley for ~ 3.5 km then left on the Becker Lake FSR for about 8 km. To access the centre of the property is approximately 1 hour's travelling time from Vernon. From here there is good access on various logging and powerline roads and trails to most parts of the claim block. A new logging road extending along the south side of an unnamed small lake in the centre of the property provides excellent access to the principal mineralized areas.

**(c) Local Resources**

The center of the property is located less than 10 km east of the small city of Vernon, which provides most services and supplies for exploration and mining. Kelowna, located 45 km south of Vernon can provides any services not found in Vernon such as an international airport.

**(d) Climate and Length of Operating Season**

The Lavington property is situated in the central Okanagan area of British Columbia. The region has a relatively dry climate, and snow cover in winter is generally moderate. The climate in the area is semi-arid with moderately warm summers and cold dry winters. Typical temperature ranges are from mid to upper 30's C in summer and -10 to -20 C in winter. Vernon Hill, due to its elevation is substantially wetter than the surrounding low lands. Exploration can take place throughout the year, however normal unhindered road access is from early May to early November.

**(e) Land Ownership and Infrastructure**

The surface rights overlying the Lavington property are owned by the Crown. There are existing timber and grazing leases. One major powerline crosses through the property. The author is not aware of any other surface rights. Numerous primary and secondary forestry roads and trails and. Lower tension power is available from Lavington. Water on the property is available from several small lakes and semi-permanent streams. There is sufficient room on the property to operate a small to medium sized mining operation. There is presently little high quality

merchantable timber on the property. Vernon and the surrounding region has several geological and mining companies with experienced personnel.

## HISTORY

### (a): Pre 43-101 Implementation History

The area surrounding the Lavington property has been explored for high grade gold and silver deposits since the mid 1800's. There are several small past producers and developed prospects within 15 kilometres of the property.

The Silver Queen silver-gold mine (MINFILE # 082LSW010) 19 km NE of Vernon and ~13 km north of Lavington has very similar geology to Lavington except that all of the reported gold vein mineralization is hosted by sediments. From 1949 to 1950 four tonnes of ore were mined returning 2955 g silver, 0.44 tonnes lead and 49 kg zinc. Although good gold results have been reported from sampling there has not been any gold production.

The Mount Vernon silver-gold-copper and molybdenum quartz vein and bulk tonnage prospects (MINFILE No's 082LSW008, 147, 148, 149) are located less than 2 kilometres northwest of the Lavington property's west boundary. Government records indicate in 1950 production of 10 tonnes from which 6812 grammes silver, 93 grams gold, 1261 kilograms lead and 63 kilograms zinc were recovered. In 1969 (1966?) Vernon Copper Limited mined 54 tonnes from which 5319 grams silver, 31 grams gold, 1150 kilograms of lead and 444 kilograms of zinc were recovered. Also King Greybar Resources Limited in the late 1960's to the mid 1980's made significant expenditures attempting to develop more resources. In 1969 they completed an airborne magnetometer survey over their property part of which covered the western half of the Lavington property. At later periods they completed trenching and diamond drilling of their targets. Some of the information, in particular drilling and trenching results are incomplete.

A quotation from AR 12097 by Fipke and Capell quoting C. T. Pasioka, P. Eng..

*"The early history of the property is not well known however evidence of prospecting activity is available by way of old sloughed-in trenches.*

*Work commenced in the area under the auspices of Vernon Copper Limited in 1966. It is reported that a grid was laid out over the property and some geophysics and geochemistry carried out. Two bulk shipments of silver-lead ore were made in 1966. The first comprising 4.24 tons yielded a gross value of \$320.10. A second shipment of approximately five tons was shipped to another smelter however settlement records are not available.*

*In the latter part of 1968 the property was taken over by King Graybar Mines Ltd. and further work carried out in the form of trenching, sampling, minor diamond drilling and airborne magnetics. In 1975 geological mapping and wide spaced percussion drilling was carried out by Canadian Superior Exploration Ltd. More recently Kandahar Resources Ltd. have carried out additional stripping and sampling within the limits of the property."*





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The Kalamalka Gold Mine (MINFILE NO.: 082LSW050) located 6 kilometres south of Lavington was discovered late in the 19<sup>th</sup> century and worked sporadically until 1944. Minfile records indicate that total production exceeded 6500 tonnes with 108592 grams silver and 90,137 grams gold produced with minor lead, zinc and copper credits.

In 1985 Minequest Resource Associates Ltd. outlined an area of elevated gold in drainages between Vernon Hill and the Coldstream River during a regional heavy mineral and silt sample program.

Goldquest Minerals Corp. staked the source area of the anomalies in 1986 as the LAV property and optioned the claims to BP Resources Canada Ltd. (BP) in 1988. BP that year completed ridge line and drainage soil and silt sampling programs confirmed the anomaly and later completed a near property wide 50 by 150 metre soil grid which produced one large and several smaller Au (+ As, Sb, Ag, W, Cd, Zn, Pb, Fe, La, Mn, P) open ended to the west soil anomalies (Wong and Hoffman, 1988). BP extended the property to the west with the MAG-NEW AGE claims. The author opines that this work was completed using sample preparation, analytical and security measures appropriate for the times.

In 1989 BP extended the grid to the west, and completed additional soil sampling and reconnaissance geological mapping at the same 50 by 150 station/sample density. The main gold, arsenic, silver base metal anomaly was extended to the west northwest for over another kilometre and now totaled 2.5 km in strike length, with a width of 200 - 400 metres. Maximum gold values within the anomalous area were 750 ppb Au (Wong, 1989). The author opines that this work was completed using sample preparation, analytical and security measures appropriate for the times.

BP completed two diamond drilling programs in 1989 and 1990 to test portions of the anomalous area for the presence of a large, low-grade gold deposit (Wong, 1990). Eight holes totalling 1008 metres were completed (4 in one fence). Wong summarizes the results as follows:

*“Drilling has indicated that the soil anomaly is underlain by pyrite sericite schist containing variable amounts of quartz, chlorite, tourmaline and mariposite. The schist is pervasively enriched in gold with drill results ranging from 50 m averaging 113 ppb gold in hole LD89-4, to 125 m averaging 307 ppb go/d in hole 90-7”... (including ...”34 metres @ 500 ppb Au). This interval includes 2 metres, which returned 2520 ppb Au, 3.8 ppm Ag, and 1548 ppm Cu. The schist is gradational into graphitic argillite with subordinate mafic tuffaceous beds to the southwest, and gradational into quartz-feldspar porphyry to the northeast. Protolith for the schist, which has a minimum width of 250 m, appears to be a felsic rock, perhaps originally a volcanic in origin, which localized deformation and alteration possibly related to the emplacement of Jurassic plutons.”*

The author opines that this work was completed using sample preparation, analytical and security measures appropriate for the times.

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Although follow-up work was recommended, BP relinquished the option on the claims following the 1990 drill program, and the claims were subsequently allowed to lapse.

5 kilometres east of Lavington the Thong gold-silver arsenic occurrence was discovered in 1989 by Noranda following up Minequest's 1983 and 1984 work. During 1989, the east side of Bardolph Lake was gridded and soil sampled on a 1200 by 600 metre NW-SE trending grid. Line spacing was 100 or 200 metres and sample spacing was 50 metres. 128 soil and 4 rock samples were analyzed for 30 elements plus gold. A northwest trending 800 metres long weak gold anomaly was partially outlined, apparently spatially coincident with a NW trending fault separating Monashee schists from Tertiary volcanics. This anomaly was partially coincident with silver and arsenic the only other elements plotted. The anomalies are open to the southeast. Although additional work was recommended no follow-up exploration was completed. Observations of broken quartz veins were reported but no samples were taken. The author opines that this exploration work appears to have been managed and completed using sample recovery, preparation, analytical and security measures appropriate for the times.

In 1999 Linda Caron and John Kemp (Caron, 2000) staked the core area of the occurrence and recorded one day of prospecting and the collection of 10 rock samples. For the first time mercury was analyzed for. Several verification rock samples taken reported anomalous values for that metal coincidental with gold, silver, arsenic and base metals. Caron also submitted one altered and mineralized rock sample for petrographic analyses with the conclusion made that the protolith may have been an intermediate metavolcanic. Both Caron and Kemp are well regarded professional explorationists and the author is confident that the verification sample recovery, sample preparation, analytical and security measures were adequate.

In the period 2000-2005 other parties acquired claims in the area, however no work was recorded.

(b): Post 43-101 Implementation History

In 2005 Adam Travis acquired the mineral tenure overlying the occurrence using the new MTO tenure acquisition system and later in 2006 reacquired the area as the LAV GOLD 1-3 tenures. In 2007, he completed a 16 rock sampling program (Travis, 2007). The results of this program, which was concentrated east of the area tested by BP verified and extended the gold-multielement anomaly (including mercury) outlined by BP and Caron. Mr. Travis is a well-regarded professional explorationist and the author is confident that sample preparation, analytical and security measures were adequate and to 43-101 standards.

On January 16, 2008 ownership of the claims were transferred to Cazador Resources Ltd. a wholly owned private company of Adam Travis.

Later in 2008 Travis, through Sawdee Ventures Inc. contracted Peter Walcott and Associates Ltd. to complete a 1.3 line km test IP survey that cross-cut the eastern part of the mineralized shear over and several hundred metres north and south of drill hole 90-8. The results of this survey confirmed a geophysical response over the mineralized area (Travis 2008).

On September 2009 Cazador staked the LAV 4 claim to protect the eastern and southern targets of the property.

In October 2009 Cazador optioned the LAV GOLD claims to Aurion Resources Ltd.. Aurion completed from September to December 2009 a coarse scaled combined ground magnetics, IP chargeability and resistivity program totalling about 16 line kilometres on 10 cut lines spaced 200 metres apart and covering 3.5 square kilometres over the central, most prospective portion of the property. The IP lines were cut by employees of Discovery Consultants Ltd. and Meridian Mapping Ltd. both of Vernon, B.C.. Peter Wallcot and Associates Ltd. (Wallcot) of Vancouver completed the geophysical surveys between October 26 and November 5, 2009. In early December 2009 193 b-c horizon soil samples were collected by employees of Cazador including Adam Travis from middle sections of the central four cut grid lines in order to verify the results of the previous work, and to provide actual geochemical data linked to the new grid coordinates. All soil samples were analyzed for 28 elements including gold by FAA.

## 2009 Exploration Results

### Geophysical Survey Results

The I.P. survey outlined a 1500 metre long 200 metre wide west-northwesterly trending zone of moderate chargeability and lower resistivity coincident with the strongly altered sericite-quartz-pyrite schist and areas of elevated gold and base metals in soils.

The survey also defined the contact between this zone and the graphitic-pyritic argillites to the southwest which produce high chargeabilities and low resistivities.

The resistivity results indicate a broad high centered some 500 metres northeast of the central portion of the known main gold zone. This zone is overlain in part by multielement, copper, lead, zinc and arsenic in soil anomalies.

### Verification soil Sampling and Geochemistry results

Travis (2010), page 16 concluded.

*...”Soil sampling conducted in 2009 outlined and confirmed the significant gold anomaly coinciding with the previously outlined mineralized and altered zone occurring near the central portion of the claims. The new soil sampling program also returned highly anomalous gold values outside of the previous surveys (NE of Becker Lake) indicating potential for possible sub-parallel zones to the known mineralization. As such soil sampling is recommended on the remainder of the geophysics grid, particularly in areas not previously sampled.”*

### Sampling Method and Approach Completed by Cazador

The following description is excerpted from Travis 2010

*...”Samples were collected by Cazador Resources Ltd. personnel using picks and shovels from the “B” soil horizon when present at a depth varying from 10-50 cm an averaging 20 cm. Although approximately 50 cm of snow was on the ground at the time and temperatures were -2<sup>0</sup> Celsius, the underlying ground usually only had less than 10 cm of frost. When soil horizons were non-developed, samples were taken of whatever fine material was available. Sample sites were taken on 25 metres spacings which were previously marked in the field with pickets with aluminum tags. Co-ordinates and elevations were determined with hand-held GPS with the coordinates provided by Walcott Geophysics”...*

*...”Sample Preparation*

*All soil and rock samples were submitted to the Eco Tech Labs of Kamloops, B.C. where they were dried, crushed and pulverized and analyzed using a 28 element ICP procedure and a fire assay for gold.*

*Sample Analysis*

*Each sample was analyzed for 28 elements using conventional inductively couple plasma-atomic emission spectrometry (ICP) and fire assay gold.”...*

*...” Security*

*All soil samples were collected, dried and stored in a locked garage at the home of Adam Travis and then shipped via Greyhound to Eco Techs Labs in Kamloops on the next morning following the last sample collection day.”...*

Adam Travis is the property vendor, is not independent of Aurion and was one of two persons taking the soil samples. He is however a well-regarded exploration professional and the author is satisfied that all 43-101 compliant sample preparation, analytical and security measures were implemented.

June 23, 2010 property visit by Leopold J. Lindinger, P.Geo.

On June 23, 2010 the author visited the property on a site visit for Aurion Resources Corp. who optioned the property. Five confirmation soil samples from one site and four rock samples from various areas on the property were taken.

The soil resampling failed to return anomalous gold.

Of the 4 rock samples taken samples 2 and 4 returned anomalous gold results. Sample 2 returned 295 ppb Au and 322 ppm Cr. Sample 4 returned 120 ppb Au, 0.5 ppm Ag, 135 ppm As, 4.9% Fe, 128 ppm Cu and 51 ppm Ni. This sample, relative to other mineralized rock at Lavington was very weakly enriched or perhaps better stated less depleted in lithium, lawrencium, potassium and magnesium.

## GEOLOGICAL SETTING AND MINERALIZATION

### Regional Geology (Figure 3)

The regional geology of the area is complex. High grade metamorphic Proterozoic to early Palaeozoic pericratonic rocks of the Shuswap, Monashee, Okanagan and other basement complexes are juxtaposed against, or unconformably overlain by erosional and tectonic remnants of portions of much less metamorphosed mid Paleozoic to mid Jurassic Harper Ranch, Slocan and Nicola Group volcanics, coeval intrusives and sediments of the exotic Quesnel Terrane. The Quesnel Terrane hosts numerous porphyry related and much less commonly subaqueous volcanogenic copper+/-gold and copper +/- molybdenum deposits. The present location of these packages was produced by mid to late Mesozoic compressional tectonics as evidenced by numerous thrust faulted and folded lithologies followed by significant but uneven early Tertiary (mostly Eocene) uplift and later transtensional and tensional detachment and normal faulting. Invading these rocks are post collisional mid to late Jurassic, Cretaceous and Tertiary intrusives. The Cretaceous to Eocene orogenic and intrusive activity in particular is related to numerous gold enriched mineral deposits throughout western North America.

### Local Geology (Figure 4)

In the area, east of the Okanagan Valley fault, portions of the exotic Upper Triassic to Lower Jurassic Nicola Group sedimentary (uTrNsf) and volcanic rocks (uTrJN) unconformably overlie Devonian to Triassic sedimentary and volcanic rocks of the also exotic Harper Ranch Group (DTrHsf). These units were thrust faulted over older pericratonic gneissic rocks (PtPzog) of unknown age and metasedimentary rocks (PtPzShm) of the Proterozoic Silver Creek Formation. Post accretionary middle Jurassic (MJgd), Cretaceous-Tertiary (KTgr) and Eocene (Egr) granitic rocks intruded all older lithologies.

Outliers of Eocene Kamloops Group volcanic and sedimentary rocks (Ekav, Epev) and Miocene-Pliocene flood basalts (MiPiCvb) cap the older units.

### Property Geology (Figure 5)

The Lavington Property geology as currently interpreted is complex with many diverse rock packages of different ages occurring against and within each other. It is centred on an east-west trending 11 km x 1.5 km long belt of presumably andesitic Nicola Group volcanic flows, tuffs and associated epiclastic and contemporaneous sediments that are in fault contact with each other and to the south also exotic portions of late Paleozoic Harper Ranch and Slocan Group rocks. To the east of the current property are several Jurassic intrusive and Eocene Kamloops Group extrusive exposures.

Within the central portion of the "Nicola" package on the property occurs a WNW trending zone of sheared sericite-pyrite-quartz-carbonate altered felsic and intermediate fragmental volcanics, flows and possibly (subvolcanic?) intrusives that are adjacent to pyritic graphitic argillites assigned to the Slocan Group to the south and to the north a foliated biotitic "orthogneiss" and schist package. Whether the orthogneiss and schist are remnant exposures of Okanagan or

Shuswap complex rocks or deformed Harper or Nicola possibly flow banded flows or subvolcanic or deeper intrusives is currently unknown. Intruding the argillites and pyritic schists are later undeformed felsic feldspar+/-quartz porphyry, equigranular diorites, mafic diabase and “biotitic mafic”, and lamprophyre dykes. The felsic intrusives, which most commonly occur along the north side of the altered shear zone may be “extrusive” or subvolcanic porphyritic flows related to the adjacent compositionally and texturally similar fragmentals. Occupying the north central areas, and in apparent fault contact with the “orthogneiss” is a package of intermediate andesitic flows assigned to the Nicola Group. These flows grade to the east into an extensive package of fragmental andesite and coeval sediments including small occurrences of limestone. These rocks also occur on the south side of the property.

The following summary descriptions of the properties’ alteration and mineralization is largely derived from the author’s studies of the historic Selco drill logs from 1989 and 1990 as well as Wong’s 1990 report.

Occupying the center of the property is a minimum 2 by 0.4 kilometre WNW striking apparently subvertical to steeply north dipping topographically recessive zone of sheared “pyritic sericitic and chloritic schists” derived from rocks ranging from orthogneiss (biotite-sericite schist-gneiss), schistose altered felsic ash tuff, intermediate trachytic tuff and felsic and intermediate lapilli tuffs and graphitic-pyritic argillite (formerly a mudstone) and undeformed felsic (quartz) feldspar porphyry flows and/or dykes. The contact between the felsic-intermediate tuffs and argillites is sheared, gradational (both tectonic and primary) and sharp, depending on location. Within the argillites are numerous zones of highly altered mafic to felsic ash tuff beds that decrease in both thickness and frequency to the south away from the contact.

The felsic and intermediate fragmentals appear to be most affected by the alteration and mineralization. Within the alteration zone are “grey quartz” zones and veins, often very fine grained (chalcedonic), and semi massive sulphide-quartz vein breccia zones, often adjacent to or within discreet fault-shear zones that host veins of precious metal enriched polymetallic sulphide mineralization.

Wong 1990 describes a distinct late clay overprint of all earlier alteration and mineralization phases. This late event may be related to Miocene or later activity.

Outbound from and surrounding in a circular pattern the west end of the “main or LMZ” zone are several alteration zones hosted by intermediate volcanics that express multielement precious and base metal anomalies. These zones lie outside of the area explored since and including 2009. These zones all lie on or near interesting circular or arcuate often with cross cutting planar (radial?) topographic features visible from Google Earth and from topographic and drainage patterns. These late stage features may be related to late Mesozoic or Tertiary (Kamloops Group?) intrusive activity. Other than a fair spatial association with the IP and resistivity results and a tentative spatial association with the incomplete geochemical coverage, the true relationship to these features to gold and copper mineralization at Lavington is unknown.

The recently acquired Thong soil anomaly hosts an 800 metre long gold, arsenic and weak silver in soil anomaly apparently paralleling an inferred NW trending fault (Erdmer, 1989). Other similar alteration zones with geochemical anomalies occur outside the current property boundary and will not be discussed in this report.

### Mineralization

The bulk of the known mineralization of Lavington property occurs within a “2.5 kilometre by 200-400 metre wide ”siliceous-sericitic-pyritic ” “shear” zone that is bounded on its south side by black also sheared, altered and pyritic graphitic argillite assigned to the Slocan Group and apparently on the north by a deformed gneissic dioritic? orthogneiss. Further north are widespread intermediate volcanics assigned to the Nicola Group. The core of the altered and mineralized zone is hosted by undeformed less strongly gold mineralized variably sericite-quartz-pyrite altered feldspar+/- quartz eye porphyry “intrusive” (flows-sills-dykes?) and compositionally similar but more strongly gold mineralized lapilli and ash tuffs. The porphyry bodies are presumably of intrusive but possibly subvolcanic origin. Bedrock exposures of the sericitic schist are rare, as this and to a lesser extent the argillite are quite recessive (the best drilled values underlie a small lake). One rock sample of the altered and sheared unit that had a petrographic analyses completed on it was labelled as an altered possibly intermediate volcanic. The author, during the site visit observed a much wider variety of altered rocks within the shear including bleached tan altered portions of a dark melanocratic massive biotitic intrusive that occurs as an apparently late post deformational but pre mineral phase within both the footwall argillites and the shear.

The 180 plus metre thick pyritic and sericitic schistose volcanoclastic carries low grade but persistent gold mineralization. Descriptions of the best gold mineralization, mostly in drill logs state the presence of dark grey very fine grained possibly chalcedonic quartz veining within highly sheared wallrock. A second more noted style are semi massive coarser grained at least semi massive sulphidic (quartz) veins.

These higher grade vein and sulphide zones, when intersected in drill core are commonly at shallow core angles implying that the zones may not always be parallel to the main shear orientation and therefore may occupy more discreet crosscutting structures or dilatational flexures and zones (conjugate shears?) or possibly crosscutting stockworks to the main WNW trend. The disseminated pyrite associated with better gold grades is accompanied by quartz, chlorite, and tourmaline. All units drill tested and many surface samples host at least weakly anomalous gold mineralization. However the best values (as tested) occur within the strongly sericitic altered schistose but well pyritized volcanoclastic.

Weaker more sporadic anomalous gold surrounds the main quartz-sericite zone. The economic significance of and relationship to the main zone of this mineralization is unknown but probably related.

The gold mineralization is associated with an unusually broad metal suite including silver, arsenic, zinc, lead and mercury. This implies in part a “telescoped” system where very rapid

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changes in the metal deposition system occur over short distances and/or that there were several overprinting possibly crosscutting and subparallel mineralized episodes.

Outboard of the central main zone are several partially delineated multielement soil and coincident geophysical anomalies that occur in recessive linear and arcuate topographic features...



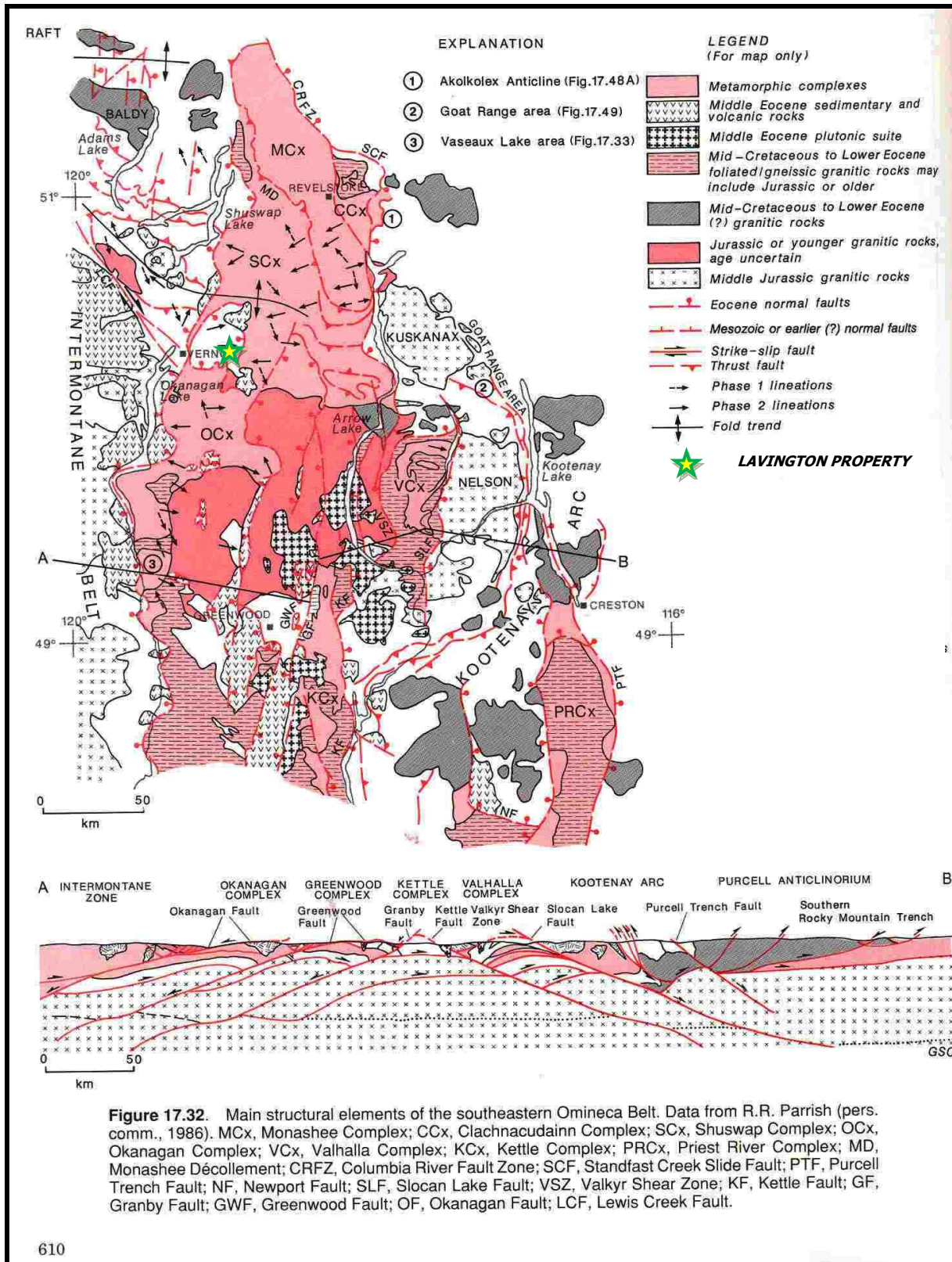
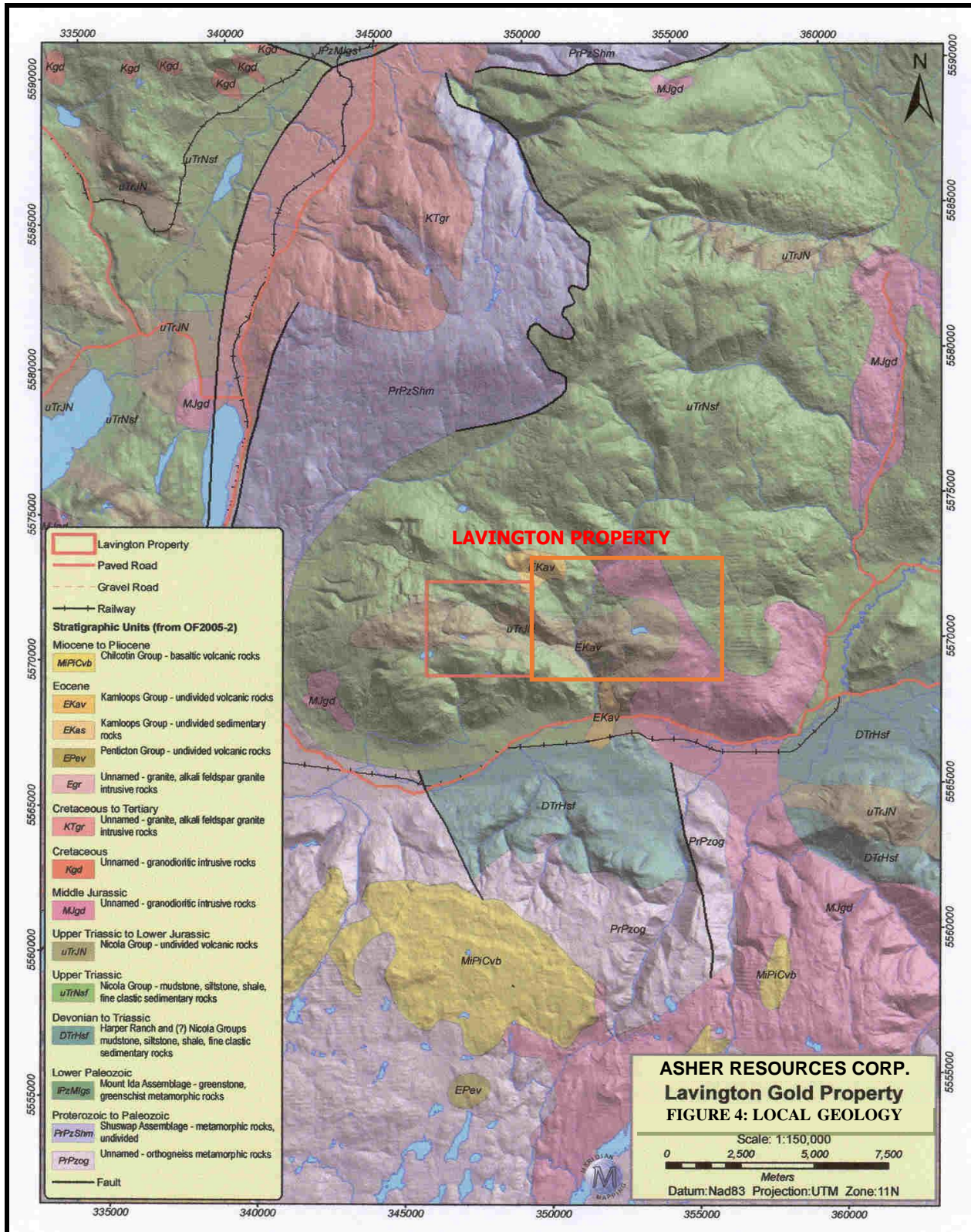


Figure 3 REGIONAL GEOLOGY – Source Wheeler, Page 610

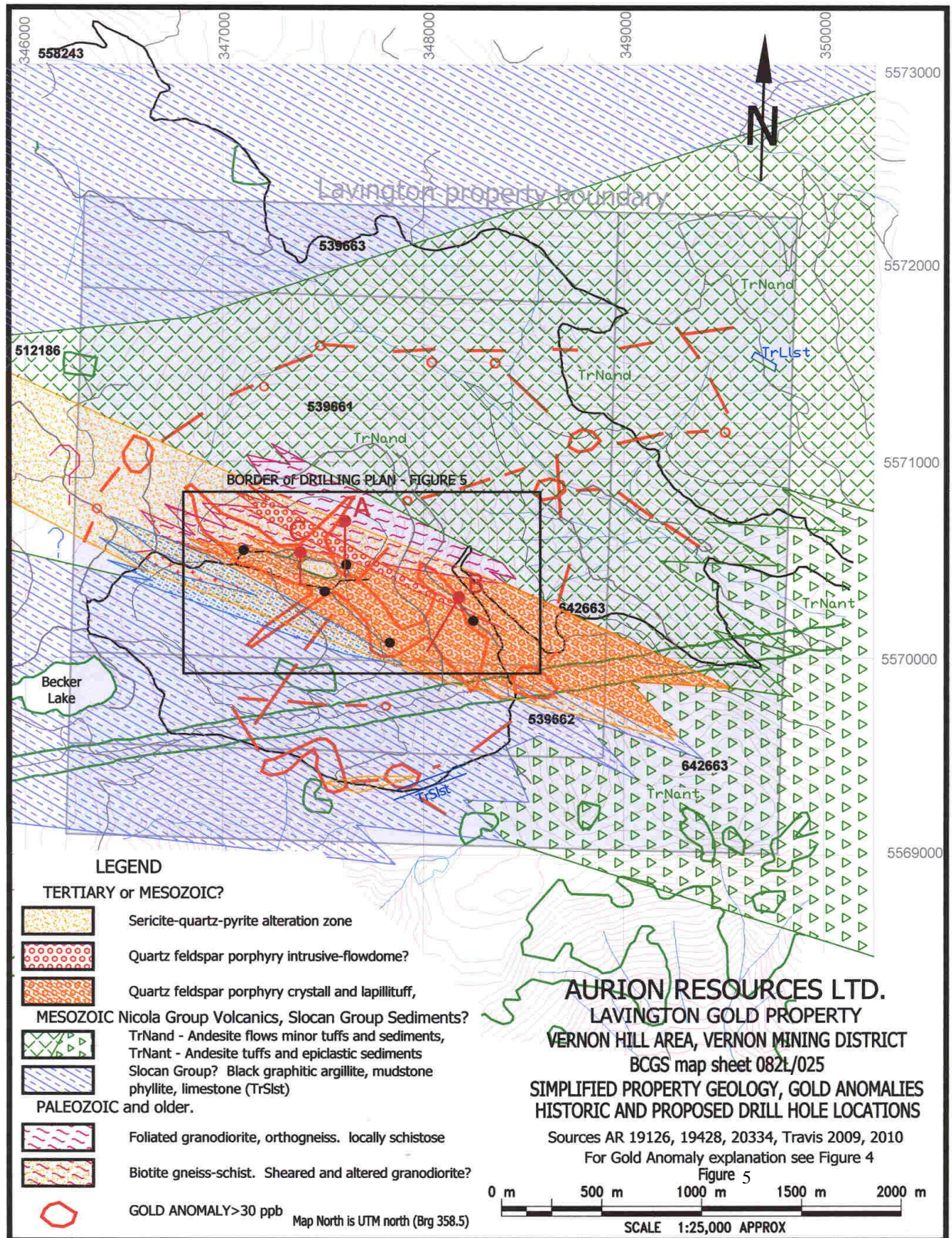


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Source. Travis 2009







## DEPOSIT TYPES

### INTRODUCTION

The known mineralization on the Lavington property that is being explored for has the characteristics of the subvolcanic deposit model. Recognition of this deposit type is hindered by the extensive deformation and alteration in the area.

...”***SUBVOLCANIC Cu-Au-Ag (As-Sb)***

***L01 by Andre Panteleyev British Columbia Geological Survey***

***Panteleyev, A. (1995): Subvolcanic Cu-Au-Ag (As-Sb), in Selected British Columbia Mineral Deposit Profiles,***

### **IDENTIFICATION**

***SYNONYMS:*** Transitional, intrusion-related (polymetallic) stockwork and vein.

***COMMODITIES (BYPRODUCTS):*** Cu, Au, Ag (As, Sb).

***EXAMPLES (British Columbia - Canada/International):*** Equity Silver ([093L 001](#)); Thorn prospect ([104K031](#), [116](#)); Rochester District (Nevada, USA), Kori Kollo (Bolivia), the 'epithermal gold' zones at Lepanto (Philippines), parts of Recsk (Hungary) and Bor (Serbia).

### **GEOLOGICAL CHARACTERISTICS**

***CAPSULE DESCRIPTION:*** Pyritic veins, stockworks and breccias in subvolcanic intrusive bodies with stratabound to discordant massive pyritic replacements, veins, stockworks, disseminations and related hydrothermal breccias in country rocks. These deposits are located near or above porphyry Cu hydrothermal systems and commonly contain pyritic auriferous polymetallic mineralization with Ag sulphosalt and other As and Sb-bearing minerals.

***TECTONIC SETTINGS:*** Volcano-plutonic belts in island arcs and continental margins; continental volcanic arcs. Subvolcanic intrusions are abundant. Extensional tectonic regimes allow high-level emplacement of the intrusions, but compressive regimes are also permissive.

***DEPOSITIONAL ENVIRONMENT / GEOLOGICAL SETTING:*** Uppermost levels of intrusive systems and their adjoining fractured and permeable country rocks, commonly in volcanic terrains with eroded stratovolcanoes. Subvolcanic domes and flow-dome complexes can also be mineralized; their uppermost parts are exposed without much erosion.

***AGE OF MINERALIZATION:*** Mainly Tertiary, a number of older deposits have been identified.

***HOST/ASSOCIATED ROCK TYPES:*** Subvolcanic (hypabyssal) stocks, rhyodacite and dacite flow-dome complexes with fine to coarse-grained quartz-phyric intrusions are common. Dike swarms and other small subvolcanic intrusions are likely to be present. Country rocks range widely in character and age. Where coeval volcanic rocks are present, they range from andesite to

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*rhyolite in composition and occur as flows, breccias and pyroclastic rocks with related erosion products (epiclastic rocks).*

**DEPOSIT FORM:** *Stockworks and closely-spaced to sheeted sets of sulphide-bearing veins in zones within intrusions and as structurally controlled and stratabound or bedding plane replacements along permeable units and horizons in hostrocks. Veins and stockworks form in transgressive hydrothermal fluid conduits that can pass into pipe-like and planar breccias. Breccia bodies are commonly tens of metres and, rarely, a few hundred metres in size. Massive sulphide zones can pass outward into auriferous pyrite-quartz-sericite veins and replacements.*

**TEXTURE/STRUCTURE:** *Sulphide and sulphide-quartz veins and stockworks. Open space filling and replacement of matrix in breccia units. Bedding and lithic clast replacements by massive sulphide, disseminations and veins. Multiple generations of veins and hydrothermal breccias are common. Pyrite is dominant and quartz is minor to absent in veins.*

**ORE MINERALOGY (Principal and subordinate):** *Pyrite, commonly as auriferous pyrite, chalcopyrite, tetrahedrite/tennantite; enargite/luzonite, covellite, chalcocite, bornite, sphalerite, galena, arsenopyrite, argentite, sulphosalts, gold, stibnite, molybdenite, wolframite or scheelite, pyrrhotite, marcasite, realgar, hematite, tin and bismuth minerals. Depth zoning is commonly evident with pyrite-rich deposits containing enargite near surface, passing downwards into tetrahedrite/tennantite + chalcopyrite and then chalcopyrite in porphyry intrusions at depth.*

**GANGUE MINERALOGY (Principal and subordinate):** *Pyrite, sericite, quartz; kaolinite, alunite, jarosite (mainly in supergene zone).*

**ALTERATION MINERALOGY (Principal and subordinate):** *Pyrite, sericite, quartz; kaolinite, dickite, pyrophyllite, andalusite, diaspore, corundum, tourmaline, alunite, anhydrite, barite, chalcedony, dumortierite, lazulite (variety scorzalite), rutile and chlorite. Tourmaline as schorlrite (a black Fe-rich variety) can be present locally; it is commonly present in breccias with quartz and variable amounts of clay minerals. Late quartz-alunite veins may occur.*

**WEATHERING:** *Weathering of pyritic zones can produce limonitic blankets containing abundant jarosite, goethite and, locally, alunite.*

**GENETIC MODEL:** *These deposits represent a transition from porphyry copper to epithermal conditions with a blending and blurring of porphyry and epithermal characteristics. Mineralization is related to robust, evolving hydrothermal systems derived from porphyritic, subvolcanic intrusions. Vertical zoning and superimposition of different types of ores is typical due, in large part, to overlapping stages of mineralization. Ore fluids with varying amounts of magmatic-source fluids have temperatures generally greater than those of epithermal systems, commonly in the order of 300\* C and higher. Fluid salinities are also relatively high, commonly more than 10 weight per cent NaCl-equivalent and rarely in the order of 50 %, and greater.*

**ORE CONTROLS:** *Strongly fractured to crackled zones in cupolas and internal parts of intrusions and flow-dome complexes; along faulted margins of high-level intrusive bodies. Permeable lithologies, both primary and secondary in origin, in the country rocks. Primary controls are structural features such as faults, shears, fractured and crackled zones and breccias. Secondary controls are porous volcanic units, bedding plane contacts and unconformities. Breccia pipes provide channelways for hydrothermal fluids originating from porphyry Cu systems and commonly*

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carry elevated values of Au and Ag. The vein and replacement style deposits can be separated from the deeper porphyry Cu mineralization by 200 to 700 m.

**ASSOCIATED DEPOSIT TYPES:** Porphyry Cu-Au±Mo ([L04](#)); epithermal Au-Ag commonly both high-sulphidation ([H04](#)) and low-sulphidation ([H05](#)) pyrite-sericite-bearing types; auriferous quartz-pyrite veins, enargite massive sulphide also known as enargite gold.

**COMMENTS:** This deposit type is poorly defined and overall, uncommon. It is in large part stockworks and a closely spaced to sheeted sulphide vein system with local massive to disseminated replacement sulphide zones. It forms as a high- temperature, pyrite-rich, commonly tetrahedrite, and rarely enargite-bearing, polymetallic affiliate of epithermal Au-Ag mineralization. Both low and high- sulphidation epithermal styles of mineralization can be present. As and Sb enrichments in ores are characteristic. If abundant gas and gas condensates evolve from the hydrothermal fluids there can be extensive acid leaching and widespread, high-level advanced argillic alteration. This type of alteration is rarely mineralized.

### **EXPLORATION GUIDES**

**GEOCHEMICAL SIGNATURE:** Elevated values of Au, Cu, Ag, As, Sb, Zn, Cd, Pb, Fe and F; at deeper levels Mo, Bi, W and locally Sn. In some deposits there is local strong enrichment in B, Co, Ba, K and depletion of Na. Both depth zoning and lateral zoning are evident.

**GEOPHYSICAL SIGNATURE:** Induced polarization to delineate pyrite zones. Magnetic surveys are useful in some cases to outline lithologic units and delineate contacts. Electromagnetic surveys can be used effectively where massive sulphide bodies are present.

**OTHER EXPLORATION GUIDES:** Association with widespread sericite-pyrite and quartz-sericite-pyrite that might be high-level leakage from buried porphyry Cu ± Au ± Mo deposits. Extensive overprinting of sericite/illite by kaolinite; rare alunite. In some deposits, high-temperature aluminous alteration minerals pyrophyllite and andalusite are present but are generally overprinted by abundant sericite and lesser kaolinite. Tourmaline and phosphate minerals can occur. There is commonly marked vertical mineralogical and geochemical depth-zoning.

### **ECONOMIC FACTORS**

**GRADE AND TONNAGE:** The deposits have pyritic orebodies of various types; vertical stacking and pronounced metal zoning are prevalent. Small, high-grade replacement orebodies containing tetrahedrite/tennantite, and rarely enargite, can form within larger zones of pyritization. The massive sulphide replacement ores have associated smaller peripheral, structurally controlled zones of sericitic alteration that constitute pyritic orebodies grading ~ 4 g/t gold. Similar tetrahedrite-bearing ores with bulk mineable reserves at Equity Silver were in the order of 30 Mt with 0.25% Cu and ~86 g/t Ag and 1 g/t Au. At the Recsk deposit, Hungary, shallow breccia-hosted Cu-Au ores overlie a porphyry deposit containing ~1000 Mt with 0.8 % Cu. The closely spaced pyritic fracture and vein systems at Kollo, La Joya district, Bolivia contained 10 Mt oxide ore with 1.62 g/t Au and 23.6 g/t Ag and had sulphide ore reserves of 64 Mt at 2.26 g/t Au and 13.8 g/t Ag.

## 2014 EXPLORATION PROGRAM

2014 Diamond drilling program.

In June 2014 three HQ diameter diamond drill holes were completed totalling 987.7 metres. They both undercut and explored to the north for additional gold and gold deposit indicator elements the historic drilling.

Hole L14-01 was collared approximately 35 meters SSE of historic hole 90-07 into the assumed south side of the Lavington Main Zone (LMZ) and drilled at a bearing of 028 degrees, a dip of -45 degrees subparalleling hole LD09-07 and to a depth of 245.7 meters. The collar is at UTM Zone 11U 347500E, 5570315 N and 1277 m elevation. The hole was drilled approximately 80 metres deeper than hole LD90-07 and was still in mineralization at the end of the hole.

Hole L14-02 was collared 440 metres north of and drilled towards (due south) hole L14-01 at a dip of -45 and to a depth of 507.8 meters. The collar is at UTM Zone 11U 347586E, 5570777 N and 1285 m elevation. This hole undercut and subparalleled historic hole LD89-02 by 170 metres. The hole was collared this far north to attempt to core under a zinc-lead-arsenic +/- gold +/- copper in soil anomaly north of and subparalleling the LMZ.

Hole L14-03 was collared 450 meters west of hole L14-02 and drilled towards (south) at a -45 degree dip to a 233.5 meters depth and under holes 89-01 (in part) and 90-06. Due to topographic constraints the hole was collared over 30 metres south of its intended location. The collar is at UTM Zone 11U 347138E, 5570765 N and 1270 m elevation

## GEOTECHNICAL CORE PROCESSING

The core was retrieved by the geotechnical or geological staff directly from the drill at least twice per day. The core was transported by pickup truck directly to the core processing and logging area where it was sorted and stacked on temporary racks. The sorted core was then placed on a core logging table for completion of geotechnical procedures. The geotechnical procedures chosen for the phase 1 drilling were washing, reassembly, reorientation so that the rock fabric was best exposed, rewashing is (usually) required, recovery measurements and observations, magnetic susceptibility (and for hole L14-01 conductivity) readings (both at every metre and for hole L14-03 continuous) readings, and core imaging.

## SAMPLING METHOD AND APPROACH

For any discussions of historic sample preparation, analytical and sample security methods please refer to the statement made by the author regarding the measures taken by previous operators in History.

Upon completion of logging of one to four boxes of core, core was marked for sampling by the logging geologist by scribing with a red permanent marker or grease pencil line across the core at

the beginning and end of the sample with arrows pointing towards the sample termination. If a section of core had to be cut or split a certain way a red cut line was drawn along the length of the core. Otherwise the geotechnicians were instructed to cut or split the core so the core angles were best exposed as long as mineralization representativeness was retained. The sample lengths were based on geology to a minimum length of 15 cm and a maximum of 2.7 metres (in areas of poor core recovery). 2 metres was the general sample length.

The sample books used had white plastic triplicate tags. Two tags had all pertinent information written on them and one had just the sample number. One information tag and the one number only tags were placed at the end of each sample next to the core.

### **SAMPLE PREPARATION, ANALYSES AND SECURITY**

Upon completion of all geological and geotechnical procedures, especially washing, core reassembly, recovery and imaging, the sections of core selected for sampling by the geologist were cut by a 5 hp gas powered rock saw or split by a manual Longyear core splitter. After cutting or splitting, one half of the sample was placed into a 6 mil thick 20 by 35 cm or 30 by 45 cm plastic sample bag depending on sample size, with the “number only” tag inserted facing out. Large and heavy samples were double bagged. The sample number was also prewritten on the bag. The second half of the core was placed sequentially in its original order and orientation back in the core box. The “information on” removable sample tag was stapled to the box at the end of each sample. A large fencing staple was also hammered into the bottom of the core box at the beginning and end of each sample. Inserted blanks and duplicates were also added by stapling them at the preceding sample location in the core box.

The filled sample bags were sealed using 10 inch plastic zap straps or wire twist ties. Every sample was placed into a white fabrene sack to a maximum weight of less than 25 kilograms. The address of the destination laboratory was either pre labelled or written on each sack which were also numbered with shipment and position in the shipment. Written record sheets were made for all samples and sacks for internal tracking purposes. The samples not shipped directly to the lab at the end of the shift were stored in a locked vehicle prior to shipping to the laboratory.

Blanks comprised of washed cement sand were randomly inserted into the sample stream and often after strongly mineralized samples to test for downstream laboratory contamination. This material provided an extremely cost effective and highly reproducible blank material. WCM Minerals Ltd. Cu 151, 157 or Pb 113 analytical standards were inserted at approximately every 23 samples. The blank and standard samples were made in advance by carefully placing at least 35 grams of material into 5 by 10 cm sealable kraft paper envelope. At the appropriate sample location the numbered tags were stapled to the craft envelope and placed into 8 by 13 inch sample bags which were in turn stapled shut. The blanks and standards were then placed into the core sample stream prior to shipping to the lab. The blank or standard information was recorded in the sample book and on the appropriate tag stapled into the core boxes. The batches of prepared samples were transported directly to Actlabs at 9989 Dallas Drive, Kamloops, B.C. by



geotechnical employees or the project geologist. Due to the grass roots nature of the program no field duplicates were taken for this phase. Also no security straps were used.

After processing the core boxes were cross stacked and chicken wire wrapped to prevent porcupine, other animal damage and vandalism. The location is at historic drill hole site LD 89-02 and 89-03 at UTM location 11U 347635E, 5570425N.

### **Historic core retrieval**

The historic core was located at the site of hole LD90-08 and in very poor condition. An attempt to salvage the core was made and approximately 70% was salvaged. Of this about 50% is identifiable (Hole no., box no. meterage) and about 50% of the remainder can be inferred as to which hole it came from. The remainder due to the almost complete disintegration of the boxes was left at the site. The core was placed into new core boxes and cross stacked at the new core storage site.

### **Analytical Procedures and Methodology**

The analytical procedures used at Actlabs are summarized below.

#### Sample Preparation

For rock and core the entire sample is crushed to a nominal minus 10 mesh (1.7 mm) with 90% passing 2 mm, mechanically split (250 g) to obtain a representative sample and then pulverized to at least 95% minus 150 mesh (105 microns). All steel mills are mild steel and do not induce Cr or Ni contamination. Quality of crushing and pulverization is routinely checked as part of the quality assurance program.

During the crushing and pulverizing process barren sand is used to clean the equipment after each sample.

#### Gold analyses

The package chosen (1A2) was a conventional Au fire assay with AA finish with a range of 5 to 5000 ppb from a 30 gm subsample.

#### Multi-Element ICPMS Analysis

The sample procedure chosen was UT1 which produced results for 63 elements including mercury at a range of 10 to 50,000 ppb. Samples are digested in a 90 degree Celsius aqua regia solution for 45 minutes. They are bulked with de-ionized water, and an aliquot of this is taken for analysis. A 2-3 point standardization curve is used to check the linearity (high and low). Certified reference material is used to check the performance of the machine and to ensure that proper digestion occurred in the wet lab. QC samples are run along with the client samples to ensure no machine drift or instrumentation issues occurred during the analysis of the sample(s).

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Repeat samples (every 10 or less) and re-splits (every 35 or less) are also run to ensure proper weighing and digestion occurred.

Element returning results over the maximum threshold are upon request or instruction fire assayed using a separate subsample by procedures specific for those elements. No elements from the 2014 program required separate fire assaying.

Analytical results processing

Results are collated by computer and are printed along with accompanying quality control data (re-splits and standards). After approval by the chief assayer, the results are released for publication and Emailed to the client as signed PDF and CSV text files.

Final Analytical Result affidavits are appended to this report in Appendix I

The historic soil and drill core sampling are described in the “History” section of this report. Sample preparation, analyses and security procedures taken were by or under the supervision of experienced professionals and standard for the times.

**DATA VERIFICATION**

All samples were collected under the direct supervision of independent geotechnicians, and transported directly to Actlabs Inc. in Kamloops, a certified analytical laboratory.

Both the field standards and “blanks” were inserted into the core sample sequence by independent employees of Renaissance Geoscience Services Inc.

The author has reviewed the blanks, and field standard results and have found no significant quality control issues with the following exceptions. There appears to be slight contamination of blank material of silver with results (range 0.1 to 0.6 ppm) when the preceding samples had high results (>2 ppm). Other elements did not appear affected however they usually had lower sensitivity thresholds of 1 ppm versus 0.1 ppm for silver.

Three field standards were used for this program, all from WCM Minerals Ltd.

Standard Cu151 had published values of 0.93 ppm Au, 56 ppm Ag, 6100 ppm Cu, and 900 ppm Mo. This standard was used twice with results of 1.03 ppm Au, 60.7 to 62.2 ppm Ag, 6210 and 6440 ppm Cu, 1400 and 1590 ppm Hg, 846 to 877 ppm Mo and 490 to 502 ppm Zn. The conclusion was that all elements returned 5% to 10% higher values than the standard. The higher values were from the same run indicating the instrument calibration was the defining issue.

Standard Cu157 has published values of 0.84 ppm Au, 15 ppm Ag, 4800 ppm Cu and 570 ppm Mo. This standard was used 14 times. Au had a range of 827 to 881 ppb, Ag 13 to 16.4 ppm, Cu

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4250 to 4800 ppm, Hg 1790 to 2300 ppm, and Mo 492 to 574 ppm. This spans a range of ~ 8% with the published results centrally positioned in the spread.

Standards Pb 113 was used one and had published results of 22 ppm Ag, 0.47% Cu, 1.11% lead and 1.4% Zn. Due to the limitations of the analytical procedure used (0.5% lead and zinc) lead and zinc were over limit. The standard returned 1.4 g/t Au, 23.2 g/t Ag, and 0.47% copper. The silver value was within 10% of the published values.

### **EXPLORATION RESULTS**

The 2014 drilling program expanded both the geological knowledge and economic potential of the property. The economic potential was also increased by the addition of over 2000 hectares of prospective land east of the original property that includes the Thong soil anomaly 5 kilometres to the east of the Lavington Zone that hosts strong open ended arsenic with lesser gold and silver in soil anomalies.

Hole L14-01 intersected beginning at the overburden-bedrock contact at 19 metres from surface to a depth of 79 metres (60 metres core length) an average grade of 0.49 g/t gold. This included a 6 meter intercept reporting 1.16 g/t gold and two more two meter intercepts returning greater than 1 g/t gold. True widths are estimated to be at most 50% of core length.

Hole L14-02 intersected multiple mineralized zones over a 280 meter horizontal width including a deep portion of the (LMZ) from 409 to 505 metres. The first intersection grading over 100 ppb gold over 2 metres was intersected at 24.6 m. A new zone north of the LMZ returned 112 meters grading 0.173 g/t gold, including 22 meters grading 0.297 g/t gold. This zone has a much weaker mid-section so may be considered to be 2 zones. The LMZ over a 94.5 metres core length grading 0.227 g/t gold including 24.5 m grading 0.617 g/t gold and 0.051% copper and 2 meters grading 1.6 g/t gold and 0.09% copper. The LMZ here also hosts multigram silver values. True zone widths are estimated to be about 70% to 80% of core zone widths from the top of the hole to the bottom.

In the upper quarter of the hole a 67 metre zone of silicified core averaging 270 ppm arsenic was intersected with sporadically anomalous gold, zinc and silver values. Lead was rarely anomalous. This strongly suggest that a deeper gold bearing zone is present below the arsenic. This zone underlies a strong zinc-lead and arsenic in soil anomaly and coincided with topographically high due to rock hardening by silicification. The much lower lead values in drill core versus the soil geochemical results here is unexplained. They may be derived from a different source not intersected by this drill hole. Down hole below the arsenic anomalous zone at 130 m and a small fault the rock hosts strongly magnetic pyrrhotite which is reflected by the increase magnetic susceptibility readings. The elevated magnetic susceptibility readings continue to 190 metres with pyrrhotite being slightly altered and much less magnetic "brown pyrite." From 190 to 230 metres gold and silver values gradually increase and the host rock takes on "Lavington style" quartz-sericite-clay +/- tourmaline alteration. From 230 to 342 metres occurs the aforementioned 112 metre gold intersection. Brief examination of the core indicates that the top ½ of the hole is weakly anomalous in potassium and thallium relative to the bottom half.

The host lithologies in the upper (northern) ½ of the hole was moderately to strongly silicified with accompanying biotite alteration. This is topographically reflected in the west trending ovoid hill between holes L14-01 and L14-02.

Hole L14-03 intersected anomalous gold from the collar. Encountered was a 77.4 m intersection grading 0.128 ppm gold including 6 meters grading 0.286 g/t gold and 0.039% copper within what is probably the LMZ. If this is the case then the LMZ has a more northwesterly trend than previously interpreted. The intersection could also be part of an east trending en-echelon zone with the LMZ to the southeast as the soil geochemistry, IP and ground magnetic results suggest this intersection was probably in part intersected by the tops of holes 89-01 and 90-06 with a 12 metre gap in the center of the zone due to the overburden depths drilled and the drill being essentially at the same pad for both holes which were drilled in opposite directions. The top of hole 89-01 intersected 0.307 g/t gold over an estimated 10 metre true width. The top of hole 90-06 9 drilling down dip intersected over an estimated true width of 6 metres (drilled intersection 31.8 m) 0.361 g/t gold. Assuming similar grades for the 10 metre gap the LMZ here grades over 0.3 g/t over a surface width of 25 to 30 metres. Given this assumption the LMZ is decreasing in gold down dip on this section although similar copper grades were intersected.

Similar to Hole L14-02 but closer to the LMZ was an arsenic enriched zone with a core 24 m intersection (45-67m) grading 760 ppm within a larger 63.4 m intersection (15.0 to 78.4 m) grading 364 ppm. Unlike in Hole L14-01 hole L14-03 has anomalous gold at the beginning of the hole and north of the arsenic zone. This may be the south part of an interpreted (from soil geochemistry) zone not intersected due to topographic constraints in locating the drill. Similar to the situation in hole L14-01 the arsenic anomalous core underlies a topographic ridge of geochemically anomalous, silicified and intensely fractured rock.

These and other intersections are presented in the following table.

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**TABLE 2**

2014 LAVINGTON DRILLING GOLD RESULTS SUMMARY								
HOLE NO	ZONE OR TARGET		FROM (m)	TO (m)	INTER-SECTION (m) core length	GOLD g/t	% Copper (only composites > 0.3% with associated gold reported below)	COMMENTS
L14-01			19	152.5	133.5	0.328		0.2 g/t cutoff
L14-01	LMZ	INCLUDING	19	79	60	0.491	0.052	0.25 g/t cutoff
L14-01	LMZ	INCLUDING	19	21	2	1.05		0.5 g/t cutoff
L14-01	LMZ	INCLUDING	33	79	46	0.51		0.5 g/t external cutoff
L14-01	LMZ	INCLUDING	33	35	2	1.08		0.5 g/t cutoff
L14-01	LMZ	INCLUDING	51	79	28	0.58		0.5 g/t external cutoff
L14-01	LMZ	INCLUDING	51	57	6	0.94		0.5 g/t cutoff
L14-01	LMZ	INCLUDING	53	55	2	1.55		1 g/t cutoff
L14-01	LMZ	INCLUDING	73	79	6	1.16	0.053	0.5 g/t cutoff
L14-01	LMZ	INCLUDING	75	77	2	2.05	0.051	1 g/t cutoff
L14-01	LMZ	INCLUDING	114.5	118.5	4	0.52	0.105	0.4 g/t cutoff
L14-01	LMZ	INCLUDING	126.5	128.5	2	0.5	0.05	0.45 g/t cutoff
L14-01	LMZ	INCLUDING	150.5	152.5	2	0.92		
L14-01	LMZ	INCLUDING	163	165	2	0.67		
L14-02	N3		58.1	123.5	65.4			270 ppm arsenic
L14-02	N2		230	252	22	0.3		
L14-02	N1		308	320	12	0.28		
L14-02	LMZ		409	503.5	94.5	0.28		0.19 g/t external cutoff
L14-02	LMZ	INCLUDING	425.5	497	71.5	0.33		0.32 g/t external cutoff
L14-02	LMZ	INCLUDING	441	473	32	0.52	0.054	0.3 g/t external cutoff
L14-02	LMZ	INCLUDING	445	469	24	0.62	0.057	0.39 g/t external cutoff
L14-02	LMZ	INCLUDING	445	460.1	15.1	0.7	0.057	3.4 g/t silver
L14-02	LMZ	INCLUDING	449	460.1	11.1	0.79	0.059	3.4 g/t silver
L14-02	LMZ	INCLUDING	453	455	2	1.61	0.09	5.3 g/t silver
L14-02	LMZ	INCLUDING	463.4	465.5	2.1	0.98	0.1	5 g/t silver, 0.2 % zinc, 0.99 g/t mercury
L14-03			15	21	6			300 ppm arsenic
L14-03			17	23	6			0.024% zinc
L14-03			43	78.35	35.35			383 ppm arsenic, 404 ppm zinc
L14-03			45	47	2	0.7		2.25 ppm silver, 902 ppm arsenic
L14-03		INCLUDING	47	49	2	0.1		2450 ppm arsenic
L14-03	LMZ		122	126	4			700 ppm arsenic
L14-03	LMZ		148	227	79	0.128		0.11 g/t cutoff
L14-03	LMZ	INCLUDING	181	229	48	0.157	0.32	0.15 g/t cutoff
L14-03	LMZ	INCLUDING	201	207	6	0.286		0.2 g/t cutoff
L14-03	LMZ	INCLUDING	215	221	6	0.262		0.2 g/t cutoff

## INTERPRETATION AND CONCLUSIONS

Exploration efforts by several operators between 1984 and 2010 on and around various portions of the current Lavington property has resulted in the discovery of one large and several smaller partially defined gold $\pm$ -arsenic $\pm$ -silver $\pm$ -copper $\pm$ - lead and  $\pm$ - zinc bearing quartz shear vein and stockwork mineralized zones.

The form, size, geological, alterational and mineralogical characteristics of the Lavington Main Gold Zone have similarities to the “intrusion-related gold vein systems”, “subvolcanic” (epigenetic precious-base metal) deposit types.

The “intrusion-related gold vein system” and especially the “epigenetic subvolcanic” model, in particular the metal suite, alteration patterns and presence of possible late porphyritic intrusives has many characteristics of the being at the upper levels (i.e. pyrite and overlying silicified shell and peripheral shear zone associated gold-silver copper mineralization) of a still largely buried intrusive porphyry system.

The limited and coarse spaced soil sampling, mapping and drilling to date (including the 2014 drilling) indicate that the best gold mineralization is associated with higher grade pyrite bearing quartz veins and especially discreet grey quartz veins and stockworks within quartz-sericite altered and sheared zones that invariably host at least 3 to over 7% euhedral recrystallized pyrite. These zones are often partially re-broken by syn and post mineralization shearing. To date the best known gold values occur within 30 metre wide portions within a 2.5 kilometre by 200-400+ metre wide quartz-sericite-sulphide altered zone. This zone is bounded on the south by a pyritic argillite that is also weakly anomalous in gold and moderately anomalous in arsenic, chrome and nickel and to the north by a deformed probably intrusive biotite “gneiss” body of uncertain age. This formation may be an unrecognized flow laminated subvolcanic dyke or flow. The 2014 drilling did not intersect this body at depth but did intersect deformed, possibly flow laminated flows or subvolcanic dykes. Additionally partially defined zones of highly anomalous gold-arsenic, mercury and other indicator metal values occur over a much broader area within the surrounding widespread Nicola Group andesitic volcanic package. Parts of the anomalies coincide with portions of a 1.5-2 kilometre diameter circular topographic feature that the shear zone bisects and that is cored by a 1000 m by 700 metre resistivity anomaly (see Figures 6 and 7). Historic geochemical sampling over this resistivity feature (which co-incidentally is a topographic high) has revealed that the core area of the anomaly is geochemically elevated magnesium, aluminum, barium and potassium, weakly elevated in titanium, strongly depleted in iron, zinc, lead. A multielement halo is present on the fringes of this feature consisting of manganese, strontium, zinc, lead, arsenic, and phosphorus. A weak halo of lanthanum is also present (Wong, AR19529). The western portions of the feature have been sampled by Travis in 2009 but a similar study has not been completed using these elements.

For the Lavington main zone the I.P. survey outlines part of a minimum 2500 metre long by 200 to 400 metre wide northwesterly trending corridor of moderate chargeability and lower resistivity coincident where observed on surface and in drill core with the strongly altered sericite-pyrite schist hosted grey quartz veins and stockworks hosting elevated gold and indicator elements in

particular lead and zinc in soils and copper, lead and arsenic. The ground magnetics also indicate a NW trending feature. Deep chargeability responses infer a steep north dip to the argillite-tuff contact. Local magnetic highs may represent as yet unmapped intrusives and areas of lower intensity alteration zones where magnetic minerals have not been destroyed. The extreme south western part of this IP resistivity anomaly was intersected by the upper parts of holes L14-02 and L14-03 and in addition to being silicified and biotite altered is strongly anomalous in arsenic.

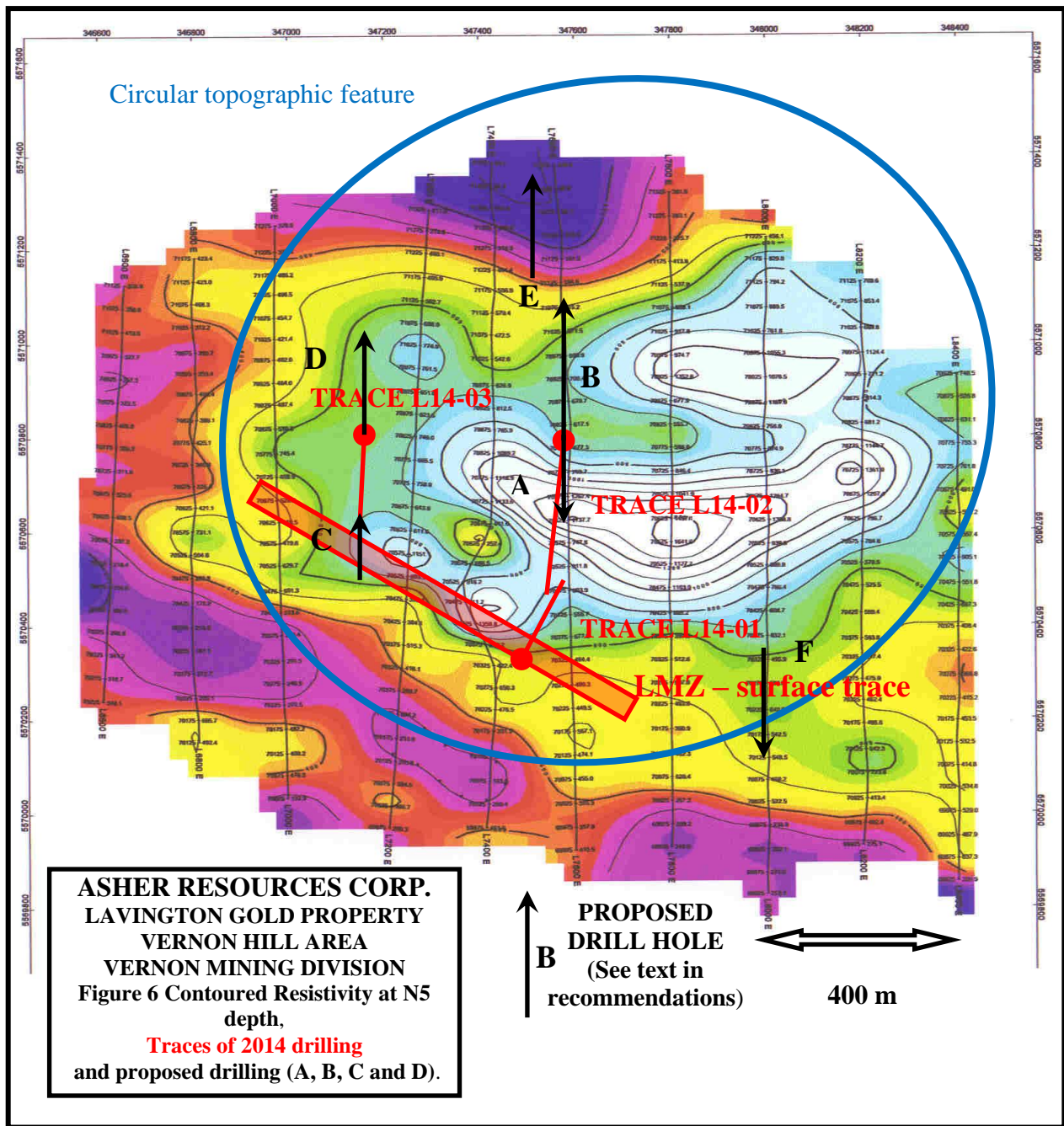
An arcuate geophysical feature is also present, wrapping around the west side of the surveyed area and centered around a combined resistivity and chargeability and moderate magnetic low over the north central part of the surveyed area. This feature is also host to a weak to locally strong (750 ppb gold) historic gold in soil anomaly. This circular feature is also indicated by recessive topography and descriptions of altered bedrock. Several other arcuate topographic features lie outbound of and adjacent to this one.

Geochemistry, geophysics and recessive topographic features also outline one or more possible cross structures. The intersection of the main gold zone and the most evident cross cutting features underlies the central small lake.

It is possible that the silicified zone intersected in holes L14-02 and L14-03 represents a portion of a distal alteration halo of a more deeply buried gold enriched porphyry copper mineralized system centered some 200-500 metres northeast of the collar of hole L14-02. The Cretaceous Fish Lake porphyry gold-copper deposit of Taseko Mines Ltd. also hosts quartz sericite-pyrite (phyllic) alteration zones that host subeconomic gold and copper grades and which grade laterally and to depth over tens to hundreds of metres into ore grade mineralization.

The coincident chargeability, resistivity and magnetic anomaly at the north-west end of the 2009 IP grid with nearby coincident weak gold soil values should be field checked and prospected and drill tested.

The analytical results of 193 soil samples confirmed the size, pattern and tenure of the previously identified geochemical anomalies and also allowed the direct correlation with the 2009 geophysical survey. However the geochemical alteration patterns (probably both the BP and the Cazador ones) are somewhat influenced by the presence either residual or exotic fragment-matrix till with the exotic till values not representing the underlying mineralized zones and thereby having a negative effect on the actual anomaly size





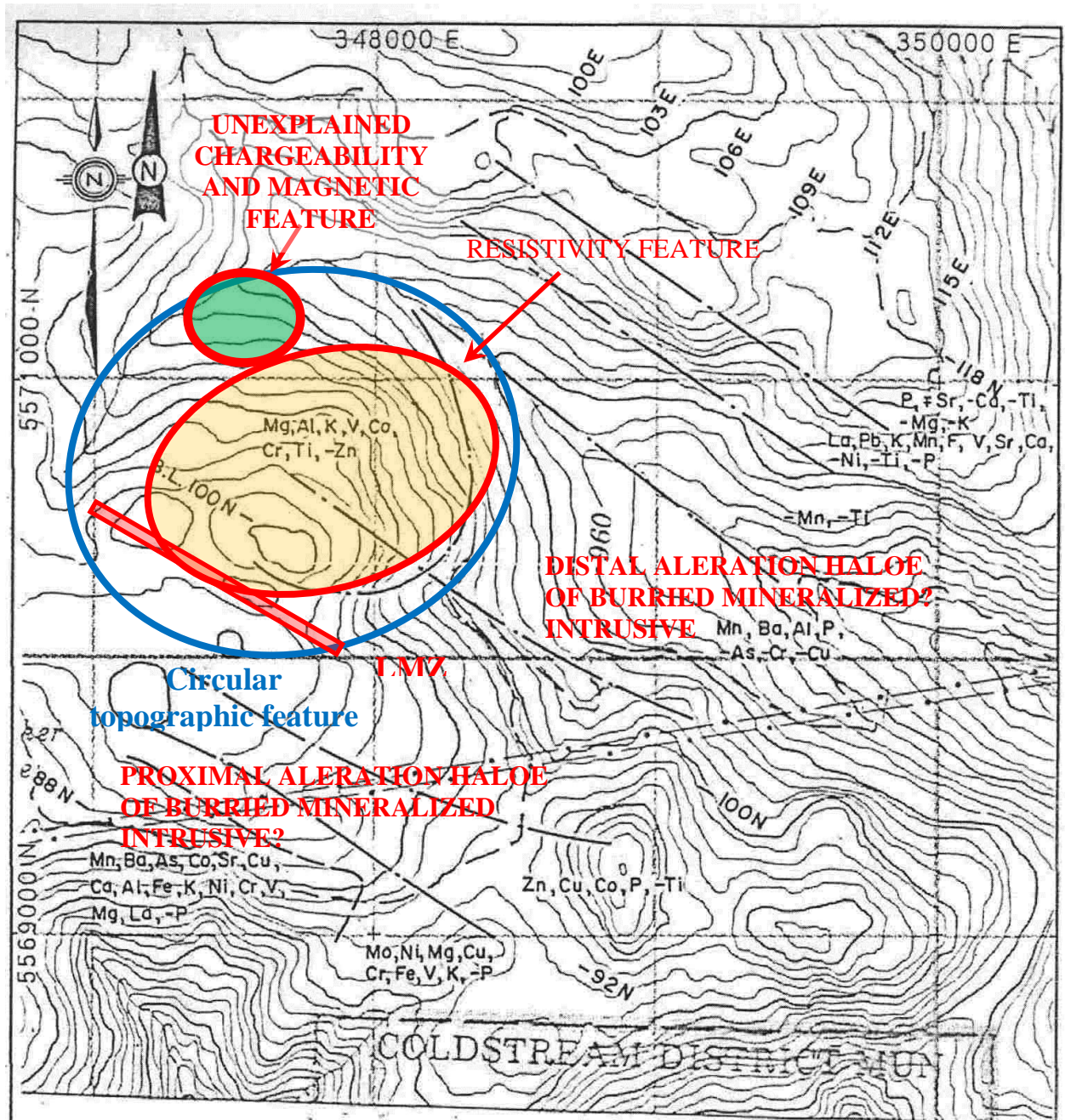


Figure 7 – INTERPRETATIVE PLAN

Source. Wong 1989 AR 19126	MAJOR GEOCHEMICAL TRENDS		
	LAVINGTON OPTION VERNON MINING DIVISION 1989 SOIL SURVEY		
	Project No. 582	NTS 82L/6E	Scale 1: 20000
	Date JULY 1989	Report No. BPVR 89-2	Fig. No. 27.
BP RESOURCES CANADA LIMITED	New Horizon Software.		

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**TABLE 3 – COST STATEMENT**

<b>Exploration Work type</b>	<b>Comment</b>	<b>Time unit</b>	<b>Rate</b>	<b>Subtotals</b>
<b>Personnel (Name)* / Position</b>	<b>Field Days (list actual days)</b>	<b>Days</b>	<b>Rate</b>	<b>Subtotal*</b>
Leo Lindinger, Project manager	May 27-Jun 21, 24, 27-28, 30, Jul 1-2	32	\$1,000	\$32,000
Evan Hall - Geotech 2	Jun 06 - Jun 31	26	\$300.00	\$7,800.00
Sarah Russell, geotech 1	May 27-31, Jun 01-05, Jun 10-31	31	\$250.00	\$7,750.00
A Demoskoff, Jr. Geologist	Jun 10-14	5	\$500.00	\$2,500.00
Nolan Snow, labourer	Jun 12 - 18	6	\$200.00	\$1,200.00
Bryan Larson, labourer	Jun 12 - July 02	20	\$200.00	\$4,000.00
<b>Total Personnel</b>				<b>\$55,250.00</b>
<b>Office Studies and Report</b>	<b>List Personnel (hours)</b>	<b>Hrs</b>	<b>Rate</b>	<b>Subtotal*</b>
Literature search	Lindinger	5.0	\$110.00	\$550.00
Database compilation	Lindinger	40.8	\$55.00	\$2,241.25
Computer modelling	Lindinger	45.0	\$65.00	\$2,925.00
General research	Lindinger	2.0	\$110.00	\$220.00
Report preparation	Lindinger	90	\$110.00	\$9900.00
Other (specify)		0.0	\$0.00	\$0.00
<b>Total Office Studies and Report</b>				<b>\$14,461.25</b>
<b>Geochemical Surveying</b>	<b>TYPE</b>	<b>No.</b>	<b>Rate</b>	<b>Subtotal</b>
CORE	DRILL CORE	460	43	\$19780.00
Other (specify)	sludge from saw	8.0	\$43	\$344.00
<b>Total Geochemical Surveying</b>				<b>\$20,124.00</b>
<b>Drilling</b>	<b>No. of Holes, Size of Core and Metres</b>	<b>No.</b>	<b>Rate</b>	<b>Subtotal</b>
Diamond	3 holes, HQ, 987 metres			\$103,854.17
<b>Total Drilling</b>				<b>\$103,854.17</b>
<b>Reclamation</b>	<b>Clarify</b>	<b>No.</b>	<b>Rate</b>	<b>Subtotal</b>
After drilling	Downing leaning trees, cleanup drill sites, put in waterbars, seeding sites and trails, placing fallen and CWD onto sites and trails. Project manager, 2 labourers, field camp and accommodation, chain saw. All in daily rate.	1.5	\$2,000.	\$3,000.00
<b>Total Reclamation</b>				<b>\$3,000.00</b>
<b>Transportation</b>		<b>No.</b>	<b>Rate</b>	<b>Subtotal</b>
truck rental	2 4x4 pickup trucks	58.00	\$110.00	\$6,380.00
kilometers	1200 kilometres 3 trips, samples to Kamloops and return.	1200	\$0.75	\$900.00
fuel	For core saw, gen sets and heating water, per receipts			\$634.18
Other	Travelling – A. Demoskoff. 4X4	5.00	\$125.00	\$625.00

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	truck			
<b>Total Transportation</b>				\$8,539.18
<b>Accommodation &amp; Food</b>		<b>Rates per day</b>		
Camp	125/day - 115 mandays	115.00	\$125.00	\$14,375.00
Meals	65/day 115 mandays	115.00	\$65.00	\$7,475.00
<b>Total Accommodation and Food</b>				\$21,850.00
<b>Miscellaneous</b>		hrs		
Telephone	Hours	2.3	\$220.00	\$495.00
General project management	Hours	47.0	\$110.00	\$5,170.00
<b>Total Miscellaneous</b>				\$5,665.00
<b>Equipment Rentals</b>			\$0.00	\$0.00
Mobile field office	June 01-24, Jun 25-27, Jun 29-30	28.00	\$30.00	\$840.00
Magnetic susceptibility - conductivity measurement device	Jun 05-31	26.00	\$10.00	\$260.00
Manual Core splitter	June 01-Jul 01	32.00	\$5.00	\$160.00
Portable core processing shop	June 01-Jul 01	32.00	\$10.00	\$320.00
Field Gear (Specify)	Gas powered Core saw - one month at \$3600		\$1.00	\$3,600.00
Other (Specify)				
<b>Total Equipment Rentals</b>				\$5,180.00
<b>TOTAL Expenditures</b>				<b>\$239,298.60</b>

RECOMMENDATIONS.

The large gold bearing areas on the Lavington Property indicate that several bedrock sources of possible bulk tonnage and possibly higher grade gold +/- copper porphyry deposits may occur on the property.

To effectively develop the many exploration targets on the Lavington property the following \$500,000 phase 2 program is recommended.

\$75000 surface program.

The coincident chargeability, resistivity and magnetic anomaly at the north end of the 2009 IP grid with nearly coincident weak gold soil values should be field checked and prospected prior to the recommended drill testing.

IP-soil grid extension to NE zone

Recommended is extending the IP grid to the property boundaries, especially to the north and west to cover previously outlined geochemical anomalies (NE and N anomalies - Figure 4). At least 2009 IP line 8400 E should be extended to UTM 5572000 N with a one sq. kilometre area from 368200 E to 369200 E and 5571200 N to 5572200 N surveyed by IP and ground magnetics

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and soil and rock sampling. Elsewhere on the property outside of the main zone a property wide systematic rock sampling, stream sediment, seep, soil sampling and bedrock mapping program should be completed.

**1989-90 Drill Core Relogging.**

The core from the 1989-90 drill program representing at least \$150,000 of exploration expenditures is still on the property and is no longer in very good shape. Approximately 70% was recovered but only 50% of that is readily recognizable. An attempt to relog and image should be made from the recognizable core.

**Bedrock Mapping.**

The property badly requires a current geological map at least 1:5000 scale with detailed mapping in target areas. In addition to protolith determination, particular detail should be made to map structure, alteration and mineralization as these are much more widespread and variable than the historic literature indicates. Structural mapping to ground truth the numerous linear and circular features is also a priority. A determination should be made if possible if the “gneissic” intrusive rocks on the property are actually deformed flow laminated intrusives and/or flows. Also a determination is possible to improve the knowledge of the age of the mineralization between a deformed Nicola aged system or one much younger but still deformed.

The southern edge of the property hosts very strong multielement base metal anomalies that are underlain by very high chargeabilities suggesting a proximal porphyry environment is present here. These anomalies are open to the south onto the steep slopes north of Lavington. Topographic features here infer both hydrothermal alteration and large structural features. Mapping this area may reveal additional potential exists for porphyry copper-gold mineralization on the property. (See Figure 7)

**Soil sampling.**

Recommended as part of the IP program is to systematically examine the soil type at the station locations. IP lines 6200 E and 6400 E immediately west of the 2009 surveyed area should all be cut from 5570000 N to 5571500 N. In addition to the 200 metres spaced IP lines infill lines should be completed at 100 metre spacing. Areas of deeper masking till should be noted and if sampled in future programs either an attempt to penetrate the till with power augers to achieve a more representative sample or not sample the location at all and rely on geophysical data to determine that areas economic potential. Although little soil sampling is recommended for this phase comparing the soil material exposed (as part of the geological mapping program) with the historic anomalies may prove useful.

**Diamond Drill Testing. (Please refer to Figure 6)**

The 2014 drilling program proved that the Lavington gold system continues to at least 350 m depth without significant decrease in tenure or size on and near UTM section 347600E. It also

**DIAMOND DRILLING REPORT ON THE LAVINGTON GOLD PROPERTY 03 NOVEMBER, 2014**

proved that the areas underlying topographically positive areas hosting multielement zinc-lead-arsenic+/- copper and gold anomalies are silicified zones with secondary biotite that grade with depth from lead and zinc dominant to arsenic dominant. These areas north of the LMZ are represented by distinct open to depth resistivity anomalies. This geophysical and geochemical pattern is often seen in the rock overlying still buried porphyry copper-gold porphyry deposits.

A 1700 metre diamond drilling program is proposed. Recommended is testing the depth extension of the arsenic zone on section 347600E with at least one (A) 500 metre hole drilled at -75 degrees to the south under hole L14-02. Also from the same site an east-west trending decreased resistivity and increased chargeability feature 50-100 metres north of the site has coincident weakly anomalous precious, indicator and base metal values in soil. This may represent another mineralized shear bisecting the resistivity anomaly. This target should be tested with at least a 500 metre hole drill north from the site of L14-02 at -45 degrees (B). Also recommended on section 347100 E drill testing with a 100 metre hole the shallow possibly ore grade mineralization inferred but partially missed by holes L89-01 and 06 (C). Testing to the north of hole L14-03 in to a chargeability anomaly 50 to 100 metres north with a 300+ metre hole (D). A distinct partially defined chargeability and ground magnetic feature beginning 800 metres north of LMZ that hosts nearby highly anomalous precious and base metal values in silt and soil and is probably a mineralized intrusive or breccia pipe should be tested by one 300 metre drill hole collared near 347500E, 5571150N and drilled at -60 degrees to the north (E). Some 400 metres to the east Hole 90-05 ended in mineralization. Recommended is a 450 metre hole collared near 348000E, 5570350N at a bearing of 180 and dip of -45 (F). This hole would test the mineralization at depth near hole 90-05 and under some of the strongest gold in soil results from historic sampling. IP and resistivity results here indicate rapid changes in responses possibly indicating (mineralized?) structures.

Due to the common occurrence hard quartz zones with clay alteration associated with most gold deposits resulting in poor recoveries if small diameter drilling large diameter HQ (63.5 mm) or NQTW (56 mm) sized core is recommended.

Contingent of development of these targets a third phase minimum \$1,000,000 program of additional target definition including diamond drilling testing would be recommended. Based on the success of the various areas tested a deep penetrating geophysical survey should be completed prior to further drill testing.

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<b>TABLE 4- PHASE 2 RECOMMENDED EXPENDITURES LAVINGTON PROPERTY</b>	
PREPARATORY WORK (does not include permitting expenses)	
Digitizing historical database (Thong, Minequest data)	\$2,000
Creating digital base maps	\$2,000
<b>FIELD PROGRAM</b>	
Mobilization to Vernon.	\$4,500
Line cutting 10 km @\$1000/km	\$10,000
Bedrock mapping 15 man days @ 1000 per man day*	\$15,000
Rock sampling 100 samples @ \$45 per sample	\$4,500
Soil sampling 140 samples @ 35/ sample	\$4,900
Geotech - field assistant 15 mandays @ 400/day	\$6,000
IP survey 10 line km @\$ 2500 per km including mobilization	\$25,000
Historic drill core relogging.	\$1,500
Vehicle rental 2 4x4 14 days @ 125/ day	\$3,250
<b>SUB TOTAL FIELD PROGRAM</b>	<b>\$74,650</b>
Drilling 1700 metres at \$150 per metre	\$255,000
Core Geotechs 46 mandays@ 500 per day*	\$23,000
Core logging 17 days@ \$800 per day*	\$13,600
Vehicle rental 54 vehicle days @ \$125/day	\$6,750
Core and geotech camp equipment 28 days @ 50/day	\$1,400
core saw rental	\$3,600
<b>PROJECT SUPERVISION</b>	<b>\$8,000</b>
Core Analytical charges 850 core samples at \$45 per sample	\$38,250
Supplies (core bags, sacks, standards, gas, saw blades)	\$2,000
Demobilization to Kamloops	\$4,750
<b>CONTINGENCY 10%</b>	<b>\$50,000</b>
<b>REPORT</b>	<b>\$15,000</b>
<b>TOTAL PHASE 2</b>	<b>\$500,000</b>
* includes food and accommodation at \$150 per day	



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**DIAMOND DRILLING REPORT ON THE LAVINGTON GOLD PROPERTY 03 NOVEMBER, 2014**

DATE AND SIGNATURE PAGE

This report is dated 03 of November, 2014.

*"Leopold J. Lindinger, P. Geo."*

---

Leopold J. Lindinger, P .Geo.

**CERTIFICATE OF QUALIFIED PERSON:**

I, Leopold Joseph Lindinger, do hereby certify that:

- a) I am a consulting geologist currently residing at 680 Dairy Road Kamloops, B.C. V2B-8N5.
- b) This certificate applies to the report entitled “Diamond Drilling Report On The Lavington Gold Property dated 31 October, 2014.
- c) 1 I am a graduate of the University of Waterloo, Ontario with a Bachelor of Sciences (BSc) in Honours Earth Sciences, (1980).  
2 I have worked continuously in mineral exploration and mine geology in Canada, the United States and Mexico on a full-time basis since 1980. Some of this relevant work experience includes 5 years working in epithermal gold mines, and over 20 years experience exploring for gold deposits in B. C. Ontario, Nevada, Mexico and Russia.  
3 I am Registered Professional Geoscientist (#19155) of the Association of Professional Engineers and Geoscientists of the Province of British Columbia since 1992.
- d) I have managed and directed the exploration program summarized in this report for Aurion Resources Corp.
- e) I am responsible for all items in the report, including the conclusions reached, and the recommendations made.
- f) I fulfill the requirement to be an independent qualified person for the purposes of NI 43-101 applying all tests as described in Section 1.5 of the instrument.
- g) As of the effective date of the report, to the best of the qualified person’s knowledge, information and belief, the technical report contains all scientific and technical information that is required to be disclosed to make the technical report not misleading.

Dated this 03 of November, 2014

*“Leopold J. Lindinger, P. Geo.”*

---

Signature of Leopold J. Lindinger, P. Geo.

**Appendix 1**  
Analytical Certificates



**Date Submitted:** 13-Jun-14  
**Invoice No.:** A14-04014  
**Invoice Date:** 25-Jun-14  
**Your Reference:**

Renaissance Geosciences  
680 Dairy Road  
Kamloops B.C. V2B8N5  
Canada

ATTN: Leo Lindinger

## CERTIFICATE OF ANALYSIS

86 Core samples were submitted for analysis.

The following analytical package was requested:

Code 1A2-Kamloops Au - Fire Assay AA  
Code UT-1-Kamloops Aqua Regia ICP/MS

REPORT **A14-04014**

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:

Assays are recommended for values >10,000 for Cu and Au. The Au from AR-MS is only semi-quantitative. For accurate Au data, fire assay is recommended. If value exceeds upper limit we recommend reassay by fire assay gravimetric-Code 1A3

CERTIFIED BY:

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

Emmanuel Esemé , Ph.D.  
Quality Control



## Results

Analyte Symbol	Au	Li	Be	B	Na	Mg	Al	K	Bi	Ca	Sc	V	Cr	Mn	Fe	Co	Ni	Cu	Zn	Ga	Ge	As	Rb
Unit Symbol	ppb	ppm	ppm	ppm	%	%	%	%	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	5	0.1	0.1	1	0.001	0.01	0.01	0.01	0.02	0.01	0.1	1	1	1	0.01	0.1	0.1	0.01	0.1	0.02	0.1	0.1	0.1
Analysis Method	FA-AA	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS
11s171159	277	9.3	0.4	6	0.024	0.21	0.87	0.53	3.05	1.85	1.1	15	8	711	3.87	10.7	7.9	291	92.6	2.21	< 0.1	170	28.7
11s171160	221	11.1	0.3	8	0.025	0.23	1.02	0.61	2.92	2.88	1.3	16	9	1040	4.14	9.6	8.2	330	94.3	2.46	< 0.1	160	33.3
11s171161	217	7.7	0.3	6	0.021	0.15	0.67	0.42	3.99	2.78	0.8	10	7	695	3.58	8.7	6.8	301	44.0	1.67	< 0.1	140	21.0
11s171162	310	8.0	0.3	6	0.024	0.15	0.81	0.50	3.96	1.57	1.0	13	8	495	3.54	9.7	7.2	441	47.4	1.98	< 0.1	153	23.1
11s171163	277	10.2	0.4	7	0.025	0.27	0.97	0.65	2.95	1.57	1.1	14	7	619	3.79	9.8	6.6	535	49.0	2.25	0.1	89.8	29.7
11s171164	1050	10.1	0.5	5	0.026	0.51	1.27	0.80	2.56	1.62	1.6	19	9	766	4.84	10.0	7.1	673	86.3	3.26	0.1	137	34.7
11s171165	260	15.0	0.4	5	0.032	0.53	1.18	0.80	2.90	1.97	1.6	19	8	614	3.35	9.8	6.9	547	49.6	2.85	< 0.1	102	43.7
11s171166	364	9.7	0.4	6	0.033	0.29	0.96	0.70	3.44	2.95	1.5	17	9	565	3.67	9.6	6.9	475	29.3	2.67	0.1	114	32.5
11s171167	459	8.8	0.4	6	0.025	0.28	0.96	0.68	3.00	2.78	1.2	14	7	930	3.00	9.4	6.3	522	33.8	2.22	0.1	57.9	30.4
11s171168	205	8.2	0.4	7	0.027	0.21	1.05	0.69	2.79	1.76	1.2	15	9	666	4.88	10.2	6.4	1030	182	2.52	0.1	97.9	27.7
11s171169	1030	15.9	1.1	8	0.127	1.03	1.61	0.30	3.96	1.49	6.3	262	10	443	7.64	31.4	12.6	6440	502	11.0	0.2	60.8	14.4
11s171170	< 5	1.0	0.1	< 1	0.014	0.02	0.08	0.01	< 0.02	0.02	< 0.1	3	2	16	0.18	0.6	1.6	1.48	3.4	0.30	< 0.1	1.3	0.9
11s171171	410	5.2	0.3	3	0.023	0.23	0.77	0.52	1.52	2.55	0.9	11	7	577	3.43	9.7	6.3	465	21.1	1.77	< 0.1	47.1	22.1
11s171172	286	7.1	0.3	3	0.028	0.28	0.99	0.63	3.45	2.36	1.2	13	7	476	3.95	9.9	7.5	461	36.9	2.33	< 0.1	83.4	25.5
11s171173	1080	5.2	0.5	4	0.018	0.19	0.91	0.58	2.92	2.74	1.1	12	8	619	4.78	9.3	7.7	329	55.1	2.13	0.1	104	27.2
11s171174	277	6.6	0.5	3	0.024	0.21	1.12	0.68	3.62	2.55	1.4	14	8	502	4.06	9.4	7.3	301	272	2.55	0.1	104	32.8
11s171175	340	6.4	0.9	5	0.030	0.34	1.35	0.72	7.14	4.54	1.9	18	8	540	3.94	9.2	7.6	633	490	3.13	< 0.1	79.7	36.4
11s171176	< 5	1.1	0.1	< 1	0.016	0.02	0.08	0.01	0.03	0.02	< 0.1	3	2	16	0.15	0.6	1.6	0.92	2.7	0.28	< 0.1	0.6	0.9
11s171177	251	7.6	0.7	4	0.039	0.57	1.21	0.64	5.76	5.57	1.9	20	10	685	3.88	9.6	7.8	541	53.0	3.08	< 0.1	44.4	28.7
11s171178	175	7.1	0.5	2	0.047	0.57	1.18	0.69	3.79	3.57	2.2	22	15	644	3.42	10.5	8.6	463	35.9	3.18	< 0.1	52.2	28.6
11s171179	349	6.5	0.5	2	0.037	0.43	1.11	0.61	2.19	3.02	2.3	21	8	544	3.16	10.0	7.3	556	40.0	2.93	< 0.1	48.1	28.9
11s171180	372	8.3	0.6	3	0.044	0.49	1.34	0.76	2.08	3.79	2.7	25	10	655	3.28	11.2	8.0	247	36.1	3.16	< 0.1	26.3	36.3
11s171181	240	10.7	0.6	3	0.035	0.50	1.21	0.69	3.05	3.26	2.3	23	11	685	3.44	9.6	8.5	365	47.4	3.00	< 0.1	34.0	38.7
11s171182	438	8.7	0.9	8	0.036	0.61	1.59	0.77	1.75	2.87	2.5	23	10	547	3.56	9.4	9.6	452	117	3.18	0.1	34.7	39.1
11s171183	770	8.9	1.0	6	0.047	0.66	1.92	1.00	0.94	3.36	3.2	25	10	708	3.14	10.1	7.8	292	68.2	3.78	< 0.1	21.9	44.4
11s171184	1550	9.6	0.6	3	0.042	0.54	1.65	0.91	0.88	3.57	2.6	21	8	624	3.27	10.7	7.8	214	40.0	3.06	< 0.1	17.7	36.1
11s171185	503	8.5	0.9	2	0.037	0.51	1.68	0.81	0.99	3.54	2.9	22	8	639	2.69	10.3	7.8	215	54.4	3.27	< 0.1	21.8	38.8
11s171186	147	7.5	1.0	3	0.036	0.50	1.57	0.75	1.33	3.87	2.7	20	8	655	2.98	9.5	7.8	303	58.0	3.03	< 0.1	33.0	36.3
11s171187	177	12.4	0.6	4	0.055	0.51	1.53	0.89	1.76	2.56	2.7	24	13	545	3.35	10.8	8.4	300	50.1	3.36	< 0.1	41.2	36.5
11s171188	208	9.5	0.5	2	0.035	0.36	1.02	0.64	2.28	2.02	1.6	16	8	357	3.17	10.0	6.8	359	34.7	2.38	< 0.1	36.7	26.8
11s171189	216	16.1	0.6	3	0.044	0.64	1.56	1.00	1.08	3.57	2.6	26	11	615	3.15	11.6	8.2	278	61.1	3.46	< 0.1	28.4	46.1
11s171190	250	12.4	0.6	3	0.043	0.66	1.51	0.88	1.40	3.22	2.1	23	10	586	3.14	10.1	7.1	306	44.7	3.20	< 0.1	53.3	38.0
11s171191	321	12.7	0.5	6	0.042	0.48	1.50	0.89	2.07	2.76	2.1	23	14	453	3.98	10.9	9.9	744	54.5	3.45	< 0.1	61.6	39.1
11s171192	173	12.8	0.4	2	0.047	0.70	1.18	0.73	0.71	3.30	2.6	25	12	787	2.98	8.4	7.4	307	89.7	2.86	< 0.1	17.5	36.9
11s171193	386	12.2	0.5	2	0.041	0.53	1.42	0.82	0.62	3.15	2.4	22	14	642	2.98	10.2	8.7	364	95.4	3.07	< 0.1	20.1	36.6
11s171194	574	11.6	0.6	2	0.039	0.48	1.36	0.77	2.74	2.67	2.1	21	10	602	3.54	9.5	6.9	567	206	2.98	< 0.1	29.1	33.0
11s171195	< 5	1.1	< 0.1	< 1	0.016	0.02	0.09	0.01	< 0.02	0.02	< 0.1	3	3	19	0.17	0.6	1.6	0.90	2.8	0.29	< 0.1	0.9	0.9
11s171196	2050	11.8	0.6	< 1	0.041	0.58	1.46	0.81	1.16	2.85	2.3	24	11	598	2.87	9.9	7.3	417	53.4	3.33	< 0.1	37.2	35.0
11s171197	859	9.5	0.5	3	0.038	0.48	1.27	0.69	0.94	2.86	1.9	21	10	512	3.19	10.0	6.0	595	43.8	2.91	< 0.1	30.5	28.7
11s171198	860	3.9	0.3	1	0.059	0.14	0.84	0.36	2.76	1.01	0.4	14	16	311	1.27	5.2	9.4	4730	25.5	2.84	< 0.1	11.8	7.7
11s171199	173	9.1	0.8	2	0.038	0.48	1.66	0.81	1.23	2.58	2.5	22	12	444	3.44	10.1	7.5	449	56.6	3.54	< 0.1	40.6	36.6
11s171200	178	9.9	0.9	1	0.040	0.69	1.80	0.79	1.05	3.23	3.2	25	9	523	3.52	9.7	9.2	445	80.7	3.58	< 0.1	55.8	37.6
11s171201	174	10.7	1.2	4	0.047	0.70	2.17	0.98	0.97	3.81	4.3	32	13	584	3.65	10.6	10.6	358	60.9	4.65	0.1	31.3	49.1
11s171202	245	8.8	1.1	1	0.039	0.67	1.90	0.83	0.62	3.36	4.0	29	12	630	3.37	10.1	8.6	338	61.1	4.19	< 0.1	19.4	43.4
11s171203	298	7.2	0.9	< 1	0.039	0.50	1.49	0.66	0.69	2.94	2.9	25	11	532	3.26	10.0	8.4	399	70.0	3.38	< 0.1	46.2	30.5
11s171204	134	12.7	0.5	2	0.051	0.60	1.39	0.85	0.70	2.75	2.6	26	11	575	3.23	10.1	8.8	185	71.8	3.46	0.1	10.5	36.5
11s171205	143	11.6	1.2	2	0.043	0.57	2.02	0.86	0.96	2.66	3.2	29	13	426	3.02	10.6	9.8	380	93.9	4.38	0.1	23.0	42.8
11s171206	173	9.6	0.4	< 1	0.040	0.50	1.28	0.72	0.89	2.90	2.6	22	9	505	3.13	10.2	7.5	447	46.8	3.12	0.1	23.4	31.1
11s171207	132	12.7	0.6	< 1	0.043	0.67	1.58	0.90	0.64	3.10	3.5	30	15	702	3.07	10.7	10.3	250	63.3	3.65	< 0.1	15.2	43.8

Analyte Symbol	Au	Li	Be	B	Na	Mg	Al	K	Bi	Ca	Sc	V	Cr	Mn	Fe	Co	Ni	Cu	Zn	Ga	Ge	As	Rb
Unit Symbol	ppb	ppm	ppm	ppm	%	%	%	%	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	5	0.1	0.1	1	0.001	0.01	0.01	0.01	0.02	0.01	0.1	1	1	1	0.01	0.1	0.1	0.01	0.1	0.02	0.1	0.1	0.1
Analysis Method	FA-AA	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS
11s171208	84	16.1	0.6	< 1	0.041	0.74	1.54	0.98	0.82	2.42	3.2	28	12	557	3.42	10.7	10.1	198	57.8	3.71	0.1	15.8	47.1
11s171209	254	12.7	0.5	< 1	0.036	0.60	1.37	0.85	0.62	2.32	2.4	22	12	522	3.47	11.1	9.3	248	53.0	2.96	< 0.1	15.2	37.6
11s171210	121	15.6	0.5	1	0.043	0.68	1.51	1.02	0.74	2.09	2.7	26	9	518	3.05	10.2	6.4	320	59.9	3.55	0.1	10.4	46.1
11s171211	110	11.2	0.4	1	0.040	0.57	1.33	0.79	0.71	2.33	2.2	20	9	455	2.89	9.6	6.2	328	46.9	2.84	< 0.1	12.3	32.3
11s171212	58	9.0	0.5	1	0.038	0.51	1.24	0.80	0.60	2.51	2.0	17	8	392	3.13	10.3	6.5	327	35.8	2.62	0.1	15.0	30.2
11s171213	148	10.0	0.5	< 1	0.039	0.56	1.15	0.70	0.47	2.71	2.6	21	13	435	3.10	9.1	6.9	413	47.1	2.94	0.1	15.6	35.0
11s171214	66	11.6	0.6	< 1	0.042	0.79	1.59	0.85	0.25	4.20	4.8	32	13	607	3.02	10.2	7.7	278	58.8	4.25	< 0.1	14.0	43.7
11s171215	76	16.1	0.6	< 1	0.052	0.94	1.86	1.18	0.34	2.47	5.4	36	37	580	3.63	11.5	9.6	259	63.5	4.80	0.1	13.4	54.6
11s171216	81	14.0	0.4	< 1	0.045	0.80	1.54	1.05	0.23	2.60	3.2	28	12	577	3.25	11.4	7.4	298	49.9	3.72	0.1	13.7	50.2
11s171217	1030	14.2	1.0	5	0.137	1.07	1.66	0.29	3.94	1.50	6.2	261	10	441	7.83	30.2	11.3	6210	490	10.7	0.1	56.8	14.1
11s171218	647	10.9	0.4	4	0.036	0.55	1.54	0.99	0.25	2.35	2.5	23	14	488	3.22	10.8	7.2	1120	54.9	3.41	0.1	17.8	41.2
11s171219	400	6.6	0.4	< 1	0.035	0.35	1.05	0.66	0.32	2.33	1.7	16	14	563	3.23	9.3	6.0	962	52.0	2.46	0.1	19.2	24.4
11s171220	183	6.5	0.4	< 1	0.037	0.26	1.09	0.68	0.70	2.25	1.2	14	8	444	2.94	8.1	4.8	437	44.1	2.52	0.1	25.0	23.1
11s171221	< 5	0.9	< 0.1	< 1	0.015	0.02	0.09	0.01	< 0.02	0.02	< 0.1	3	3	14	0.14	0.6	2.6	1.31	3.2	0.31	< 0.1	0.5	0.9
11s171222	91	5.0	0.4	< 1	0.032	0.19	0.73	0.50	0.30	2.88	0.8	10	5	366	2.39	7.3	5.3	295	24.3	1.53	0.1	35.1	17.1
11s171223	163	6.3	0.4	1	0.034	0.18	0.80	0.53	0.49	2.57	0.7	9	5	542	2.67	7.5	6.1	375	54.9	1.71	< 0.1	50.7	19.5
11s171224	121	7.8	0.5	4	0.043	0.19	1.00	0.65	0.71	2.32	1.1	12	6	415	2.86	7.8	5.0	361	205	2.13	< 0.1	33.7	23.4
11s171225	498	2.0	0.2	< 1	0.038	0.12	0.30	0.20	0.39	2.78	0.5	6	7	521	2.46	7.0	5.1	465	13.9	0.63	< 0.1	36.2	6.5
11s171226	177	8.1	0.5	2	0.057	0.31	1.09	0.65	0.83	2.85	1.3	14	6	403	2.56	7.7	6.1	352	46.0	2.19	< 0.1	30.9	23.5
11s171227	176	7.0	0.4	3	0.038	0.19	1.01	0.64	10.5	2.69	0.7	10	7	468	2.42	6.7	5.3	352	228	1.60	< 0.1	143	20.6
11s171228	217	6.6	0.4	3	0.049	0.34	1.00	0.60	2.59	2.93	0.9	12	7	493	3.19	5.6	5.5	427	50.2	2.05	< 0.1	38.9	20.4
11s171229	123	7.2	0.5	4	0.063	0.44	1.17	0.68	2.23	2.34	1.5	16	7	317	3.02	5.5	4.8	246	103	2.71	< 0.1	19.7	25.8
11s171230	73	7.3	0.5	3	0.068	0.32	1.12	0.65	0.52	2.57	1.3	14	6	388	2.85	5.8	5.5	192	49.9	2.35	0.1	15.3	24.7
11s171231	178	5.4	0.2	5	0.046	0.11	0.94	0.58	3.71	1.88	0.6	9	6	489	4.40	5.7	4.9	89.7	1740	1.78	< 0.1	66.8	19.2
11s171232	220	6.2	0.3	3	0.040	0.13	0.81	0.51	3.53	1.64	0.5	9	6	388	2.79	4.9	5.0	125	77.3	1.56	< 0.1	209	17.3
11s171233	359	7.9	0.5	3	0.042	0.26	1.03	0.65	0.40	2.25	1.0	11	6	321	2.80	6.8	5.0	144	18.7	2.15	< 0.1	15.7	23.9
11s171234	77	6.7	0.4	3	0.052	0.20	0.86	0.53	0.72	1.91	1.0	12	5	225	2.84	6.7	5.3	127	16.7	2.11	< 0.1	16.0	18.2
11s171235	90	9.8	0.5	5	0.075	0.38	1.37	0.80	0.77	2.11	2.3	19	7	267	3.28	8.4	5.9	108	29.8	3.25	< 0.1	18.4	28.6
11s171236	187	14.6	0.6	6	0.067	0.61	1.61	1.00	0.49	2.68	3.5	24	7	327	3.38	7.1	5.7	116	42.5	4.07	0.1	17.1	45.5
11s171301	< 5	23.6	1.0	7	0.049	0.83	2.26	0.88	0.02	3.86	5.4	42	11	1490	3.07	8.7	8.1	13.6	58.7	6.38	< 0.1	10.0	33.1
11s171302	< 5	30.0	1.0	9	0.074	1.22	2.69	1.11	0.03	2.99	7.8	76	17	1640	3.66	10.6	9.3	14.9	75.6	9.02	< 0.1	34.1	43.3
11s171303	< 5	32.4	0.9	10	0.073	1.35	3.08	1.25	< 0.02	2.76	8.3	84	19	1430	3.80	11.3	9.7	18.1	73.8	10.00	0.1	26.5	53.7
11s171304	< 5	32.0	1.0	7	0.073	1.34	2.78	1.15	< 0.02	3.20	8.9	86	23	1590	3.66	11.3	11.2	32.6	89.2	9.43	< 0.1	26.3	51.5
11s171305	7	25.5	0.8	4	0.058	0.92	2.16	0.61	0.03	3.52	6.8	54	15	1420	3.20	10.5	9.2	24.1	68.5	7.57	< 0.1	92.1	22.4
11s171306	< 5	22.0	0.9	13	0.073	1.26	2.78	1.25	< 0.02	3.88	7.2	66	18	1220	3.40	11.7	10.8	17.8	51.2	8.47	< 0.1	15.4	41.7
11s171307	8	17.1	0.6	7	0.054	0.90	1.98	0.97	0.07	2.94	6.4	51	12	1230	3.45	10.2	9.8	23.1	70.7	7.08	< 0.1	8.6	44.4
11s171308	6	23.8	0.7	10	0.079	1.26	2.72	1.55	0.03	3.06	6.5	62	15	1290	3.49	12.3	9.7	26.1	56.1	8.49	< 0.1	157	57.2

## Results

Analyte Symbol	Sr	Y	Zr	Nb	Mo	Ag	In	Sn	Sb	Te	Cs	Ba	La	Ce	Cd	Pr	Nd	Sm	Se	Eu	Gd	Tb	Dy	
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	0.5	0.01	0.1	0.1	0.01	0.002	0.02	0.05	0.02	0.02	0.02	0.5	0.5	0.01	0.01	0.1	0.02	0.1	0.1	0.1	0.1	0.1	0.1	
Analysis Method	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS
11s171159	69.1	8.56	2.8	< 0.1	19.2	2.34	0.05	0.89	75.1	0.22	0.47	13.3	13.2	25.2	1.11	3.0	11.5	2.4	4.6	0.8	2.5	0.3	2.0	
11s171160	186	9.91	2.6	< 0.1	23.2	1.99	0.05	0.71	68.8	0.20	0.56	12.2	15.7	30.2	0.91	3.6	13.4	2.8	4.3	0.8	2.9	0.4	2.3	
11s171161	243	9.19	2.7	< 0.1	22.9	2.81	0.04	0.47	48.3	0.26	0.40	16.6	13.1	25.7	0.47	3.0	11.7	2.5	5.4	0.7	2.7	0.4	2.2	
11s171162	95.8	8.08	2.5	< 0.1	23.3	3.27	0.05	1.12	39.8	0.12	0.48	16.5	15.4	30.3	0.45	3.6	13.8	2.8	6.4	0.7	2.8	0.4	2.0	
11s171163	40.8	9.23	2.0	< 0.1	30.4	2.28	0.07	0.60	1.23	0.09	0.80	16.0	21.0	40.8	0.43	4.9	18.9	3.8	7.3	1.0	3.6	0.5	2.5	
11s171164	76.1	10.1	2.1	< 0.1	33.9	2.19	0.12	0.92	0.90	0.08	1.04	16.9	18.5	36.2	0.65	4.3	16.9	3.5	8.8	1.0	3.7	0.5	2.7	
11s171165	86.1	9.84	1.8	< 0.1	36.1	2.37	0.10	0.66	0.68	0.12	2.15	27.5	20.3	39.7	0.14	4.8	18.7	3.9	5.8	1.0	4.0	0.5	2.8	
11s171166	265	10.2	2.0	< 0.1	26.8	2.61	0.10	0.81	1.90	0.16	1.13	22.2	18.1	36.2	0.16	4.3	17.2	3.6	7.2	0.9	3.7	0.5	2.7	
11s171167	231	10.4	1.7	< 0.1	39.4	2.98	0.08	0.60	0.42	0.11	1.07	28.6	21.0	40.4	0.20	4.8	18.6	4.0	6.0	1.1	4.0	0.5	2.7	
11s171168	163	9.25	2.4	< 0.1	27.6	4.97	0.17	0.79	4.25	0.15	0.65	21.2	18.6	37.4	2.09	4.6	18.6	4.0	10.5	1.0	3.9	0.5	2.4	
11s171169	106	16.0	10.9	0.5	877	62.2	6.01	3.09	128	3.66	1.38	40.6	9.6	18.8	2.37	2.4	10.4	2.6	9.0	0.7	3.1	0.5	3.2	
11s171170	5.0	0.76	0.7	< 0.1	1.17	1.24	< 0.02	0.15	0.04	0.02	0.06	6.5	2.8	5.36	< 0.01	0.6	2.05	0.3	0.1	< 0.1	0.3	< 0.1	0.2	
11s171171	183	11.9	2.2	< 0.1	16.6	1.86	0.09	0.51	1.32	0.09	1.07	24.6	21.2	41.9	0.21	5.0	19.8	4.2	7.1	1.1	4.3	0.6	3.0	
11s171172	158	10.2	2.4	< 0.1	18.8	2.79	0.14	0.63	17.4	0.08	1.01	23.3	18.5	35.9	0.26	4.2	16.7	3.5	6.6	1.0	3.6	0.5	2.5	
11s171173	243	12.8	4.3	< 0.1	15.5	1.96	0.08	0.72	1.27	0.14	2.92	16.9	17.8	35.1	0.49	4.3	17.1	3.6	8.0	1.0	4.0	0.5	3.1	
11s171174	190	13.4	4.7	< 0.1	19.8	1.96	0.13	0.84	1.83	0.09	3.73	19.2	21.4	42.3	3.20	5.1	20.4	4.2	8.4	1.1	4.5	0.6	3.2	
11s171175	470	15.4	6.7	< 0.1	19.6	3.41	0.20	1.06	3.09	0.34	5.64	13.1	16.3	33.1	6.75	4.0	15.9	3.5	7.7	1.0	3.9	0.6	3.4	
11s171176	5.5	1.08	0.3	< 0.1	0.12	0.550	< 0.02	0.13	< 0.02	< 0.02	0.07	8.0	3.5	7.09	< 0.01	0.8	2.78	0.5	0.1	< 0.1	0.4	< 0.1	0.3	
11s171177	635	18.7	3.2	< 0.1	16.8	2.52	0.14	1.45	4.29	0.33	2.48	18.5	18.2	36.4	1.51	4.4	17.5	3.8	6.5	1.2	4.2	0.6	4.1	
11s171178	733	18.0	1.8	< 0.1	15.2	1.81	0.13	1.64	0.76	0.30	1.31	37.1	18.1	35.2	0.76	4.2	16.4	3.4	5.0	1.0	3.9	0.6	3.6	
11s171179	812	18.1	2.0	< 0.1	18.2	1.46	0.08	0.69	0.43	0.25	2.26	43.5	18.4	36.3	0.27	4.3	16.9	3.5	5.3	1.1	4.0	0.6	3.8	
11s171180	1030	20.9	2.5	< 0.1	14.7	0.895	0.05	0.80	0.43	0.15	3.63	53.6	21.4	42.1	0.27	5.1	19.7	4.2	3.8	1.3	4.8	0.7	4.6	
11s171181	333	16.0	1.8	< 0.1	15.5	0.897	0.07	0.79	0.47	0.20	4.08	41.1	20.2	38.5	0.31	4.6	17.9	3.7	4.1	1.1	4.1	0.6	3.6	
11s171182	264	17.7	4.5	< 0.1	20.9	1.41	0.08	0.84	1.28	0.14	5.09	29.6	20.5	39.7	1.33	4.7	18.3	3.7	4.2	1.2	4.2	0.6	4.0	
11s171183	283	17.7	3.3	< 0.1	15.0	0.866	0.05	0.85	0.77	0.04	3.82	45.9	20.0	38.7	0.31	4.5	17.6	3.6	3.2	1.1	4.2	0.6	3.9	
11s171184	201	18.3	2.7	< 0.1	7.70	0.663	0.05	0.79	0.47	0.08	1.92	36.2	20.6	39.5	0.17	4.7	18.0	3.6	3.6	1.1	4.1	0.6	4.0	
11s171185	154	19.9	3.6	< 0.1	8.58	0.579	0.05	1.30	0.50	0.05	4.18	56.6	22.5	42.7	0.20	5.0	19.4	3.9	3.1	1.2	4.4	0.7	4.3	
11s171186	122	19.0	3.6	< 0.1	18.6	0.869	0.05	0.82	0.66	0.14	5.03	51.6	21.7	41.4	0.23	4.9	18.8	3.8	3.7	1.2	4.4	0.6	4.1	
11s171187	288	17.9	2.8	< 0.1	19.2	0.828	0.06	0.95	0.70	0.12	2.51	39.6	19.8	38.4	0.17	4.5	17.6	3.7	4.8	1.1	4.1	0.6	3.9	
11s171188	182	14.9	2.3	< 0.1	23.7	1.00	0.04	0.79	0.88	0.21	1.45	24.2	18.0	34.9	0.17	4.1	15.9	3.2	4.3	0.9	3.6	0.5	3.3	
11s171189	309	14.5	2.4	< 0.1	16.3	0.755	0.05	0.71	0.37	0.03	3.12	45.0	22.4	42.8	0.20	5.0	19.1	3.8	5.3	1.2	4.0	0.6	3.3	
11s171190	605	14.6	2.2	< 0.1	21.5	0.715	0.04	0.67	0.70	0.08	2.23	43.9	18.5	35.4	0.20	4.2	16.3	3.3	4.7	1.0	3.6	0.5	3.2	
11s171191	640	14.5	2.5	< 0.1	33.4	1.41	0.06	1.31	0.53	0.09	2.20	23.7	16.7	33.1	0.29	3.9	15.2	3.1	5.8	0.8	3.4	0.5	3.2	
11s171192	551	18.8	2.5	< 0.1	22.3	0.950	0.05	0.56	0.49	0.09	2.85	49.5	20.4	38.3	0.39	4.5	17.2	3.5	2.3	1.1	4.0	0.6	3.9	
11s171193	267	18.5	2.9	< 0.1	31.0	1.01	0.04	0.98	0.72	0.07	2.45	36.9	22.6	43.5	0.40	5.1	19.9	4.0	4.5	1.2	4.3	0.6	4.0	
11s171194	263	17.3	2.7	< 0.1	16.7	2.58	0.07	0.82	0.72	0.30	1.88	30.6	19.5	37.5	3.01	4.4	17.2	3.5	4.8	1.0	3.9	0.6	3.7	
11s171195	5.2	0.81	0.6	< 0.1	0.15	0.392	< 0.02	0.42	< 0.02	< 0.02	0.06	6.4	2.8	5.43	< 0.01	0.6	2.19	0.4	0.2	< 0.1	0.3	< 0.1	0.2	
11s171196	419	17.0	2.3	< 0.1	14.7	0.943	0.03	0.61	0.43	0.12	2.15	39.9	20.9	40.0	0.23	4.7	18.1	3.6	4.7	1.1	4.0	0.6	3.6	
11s171197	361	16.3	2.6	< 0.1	17.9	1.78	0.04	0.64	0.60	0.15	1.30	36.1	18.8	36.6	0.26	4.4	17.0	3.5	7.0	1.0	3.9	0.6	3.6	
11s171198	249	3.62	1.7	< 0.1	524	15.0	0.03	1.07	42.3	5.22	0.90	30.8	6.2	13.2	< 0.01	1.6	6.34	1.2	0.6	0.3	1.0	0.1	0.8	
11s171199	195	14.3	4.3	< 0.1	13.0	2.20	0.03	0.88	1.06	0.28	4.67	27.3	17.1	32.4	0.25	3.8	14.9	3.0	7.2	0.9	3.3	0.5	3.0	
11s171200	96.3	18.3	5.5	< 0.1	16.0	1.41	0.05	0.92	1.65	0.16	4.81	38.3	19.2	37.1	0.39	4.4	16.8	3.5	5.5	1.0	3.9	0.6	3.8	
11s171201	267	19.0	7.2	< 0.1	12.7	1.00	0.04	1.05	1.15	0.17	7.23	37.8	20.6	39.9	0.28	4.8	18.4	3.8	5.9	1.1	4.2	0.6	4.0	
11s171202	251	19.2	5.0	< 0.1	10.2	0.872	0.04	0.89	0.98	0.12	6.33	32.1	21.7	41.8	0.22	4.9	18.9	3.7	5.3	1.1	4.2	0.6	4.0	
11s171203	310	17.1	7.0	< 0.1	11.3	0.886	0.05	1.13	1.55	< 0.02	3.67	33.4	20.7	39.4	0.28	4.6	18.1	3.6	5.6	1.1	3.9	0.6	3.6	
11s171204	452	18.3	2.9	< 0.1	3.76	0.547	0.03	0.93	0.59	< 0.02	2.10	33.9	23.1	44.3	0.32	5.2	20.2	4.0	8.3	1.2	4.4	0.6	4.0	
11s171205	140	16.6	7.8	< 0.1	11.7	0.913	0.04	0.96	1.63	0.08	6.01	28.0	20.9	39.9	0.39	4.7	18.3	3.7	7.6	1.1	4.1	0.6	3.5	
11s171206	141	17.4	2.6	< 0.1	13.5	0.974	0.04	0.82	0.64	0.08	1.91	28.6	22.0	42.5	0.49	5.1	19.6	4.0	8.6	1.2	4.3	0.6	3.9	
11s171207	767	18.0	2.3	< 0.1	9.97	0.636	0.05	0.82	0.55	0.04	3.52	46.6	21.7	41.5	0.39	4.9	19.2	3.9	8.9	1.2	4.3	0.6	3.9	

Analyte Symbol	Sr	Y	Zr	Nb	Mo	Ag	In	Sn	Sb	Te	Cs	Ba	La	Ce	Cd	Pr	Nd	Sm	Se	Eu	Gd	Tb	Dy
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	0.5	0.01	0.1	0.1	0.01	0.002	0.02	0.05	0.02	0.02	0.02	0.5	0.5	0.01	0.01	0.1	0.02	0.1	0.1	0.1	0.1	0.1	0.1
Analysis Method	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS
11s171208	80.7	17.9	2.5	< 0.1	7.93	0.482	0.02	0.87	0.58	0.10	3.40	20.5	20.2	38.8	0.29	4.5	17.7	3.6	10.8	1.0	4.0	0.6	3.7
11s171209	79.9	15.6	2.3	< 0.1	6.78	0.470	0.03	0.77	1.02	0.11	2.17	26.6	18.9	35.6	0.29	4.2	16.0	3.3	9.2	1.0	3.7	0.5	3.2
11s171210	92.2	18.5	2.2	< 0.1	10.3	0.586	0.04	1.01	0.69	0.12	2.84	33.4	21.4	40.1	0.32	4.7	18.1	3.6	10.1	1.1	4.2	0.6	3.9
11s171211	62.6	17.9	2.3	< 0.1	16.1	0.601	0.03	0.77	0.65	0.08	1.64	27.3	20.1	38.5	0.29	4.5	17.4	3.5	9.4	1.1	4.0	0.6	3.7
11s171212	95.7	19.0	2.3	< 0.1	22.1	0.666	0.02	0.68	0.77	0.04	1.21	28.6	24.2	46.0	0.22	5.3	20.2	4.1	9.3	1.2	4.4	0.6	4.1
11s171213	91.2	18.0	2.4	< 0.1	24.7	0.638	0.03	0.63	0.42	< 0.02	2.31	29.1	24.2	46.1	0.26	5.3	20.4	3.9	9.2	1.2	4.2	0.6	3.7
11s171214	151	19.8	2.8	< 0.1	10.4	0.514	0.05	0.77	0.71	0.03	3.35	48.9	23.2	44.8	0.25	5.3	20.3	4.0	6.9	1.2	4.5	0.6	4.1
11s171215	128	18.5	2.5	< 0.1	10.8	0.480	0.03	0.92	0.84	0.05	3.51	39.9	20.0	38.8	0.20	4.6	17.8	3.6	8.1	1.1	4.1	0.6	3.8
11s171216	124	18.9	2.6	< 0.1	23.0	0.444	0.03	0.74	0.65	< 0.02	2.86	32.1	20.5	39.6	0.22	4.6	17.8	3.6	8.2	1.1	4.0	0.6	3.8
11s171217	103	15.5	7.5	0.4	846	60.7	5.85	2.82	120	3.36	1.36	27.1	9.1	17.5	2.32	2.3	9.99	2.4	8.8	0.7	2.9	0.4	3.0
11s171218	83.8	17.5	2.9	< 0.1	18.3	2.99	0.05	0.82	1.45	0.10	1.67	31.9	20.3	39.7	0.55	4.7	18.5	3.8	9.1	1.1	4.0	0.6	3.7
11s171219	94.4	16.5	2.5	< 0.1	29.3	2.13	0.03	0.60	1.00	0.13	0.72	24.4	18.7	36.5	0.56	4.3	16.8	3.3	10.9	1.0	3.8	0.5	3.4
11s171220	79.1	15.1	3.1	< 0.1	23.2	1.49	< 0.02	0.64	1.37	< 0.02	0.49	22.1	23.6	44.4	0.45	5.0	18.9	3.5	9.6	1.0	3.6	0.5	3.1
11s171221	4.3	0.79	0.7	< 0.1	0.18	0.269	< 0.02	0.13	< 0.02	< 0.02	0.06	4.8	2.7	5.23	< 0.01	0.6	2.17	0.3	< 0.1	< 0.1	0.3	< 0.1	0.2
11s171222	169	16.0	2.2	< 0.1	17.7	0.828	< 0.02	0.60	0.82	0.04	0.29	39.0	24.6	45.8	0.15	5.2	19.5	3.7	8.6	1.1	3.9	0.6	3.4
11s171223	138	15.6	2.2	< 0.1	15.0	1.15	< 0.02	0.82	1.82	0.03	0.34	22.9	23.9	43.6	0.72	4.9	18.3	3.5	8.9	1.0	3.8	0.5	3.4
11s171224	137	15.5	2.2	< 0.1	16.4	1.50	0.03	0.56	0.94	0.06	0.42	25.6	24.3	45.8	2.94	5.2	19.2	3.6	10.5	1.0	3.7	0.5	3.4
11s171225	125	14.8	1.6	< 0.1	18.0	2.13	< 0.02	0.43	14.4	0.05	0.15	31.5	21.4	39.9	0.38	4.6	17.3	3.3	7.8	1.0	3.7	0.5	3.3
11s171226	88.2	15.3	2.3	< 0.1	14.7	2.34	< 0.02	0.66	2.58	0.08	0.45	34.4	25.2	47.0	0.56	5.4	20.2	3.8	9.2	1.1	4.0	0.6	3.6
11s171227	107	12.8	1.9	< 0.1	14.8	7.74	0.05	1.29	5.82	0.25	0.23	54.2	21.8	41.8	15.4	4.8	18.3	3.5	6.6	0.8	3.7	0.5	3.1
11s171228	151	13.6	1.9	< 0.1	21.8	3.48	0.02	1.08	2.61	0.11	0.28	34.1	18.5	35.4	1.55	4.1	15.7	3.1	6.1	0.9	3.4	0.5	3.1
11s171229	122	16.0	2.4	< 0.1	9.31	1.44	< 0.02	0.90	0.59	0.06	0.51	31.7	26.1	49.5	4.37	5.7	21.7	4.2	5.2	1.2	4.2	0.6	3.8
11s171230	112	17.0	2.4	< 0.1	10.1	1.70	< 0.02	0.94	3.94	0.07	0.38	28.4	27.1	50.6	0.51	5.8	21.8	4.1	4.6	1.2	4.2	0.6	3.8
11s171231	126	12.2	2.1	< 0.1	8.67	9.10	0.06	0.68	20.1	0.12	0.15	13.2	19.8	36.5	21.0	4.1	15.4	3.0	6.3	0.9	3.1	0.5	2.8
11s171232	99.8	12.6	2.1	< 0.1	14.4	3.01	< 0.02	0.63	5.96	0.15	0.18	22.4	18.6	36.0	2.32	4.2	15.7	3.0	4.4	0.7	3.1	0.4	2.8
11s171233	110	16.6	2.4	< 0.1	10.3	1.06	< 0.02	0.65	0.78	0.04	0.30	28.7	26.0	49.0	0.26	5.6	20.8	4.0	6.0	1.1	4.1	0.6	3.6
11s171234	97.8	17.1	2.1	< 0.1	7.82	0.694	< 0.02	0.59	2.13	0.05	0.23	20.2	25.9	49.2	0.29	5.6	21.1	3.9	4.7	1.2	4.0	0.6	3.7
11s171235	97.0	16.5	2.6	< 0.1	11.3	0.473	< 0.02	0.88	0.95	0.06	0.73	26.5	26.9	51.1	0.30	5.8	21.8	4.1	5.8	1.2	4.2	0.6	3.7
11s171236	102	18.4	2.7	< 0.1	9.31	0.332	< 0.02	1.56	1.02	< 0.02	2.48	25.0	30.7	59.4	0.29	6.9	25.9	4.8	6.1	1.4	4.9	0.7	4.2
11s171301	195	17.8	1.8	< 0.1	0.98	0.242	0.03	0.79	1.46	< 0.02	3.85	101	29.5	55.3	0.14	6.3	23.3	4.4	0.7	1.2	4.6	0.6	4.0
11s171302	256	15.9	2.1	< 0.1	0.90	0.094	0.03	1.05	2.18	< 0.02	1.86	105	25.8	49.0	0.10	5.6	21.2	3.9	0.5	1.0	4.0	0.6	3.5
11s171303	350	17.9	2.4	< 0.1	0.85	0.055	0.03	1.01	2.08	< 0.02	2.17	83.0	27.8	51.9	0.09	5.9	22.5	4.2	0.6	1.1	4.4	0.6	3.8
11s171304	325	17.3	2.7	< 0.1	0.80	0.062	0.03	0.99	2.17	0.02	2.67	82.1	25.0	46.9	0.26	5.3	19.8	3.8	0.6	1.1	4.0	0.6	3.5
11s171305	278	16.8	1.9	< 0.1	0.90	0.152	0.03	0.84	1.63	0.17	2.07	271	26.1	48.8	0.15	5.5	20.2	3.9	0.6	1.1	4.1	0.6	3.5
11s171306	382	16.2	2.5	< 0.1	1.00	0.105	0.02	0.89	2.96	0.03	1.97	142	22.3	42.0	0.04	4.7	17.6	3.4	0.5	0.9	3.6	0.5	3.2
11s171307	194	15.3	1.8	< 0.1	0.71	0.411	0.03	0.62	1.69	0.87	1.74	113	21.3	40.0	0.22	4.5	16.5	3.1	0.6	0.9	3.3	0.4	2.7
11s171308	270	15.3	2.4	< 0.1	0.86	0.185	0.03	0.75	2.69	1.42	1.73	137	21.4	40.5	0.12	4.6	16.8	3.1	0.8	0.8	3.3	0.5	2.9



## Results

Analyte Symbol	Ho	Er	Tm	Yb	Lu	Hf	Ta	W	Re	Au	Tl	Pb	Th	U	Hg
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppb
Detection Limit	0.1	0.1	0.1	0.1	0.1	0.1	0.05	0.1	0.001	0.5	0.02	0.01	0.1	0.1	10
Analysis Method	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS
11s171159	0.4	1.0	0.1	0.8	0.1	< 0.1	< 0.05	0.6	0.042	242	0.37	90.6	3.9	0.9	90
11s171160	0.4	1.2	0.2	1.0	0.2	< 0.1	< 0.05	0.8	0.053	90.6	0.41	81.5	3.8	0.9	70
11s171161	0.4	1.1	0.2	0.8	0.1	< 0.1	< 0.05	0.4	0.079	190	0.27	52.0	4.0	0.9	50
11s171162	0.3	0.9	0.1	0.7	0.1	< 0.1	< 0.05	0.6	0.111	129	0.30	23.9	3.5	0.7	80
11s171163	0.4	1.1	0.1	0.8	0.1	< 0.1	< 0.05	0.6	0.118	97.6	0.43	13.1	4.1	0.7	< 10
11s171164	0.5	1.1	0.2	0.9	0.1	< 0.1	< 0.05	0.7	0.133	186	0.56	14.1	3.7	0.9	< 10
11s171165	0.5	1.1	0.1	0.8	0.1	< 0.1	< 0.05	0.5	0.137	93.1	0.75	17.6	4.5	0.9	< 10
11s171166	0.5	1.2	0.2	0.8	0.1	< 0.1	< 0.05	0.5	0.103	86.7	0.52	29.9	4.0	0.8	< 10
11s171167	0.5	1.1	0.2	0.9	0.2	< 0.1	< 0.05	0.5	0.147	95.3	0.52	29.7	4.2	1.1	< 10
11s171168	0.4	1.0	0.1	0.7	0.1	< 0.1	< 0.05	0.7	0.125	98.6	0.42	131	3.9	0.8	10
11s171169	0.7	2.0	0.3	1.6	0.2	0.3	< 0.05	3.0	0.112	597	0.14	92.6	1.5	2.2	1590
11s171170	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.05	< 0.1	< 0.001	< 0.5	0.02	1.35	0.7	< 0.1	< 10
11s171171	0.5	1.3	0.2	0.9	0.1	< 0.1	< 0.05	0.4	0.075	583	0.29	14.4	4.4	1.2	< 10
11s171172	0.4	1.2	0.2	0.8	0.1	< 0.1	< 0.05	0.5	0.073	192	0.39	15.4	4.2	0.9	< 10
11s171173	0.5	1.5	0.2	1.0	0.2	< 0.1	< 0.05	0.3	0.050	269	0.47	45.4	4.3	1.2	< 10
11s171174	0.6	1.5	0.2	1.1	0.2	< 0.1	< 0.05	0.4	0.070	171	0.55	102	4.4	1.3	20
11s171175	0.6	1.8	0.3	1.3	0.2	0.1	< 0.05	0.2	0.071	83.8	0.68	119	3.8	1.6	60
11s171176	< 0.1	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.05	< 0.1	< 0.001	< 0.5	0.06	1.13	0.8	0.1	< 10
11s171177	0.8	2.3	0.3	1.7	0.2	< 0.1	< 0.05	0.3	0.061	78.0	0.42	16.1	4.1	1.5	< 10
11s171178	0.8	2.1	0.3	1.6	0.2	< 0.1	< 0.05	0.6	0.051	59.5	0.41	13.4	4.3	0.8	< 10
11s171179	0.8	2.2	0.3	1.6	0.2	< 0.1	< 0.05	0.2	0.062	136	0.50	6.25	4.4	0.5	< 10
11s171180	0.9	2.6	0.4	1.9	0.3	< 0.1	< 0.05	0.3	0.048	183	0.65	5.58	4.9	0.4	< 10
11s171181	0.7	2.0	0.3	1.5	0.2	< 0.1	< 0.05	0.3	0.065	67.8	0.75	9.17	5.1	0.5	< 10
11s171182	0.8	2.2	0.3	1.5	0.2	< 0.1	< 0.05	0.2	0.093	73.5	0.64	10.9	5.0	2.3	< 10
11s171183	0.8	2.3	0.3	1.7	0.2	< 0.1	< 0.05	0.2	0.058	41.1	0.66	13.7	4.9	1.2	< 10
11s171184	0.8	2.4	0.3	1.7	0.2	< 0.1	< 0.05	0.6	0.028	311	0.57	6.96	5.1	0.9	< 10
11s171185	0.9	2.4	0.3	1.8	0.3	< 0.1	< 0.05	0.1	0.027	83.4	0.64	7.24	5.6	0.5	< 10
11s171186	0.8	2.4	0.3	1.7	0.2	< 0.1	< 0.05	< 0.1	0.066	45.2	0.62	10.5	5.3	0.6	< 10
11s171187	0.8	2.1	0.3	1.5	0.2	< 0.1	< 0.05	0.4	0.076	55.4	0.67	9.95	4.9	0.8	< 10
11s171188	0.6	1.8	0.2	1.3	0.2	< 0.1	< 0.05	0.4	0.076	211	0.50	10.2	4.7	1.2	< 10
11s171189	0.6	1.8	0.2	1.3	0.2	< 0.1	< 0.05	0.6	0.061	67.2	0.99	6.06	5.5	0.9	< 10
11s171190	0.6	1.8	0.3	1.3	0.2	< 0.1	< 0.05	0.5	0.069	191	0.71	7.70	4.9	1.0	< 10
11s171191	0.6	1.7	0.2	1.3	0.2	< 0.1	< 0.05	0.6	0.148	9.7	0.69	9.69	4.6	0.7	< 10
11s171192	0.8	2.3	0.3	1.7	0.3	< 0.1	< 0.05	0.2	0.093	31.2	0.70	10.3	5.3	0.8	< 10
11s171193	0.8	2.2	0.3	1.7	0.2	< 0.1	< 0.05	0.4	0.140	61.2	0.69	9.58	5.8	0.9	< 10
11s171194	0.7	2.2	0.3	1.6	0.2	< 0.1	< 0.05	0.4	0.075	1680	0.58	104	5.0	0.9	< 10
11s171195	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.05	< 0.1	< 0.001	< 0.5	0.05	1.21	0.6	< 0.1	< 10
11s171196	0.7	2.0	0.3	1.6	0.2	< 0.1	< 0.05	0.4	0.051	44.7	0.56	6.87	5.3	0.6	< 10
11s171197	0.7	2.0	0.3	1.5	0.2	< 0.1	< 0.05	0.4	0.053	1960	0.45	6.88	5.1	0.9	< 10
11s171198	0.1	0.4	< 0.1	0.4	< 0.1	< 0.1	< 0.05	< 0.1	0.263	579	0.10	30.6	1.1	1.0	1940
11s171199	0.6	1.7	0.2	1.4	0.2	0.1	< 0.05	0.3	0.043	354	0.50	8.46	4.6	1.1	20
11s171200	0.8	2.2	0.3	1.8	0.3	0.1	< 0.05	0.2	0.062	80.9	0.57	11.1	5.0	1.5	< 10
11s171201	0.8	2.3	0.3	1.7	0.3	0.1	< 0.05	0.2	0.051	88.6	0.74	10.9	4.9	0.9	< 10
11s171202	0.8	2.3	0.3	1.8	0.3	< 0.1	< 0.05	< 0.1	0.040	387	0.73	9.29	5.1	0.5	< 10
11s171203	0.7	2.0	0.3	1.6	0.2	0.1	< 0.05	0.2	0.050	105	0.49	10.2	5.3	1.2	< 10
11s171204	0.8	2.3	0.3	1.7	0.3	< 0.1	< 0.05	0.5	0.014	46.8	0.64	6.56	5.4	0.9	< 10
11s171205	0.7	1.9	0.3	1.5	0.2	0.1	< 0.05	0.2	0.056	64.0	0.64	12.5	5.2	1.3	< 10
11s171206	0.8	2.2	0.3	1.6	0.2	< 0.1	< 0.05	0.3	0.040	45.0	0.54	5.31	5.6	0.6	< 10
11s171207	0.8	2.2	0.3	1.6	0.2	< 0.1	< 0.05	0.6	0.022	252	0.80	6.07	5.3	0.5	< 10

Analyte Symbol	Ho	Er	Tm	Yb	Lu	Hf	Ta	W	Re	Au	Tl	Pb	Th	U	Hg
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppb
Detection Limit	0.1	0.1	0.1	0.1	0.1	0.1	0.05	0.1	0.001	0.5	0.02	0.01	0.1	0.1	10
Analysis Method	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS
11s171208	0.8	2.1	0.3	1.6	0.2	< 0.1	< 0.05	0.9	0.017	32.4	0.88	7.47	5.0	0.6	< 10
11s171209	0.7	1.8	0.3	1.4	0.2	< 0.1	< 0.05	0.9	0.024	80.2	0.68	5.58	5.1	0.8	< 10
11s171210	0.8	2.1	0.3	1.6	0.2	< 0.1	< 0.05	0.5	0.042	18.1	0.86	5.84	5.0	0.6	< 10
11s171211	0.7	2.1	0.3	1.6	0.2	< 0.1	< 0.05	0.5	0.077	56.1	0.59	6.21	4.9	0.7	< 10
11s171212	0.8	2.2	0.3	1.6	0.2	< 0.1	< 0.05	1.3	0.086	20.1	0.48	8.36	5.9	0.7	< 10
11s171213	0.8	2.1	0.3	1.5	0.2	< 0.1	< 0.05	0.3	0.083	33.3	0.61	7.28	5.8	0.4	< 10
11s171214	0.8	2.2	0.3	1.7	0.2	< 0.1	< 0.05	0.3	0.035	28.2	0.73	7.18	5.2	0.4	< 10
11s171215	0.8	2.1	0.3	1.6	0.2	< 0.1	< 0.05	0.3	0.042	18.0	0.97	7.75	4.3	0.5	< 10
11s171216	0.8	2.1	0.3	1.6	0.2	< 0.1	< 0.05	0.3	0.063	21.2	0.90	5.96	4.5	0.6	< 10
11s171217	0.6	1.8	0.3	1.5	0.2	0.2	< 0.05	2.7	0.114	718	0.16	88.9	1.4	2.0	1400
11s171218	0.7	2.0	0.3	1.5	0.2	< 0.1	< 0.05	0.5	0.068	85.2	0.60	5.13	4.7	0.7	< 10
11s171219	0.7	1.9	0.3	1.4	0.2	< 0.1	< 0.05	0.4	0.109	321	0.35	10.2	4.8	0.7	< 10
11s171220	0.6	1.7	0.2	1.3	0.2	0.1	< 0.05	0.5	0.093	32.4	0.29	49.4	5.9	0.8	< 10
11s171221	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.05	< 0.1	< 0.001	< 0.5	0.05	1.31	0.6	< 0.1	< 10
11s171222	0.7	1.8	0.3	1.4	0.2	< 0.1	< 0.05	0.3	0.062	24.7	0.22	8.57	6.3	1.0	< 10
11s171223	0.7	1.9	0.3	1.5	0.2	< 0.1	< 0.05	0.4	0.064	39.5	0.27	157	5.5	1.0	< 10
11s171224	0.7	1.9	0.3	1.5	0.2	< 0.1	< 0.05	0.6	0.074	35.4	0.31	187	6.0	1.1	110
11s171225	0.7	1.9	0.3	1.5	0.2	< 0.1	< 0.05	< 0.1	0.093	78.1	0.16	26.4	6.0	1.0	30
11s171226	0.7	1.9	0.3	1.5	0.2	< 0.1	< 0.05	0.7	0.080	30.6	0.31	5.00	6.5	1.2	< 10
11s171227	0.6	1.6	0.2	1.2	0.2	< 0.1	< 0.05	0.8	0.089	74.1	0.44	43.1	6.2	1.1	40
11s171228	0.6	1.7	0.2	1.3	0.2	< 0.1	< 0.05	0.6	0.122	58.9	0.33	32.7	5.7	1.2	< 10
11s171229	0.7	2.0	0.3	1.5	0.2	< 0.1	< 0.05	0.6	0.039	481	0.36	8.80	7.0	1.1	< 10
11s171230	0.8	2.1	0.3	1.6	0.2	< 0.1	< 0.05	0.6	0.064	33.5	0.34	40.7	6.5	1.3	< 10
11s171231	0.6	1.5	0.2	1.2	0.2	< 0.1	< 0.05	0.8	0.051	71.6	0.32	632	5.1	1.2	790
11s171232	0.6	1.6	0.2	1.2	0.2	< 0.1	< 0.05	0.5	0.063	118	0.30	51.2	5.5	0.9	< 10
11s171233	0.7	2.0	0.3	1.5	0.2	< 0.1	< 0.05	0.6	0.063	203	0.30	7.84	6.6	1.1	< 10
11s171234	0.7	2.1	0.3	1.6	0.2	< 0.1	< 0.05	0.4	0.064	23.6	0.24	20.9	6.4	1.1	< 10
11s171235	0.7	2.0	0.3	1.6	0.2	< 0.1	< 0.05	0.4	0.081	17.6	0.40	26.1	6.3	1.0	< 10
11s171236	0.8	2.2	0.3	1.6	0.2	< 0.1	< 0.05	0.3	0.054	86.5	0.80	13.3	7.9	0.7	< 10
11s171301	0.8	2.1	0.3	1.7	0.2	< 0.1	< 0.05	< 0.1	< 0.001	< 0.5	0.39	7.37	8.0	1.4	< 10
11s171302	0.7	1.9	0.3	1.4	0.2	< 0.1	< 0.05	< 0.1	0.001	< 0.5	0.42	8.83	7.0	0.9	< 10
11s171303	0.7	2.0	0.3	1.5	0.2	< 0.1	< 0.05	< 0.1	< 0.001	< 0.5	0.43	6.30	7.3	0.9	< 10
11s171304	0.7	2.0	0.3	1.5	0.2	< 0.1	< 0.05	< 0.1	< 0.001	< 0.5	0.40	21.2	6.7	0.8	< 10
11s171305	0.7	1.9	0.3	1.4	0.2	< 0.1	< 0.05	< 0.1	< 0.001	< 0.5	0.25	9.85	7.3	1.0	< 10
11s171306	0.6	1.8	0.2	1.4	0.2	< 0.1	< 0.05	< 0.1	< 0.001	< 0.5	0.33	6.57	6.3	1.0	< 10
11s171307	0.5	1.4	0.2	1.1	0.2	< 0.1	< 0.05	< 0.1	< 0.001	9.4	0.37	5.14	6.3	1.0	< 10
11s171308	0.6	1.6	0.2	1.2	0.2	< 0.1	< 0.05	< 0.1	< 0.001	1.8	0.46	4.01	5.6	1.1	< 10

QC

Analyte Symbol	Au	Li	Be	B	Na	Mg	Al	K	Bi	Ca	Sc	V	Cr	Mn	Fe	Co	Ni	Cu	Zn	Ga	Ge	As	Rb
Unit Symbol	ppb	ppm	ppm	ppm	%	%	%	%	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	5	0.1	0.1	1	0.001	0.01	0.01	0.01	0.02	0.01	0.1	1	1	1	0.01	0.1	0.1	0.01	0.1	0.02	0.1	0.1	0.1
Analysis Method	FA-AA	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS
GXR-1 Meas		5.9	1.0	15	0.053	0.15	0.40	0.04	1490	0.89	0.8	79	10	903	22.6	8.1	44.7	1140	753	4.85		405	2.2
GXR-1 Cert		8.20	1.22	15.0	0.0520	0.217	3.52	0.050	1380	0.960	1.58	80.0	12.0	852	23.6	8.20	41.0	1110	760	13.8		427	14.0
GXR-4 Meas		11.5	1.7	5	0.150	1.67	3.08	1.97	19.1	0.92	6.7	82	58	142	2.76	14.0	41.8	6490	68.7	10.6		94.9	95.5
GXR-4 Cert		11.1	1.90	4.50	0.564	1.66	7.20	4.01	19.0	1.01	7.70	87.0	64.0	155	3.09	14.6	42.0	6520	73.0	20.0		98.0	160
GXR-6 Meas		38.6	1.3	9	0.101	0.52	> 10.0	1.55	0.21	0.17	26.2	177	90	1200	5.65	14.7	27.0	71.8	123	17.1		194	70.7
GXR-6 Cert		32.0	1.40	9.80	0.104	0.609	17.7	1.87	0.290	0.180	27.6	186	96.0	1010	5.58	13.8	27.0	66.0	118	35.0		330	90.0
SAR-M (U.S.G.S.) Meas		18.1	1.4		0.046	0.42	1.45	0.34	2.07	0.31	3.0	36	94	5030	2.66	10.9	47.6	338	934	5.49		35.0	22.8
SAR-M (U.S.G.S.) Cert		27.4	2.20		1.140	0.50	6.30	2.94	1.94	0.61	7.83	67.2	79.7	5220	2.99	10.70	41.5	331	930.0	17		38.8	146
SG56 Meas	1030																						
SG56 Cert	1027.00																						
SG56 Meas	1090																						
SG56 Cert	1027.00																						
SG56 Meas	1030																						
SG56 Cert	1027.00																						
SG56 Meas	1000																						
SG56 Cert	1027.00																						
SG56 Meas	1070																						
SG56 Cert	1027.00																						
OxD108 Meas	424																						
OxD108 Cert	414.000																						
OxD108 Meas	426																						
OxD108 Cert	414.000																						
OxD108 Meas	409																						
OxD108 Cert	414.000																						
OxD108 Meas	418																						
OxD108 Cert	414.000																						
OxD108 Meas	441																						
OxD108 Cert	414.000																						
OREAS 922 (AQUA REGIA) Meas						1.63	3.69			0.46				4.93	20.0			2230	252			6.1	
OREAS 922 (AQUA REGIA) Cert						1.33	2.72			0.324				5.05	19.4			2176	256			6.12	
OREAS 923 (AQUA REGIA) Meas						1.81	3.89			0.49				6.02	24.4			4570	337			7.5	
OREAS 923 (AQUA REGIA) Cert						1.43	2.80			0.326				5.91	22.2			4248	335			7.07	
11s171159 Orig	275																						
11s171159 Dup	279																						
11s171171 Orig		5.2	0.3	3	0.023	0.23	0.77	0.51	1.50	2.49	0.9	11	6	575	3.44	9.7	6.2	465	20.2	1.79	0.1	46.9	22.3
11s171171 Dup		5.3	0.4	3	0.022	0.24	0.77	0.53	1.53	2.61	0.9	11	7	579	3.43	9.6	6.4	464	22.0	1.75	< 0.1	47.3	21.9
11s171185 Orig		8.7	0.9	3	0.038	0.51	1.71	0.83	0.98	3.63	2.9	23	8	637	2.67	10.2	7.9	215	54.3	3.32	< 0.1	21.6	39.2
11s171185 Dup		8.3	0.9	2	0.036	0.50	1.64	0.79	1.00	3.45	2.8	22	8	641	2.70	10.4	7.8	215	54.4	3.22	< 0.1	22.1	38.3
11s171188 Orig	208	9.5	0.5	2	0.035	0.36	1.02	0.64	2.28	2.02	1.6	16	8	357	3.17	10.0	6.8	359	34.7	2.38	< 0.1	36.7	26.8
11s171188 Split	155	9.5	0.4	4	0.042	0.43	1.14	0.69	2.38	2.15	1.7	18	9	404	3.53	10.7	7.5	388	38.6	2.63	< 0.1	41.5	28.7
11s171189 Orig	226																						
11s171189 Dup	207																						
11s171198 Orig		3.8	0.3	1	0.056	0.14	0.79	0.35	2.62	1.00	0.4	14	15	305	1.24	5.1	9.4	4590	26.5	2.72	< 0.1	11.7	7.3
11s171198 Dup		3.9	0.3	1	0.062	0.15	0.88	0.37	2.91	1.02	0.4	15	16	317	1.31	5.3	9.4	4870	24.5	2.97	< 0.1	11.9	8.0

Analyte Symbol	Au	Li	Be	B	Na	Mg	Al	K	Bi	Ca	Sc	V	Cr	Mn	Fe	Co	Ni	Cu	Zn	Ga	Ge	As	Rb
Unit Symbol	ppb	ppm	ppm	ppm	%	%	%	%	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	5	0.1	0.1	1	0.001	0.01	0.01	0.01	0.02	0.01	0.1	1	1	1	0.01	0.1	0.1	0.01	0.1	0.02	0.1	0.1	0.1
Analysis Method	FA-AA	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS
11s171208 Orig	84	16.1	0.6	< 1	0.041	0.74	1.54	0.98	0.82	2.42	3.2	28	12	557	3.42	10.7	10.1	198	57.8	3.71	0.1	15.8	47.1
11s171208 Split	109	16.1	0.5	4	0.045	0.81	1.63	1.01	0.86	3.26	3.3	30	12	585	3.50	11.1	10.1	205	60.5	3.88	0.1	17.2	50.2
11s171212 Orig		8.9	0.5	1	0.038	0.52	1.25	0.79	0.60	2.31	2.0	17	8	391	3.12	10.2	6.3	325	35.8	2.60	0.1	14.8	29.9
11s171212 Dup		9.0	0.5	2	0.039	0.51	1.23	0.81	0.61	2.70	2.0	17	9	393	3.14	10.4	6.6	329	35.8	2.63	0.1	15.3	30.5
11s171218 Orig	647	10.9	0.4	4	0.036	0.55	1.54	0.99	0.25	2.35	2.5	23	14	488	3.22	10.8	7.2	1120	54.9	3.41	0.1	17.8	41.2
11s171218 Split	662	12.1	0.5	9	0.039	0.59	1.56	1.01	0.23	2.30	2.5	22	13	514	3.26	10.7	7.3	1120	54.8	3.23	0.1	17.9	40.6
11s171233 Orig	338																						
11s171233 Dup	379																						
11s171235 Orig		9.6	0.6	3	0.074	0.38	1.35	0.80	0.77	1.92	2.3	19	7	267	3.27	8.4	6.0	109	31.2	3.23	< 0.1	18.2	28.6
11s171235 Dup		10.0	0.5	6	0.077	0.39	1.39	0.81	0.77	2.31	2.4	19	7	266	3.29	8.4	5.8	107	28.3	3.27	0.1	18.6	28.6
11s171307 Orig	9																						
11s171307 Dup	8																						
11s171308 Orig	6	23.8	0.7	10	0.079	1.26	2.72	1.55	0.03	3.06	6.5	62	15	1290	3.49	12.3	9.7	26.1	56.1	8.49	< 0.1	157	57.2
11s171308 Split	8	25.4	0.8	11	0.080	1.22	2.70	1.47	0.04	2.95	6.3	61	14	1250	3.40	11.8	9.7	26.5	55.7	7.87	< 0.1	160	54.7
Method Blank	< 5																						
Method Blank	< 5																						
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QC

Analyte Symbol	Sr	Y	Zr	Nb	Mo	Ag	In	Sn	Sb	Te	Cs	Ba	La	Ce	Cd	Pr	Nd	Sm	Se	Eu	Gd	Tb	Dy
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	0.5	0.01	0.1	0.1	0.01	0.002	0.02	0.05	0.02	0.02	0.02	0.5	0.5	0.01	0.01	0.1	0.02	0.1	0.1	0.1	0.1	0.1	0.1
Analysis Method	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS
GXR-1 Meas	199	28.3	9.1	< 0.1	18.0	33.2	0.72	24.1	81.9	14.4	2.59	232	5.3	10.3	2.44		6.31	2.2	16.2	0.5	3.8	0.7	5.0
GXR-1 Cert	275	32.0	38.0	0.800	18.0	31.0	0.770	54.0	122	13.0	3.00	750	7.50	17.0	3.30		18.0	2.70	16.6	0.690	4.20	0.830	4.30
GXR-4 Meas	71.7	12.0	7.4	0.4	303	3.52	0.19	5.38	3.14	0.88	2.35	34.8	45.5	85.8	0.22		33.7	5.3	5.5	1.3	4.6	0.5	2.7
GXR-4 Cert	221	14.0	186	10.0	310	4.00	0.270	5.60	4.80	0.970	2.80	1640	64.5	102	0.860		45.0	6.60	5.60	1.63	5.25	0.360	2.60
GXR-6 Meas	31.1	7.24	2.8	< 0.1	1.36	0.289	0.06	1.09	1.17	< 0.02	3.90	956	11.7	33.8	0.09		12.2	2.5	0.2	0.6	2.3	0.3	1.9
GXR-6 Cert	35.0	14.0	110	7.50	2.40	1.30	0.260	1.70	3.60	0.0180	4.20	1300	13.9	36.0	1.00		13.0	2.67	0.940	0.760	2.97	0.415	2.80
SAR-M (U.S.G.S.) Meas	28.1	18.9		1.2	12.1	2.70	1.05	1.73	3.99	0.84		168	43.7	91.7	5.11				0.7				
SAR-M (U.S.G.S.) Cert	151	28.00		29.9	13.1	3.64	1.08	2.76	6.0	0.96		801	57.4	122.0	5.27				0.39				
SG56 Meas																							
SG56 Cert																							
SG56 Meas																							
SG56 Cert																							
SG56 Meas																							
SG56 Cert																							
SG56 Meas																							
SG56 Cert																							
SG56 Meas																							
SG56 Cert																							
OxD108 Meas																							
OxD108 Cert																							

Analyte Symbol	Sr	Y	Zr	Nb	Mo	Ag	In	Sn	Sb	Te	Cs	Ba	La	Ce	Cd	Pr	Nd	Sm	Se	Eu	Gd	Tb	Dy
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	0.5	0.01	0.1	0.1	0.01	0.002	0.02	0.05	0.02	0.02	0.02	0.5	0.5	0.01	0.01	0.1	0.02	0.1	0.1	0.1	0.1	0.1	0.1
Analysis Method	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS
OxD108 Meas																							
OxD108 Cert																							
OxD108 Meas																							
OxD108 Cert																							
OxD108 Meas																							
OxD108 Cert																							
OxD108 Meas																							
OxD108 Cert																							
OREAS 922 (AQUA REGIA) Meas						0.969			0.69						0.26								
OREAS 922 (AQUA REGIA) Cert						0.851			0.57						0.280								
OREAS 923 (AQUA REGIA) Meas						1.44			0.61						0.38								
OREAS 923 (AQUA REGIA) Cert						1.62			0.58						0.40								
11s171159 Orig																							
11s171159 Dup																							
11s171171 Orig	184	12.0	2.2	< 0.1	16.0	1.96	0.09	0.45	1.29	0.08	1.08	23.9	21.3	42.0	0.21	5.1	19.9	4.2	7.4	1.0	4.3	0.5	3.0
11s171171 Dup	181	11.8	2.2	< 0.1	17.1	1.77	0.09	0.57	1.35	0.09	1.07	25.4	21.2	41.8	0.20	5.0	19.8	4.2	6.8	1.1	4.4	0.6	3.0
11s171185 Orig	155	19.8	3.7	< 0.1	8.44	0.570	0.05	0.64	0.50	0.08	4.23	56.5	22.4	42.3	0.19	5.0	19.3	3.9	3.2	1.2	4.4	0.7	4.3
11s171185 Dup	153	20.1	3.6	< 0.1	8.71	0.587	0.05	1.95	0.50	0.03	4.14	56.7	22.7	43.0	0.20	5.1	19.6	3.9	3.1	1.2	4.5	0.7	4.3
11s171188 Orig	182	14.9	2.3	< 0.1	23.7	1.00	0.04	0.79	0.88	0.21	1.45	24.2	18.0	34.9	0.17	4.1	15.9	3.2	4.3	0.9	3.6	0.5	3.3
11s171188 Split	196	16.3	2.5	< 0.1	24.4	0.811	0.04	0.85	0.91	0.21	1.50	20.9	18.8	36.3	0.22	4.3	16.5	3.3	5.6	1.0	3.6	0.5	3.3
11s171189 Orig																							
11s171189 Dup																							
11s171198 Orig	245	3.55	1.7	< 0.1	518	14.4	0.03	1.07	42.2	5.14	0.88	31.8	6.1	12.9	< 0.01	1.6	6.21	1.2	0.5	0.3	1.0	0.1	0.7
11s171198 Dup	254	3.69	1.7	< 0.1	530	15.6	0.03	1.06	42.5	5.30	0.91	29.8	6.4	13.5	< 0.01	1.6	6.46	1.2	0.6	0.3	1.1	0.1	0.8
11s171208 Orig	80.7	17.9	2.5	< 0.1	7.93	0.482	0.02	0.87	0.58	0.10	3.40	20.5	20.2	38.8	0.29	4.5	17.7	3.6	10.8	1.0	4.0	0.6	3.7
11s171208 Split	93.7	19.4	2.6	< 0.1	8.42	0.563	0.03	0.84	0.58	0.07	3.61	47.3	23.0	43.5	0.31	5.2	19.8	4.0	11.4	1.2	4.4	0.6	4.1
11s171212 Orig	92.2	18.8	2.2	< 0.1	21.7	0.654	0.02	0.64	0.75	0.03	1.18	26.6	23.5	44.3	0.22	5.1	19.4	3.9	8.9	1.1	4.4	0.6	4.0
11s171212 Dup	99.2	19.2	2.3	< 0.1	22.4	0.679	0.02	0.72	0.79	0.05	1.23	30.5	24.8	47.7	0.22	5.5	21.0	4.2	9.6	1.2	4.5	0.7	4.2
11s171218 Orig	83.8	17.5	2.9	< 0.1	18.3	2.99	0.05	0.82	1.45	0.10	1.67	31.9	20.3	39.7	0.55	4.7	18.5	3.8	9.1	1.1	4.0	0.6	3.7
11s171218 Split	81.3	17.4	2.7	< 0.1	16.7	1.52	0.05	0.74	1.38	0.05	1.66	31.4	20.4	39.5	0.54	4.7	18.2	3.7	9.2	1.1	4.0	0.6	3.7
11s171233 Orig																							
11s171233 Dup																							
11s171235 Orig	95.4	16.5	2.6	< 0.1	11.3	0.475	< 0.02	0.94	0.95	0.06	0.72	26.6	26.6	50.2	0.32	5.7	21.1	3.9	5.5	1.1	4.1	0.6	3.7
11s171235 Dup	98.5	16.5	2.6	< 0.1	11.4	0.471	< 0.02	0.83	0.94	0.06	0.74	26.3	27.2	52.0	0.27	5.9	22.5	4.2	6.2	1.2	4.3	0.6	3.8
11s171307 Orig																							
11s171307 Dup																							
11s171308 Orig	270	15.3	2.4	< 0.1	0.86	0.185	0.03	0.75	2.69	1.42	1.73	137	21.4	40.5	0.12	4.6	16.8	3.1	0.8	0.8	3.3	0.5	2.9
11s171308 Split	263	15.1	2.1	< 0.1	0.86	0.988	0.03	0.83	2.69	1.95	1.69	140	22.2	42.1	0.13	4.8	17.7	3.3	0.6	0.9	3.5	0.5	3.1
Method Blank																							
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Analyte Symbol	Ho	Er	Tm	Yb	Lu	Hf	Ta	W	Re	Au	Tl	Pb	Th	U	Hg
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppb
Detection Limit	0.1	0.1	0.1	0.1	0.1	0.1	0.05	0.1	0.001	0.5	0.02	0.01	0.1	0.1	10
Analysis Method	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS
11s171171 Dup	0.5	1.3	0.2	0.9	0.1	< 0.1	< 0.05	0.4	0.081	69.6	0.31	14.6	4.5	1.3	< 10
11s171185 Orig	0.9	2.4	0.3	1.7	0.3	< 0.1	< 0.05	0.1	0.026	52.6	0.65	7.16	5.6	0.5	< 10
11s171185 Dup	0.9	2.4	0.3	1.8	0.3	< 0.1	< 0.05	0.1	0.027	114	0.64	7.33	5.6	0.5	< 10
11s171188 Orig	0.6	1.8	0.2	1.3	0.2	< 0.1	< 0.05	0.4	0.076	211	0.50	10.2	4.7	1.2	< 10
11s171188 Split	0.7	1.8	0.3	1.4	0.2	< 0.1	< 0.05	0.4	0.082	87.5	0.46	10.9	4.7	1.2	< 10
11s171189 Orig															
11s171189 Dup															
11s171198 Orig	0.1	0.4	< 0.1	0.3	< 0.1	< 0.1	< 0.05	< 0.1	0.262	684	0.11	30.5	1.1	1.0	1860
11s171198 Dup	0.2	0.4	< 0.1	0.4	< 0.1	< 0.1	< 0.05	< 0.1	0.264	473	0.08	30.8	1.0	1.0	2020
11s171208 Orig	0.8	2.1	0.3	1.6	0.2	< 0.1	< 0.05	0.9	0.017	32.4	0.88	7.47	5.0	0.6	< 10
11s171208 Split	0.8	2.3	0.3	1.7	0.2	< 0.1	< 0.05	1.0	0.019	14.3	0.88	7.84	5.8	0.6	< 10
11s171212 Orig	0.8	2.1	0.3	1.6	0.2	< 0.1	< 0.05	1.4	0.082	13.4	0.48	8.21	5.7	0.7	< 10
11s171212 Dup	0.8	2.3	0.3	1.7	0.2	< 0.1	< 0.05	1.3	0.089	26.7	0.49	8.51	6.1	0.7	< 10
11s171218 Orig	0.7	2.0	0.3	1.5	0.2	< 0.1	< 0.05	0.5	0.068	85.2	0.60	5.13	4.7	0.7	< 10
11s171218 Split	0.7	2.0	0.3	1.4	0.2	< 0.1	< 0.05	0.4	0.070	49.9	0.67	5.58	4.6	0.6	< 10
11s171233 Orig															
11s171233 Dup															
11s171235 Orig	0.7	2.0	0.3	1.5	0.2	< 0.1	< 0.05	0.4	0.076	14.3	0.38	26.1	6.2	1.0	< 10
11s171235 Dup	0.7	2.0	0.3	1.6	0.2	< 0.1	< 0.05	0.4	0.087	20.9	0.43	26.1	6.5	1.0	< 10
11s171307 Orig															
11s171307 Dup															
11s171308 Orig	0.6	1.6	0.2	1.2	0.2	< 0.1	< 0.05	< 0.1	< 0.001	1.8	0.46	4.01	5.6	1.1	< 10
11s171308 Split	0.6	1.7	0.2	1.3	0.2	< 0.1	< 0.05	< 0.1	< 0.001	< 0.5	0.52	4.56	6.0	1.2	< 10
Method Blank															
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**Date Submitted:** 17-Jun-14  
**Invoice No.:** A14-04091  
**Invoice Date:** 27-Jun-14  
**Your Reference:**

Renaissance Geosciences  
680 Dairy Road  
Kamloops B.C. V2B 8N5  
Canada

ATTN: Richard Buzbuzian

## CERTIFICATE OF ANALYSIS

57 Core samples were submitted for analysis.

The following analytical package was requested:

Code 1A2-Kamloops Au - Fire Assay AA  
Code UT-1-Kamloops Aqua Regia ICP/MS

REPORT      **A14-04091**

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:

Assays are recommended for values >10,000 for Cu and Au. The Au from AR-MS is only semi-quantitative. For accurate Au data, fire assay is recommended.  
If value exceeds upper limit we recommend reassay by fire assay gravimetric-Code 1A3

CERTIFIED BY:

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

Emmanuel Esemé , Ph.D.  
Quality Control





## Results

Analyte Symbol	Au	Li	Be	B	Na	Mg	Al	K	Bi	Ca	Sc	V	Cr	Mn	Fe	Co	Ni	Cu	Zn	Ga	Ge	As	Rb
Unit Symbol	ppb	ppm	ppm	ppm	%	%	%	%	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	5	0.1	0.1	1	0.001	0.01	0.01	0.01	0.02	0.01	0.1	1	1	1	0.01	0.1	0.1	0.01	0.1	0.02	0.1	0.1	0.1
Analysis Method	FA-AA	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS
11S171237	918	6.7	0.3	7	0.040	0.40	0.88	0.55	0.29	2.48	3.2	19	5	341	3.06	6.2	5.5	119	44.3	3.21	< 0.1	19.3	34.6
11S171238	128	7.2	0.4	7	0.037	0.47	1.16	0.65	0.36	1.58	3.3	19	3	285	3.01	5.7	5.0	126	42.5	3.28	< 0.1	21.5	35.3
11S171239	< 5	0.8	< 0.1	6	0.016	0.02	0.08	< 0.01	< 0.02	0.02	0.2	2	< 1	23	0.20	0.5	1.6	0.91	3.0	0.28	< 0.1	1.4	0.9
11S171240	163	9.4	0.4	7	0.039	0.45	1.14	0.68	0.42	1.28	3.4	21	4	303	3.44	6.4	4.6	142	38.8	3.63	< 0.1	29.4	38.5
11S171241	66	10.1	0.4	7	0.040	0.45	1.22	0.72	0.48	1.33	3.7	23	3	301	3.21	7.2	4.4	159	36.1	3.91	0.1	30.4	40.9
11S171242	80	8.7	0.3	8	0.037	0.47	1.24	0.69	0.31	1.12	3.9	21	3	318	3.95	6.8	4.3	122	42.2	3.68	0.1	33.6	40.0
11S171243	119	8.2	0.5	6	0.039	0.42	1.29	0.63	0.29	1.89	3.9	23	3	408	3.62	6.8	4.8	158	49.6	4.08	< 0.1	22.6	36.4
11S171244	< 5	0.7	< 0.1	4	0.015	0.01	0.07	< 0.01	< 0.02	0.02	0.2	2	< 1	37	0.22	0.4	1.4	7.78	5.8	0.27	< 0.1	1.0	0.8
11S171245	346	4.1	0.2	4	0.034	0.17	0.74	0.43	0.39	1.60	1.8	10	< 1	393	3.22	6.7	4.1	162	11.0	2.02	< 0.1	33.8	18.2
11S171246	671	7.9	0.3	3	0.037	0.45	1.13	0.68	0.43	1.99	3.6	20	4	416	3.30	6.9	4.9	308	42.9	3.49	< 0.1	19.0	35.6
11S171247	868	2.3	0.2	1	0.050	0.11	0.65	0.27	2.50	0.83	0.8	13	11	300	1.31	4.6	8.8	4420	29.2	2.83	< 0.1	12.8	7.5
11S171248	80	9.6	0.4	3	0.035	0.60	1.25	0.81	0.30	2.00	5.1	30	4	445	3.58	9.4	6.1	159	53.2	4.06	0.1	23.7	45.9
11S171249	114	13.1	0.4	3	0.046	0.83	1.41	0.89	0.32	1.56	5.3	36	7	446	4.34	10.9	7.1	202	64.3	4.92	0.1	17.0	56.5
11S171250	99	12.2	0.4	3	0.044	0.73	1.39	0.83	0.36	1.96	5.3	33	7	470	3.87	10.2	6.9	194	58.5	4.57	< 0.1	14.4	48.0
11S171251	69	11.5	0.4	7	0.047	0.82	1.46	0.85	1.58	2.33	4.6	31	10	536	3.48	9.6	7.9	158	66.7	4.47	< 0.1	14.7	45.9
11S171252	136	8.9	0.4	4	0.043	0.63	1.34	0.67	0.61	2.19	4.7	29	6	469	3.70	8.8	6.5	138	59.3	4.29	< 0.1	12.5	37.2
11S171253	36	6.5	0.3	3	0.043	0.40	1.11	0.54	0.87	2.29	3.4	19	5	383	2.58	6.3	5.1	51.5	28.3	3.68	< 0.1	10.4	26.5
11S171254	19	4.4	0.3	3	0.043	0.31	1.00	0.47	0.32	2.84	2.9	15	3	396	2.47	5.6	4.9	11.6	20.7	3.13	< 0.1	9.0	20.8
11S171255	13	5.7	0.3	3	0.047	0.35	1.00	0.45	0.28	2.20	3.2	18	3	327	2.68	5.8	4.7	29.4	25.3	3.73	< 0.1	10.3	21.6
11S171256	41	4.9	0.3	4	0.038	0.25	0.92	0.44	0.35	1.94	2.7	13	3	327	2.55	5.4	4.0	13.5	22.7	2.91	< 0.1	10.9	20.5
11S171257	39	3.7	0.2	5	0.031	0.14	0.79	0.41	0.51	2.22	1.6	9	1	432	3.02	5.2	4.2	10.6	118	2.03	< 0.1	15.8	16.5
11S171258	35	4.8	0.4	4	0.052	0.20	1.04	0.51	0.31	2.62	2.8	14	3	365	2.66	5.6	4.5	13.4	26.2	3.03	< 0.1	11.9	20.7
11S171259	26	3.5	0.3	3	0.035	0.12	0.79	0.39	0.24	2.03	2.3	11	1	244	2.27	5.4	4.3	11.5	10.5	2.32	< 0.1	11.6	15.0
11S171260	60	4.7	0.3	4	0.040	0.19	0.96	0.45	0.25	2.69	3.1	14	2	308	2.33	5.7	4.4	17.1	14.2	2.98	< 0.1	10.5	18.3
11S171261	56	8.7	0.5	4	0.054	0.43	1.55	0.62	0.56	2.07	3.9	24	4	394	2.95	5.9	4.8	31.2	36.2	5.15	< 0.1	9.9	29.2
11S171262	140	11.1	0.4	5	0.048	0.49	1.24	0.57	0.68	1.65	4.2	26	3	380	3.67	7.5	4.9	58.1	47.0	4.55	< 0.1	14.2	28.7
11S171263	225	8.1	0.5	3	0.043	0.42	1.38	0.54	0.58	3.14	5.3	29	3	488	3.49	7.7	5.3	65.3	49.3	4.68	0.1	22.0	27.3
11S171264	216	7.5	0.4	2	0.038	0.38	1.23	0.49	0.58	2.91	5.1	26	3	409	3.59	7.4	5.7	105	40.5	3.92	< 0.1	25.0	25.1
11S171265	< 5	0.7	< 0.1	1	0.015	0.01	0.07	0.01	< 0.02	0.02	0.2	2	< 1	17	0.16	0.6	1.4	0.75	1.7	0.26	< 0.1	0.7	0.9
11S171266	93	9.3	0.4	4	0.057	0.49	1.12	0.57	1.05	1.91	4.5	26	5	349	3.70	7.5	5.2	48.8	47.3	4.10	0.1	10.7	30.1
11S171267	298	10.8	0.4	3	0.040	0.53	1.31	0.53	0.56	1.83	5.5	32	3	350	3.89	8.0	5.1	71.3	59.3	4.79	< 0.1	18.1	28.8
11S171268	86	6.6	0.4	< 1	0.037	0.27	0.97	0.47	0.61	2.35	3.4	18	2	393	2.74	6.3	4.6	56.9	38.2	3.45	< 0.1	16.5	21.4
11S171269	< 5	0.7	< 0.1	< 1	0.019	0.01	0.07	< 0.01	0.03	0.02	0.2	2	< 1	22	0.19	0.5	1.7	1.53	3.0	0.28	< 0.1	1.3	0.8
11S171270	156	8.7	0.3	< 1	0.043	0.37	1.15	0.41	0.88	2.53	3.8	23	2	400	3.16	7.3	4.3	207	51.5	4.64	< 0.1	14.2	19.8
11S171271	170	13.5	0.4	3	0.050	0.61	1.62	0.63	1.21	2.61	6.8	39	6	571	4.52	8.0	5.4	208	76.3	6.38	0.1	17.2	28.1
11S171272	931	11.4	1.0	6	0.125	0.91	1.47	0.25	4.07	1.36	5.9	235	6	454	8.29	27.9	11.7	5760	581	10.4	0.2	62.4	14.1
11S171273	163	10.3	0.4	3	0.049	0.51	1.37	0.47	0.95	2.42	5.7	37	7	614	3.66	9.0	6.8	217	59.7	5.68	< 0.1	18.3	19.6
11S171274	76	10.2	0.4	3	0.056	0.55	1.28	0.56	1.14	2.18	5.1	31	7	545	3.64	8.8	6.3	218	69.1	5.07	< 0.1	18.9	23.9
11S171275	120	7.8	0.3	3	0.045	0.39	0.97	0.42	0.99	2.67	3.8	24	6	457	3.39	8.0	5.8	265	62.8	3.73	< 0.1	22.3	16.6
11S171276	126	8.9	0.4	3	0.048	0.47	1.07	0.50	1.11	2.80	5.0	28	8	504	3.21	8.0	6.9	471	51.0	3.88	< 0.1	18.1	20.4
11S171277	101	11.6	0.5	2	0.045	0.60	1.40	0.60	0.69	1.71	5.9	32	5	372	3.38	9.1	6.0	293	55.7	5.07	< 0.1	31.2	25.7
11S171278	73	11.1	0.5	5	0.051	0.61	1.55	0.53	1.25	2.17	6.7	44	6	503	3.70	11.3	5.7	171	63.1	6.05	< 0.1	21.0	22.7
11S171279	66	12.8	0.4	1	0.047	0.70	1.39	0.59	0.73	2.67	6.3	33	3	637	3.54	9.9	5.6	103	79.8	4.98	0.1	24.5	25.3
11S171280	70	11.8	0.5	4	0.056	0.71	1.44	0.63	0.69	1.79	4.7	36	5	518	3.63	9.9	5.5	68.2	71.1	4.78	< 0.1	27.5	25.5
11S171281	62	12.7	0.5	4	0.055	0.84	1.51	0.66	0.54	1.77	4.7	39	4	579	3.35	9.8	5.6	70.4	70.9	4.92	< 0.1	22.3	28.4
11S171282	33	14.2	0.5	1	0.072	0.88	1.28	0.42	0.79	1.87	5.5	42	7	393	3.85	11.6	6.1	107	71.8	5.71	< 0.1	28.1	18.7
11S171283	59	12.4	0.4	5	0.076	0.77	1.20	0.44	0.97	1.71	5.3	40	7	375	4.24	14.6	7.4	253	69.4	5.49	< 0.1	33.1	20.0
11S171284	68	11.1	0.4	9	0.082	0.65	1.07	0.53	0.54	1.66	4.2	36	11	324	3.51	7.8	5.6	84.8	59.5	4.47	< 0.1	29.1	25.2
11S171285	34	14.8	0.5	4	0.070	0.80	1.41	0.63	0.37	1.91	5.7	42	8	384	2.70	10.9	7.3	52.5	69.1	5.50	< 0.1	19.5	28.7

Analyte Symbol	Au	Li	Be	B	Na	Mg	Al	K	Bi	Ca	Sc	V	Cr	Mn	Fe	Co	Ni	Cu	Zn	Ga	Ge	As	Rb
Unit Symbol	ppb	ppm	ppm	ppm	%	%	%	%	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	5	0.1	0.1	1	0.001	0.01	0.01	0.01	0.02	0.01	0.1	1	1	1	0.01	0.1	0.1	0.01	0.1	0.02	0.1	0.1	0.1
Analysis Method	FA-AA	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS
11S171286	59	13.3	0.6	3	0.065	0.75	1.55	0.75	1.00	1.74	5.2	35	7	343	3.51	10.4	7.8	155	60.5	4.99	< 0.1	24.4	32.0
11S171287	55	13.6	0.6	3	0.056	0.72	1.46	0.72	1.12	1.82	4.8	32	4	388	3.37	9.6	5.9	136	53.8	4.49	< 0.1	25.6	31.2
11S171288	46	11.2	0.5	4	0.049	0.61	1.32	0.69	0.68	1.80	4.3	30	5	378	3.74	9.9	5.6	90.9	48.5	4.13	< 0.1	24.9	29.0
11S171289	145	12.1	0.6	6	0.049	0.70	1.49	0.58	0.74	1.67	4.4	34	5	396	3.99	9.7	5.5	101	52.3	4.54	< 0.1	27.5	25.8
11S171290	40	12.6	0.4	3	0.052	0.68	1.33	0.63	1.02	1.53	4.3	31	6	380	3.87	8.5	6.5	63.1	53.8	4.34	< 0.1	27.4	27.8
11S171291	889	3.0	0.3	< 1	0.054	0.13	0.73	0.31	2.50	0.91	0.8	14	13	304	1.34	4.7	9.1	4250	27.3	2.72	< 0.1	12.0	7.6
11S171292	49	11.9	0.5	3	0.049	0.64	1.48	0.60	0.46	1.75	5.0	35	5	361	3.38	9.7	5.5	77.6	47.0	4.70	< 0.1	21.8	26.4
11S171293	480																						

## Results

Analyte Symbol	Sr	Y	Zr	Nb	Mo	Ag	In	Sn	Sb	Te	Cs	Ba	La	Ce	Cd	Pr	Nd	Sm	Se	Eu	Gd	Tb	Dy	
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	0.5	0.01	0.1	0.1	0.01	0.002	0.02	0.05	0.02	0.02	0.02	0.5	0.5	0.01	0.01	0.1	0.02	0.1	0.1	0.1	0.1	0.1	0.1	
Analysis Method	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS
11S171237	182	18.1	1.9	< 0.1	9.18	0.274	< 0.02	1.82	0.78	0.12	1.80	28.9	26.0	47.6	0.27	5.2	19.1	3.5	5.4	1.0	3.6	0.5	3.2	
11S171238	351	18.4	2.1	< 0.1	10.1	0.346	< 0.02	1.46	1.10	0.10	1.59	32.1	27.6	50.7	0.23	5.7	21.1	4.0	5.9	1.1	4.0	0.6	3.4	
11S171239	4.6	1.31	0.6	< 0.1	0.12	0.111	< 0.02	0.61	0.03	0.04	0.06	7.1	2.6	4.89	0.02	0.6	2.19	0.4	< 0.1	< 0.1	0.4	< 0.1	0.2	
11S171240	97.5	19.0	2.0	< 0.1	18.0	0.383	< 0.02	1.27	1.36	0.14	1.57	19.1	27.3	50.7	0.19	5.7	21.1	3.9	6.2	1.2	3.9	0.6	3.4	
11S171241	222	18.2	1.8	< 0.1	11.3	0.554	< 0.02	1.57	0.94	0.07	1.49	23.1	25.5	48.0	0.19	5.4	19.8	3.7	5.9	1.0	3.8	0.5	3.3	
11S171242	126	17.8	2.0	< 0.1	12.7	0.496	< 0.02	1.63	0.95	0.04	1.60	16.3	23.7	45.2	0.15	5.1	19.2	3.6	6.4	1.0	3.8	0.5	3.2	
11S171243	124	18.9	2.3	< 0.1	19.5	0.568	< 0.02	1.68	1.76	0.08	1.35	22.4	28.8	53.9	0.21	6.0	21.9	4.0	5.0	1.1	4.0	0.6	3.5	
11S171244	4.1	0.86	0.6	< 0.1	0.09	0.207	< 0.02	0.64	< 0.02	< 0.02	0.05	5.9	2.5	4.72	0.02	0.5	1.93	0.3	< 0.1	< 0.1	0.3	< 0.1	0.2	
11S171245	99.7	14.7	1.6	< 0.1	10.1	0.601	< 0.02	1.14	2.18	0.10	0.46	16.7	21.6	39.5	0.14	4.4	16.1	2.9	6.9	0.8	3.0	0.4	2.5	
11S171246	312	18.2	1.6	< 0.1	9.64	1.42	< 0.02	1.83	1.03	0.04	1.35	30.4	24.2	45.9	0.31	5.2	19.1	3.6	6.4	1.0	3.6	0.5	3.1	
11S171247	242	3.90	1.8	< 0.1	503	13.7	0.02	1.26	43.4	5.11	0.91	28.0	5.8	12.4	< 0.01	1.5	5.86	1.1	0.3	0.3	0.9	0.1	0.7	
11S171248	270	20.5	1.9	< 0.1	10.4	1.24	0.02	1.21	0.91	0.21	1.97	33.9	26.3	48.8	0.23	5.5	20.4	3.9	5.8	1.2	4.0	0.6	3.6	
11S171249	375	18.4	2.2	< 0.1	9.61	0.481	0.03	1.41	0.79	0.07	3.06	28.8	19.4	37.7	0.24	4.4	16.7	3.3	7.3	0.9	3.6	0.5	3.1	
11S171250	209	20.0	2.3	< 0.1	8.44	0.417	0.03	1.25	1.03	0.08	2.70	32.0	18.7	36.8	0.30	4.3	16.4	3.3	6.2	1.0	3.7	0.5	3.3	
11S171251	318	20.0	2.2	< 0.1	3.13	0.470	0.02	1.23	0.64	0.10	2.45	38.5	20.6	40.4	0.42	4.7	17.8	3.6	4.9	1.1	3.8	0.6	3.4	
11S171252	129	18.8	2.4	< 0.1	12.1	0.293	0.02	1.24	0.92	0.07	2.12	26.5	18.0	35.0	0.34	4.1	15.5	3.1	6.9	1.0	3.5	0.5	3.1	
11S171253	334	18.4	1.6	< 0.1	5.12	0.184	< 0.02	1.06	1.26	0.11	1.18	27.9	18.6	36.1	0.26	4.3	16.3	3.2	3.0	1.0	3.4	0.5	3.0	
11S171254	299	18.3	1.7	< 0.1	1.51	0.118	< 0.02	1.03	0.74	0.08	0.64	33.4	19.3	37.6	0.22	4.4	16.5	3.2	2.9	1.0	3.3	0.5	3.0	
11S171255	111	16.4	2.0	< 0.1	2.22	0.106	< 0.02	1.41	1.10	0.08	0.72	18.6	19.2	36.7	0.14	4.3	16.2	3.1	2.8	0.9	3.2	0.4	2.7	
11S171256	105	17.4	1.0	< 0.1	2.97	0.088	< 0.02	0.99	0.87	0.08	0.61	19.2	17.5	34.1	0.11	4.0	15.1	3.0	3.1	0.9	3.1	0.5	2.9	
11S171257	132	15.9	1.1	< 0.1	6.25	0.158	< 0.02	0.93	0.74	0.09	0.33	14.1	16.6	31.9	1.29	3.7	14.1	2.8	2.9	0.8	2.9	0.4	2.6	
11S171258	228	17.2	1.3	< 0.1	3.62	0.114	< 0.02	1.05	1.00	0.04	0.62	24.1	19.5	37.5	0.19	4.3	16.3	3.1	3.8	0.9	3.3	0.5	2.9	
11S171259	138	16.4	1.2	< 0.1	6.53	0.090	< 0.02	1.05	0.86	< 0.02	0.47	16.7	17.9	35.2	0.08	4.1	15.8	3.1	3.7	0.9	3.3	0.5	2.9	
11S171260	287	17.2	1.4	< 0.1	9.22	0.084	< 0.02	1.16	0.92	< 0.02	0.55	28.0	18.1	35.2	0.10	4.1	15.8	3.1	3.7	0.9	3.4	0.5	3.0	
11S171261	206	16.0	1.5	< 0.1	4.24	0.101	< 0.02	1.44	1.19	0.08	1.01	23.1	17.3	33.2	0.12	3.8	14.6	2.9	3.4	0.8	3.1	0.4	2.8	
11S171262	142	15.3	2.5	< 0.1	5.68	0.225	< 0.02	1.54	0.92	0.04	0.87	21.8	20.1	37.4	0.16	4.2	15.4	2.9	6.3	0.9	3.0	0.4	2.7	
11S171263	405	19.8	2.3	< 0.1	2.55	0.222	0.03	1.67	1.41	0.04	1.51	23.4	23.5	44.1	0.25	4.9	18.2	3.4	6.1	1.0	3.6	0.5	3.3	
11S171264	359	18.1	2.5	< 0.1	3.79	0.236	0.02	2.08	1.06	0.08	1.19	23.9	21.6	41.1	0.27	4.7	17.6	3.3	7.2	0.9	3.5	0.5	3.1	
11S171265	4.3	1.00	0.6	< 0.1	0.09	0.083	< 0.02	0.37	< 0.02	0.04	0.06	6.1	2.8	5.38	< 0.01	0.6	2.12	0.3	< 0.1	< 0.1	0.3	< 0.1	0.2	
11S171266	149	16.7	3.4	< 0.1	4.43	0.260	0.02	1.73	0.69	0.07	1.06	19.0	21.4	39.8	0.19	4.5	16.6	3.1	8.2	0.9	3.3	0.5	2.9	
11S171267	157	17.8	2.6	< 0.1	5.22	0.252	0.02	1.89	1.46	0.05	1.13	21.0	22.7	42.1	0.19	4.7	17.2	3.3	7.4	1.0	3.5	0.5	3.1	
11S171268	148	18.1	2.3	< 0.1	1.61	0.302	0.03	1.96	0.53	0.05	0.66	22.5	17.9	34.0	0.20	3.9	15.2	3.1	5.3	1.0	3.4	0.5	3.1	
11S171269	4.8	0.85	0.6	< 0.1	0.09	0.107	< 0.02	0.87	0.02	< 0.02	0.06	7.4	2.3	4.39	0.02	0.5	1.78	0.3	< 0.1	< 0.1	0.3	< 0.1	0.2	
11S171270	186	19.0	1.6	< 0.1	4.68	0.286	0.04	1.98	0.95	0.06	0.81	12.7	15.0	29.6	0.30	3.5	13.5	2.8	6.9	0.9	3.3	0.5	3.2	
11S171271	213	20.2	2.3	< 0.1	8.88	0.447	0.12	4.03	1.80	0.11	1.03	18.7	22.1	42.4	0.33	4.9	18.4	3.5	8.0	1.1	3.8	0.6	3.5	
11S171272	103	16.6	7.9	0.4	756	55.5	5.58	3.31	120	3.42	1.30	23.9	8.6	16.7	2.30	2.2	9.33	2.3	8.4	0.7	2.7	0.4	2.8	
11S171273	257	20.2	2.1	< 0.1	4.41	1.54	0.11	2.33	1.41	0.16	0.47	28.3	22.5	44.4	0.28	5.1	19.4	3.7	5.7	1.1	3.8	0.6	3.5	
11S171274	192	17.7	2.1	< 0.1	4.49	0.668	0.07	1.69	1.03	0.10	0.70	20.2	18.0	35.6	0.63	4.2	16.0	3.2	5.9	0.9	3.3	0.5	3.1	
11S171275	167	14.2	1.9	< 0.1	5.00	0.632	0.08	1.89	1.34	0.15	0.53	16.4	16.6	32.1	0.48	3.7	13.9	2.6	5.4	0.8	2.8	0.4	2.5	
11S171276	171	19.3	2.0	< 0.1	7.09	0.840	0.06	2.01	0.89	0.13	0.54	22.4	24.1	46.6	0.42	5.4	19.7	3.7	5.7	1.1	4.0	0.6	3.4	
11S171277	193	19.7	2.6	< 0.1	6.64	0.615	0.07	1.93	1.15	0.09	0.70	26.9	24.6	47.4	0.19	5.4	20.4	3.8	4.9	1.1	4.1	0.6	3.6	
11S171278	279	19.5	3.5	< 0.1	4.68	0.614	0.08	1.70	1.87	0.06	0.71	21.0	27.9	50.8	0.22	5.6	20.8	3.8	5.4	1.1	4.0	0.6	3.5	
11S171279	231	19.0	2.6	< 0.1	2.71	0.539	0.09	2.06	1.19	0.12	1.06	27.7	27.2	51.1	0.44	5.6	20.7	3.8	4.9	1.1	4.0	0.6	3.4	
11S171280	239	15.3	3.3	0.1	3.46	0.327	0.06	2.12	1.13	0.06	0.81	28.1	19.2	36.0	0.35	4.1	15.5	2.9	4.7	0.8	3.1	0.4	2.7	
11S171281	243	15.4	3.2	< 0.1	1.40	0.238	0.08	2.31	1.12	0.04	1.04	31.2	21.0	39.6	0.27	4.6	16.9	3.2	4.5	0.9	3.3	0.5	2.8	
11S171282	200	16.2	3.0	< 0.1	5.93	0.376	0.05	1.81	0.64	0.04	0.73	11.8	17.5	33.2	0.27	3.9	15.3	3.1	5.6	0.9	3.3	0.5	2.9	
11S171283	187	17.5	2.7	< 0.1	13.1	0.628	0.09	1.81	0.87	0.09	0.74	15.5	15.3	29.6	0.32	3.6	14.5	3.1	6.8	0.9	3.5	0.5	3.1	
11S171284	146	15.0	3.0	0.2	6.38	0.412	0.03	1.95	0.82	0.04	1.04	20.0	7.8	17.3	0.20	2.3	9.58	2.2	5.0	0.7	2.6	0.4	2.5	
11S171285	223	18.1	2.7	< 0.1	3.00	0.209	0.04	1.72	1.29	0.03	1.20	27.4	21.5	40.5	0.36	4.5	17.3	3.2	4.5	1.0	3.5	0.5	3.2	

Analyte Symbol	Sr	Y	Zr	Nb	Mo	Ag	In	Sn	Sb	Te	Cs	Ba	La	Ce	Cd	Pr	Nd	Sm	Se	Eu	Gd	Tb	Dy
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	0.5	0.01	0.1	0.1	0.01	0.002	0.02	0.05	0.02	0.02	0.02	0.5	0.5	0.01	0.01	0.1	0.02	0.1	0.1	0.1	0.1	0.1	0.1
Analysis Method	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS
11S171286	207	17.4	2.9	< 0.1	5.54	0.433	0.03	1.91	1.08	0.06	1.30	24.9	16.1	31.5	0.25	3.6	14.2	2.8	5.1	0.8	3.1	0.5	3.0
11S171287	198	14.9	3.9	< 0.1	6.82	0.498	0.03	1.58	1.01	0.06	1.40	26.8	17.8	33.5	0.26	3.8	14.1	2.7	4.1	0.8	2.9	0.4	2.6
11S171288	167	14.7	5.2	0.2	5.20	0.362	0.03	1.82	0.92	0.12	1.24	16.4	17.9	34.0	0.31	3.9	14.3	2.7	4.6	0.8	2.9	0.4	2.6
11S171289	241	14.4	5.5	0.3	3.93	0.388	0.04	1.57	1.32	0.10	1.18	21.4	17.9	34.3	0.25	3.9	14.4	2.7	3.9	0.8	2.8	0.4	2.5
11S171290	149	15.7	4.0	< 0.1	11.5	0.449	0.03	1.55	2.20	0.12	1.05	16.9	20.7	38.8	0.20	4.4	15.9	3.0	4.5	0.8	3.1	0.4	2.8
11S171291	240	3.81	1.7	< 0.1	492	13.0	0.02	1.66	39.6	4.72	0.81	23.0	5.7	12.3	< 0.01	1.5	5.71	1.1	0.3	0.3	0.9	0.1	0.7
11S171292	249	16.0	4.1	< 0.1	3.63	1.15	0.04	1.63	1.49	0.16	1.07	22.5	21.1	40.3	0.17	4.6	17.1	3.1	3.1	0.9	3.3	0.5	2.8
11S171293																							

## Results

Analyte Symbol	Ho	Er	Tm	Yb	Lu	Hf	Ta	W	Re	Au	Tl	Pb	Th	U	Hg
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppb
Detection Limit	0.1	0.1	0.1	0.1	0.1	0.1	0.05	0.1	0.001	0.5	0.02	0.01	0.1	0.1	10
Analysis Method	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS
11S171237	0.6	1.7	0.2	1.3	0.2	< 0.1	< 0.05	0.2	0.034	748	0.53	8.60	6.4	0.5	< 10
11S171238	0.7	1.8	0.2	1.3	0.2	< 0.1	< 0.05	0.2	0.057	193	0.53	13.4	7.0	1.1	< 10
11S171239	< 0.1	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.05	< 0.1	0.001	< 0.5	0.02	1.00	0.6	0.1	< 10
11S171240	0.7	1.9	0.2	1.4	0.2	< 0.1	< 0.05	0.2	0.096	86.9	0.59	24.4	6.7	0.8	< 10
11S171241	0.6	1.8	0.2	1.3	0.2	< 0.1	< 0.05	0.2	0.049	71.8	0.61	14.4	6.4	0.7	< 10
11S171242	0.6	1.7	0.2	1.3	0.2	< 0.1	< 0.05	0.2	0.078	60.0	0.62	18.1	6.4	0.6	< 10
11S171243	0.7	1.9	0.3	1.4	0.2	< 0.1	< 0.05	< 0.1	0.114	43.1	0.55	9.65	7.3	0.5	< 10
11S171244	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.05	< 0.1	0.001	< 0.5	0.02	0.82	0.6	< 0.1	< 10
11S171245	0.5	1.4	0.2	1.0	0.2	< 0.1	< 0.05	0.1	0.066	260	0.22	12.3	5.6	1.4	< 10
11S171246	0.6	1.7	0.2	1.3	0.2	< 0.1	< 0.05	0.1	0.050	3870	0.55	14.2	6.2	0.8	< 10
11S171247	0.1	0.3	< 0.1	0.3	< 0.1	< 0.1	< 0.05	< 0.1	0.230	1260	0.07	32.6	1.0	1.0	1960
11S171248	0.7	1.9	0.3	1.4	0.2	< 0.1	< 0.05	0.2	0.022	67.7	0.70	8.46	6.1	0.7	< 10
11S171249	0.6	1.7	0.2	1.3	0.2	< 0.1	< 0.05	0.1	0.051	80.4	0.96	7.79	4.7	0.6	< 10
11S171250	0.7	1.9	0.3	1.4	0.2	< 0.1	< 0.05	0.1	0.034	49.5	0.79	7.56	4.5	0.5	< 10
11S171251	0.7	1.9	0.3	1.4	0.2	< 0.1	< 0.05	0.2	0.012	49.1	0.71	9.21	4.7	0.7	< 10
11S171252	0.6	1.8	0.2	1.3	0.2	< 0.1	< 0.05	0.1	0.070	136	0.56	6.76	4.3	0.6	< 10
11S171253	0.6	1.7	0.2	1.3	0.2	< 0.1	< 0.05	< 0.1	0.007	32.9	0.37	4.81	4.6	0.6	< 10
11S171254	0.6	1.7	0.2	1.3	0.2	< 0.1	< 0.05	< 0.1	0.002	41.4	0.25	5.04	4.9	0.6	< 10
11S171255	0.5	1.5	0.2	1.2	0.2	< 0.1	< 0.05	< 0.1	0.003	11.9	0.27	5.13	5.0	0.6	< 10
11S171256	0.6	1.6	0.2	1.2	0.2	< 0.1	< 0.05	< 0.1	0.003	12.4	0.25	5.98	4.6	0.6	< 10
11S171257	0.5	1.5	0.2	1.1	0.2	< 0.1	< 0.05	0.1	0.005	30.7	0.17	10.7	4.2	0.7	30
11S171258	0.6	1.6	0.2	1.2	0.2	< 0.1	< 0.05	0.1	0.002	63.8	0.24	6.61	5.0	0.5	< 10
11S171259	0.6	1.5	0.2	1.1	0.2	< 0.1	< 0.05	< 0.1	0.004	12.3	0.16	5.65	4.7	0.4	< 10
11S171260	0.6	1.6	0.2	1.3	0.2	< 0.1	< 0.05	< 0.1	0.010	246	0.22	5.17	5.1	0.7	< 10
11S171261	0.6	1.6	0.2	1.2	0.2	< 0.1	< 0.05	0.1	0.002	104	0.38	7.85	4.5	0.6	< 10
11S171262	0.5	1.5	0.2	1.1	0.2	< 0.1	< 0.05	0.2	0.012	176	0.39	17.4	5.0	0.7	< 10
11S171263	0.7	1.9	0.3	1.4	0.2	< 0.1	< 0.05	< 0.1	0.013	84.9	0.40	12.4	5.6	0.9	< 10
11S171264	0.6	1.7	0.2	1.3	0.2	< 0.1	< 0.05	< 0.1	0.029	84.0	0.38	11.3	5.5	0.7	< 10
11S171265	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.05	< 0.1	0.001	< 0.5	0.02	0.93	0.5	< 0.1	< 10
11S171266	0.6	1.6	0.2	1.2	0.2	0.1	< 0.05	< 0.1	0.019	61.2	0.48	11.4	5.3	0.7	< 10
11S171267	0.6	1.7	0.2	1.2	0.2	< 0.1	< 0.05	< 0.1	0.032	1160	0.50	7.64	5.9	0.7	< 10
11S171268	0.6	1.7	0.2	1.3	0.2	< 0.1	< 0.05	< 0.1	0.007	96.1	0.32	11.9	3.9	0.4	< 10
11S171269	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.05	< 0.1	< 0.001	< 0.5	0.02	1.95	0.5	< 0.1	< 10
11S171270	0.6	1.8	0.3	1.5	0.2	< 0.1	< 0.05	< 0.1	0.040	113	0.31	15.2	3.4	0.4	< 10
11S171271	0.7	2.0	0.3	1.6	0.2	< 0.1	< 0.05	< 0.1	0.056	184	0.48	12.5	5.0	0.7	< 10
11S171272	0.6	1.7	0.3	1.4	0.2	0.2	< 0.05	2.3	0.101	1250	0.09	105	1.4	2.0	1450
11S171273	0.7	2.0	0.3	1.5	0.2	< 0.1	< 0.05	< 0.1	0.010	92.4	0.28	8.77	5.5	0.8	< 10
11S171274	0.6	1.7	0.2	1.3	0.2	< 0.1	< 0.05	< 0.1	0.024	48.8	0.37	13.0	4.8	0.7	< 10
11S171275	0.5	1.4	0.2	1.1	0.2	< 0.1	< 0.05	< 0.1	0.023	201	0.26	10.2	4.5	0.9	< 10
11S171276	0.7	1.9	0.3	1.4	0.2	< 0.1	< 0.05	< 0.1	0.049	98.0	0.31	17.0	5.5	0.6	< 10
11S171277	0.7	1.9	0.3	1.4	0.2	< 0.1	< 0.05	< 0.1	0.026	81.6	0.41	7.10	5.6	0.8	< 10
11S171278	0.7	1.9	0.3	1.4	0.2	0.1	< 0.05	< 0.1	0.029	60.4	0.37	15.3	6.5	1.0	< 10
11S171279	0.7	1.9	0.2	1.3	0.2	< 0.1	< 0.05	< 0.1	0.014	44.0	0.39	14.6	6.6	0.9	< 10
11S171280	0.5	1.5	0.2	1.1	0.2	0.1	< 0.05	< 0.1	0.013	63.8	0.41	12.8	4.6	0.8	< 10
11S171281	0.6	1.5	0.2	1.1	0.2	0.1	< 0.05	< 0.1	0.008	29.2	0.47	7.59	4.9	0.8	< 10
11S171282	0.6	1.6	0.2	1.2	0.2	< 0.1	< 0.05	< 0.1	0.020	35.7	0.31	9.99	5.3	1.3	< 10
11S171283	0.6	1.7	0.2	1.3	0.2	< 0.1	< 0.05	< 0.1	0.051	40.8	0.32	12.3	5.2	0.6	< 10
11S171284	0.5	1.5	0.2	1.1	0.2	0.1	< 0.05	< 0.1	0.020	39.6	0.41	7.94	4.3	0.7	< 10
11S171285	0.7	1.8	0.3	1.4	0.2	< 0.1	< 0.05	< 0.1	0.008	30.3	0.49	7.46	5.1	0.7	< 10

Analyte Symbol	Ho	Er	Tm	Yb	Lu	Hf	Ta	W	Re	Au	Tl	Pb	Th	U	Hg
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppb
Detection Limit	0.1	0.1	0.1	0.1	0.1	0.1	0.05	0.1	0.001	0.5	0.02	0.01	0.1	0.1	10
Analysis Method	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS
11S171286	0.6	1.8	0.2	1.4	0.2	< 0.1	< 0.05	< 0.1	0.022	42.7	0.51	12.9	4.6	0.7	< 10
11S171287	0.5	1.5	0.2	1.1	0.2	0.1	< 0.05	< 0.1	0.025	51.9	0.52	15.9	4.5	0.8	< 10
11S171288	0.5	1.5	0.2	1.1	0.2	0.1	< 0.05	< 0.1	0.017	41.7	0.45	9.57	4.3	0.9	< 10
11S171289	0.5	1.5	0.2	1.1	0.2	0.2	< 0.05	< 0.1	0.010	75.9	0.41	12.4	4.4	0.8	< 10
11S171290	0.6	1.5	0.2	1.0	0.2	0.1	< 0.05	< 0.1	0.038	36.5	0.43	21.2	4.6	0.8	< 10
11S171291	0.1	0.4	< 0.1	0.3	< 0.1	< 0.1	< 0.05	< 0.1	0.230	1000	0.08	32.9	0.9	0.9	1860
11S171292	0.6	1.6	0.2	1.1	0.2	0.1	< 0.05	< 0.1	0.010	46.4	0.41	7.84	5.3	0.8	< 10
11S171293															



QC

Analyte Symbol	Au	Li	Be	B	Na	Mg	Al	K	Bi	Ca	Sc	V	Cr	Mn	Fe	Co	Ni	Cu	Zn	Ga	Ge	As	Rb
Unit Symbol	ppb	ppm	ppm	ppm	%	%	%	%	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	5	0.1	0.1	1	0.001	0.01	0.01	0.01	0.02	0.01	0.1	1	1	1	0.01	0.1	0.1	0.01	0.1	0.02	0.1	0.1	0.1
Analysis Method	FA-AA	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS
GXR-1 Meas	4.7	0.7	6	0.041	0.12	0.31	0.03	1240	0.75	1.0	73	5	831	23.3	7.2	42.2	1060	866	4.08		427	2.0	
GXR-1 Cert	8.20	1.22	15.0	0.0520	0.217	3.52	0.050	1380	0.960	1.58	80.0	12.0	852	23.6	8.20	41.0	1110	760	13.8		427	14.0	
GXR-4 Meas	9.0	1.3	< 1	0.115	1.30	2.37	1.48	18.8	0.77	5.8	77	50	146	2.94	12.8	39.1	6030	82.8	9.97		102	87.8	
GXR-4 Cert	11.1	1.90	4.50	0.564	1.66	7.20	4.01	19.0	1.01	7.70	87.0	64.0	155	3.09	14.6	42.0	6520	73.0	20.0		98.0	160	
GXR-6 Meas	29.6	1.0	2	0.072	0.37	7.16	1.17	0.17	0.14	22.1	162	75	1090	5.76	13.7	25.5	72.7	140	14.7		206	66.1	
GXR-6 Cert	32.0	1.40	9.80	0.104	0.609	17.7	1.87	0.290	0.180	27.6	186	96.0	1010	5.58	13.8	27.0	66.0	118	35.0		330	90.0	
SAR-M (U.S.G.S.) Meas	11.9	1.0		0.033	0.31	1.00	0.25	1.88	0.27	2.9	32	79	4570	2.61	9.4	44.8	359	1120	4.80		37.2	21.3	
SAR-M (U.S.G.S.) Cert	27.4	2.20		1.140	0.50	6.30	2.94	1.94	0.61	7.83	67.2	79.7	5220	2.99	10.70	41.5	331	930.0	17		38.8	146	
SG56 Meas	1060																						
SG56 Cert	1027.00																						
SG56 Meas	1040																						
SG56 Cert	1027.00																						
SG56 Meas	1040																						
SG56 Cert	1027.00																						
OxD108 Meas	416																						
OxD108 Cert	414.000																						
OxD108 Meas	431																						
OxD108 Cert	414.000																						
OxD108 Meas	427																						
OxD108 Cert	414.000																						
OREAS 922 (AQUA REGIA) Meas					1.32	2.98			0.41					5.14	18.0		2090	300			7.3		
OREAS 922 (AQUA REGIA) Cert					1.33	2.72			0.324					5.05	19.4		2176	256			6.12		
OREAS 923 (AQUA REGIA) Meas					1.44	3.08			0.43					6.02	21.0		4170	406			8.3		
OREAS 923 (AQUA REGIA) Cert					1.43	2.80			0.326					5.91	22.2		4248	335			7.07		
11S171249 Orig		13.1	0.4	4	0.045	0.82	1.41	0.88	0.32	1.55	5.1	36	6	437	4.25	10.7	6.9	197	64.7	4.90	0.1	16.8	56.0
11S171249 Dup		13.1	0.4	3	0.046	0.85	1.40	0.89	0.33	1.57	5.4	37	7	455	4.42	11.1	7.2	207	63.8	4.95	0.1	17.3	56.9
11S171263 Orig		8.1	0.5	3	0.044	0.42	1.40	0.56	0.61	2.76	5.2	30	3	498	3.55	7.7	5.3	64.9	50.4	4.75	0.1	22.2	28.2
11S171263 Dup		8.0	0.5	3	0.042	0.41	1.36	0.52	0.55	3.51	5.3	29	3	478	3.43	7.6	5.2	65.7	48.2	4.62	0.1	21.7	26.5
11S171266 Orig	93	9.3	0.4	4	0.057	0.49	1.12	0.57	1.05	1.91	4.5	26	5	349	3.70	7.5	5.2	48.8	47.3	4.10	0.1	10.7	30.1
11S171266 Split	116	10.3	0.4	2	0.055	0.50	1.15	0.56	1.06	1.85	4.4	25	5	332	3.63	7.2	5.0	46.4	44.7	3.88	0.1	10.3	28.3
11S171266 Orig	91																						
11S171266 Dup	96																						
11S171276 Orig		8.9	0.3	3	0.048	0.48	1.05	0.50	1.11	3.02	5.1	27	9	511	3.25	8.1	7.3	472	52.2	3.83	< 0.1	18.5	20.3
11S171276 Dup		8.9	0.4	3	0.048	0.47	1.08	0.50	1.11	2.57	5.0	28	8	497	3.16	7.9	6.5	469	49.8	3.93	< 0.1	17.7	20.4
11S171281 Orig	72																						
11S171281 Dup	53																						
11S171286 Orig	59	13.3	0.6	3	0.065	0.75	1.55	0.75	1.00	1.74	5.2	35	7	343	3.51	10.4	7.8	155	60.5	4.99	< 0.1	24.4	32.0
11S171286 Split	59	13.1	0.5	2	0.065	0.77	1.57	0.73	1.01	1.78	5.2	35	7	354	3.53	10.1	7.5	149	59.5	4.98	< 0.1	25.4	31.7
11S171292 Orig	49																						
11S171292 Dup	50																						
11S171293 Orig	416																						
11S171293 Split	509																						
Method Blank	< 5																						
Method Blank	< 5																						

Analyte Symbol	Au	Li	Be	B	Na	Mg	Al	K	Bi	Ca	Sc	V	Cr	Mn	Fe	Co	Ni	Cu	Zn	Ga	Ge	As	Rb
Unit Symbol	ppb	ppm	ppm	ppm	%	%	%	%	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	5	0.1	0.1	1	0.001	0.01	0.01	0.01	0.02	0.01	0.1	1	1	1	0.01	0.1	0.1	0.01	0.1	0.02	0.1	0.1	0.1
Analysis Method	FA-AA	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS
Method Blank	< 5																						
Method Blank	< 5																						
Method Blank	< 5																						

QC

Analyte Symbol	Sr	Y	Zr	Nb	Mo	Ag	In	Sn	Sb	Te	Cs	Ba	La	Ce	Cd	Pr	Nd	Sm	Se	Eu	Gd	Tb	Dy
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	0.5	0.01	0.1	0.1	0.01	0.002	0.02	0.05	0.02	0.02	0.02	0.5	0.5	0.01	0.01	0.1	0.02	0.1	0.1	0.1	0.1	0.1	0.1
Analysis Method	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS
GXR-1 Meas	187	28.9	8.5	< 0.1	16.2	28.4	0.64	21.1	77.3	13.4	2.29	179	4.7	9.31	2.32		5.50	1.9	15.6	0.5	3.3	0.6	4.2
GXR-1 Cert	275	32.0	38.0	0.800	18.0	31.0	0.770	54.0	122	13.0	3.00	750	7.50	17.0	3.30		18.0	2.70	16.6	0.690	4.20	0.830	4.30
GXR-4 Meas	67.1	12.2	6.8	0.2	282	3.02	0.18	4.73	2.98	0.84	2.09	9.4	40.5	77.8	0.08		30.2	4.7	5.1	1.2	3.9	0.4	2.3
GXR-4 Cert	221	14.0	186	10.0	310	4.00	0.270	5.60	4.80	0.970	2.80	1640	64.5	102	0.860		45.0	6.60	5.60	1.63	5.25	0.360	2.60
GXR-6 Meas	29.6	7.43	2.4	< 0.1	1.24	0.390	0.05	0.89	1.08	0.07	3.43	830	10.2	28.9	0.09		9.86	2.0	0.4	0.5	1.9	0.3	1.5
GXR-6 Cert	35.0	14.0	110	7.50	2.40	1.30	0.260	1.70	3.60	0.0180	4.20	1300	13.9	36.0	1.00		13.0	2.67	0.940	0.760	2.97	0.415	2.80
SAR-M (U.S.G.S.) Meas	26.7	19.2		1.1	10.8	2.50	0.93	1.46	3.45	0.87		148	39.1	81.7	4.54				0.6				
SAR-M (U.S.G.S.) Cert	151	28.00		29.9	13.1	3.64	1.08	2.76	6.0	0.96		801	57.4	122.0	5.27				0.39				
SG56 Meas																							
SG56 Cert																							
SG56 Meas																							
SG56 Cert																							
SG56 Meas																							
SG56 Cert																							
OxD108 Meas																							
OxD108 Cert																							
OxD108 Meas																							
OxD108 Cert																							
OxD108 Meas																							
OxD108 Cert																							
OREAS 922 (AQUA REGIA) Meas						0.848			0.59						0.24								
OREAS 922 (AQUA REGIA) Cert						0.851			0.57						0.280								
OREAS 923 (AQUA REGIA) Meas						1.24			0.52						0.37								
OREAS 923 (AQUA REGIA) Cert						1.62			0.58						0.40								
11S171249 Orig	381	18.3	2.1	< 0.1	8.97	0.556	0.03	1.39	0.78	0.05	3.08	28.2	19.4	38.0	0.26	4.4	16.7	3.2	7.0	1.0	3.6	0.5	3.2
11S171249 Dup	370	18.6	2.2	< 0.1	10.2	0.406	0.03	1.42	0.80	0.08	3.03	29.5	19.4	37.3	0.23	4.3	16.7	3.3	7.7	0.9	3.6	0.5	3.1
11S171263 Orig	400	19.9	2.4	< 0.1	2.42	0.234	0.03	1.73	1.44	0.06	1.57	29.9	23.5	43.8	0.26	4.9	17.9	3.4	6.2	1.0	3.6	0.5	3.3
11S171263 Dup	410	19.6	2.2	< 0.1	2.67	0.211	0.03	1.62	1.38	0.03	1.44	16.9	23.5	44.4	0.24	5.0	18.5	3.5	5.9	1.0	3.6	0.5	3.3
11S171266 Orig	149	16.7	3.4	< 0.1	4.43	0.260	0.02	1.73	0.69	0.07	1.06	19.0	21.4	39.8	0.19	4.5	16.6	3.1	8.2	0.9	3.3	0.5	2.9
11S171266 Split	147	16.3	3.3	< 0.1	4.72	0.447	< 0.02	2.21	0.67	0.13	1.01	19.0	20.7	39.1	0.17	4.4	16.7	3.2	7.4	1.0	3.3	0.5	2.9
11S171266 Orig																							
11S171266 Dup																							
11S171276 Orig	176	19.8	2.0	< 0.1	7.53	0.800	0.06	2.17	0.90	0.13	0.53	23.1	24.4	47.5	0.43	5.5	20.1	3.8	5.7	1.1	4.0	0.6	3.4
11S171276 Dup	166	18.9	2.0	< 0.1	6.65	0.880	0.06	1.86	0.89	0.12	0.54	21.7	23.8	45.7	0.41	5.2	19.3	3.7	5.7	1.1	4.0	0.5	3.4
11S171281 Orig																							
11S171281 Dup																							

Analyte Symbol	Sr	Y	Zr	Nb	Mo	Ag	In	Sn	Sb	Te	Cs	Ba	La	Ce	Cd	Pr	Nd	Sm	Se	Eu	Gd	Tb	Dy
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	0.5	0.01	0.1	0.1	0.01	0.002	0.02	0.05	0.02	0.02	0.02	0.5	0.5	0.01	0.01	0.1	0.02	0.1	0.1	0.1	0.1	0.1	0.1
Analysis Method	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS
11S171286 Orig	207	17.4	2.9	< 0.1	5.54	0.433	0.03	1.91	1.08	0.06	1.30	24.9	16.1	31.5	0.25	3.6	14.2	2.8	5.1	0.8	3.1	0.5	3.0
11S171286 Split	212	17.8	2.8	< 0.1	5.55	0.473	0.03	1.82	1.06	0.12	1.28	24.2	16.1	31.7	0.26	3.7	14.4	2.9	5.2	0.9	3.2	0.5	3.1
11S171292 Orig																							
11S171292 Dup																							
11S171293 Orig																							
11S171293 Split																							
Method Blank																							
Method Blank																							
Method Blank																							
Method Blank																							
Method Blank																							

QC

Analyte Symbol	Ho	Er	Tm	Yb	Lu	Hf	Ta	W	Re	Au	Tl	Pb	Th	U	Hg
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppb
Detection Limit	0.1	0.1	0.1	0.1	0.1	0.1	0.05	0.1	0.001	0.5	0.02	0.01	0.1	0.1	10
Analysis Method	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS
GXR-1 Meas			0.3	1.7	0.2	0.1	< 0.05	116		3330	0.28	630	1.6	30.1	3620
GXR-1 Cert			0.430	1.90	0.280	0.960	0.175	164		3300	0.390	730	2.44	34.9	3900
GXR-4 Meas			0.1	0.7	< 0.1	0.1	< 0.05	7.4			2.46	44.5	16.3	4.6	
GXR-4 Cert			0.210	1.60	0.170	6.30	0.790	30.8			3.20	52.0	22.5	6.20	
GXR-6 Meas			0.1	0.7	< 0.1	< 0.1	< 0.05	< 0.1			1.75	105	4.0	0.8	
GXR-6 Cert			0.0320	2.40	0.330	4.30	0.485	1.90			2.20	101	5.30	1.54	
SAR-M (U.S.G.S.) Meas								1.7			0.72	854	11.1	1.8	
SAR-M (U.S.G.S.) Cert								9.78			2.7	982	17.2	3.57	
SG56 Meas															
SG56 Cert															
SG56 Meas															
SG56 Cert															
SG56 Meas															
SG56 Cert															
OxD108 Meas															
OxD108 Cert															
OxD108 Meas															
OxD108 Cert															
OxD108 Meas															
OxD108 Cert															
OREAS 922 (AQUA REGIA) Meas												64.8			
OREAS 922 (AQUA REGIA) Cert												60			
OREAS 923 (AQUA REGIA) Meas												90.8			
OREAS 923 (AQUA REGIA) Cert												81			
11S171249 Orig	0.6	1.7	0.2	1.2	0.2	< 0.1	< 0.05	0.1	0.048	80.3	0.97	7.93	4.7	0.6	< 10
11S171249 Dup	0.6	1.7	0.2	1.3	0.2	< 0.1	< 0.05	0.1	0.054	80.5	0.94	7.64	4.6	0.6	< 10

Analyte Symbol	Ho	Er	Tm	Yb	Lu	Hf	Ta	W	Re	Au	Tl	Pb	Th	U	Hg
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppb
Detection Limit	0.1	0.1	0.1	0.1	0.1	0.1	0.05	0.1	0.001	0.5	0.02	0.01	0.1	0.1	10
Analysis Method	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS
11S171263 Orig	0.7	1.9	0.3	1.5	0.2	< 0.1	< 0.05	< 0.1	0.012	64.0	0.40	12.7	5.6	0.9	< 10
11S171263 Dup	0.7	1.9	0.3	1.4	0.2	< 0.1	< 0.05	< 0.1	0.015	106	0.39	12.2	5.6	0.9	< 10
11S171266 Orig	0.6	1.6	0.2	1.2	0.2	0.1	< 0.05	< 0.1	0.019	61.2	0.48	11.4	5.3	0.7	< 10
11S171266 Split	0.6	1.6	0.2	1.2	0.2	0.1	< 0.05	< 0.1	0.023	62.9	0.49	11.4	5.3	0.7	< 10
11S171266 Orig															
11S171266 Dup															
11S171276 Orig	0.7	1.8	0.3	1.4	0.2	< 0.1	< 0.05	< 0.1	0.054	92.9	0.31	17.2	5.6	0.6	< 10
11S171276 Dup	0.7	1.9	0.3	1.4	0.2	< 0.1	< 0.05	< 0.1	0.044	103	0.32	16.9	5.4	0.6	< 10
11S171281 Orig															
11S171281 Dup															
11S171286 Orig	0.6	1.8	0.2	1.4	0.2	< 0.1	< 0.05	< 0.1	0.022	42.7	0.51	12.9	4.6	0.7	< 10
11S171286 Split	0.6	1.8	0.3	1.4	0.2	< 0.1	< 0.05	< 0.1	0.021	46.0	0.47	13.4	4.7	0.7	< 10
11S171292 Orig															
11S171292 Dup															
11S171293 Orig															
11S171293 Split															
Method Blank															
Method Blank															
Method Blank															
Method Blank															
Method Blank															



**Date Submitted:** 23-Jun-14  
**Invoice No.:** A14-04185 (i)  
**Invoice Date:** 03-Jul-14  
**Your Reference:**

Renaissance Geosciences  
680 Dairy Road  
Kamloops B.C. V2B8N5  
Canada

ATTN: Leo Lindinger

## CERTIFICATE OF ANALYSIS

75 Core samples were submitted for analysis.

The following analytical package was requested:

Code 1A2-Kamloops Au - Fire Assay AA  
Code UT-1-Kamloops Aqua Regia ICP/MS

REPORT      **A14-04185 (i)**

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

Notes:

Assays are recommended for values >10,000 for Cu and Au. The Au from AR-MS is only semi-quantitative. For accurate Au data, fire assay is recommended.  
If value exceeds upper limit we recommend reassay by fire assay gravimetric-Code 1A3

CERTIFIED BY:

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

Emmanuel Esemé , Ph.D.  
Quality Control



## Results

Analyte Symbol	Au	Li	Be	B	Na	Mg	Al	K	Bi	Ca	Sc	V	Cr	Mn	Fe	Co	Ni	Cu	Zn	Ga	Ge	As	Rb
Unit Symbol	ppb	ppm	ppm	ppm	%	%	%	%	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	5	0.1	0.1	1	0.001	0.01	0.01	0.01	0.02	0.01	0.1	1	1	1	0.01	0.1	0.1	0.01	0.1	0.02	0.1	0.1	0.1
Analysis Method	FA-AA	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS
11s171309	16	24.5	0.8	11	0.074	1.15	2.78	1.42	0.11	3.13	7.3	61	14	1040	3.87	10.1	7.6	13.6	47.7	8.32	0.1	12.1	50.8
11s171310	110	24.2	0.9	9	0.067	1.07	2.43	1.32	0.06	2.88	6.2	51	11	1050	3.62	9.8	6.6	27.7	47.1	7.01	< 0.1	7.8	46.8
11s171311	17	24.2	0.8	10	0.067	1.15	2.62	1.34	0.02	3.18	6.7	55	14	1030	3.81	11.6	9.5	16.8	44.7	7.72	< 0.1	9.3	48.8
11s171312	46	23.5	0.9	7	0.089	1.15	2.28	1.33	0.10	4.07	8.0	63	18	1220	4.35	12.5	11.1	19.2	87.0	7.70	0.1	20.0	50.6
11s171313	89	23.0	0.6	6	0.072	0.87	1.62	0.49	0.59	5.18	6.8	56	14	1130	4.55	12.4	10.1	34.6	84.5	6.80	< 0.1	212	15.3
11s171314	< 5	1.2	0.1	2	0.015	0.02	0.09	0.01	< 0.02	0.03	< 0.1	3	2	21	0.24	0.6	1.6	0.79	3.1	0.34	< 0.1	1.1	1.0
11s171315	37	24.4	0.7	3	0.121	1.08	1.77	0.99	0.06	4.65	9.4	81	17	1300	4.32	12.0	9.1	16.0	60.3	8.03	0.1	35.2	39.8
11s171316	< 5	31.2	1.0	9	0.090	1.27	2.72	1.25	0.02	2.70	8.7	82	16	1230	4.36	10.8	8.3	15.3	57.1	10.5	0.1	10.8	45.8
11s171317	14	24.0	0.9	5	0.098	1.16	2.15	0.98	< 0.02	3.64	6.6	69	17	1110	3.86	11.3	9.4	16.2	53.1	8.38	< 0.1	11.7	38.5
11s171318	860	3.6	0.3	2	0.061	0.13	0.80	0.37	2.48	1.07	0.7	14	14	272	1.47	5.4	8.9	4350	24.6	2.97	< 0.1	11.8	8.0
11s171319	7	25.7	1.2	5	0.049	1.29	2.79	1.15	0.03	3.12	8.8	76	16	1240	4.34	11.4	9.1	17.9	59.2	9.93	0.1	11.9	46.4
11s171320	< 5	19.5	0.7	2	0.071	0.82	1.92	0.48	< 0.02	4.22	6.4	63	20	1030	3.16	7.0	6.6	10.3	38.4	8.18	< 0.1	7.3	21.4
11s171321	< 5	22.1	0.9	3	0.071	1.00	2.07	0.96	0.17	2.72	6.7	62	14	1130	3.70	12.0	11.1	16.9	57.8	8.48	< 0.1	14.0	40.4
11s171322	6	21.4	0.7	< 1	0.067	1.01	1.85	1.18	0.12	2.89	6.3	55	11	939	3.97	11.6	8.7	19.2	45.9	6.57	< 0.1	14.4	47.1
11s171323	6	26.4	0.7	4	0.080	1.09	2.17	1.13	0.06	3.01	7.1	65	12	1300	4.05	11.5	9.7	12.6	53.8	8.53	0.1	22.0	45.7
11s171324	13	17.6	0.6	2	0.096	0.76	1.87	0.87	0.16	2.25	5.2	58	17	972	3.58	9.4	11.8	12.9	39.5	7.23	< 0.1	46.8	33.3
11s171325	8	24.1	0.7	4	0.067	0.93	2.05	0.92	0.08	3.13	6.3	52	11	1460	4.05	10.4	9.1	19.6	103	7.85	0.1	17.4	36.8
11s171326	14	18.9	0.7	< 1	0.054	0.79	1.71	0.88	0.50	3.23	5.6	40	7	1010	3.43	10.9	8.1	18.3	57.0	6.27	0.1	14.7	35.4
11s171327	28	19.6	0.8	< 1	0.060	0.81	1.81	0.87	0.94	3.23	6.5	44	8	1120	3.96	10.7	8.6	21.1	107	6.53	< 0.1	19.1	33.9
11s171328	8	23.7	1.1	2	0.065	1.07	2.12	1.08	0.13	3.54	6.7	58	14	1540	4.24	12.4	10.1	20.6	92.9	8.06	0.1	10.6	41.7
11s171329	6	23.6	0.8	3	0.074	1.12	2.32	1.18	0.04	3.23	6.6	62	14	1240	3.85	12.2	10.6	17.9	77.5	7.95	0.1	23.7	48.7
11s171330	7	22.4	0.8	2	0.061	1.00	2.22	1.02	0.08	4.00	6.4	51	14	1430	3.63	11.7	8.9	19.8	143	7.93	0.1	380	49.2
11s171331	32	18.2	0.6	3	0.081	0.95	1.95	0.94	0.13	4.43	6.3	45	11	1250	3.74	10.6	10.2	26.2	100	7.03	< 0.1	50.8	46.8
11s171332	10	17.2	0.5	2	0.062	0.97	1.89	1.04	0.05	3.78	5.1	41	11	1120	3.83	13.0	9.4	23.5	82.5	5.97	< 0.1	427	48.7
11s171333	120	12.8	0.5	< 1	0.044	0.77	1.73	0.86	0.13	2.88	3.6	27	8	983	3.93	11.7	9.6	24.4	89.0	4.71	< 0.1	776	33.9
11s171334	< 5	1.0	< 0.1	< 1	0.016	0.02	0.09	0.01	< 0.02	0.03	< 0.1	2	< 1	16	0.21	0.6	1.6	0.61	2.8	0.34	< 0.1	1.8	1.1
11s171335	11	13.7	0.5	< 1	0.043	0.88	1.94	0.80	0.09	3.37	3.9	29	9	931	3.74	11.1	9.8	23.8	205	5.04	< 0.1	226	31.0
11s171336	176	13.5	0.5	< 1	0.039	0.78	1.78	0.79	0.23	3.34	3.9	28	11	1010	4.19	12.7	11.5	36.4	849	4.59	< 0.1	2460	30.7
11s171337	20	21.3	0.7	< 1	0.058	1.20	2.90	1.46	0.03	2.80	6.1	56	19	887	3.74	12.9	11.1	16.9	65.6	7.59	< 0.1	241	77.6
11s171338	< 5	21.9	0.7	< 1	0.048	1.04	2.40	1.11	0.03	2.84	6.7	53	14	909	3.53	12.3	10.4	16.0	51.3	7.70	< 0.1	278	55.7
11s171339	< 5	20.3	0.9	< 1	0.043	1.00	2.24	0.89	0.03	3.60	7.5	52	15	913	3.64	11.6	10.1	20.4	58.1	7.84	0.1	249	45.6
11s171340	< 5	20.2	0.8	< 1	0.052	1.00	2.40	1.05	0.03	3.25	6.3	51	14	1040	3.36	12.9	10.6	18.7	68.7	7.81	< 0.1	277	50.9
11s171341	< 5	20.2	0.7	< 1	0.063	1.03	2.55	1.10	< 0.02	2.98	6.3	55	19	894	3.35	11.7	9.8	21.5	46.9	7.97	< 0.1	334	50.0
11s171342	12	20.5	0.7	< 1	0.072	1.15	2.61	1.28	< 0.02	2.86	6.4	58	18	937	3.48	11.0	11.7	14.2	61.4	8.49	< 0.1	73.1	61.0
11s171343	68	20.7	0.7	< 1	0.064	1.04	2.28	1.25	0.02	2.76	5.0	47	14	923	3.48	12.2	10.5	18.9	55.7	6.66	< 0.1	492	57.2
11s171344	15	25.0	0.6	< 1	0.075	1.23	2.72	1.42	0.02	2.25	5.7	55	17	925	3.94	13.4	12.6	15.8	66.6	8.60	0.1	59.8	64.3
11s171345	7	23.0	0.6	< 1	0.052	1.02	2.27	0.65	0.02	3.23	6.0	54	14	1030	3.57	10.4	9.2	13.2	87.2	8.64	< 0.1	115	30.4
11s171346	< 5	19.9	0.5	< 1	0.058	1.03	2.24	0.83	0.04	2.91	6.4	56	14	1010	3.72	11.2	9.7	21.5	156	8.63	< 0.1	135	38.3
11s171347	6	18.1	0.6	< 1	0.053	1.01	2.09	0.89	0.06	3.41	6.5	53	13	1090	3.67	11.4	9.6	20.9	143	7.50	< 0.1	123	43.5
11s171348	11	15.6	0.5	< 1	0.042	0.89	1.81	0.83	0.07	2.75	4.8	41	9	994	3.32	11.1	8.7	22.9	77.0	6.17	< 0.1	249	41.1
11s171349	< 5	16.6	0.6	< 1	0.048	0.92	2.05	0.92	0.07	3.33	5.5	40	9	949	3.54	11.1	9.2	22.9	99.3	6.71	< 0.1	142	43.5
11s171350	< 5	18.9	0.6	< 1	0.057	1.04	2.38	1.23	0.04	2.33	5.9	51	13	903	3.40	11.3	10.0	20.3	130	7.55	< 0.1	60.2	59.5
11s171351	< 5	16.6	0.5	< 1	0.050	0.87	1.92	0.84	0.14	3.71	5.9	43	12	1130	3.58	11.2	9.8	23.8	133	6.82	< 0.1	76.6	35.2
11s171352	30	4.4	0.3	5	0.023	0.22	0.64	0.32	0.24	3.12	1.4	9	21	699	2.49	6.0	6.2	22.2	32.8	1.77	< 0.1	257	10.4
11s171353	860	3.5	0.3	< 1	0.059	0.15	0.83	0.37	2.60	1.10	0.6	16	14	269	1.51	5.7	10.0	4600	26.8	3.27	< 0.1	13.1	8.6
11s171354	27	13.8	0.6	< 1	0.044	0.74	1.67	0.87	0.10	4.13	4.4	31	10	1150	3.18	10.0	9.1	23.0	230	4.91	< 0.1	192	35.0
11s171355	23	17.9	0.6	< 1	0.069	1.05	2.08	1.18	0.14	2.92	5.7	51	11	1050	3.73	11.9	9.9	19.3	63.1	7.05	< 0.1	253	54.3
11s171356	< 5	18.9	0.6	< 1	0.072	1.10	2.39	1.25	0.07	2.74	5.1	50	16	915	3.41	11.9	10.3	18.7	83.6	7.39	< 0.1	95.1	57.1
11s171357	< 5	16.3	0.5	< 1	0.057	0.94	2.05	1.07	0.10	3.12	5.2	48	12	918	3.61	11.7	10.0	24.7	165	6.92	< 0.1	145	50.6

Analyte Symbol	Au	Li	Be	B	Na	Mg	Al	K	Bi	Ca	Sc	V	Cr	Mn	Fe	Co	Ni	Cu	Zn	Ga	Ge	As	Rb
Unit Symbol	ppb	ppm	ppm	ppm	%	%	%	%	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	5	0.1	0.1	1	0.001	0.01	0.01	0.01	0.02	0.01	0.1	1	1	1	0.01	0.1	0.1	0.01	0.1	0.02	0.1	0.1	0.1
Analysis Method	FA-AA	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS
11s171358	< 5	13.3	0.5	< 1	0.055	0.84	1.65	0.94	0.14	2.96	4.8	34	8	866	3.52	10.6	9.3	22.1	115	5.63	0.1	158	42.2
11s171359	11	13.3	0.6	< 1	0.056	0.67	1.59	0.75	0.37	3.63	4.0	31	6	946	3.41	11.3	7.4	21.5	211	5.64	< 0.1	273	29.2
11s171360	< 5	0.9	0.1	< 1	0.014	0.02	0.08	0.01	< 0.02	0.02	< 0.1	2	< 1	17	0.23	0.5	1.6	0.70	2.6	0.31	< 0.1	1.3	0.9
11s171361	< 5	16.3	0.5	< 1	0.061	0.91	2.03	1.03	0.09	2.92	4.5	44	11	926	3.46	11.3	8.6	17.3	154	6.33	< 0.1	257	43.0
11s171362	< 5	18.9	0.7	< 1	0.075	1.12	2.48	1.18	0.05	2.24	5.1	57	13	876	3.48	13.0	8.8	18.6	134	7.28	< 0.1	318	47.1
11s171363	< 5	16.5	0.5	< 1	0.059	1.01	2.17	1.19	0.06	2.41	4.6	48	9	882	3.24	10.9	8.1	22.2	84.0	6.24	< 0.1	204	49.7
11s171364	9	17.1	0.5	< 1	0.055	1.03	2.07	1.21	0.06	2.10	4.0	44	8	824	3.05	11.4	7.6	17.2	140	5.68	< 0.1	344	49.2
11s171365	< 5	14.1	0.5	< 1	0.058	0.80	1.91	0.95	0.22	2.43	4.2	39	6	754	2.99	9.8	6.9	16.5	87.8	6.28	< 0.1	128	39.2
11s171366	6	13.7	0.5	< 1	0.053	0.80	1.96	0.93	0.20	2.92	4.3	38	7	786	2.96	9.9	6.7	19.7	53.5	5.93	< 0.1	12.6	38.3
11s171367	< 5	17.0	0.5	< 1	0.052	0.82	2.09	0.75	0.14	2.38	4.0	40	9	669	3.03	10.0	6.4	14.9	58.3	7.21	< 0.1	13.3	32.1
11s171368	< 5	17.0	0.5	< 1	0.058	0.91	2.00	0.73	0.58	3.44	5.0	45	11	884	3.42	10.4	8.8	16.7	82.1	7.24	< 0.1	9.3	30.6
11s171369	12	16.5	0.6	< 1	0.055	0.86	1.60	0.64	0.92	3.91	5.1	36	8	764	3.71	11.0	10.1	20.2	47.1	5.70	< 0.1	64.2	23.4
11s171370	< 5	17.4	0.6	< 1	0.083	1.10	1.90	1.07	0.21	2.37	5.5	56	15	733	3.73	11.3	10.9	17.5	60.7	7.65	< 0.1	18.1	49.7
11s171371	< 5	16.6	0.5	< 1	0.084	0.95	1.71	0.92	0.10	2.38	5.2	54	13	667	3.10	10.3	9.9	16.8	48.1	6.69	< 0.1	7.9	40.1
11s171372	< 5	17.0	0.6	7	0.077	1.09	1.79	0.97	0.23	2.85	5.6	58	16	755	3.74	13.9	11.1	23.5	52.9	7.07	< 0.1	21.7	43.5
11s171373	10	15.5	0.6	5	0.076	0.95	1.71	0.94	0.23	4.86	5.1	52	13	960	3.81	12.8	11.1	25.6	47.4	6.15	< 0.1	14.4	36.7
11s171374	7	13.2	0.6	10	0.039	0.67	1.46	0.89	0.36	3.16	4.2	24	6	727	3.92	12.0	10.3	32.2	50.0	4.24	< 0.1	10.7	28.6
11s171375	5	14.8	0.6	8	0.051	0.69	1.62	0.86	0.45	4.08	4.2	28	6	736	3.25	13.5	9.9	28.4	47.8	4.59	< 0.1	66.5	26.7
11s171376	8	17.3	0.5	5	0.081	1.17	1.73	1.18	0.22	3.83	5.3	49	11	899	3.90	11.3	9.8	21.1	75.4	5.59	< 0.1	38.1	43.7
11s171377	17	18.2	0.6	6	0.071	1.04	1.63	1.03	0.56	4.46	5.6	44	12	922	3.97	12.5	11.4	23.8	73.1	5.39	< 0.1	35.1	37.7
11s171378	< 5	22.3	0.6	6	0.070	1.26	2.24	1.28	0.10	2.98	5.8	56	16	833	3.67	14.8	12.3	25.4	47.9	6.75	< 0.1	12.7	45.0
11s171379	85	20.7	0.7	4	0.063	1.21	2.10	1.29	0.10	2.84	5.9	54	13	844	3.91	13.6	12.6	31.7	58.2	6.98	< 0.1	16.4	42.3
11s171380	< 5	19.2	0.6	4	0.077	1.17	1.93	1.15	0.10	3.11	5.7	54	16	864	3.57	13.4	11.7	27.3	61.4	6.56	< 0.1	5.3	38.6
11s171381	84	20.0	0.6	3	0.100	1.29	2.01	1.27	0.28	3.15	6.5	67	17	945	3.82	12.5	11.6	21.8	71.1	7.34	< 0.1	61.5	45.3
11s171382	24	16.5	0.6	3	0.110	1.04	1.78	1.15	0.23	3.91	6.1	61	16	1100	3.60	12.6	11.6	25.5	70.9	6.64	< 0.1	65.7	40.6
11s171383	< 5	17.9	0.5	3	0.070	1.20	1.77	1.08	0.33	5.20	5.9	53	13	1170	3.50	10.8	10.7	23.9	90.3	5.84	< 0.1	36.4	42.7



## Results

Analyte Symbol	Sr	Y	Zr	Nb	Mo	Ag	In	Sn	Sb	Te	Cs	Ba	La	Ce	Cd	Pr	Nd	Sm	Se	Eu	Gd	Tb	Dy	
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	0.5	0.01	0.1	0.1	0.01	0.002	0.02	0.05	0.02	0.02	0.02	0.5	0.5	0.01	0.01	0.1	0.02	0.1	0.1	0.1	0.1	0.1	0.1	
Analysis Method	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	
11s171309	369	15.9	2.0	0.1	1.21	0.408	0.03	1.36	2.73	1.71	1.56	154	23.2	45.2	0.10	5.2	19.4	3.7	0.6	0.8	3.6	0.5	3.2	
11s171310	341	15.9	2.1	0.1	1.89	0.240	0.02	0.65	2.02	0.15	1.50	138	22.5	43.7	0.08	5.0	19.2	3.7	1.1	0.8	3.7	0.5	3.3	
11s171311	309	15.0	2.6	0.1	0.89	0.195	0.03	0.64	2.38	0.22	1.62	133	23.7	45.4	0.11	5.1	19.1	3.6	0.6	0.9	3.6	0.5	3.1	
11s171312	243	16.3	3.1	< 0.1	1.13	0.390	0.04	0.72	2.46	0.69	1.54	122	26.0	49.0	0.99	5.6	20.7	3.9	0.9	1.0	3.9	0.5	3.4	
11s171313	302	13.9	2.5	< 0.1	1.33	2.85	0.04	0.80	2.00	38.4	0.53	52.1	18.0	34.2	0.75	3.9	14.4	2.9	1.3	0.8	2.9	0.4	2.7	
11s171314	5.7	1.20	0.7	0.1	0.07	0.463	< 0.02	< 0.05	< 0.02	0.34	0.06	7.7	4.4	8.89	0.03	1.0	3.57	0.6	< 0.1	< 0.1	0.4	< 0.1	0.3	
11s171315	227	17.7	2.1	< 0.1	0.95	0.496	0.05	0.79	1.64	0.92	1.46	62.6	30.3	57.2	0.22	6.4	24.0	4.6	0.8	1.2	4.4	0.6	3.8	
11s171316	345	18.4	2.5	< 0.1	1.08	0.305	0.04	0.84	4.21	0.45	2.29	84.0	28.0	53.5	0.18	6.1	22.3	4.3	0.8	1.1	4.2	0.6	3.8	
11s171317	359	15.9	2.3	0.1	0.90	0.216	0.03	0.81	2.26	0.44	1.55	92.2	23.5	44.7	0.15	5.0	18.6	3.5	0.6	0.9	3.5	0.5	3.1	
11s171318	260	3.71	1.8	< 0.1	540	15.2	0.03	1.19	43.9	4.93	0.90	22.1	6.4	13.6	< 0.01	1.7	6.42	1.2	0.4	0.3	0.9	0.1	0.7	
11s171319	364	18.5	2.0	< 0.1	2.17	1.36	0.04	0.80	4.12	0.51	5.00	113	28.9	55.2	0.17	6.3	23.5	4.5	1.0	1.2	4.3	0.6	3.7	
11s171320	651	15.4	1.6	< 0.1	2.14	0.377	0.03	0.74	3.38	0.32	1.33	60.0	21.5	41.0	0.14	4.6	17.0	3.2	0.6	0.8	3.1	0.4	2.9	
11s171321	353	15.4	1.9	< 0.1	1.37	0.379	0.04	0.87	4.37	2.06	1.72	91.2	24.5	46.7	0.20	5.2	19.3	3.7	0.7	0.9	3.5	0.5	3.1	
11s171322	234	15.8	2.2	< 0.1	1.46	0.518	0.04	0.68	2.89	4.55	1.94	61.3	24.8	47.1	0.17	5.4	20.1	3.8	0.7	1.0	3.7	0.5	3.2	
11s171323	321	17.0	2.5	< 0.1	1.18	0.383	0.04	1.00	3.33	0.95	2.35	124	27.4	51.3	0.14	5.8	21.5	4.0	0.7	1.1	4.0	0.5	3.3	
11s171324	370	11.5	2.3	< 0.1	1.09	0.377	0.03	0.87	3.37	1.38	1.54	44.7	18.1	34.5	0.14	3.9	14.1	2.6	0.7	0.7	2.6	0.4	2.3	
11s171325	345	16.6	2.5	< 0.1	1.06	0.386	0.04	0.61	3.32	0.60	2.59	48.7	25.1	48.4	0.44	5.5	20.1	3.9	0.6	1.0	3.8	0.5	3.2	
11s171326	226	17.9	2.5	< 0.1	1.13	0.550	0.04	0.56	2.56	2.63	2.04	66.0	28.2	53.2	0.33	6.1	22.3	4.3	1.0	1.1	4.1	0.6	3.6	
11s171327	284	15.5	2.3	< 0.1	1.67	1.22	0.04	0.58	2.62	2.49	1.34	41.0	24.9	48.0	0.53	5.5	20.6	3.9	0.8	1.0	3.8	0.5	3.2	
11s171328	308	17.0	1.8	< 0.1	1.35	0.706	0.04	0.76	3.11	0.65	1.77	50.4	26.4	50.7	0.39	5.8	21.6	4.1	0.8	1.0	3.9	0.5	3.4	
11s171329	316	15.3	2.4	0.1	0.94	0.410	0.03	0.73	3.46	0.38	2.18	156	23.8	44.8	0.23	5.1	19.2	3.6	0.6	0.9	3.5	0.5	3.0	
11s171330	271	16.5	2.5	< 0.1	1.00	0.471	0.05	1.44	2.96	0.91	1.95	119	25.1	48.2	0.96	5.5	20.4	3.9	0.8	1.0	3.7	0.5	3.2	
11s171331	274	18.3	2.7	< 0.1	1.08	1.02	0.04	1.15	1.84	1.28	1.55	91.9	26.0	49.3	0.51	5.6	20.4	3.9	0.7	1.0	3.7	0.5	3.4	
11s171332	162	15.6	2.8	< 0.1	1.35	0.692	0.03	0.68	1.55	0.80	1.21	80.5	23.9	45.1	0.25	5.1	18.8	3.6	0.6	0.9	3.4	0.5	3.0	
11s171333	101	17.1	3.5	< 0.1	1.02	0.571	0.04	0.43	6.63	1.46	0.57	38.1	25.7	48.3	0.27	5.5	20.0	3.7	1.0	1.0	3.7	0.5	3.2	
11s171334	5.0	1.00	0.8	< 0.1	0.08	0.206	< 0.02	0.08	< 0.02	0.10	0.07	6.7	2.8	5.28	0.02	0.6	2.14	0.4	< 0.1	< 0.1	0.3	< 0.1	0.2	
11s171335	166	15.1	3.7	0.2	0.96	0.391	0.06	0.54	1.73	0.82	0.54	62.7	22.2	42.2	3.35	4.8	17.5	3.3	0.7	0.8	3.3	0.5	2.9	
11s171336	168	16.9	5.4	0.1	0.86	1.16	0.07	0.39	12.9	9.97	0.64	44.6	24.3	45.4	17.2	5.2	19.0	3.7	1.4	0.9	3.7	0.5	3.1	
11s171337	369	14.9	3.2	< 0.1	1.08	0.713	0.02	0.74	2.98	1.95	2.21	141	20.9	40.0	0.13	4.6	17.0	3.2	0.7	0.7	3.2	0.5	2.9	
11s171338	335	16.7	2.9	< 0.1	0.83	0.352	0.04	0.76	1.58	1.69	2.39	133	24.0	45.3	0.17	5.1	18.6	3.5	0.4	0.9	3.4	0.5	3.2	
11s171339	406	19.8	3.5	< 0.1	0.91	0.466	0.04	0.85	2.01	1.56	2.18	139	29.3	54.2	0.21	6.1	22.2	4.3	0.7	1.1	4.1	0.6	3.6	
11s171340	290	14.0	2.8	< 0.1	1.06	0.573	0.03	0.71	2.66	2.37	1.97	124	21.4	40.7	0.26	4.6	16.8	3.2	0.4	0.8	3.2	0.4	2.7	
11s171341	353	14.8	3.2	< 0.1	1.33	0.364	0.03	0.99	2.85	0.88	1.98	155	21.3	40.0	0.15	4.5	16.6	3.1	0.5	0.8	3.1	0.4	2.7	
11s171342	341	13.9	2.9	< 0.1	0.99	0.281	0.03	0.82	3.17	0.41	2.57	155	20.2	38.1	0.13	4.3	15.8	3.0	0.5	0.7	3.0	0.4	2.6	
11s171343	290	14.3	3.4	0.1	0.93	0.514	0.03	0.78	3.15	1.44	2.53	164	20.0	37.9	0.13	4.3	15.6	2.9	0.6	0.7	2.9	0.4	2.7	
11s171344	332	14.1	2.4	0.2	1.28	0.333	0.03	0.78	2.72	0.38	2.96	180	21.3	40.2	0.09	4.5	16.4	3.1	0.4	0.7	3.0	0.4	2.7	
11s171345	353	17.3	2.6	< 0.1	0.96	0.240	0.03	0.69	2.32	0.38	2.03	98.3	26.6	49.3	0.28	5.6	20.6	3.9	0.3	1.0	3.8	0.5	3.3	
11s171346	293	17.7	2.4	< 0.1	0.96	0.252	0.04	0.84	3.66	0.26	2.18	118	29.3	54.8	2.19	6.2	22.6	4.2	0.8	1.0	4.1	0.6	3.4	
11s171347	341	18.3	2.6	< 0.1	0.91	0.308	0.04	0.76	3.49	0.39	2.08	114	25.3	47.1	1.29	5.3	19.8	3.8	0.6	1.0	3.9	0.6	3.4	
11s171348	197	16.4	2.6	< 0.1	0.98	0.622	0.05	0.61	3.15	1.01	1.66	104	24.5	46.0	0.30	5.2	19.2	3.6	0.7	0.9	3.6	0.5	3.2	
11s171349	284	17.7	2.4	< 0.1	0.98	0.421	0.04	0.57	2.84	0.30	1.75	129	27.3	51.2	0.34	5.7	20.9	4.0	0.7	1.0	3.9	0.6	3.4	
11s171350	305	14.5	2.4	< 0.1	0.82	0.314	0.04	0.64	4.04	0.12	2.31	134	22.3	42.8	0.39	4.9	18.0	3.3	0.4	0.8	3.2	0.5	2.8	
11s171351	240	18.4	2.4	< 0.1	1.03	0.453	0.05	0.58	3.07	0.34	1.21	84.4	27.1	50.7	0.39	5.8	21.2	4.0	1.1	1.1	4.0	0.6	3.5	
11s171352	171	9.45	1.2	< 0.1	1.90	0.966	0.05	0.32	4.17	0.84	0.36	32.6	14.3	26.4	0.31	3.0	11.0	2.1	0.5	0.6	2.0	0.3	1.7	
11s171353	284	4.06	2.0	< 0.1	555	16.4	0.03	1.18	43.3	5.20	0.93	38.6	7.0	14.7	< 0.01	1.8	6.85	1.2	0.4	0.3	1.0	0.1	0.8	
11s171354	366	17.7	2.5	< 0.1	1.75	1.55	0.06	0.47	1.22	0.47	1.24	110	26.1	48.0	1.56	5.4	19.7	3.7	0.6	1.0	3.8	0.5	3.4	
11s171355	252	16.8	3.3	< 0.1	1.05	1.11	0.05	0.70	2.43	1.26	1.84	119	25.2	47.8	0.28	5.4	20.0	3.8	0.6	0.9	3.8	0.5	3.3	
11s171356	282	14.5	3.2	< 0.1	1.02	0.560	0.03	0.68	2.87	0.55	1.67	154	21.7	41.0	0.35	4.7	17.3	3.2	0.5	0.8	3.0	0.4	2.7	
11s171357	281	16.0	3.1	< 0.1	0.96	0.420	0.04	0.62	2.62	0.66	1.33	83.3	22.9	42.8	3.05	4.8	17.8	3.4	0.6	0.9	3.4	0.5	3.0	

Analyte Symbol	Sr	Y	Zr	Nb	Mo	Ag	In	Sn	Sb	Te	Cs	Ba	La	Ce	Cd	Pr	Nd	Sm	Se	Eu	Gd	Tb	Dy
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	0.5	0.01	0.1	0.1	0.01	0.002	0.02	0.05	0.02	0.02	0.02	0.5	0.5	0.01	0.01	0.1	0.02	0.1	0.1	0.1	0.1	0.1	0.1
Analysis Method	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS
11s171358	167	18.4	3.3	< 0.1	0.86	0.605	0.04	0.52	1.06	0.50	1.08	46.0	28.4	53.8	0.82	6.1	22.4	4.2	0.7	1.1	4.0	0.6	3.5
11s171359	195	18.0	3.2	< 0.1	0.92	1.04	0.05	0.54	2.24	1.14	0.86	32.7	24.3	45.7	3.07	5.2	19.3	3.8	1.0	1.0	3.7	0.5	3.3
11s171360	5.5	1.15	0.8	< 0.1	0.10	0.247	< 0.02	< 0.05	0.03	0.08	0.06	5.8	5.2	10.7	0.03	1.2	4.50	0.9	< 0.1	< 0.1	0.6	< 0.1	0.3
11s171361	239	14.0	3.8	0.6	0.68	0.418	0.03	0.67	2.56	0.86	1.02	97.3	16.8	32.0	1.09	3.7	13.9	2.8	0.5	0.7	2.8	0.4	2.6
11s171362	254	13.2	4.2	1.1	0.79	0.410	0.02	0.84	2.73	1.25	1.21	151	17.4	32.8	0.53	3.8	13.9	2.7	0.5	0.7	2.7	0.4	2.5
11s171363	228	13.2	4.4	0.5	0.65	0.408	0.03	0.68	1.78	0.94	1.26	168	17.3	32.8	0.20	3.7	13.8	2.7	0.6	0.7	2.6	0.4	2.5
11s171364	224	12.1	4.0	0.5	0.72	0.366	0.02	0.62	2.07	1.13	1.40	168	15.6	29.6	0.75	3.4	12.6	2.5	0.7	0.6	2.5	0.4	2.3
11s171365	226	14.5	4.3	0.2	0.67	0.368	0.03	0.84	1.42	0.61	0.95	97.2	18.8	35.3	0.48	4.0	15.0	3.0	0.4	0.8	3.0	0.4	2.7
11s171366	250	15.1	4.3	0.3	0.70	0.373	0.04	0.78	1.27	0.40	0.85	115	17.6	33.2	0.15	3.8	14.3	2.9	0.6	0.8	3.0	0.4	2.8
11s171367	317	16.2	3.3	< 0.1	0.73	0.305	0.03	0.59	2.41	0.28	1.11	90.7	19.0	36.3	0.14	4.2	15.7	3.2	0.3	0.8	3.2	0.5	2.9
11s171368	325	15.7	3.5	0.1	0.93	0.485	0.04	0.70	1.47	0.72	0.80	49.0	23.9	44.8	0.41	5.1	18.7	3.5	0.8	0.9	3.4	0.5	2.9
11s171369	232	17.4	2.9	< 0.1	0.84	1.23	0.06	0.44	0.50	1.57	0.93	46.7	25.4	47.1	0.26	5.4	20.0	3.8	1.1	1.1	3.7	0.5	3.2
11s171370	251	15.5	4.1	0.7	0.95	0.715	0.06	0.80	1.42	0.63	1.65	65.1	21.9	41.1	0.22	4.7	17.1	3.3	0.7	0.9	3.2	0.5	2.9
11s171371	243	14.3	3.6	0.8	0.98	0.475	0.05	0.73	1.62	0.44	1.23	111	20.8	39.3	0.17	4.4	16.2	3.1	0.5	0.8	3.0	0.4	2.7
11s171372	240	15.0	3.7	0.2	1.09	0.625	0.08	0.69	1.22	0.56	1.52	34.1	20.1	37.6	0.22	4.3	15.9	3.1	0.8	0.9	3.0	0.5	2.8
11s171373	256	14.7	2.9	< 0.1	1.38	0.420	0.06	1.76	1.08	0.56	0.99	55.0	21.2	39.4	0.31	4.5	16.6	3.1	0.7	0.9	3.0	0.4	2.8
11s171374	132	16.7	2.7	< 0.1	1.02	0.541	0.07	2.60	0.78	0.86	0.68	28.1	24.7	46.6	0.39	5.3	20.2	3.9	0.9	1.0	3.9	0.5	3.4
11s171375	165	15.9	2.8	< 0.1	1.24	0.573	0.06	0.34	0.68	0.31	0.70	42.8	25.5	48.2	0.34	5.5	20.3	3.9	1.0	1.1	3.8	0.5	3.3
11s171376	183	16.3	2.7	< 0.1	1.48	0.380	0.05	0.55	0.62	0.19	1.38	47.0	22.7	42.7	0.34	4.8	18.3	3.6	0.6	0.9	3.5	0.5	3.2
11s171377	229	14.7	2.9	< 0.1	1.18	0.505	0.05	5.11	0.73	0.28	1.52	50.4	21.0	39.0	0.45	4.5	16.9	3.3	0.7	0.9	3.2	0.5	2.9
11s171378	221	14.2	3.4	0.4	0.91	0.356	0.04	0.71	1.53	0.18	1.88	83.6	18.0	34.3	0.22	4.0	15.1	3.0	0.7	0.8	3.0	0.4	2.7
11s171379	193	16.4	3.1	< 0.1	0.80	0.370	0.05	0.58	1.08	0.23	1.50	47.0	20.2	38.8	0.29	4.6	17.5	3.5	0.8	0.9	3.4	0.5	3.1
11s171380	223	14.5	2.9	0.6	1.04	0.323	0.04	0.66	0.90	0.25	1.59	65.1	18.1	34.2	0.23	3.9	14.8	2.9	0.6	0.8	3.0	0.4	2.7
11s171381	260	14.0	2.5	< 0.1	1.00	0.683	0.07	0.61	0.95	0.82	2.23	49.4	18.9	36.6	0.27	4.2	15.8	3.1	0.7	0.8	3.1	0.4	2.8
11s171382	306	13.9	2.5	< 0.1	1.62	0.394	0.04	0.77	1.43	0.32	2.42	50.9	18.4	34.8	0.38	4.1	15.2	3.0	0.5	0.8	3.0	0.4	2.7
11s171383	323	15.3	2.4	< 0.1	1.45	0.415	0.05	0.75	1.27	0.29	1.95	87.2	19.8	37.0	0.59	4.2	15.8	3.1	0.6	0.8	3.1	0.4	2.9

## Results

Analyte Symbol	Ho	Er	Tm	Yb	Lu	Hf	Ta	W	Re	Au	Tl	Pb	Th	U	Hg
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppb
Detection Limit	0.1	0.1	0.1	0.1	0.1	0.1	0.05	0.1	0.001	0.5	0.02	0.01	0.1	0.1	10
Analysis Method	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS
11s171309	0.6	1.8	0.2	1.5	0.2	< 0.1	< 0.05	< 0.1	0.002	12.4	0.41	7.09	5.3	0.9	< 10
11s171310	0.7	1.8	0.2	1.4	0.2	< 0.1	< 0.05	< 0.1	0.004	7.0	0.40	3.54	5.1	0.9	< 10
11s171311	0.6	1.7	0.2	1.4	0.2	0.1	< 0.05	< 0.1	0.002	1.2	0.43	4.04	6.4	1.3	< 10
11s171312	0.7	1.9	0.3	1.6	0.2	0.1	< 0.05	< 0.1	0.002	6.4	0.56	9.31	6.9	1.3	< 10
11s171313	0.5	1.6	0.2	1.3	0.2	< 0.1	< 0.05	< 0.1	0.002	72.0	0.22	83.1	6.9	2.1	< 10
11s171314	< 0.1	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.05	< 0.1	0.003	< 0.5	< 0.02	1.42	1.1	0.2	< 10
11s171315	0.7	2.0	0.3	1.6	0.2	< 0.1	< 0.05	< 0.1	0.001	9.3	0.39	6.09	8.2	1.8	< 10
11s171316	0.7	2.1	0.3	1.7	0.3	< 0.1	< 0.05	< 0.1	0.003	< 0.5	0.41	4.87	7.3	1.2	< 10
11s171317	0.6	1.8	0.3	1.5	0.2	< 0.1	< 0.05	< 0.1	0.002	3.3	0.38	4.01	6.4	1.1	< 10
11s171318	0.1	0.4	< 0.1	0.4	< 0.1	< 0.1	< 0.05	< 0.1	0.275	828	0.08	29.9	0.9	0.9	1790
11s171319	0.7	2.1	0.3	1.7	0.2	< 0.1	< 0.05	< 0.1	0.001	7.6	0.38	4.89	8.0	0.7	< 10
11s171320	0.6	1.6	0.2	1.4	0.2	< 0.1	< 0.05	< 0.1	0.001	5.4	0.17	3.89	5.7	0.7	< 10
11s171321	0.6	1.7	0.2	1.4	0.2	< 0.1	< 0.05	< 0.1	0.004	5.2	0.40	7.80	6.3	1.1	< 10
11s171322	0.6	1.8	0.3	1.5	0.2	< 0.1	< 0.05	< 0.1	0.003	10.1	0.53	8.80	6.3	1.4	< 10
11s171323	0.7	1.8	0.3	1.5	0.2	0.1	< 0.05	< 0.1	0.001	7.0	0.40	4.57	7.0	1.0	< 10
11s171324	0.5	1.3	0.2	1.1	0.2	0.1	< 0.05	< 0.1	0.003	14.8	0.29	6.17	5.1	1.0	< 10
11s171325	0.6	1.8	0.3	1.4	0.2	< 0.1	< 0.05	< 0.1	0.003	8.1	0.38	5.69	6.9	1.5	< 10
11s171326	0.7	2.0	0.3	1.6	0.2	< 0.1	< 0.05	< 0.1	0.002	9.6	0.36	8.30	6.7	1.2	< 10
11s171327	0.6	1.7	0.2	1.4	0.2	< 0.1	< 0.05	< 0.1	0.004	32.6	0.34	9.52	6.0	1.1	< 10
11s171328	0.7	1.8	0.3	1.5	0.2	< 0.1	< 0.05	< 0.1	0.003	7.7	0.41	8.35	6.4	1.1	< 10
11s171329	0.6	1.6	0.2	1.3	0.2	< 0.1	< 0.05	< 0.1	0.002	3.9	0.44	6.68	5.7	1.1	< 10
11s171330	0.6	1.8	0.2	1.4	0.2	< 0.1	< 0.05	< 0.1	0.002	4.1	0.49	7.16	6.0	1.1	< 10
11s171331	0.7	1.9	0.3	1.5	0.2	0.1	< 0.05	< 0.1	0.001	26.2	0.49	7.19	6.6	1.2	< 10
11s171332	0.6	1.6	0.2	1.4	0.2	< 0.1	< 0.05	< 0.1	0.002	3.9	0.54	6.33	5.8	1.1	< 10
11s171333	0.6	1.7	0.2	1.3	0.2	< 0.1	< 0.05	< 0.1	0.005	111	0.35	6.99	5.8	1.1	< 10
11s171334	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.05	< 0.1	0.003	1.1	< 0.02	0.85	0.5	< 0.1	< 10
11s171335	0.6	1.6	0.2	1.4	0.2	0.1	< 0.05	< 0.1	0.003	3.4	0.33	5.34	5.9	1.1	< 10
11s171336	0.6	1.7	0.2	1.4	0.2	0.1	< 0.05	< 0.1	0.003	156	0.36	6.18	5.6	1.1	< 10
11s171337	0.6	1.6	0.2	1.3	0.2	0.1	< 0.05	< 0.1	0.002	18.7	0.82	5.30	5.7	1.1	< 10
11s171338	0.6	1.7	0.2	1.4	0.2	< 0.1	< 0.05	< 0.1	0.002	2.5	0.50	5.62	6.3	1.1	< 10
11s171339	0.7	2.0	0.3	1.6	0.2	< 0.1	< 0.05	< 0.1	0.002	4.4	0.43	4.93	6.7	1.0	< 10
11s171340	0.5	1.5	0.2	1.2	0.2	0.1	< 0.05	< 0.1	0.002	8.3	0.50	4.66	5.9	1.1	< 10
11s171341	0.6	1.6	0.2	1.2	0.2	0.1	< 0.05	< 0.1	0.002	3.3	0.41	3.96	5.7	1.0	< 10
11s171342	0.5	1.5	0.2	1.2	0.2	0.1	< 0.05	< 0.1	0.003	6.5	0.55	4.23	5.9	1.0	< 10
11s171343	0.5	1.5	0.2	1.2	0.2	0.1	< 0.05	< 0.1	0.003	61.3	0.56	4.05	5.6	1.1	< 10
11s171344	0.5	1.5	0.2	1.1	0.2	< 0.1	< 0.05	< 0.1	0.001	10.9	0.60	3.82	6.5	1.1	< 10
11s171345	0.6	1.8	0.3	1.4	0.2	< 0.1	< 0.05	< 0.1	0.004	5.9	0.27	4.46	6.5	1.1	< 10
11s171346	0.7	1.9	0.3	1.4	0.2	< 0.1	< 0.05	< 0.1	0.002	3.5	0.38	4.43	6.8	1.3	< 10
11s171347	0.7	1.9	0.3	1.6	0.2	< 0.1	< 0.05	< 0.1	0.002	10.6	0.46	6.44	5.4	1.2	< 10
11s171348	0.6	1.8	0.2	1.4	0.2	< 0.1	< 0.05	< 0.1	0.004	10.5	0.47	6.00	5.4	1.0	< 10
11s171349	0.7	1.9	0.3	1.5	0.2	< 0.1	< 0.05	< 0.1	0.004	5.5	0.47	7.77	6.2	1.0	< 10
11s171350	0.5	1.6	0.2	1.2	0.2	< 0.1	< 0.05	< 0.1	0.003	3.0	0.59	8.91	5.6	1.2	< 10
11s171351	0.7	2.0	0.3	1.6	0.2	< 0.1	< 0.05	< 0.1	0.002	4.8	0.38	16.3	6.3	1.1	< 10
11s171352	0.4	1.0	0.1	0.8	0.1	< 0.1	< 0.05	< 0.1	0.002	29.8	0.15	13.5	3.2	0.6	< 10
11s171353	0.1	0.4	< 0.1	0.4	< 0.1	< 0.1	< 0.05	< 0.1	0.269	903	0.07	31.0	1.0	0.8	1880
11s171354	0.7	1.9	0.3	1.5	0.2	< 0.1	< 0.05	< 0.1	0.002	25.3	0.36	46.0	6.3	1.2	< 10
11s171355	0.6	1.8	0.2	1.4	0.2	0.1	< 0.05	< 0.1	0.002	21.6	0.60	10.5	6.0	1.1	< 10
11s171356	0.5	1.6	0.2	1.3	0.2	0.1	< 0.05	< 0.1	0.003	3.3	0.55	7.74	6.1	1.0	< 10
11s171357	0.6	1.7	0.2	1.4	0.2	0.1	< 0.05	< 0.1	0.004	5.7	0.57	9.09	6.2	1.1	< 10

Analyte Symbol	Ho	Er	Tm	Yb	Lu	Hf	Ta	W	Re	Au	Tl	Pb	Th	U	Hg
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppb
Detection Limit	0.1	0.1	0.1	0.1	0.1	0.1	0.05	0.1	0.001	0.5	0.02	0.01	0.1	0.1	10
Analysis Method	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS
11s171358	0.7	2.0	0.3	1.6	0.2	0.1	< 0.05	< 0.1	0.002	5.1	0.45	7.27	7.1	1.4	< 10
11s171359	0.7	1.9	0.3	1.6	0.2	0.1	< 0.05	< 0.1	0.004	16.3	0.33	13.2	5.3	1.0	< 10
11s171360	< 0.1	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.05	< 0.1	0.004	2.1	< 0.02	0.88	2.2	0.2	< 10
11s171361	0.5	1.5	0.2	1.3	0.2	0.1	< 0.05	< 0.1	0.002	4.2	0.44	7.36	4.0	0.8	< 10
11s171362	0.5	1.4	0.2	1.2	0.2	0.2	< 0.05	< 0.1	0.002	3.2	0.44	5.32	4.6	0.9	< 10
11s171363	0.5	1.4	0.2	1.2	0.2	0.2	< 0.05	< 0.1	0.003	4.2	0.46	4.63	4.6	0.8	< 10
11s171364	0.5	1.3	0.2	1.1	0.2	0.2	< 0.05	< 0.1	0.003	10.9	0.47	3.66	4.0	0.7	< 10
11s171365	0.5	1.5	0.2	1.3	0.2	0.2	< 0.05	< 0.1	0.004	1.4	0.38	4.86	4.5	0.7	< 10
11s171366	0.5	1.6	0.2	1.4	0.2	0.2	< 0.05	< 0.1	0.004	2.6	0.38	4.57	4.2	0.7	< 10
11s171367	0.6	1.7	0.2	1.4	0.2	0.1	< 0.05	< 0.1	0.002	1.6	0.33	5.80	4.3	0.7	< 10
11s171368	0.6	1.7	0.2	1.4	0.2	0.1	< 0.05	< 0.1	0.003	3.8	0.32	8.75	6.1	1.1	< 10
11s171369	0.6	1.8	0.2	1.5	0.2	0.1	< 0.05	< 0.1	0.004	11.3	0.21	12.1	7.0	1.3	< 10
11s171370	0.6	1.7	0.2	1.4	0.2	0.2	< 0.05	< 0.1	0.004	4.5	0.51	5.67	6.6	1.2	< 10
11s171371	0.5	1.5	0.2	1.3	0.2	0.2	< 0.05	< 0.1	0.004	3.8	0.41	5.11	6.4	1.2	< 10
11s171372	0.6	1.6	0.2	1.2	0.2	0.2	< 0.05	< 0.1	0.004	5.8	0.47	6.88	5.8	1.1	< 10
11s171373	0.6	1.6	0.2	1.3	0.2	0.1	< 0.05	< 0.1	0.002	6.9	0.39	7.37	5.9	1.1	< 10
11s171374	0.7	1.8	0.3	1.4	0.2	0.1	< 0.05	< 0.1	0.004	2.4	0.30	7.05	6.2	1.2	< 10
11s171375	0.6	1.7	0.2	1.4	0.2	< 0.1	< 0.05	< 0.1	0.003	4.7	0.28	15.2	7.7	1.4	< 10
11s171376	0.6	1.8	0.2	1.4	0.2	0.1	< 0.05	0.1	0.005	4.2	0.49	11.9	6.3	1.2	< 10
11s171377	0.6	1.6	0.2	1.4	0.2	0.1	< 0.05	< 0.1	0.003	4.6	0.43	39.4	6.3	1.2	< 10
11s171378	0.5	1.6	0.2	1.3	0.2	0.2	< 0.05	< 0.1	0.004	2.3	0.52	7.90	6.3	1.0	< 10
11s171379	0.6	1.8	0.3	1.4	0.2	0.1	< 0.05	< 0.1	0.002	2.6	0.43	7.84	5.8	1.0	< 10
11s171380	0.6	1.6	0.2	1.3	0.2	0.1	< 0.05	0.2	0.003	4.6	0.45	5.89	5.6	1.0	< 10
11s171381	0.6	1.5	0.2	1.2	0.2	< 0.1	< 0.05	< 0.1	0.005	76.6	0.51	10.5	5.1	1.1	< 10
11s171382	0.5	1.5	0.2	1.2	0.2	0.1	< 0.05	< 0.1	0.003	22.1	0.49	9.51	5.2	1.0	< 10
11s171383	0.6	1.7	0.2	1.4	0.2	< 0.1	< 0.05	< 0.1	0.005	7.0	0.49	14.4	5.2	0.9	< 10

QC

Analyte Symbol	Au	Li	Be	B	Na	Mg	Al	K	Bi	Ca	Sc	V	Cr	Mn	Fe	Co	Ni	Cu	Zn	Ga	Ge	As	Rb
Unit Symbol	ppb	ppm	ppm	ppm	%	%	%	%	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	5	0.1	0.1	1	0.001	0.01	0.01	0.01	0.02	0.01	0.1	1	1	1	0.01	0.1	0.1	0.01	0.1	0.02	0.1	0.1	0.1
Analysis Method	FA-AA	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS
GXR-1 Meas		6.0	1.1	16	0.047	0.15	0.40	0.04	1580	0.90	0.8	81	7	790	24.6	8.1	41.4	1060	767	4.09		436	2.3
GXR-1 Cert		8.20	1.22	15.0	0.0520	0.217	3.52	0.050	1380	0.960	1.58	80.0	12.0	852	23.6	8.20	41.0	1110	760	13.8		427	14.0
GXR-1 Meas		5.8	1.0	8	0.049	0.16	0.43	0.04	1350	0.98	0.8	85	7	821	25.6	8.6	43.3	1100	778	6.41		443	2.3
GXR-1 Cert		8.20	1.22	15.0	0.0520	0.217	3.52	0.050	1380	0.960	1.58	80.0	12.0	852	23.6	8.20	41.0	1110	760	13.8		427	14.0
GXR-4 Meas		10.8	1.7	4	0.127	1.62	2.95	1.85	19.8	0.88	6.5	81	58	130	3.02	14.2	41.1	5900	66.9	11.3		106	97.9
GXR-4 Cert		11.1	1.90	4.50	0.564	1.66	7.20	4.01	19.0	1.01	7.70	87.0	64.0	155	3.09	14.6	42.0	6520	73.0	20.0		98.0	160
GXR-4 Meas		12.8	2.0	3	0.161	1.94	3.45	2.24	19.3	1.06	7.8	92	65	140	3.22	15.4	43.5	6270	70.8	12.1		106	105
GXR-4 Cert		11.1	1.90	4.50	0.564	1.66	7.20	4.01	19.0	1.01	7.70	87.0	64.0	155	3.09	14.6	42.0	6520	73.0	20.0		98.0	160
GXR-6 Meas		33.5	1.3	10	0.076	0.47	8.83	1.41	0.19	0.16	25.5	187	89	1050	6.04	14.3	25.3	64.4	122	16.8		267	69.1
GXR-6 Cert		32.0	1.40	9.80	0.104	0.609	17.7	1.87	0.290	0.180	27.6	186	96.0	1010	5.58	13.8	27.0	66.0	118	35.0		330	90.0
GXR-6 Meas		40.8	1.3	8	0.099	0.57	> 10.0	1.85	0.19	0.20	31.1	208	100	1110	6.37	15.7	27.3	66.6	127	22.2		253	74.4
GXR-6 Cert		32.0	1.40	9.80	0.104	0.609	17.7	1.87	0.290	0.180	27.6	186	96.0	1010	5.58	13.8	27.0	66.0	118	35.0		330	90.0
SAR-M (U.S.G.S.) Meas		15.7	1.2		0.034	0.38	1.18	0.30	2.27	0.29	2.7	34	93	4310	2.79	10.5	46.7	305	928	5.31		38.3	22.4
SAR-M (U.S.G.S.) Cert		27.4	2.20		1.140	0.50	6.30	2.94	1.94	0.61	7.83	67.2	79.7	5220	2.99	10.70	41.5	331	930.0	17		38.8	146
SAR-M (U.S.G.S.) Meas		19.0	1.5		0.045	0.48	1.55	0.41	1.82	0.37	3.7	40	108	4640	3.04	11.8	49.5	330	991	7.17		38.7	26.0
SAR-M (U.S.G.S.) Cert		27.4	2.20		1.140	0.50	6.30	2.94	1.94	0.61	7.83	67.2	79.7	5220	2.99	10.70	41.5	331	930.0	17		38.8	146
SG56 Meas	1080																						
SG56 Cert	1027.00																						
SG56 Meas	1050																						
SG56 Cert	1027.00																						
SG56 Meas	1020																						
SG56 Cert	1027.00																						
SG56 Meas	1060																						
SG56 Cert	1027.00																						
SG56 Meas	1070																						
SG56 Cert	1027.00																						
OxD108 Meas	416																						
OxD108 Cert	414.000																						
OxD108 Meas	411																						
OxD108 Cert	414.000																						
OxD108 Meas	413																						
OxD108 Cert	414.000																						
OxD108 Meas	417																						
OxD108 Cert	414.000																						
OxD108 Meas	435																						
OxD108 Cert	414.000																						
OREAS 922 (AQUA REGIA) Meas						1.51	3.41			0.43				5.34	20.3			2050	258			7.1	
OREAS 922 (AQUA REGIA) Cert						1.33	2.72			0.324				5.05	19.4			2176	256			6.12	
OREAS 922 (AQUA REGIA) Meas						1.76	3.86			0.53				5.84	22.3			2110	269			6.3	
OREAS 922 (AQUA REGIA) Cert						1.33	2.72			0.324				5.05	19.4			2176	256			6.12	
OREAS 923 (AQUA REGIA) Meas						1.63	3.48			0.47				6.22	22.9			4140	337			8.3	
OREAS 923 (AQUA REGIA) Meas						1.43	2.80			0.326				5.91	22.2			4248	335			7.07	

Analyte Symbol	Au	Li	Be	B	Na	Mg	Al	K	Bi	Ca	Sc	V	Cr	Mn	Fe	Co	Ni	Cu	Zn	Ga	Ge	As	Rb
Unit Symbol	ppb	ppm	ppm	ppm	%	%	%	%	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	5	0.1	0.1	1	0.001	0.01	0.01	0.01	0.02	0.01	0.1	1	1	1	0.01	0.1	0.1	0.01	0.1	0.02	0.1	0.1	0.1
Analysis Method	FA-AA	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS
REGIA) Cert																							
OREAS 923 (AQUA REGIA) Meas						1.89	3.91			0.54					6.68	25.1		4150	342			7.8	
OREAS 923 (AQUA REGIA) Cert						1.43	2.80			0.326					5.91	22.2		4248	335			7.07	
11s171321 Orig		22.3	0.9	4	0.071	1.01	2.11	0.97	0.18	2.77	6.9	62	15	1130	3.69	12.1	12.9	16.9	58.7	8.71	< 0.1	14.1	40.6
11s171321 Dup		22.0	0.9	3	0.070	1.00	2.02	0.95	0.16	2.67	6.5	63	14	1120	3.71	12.0	9.3	16.9	56.8	8.25	< 0.1	13.9	40.2
11s171323 Orig	7																						
11s171323 Dup	6																						
11s171335 Orig		13.3	0.5	< 1	0.043	0.86	1.86	0.77	0.09	3.30	3.9	29	9	917	3.69	11.1	9.6	23.7	202	4.90	< 0.1	222	30.6
11s171335 Dup		14.0	0.5	< 1	0.044	0.90	2.02	0.83	0.09	3.44	4.0	30	9	945	3.79	11.1	9.9	24.0	208	5.18	< 0.1	230	31.5
11s171338 Orig	< 5	21.9	0.7	< 1	0.048	1.04	2.40	1.11	0.03	2.84	6.7	53	14	909	3.53	12.3	10.4	16.0	51.3	7.70	< 0.1	278	55.7
11s171338 Split	< 5	25.7	0.9	4	0.058	1.23	2.82	1.26	0.03	3.33	7.9	62	17	971	3.70	13.2	11.2	17.4	55.6	9.24	< 0.1	299	60.9
11s171342 Orig	17																						
11s171342 Dup	7																						
11s171348 Orig		15.4	0.5	< 1	0.041	0.90	1.77	0.82	0.08	2.73	4.6	40	8	980	3.27	11.0	8.6	22.7	75.2	6.07	< 0.1	238	40.3
11s171348 Dup		15.7	0.5	< 1	0.043	0.89	1.84	0.84	0.07	2.78	5.1	41	9	1010	3.36	11.2	8.7	23.1	78.8	6.27	< 0.1	260	41.9
11s171356 Orig	< 5																						
11s171356 Dup	< 5																						
11s171358 Orig	< 5	13.3	0.5	< 1	0.055	0.84	1.65	0.94	0.14	2.96	4.8	34	8	866	3.52	10.6	9.3	22.1	115	5.63	0.1	158	42.2
11s171358 Split	5	14.4	0.6	8	0.060	0.90	1.80	1.04	0.13	3.17	4.9	36	7	898	3.57	10.9	9.6	22.0	116	5.76	< 0.1	153	42.3
11s171358 Split		14.4	0.6	8	0.060	0.90	1.80	1.04	0.13	3.17	4.9	36	7	898	3.57	10.9	9.6	22.0	116	5.76	< 0.1	153	42.3
11s171362 Orig		19.1	0.7	< 1	0.073	1.09	2.43	1.19	0.05	2.21	4.9	55	12	869	3.44	13.0	8.7	18.5	132	6.83	< 0.1	318	46.4
11s171362 Dup		18.6	0.7	7	0.078	1.14	2.53	1.18	0.05	2.26	5.3	58	14	883	3.51	13.0	8.8	18.6	135	7.72	< 0.1	319	47.8
11s171368 Orig	< 5	17.0	0.5	< 1	0.058	0.91	2.00	0.73	0.58	3.44	5.0	45	11	884	3.42	10.4	8.8	16.7	82.1	7.24	< 0.1	9.3	30.6
11s171368 Split	< 5	18.5	0.5	4	0.059	0.94	2.03	0.77	0.60	3.49	5.0	44	11	925	3.49	10.8	8.9	16.9	82.4	7.23	< 0.1	9.1	31.1
11s171375 Orig	5																						
11s171375 Dup	5																						
11s171383 Orig	< 5	17.9	0.5	3	0.070	1.20	1.77	1.08	0.33	5.20	5.9	53	13	1170	3.50	10.8	10.7	23.9	90.3	5.84	< 0.1	36.4	42.7
11s171383 Split	7	18.0	0.6	2	0.065	1.15	1.68	1.10	0.32	5.40	5.7	51	12	1190	3.58	11.0	10.9	23.5	91.4	5.84	< 0.1	35.6	42.2
Method Blank	< 5																						
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QC

Analyte Symbol	Sr	Y	Zr	Nb	Mo	Ag	In	Sn	Sb	Te	Cs	Ba	La	Ce	Cd	Pr	Nd	Sm	Se	Eu	Gd	Tb	Dy
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	0.5	0.01	0.1	0.1	0.01	0.002	0.02	0.05	0.02	0.02	0.02	0.5	0.5	0.01	0.01	0.1	0.02	0.1	0.1	0.1	0.1	0.1	0.1
Analysis Method	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS
GXR-1 Meas	203	29.6	9.7	< 0.1	18.1	35.5	0.78	26.3	88.2	15.1	2.64	377	5.8	11.4	2.63		6.95	2.5	17.5	0.6	3.9	0.7	5.0
GXR-1 Cert	275	32.0	38.0	0.800	18.0	31.0	0.770	54.0	122	13.0	3.00	750	7.50	17.0	3.30		18.0	2.70	16.6	0.690	4.20	0.830	4.30
GXR-1 Meas	210	29.9	9.4	< 0.1	18.7	35.5	0.77	26.1	82.1	14.6	2.53	167	5.6	11.0	2.62		6.81	2.4	17.7	0.5	3.7	0.7	4.6
GXR-1 Cert	275	32.0	38.0	0.800	18.0	31.0	0.770	54.0	122	13.0	3.00	750	7.50	17.0	3.30		18.0	2.70	16.6	0.690	4.20	0.830	4.30
GXR-4 Meas	74.6	12.4	9.0	0.2	322	3.94	0.20	5.67	3.51	0.97	2.38	49.3	50.2	94.8	0.09		37.6	5.9	5.6	1.3	4.7	0.5	2.7

Analyte Symbol	Sr	Y	Zr	Nb	Mo	Ag	In	Sn	Sb	Te	Cs	Ba	La	Ce	Cd	Pr	Nd	Sm	Se	Eu	Gd	Tb	Dy
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	0.5	0.01	0.1	0.1	0.01	0.002	0.02	0.05	0.02	0.02	0.02	0.5	0.5	0.01	0.01	0.1	0.02	0.1	0.1	0.1	0.1	0.1	0.1
Analysis Method	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS
GXR-4 Cert	221	14.0	186	10.0	310	4.00	0.270	5.60	4.80	0.970	2.80	1640	64.5	102	0.860		45.0	6.60	5.60	1.63	5.25	0.360	2.60
GXR-4 Meas	80.9	13.0	7.9	0.4	321	3.99	0.21	5.64	3.03	0.98	2.28	28.4	51.1	97.2	0.12		38.5	6.0	6.0	1.3	4.8	0.5	2.7
GXR-4 Cert	221	14.0	186	10.0	310	4.00	0.270	5.60	4.80	0.970	2.80	1640	64.5	102	0.860		45.0	6.60	5.60	1.63	5.25	0.360	2.60
GXR-6 Meas	31.0	7.17	13.1	< 0.1	1.85	0.448	0.06	1.18	1.97	0.10	3.72	890	11.9	33.8	0.11		12.1	2.5	0.2	0.6	2.2	0.3	1.7
GXR-6 Cert	35.0	14.0	110	7.50	2.40	1.30	0.260	1.70	3.60	0.0180	4.20	1300	13.9	36.0	1.00		13.0	2.67	0.940	0.760	2.97	0.415	2.80
GXR-6 Meas	33.5	7.50	10.1	< 0.1	1.75	0.591	0.06	1.05	1.60	0.04	3.70	890	12.0	33.8	0.11		12.4	2.5	0.2	0.6	2.2	0.3	1.8
GXR-6 Cert	35.0	14.0	110	7.50	2.40	1.30	0.260	1.70	3.60	0.0180	4.20	1300	13.9	36.0	1.00		13.0	2.67	0.940	0.760	2.97	0.415	2.80
SAR-M (U.S.G.S.) Meas	28.6	19.2		2.2	12.5	2.74	1.00	1.64	4.01	1.08		173	47.0	98.8	5.43				0.7				
SAR-M (U.S.G.S.) Cert	151	28.00		29.9	13.1	3.64	1.08	2.76	6.0	0.96		801	57.4	122.0	5.27				0.39				
SAR-M (U.S.G.S.) Meas	31.5	20.4		2.0	13.0	3.14	1.03	1.90	3.38	0.95		165	46.3	94.8	5.14				0.8				
SAR-M (U.S.G.S.) Cert	151	28.00		29.9	13.1	3.64	1.08	2.76	6.0	0.96		801	57.4	122.0	5.27				0.39				
SG56 Meas																							
SG56 Cert																							
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OxD108 Cert																							
OREAS 922 (AQUA REGIA) Meas						0.864			0.67						0.29								
OREAS 922 (AQUA REGIA) Cert						0.851			0.57						0.280								
OREAS 922 (AQUA REGIA) Meas						0.956			0.60						0.29								
OREAS 922 (AQUA REGIA) Cert						0.851			0.57						0.280								
OREAS 923 (AQUA REGIA) Meas						1.54			0.69						0.44								
OREAS 923 (AQUA REGIA) Cert						1.62			0.58						0.40								
OREAS 923 (AQUA REGIA) Meas						1.64			0.68						0.42								
OREAS 923 (AQUA REGIA) Cert						1.62			0.58						0.40								



Analyte Symbol	Sr	Y	Zr	Nb	Mo	Ag	In	Sn	Sb	Te	Cs	Ba	La	Ce	Cd	Pr	Nd	Sm	Se	Eu	Gd	Tb	Dy
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	0.5	0.01	0.1	0.1	0.01	0.002	0.02	0.05	0.02	0.02	0.02	0.5	0.5	0.01	0.01	0.1	0.02	0.1	0.1	0.1	0.1	0.1	0.1
Analysis Method	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS
11s171321 Orig	356	15.6	1.9	< 0.1	1.41	0.383	0.04	0.92	4.51	2.14	1.73	91.8	24.9	47.7	0.20	5.3	19.6	3.7	0.7	0.9	3.6	0.5	3.1
11s171321 Dup	350	15.1	1.8	0.1	1.34	0.375	0.04	0.81	4.23	1.99	1.70	90.6	24.2	45.7	0.20	5.1	19.0	3.6	0.8	0.9	3.4	0.5	3.0
11s171323 Orig																							
11s171323 Dup																							
11s171335 Orig	163	15.0	3.6	0.2	0.98	0.363	0.06	0.51	1.76	0.80	0.53	63.6	22.1	42.1	3.36	4.7	17.3	3.3	0.8	0.9	3.3	0.5	2.9
11s171335 Dup	169	15.3	3.8	0.2	0.93	0.419	0.06	0.58	1.71	0.84	0.56	61.9	22.3	42.3	3.34	4.8	17.6	3.3	0.7	0.8	3.3	0.5	2.8
11s171338 Orig	335	16.7	2.9	< 0.1	0.83	0.352	0.04	0.76	1.58	1.69	2.39	133	24.0	45.3	0.17	5.1	18.6	3.5	0.4	0.9	3.4	0.5	3.2
11s171338 Split	368	18.2	3.1	< 0.1	0.88	0.265	0.04	0.76	1.61	1.59	2.51	142	25.7	48.4	0.19	5.5	20.1	3.8	0.4	1.0	3.7	0.5	3.4
11s171342 Orig																							
11s171342 Dup																							
11s171348 Orig	193	16.2	2.6	< 0.1	0.95	0.581	0.04	0.60	3.15	0.98	1.64	102	24.1	45.4	0.28	5.2	18.9	3.6	0.5	0.9	3.6	0.5	3.2
11s171348 Dup	201	16.5	2.6	< 0.1	1.00	0.663	0.05	0.61	3.15	1.04	1.69	106	24.9	46.6	0.31	5.2	19.4	3.7	0.8	0.9	3.6	0.5	3.1
11s171356 Orig																							
11s171356 Dup																							
11s171358 Orig	167	18.4	3.3	< 0.1	0.86	0.605	0.04	0.52	1.06	0.50	1.08	46.0	28.4	53.8	0.82	6.1	22.4	4.2	0.7	1.1	4.0	0.6	3.5
11s171358 Split	163	17.8	3.1	< 0.1	0.89	0.618	0.04	0.52	0.99	0.46	1.02	47.3	27.3	51.2	0.78	5.8	21.4	4.0	0.7	1.1	3.9	0.6	3.4
11s171358 Split	163	17.8	3.1	< 0.1	0.89	0.618	0.04	0.52	0.99	0.46	1.02	47.3	27.3	51.2	0.78	5.8	21.4	4.0	0.7	1.1	3.9	0.6	3.4
11s171362 Orig	244	12.8	3.7	1.4	0.82	0.393	0.02	0.72	2.67	1.24	1.21	149	17.3	32.4	0.55	3.7	13.6	2.6	0.5	0.7	2.7	0.4	2.5
11s171362 Dup	263	13.6	4.6	0.9	0.76	0.428	0.02	0.96	2.78	1.26	1.22	152	17.6	33.2	0.52	3.8	14.2	2.8	0.4	0.7	2.7	0.4	2.5
11s171368 Orig	325	15.7	3.5	0.1	0.93	0.485	0.04	0.70	1.47	0.72	0.80	49.0	23.9	44.8	0.41	5.1	18.7	3.5	0.8	0.9	3.4	0.5	2.9
11s171368 Split	322	15.8	3.5	0.1	0.93	0.656	0.04	0.60	1.37	0.69	0.79	60.8	23.3	43.8	0.48	5.0	18.5	3.5	0.5	0.9	3.5	0.5	3.0
11s171375 Orig																							
11s171375 Dup																							
11s171383 Orig	323	15.3	2.4	< 0.1	1.45	0.415	0.05	0.75	1.27	0.29	1.95	87.2	19.8	37.0	0.59	4.2	15.8	3.1	0.6	0.8	3.1	0.4	2.9
11s171383 Split	321	15.7	2.4	< 0.1	1.46	0.513	0.05	0.56	1.33	0.22	1.97	68.5	19.4	36.1	0.59	4.2	15.5	3.1	0.7	0.8	3.1	0.5	2.9
Method Blank																							
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Analyte Symbol	Ho	Er	Tm	Yb	Lu	Hf	Ta	W	Re	Au	Tl	Pb	Th	U	Hg
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppb
Detection Limit	0.1	0.1	0.1	0.1	0.1	0.1	0.05	0.1	0.001	0.5	0.02	0.01	0.1	0.1	10
Analysis Method	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS
GXR-1 Meas			0.4	2.0	0.3	0.2	< 0.05	142		3200	0.37	733	1.7	33.5	3460
GXR-1 Cert			0.430	1.90	0.280	0.960	0.175	164		3300	0.390	730	2.44	34.9	3900
GXR-1 Meas			0.4	1.9	0.3	0.2	< 0.05	132		3590	0.34	643	1.5	29.8	
GXR-1 Cert			0.430	1.90	0.280	0.960	0.175	164		3300	0.390	730	2.44	34.9	
GXR-4 Meas			0.2	0.8	0.1	0.2	< 0.05	10.7			2.92	43.5	18.3	4.8	
GXR-4 Cert			0.210	1.60	0.170	6.30	0.790	30.8			3.20	52.0	22.5	6.20	
GXR-4 Meas			0.2	0.8	0.1	0.2	< 0.05	9.0			2.96	44.1	16.7	4.8	

Analyte Symbol	Ho	Er	Tm	Yb	Lu	Hf	Ta	W	Re	Au	Tl	Pb	Th	U	Hg
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppb
Detection Limit	0.1	0.1	0.1	0.1	0.1	0.1	0.05	0.1	0.001	0.5	0.02	0.01	0.1	0.1	10
Analysis Method	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS
GXR-4 Cert			0.210	1.60	0.170	6.30	0.790	30.8			3.20	52.0	22.5	6.20	
GXR-6 Meas			0.1	0.8	0.1	0.3	< 0.05	< 0.1			1.89	107	4.4	0.9	
GXR-6 Cert			0.0320	2.40	0.330	4.30	0.485	1.90			2.20	101	5.30	1.54	
GXR-6 Meas			0.1	0.8	0.1	0.2	< 0.05	< 0.1			1.93	104	4.3	0.9	
GXR-6 Cert			0.0320	2.40	0.330	4.30	0.485	1.90			2.20	101	5.30	1.54	
SAR-M (U.S.G.S.) Meas								2.7			0.83	965	12.1	2.2	
SAR-M (U.S.G.S.) Cert								9.78			2.7	982	17.2	3.57	
SAR-M (U.S.G.S.) Meas								2.2			0.88	924	10.7	2.1	
SAR-M (U.S.G.S.) Cert								9.78			2.7	982	17.2	3.57	
SG56 Meas															
SG56 Cert															
SG56 Meas															
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Analyte Symbol	Ho	Er	Tm	Yb	Lu	Hf	Ta	W	Re	Au	Tl	Pb	Th	U	Hg
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppb
Detection Limit	0.1	0.1	0.1	0.1	0.1	0.1	0.05	0.1	0.001	0.5	0.02	0.01	0.1	0.1	10
Analysis Method	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS
11s171323 Orig															
11s171323 Dup															
11s171335 Orig	0.6	1.6	0.2	1.3	0.2	0.1	< 0.05	< 0.1	0.004	3.2	0.32	5.25	5.8	1.1	< 10
11s171335 Dup	0.6	1.6	0.2	1.4	0.2	0.1	< 0.05	< 0.1	0.001	3.5	0.33	5.43	6.0	1.1	< 10
11s171338 Orig	0.6	1.7	0.2	1.4	0.2	< 0.1	< 0.05	< 0.1	0.002	2.5	0.50	5.62	6.3	1.1	< 10
11s171338 Split	0.7	1.9	0.3	1.5	0.2	< 0.1	< 0.05	< 0.1	0.002	3.3	0.56	6.40	6.9	1.3	< 10
11s171342 Orig															
11s171342 Dup															
11s171348 Orig	0.6	1.8	0.2	1.4	0.2	< 0.1	< 0.05	< 0.1	0.003	10.2	0.47	5.95	5.4	1.0	< 10
11s171348 Dup	0.6	1.8	0.2	1.4	0.2	< 0.1	< 0.05	< 0.1	0.004	10.9	0.48	6.04	5.4	1.0	< 10
11s171356 Orig															
11s171356 Dup															
11s171358 Orig	0.7	2.0	0.3	1.6	0.2	0.1	< 0.05	< 0.1	0.002	5.1	0.45	7.27	7.1	1.4	< 10
11s171358 Split	0.7	1.9	0.3	1.5	0.2	0.1	< 0.05	< 0.1	0.002	3.7	0.44	7.29	6.9	1.3	< 10
11s171358 Split	0.7	1.9	0.3	1.5	0.2	0.1	< 0.05	< 0.1	0.002	3.7	0.44	7.29	6.9	1.3	< 10
11s171362 Orig	0.5	1.4	0.2	1.2	0.2	0.1	< 0.05	< 0.1	0.003	4.1	0.43	5.20	4.6	0.9	< 10
11s171362 Dup	0.5	1.4	0.2	1.2	0.2	0.2	< 0.05	< 0.1	0.002	2.3	0.44	5.45	4.7	0.9	< 10
11s171368 Orig	0.6	1.7	0.2	1.4	0.2	0.1	< 0.05	< 0.1	0.003	3.8	0.32	8.75	6.1	1.1	< 10
11s171368 Split	0.6	1.7	0.2	1.4	0.2	0.1	< 0.05	< 0.1	0.004	3.8	0.34	9.37	6.1	1.1	< 10
11s171375 Orig															
11s171375 Dup															
11s171383 Orig	0.6	1.7	0.2	1.4	0.2	< 0.1	< 0.05	< 0.1	0.005	7.0	0.49	14.4	5.2	0.9	< 10
11s171383 Split	0.6	1.7	0.2	1.3	0.2	< 0.1	< 0.05	< 0.1	0.003	6.0	0.50	13.6	5.1	0.9	< 10
Method Blank															
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**Date Submitted:** 23-Jun-14  
**Invoice No.:** A14-04239 (i)  
**Invoice Date:** 03-Jul-14  
**Your Reference:**

Renaissance Geosciences  
680 Dairy Road  
Kamloops B.C. V2B8N5  
Canada

ATTN: Leo Lindinger

## CERTIFICATE OF ANALYSIS

37 Core samples were submitted for analysis.

The following analytical package was requested:

Code 1A2-Kamloops Au - Fire Assay AA  
Code UT-1-Kamloops Aqua Regia ICP/MS

REPORT      **A14-04239 (i)**

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

Notes:

Assays are recommended for values >10,000 for Cu and Au. The Au from AR-MS is only semi-quantitative. For accurate Au data, fire assay is recommended. If value exceeds upper limit we recommend reassay by fire assay gravimetric-Code 1A3

CERTIFIED BY:

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

Emmanuel Esemé , Ph.D.  
Quality Control



Results

Analyte Symbol	Au	Li	Be	B	Na	Mg	Al	K	Bi	Ca	Sc	V	Cr	Mn	Fe	Co	Ni	Cu	Zn	Ga	Ge	As	Rb
Unit Symbol	ppb	ppm	ppm	ppm	%	%	%	%	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	5	0.1	0.1	1	0.001	0.01	0.01	0.01	0.02	0.01	0.1	1	1	1	0.01	0.1	0.1	0.01	0.1	0.02	0.1	0.1	0.1
Analysis Method	FA-AA	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS
11s171384	5	16.5	0.6	2	0.051	1.00	1.91	1.18	0.25	2.33	4.6	45	14	850	3.41	14.4	11.8	21.8	59.3	5.76	< 0.1	53.8	44.5
11s171385	60	19.3	0.7	3	0.065	1.16	1.88	1.16	0.12	2.85	6.4	56	18	1020	3.36	12.0	10.9	28.4	80.7	6.91	< 0.1	43.7	44.8
11s171386	12	22.6	0.9	2	0.094	1.94	2.25	0.77	0.14	3.82	9.6	112	62	867	4.35	18.8	22.6	28.4	76.0	9.13	< 0.1	18.5	31.0
11s171387	6	20.5	0.7	2	0.047	1.13	2.26	1.00	0.24	2.53	5.8	51	14	982	3.29	12.7	9.7	21.4	84.0	7.81	< 0.1	34.3	37.6
11s171388	871	3.5	0.2	2	0.056	0.14	0.78	0.36	2.49	1.01	0.4	14	12	262	1.37	5.5	9.2	4430	24.8	3.06	< 0.1	12.7	8.1
11s171389	7	17.1	0.6	2	0.056	0.84	1.93	0.86	0.28	2.92	4.4	40	9	757	3.12	9.1	6.3	14.2	70.9	6.38	< 0.1	65.9	31.0
11s171390	< 5	18.2	0.6	4	0.083	1.01	2.10	0.81	0.22	3.03	4.6	51	12	767	3.22	9.7	6.6	14.7	63.5	7.27	< 0.1	31.2	28.8
11s171391	12	18.7	0.5	4	0.047	0.77	1.74	0.61	0.57	3.42	4.7	35	9	758	3.52	9.5	7.0	15.0	264	6.41	< 0.1	92.6	21.1
11s171392	21	18.9	0.6	4	0.058	0.88	2.05	0.63	0.28	4.16	5.3	44	8	899	3.29	8.7	6.6	17.6	68.4	8.00	< 0.1	125	23.9
11s171393	32	18.8	0.7	3	0.053	0.93	1.91	0.70	0.46	3.62	6.1	50	15	916	3.20	9.6	8.1	16.6	65.2	7.37	< 0.1	53.0	27.5
11s171394	24	18.3	0.7	3	0.074	0.96	1.98	1.15	0.49	2.40	6.1	49	17	915	3.51	12.4	11.0	18.5	76.8	6.99	< 0.1	53.3	42.3
11s171395	14	16.8	0.6	2	0.060	0.97	1.81	1.14	0.38	2.28	6.0	44	15	870	3.57	13.3	11.2	10.2	74.2	6.04	< 0.1	81.6	44.2
11s171396	16	17.0	0.7	3	0.058	0.97	2.04	1.21	0.49	2.03	5.5	41	17	872	3.91	12.8	11.5	15.5	87.0	6.20	< 0.1	97.8	43.1
11s171397	< 5	0.9	< 0.1	< 1	0.014	0.02	0.08	0.01	< 0.02	0.02	< 0.1	2	< 1	22	0.18	0.5	1.3	0.80	2.3	0.29	< 0.1	0.9	0.9
11s171398	14	14.1	0.5	2	0.063	1.07	1.83	0.92	0.43	1.81	4.9	45	17	830	4.05	13.0	12.0	30.2	104	5.82	< 0.1	46.1	35.2
11s171399	6	13.9	0.6	2	0.084	1.07	1.98	0.90	0.26	2.83	5.0	47	15	943	3.16	11.7	10.2	21.8	82.3	6.10	< 0.1	19.1	32.1
11s171400	6	15.3	0.6	3	0.067	1.13	2.09	0.92	0.28	2.49	5.7	44	18	942	3.51	11.5	12.3	33.2	110	6.61	< 0.1	86.9	30.5
11s171401	11	14.4	0.6	2	0.063	1.17	2.08	0.83	0.43	2.35	5.2	49	16	1000	3.91	13.5	10.5	19.5	107	6.78	< 0.1	45.3	31.6
11s171402	17	12.1	0.5	2	0.050	0.98	1.90	0.65	0.68	2.28	4.6	35	14	880	3.65	11.8	9.9	25.2	119	5.84	< 0.1	66.9	22.7
11s171403	14	13.5	0.6	3	0.044	0.88	1.79	0.68	0.50	1.99	3.7	27	8	645	4.16	11.6	9.2	38.2	77.6	5.01	< 0.1	61.3	20.7
11s171404	23	14.0	0.5	4	0.054	0.96	1.63	0.46	0.70	1.98	3.8	29	11	544	4.36	14.0	8.9	24.0	75.0	5.10	< 0.1	102	13.0
11s171405	22	14.5	0.5	3	0.052	0.84	1.45	0.60	1.11	2.06	3.3	24	6	522	4.69	12.4	9.1	14.4	91.2	4.38	< 0.1	115	17.3
11s171406	35	14.6	0.4	4	0.055	0.94	1.72	0.60	0.53	2.51	3.2	26	10	752	3.58	10.5	8.9	22.6	96.2	4.72	< 0.1	183	16.7
11s171407	60	13.1	0.5	4	0.050	0.64	1.47	0.74	2.76	2.67	3.9	25	8	707	4.73	12.9	7.1	19.7	196	4.57	< 0.1	47.1	25.4
11s171408	77	16.0	0.6	4	0.062	0.95	1.93	0.85	0.76	2.22	4.1	35	12	676	3.45	10.8	6.8	23.0	73.0	5.53	< 0.1	45.3	32.1
11s171409	33	15.5	0.7	5	0.059	0.93	2.08	0.83	0.55	1.88	4.1	35	8	477	2.95	10.5	6.4	25.8	73.0	5.63	< 0.1	42.3	30.7
11s171410	49	11.4	0.6	4	0.065	0.63	1.12	0.63	1.09	2.89	3.8	28	7	608	4.10	11.7	6.9	6.66	132	3.57	< 0.1	42.6	20.7
11s171411	55	11.9	0.4	7	0.050	0.64	1.31	0.67	0.66	2.89	2.8	22	5	728	4.13	10.3	6.9	8.41	109	3.44	< 0.1	63.9	20.1
11s171412	79	11.1	0.5	3	0.034	0.58	1.34	0.55	0.73	3.28	2.8	16	6	836	4.08	9.0	6.4	14.6	130	3.21	< 0.1	170	15.1
11s171413	38	13.1	0.5	4	0.049	0.80	1.57	0.57	0.56	3.09	3.5	23	5	732	3.58	11.0	6.7	4.15	74.1	4.01	< 0.1	40.4	14.9
11s171414	64	14.4	0.4	3	0.057	0.83	1.51	0.63	0.88	2.99	4.0	30	9	781	3.79	11.8	9.1	10.2	119	4.67	< 0.1	41.3	18.6
11s171415	95	16.0	0.7	4	0.075	1.02	1.89	0.75	0.94	3.11	4.7	41	9	814	3.62	11.3	9.3	12.1	92.7	5.94	< 0.1	44.8	24.6
11s171416	81	15.1	0.6	5	0.058	0.92	1.73	0.75	1.33	2.97	4.1	36	10	834	3.94	11.2	8.9	12.7	117	5.14	< 0.1	44.3	23.6
11s171417	70	12.9	0.6	4	0.064	0.75	1.65	0.48	0.96	2.84	3.6	32	8	759	3.42	10.9	8.8	14.4	94.7	5.15	< 0.1	33.0	12.7
11s171418	148	9.3	0.6	2	0.046	0.70	1.22	0.58	0.85	2.09	2.4	15	11	582	4.18	9.7	8.0	32.2	72.0	2.79	< 0.1	101	13.5
11s171419	< 5	1.0	< 0.1	< 1	0.014	0.02	0.09	0.01	< 0.02	0.02	< 0.1	3	< 1	20	0.25	0.6	1.9	1.00	2.5	0.37	< 0.1	1.2	1.0
11s171420	73	14.2	0.5	1	0.049	0.75	1.44	0.46	0.61	2.63	3.9	26	10	832	3.81	11.2	8.3	20.2	71.6	4.57	< 0.1	31.6	12.6

## Results

Analyte Symbol	Sr	Y	Zr	Nb	Mo	Ag	In	Sn	Sb	Te	Cs	Ba	La	Ce	Cd	Pr	Nd	Sm	Se	Eu	Gd	Tb	Dy	
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	0.5	0.01	0.1	0.1	0.01	0.002	0.02	0.05	0.02	0.02	0.02	0.5	0.5	0.01	0.01	0.1	0.02	0.1	0.1	0.1	0.1	0.1	0.1	
Analysis Method	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS
11s171384	244	13.3	2.3	0.4	1.05	0.321	0.04	0.64	1.30	0.21	1.78	42.3	14.7	28.5	0.23	3.4	12.6	2.6	0.7	0.7	2.7	0.4	2.5	
11s171385	179	16.7	2.3	< 0.1	1.29	0.335	0.08	0.67	0.85	0.17	1.87	48.7	22.7	42.9	0.44	5.0	19.1	3.8	0.6	1.1	3.8	0.5	3.3	
11s171386	427	15.7	2.1	0.2	1.25	0.240	0.06	0.87	0.64	0.13	1.07	73.9	20.8	44.4	0.25	5.8	23.8	4.8	0.5	1.2	4.5	0.6	3.3	
11s171387	266	16.1	2.2	< 0.1	1.14	0.300	0.06	0.67	1.80	0.30	1.33	71.0	22.3	42.2	0.23	4.8	18.0	3.5	0.6	0.9	3.5	0.5	3.1	
11s171388	267	3.89	1.7	< 0.1	550	15.4	0.03	0.92	42.6	5.67	0.90	32.0	6.8	14.2	< 0.01	1.7	6.84	1.2	0.3	0.3	1.0	0.1	0.7	
11s171389	245	16.8	2.3	< 0.1	1.74	1.30	0.06	0.61	1.56	0.32	0.90	44.9	16.8	33.3	0.33	4.0	15.6	3.3	0.8	0.9	3.5	0.5	3.3	
11s171390	228	17.1	5.2	0.3	1.39	0.522	0.04	0.78	1.38	0.28	0.75	69.6	12.0	25.3	0.21	3.2	13.1	2.9	0.5	0.8	3.2	0.5	3.2	
11s171391	245	17.3	1.8	< 0.1	0.87	0.485	0.06	0.48	1.16	0.38	0.60	31.0	14.2	29.1	3.19	3.6	14.9	3.4	0.8	1.0	3.6	0.5	3.4	
11s171392	381	19.9	1.7	< 0.1	0.87	0.430	0.05	0.56	1.62	0.29	1.04	67.9	15.3	31.1	0.29	3.9	16.0	3.7	0.9	1.1	3.9	0.6	3.8	
11s171393	421	16.6	2.2	< 0.1	0.98	0.347	0.05	0.63	1.60	0.30	1.48	41.5	19.8	38.2	0.29	4.5	17.5	3.5	0.9	1.0	3.7	0.5	3.3	
11s171394	229	12.1	2.7	< 0.1	1.15	0.336	0.04	0.70	1.12	0.28	1.28	39.2	21.0	40.1	0.30	4.6	16.8	3.2	0.9	0.8	3.0	0.4	2.5	
11s171395	151	14.0	2.8	< 0.1	1.13	0.298	0.06	0.61	0.58	0.31	1.57	27.4	21.6	41.3	0.30	4.8	18.1	3.6	0.7	0.9	3.5	0.5	2.9	
11s171396	175	13.8	3.0	< 0.1	1.16	0.292	0.08	0.62	0.78	0.38	1.53	32.8	19.4	37.0	0.37	4.3	16.1	3.2	1.1	0.8	3.1	0.4	2.8	
11s171397	4.5	1.14	0.6	< 0.1	0.06	0.110	< 0.02	0.05	< 0.02	0.06	0.07	6.5	4.1	7.89	0.02	0.9	3.06	0.5	< 0.1	< 0.1	0.4	< 0.1	0.2	
11s171398	168	13.4	3.3	0.4	1.04	0.325	0.06	0.69	0.99	0.38	1.11	23.4	18.3	35.1	0.75	4.1	15.3	3.0	0.8	0.7	2.9	0.4	2.6	
11s171399	258	14.0	2.7	0.2	1.02	0.304	0.07	0.63	1.27	0.27	0.91	55.3	18.7	35.7	0.26	4.1	15.5	3.0	0.5	0.8	3.1	0.4	2.7	
11s171400	166	13.0	2.4	< 0.1	1.37	0.411	0.07	0.59	1.32	0.27	0.73	23.9	17.6	34.0	0.51	4.0	14.9	2.9	0.5	0.8	2.9	0.4	2.5	
11s171401	225	15.6	3.0	< 0.1	1.44	0.329	0.08	2.35	1.63	0.19	1.16	25.7	18.9	35.5	0.51	4.2	15.5	3.1	1.0	0.8	3.1	0.5	2.8	
11s171402	239	15.9	3.0	< 0.1	1.03	0.297	0.10	0.63	0.85	0.21	0.78	22.7	20.5	38.3	1.04	4.4	16.3	3.1	0.9	0.8	3.1	0.5	2.9	
11s171403	161	14.8	3.2	< 0.1	1.00	0.274	0.05	0.72	0.71	0.21	0.61	16.5	20.8	38.8	0.44	4.4	16.3	3.2	2.2	0.8	3.0	0.4	2.7	
11s171404	175	15.8	6.9	< 0.1	1.09	0.273	0.04	0.62	0.57	0.36	0.38	10.1	19.9	37.7	0.38	4.4	16.0	3.2	1.8	0.8	3.3	0.5	2.9	
11s171405	123	14.6	4.1	< 0.1	1.03	0.367	0.02	0.64	0.37	0.43	0.32	11.7	18.8	35.6	0.83	4.1	15.5	3.0	2.8	0.8	3.1	0.4	2.7	
11s171406	145	12.7	3.6	< 0.1	1.00	0.228	0.04	0.58	0.50	0.21	0.34	20.2	20.0	37.2	0.72	4.2	15.4	2.9	1.3	0.8	2.8	0.4	2.5	
11s171407	193	16.2	2.9	< 0.1	1.73	0.679	0.07	0.73	0.45	0.85	1.08	17.4	25.3	46.7	3.58	5.3	19.5	3.7	2.4	1.1	3.8	0.5	3.1	
11s171408	260	10.8	3.7	< 0.1	1.11	0.289	0.07	0.64	0.85	0.51	1.12	19.2	15.1	29.3	0.27	3.5	13.4	2.7	0.8	0.7	2.7	0.4	2.2	
11s171409	302	10.7	5.6	0.4	0.68	0.199	0.06	0.66	0.94	0.17	0.87	15.1	14.0	27.9	0.37	3.3	12.6	2.5	0.6	0.6	2.4	0.3	2.1	
11s171410	153	11.5	4.6	1.6	0.81	0.416	0.03	0.76	0.35	0.34	0.41	10.9	11.5	22.1	1.23	2.6	10.1	2.1	2.6	0.5	2.2	0.3	2.1	
11s171411	105	14.0	4.1	0.3	0.52	0.368	0.03	0.63	0.40	0.31	0.44	14.4	12.7	24.7	0.94	3.0	11.9	2.5	1.7	0.7	2.6	0.4	2.6	
11s171412	138	15.5	3.3	< 0.1	0.67	0.374	0.03	0.36	0.79	0.30	0.67	15.1	15.9	30.9	1.53	3.7	14.4	2.9	1.7	0.8	3.0	0.4	2.8	
11s171413	175	14.2	2.8	0.1	0.77	0.348	0.05	0.50	0.41	0.23	0.23	16.3	16.0	30.6	0.33	3.7	14.3	2.9	1.4	0.8	3.0	0.4	2.7	
11s171414	162	15.8	3.8	0.3	1.00	0.437	0.07	0.83	0.46	0.33	0.33	23.6	21.6	40.3	1.03	4.6	17.2	3.4	1.7	0.8	3.3	0.5	2.9	
11s171415	234	15.4	5.1	1.6	0.96	0.459	0.06	0.81	0.98	0.36	0.63	26.7	23.8	44.9	0.38	5.1	18.7	3.5	0.9	0.8	3.4	0.5	3.0	
11s171416	190	13.4	4.9	2.1	1.10	0.617	0.05	0.81	0.82	0.36	0.61	16.6	18.9	35.9	1.10	4.2	15.4	2.9	1.0	0.7	2.8	0.4	2.6	
11s171417	271	13.2	4.0	1.0	1.25	0.469	0.06	0.63	0.93	0.29	0.26	17.7	22.0	41.5	0.77	4.7	17.3	3.2	1.3	0.8	3.1	0.4	2.6	
11s171418	160	6.76	2.6	< 0.1	1.50	0.643	0.05	0.25	0.34	0.40	0.16	11.5	12.4	23.5	0.47	2.7	10.1	1.9	2.1	0.5	1.8	0.2	1.4	
11s171419	5.2	0.95	0.7	< 0.1	0.07	0.199	< 0.02	< 0.05	< 0.02	< 0.02	0.06	5.3	3.0	5.71	0.03	0.7	2.33	0.4	< 0.1	< 0.1	0.3	< 0.1	0.2	
11s171420	247	14.2	2.0	< 0.1	1.02	0.331	0.07	0.47	0.79	0.30	0.27	19.0	24.3	45.7	0.32	5.2	19.4	3.6	1.4	1.0	3.5	0.5	2.9	

## Results

Analyte Symbol	Ho	Er	Tm	Yb	Lu	Hf	Ta	W	Re	Au	Tl	Pb	Th	U	Hg
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppb
Detection Limit	0.1	0.1	0.1	0.1	0.1	0.1	0.05	0.1	0.001	0.5	0.02	0.01	0.1	0.1	10
Analysis Method	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS
11s171384	0.5	1.5	0.2	1.2	0.2	< 0.1	< 0.05	< 0.1	0.005	6.2	0.49	9.13	4.4	0.9	< 10
11s171385	0.6	1.7	0.2	1.3	0.2	< 0.1	< 0.05	< 0.1	0.005	7.8	0.47	5.04	5.8	1.4	< 10
11s171386	0.6	1.7	0.2	1.2	0.2	< 0.1	< 0.05	< 0.1	0.005	8.2	0.26	6.77	4.4	1.1	< 10
11s171387	0.6	1.7	0.2	1.3	0.2	< 0.1	< 0.05	< 0.1	0.004	5.1	0.41	11.9	5.2	0.9	< 10
11s171388	0.1	0.4	< 0.1	0.4	< 0.1	< 0.1	< 0.05	< 0.1	0.261	839	0.08	29.6	1.0	1.0	1810
11s171389	0.7	1.8	0.3	1.4	0.2	0.1	< 0.05	< 0.1	0.003	10.2	0.32	8.26	3.7	0.6	< 10
11s171390	0.7	1.9	0.3	1.4	0.2	0.2	< 0.05	< 0.1	0.004	5.9	0.32	7.53	2.9	0.5	< 10
11s171391	0.7	1.9	0.3	1.4	0.2	< 0.1	< 0.05	< 0.1	0.005	14.2	0.26	14.8	3.4	0.6	< 10
11s171392	0.8	2.2	0.3	1.7	0.2	< 0.1	< 0.05	< 0.1	0.004	21.3	0.29	6.53	3.3	0.5	< 10
11s171393	0.6	1.7	0.2	1.3	0.2	< 0.1	< 0.05	< 0.1	0.005	30.7	0.32	6.95	4.4	0.6	< 10
11s171394	0.5	1.3	0.2	1.0	0.1	0.1	< 0.05	< 0.1	0.004	22.9	0.50	6.36	5.4	0.9	< 10
11s171395	0.6	1.5	0.2	1.2	0.2	0.1	< 0.05	< 0.1	0.005	16.1	0.56	7.33	5.2	1.0	< 10
11s171396	0.5	1.5	0.2	1.1	0.2	0.1	< 0.05	< 0.1	0.004	20.8	0.52	7.80	4.4	1.0	< 10
11s171397	< 0.1	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.05	< 0.1	0.004	2.8	0.02	0.94	0.5	< 0.1	< 10
11s171398	0.5	1.5	0.2	1.2	0.2	0.1	< 0.05	< 0.1	0.003	15.6	0.46	5.85	5.0	0.9	< 10
11s171399	0.5	1.5	0.2	1.2	0.2	0.1	< 0.05	< 0.1	0.004	6.3	0.44	6.95	5.7	1.1	< 10
11s171400	0.5	1.4	0.2	1.1	0.2	< 0.1	< 0.05	< 0.1	0.002	7.2	0.44	15.4	5.3	1.0	< 10
11s171401	0.6	1.7	0.2	1.3	0.2	0.1	< 0.05	< 0.1	0.004	9.8	0.45	8.83	4.9	1.1	< 10
11s171402	0.6	1.7	0.2	1.2	0.2	0.1	< 0.05	< 0.1	0.004	12.1	0.29	7.70	5.3	0.8	< 10
11s171403	0.5	1.5	0.2	1.2	0.2	0.1	< 0.05	< 0.1	0.002	11.1	0.30	6.20	5.1	1.0	< 10
11s171404	0.6	1.6	0.2	1.2	0.2	0.2	< 0.05	< 0.1	0.004	16.6	0.17	7.27	5.2	0.9	< 10
11s171405	0.5	1.5	0.2	1.1	0.2	0.2	< 0.05	< 0.1	0.003	33.8	0.24	11.8	5.0	1.1	< 10
11s171406	0.5	1.3	0.2	1.1	0.2	0.1	< 0.05	< 0.1	0.002	11.4	0.25	7.69	5.6	0.9	< 10
11s171407	0.6	1.6	0.2	1.2	0.2	0.1	< 0.05	< 0.1	0.004	53.9	0.38	31.7	4.8	0.9	< 10
11s171408	0.4	1.1	0.1	0.8	0.1	0.1	< 0.05	< 0.1	0.003	77.2	0.58	5.40	3.7	0.6	< 10
11s171409	0.4	1.1	0.2	0.8	0.1	0.2	< 0.05	< 0.1	0.001	20.6	0.58	5.03	3.7	0.7	< 10
11s171410	0.4	1.2	0.2	1.0	0.2	0.2	< 0.05	< 0.1	0.003	55.5	0.35	21.9	3.5	0.8	< 10
11s171411	0.5	1.5	0.2	1.2	0.2	0.1	< 0.05	< 0.1	0.002	80.0	0.31	16.1	3.4	0.7	< 10
11s171412	0.6	1.6	0.2	1.3	0.2	< 0.1	< 0.05	< 0.1	0.002	48.5	0.27	16.3	4.0	0.7	< 10
11s171413	0.5	1.5	0.2	1.1	0.2	< 0.1	< 0.05	< 0.1	0.002	29.4	0.17	12.3	4.1	0.6	< 10
11s171414	0.6	1.6	0.2	1.3	0.2	0.2	< 0.05	< 0.1	0.001	58.6	0.28	20.1	5.9	1.0	< 10
11s171415	0.6	1.7	0.2	1.3	0.2	0.2	< 0.05	< 0.1	0.003	85.5	0.40	12.0	7.0	1.3	< 10
11s171416	0.5	1.5	0.2	1.3	0.2	0.2	< 0.05	0.2	0.002	73.1	0.39	21.4	5.9	1.2	< 10
11s171417	0.5	1.5	0.2	1.2	0.2	0.2	< 0.05	< 0.1	0.003	68.5	0.17	19.4	6.7	1.4	< 10
11s171418	0.3	0.7	0.1	0.6	< 0.1	< 0.1	< 0.05	0.9	0.003	102	0.17	14.3	5.5	1.5	< 10
11s171419	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.05	< 0.1	0.003	1.2	0.03	0.81	0.6	0.1	< 10
11s171420	0.6	1.5	0.2	1.2	0.2	< 0.1	< 0.05	< 0.1	0.003	72.8	0.14	9.40	6.5	1.2	< 10

QC

Analyte Symbol	Au	Li	Be	B	Na	Mg	Al	K	Bi	Ca	Sc	V	Cr	Mn	Fe	Co	Ni	Cu	Zn	Ga	Ge	As	Rb
Unit Symbol	ppb	ppm	ppm	ppm	%	%	%	%	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	5	0.1	0.1	1	0.001	0.01	0.01	0.01	0.02	0.01	0.1	1	1	1	0.01	0.1	0.1	0.01	0.1	0.02	0.1	0.1	0.1
Analysis Method	FA-AA	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS
GXR-1 Meas		6.0	1.1	16	0.047	0.15	0.40	0.04	1580	0.90	0.8	81	7	790	24.6	8.1	41.4	1060	767	4.09		436	2.3
GXR-1 Cert		8.20	1.22	15.0	0.0520	0.217	3.52	0.050	1380	0.960	1.58	80.0	12.0	852	23.6	8.20	41.0	1110	760	13.8		427	14.0
GXR-1 Meas		5.8	1.0	8	0.049	0.16	0.43	0.04	1350	0.98	0.8	85	7	821	25.6	8.6	43.3	1100	778	6.41		443	2.3
GXR-1 Cert		8.20	1.22	15.0	0.0520	0.217	3.52	0.050	1380	0.960	1.58	80.0	12.0	852	23.6	8.20	41.0	1110	760	13.8		427	14.0
GXR-4 Meas		10.8	1.7	4	0.127	1.62	2.95	1.85	19.8	0.88	6.5	81	58	130	3.02	14.2	41.1	5900	66.9	11.3		106	97.9
GXR-4 Cert		11.1	1.90	4.50	0.564	1.66	7.20	4.01	19.0	1.01	7.70	87.0	64.0	155	3.09	14.6	42.0	6520	73.0	20.0		98.0	160
GXR-4 Meas		12.8	2.0	3	0.161	1.94	3.45	2.24	19.3	1.06	7.8	92	65	140	3.22	15.4	43.5	6270	70.8	12.1		106	105
GXR-4 Cert		11.1	1.90	4.50	0.564	1.66	7.20	4.01	19.0	1.01	7.70	87.0	64.0	155	3.09	14.6	42.0	6520	73.0	20.0		98.0	160
GXR-6 Meas		33.5	1.3	10	0.076	0.47	8.83	1.41	0.19	0.16	25.5	187	89	1050	6.04	14.3	25.3	64.4	122	16.8		267	69.1
GXR-6 Cert		32.0	1.40	9.80	0.104	0.609	17.7	1.87	0.290	0.180	27.6	186	96.0	1010	5.58	13.8	27.0	66.0	118	35.0		330	90.0
GXR-6 Meas		40.8	1.3	8	0.099	0.57	> 10.0	1.85	0.19	0.20	31.1	208	100	1110	6.37	15.7	27.3	66.6	127	22.2		253	74.4
GXR-6 Cert		32.0	1.40	9.80	0.104	0.609	17.7	1.87	0.290	0.180	27.6	186	96.0	1010	5.58	13.8	27.0	66.0	118	35.0		330	90.0
SAR-M (U.S.G.S.) Meas		15.7	1.2		0.034	0.38	1.18	0.30	2.27	0.29	2.7	34	93	4310	2.79	10.5	46.7	305	928	5.31		38.3	22.4
SAR-M (U.S.G.S.) Cert		27.4	2.20		1.140	0.50	6.30	2.94	1.94	0.61	7.83	67.2	79.7	5220	2.99	10.70	41.5	331	930.0	17		38.8	146
SAR-M (U.S.G.S.) Meas		19.0	1.5		0.045	0.48	1.55	0.41	1.82	0.37	3.7	40	108	4640	3.04	11.8	49.5	330	991	7.17		38.7	26.0
SAR-M (U.S.G.S.) Cert		27.4	2.20		1.140	0.50	6.30	2.94	1.94	0.61	7.83	67.2	79.7	5220	2.99	10.70	41.5	331	930.0	17		38.8	146
SG56 Meas	1080																						
SG56 Cert	1027.00																						
SG56 Meas	1050																						
SG56 Cert	1027.00																						
SG56 Meas	1020																						
SG56 Cert	1027.00																						
SG56 Meas	1060																						
SG56 Cert	1027.00																						
SG56 Meas	1070																						
SG56 Cert	1027.00																						
OxD108 Meas	416																						
OxD108 Cert	414.000																						
OxD108 Meas	411																						
OxD108 Cert	414.000																						
OxD108 Meas	413																						
OxD108 Cert	414.000																						
OxD108 Meas	417																						
OxD108 Cert	414.000																						
OxD108 Meas	435																						
OxD108 Cert	414.000																						
OREAS 922 (AQUA REGIA) Meas						1.51	3.41			0.43					5.34	20.3		2050	258			7.1	
OREAS 922 (AQUA REGIA) Cert						1.33	2.72			0.324					5.05	19.4		2176	256			6.12	
OREAS 922 (AQUA REGIA) Meas						1.76	3.86			0.53					5.84	22.3		2110	269			6.3	
OREAS 922 (AQUA REGIA) Cert						1.33	2.72			0.324					5.05	19.4		2176	256			6.12	
OREAS 923 (AQUA REGIA) Meas						1.63	3.48			0.47					6.22	22.9		4140	337			8.3	
OREAS 923 (AQUA REGIA) Meas						1.43	2.80			0.326					5.91	22.2		4248	335			7.07	



Analyte Symbol	Au	Li	Be	B	Na	Mg	Al	K	Bi	Ca	Sc	V	Cr	Mn	Fe	Co	Ni	Cu	Zn	Ga	Ge	As	Rb
Unit Symbol	ppb	ppm	ppm	ppm	%	%	%	%	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	5	0.1	0.1	1	0.001	0.01	0.01	0.01	0.02	0.01	0.1	1	1	1	0.01	0.1	0.1	0.01	0.1	0.02	0.1	0.1	0.1
Analysis Method	FA-AA	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS
REGIA) Cert																							
OREAS 923 (AQUA REGIA) Meas						1.89	3.91			0.54					6.68	25.1		4150	342			7.8	
OREAS 923 (AQUA REGIA) Cert						1.43	2.80			0.326					5.91	22.2		4248	335			7.07	
11s171395 Orig	15	17.0	0.6	2	0.062	0.96	1.83	1.14	0.37	2.32	6.1	45	15	883	3.61	13.4	11.2	10.4	74.1	6.08	< 0.1	81.7	44.4
11s171395 Dup	14	16.6	0.6	2	0.059	0.99	1.79	1.14	0.39	2.23	5.9	43	15	858	3.53	13.3	11.2	9.97	74.4	6.00	< 0.1	81.5	44.0
11s171408 Orig		16.5	0.7	3	0.063	0.97	1.95	0.88	0.78	2.55	4.3	35	12	701	3.53	11.0	7.0	24.2	75.2	5.64	< 0.1	46.2	32.9
11s171408 Dup		15.6	0.5	4	0.061	0.93	1.91	0.83	0.75	1.88	4.0	34	11	651	3.36	10.7	6.6	21.8	70.7	5.42	< 0.1	44.4	31.3
11s171409 Orig	27																						
11s171409 Dup	38																						
11s171418 Orig	129																						
11s171418 Dup	167																						
11s171420 Orig	73	14.2	0.5	1	0.049	0.75	1.44	0.46	0.61	2.63	3.9	26	10	832	3.81	11.2	8.3	20.2	71.6	4.57	< 0.1	31.6	12.6
11s171420 Split	71	14.5	0.5	2	0.048	0.77	1.43	0.47	0.58	2.73	3.8	25	10	853	3.85	11.3	8.3	20.0	70.4	4.49	< 0.1	31.2	12.2
Method Blank	< 5																						
Method Blank	< 5																						
Method Blank	< 5																						
Method Blank	< 5																						
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QC

Analyte Symbol	Sr	Y	Zr	Nb	Mo	Ag	In	Sn	Sb	Te	Cs	Ba	La	Ce	Cd	Pr	Nd	Sm	Se	Eu	Gd	Tb	Dy
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	0.5	0.01	0.1	0.1	0.01	0.002	0.02	0.05	0.02	0.02	0.02	0.5	0.5	0.01	0.01	0.1	0.02	0.1	0.1	0.1	0.1	0.1	0.1
Analysis Method	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS
GXR-1 Meas	203	29.6	9.7	< 0.1	18.1	35.5	0.78	26.3	88.2	15.1	2.64	377	5.8	11.4	2.63		6.95	2.5	17.5	0.6	3.9	0.7	5.0
GXR-1 Cert	275	32.0	38.0	0.800	18.0	31.0	0.770	54.0	122	13.0	3.00	750	7.50	17.0	3.30		18.0	2.70	16.6	0.690	4.20	0.830	4.30
GXR-1 Meas	210	29.9	9.4	< 0.1	18.7	35.5	0.77	26.1	82.1	14.6	2.53	167	5.6	11.0	2.62		6.81	2.4	17.7	0.5	3.7	0.7	4.6
GXR-1 Cert	275	32.0	38.0	0.800	18.0	31.0	0.770	54.0	122	13.0	3.00	750	7.50	17.0	3.30		18.0	2.70	16.6	0.690	4.20	0.830	4.30
GXR-4 Meas	74.6	12.4	9.0	0.2	322	3.94	0.20	5.67	3.51	0.97	2.38	49.3	50.2	94.8	0.09		37.6	5.9	5.6	1.3	4.7	0.5	2.7
GXR-4 Cert	221	14.0	186	10.0	310	4.00	0.270	5.60	4.80	0.970	2.80	1640	64.5	102	0.860		45.0	6.60	5.60	1.63	5.25	0.360	2.60
GXR-4 Meas	80.9	13.0	7.9	0.4	321	3.99	0.21	5.64	3.03	0.98	2.28	28.4	51.1	97.2	0.12		38.5	6.0	6.0	1.3	4.8	0.5	2.7
GXR-4 Cert	221	14.0	186	10.0	310	4.00	0.270	5.60	4.80	0.970	2.80	1640	64.5	102	0.860		45.0	6.60	5.60	1.63	5.25	0.360	2.60
GXR-6 Meas	31.0	7.17	13.1	< 0.1	1.85	0.448	0.06	1.18	1.97	0.10	3.72	890	11.9	33.8	0.11		12.1	2.5	0.2	0.6	2.2	0.3	1.7
GXR-6 Cert	35.0	14.0	110	7.50	2.40	1.30	0.260	1.70	3.60	0.0180	4.20	1300	13.9	36.0	1.00		13.0	2.67	0.940	0.760	2.97	0.415	2.80
GXR-6 Meas	33.5	7.50	10.1	< 0.1	1.75	0.591	0.06	1.05	1.60	0.04	3.70	890	12.0	33.8	0.11		12.4	2.5	0.2	0.6	2.2	0.3	1.8
GXR-6 Cert	35.0	14.0	110	7.50	2.40	1.30	0.260	1.70	3.60	0.0180	4.20	1300	13.9	36.0	1.00		13.0	2.67	0.940	0.760	2.97	0.415	2.80
SAR-M (U.S.G.S.) Meas	28.6	19.2		2.2	12.5	2.74	1.00	1.64	4.01	1.08		173	47.0	98.8	5.43				0.7				
SAR-M (U.S.G.S.) Cert	151	28.00		29.9	13.1	3.64	1.08	2.76	6.0	0.96		801	57.4	122.0	5.27				0.39				
SAR-M (U.S.G.S.) Meas	31.5	20.4		2.0	13.0	3.14	1.03	1.90	3.38	0.95		165	46.3	94.8	5.14				0.8				

Analyte Symbol	Sr	Y	Zr	Nb	Mo	Ag	In	Sn	Sb	Te	Cs	Ba	La	Ce	Cd	Pr	Nd	Sm	Se	Eu	Gd	Tb	Dy
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	0.5	0.01	0.1	0.1	0.01	0.002	0.02	0.05	0.02	0.02	0.02	0.5	0.5	0.01	0.01	0.1	0.02	0.1	0.1	0.1	0.1	0.1	0.1
Analysis Method	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS
SAR-M (U.S.G.S.) Cert	151	28.00		29.9	13.1	3.64	1.08	2.76	6.0	0.96		801	57.4	122.0	5.27				0.39				
SG56 Meas																							
SG56 Cert																							
SG56 Meas																							
SG56 Cert																							
SG56 Meas																							
SG56 Cert																							
SG56 Meas																							
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OxD108 Meas																							
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OxD108 Meas																							
OxD108 Cert																							
OxD108 Meas																							
OxD108 Cert																							
OREAS 922 (AQUA REGIA) Meas						0.864			0.67						0.29								
OREAS 922 (AQUA REGIA) Cert						0.851			0.57						0.280								
OREAS 922 (AQUA REGIA) Meas						0.956			0.60						0.29								
OREAS 922 (AQUA REGIA) Cert						0.851			0.57						0.280								
OREAS 923 (AQUA REGIA) Meas						1.54			0.69						0.44								
OREAS 923 (AQUA REGIA) Cert						1.62			0.58						0.40								
OREAS 923 (AQUA REGIA) Meas						1.64			0.68						0.42								
OREAS 923 (AQUA REGIA) Cert						1.62			0.58						0.40								
11s171395 Orig	152	14.0	2.8	< 0.1	1.16	0.308	0.06	0.55	0.57	0.29	1.56	25.8	21.6	41.7	0.30	4.8	18.3	3.6	0.7	0.9	3.5	0.5	3.0
11s171395 Dup	150	14.0	2.8	< 0.1	1.09	0.288	0.06	0.68	0.59	0.33	1.58	28.9	21.5	41.0	0.31	4.8	18.0	3.6	0.8	0.9	3.5	0.5	2.9
11s171408 Orig	272	11.1	3.8	< 0.1	1.09	0.363	0.07	0.70	0.87	0.57	1.17	19.6	15.8	30.9	0.26	3.7	14.3	2.9	0.6	0.7	2.8	0.4	2.3
11s171408 Dup	248	10.4	3.5	< 0.1	1.12	0.216	0.07	0.57	0.84	0.45	1.08	18.9	14.3	27.7	0.29	3.3	12.5	2.6	0.9	0.6	2.6	0.3	2.1
11s171409 Orig																							
11s171409 Dup																							
11s171418 Orig																							
11s171418 Dup																							
11s171420 Orig	247	14.2	2.0	< 0.1	1.02	0.331	0.07	0.47	0.79	0.30	0.27	19.0	24.3	45.7	0.32	5.2	19.4	3.6	1.4	1.0	3.5	0.5	2.9
11s171420 Split	245	14.1	2.0	< 0.1	0.99	0.341	0.07	0.39	0.79	0.24	0.26	19.5	24.2	45.1	0.34	5.1	19.1	3.7	1.1	1.0	3.4	0.5	2.8
Method Blank																							
Method Blank																							

Analyte Symbol	Sr	Y	Zr	Nb	Mo	Ag	In	Sn	Sb	Te	Cs	Ba	La	Ce	Cd	Pr	Nd	Sm	Se	Eu	Gd	Tb	Dy
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	0.5	0.01	0.1	0.1	0.01	0.002	0.02	0.05	0.02	0.02	0.02	0.5	0.5	0.01	0.01	0.1	0.02	0.1	0.1	0.1	0.1	0.1	0.1
Analysis Method	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS
Method Blank																							
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QC

Analyte Symbol	Ho	Er	Tm	Yb	Lu	Hf	Ta	W	Re	Au	Tl	Pb	Th	U	Hg
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppb
Detection Limit	0.1	0.1	0.1	0.1	0.1	0.1	0.05	0.1	0.001	0.5	0.02	0.01	0.1	0.1	10
Analysis Method	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS
GXR-1 Meas			0.4	2.0	0.3	0.2	< 0.05	142		3200	0.37	733	1.7	33.5	3460
GXR-1 Cert			0.430	1.90	0.280	0.960	0.175	164		3300	0.390	730	2.44	34.9	3900
GXR-1 Meas			0.4	1.9	0.3	0.2	< 0.05	132		3590	0.34	643	1.5	29.8	
GXR-1 Cert			0.430	1.90	0.280	0.960	0.175	164		3300	0.390	730	2.44	34.9	
GXR-4 Meas			0.2	0.8	0.1	0.2	< 0.05	10.7			2.92	43.5	18.3	4.8	
GXR-4 Cert			0.210	1.60	0.170	6.30	0.790	30.8			3.20	52.0	22.5	6.20	
GXR-4 Meas			0.2	0.8	0.1	0.2	< 0.05	9.0			2.96	44.1	16.7	4.8	
GXR-4 Cert			0.210	1.60	0.170	6.30	0.790	30.8			3.20	52.0	22.5	6.20	
GXR-6 Meas			0.1	0.8	0.1	0.3	< 0.05	< 0.1			1.89	107	4.4	0.9	
GXR-6 Cert			0.0320	2.40	0.330	4.30	0.485	1.90			2.20	101	5.30	1.54	
GXR-6 Meas			0.1	0.8	0.1	0.2	< 0.05	< 0.1			1.93	104	4.3	0.9	
GXR-6 Cert			0.0320	2.40	0.330	4.30	0.485	1.90			2.20	101	5.30	1.54	
SAR-M (U.S.G.S.) Meas								2.7			0.83	965	12.1	2.2	
SAR-M (U.S.G.S.) Cert								9.78			2.7	982	17.2	3.57	
SAR-M (U.S.G.S.) Meas								2.2			0.88	924	10.7	2.1	
SAR-M (U.S.G.S.) Cert								9.78			2.7	982	17.2	3.57	
SG56 Meas															
SG56 Cert															
SG56 Meas															
SG56 Cert															
SG56 Meas															
SG56 Cert															
SG56 Meas															
SG56 Cert															
SG56 Meas															
SG56 Cert															
OxD108 Meas															
OxD108 Cert															
OxD108 Meas															
OxD108 Cert															
OxD108 Meas															





**Date Submitted:** 26-Jun-14  
**Invoice No.:** A14-04317  
**Invoice Date:** 07-Jul-14  
**Your Reference:**

Renaissance Geosciences  
680 Dairy Road  
Kamloops B.C. V2B8N5  
Canada

ATTN: Leo Lindinger

## CERTIFICATE OF ANALYSIS

116 Core samples were submitted for analysis.

The following analytical package was requested:

Code 1A2-Kamloops Au - Fire Assay AA  
Code UT-1-Kamloops Aqua Regia ICP/MS

REPORT **A14-04317**

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:

Assays are recommended for values >10,000 for Cu and Au. The Au from AR-MS is only semi-quantitative. For accurate Au data, fire assay is recommended. If value exceeds upper limit we recommend reassay by fire assay gravimetric-Code 1A3

CERTIFIED BY:

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

Emmanuel Esemé , Ph.D.  
Quality Control



## Results

Analyte Symbol	Au	Li	Be	B	Na	Mg	Al	K	Bi	Ca	Sc	V	Cr	Mn	Fe	Co	Ni	Cu	Zn	Ga	Ge	As	Rb
Unit Symbol	ppb	ppm	ppm	ppm	%	%	%	%	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	5	0.1	0.1	1	0.001	0.01	0.01	0.01	0.02	0.01	0.1	1	1	1	0.01	0.1	0.1	0.01	0.1	0.02	0.1	0.1	0.1
Analysis Method	FA-AA	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS
11S171421	63	12.5	0.3	7	0.073	0.81	1.43	0.40	0.52	2.88	4.7	37	12	909	3.68	9.0	6.9	15.0	102	5.88	0.1	30.3	15.0
11S171422	277	8.0	0.4	7	0.041	0.47	0.93	0.44	1.16	3.18	3.0	17	6	826	3.92	9.8	6.4	18.1	107	3.00	< 0.1	45.1	15.4
11S171423	199	13.0	0.4	7	0.043	0.69	1.39	0.64	0.74	2.75	4.5	28	11	1000	3.69	9.9	7.9	21.6	106	4.74	< 0.1	36.4	24.3
11S171424	858	2.7	0.2	6	0.057	0.12	0.72	0.31	2.46	0.89	0.7	13	13	320	1.46	5.0	8.6	4770	25.4	2.94	< 0.1	11.7	7.7
11S171425	1100	15.3	0.4	6	0.052	0.79	1.51	0.67	0.73	2.05	3.8	32	9	915	3.73	11.1	6.8	30.2	129	4.75	< 0.1	37.3	26.3
11S171426	302	17.0	0.4	6	0.045	0.91	1.74	0.71	0.36	2.23	3.9	35	18	1020	2.99	9.2	7.1	12.3	123	5.53	< 0.1	26.8	29.8
11S171427	290	10.8	0.4	7	0.045	0.50	1.27	0.54	1.06	2.53	4.0	29	11	843	4.21	10.3	7.7	21.5	141	4.47	< 0.1	40.3	20.6
11S171428	148	14.4	0.4	7	0.034	0.76	1.52	0.50	0.98	3.92	3.8	25	8	1250	4.49	11.0	7.9	14.4	99.8	4.84	< 0.1	34.1	18.1
11S171429	206	13.8	0.4	9	0.037	0.67	1.42	0.69	0.73	2.81	3.7	25	7	1030	3.45	10.1	7.2	13.7	115	4.18	< 0.1	29.3	25.1
11S171430	199	11.9	0.4	6	0.050	0.59	1.09	0.59	2.20	3.14	3.8	30	8	1020	3.80	11.6	7.3	22.0	137	3.78	0.1	55.1	23.8
11S171431	< 5	0.8	< 0.1	5	0.015	0.02	0.08	0.01	< 0.02	0.02	0.1	3	< 1	18	0.21	0.6	1.4	0.74	2.8	0.34	< 0.1	1.3	0.9
11S171432	115	13.0	0.3	6	0.058	0.68	1.09	0.59	2.64	3.04	4.2	33	8	950	3.91	9.5	7.1	20.9	86.8	4.39	< 0.1	44.4	25.1
11S171433	208	9.1	0.4	7	0.066	0.52	1.15	0.41	1.38	2.01	4.1	36	11	707	3.34	9.6	7.0	19.2	64.7	4.42	< 0.1	41.6	16.1
11S171434	219	9.3	0.4	6	0.045	0.58	1.03	0.33	1.30	3.68	3.8	26	8	1160	3.42	7.9	6.7	13.9	98.3	4.08	< 0.1	36.8	12.4
11S171435	173	8.1	0.3	19	0.047	0.47	1.23	0.38	0.95	2.71	2.8	21	5	832	3.18	7.9	4.7	16.9	164	4.21	< 0.1	30.1	12.0
11S171436	122	7.3	0.4	6	0.055	0.38	0.95	0.30	1.82	2.43	3.1	25	4	644	3.50	7.4	4.4	25.1	554	3.90	< 0.1	39.1	8.9
11S171437	84	7.5	0.4	6	0.056	0.44	1.01	0.34	1.74	2.63	2.7	22	11	828	3.51	9.4	4.6	19.3	980	3.94	< 0.1	51.3	10.7
11S171438	45	8.4	0.3	6	0.050	0.48	1.01	0.38	1.31	2.71	2.6	20	3	737	3.33	8.6	4.4	19.6	187	3.89	< 0.1	43.0	12.8
11S171439	81	10.5	0.3	6	0.061	0.59	0.94	0.52	3.87	2.48	2.8	23	8	628	4.28	17.1	6.7	23.1	223	3.65	< 0.1	66.8	19.1
11S171440	56	11.9	0.4	6	0.050	0.67	1.29	0.67	1.42	2.71	4.3	29	8	877	3.45	9.5	7.6	25.1	349	4.36	< 0.1	53.0	25.7
11S171441	219	9.9	0.4	6	0.035	0.60	1.29	0.47	1.07	2.06	3.7	25	7	692	2.95	10.3	5.7	22.5	182	4.27	< 0.1	51.1	19.0
11S171442	76	13.0	0.5	6	0.048	0.79	1.44	0.60	1.49	2.93	4.5	30	7	953	3.38	10.1	7.2	11.7	83.7	4.81	< 0.1	45.5	25.2
11S171443	58	10.8	0.5	6	0.047	0.63	1.17	0.53	2.25	3.54	4.4	24	10	1010	3.23	7.7	7.0	15.1	88.0	4.17	< 0.1	50.7	22.1
11S171444	69	14.1	0.4	7	0.046	0.75	1.51	0.78	1.73	2.92	3.7	27	6	816	3.59	10.0	7.7	26.0	102	4.32	< 0.1	48.7	31.8
11S171445	858	2.9	0.3	6	0.058	0.12	0.74	0.31	2.51	0.90	0.7	13	13	319	1.44	5.0	8.4	4700	25.4	2.91	< 0.1	11.5	7.8
11S171446	103	3.9	0.3	6	0.051	0.10	0.70	0.42	2.28	1.78	2.4	15	8	334	3.90	10.4	8.2	21.2	111	2.25	< 0.1	81.4	12.8
11S171447	134	9.0	0.4	7	0.045	0.39	1.09	0.58	1.13	3.40	3.6	22	10	709	3.40	7.8	7.9	18.9	53.2	3.32	< 0.1	58.6	22.0
11S171448	82	12.0	0.4	6	0.052	0.61	1.38	0.67	0.97	3.21	4.5	29	12	821	3.29	8.2	8.2	17.6	57.9	4.46	< 0.1	48.1	28.3
11S171449	68	13.8	0.5	7	0.055	0.82	1.51	0.67	1.41	3.09	4.5	33	12	799	3.52	9.2	8.1	22.6	71.5	5.09	< 0.1	47.1	29.2
11S171450	61	13.7	0.5	7	0.073	0.78	1.53	0.66	2.43	2.74	4.5	32	13	570	4.42	10.4	8.2	23.7	98.9	5.38	0.1	58.6	26.3
11S171451	83	11.6	0.4	6	0.051	0.65	1.14	0.44	1.28	2.91	3.4	25	9	583	3.38	8.2	8.4	21.0	67.6	3.80	< 0.1	38.3	17.9
11S171452	278	14.3	0.4	8	0.071	0.81	1.61	0.66	1.12	2.62	4.1	36	13	642	3.68	9.3	7.4	22.6	74.9	4.88	< 0.1	38.2	26.1
11S171453	100	14.1	0.5	7	0.069	0.73	1.41	0.71	2.44	1.62	4.0	33	10	382	5.59	11.2	9.3	39.1	82.3	4.72	< 0.1	70.2	26.9
11S171454	66	8.2	0.3	7	0.080	0.50	1.19	0.44	2.38	2.73	5.1	38	15	465	3.79	8.1	7.4	37.9	54.0	4.86	< 0.1	42.0	14.3
11S171455	48	9.1	0.4	8	0.071	0.60	1.06	0.42	2.46	2.28	4.7	36	11	411	4.45	8.2	7.8	22.8	44.7	4.27	< 0.1	33.0	14.7
11S171456	149	9.4	0.4	6	0.069	0.55	1.16	0.50	3.56	2.13	4.2	37	12	455	4.21	10.5	8.3	33.6	45.0	4.39	< 0.1	23.8	18.9
11S171457	58	11.2	0.5	8	0.064	0.48	1.21	0.64	4.19	3.69	3.7	27	12	545	4.77	8.9	7.3	31.8	33.0	4.18	0.1	21.5	25.9
11S171458	68	11.8	0.4	9	0.064	0.45	1.35	0.78	3.55	2.54	3.3	25	16	424	4.68	9.4	7.8	20.6	33.5	4.14	0.1	28.8	29.7
11S171459	90	10.4	0.3	9	0.050	0.31	1.07	0.67	2.88	2.51	2.7	19	10	373	5.21	9.9	7.9	29.9	42.7	3.31	0.1	43.2	25.5
11S171460	154	10.7	0.5	10	0.080	0.44	1.23	0.71	3.59	4.33	3.5	28	12	535	5.78	9.0	7.8	29.3	62.7	4.15	0.1	36.0	30.5
11S171461	146	12.3	0.5	8	0.084	0.66	1.27	0.71	4.46	2.55	2.7	24	8	495	3.67	8.0	6.1	44.8	63.1	4.48	< 0.1	29.9	34.0
11S171462	208	8.8	0.4	6	0.070	0.47	1.27	0.57	2.18	2.88	2.3	19	7	585	2.60	6.1	4.8	50.3	49.1	4.07	< 0.1	29.5	23.6
11S171463	92	8.8	0.4	6	0.077	0.48	1.26	0.54	1.28	2.71	2.2	17	6	586	2.47	6.0	4.8	19.3	47.5	3.97	< 0.1	28.0	23.4
11S171464	691	6.9	0.4	9	0.069	0.33	1.04	0.54	2.57	2.85	1.9	14	6	568	3.05	6.4	5.4	22.9	27.8	3.22	< 0.1	32.5	23.0
11S171465	392	8.4	0.4	6	0.070	0.47	1.08	0.44	1.70	3.10	2.3	15	7	647	2.82	6.2	5.2	13.4	42.2	3.54	< 0.1	22.9	19.6
11S171466	385	9.3	0.4	9	0.078	0.44	1.21	0.57	5.59	2.66	2.0	15	7	517	3.04	6.1	5.0	17.7	42.8	3.77	< 0.1	28.3	25.7
11S171467	875	3.1	0.3	6	0.059	0.13	0.76	0.32	2.56	0.93	0.7	13	13	320	1.45	5.1	8.5	4700	26.0	2.90	< 0.1	11.9	8.1
11S171468	169	6.1	0.4	7	0.049	0.22	0.96	0.51	4.70	3.22	1.2	11	5	741	3.11	6.2	5.2	35.4	91.8	2.57	< 0.1	40.4	21.3
11S171469	197	6.8	0.4	6	0.053	0.31	1.08	0.54	3.26	3.18	1.5	11	7	645	2.80	6.0	4.8	19.1	42.7	2.79	< 0.1	29.4	24.0

Analyte Symbol	Au	Li	Be	B	Na	Mg	Al	K	Bi	Ca	Sc	V	Cr	Mn	Fe	Co	Ni	Cu	Zn	Ga	Ge	As	Rb
Unit Symbol	ppb	ppm	ppm	ppm	%	%	%	%	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	5	0.1	0.1	1	0.001	0.01	0.01	0.01	0.02	0.01	0.1	1	1	1	0.01	0.1	0.1	0.01	0.1	0.02	0.1	0.1	0.1
Analysis Method	FA-AA	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS
11S171470	440	5.5	0.4	6	0.047	0.26	0.92	0.46	3.22	3.88	1.3	9	8	798	2.78	6.2	5.7	26.3	41.0	2.36	< 0.1	21.9	20.5
11S171471	78	5.7	0.3	6	0.049	0.19	1.01	0.53	2.15	3.28	1.2	10	12	669	2.94	5.9	5.4	31.1	33.0	2.62	< 0.1	36.9	23.8
11S171472	27	4.3	0.4	6	0.039	0.18	0.84	0.40	1.90	3.77	1.0	8	6	640	3.03	5.6	4.7	14.5	34.2	2.14	< 0.1	21.8	17.7
11S171473	146	4.5	0.3	6	0.041	0.14	0.93	0.53	2.43	3.13	1.0	9	4	721	2.93	5.9	4.6	58.4	20.0	2.25	< 0.1	37.7	22.2
11S171474	133	5.1	0.3	7	0.043	0.19	0.80	0.43	1.61	3.29	0.9	8	5	661	2.84	5.5	4.9	22.9	52.4	2.16	< 0.1	29.0	19.0
11S171475	166	6.2	0.3	10	0.065	0.26	0.93	0.47	1.89	2.64	1.3	11	3	488	2.50	5.7	4.4	13.2	78.9	2.97	< 0.1	22.9	20.9
11S171476	99	4.7	0.3	7	0.039	0.21	0.77	0.39	1.06	3.07	1.4	9	5	646	2.63	5.8	4.6	25.3	24.2	2.21	< 0.1	30.9	16.5
11S171477	76	11.3	0.4	8	0.063	0.57	1.33	0.64	3.32	2.82	3.8	25	8	500	4.60	9.1	6.3	44.6	46.5	4.27	< 0.1	24.8	31.3
11S171478	111	9.1	0.4	7	0.060	0.51	1.06	0.44	12.5	3.40	4.1	26	7	588	3.98	9.7	6.0	47.7	88.9	3.91	< 0.1	28.9	20.0
11S171479	< 5	0.9	< 0.1	6	0.017	0.02	0.08	0.01	0.04	0.02	< 0.1	2	< 1	15	0.15	0.5	1.1	0.52	2.3	0.26	< 0.1	1.0	0.8
11S171480	33	9.3	0.3	9	0.062	0.49	1.01	0.50	0.88	3.07	2.5	19	3	610	3.49	8.0	4.8	51.2	60.2	3.56	< 0.1	22.7	20.7
11S171481	48	10.8	0.4	7	0.057	0.65	1.10	0.53	1.59	3.23	3.7	24	7	673	3.90	9.3	5.4	125	68.9	4.02	0.1	35.5	23.7
11S171482	46	12.6	0.5	8	0.065	0.77	1.48	0.68	0.62	2.96	4.4	33	4	623	3.83	10.2	5.0	72.2	53.6	4.80	< 0.1	36.4	31.5
11S171483	37	13.8	0.5	8	0.053	0.85	1.27	0.65	0.56	2.86	4.3	29	7	568	3.79	8.9	5.0	84.3	60.4	4.33	< 0.1	41.5	30.9
11S171484	629	11.2	0.5	9	0.064	0.75	1.17	0.63	0.78	3.29	4.1	29	5	599	3.84	9.6	4.9	79.8	49.9	4.09	0.1	24.5	28.7
11S171485	67	11.7	0.5	8	0.052	0.68	1.26	0.64	0.79	3.01	4.2	27	5	538	3.75	9.6	5.3	77.0	44.8	3.96	< 0.1	31.4	28.0
11S171486	48	9.8	0.4	15	0.046	0.32	1.25	0.70	0.89	1.82	2.9	20	3	290	4.68	9.6	5.1	27.9	29.6	3.16	0.1	32.1	27.3
11S171487	58	6.6	0.3	9	0.038	0.22	0.90	0.53	0.83	2.42	2.3	18	4	408	4.12	9.7	5.1	50.2	28.5	2.38	< 0.1	34.5	20.5
11S171488	70	8.8	0.5	9	0.049	0.33	1.19	0.70	0.69	2.81	3.1	22	3	440	4.09	9.6	5.2	95.0	23.7	3.14	0.1	19.6	26.5
11S171489	75	10.3	0.5	8	0.046	0.52	1.21	0.61	1.75	2.45	4.1	23	8	416	3.98	10.5	5.1	186	69.9	3.58	0.1	18.5	25.3
11S171490	29	13.5	0.6	9	0.065	0.64	1.55	0.81	0.73	2.62	4.7	31	4	433	4.31	11.3	5.4	67.9	38.3	4.68	0.1	15.2	33.6
11S171491	53	10.9	0.4	8	0.045	0.62	1.22	0.57	0.53	2.86	4.1	24	5	431	3.59	8.8	4.9	138	35.2	3.78	0.1	14.0	23.4
11S171492	95	16.5	0.7	11	0.064	1.05	1.92	0.89	0.54	2.88	6.9	45	30	556	4.08	13.3	22.1	134	60.1	5.49	< 0.1	15.0	38.2
11S171493	107	10.0	0.4	7	0.059	0.69	1.40	0.43	0.46	2.56	4.9	32	9	328	3.28	8.7	6.2	137	40.0	5.25	< 0.1	12.3	16.5
11S171494	837	3.3	0.3	7	0.058	0.13	0.78	0.32	2.74	0.88	0.7	13	11	304	1.38	4.8	7.9	4390	24.0	2.63	< 0.1	10.8	8.0
11S171495	9	55.7	1.6	6	0.229	6.36	3.98	0.37	0.09	6.17	18.1	146	237	1120	5.96	43.1	314	29.4	75.5	9.49	0.3	5.4	15.8
11S171496	107	10.1	0.4	8	0.050	0.60	1.32	0.69	0.80	3.02	4.2	25	11	538	3.63	9.0	7.2	147	56.7	4.15	0.1	16.4	27.6
11S171497	78	12.4	0.5	8	0.060	0.75	1.56	0.75	0.52	2.65	4.7	30	13	485	3.53	9.4	7.0	253	50.3	5.00	< 0.1	13.2	29.5
11S171498	48	15.4	0.4	7	0.064	0.88	1.58	0.60	0.47	2.81	4.7	38	10	505	3.43	9.9	5.7	120	52.6	5.20	< 0.1	11.2	24.0
11S171499	112	11.2	0.5	8	0.069	0.62	1.48	0.70	0.45	2.68	3.9	28	10	367	3.92	11.4	6.0	406	33.3	4.90	< 0.1	13.6	27.9
11S171500	414	10.1	0.5	10	0.071	0.53	1.49	0.70	0.56	2.11	3.8	27	11	288	4.25	18.0	7.8	324	25.9	4.57	0.1	17.2	27.8
11S171501	201	11.3	0.5	9	0.063	0.66	1.83	0.65	0.54	2.20	4.4	36	14	339	5.06	16.8	7.1	582	32.4	5.83	0.1	16.4	27.8
11S171502	102	13.5	0.5	9	0.072	0.62	1.53	0.83	0.65	1.81	4.2	29	12	253	4.32	10.9	6.8	498	29.3	4.66	< 0.1	16.6	33.2
11S171503	31	11.5	0.4	8	0.077	0.48	1.53	0.69	0.41	2.02	3.5	26	10	261	3.74	9.7	4.0	110	24.1	5.02	< 0.1	15.8	26.9
11S171504	25	8.6	0.4	8	0.072	0.35	1.29	0.45	0.31	2.58	2.4	18	9	245	2.72	6.3	4.3	103	22.5	4.40	< 0.1	11.4	16.4
11S171505	59	6.6	0.4	8	0.064	0.21	1.10	0.52	0.40	3.17	2.1	15	7	314	2.82	6.4	4.9	260	26.3	3.25	< 0.1	15.0	17.6
11S171506	41	10.0	0.5	8	0.058	0.34	1.33	0.64	0.28	2.64	3.1	21	7	330	3.20	7.9	5.1	115	32.4	3.88	< 0.1	12.7	24.3
11S171507	24	9.5	0.4	8	0.066	0.35	1.29	0.59	0.33	2.01	2.3	18	8	290	3.13	6.2	4.1	94.3	32.6	4.04	< 0.1	10.0	23.1
11S171508	132	9.4	0.4	8	0.061	0.31	1.20	0.58	0.28	1.86	2.1	15	7	254	3.00	5.3	3.9	137	28.8	3.94	< 0.1	10.9	22.7
11S171509	23	9.8	0.5	8	0.064	0.35	1.29	0.66	0.25	2.05	2.6	17	6	297	2.72	6.1	4.5	58.5	28.9	4.27	< 0.1	10.8	25.9
11S171510	56	12.2	0.5	11	0.074	0.41	1.52	0.74	0.29	2.44	3.5	24	10	384	4.05	8.3	4.7	151	31.0	4.79	< 0.1	20.6	29.2
11S171511	53	10.1	0.4	7	0.049	0.30	1.28	0.73	0.33	2.29	3.2	19	6	361	3.50	8.3	5.1	182	24.8	3.64	< 0.1	19.2	27.7
11S171512	89	13.2	0.5	9	0.067	0.50	1.51	0.89	0.43	2.26	3.5	24	8	358	3.86	7.6	4.9	123	40.1	4.46	< 0.1	18.5	37.1
11S171513	59	12.5	0.5	9	0.065	0.43	1.41	0.86	0.46	2.11	3.5	23	8	335	3.54	8.7	4.8	235	37.2	4.25	0.1	16.1	34.6
11S171514	71	11.9	0.6	9	0.063	0.48	1.67	0.87	0.22	2.28	3.6	24	8	385	3.16	7.4	4.7	129	42.4	4.92	< 0.1	17.1	35.1
11S171515	11	7.8	0.4	7	0.045	0.34	1.14	0.56	0.14	2.18	2.5	15	7	331	2.43	6.1	4.4	33.2	38.9	3.54	< 0.1	15.4	23.1
11S171516	29	8.2	0.4	8	0.052	0.27	1.37	0.65	0.33	3.05	3.0	17	6	484	2.29	5.2	3.9	43.2	109	3.81	< 0.1	22.4	25.0
11S171517	23	9.8	0.6	8	0.075	0.33	1.68	0.81	0.28	2.87	3.5	21	8	422	2.95	6.5	5.3	39.1	39.9	4.92	< 0.1	17.2	29.2
11S171518	214	14.5	0.5	8	0.070	0.56	1.61	0.72	0.44	2.60	3.7	28	7	473	4.28	9.0	4.1	364	113	5.34	0.1	25.3	30.9
11S171519	98	12.5	0.4	7	0.069	0.54	1.62	0.76	0.28	1.88	3.7	28	6	338	3.46	8.3	3.8	385	42.5	5.08	< 0.1	18.1	31.0

Analyte Symbol	Au	Li	Be	B	Na	Mg	Al	K	Bi	Ca	Sc	V	Cr	Mn	Fe	Co	Ni	Cu	Zn	Ga	Ge	As	Rb
Unit Symbol	ppb	ppm	ppm	ppm	%	%	%	%	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	5	0.1	0.1	1	0.001	0.01	0.01	0.01	0.02	0.01	0.1	1	1	1	0.01	0.1	0.1	0.01	0.1	0.02	0.1	0.1	0.1
Analysis Method	FA-AA	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS
11S171520	54	15.1	0.6	9	0.062	0.67	1.83	0.98	0.40	2.01	5.3	36	11	398	4.59	9.9	6.2	221	57.1	5.56	0.1	27.2	41.9
11S171521	< 5	1.0	< 0.1	6	0.017	0.02	0.08	0.01	< 0.02	0.02	0.1	2	< 1	22	0.20	0.5	1.2	0.64	2.9	0.30	< 0.1	1.0	1.0
11S171522	103	21.1	0.7	8	0.064	0.84	2.10	0.98	0.43	2.71	6.6	46	14	548	4.59	11.4	6.9	253	70.5	7.02	0.1	18.6	43.8
11S171523	71	15.9	0.7	8	0.057	0.79	1.87	1.01	0.40	2.43	6.3	40	8	489	3.91	10.2	5.8	218	66.8	5.82	0.1	16.3	43.7
11S171524	237	19.1	0.8	11	0.076	0.86	2.53	1.27	0.41	3.50	7.2	52	13	534	4.47	11.3	6.3	527	80.0	7.90	0.1	20.0	50.2
11S171525	827	3.6	0.3	6	0.060	0.13	0.77	0.33	2.63	0.91	0.7	13	12	304	1.39	4.8	8.3	4480	24.7	2.89	< 0.1	10.7	7.4
11S171526	92	17.1	0.7	8	0.075	0.82	1.96	1.00	0.58	2.71	6.5	43	9	572	4.28	10.9	5.7	249	77.2	6.50	0.1	19.8	44.2
11S171527	96	13.6	0.6	21	0.043	0.60	1.54	0.82	0.55	2.78	5.5	32	7	577	4.14	11.7	6.1	184	60.7	4.61	0.1	22.0	36.2
11S171528	373	6.2	0.4	7	0.043	0.20	0.98	0.63	0.67	2.70	2.7	17	3	508	3.13	9.6	6.4	390	30.4	2.52	0.1	30.7	23.3
11S171529	144	5.7	0.3	6	0.031	0.22	0.91	0.61	0.29	2.71	1.8	12	4	480	3.00	7.5	4.4	293	29.9	2.09	< 0.1	27.5	22.9
11S171530	313	6.6	0.4	8	0.040	0.14	1.04	0.74	0.37	2.65	2.2	13	2	509	3.99	8.7	4.1	557	21.4	2.67	0.1	34.5	26.9
11S171531	171	7.6	0.4	6	0.031	0.29	1.02	0.70	0.31	2.57	2.4	15	5	493	4.38	8.1	3.8	482	41.2	2.43	0.1	19.5	28.1
11S171532	120	6.9	0.5	7	0.050	0.51	1.15	0.74	0.35	2.59	3.2	17	3	410	3.40	7.6	4.4	154	41.3	3.11	0.1	15.9	29.5
11S171533	140	6.3	0.4	6	0.048	0.27	0.93	0.61	0.31	2.77	3.1	14	4	445	2.63	7.3	4.3	273	32.6	2.37	0.1	15.8	24.3
11S171534	222	4.0	0.2	8	0.063	0.09	0.67	0.46	0.49	4.38	1.7	12	2	888	3.07	6.7	4.8	322	11.2	2.06	< 0.1	33.9	14.5
11S171535	83	5.2	0.3	6	0.043	0.25	0.83	0.56	0.34	2.76	1.8	11	4	460	2.41	6.9	4.2	270	38.6	2.04	< 0.1	19.1	21.1
11S171536	218	7.1	0.5	7	0.058	0.39	1.08	0.73	0.42	2.44	2.3	16	3	426	2.90	7.1	4.1	495	45.4	2.97	< 0.1	14.0	29.7



## Results

Analyte Symbol	Sr	Y	Zr	Nb	Mo	Ag	In	Sn	Sb	Te	Cs	Ba	La	Ce	Cd	Pr	Nd	Sm	Se	Eu	Gd	Tb	Dy	
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	0.5	0.01	0.1	0.1	0.01	0.002	0.02	0.05	0.02	0.02	0.02	0.5	0.5	0.01	0.01	0.1	0.02	0.1	0.1	0.1	0.1	0.1	0.1	
Analysis Method	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	
11S171421	261	14.4	2.8	1.0	1.46	0.326	0.06	0.78	1.05	0.30	0.41	41.3	16.7	32.2	0.77	3.8	14.4	2.9	1.4	0.8	3.0	0.4	2.7	
11S171422	299	9.93	2.2	< 0.1	1.14	0.625	0.06	0.29	0.47	0.60	0.36	30.6	13.4	25.8	1.32	3.0	11.2	2.3	1.7	0.7	2.3	0.3	1.9	
11S171423	183	15.2	2.9	0.1	1.33	0.518	0.11	0.70	0.73	0.36	0.87	40.9	18.9	36.8	0.66	4.2	16.3	3.3	1.4	0.9	3.3	0.5	2.8	
11S171424	265	3.66	1.6	< 0.1	561	14.7	0.03	0.97	40.9	4.88	0.67	29.2	6.0	12.4	< 0.01	1.5	5.87	1.1	0.5	0.3	0.9	0.1	0.7	
11S171425	183	12.5	3.7	1.8	2.00	1.93	0.11	0.70	1.10	1.43	1.01	30.8	16.7	32.3	0.88	3.7	14.1	2.7	1.1	0.7	2.8	0.4	2.5	
11S171426	260	12.2	3.0	1.7	1.73	0.659	0.06	0.75	1.34	0.29	1.39	58.8	16.6	32.4	0.26	3.7	13.7	2.6	0.8	0.7	2.6	0.4	2.3	
11S171427	231	15.4	2.4	0.6	1.52	0.637	0.11	0.71	0.93	0.56	0.73	28.0	18.0	35.5	1.96	4.2	15.8	3.2	1.7	0.9	3.1	0.5	2.9	
11S171428	648	13.2	1.7	0.3	0.98	0.409	0.10	0.45	0.82	0.41	0.61	34.1	18.6	35.8	0.32	4.1	15.7	3.1	1.3	0.8	3.1	0.4	2.6	
11S171429	181	15.2	3.0	0.3	0.85	0.344	0.09	0.59	0.61	0.20	0.89	35.4	18.7	35.9	0.61	4.1	15.5	3.2	1.2	0.8	3.2	0.4	2.8	
11S171430	167	14.9	3.8	0.9	1.61	0.871	0.06	0.91	0.82	0.76	0.85	36.0	17.6	33.9	1.57	3.9	14.8	3.0	2.6	0.8	3.1	0.4	2.8	
11S171431	4.7	0.83	0.6	< 0.1	0.09	0.271	< 0.02	0.06	0.07	< 0.02	0.06	5.8	3.4	6.46	< 0.01	0.7	2.40	0.4	0.1	< 0.1	0.3	< 0.1	0.2	
11S171432	174	14.2	3.9	0.9	1.59	0.802	0.06	1.14	0.71	0.51	0.86	36.8	16.6	33.6	0.51	4.0	15.3	3.1	2.4	0.8	3.2	0.4	2.7	
11S171433	245	12.5	4.1	3.2	0.97	0.555	0.05	1.34	1.20	0.53	0.51	33.1	16.4	32.2	0.26	3.7	13.9	2.7	1.4	0.6	2.7	0.4	2.5	
11S171434	241	13.7	2.5	0.4	1.15	0.491	0.08	0.64	0.63	0.50	0.38	34.8	18.0	34.4	0.53	4.0	15.0	3.0	1.8	0.8	3.1	0.4	2.6	
11S171435	257	13.9	3.9	0.5	1.29	0.403	0.05	0.62	0.80	0.46	0.34	35.7	21.6	41.9	1.39	4.8	17.5	3.3	1.3	0.9	3.2	0.4	2.7	
11S171436	174	12.7	4.2	1.9	1.12	0.561	0.14	1.83	0.72	0.64	0.17	20.8	18.7	35.6	5.13	4.0	14.7	2.8	2.1	0.7	2.7	0.4	2.5	
11S171437	186	12.4	3.4	0.7	2.16	0.676	0.27	0.85	0.86	0.75	0.28	26.9	19.9	38.0	9.34	4.2	15.5	3.0	1.8	0.8	3.0	0.4	2.5	
11S171438	177	14.0	4.2	0.7	1.00	0.577	0.10	0.77	0.81	0.44	0.38	28.8	19.8	38.0	1.52	4.3	16.2	3.2	1.8	0.9	3.2	0.5	2.8	
11S171439	95.5	13.7	3.6	0.3	1.92	1.44	0.07	0.86	0.66	0.76	0.92	23.0	18.9	36.6	2.29	4.2	15.7	3.0	2.4	0.8	3.2	0.4	2.7	
11S171440	181	14.5	3.3	0.1	1.01	0.728	0.13	0.87	0.75	0.60	1.43	36.5	20.4	39.0	3.41	4.4	16.5	3.2	1.8	0.8	3.3	0.5	2.8	
11S171441	204	11.0	2.4	< 0.1	0.80	0.425	0.09	0.78	0.99	0.63	1.26	35.7	16.5	31.8	1.88	3.6	13.4	2.6	1.1	0.7	2.6	0.3	2.2	
11S171442	351	13.0	3.3	< 0.1	0.87	0.462	0.05	0.77	0.72	0.45	1.80	48.7	18.3	35.6	0.32	4.1	15.3	3.0	1.2	0.8	3.0	0.4	2.6	
11S171443	264	14.4	2.6	< 0.1	1.11	0.751	0.08	0.64	0.52	0.47	1.85	46.5	19.6	37.6	0.76	4.3	16.3	3.3	1.9	0.9	3.3	0.5	2.9	
11S171444	191	12.5	2.7	< 0.1	0.74	0.551	0.12	0.65	0.76	0.40	1.82	39.0	16.5	32.0	0.38	3.7	13.8	2.8	1.6	0.7	2.8	0.4	2.5	
11S171445	261	3.59	1.5	< 0.1	552	14.4	0.03	0.91	41.8	4.95	0.80	24.0	6.1	12.8	< 0.01	1.5	5.85	1.1	0.2	0.3	0.9	0.1	0.7	
11S171446	72.9	15.0	3.0	0.2	2.03	1.77	0.07	0.45	1.37	0.82	0.31	20.2	18.8	36.7	1.33	4.3	16.4	3.2	2.4	0.8	3.4	0.5	2.9	
11S171447	176	15.7	2.4	< 0.1	1.40	0.631	0.05	0.55	1.10	0.53	0.94	34.5	18.6	36.5	0.39	4.3	16.4	3.3	1.6	0.9	3.4	0.5	3.1	
11S171448	219	14.7	2.5	< 0.1	1.76	0.393	0.07	0.68	1.22	0.28	1.48	33.6	16.2	32.3	0.20	3.8	15.1	3.2	1.1	0.8	3.3	0.5	3.0	
11S171449	261	13.2	2.8	< 0.1	1.07	0.439	0.09	0.90	1.40	0.41	1.83	36.5	18.5	36.5	0.21	4.2	16.3	3.2	1.3	0.8	3.2	0.4	2.7	
11S171450	181	15.0	3.3	< 0.1	1.81	0.653	0.09	1.17	0.83	0.41	1.41	16.4	17.5	35.9	1.03	4.4	17.2	3.6	2.8	1.0	3.7	0.5	3.1	
11S171451	276	12.9	3.4	0.7	0.91	0.424	0.09	0.80	0.67	0.24	1.56	37.9	15.5	30.4	0.47	3.6	13.9	2.8	2.3	0.8	2.9	0.4	2.6	
11S171452	228	14.0	3.7	0.9	1.09	0.416	0.13	1.18	0.90	0.31	1.53	31.6	15.2	31.4	0.40	3.8	14.3	2.9	2.7	0.8	2.9	0.4	2.7	
11S171453	109	14.8	3.7	1.1	1.67	0.499	0.14	1.32	0.94	0.52	1.41	11.2	13.7	28.9	0.50	3.6	14.1	3.2	4.0	0.8	3.1	0.5	2.9	
11S171454	235	14.4	3.8	0.7	1.38	0.422	0.14	1.37	0.82	0.54	0.47	24.1	16.2	33.5	0.39	4.1	16.4	3.5	2.4	0.9	3.4	0.5	2.8	
11S171455	233	13.6	3.3	2.2	1.36	0.486	0.13	1.64	0.92	0.35	0.62	17.4	12.9	26.6	0.17	3.3	13.2	2.7	3.5	0.8	2.9	0.4	2.6	
11S171456	221	13.0	4.1	3.3	1.11	0.428	0.12	1.74	1.17	0.32	0.85	16.7	14.1	27.8	0.24	3.3	12.6	2.5	3.3	0.6	2.7	0.4	2.6	
11S171457	202	18.4	3.2	0.4	1.46	0.616	0.05	1.62	0.78	0.32	1.37	16.7	24.0	47.3	0.27	5.5	21.3	4.1	4.7	1.2	4.3	0.6	3.7	
11S171458	114	15.7	3.5	< 0.1	2.56	0.690	0.05	1.78	0.67	0.41	1.24	17.3	22.6	44.5	0.21	5.2	19.4	3.8	4.8	1.1	3.9	0.5	3.2	
11S171459	182	17.0	3.4	< 0.1	1.36	0.863	0.05	1.31	0.95	0.49	1.04	18.4	23.6	46.4	0.48	5.3	20.4	4.1	5.4	1.2	4.1	0.6	3.5	
11S171460	252	16.3	3.7	0.1	1.29	1.07	0.06	1.45	0.67	0.62	1.46	14.3	19.6	39.2	0.67	4.7	17.9	3.7	5.8	1.1	3.7	0.5	3.3	
11S171461	169	14.1	2.7	0.5	0.66	0.703	0.19	0.89	1.19	0.36	1.87	23.5	17.4	33.8	0.34	3.9	14.6	2.9	2.6	0.8	2.9	0.4	2.7	
11S171462	216	10.9	2.9	0.7	0.71	0.579	0.32	0.58	0.68	0.30	0.93	50.5	11.6	23.1	0.17	2.7	10.3	2.1	1.7	0.6	2.2	0.3	2.2	
11S171463	226	10.2	3.2	0.6	0.61	0.379	0.13	0.62	0.65	0.12	1.05	65.4	11.4	22.2	0.15	2.5	9.39	1.9	1.8	0.5	2.0	0.3	2.0	
11S171464	123	11.3	3.2	0.2	0.87	0.445	0.08	0.69	0.52	0.26	1.00	38.2	11.4	22.4	0.10	2.7	10.4	2.2	2.1	0.6	2.3	0.3	2.3	
11S171465	172	12.1	2.6	< 0.1	0.81	0.368	0.07	0.52	0.47	0.17	0.85	44.9	13.2	26.4	0.13	3.1	12.1	2.6	2.2	0.7	2.6	0.4	2.5	
11S171466	127	12.0	2.6	0.2	0.76	0.686	0.07	0.52	0.55	0.22	1.10	38.8	12.4	24.4	0.23	2.9	11.0	2.3	2.8	0.7	2.5	0.4	2.4	
11S171467	268	3.66	1.6	< 0.1	574	15.6	0.03	0.95	45.6	5.40	0.93	50.8	6.5	13.6	< 0.01	1.7	6.34	1.2	0.3	0.3	1.0	0.1	0.7	
11S171468	96.9	12.6	3.9	0.3	1.84	1.96	0.09	0.50	2.06	0.28	0.52	43.8	12.6	24.6	1.13	2.9	11.7	2.5	2.7	0.7	2.7	0.4	2.5	
11S171469	96.0	13.1	4.0	0.2	1.00	0.779	0.17	0.47	1.32	0.14	0.52	48.6	13.7	27.5	0.30	3.3	12.7	2.6	1.3	0.8	2.8	0.4	2.7	

Analyte Symbol	Sr	Y	Zr	Nb	Mo	Ag	In	Sn	Sb	Te	Cs	Ba	La	Ce	Cd	Pr	Nd	Sm	Se	Eu	Gd	Tb	Dy
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	0.5	0.01	0.1	0.1	0.01	0.002	0.02	0.05	0.02	0.02	0.02	0.5	0.5	0.01	0.01	0.1	0.02	0.1	0.1	0.1	0.1	0.1	0.1
Analysis Method	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS
11S171470	264	13.7	3.5	< 0.1	1.05	1.29	0.11	0.39	1.63	0.30	0.58	50.0	20.1	39.2	0.37	4.6	17.3	3.3	1.8	1.0	3.3	0.5	2.9
11S171471	117	13.2	4.2	< 0.1	1.42	1.35	0.06	0.53	2.54	0.18	0.54	36.2	19.1	36.9	0.31	4.3	16.4	3.2	2.1	0.9	3.3	0.4	2.8
11S171472	172	14.0	2.9	< 0.1	1.01	0.876	0.03	0.64	0.65	0.17	0.98	41.6	17.8	34.6	0.33	4.1	15.3	3.1	1.8	0.9	3.2	0.5	2.9
11S171473	106	13.3	4.1	< 0.1	0.91	1.13	< 0.02	0.60	11.4	0.09	0.40	46.8	19.2	38.7	0.28	4.6	17.6	3.6	2.2	1.0	3.5	0.5	2.9
11S171474	109	14.6	3.8	< 0.1	0.85	0.683	< 0.02	0.60	2.61	0.06	0.38	51.6	19.0	37.6	0.52	4.4	16.7	3.3	2.2	0.9	3.3	0.5	3.0
11S171475	90.7	13.4	3.1	< 0.1	0.82	0.672	< 0.02	0.44	1.62	0.05	0.44	45.2	18.4	36.4	1.02	4.3	16.6	3.2	2.4	0.9	3.3	0.5	2.8
11S171476	113	13.6	3.4	< 0.1	0.70	0.671	0.02	0.61	1.42	0.07	0.56	45.8	19.4	38.8	0.17	4.5	17.4	3.5	2.4	1.0	3.5	0.5	2.9
11S171477	130	15.0	3.0	< 0.1	3.32	0.812	0.06	1.26	2.28	0.13	1.38	26.0	21.4	42.2	0.35	5.0	18.8	3.7	4.9	1.0	3.8	0.5	3.3
11S171478	185	16.5	2.8	< 0.1	1.55	0.837	0.06	1.21	2.29	0.13	0.84	27.0	16.1	31.6	1.10	3.7	14.4	3.2	5.2	0.9	3.4	0.5	3.4
11S171479	4.8	0.68	0.5	< 0.1	0.02	0.244	< 0.02	0.08	< 0.02	< 0.02	0.06	6.5	2.4	4.51	< 0.01	0.5	1.82	0.3	< 0.1	< 0.1	0.3	< 0.1	0.2
11S171480	115	14.0	3.8	< 0.1	2.45	0.508	0.02	0.98	2.00	0.03	0.65	31.8	15.9	31.1	0.66	3.7	14.1	3.0	3.4	0.9	3.3	0.5	2.9
11S171481	146	13.9	2.6	< 0.1	6.58	0.786	0.06	0.86	0.94	0.08	1.04	26.8	15.6	31.0	0.80	3.7	14.7	3.1	4.5	1.0	3.3	0.5	3.0
11S171482	301	14.8	4.6	0.2	2.16	0.431	0.06	0.96	0.81	< 0.02	1.58	35.7	23.7	47.1	0.18	5.4	19.8	3.7	3.0	1.0	3.8	0.5	3.1
11S171483	178	16.0	5.5	0.2	3.75	0.399	0.08	0.92	0.42	< 0.02	1.54	36.4	27.6	52.1	0.20	6.0	21.5	3.9	3.8	1.1	3.8	0.5	3.4
11S171484	174	15.0	5.3	0.2	4.60	0.510	0.05	1.01	0.38	0.20	1.24	27.7	25.1	48.1	0.23	5.4	20.1	3.8	3.1	1.1	3.7	0.5	3.2
11S171485	194	15.9	5.2	0.3	2.87	0.441	0.05	1.04	0.70	0.14	1.10	35.1	25.2	49.4	0.22	5.7	21.0	3.9	3.1	1.1	3.9	0.5	3.4
11S171486	82.2	16.1	5.2	< 0.1	3.98	0.450	< 0.02	1.08	0.98	0.20	0.69	16.6	30.7	59.3	0.21	6.9	24.9	4.4	5.1	1.0	4.2	0.6	3.6
11S171487	108	14.3	5.1	0.7	3.66	0.525	< 0.02	0.88	4.72	0.25	0.49	20.5	21.4	40.9	0.40	4.7	17.2	3.3	4.5	0.9	3.4	0.5	3.0
11S171488	118	14.3	4.2	0.6	5.96	0.439	0.02	1.00	1.49	0.23	0.53	14.6	21.0	41.4	0.18	4.8	17.7	3.4	3.8	0.9	3.3	0.5	3.1
11S171489	143	16.1	4.3	0.1	9.57	1.50	0.04	0.94	3.03	0.15	0.93	16.9	27.9	54.5	0.86	6.3	22.8	4.3	4.1	1.2	4.1	0.5	3.5
11S171490	158	15.7	4.9	0.2	3.50	0.786	0.02	1.16	0.79	0.05	0.81	22.5	25.9	50.2	0.16	5.6	20.8	3.9	4.9	1.1	3.9	0.5	3.5
11S171491	170	15.0	4.2	0.1	4.25	0.544	0.03	0.96	1.02	0.06	0.77	26.8	24.4	47.5	0.15	5.4	19.8	3.8	4.3	1.1	3.8	0.5	3.3
11S171492	257	14.6	4.1	< 0.1	4.63	0.375	0.04	1.20	1.42	0.03	1.43	31.8	21.0	40.7	0.16	4.7	17.7	3.4	3.9	0.9	3.5	0.5	3.1
11S171493	236	15.2	2.6	< 0.1	7.35	0.389	0.03	0.92	1.76	< 0.02	0.62	37.6	18.6	37.2	0.13	4.5	17.4	3.6	4.2	1.0	3.8	0.5	3.4
11S171494	250	3.51	1.5	< 0.1	549	14.5	0.03	1.24	43.1	5.68	0.94	76.1	6.4	13.6	< 0.01	1.7	6.58	1.2	0.2	0.3	1.0	0.1	0.7
11S171495	700	16.4	5.5	< 0.1	2.16	1.24	0.05	0.82	0.32	0.11	0.66	240	20.5	44.3	0.17	5.9	25.0	5.3	0.4	1.4	5.1	0.7	3.8
11S171496	156	14.4	2.5	< 0.1	5.20	0.947	0.05	0.90	0.86	0.11	1.07	30.6	21.2	42.3	0.42	5.0	18.9	3.8	3.5	1.1	3.7	0.5	3.2
11S171497	187	14.8	3.3	0.1	6.18	0.854	0.05	1.26	1.09	0.06	0.98	31.3	15.6	33.2	0.23	4.1	16.1	3.3	3.9	0.9	3.4	0.5	3.2
11S171498	191	13.7	3.6	0.2	9.81	0.484	0.02	1.14	1.34	< 0.02	0.78	39.8	15.2	31.0	0.16	3.8	14.7	3.0	3.5	0.8	3.1	0.4	2.9
11S171499	179	15.0	1.9	0.2	17.9	0.737	0.02	1.13	1.31	0.04	0.84	24.5	14.9	29.7	0.28	3.6	14.0	3.0	5.7	0.8	3.2	0.5	3.0
11S171500	182	12.3	2.4	0.7	11.0	0.661	< 0.02	1.26	1.39	0.08	0.83	22.1	16.0	31.0	0.24	3.6	13.6	2.7	5.5	0.7	2.7	0.4	2.6
11S171501	327	10.9	2.4	0.4	9.74	0.921	0.03	1.26	1.70	0.06	0.96	25.5	13.6	26.1	0.30	3.0	11.5	2.4	6.5	0.6	2.4	0.4	2.3
11S171502	125	12.2	3.1	0.4	6.10	0.832	< 0.02	1.27	1.40	0.09	0.92	12.6	11.4	23.6	0.33	2.9	11.5	2.5	6.9	0.6	2.6	0.4	2.5
11S171503	156	13.2	2.4	0.3	13.1	0.454	< 0.02	1.10	1.05	0.08	0.62	22.8	9.4	20.0	0.14	2.5	10.3	2.4	4.8	0.6	2.6	0.4	2.7
11S171504	196	13.8	1.8	0.2	8.34	0.386	< 0.02	0.97	1.08	< 0.02	0.34	42.4	11.0	21.1	0.12	2.5	10.1	2.2	3.4	0.6	2.5	0.4	2.7
11S171505	158	10.7	1.6	0.4	13.6	0.601	< 0.02	1.04	2.78	0.06	0.29	50.5	10.0	19.6	0.32	2.3	8.77	1.9	3.8	0.5	2.1	0.3	2.2
11S171506	168	11.2	1.8	0.7	4.40	0.394	< 0.02	0.91	1.08	0.03	0.54	30.0	16.6	30.7	0.17	3.4	12.5	2.4	4.3	0.6	2.5	0.4	2.3
11S171507	163	11.1	1.8	0.8	11.2	0.316	< 0.02	0.72	1.49	< 0.02	0.58	17.8	10.2	20.1	0.21	2.3	9.45	2.0	5.4	0.6	2.1	0.3	2.2
11S171508	134	11.2	1.9	0.2	9.39	0.302	< 0.02	0.82	1.11	0.03	0.53	14.4	9.2	18.6	0.14	2.3	8.97	2.0	5.5	0.6	2.2	0.3	2.2
11S171509	175	11.0	1.4	0.1	5.73	0.161	< 0.02	0.98	0.97	0.05	0.70	12.7	11.1	23.1	0.10	2.8	10.9	2.3	3.5	0.6	2.4	0.3	2.2
11S171510	192	12.2	2.3	0.3	8.22	0.306	< 0.02	1.16	1.15	< 0.02	0.84	13.6	11.6	24.3	0.15	2.9	11.2	2.4	6.8	0.7	2.6	0.4	2.6
11S171511	130	11.7	2.6	0.1	12.7	0.368	< 0.02	0.91	1.19	< 0.02	0.67	16.0	15.9	31.2	0.14	3.6	13.4	2.6	6.7	0.7	2.7	0.4	2.4
11S171512	152	12.3	3.3	0.5	8.09	0.392	< 0.02	1.25	1.21	0.05	1.08	18.0	14.8	29.2	0.13	3.4	12.6	2.5	6.6	0.7	2.7	0.4	2.5
11S171513	137	12.5	3.6	0.1	16.8	0.540	< 0.02	1.14	1.09	0.04	0.92	22.1	15.8	30.9	0.12	3.6	13.6	2.7	6.1	0.7	2.8	0.4	2.6
11S171514	224	11.3	2.9	0.1	13.3	0.428	< 0.02	0.93	1.83	0.06	1.11	29.0	15.2	29.6	0.08	3.4	13.0	2.5	4.6	0.6	2.6	0.4	2.3
11S171515	135	11.4	1.2	0.2	17.8	0.320	< 0.02	0.62	1.46	< 0.02	0.73	35.3	13.2	26.7	0.08	3.2	12.4	2.5	2.9	0.6	2.7	0.4	2.3
11S171516	154	12.5	1.2	< 0.1	5.95	0.549	< 0.02	0.82	2.70	0.04	0.91	53.0	14.4	29.4	1.61	3.5	13.6	2.8	2.8	0.7	2.8	0.4	2.5
11S171517	119	15.1	1.5	< 0.1	4.90	0.335	< 0.02	0.88	1.46	0.04	1.04	28.2	17.4	35.4	0.21	4.2	16.2	3.3	2.7	0.9	3.3	0.5	3.1
11S171518	223	14.5	2.6	0.1	17.5	1.13	0.02	1.27	1.56	0.02	0.90	17.2	11.8	24.1	1.25	3.0	12.2	2.7	7.2	0.8	3.0	0.4	3.0
11S171519	345	14.9	2.5	0.5	15.0	0.904	0.02	1.12	1.48	< 0.02	0.75	20.6	10.8	22.5	0.31	2.9	11.5	2.7	6.2	0.7	2.9	0.5	3.0

Analyte Symbol	Sr	Y	Zr	Nb	Mo	Ag	In	Sn	Sb	Te	Cs	Ba	La	Ce	Cd	Pr	Nd	Sm	Se	Eu	Gd	Tb	Dy
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	0.5	0.01	0.1	0.1	0.01	0.002	0.02	0.05	0.02	0.02	0.02	0.5	0.5	0.01	0.01	0.1	0.02	0.1	0.1	0.1	0.1	0.1	0.1
Analysis Method	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS
11S171520	167	15.9	2.5	0.3	10.4	0.613	< 0.02	1.55	1.57	0.04	1.38	18.7	13.9	28.9	0.20	3.5	14.1	3.0	7.0	0.8	3.3	0.5	3.2
11S171521	5.4	0.92	0.7	< 0.1	0.15	0.217	< 0.02	0.09	< 0.02	< 0.02	0.06	9.8	3.0	5.89	0.01	0.7	2.51	0.4	< 0.1	< 0.1	0.3	< 0.1	0.2
11S171522	313	17.0	2.0	< 0.1	8.22	0.584	0.04	1.42	1.68	0.03	1.47	22.5	19.0	38.0	0.29	4.6	17.8	3.7	8.0	1.1	3.8	0.6	3.6
11S171523	198	17.4	2.1	0.1	11.0	0.639	0.03	1.18	1.59	0.04	1.79	30.8	18.8	38.5	0.31	4.7	18.3	3.8	7.9	1.0	4.0	0.6	3.7
11S171524	295	16.7	3.9	1.0	11.6	1.41	0.05	1.93	1.93	< 0.02	1.46	26.0	17.3	35.8	0.60	4.3	17.3	3.5	8.6	1.0	3.7	0.5	3.6
11S171525	249	3.49	1.5	< 0.1	519	14.7	0.03	1.06	41.2	5.29	0.56	31.0	6.2	13.2	< 0.01	1.6	6.37	1.2	< 0.1	0.3	1.0	0.1	0.7
11S171526	578	17.2	1.8	0.1	23.9	1.78	0.04	1.15	1.90	0.12	1.51	29.6	18.9	38.0	0.40	4.6	18.0	3.7	7.2	1.0	4.0	0.6	3.7
11S171527	131	18.0	1.9	< 0.1	21.4	1.12	0.04	0.78	1.44	0.08	1.24	37.7	30.7	57.1	0.22	6.6	24.2	4.6	6.6	1.3	4.7	0.6	4.0
11S171528	116	13.4	1.4	< 0.1	11.0	1.98	0.02	0.40	1.71	0.04	0.36	23.2	23.0	44.6	0.40	5.1	19.8	3.7	5.3	1.0	3.7	0.5	3.1
11S171529	123	12.0	1.7	< 0.1	24.8	2.04	< 0.02	0.46	0.71	0.03	0.31	30.3	22.7	42.5	0.29	4.8	17.7	3.4	4.1	0.9	3.2	0.5	2.7
11S171530	154	14.8	1.7	< 0.1	13.6	3.00	0.02	0.54	1.16	0.18	0.42	23.6	26.1	50.0	0.30	5.6	20.9	3.9	8.4	1.1	3.9	0.5	3.4
11S171531	167	14.7	1.3	< 0.1	11.6	1.64	< 0.02	0.52	0.76	< 0.02	0.78	36.5	25.2	48.6	0.26	5.5	20.6	3.8	8.1	0.9	3.7	0.5	3.3
11S171532	315	16.3	1.6	< 0.1	9.29	0.703	< 0.02	0.62	1.21	< 0.02	0.89	29.8	26.3	49.8	0.11	5.7	21.3	4.1	6.2	1.1	4.1	0.6	3.6
11S171533	322	15.5	1.6	< 0.1	13.4	0.655	0.03	0.48	0.89	< 0.02	0.97	47.9	27.1	50.8	0.19	5.8	21.3	4.0	5.0	1.1	4.1	0.6	3.4
11S171534	194	14.8	1.4	< 0.1	17.9	1.12	< 0.02	0.59	9.60	0.05	0.16	28.8	23.5	44.2	0.25	5.0	18.8	3.6	6.3	1.1	3.7	0.5	3.3
11S171535	198	14.5	1.5	< 0.1	8.42	0.871	0.03	0.35	0.49	< 0.02	0.51	48.7	26.9	50.8	0.27	5.8	21.3	4.1	4.6	1.1	4.0	0.5	3.4
11S171536	135	14.5	1.6	< 0.1	9.02	0.994	0.02	0.55	0.42	0.04	0.90	34.4	24.7	47.6	0.25	5.4	20.3	3.9	5.6	1.1	3.9	0.5	3.3

## Results

Analyte Symbol	Ho	Er	Tm	Yb	Lu	Hf	Ta	W	Re	Au	Tl	Pb	Th	U	Hg
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppb
Detection Limit	0.1	0.1	0.1	0.1	0.1	0.1	0.05	0.1	0.001	0.5	0.02	0.01	0.1	0.1	10
Analysis Method	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS
11S171421	0.5	1.5	0.2	1.3	0.2	0.1	< 0.05	0.2	< 0.001	64.4	0.16	5.59	4.4	0.9	< 10
11S171422	0.4	1.0	0.1	0.9	0.2	< 0.1	< 0.05	0.1	< 0.001	274	0.16	15.8	4.2	1.1	< 10
11S171423	0.5	1.5	0.2	1.3	0.2	0.1	< 0.05	< 0.1	< 0.001	158	0.27	9.15	4.5	0.7	< 10
11S171424	0.1	0.4	< 0.1	0.3	< 0.1	< 0.1	< 0.05	< 0.1	0.239	163	0.08	26.2	0.9	0.9	2060
11S171425	0.5	1.3	0.2	1.2	0.2	0.2	< 0.05	0.3	< 0.001	876	0.31	9.30	4.7	0.8	< 10
11S171426	0.4	1.3	0.2	1.2	0.2	0.1	< 0.05	0.2	< 0.001	255	0.37	7.04	4.6	0.8	< 10
11S171427	0.6	1.5	0.2	1.3	0.2	0.1	< 0.05	0.1	< 0.001	130	0.24	11.0	4.4	0.8	< 10
11S171428	0.5	1.4	0.2	1.3	0.2	< 0.1	< 0.05	0.1	< 0.001	117	0.20	12.5	5.3	1.2	< 10
11S171429	0.6	1.5	0.2	1.3	0.2	0.1	< 0.05	0.1	< 0.001	91.6	0.28	7.17	4.3	0.7	< 10
11S171430	0.6	1.6	0.2	1.3	0.2	0.2	< 0.05	0.2	< 0.001	119	0.29	31.4	4.6	0.8	< 10
11S171431	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.05	< 0.1	< 0.001	< 0.5	0.03	0.95	0.9	< 0.1	< 10
11S171432	0.5	1.5	0.2	1.2	0.2	0.2	< 0.05	0.2	< 0.001	92.6	0.29	24.7	4.7	0.9	< 10
11S171433	0.5	1.4	0.2	1.2	0.2	0.2	< 0.05	0.3	< 0.001	234	0.21	15.3	4.9	0.9	< 10
11S171434	0.5	1.4	0.2	1.2	0.2	< 0.1	< 0.05	< 0.1	< 0.001	249	0.15	9.73	4.6	0.6	< 10
11S171435	0.5	1.4	0.2	1.2	0.2	0.1	< 0.05	< 0.1	< 0.001	191	0.14	6.01	5.6	0.9	< 10
11S171436	0.5	1.4	0.2	1.2	0.2	0.2	< 0.05	0.3	< 0.001	69.6	0.10	15.7	5.1	0.9	70
11S171437	0.5	1.3	0.2	1.0	0.2	0.1	< 0.05	< 0.1	< 0.001	46.4	0.11	13.7	5.0	0.8	90
11S171438	0.5	1.4	0.2	1.2	0.2	0.2	< 0.05	< 0.1	< 0.001	10.5	0.14	10.5	5.2	0.9	< 10
11S171439	0.5	1.4	0.2	1.2	0.2	0.1	< 0.05	< 0.1	< 0.001	51.6	0.23	50.6	5.6	1.2	< 10
11S171440	0.5	1.5	0.2	1.2	0.2	0.1	< 0.05	< 0.1	< 0.001	24.8	0.34	11.1	4.7	1.1	40
11S171441	0.4	1.1	0.2	0.9	0.1	< 0.1	< 0.05	< 0.1	< 0.001	80.6	0.25	6.38	4.2	0.5	< 10
11S171442	0.5	1.4	0.2	1.2	0.2	0.1	< 0.05	< 0.1	< 0.001	85.5	0.33	7.20	4.6	0.6	< 10
11S171443	0.6	1.5	0.2	1.3	0.2	< 0.1	< 0.05	< 0.1	< 0.001	71.7	0.27	20.1	4.9	0.6	< 10
11S171444	0.5	1.3	0.2	1.1	0.2	< 0.1	< 0.05	< 0.1	< 0.001	37.5	0.44	10.5	4.2	0.6	< 10
11S171445	0.1	0.4	< 0.1	0.3	< 0.1	< 0.1	< 0.05	< 0.1	0.251	77.1	0.09	28.6	0.9	0.8	2040
11S171446	0.6	1.5	0.2	1.1	0.2	< 0.1	< 0.05	0.1	< 0.001	150	0.16	20.2	5.5	0.9	120
11S171447	0.6	1.6	0.2	1.3	0.2	< 0.1	< 0.05	< 0.1	< 0.001	75.6	0.29	11.4	4.8	0.7	< 10
11S171448	0.6	1.5	0.2	1.3	0.2	< 0.1	< 0.05	< 0.1	< 0.001	27.0	0.41	5.11	4.8	0.8	< 10
11S171449	0.5	1.4	0.2	1.2	0.2	0.1	< 0.05	< 0.1	< 0.001	13.5	0.43	7.49	4.9	0.7	< 10
11S171450	0.6	1.6	0.2	1.3	0.2	0.1	< 0.05	< 0.1	< 0.001	41.5	0.35	12.2	4.6	0.8	< 10
11S171451	0.5	1.4	0.2	1.2	0.2	0.1	< 0.05	< 0.1	< 0.001	93.7	0.23	7.94	4.7	0.8	< 10
11S171452	0.5	1.5	0.2	1.4	0.2	0.2	< 0.05	0.2	< 0.001	203	0.34	8.85	4.2	0.9	< 10
11S171453	0.6	1.6	0.2	1.3	0.2	0.2	< 0.05	0.3	< 0.001	13.9	0.35	17.0	4.1	0.8	< 10
11S171454	0.6	1.5	0.2	1.3	0.2	0.2	< 0.05	0.2	< 0.001	2.1	0.19	11.5	4.5	0.7	< 10
11S171455	0.5	1.5	0.2	1.3	0.2	0.2	< 0.05	0.3	< 0.001	< 0.5	0.18	13.6	4.0	0.9	< 10
11S171456	0.5	1.5	0.2	1.4	0.2	0.2	< 0.05	0.5	< 0.001	20.7	0.25	12.3	4.1	0.9	< 10
11S171457	0.7	1.9	0.3	1.5	0.2	0.1	< 0.05	0.2	< 0.001	48.1	0.35	13.9	4.7	0.8	< 10
11S171458	0.6	1.6	0.2	1.3	0.2	0.1	< 0.05	0.3	< 0.001	25.4	0.40	16.6	4.9	0.7	< 10
11S171459	0.7	1.8	0.2	1.4	0.2	0.1	< 0.05	0.2	< 0.001	102	0.35	28.7	5.5	0.8	< 10
11S171460	0.6	1.7	0.2	1.4	0.2	0.1	< 0.05	0.2	< 0.001	110	0.41	36.6	4.8	0.8	< 10
11S171461	0.6	1.6	0.2	1.3	0.2	< 0.1	< 0.05	0.2	< 0.001	81.9	0.50	15.5	4.3	0.7	< 10
11S171462	0.4	1.3	0.2	1.1	0.2	< 0.1	< 0.05	0.1	< 0.001	319	0.33	10.9	3.0	0.7	< 10
11S171463	0.4	1.2	0.2	1.1	0.2	0.1	< 0.05	0.1	< 0.001	40.0	0.33	8.23	3.1	0.6	< 10
11S171464	0.4	1.3	0.2	1.1	0.2	< 0.1	< 0.05	0.1	< 0.001	185	0.32	13.7	3.3	0.6	< 10
11S171465	0.5	1.3	0.2	1.1	0.2	< 0.1	< 0.05	< 0.1	< 0.001	157	0.28	10.4	3.6	0.6	< 10
11S171466	0.5	1.3	0.2	1.1	0.2	< 0.1	< 0.05	0.2	< 0.001	353	0.37	22.3	3.6	0.6	< 10
11S171467	0.1	0.4	< 0.1	0.4	< 0.1	< 0.1	< 0.05	0.1	0.277	346	0.09	29.3	1.0	1.0	2070
11S171468	0.5	1.4	0.2	1.1	0.2	0.1	< 0.05	0.2	< 0.001	96.2	0.25	37.9	4.3	0.7	40
11S171469	0.5	1.5	0.2	1.3	0.2	0.1	< 0.05	< 0.1	< 0.001	51.7	0.29	19.0	4.2	0.7	< 10

Analyte Symbol	Ho	Er	Tm	Yb	Lu	Hf	Ta	W	Re	Au	Tl	Pb	Th	U	Hg
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppb
Detection Limit	0.1	0.1	0.1	0.1	0.1	0.1	0.05	0.1	0.001	0.5	0.02	0.01	0.1	0.1	10
Analysis Method	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS
11S171470	0.6	1.5	0.2	1.3	0.2	< 0.1	< 0.05	0.1	< 0.001	337	0.26	48.0	5.1	0.6	< 10
11S171471	0.5	1.5	0.2	1.2	0.2	0.1	< 0.05	0.1	< 0.001	11.8	0.29	33.2	4.8	0.5	< 10
11S171472	0.6	1.5	0.2	1.3	0.2	< 0.1	< 0.05	0.1	< 0.001	3.2	0.23	21.3	4.8	0.7	< 10
11S171473	0.5	1.5	0.2	1.2	0.2	0.1	< 0.05	0.2	< 0.001	49.1	0.26	16.0	5.2	0.5	< 10
11S171474	0.6	1.6	0.2	1.3	0.2	< 0.1	< 0.05	0.2	< 0.001	163	0.24	18.9	5.2	0.6	< 10
11S171475	0.5	1.4	0.2	1.1	0.2	< 0.1	< 0.05	0.1	< 0.001	192	0.26	41.6	4.9	0.5	< 10
11S171476	0.6	1.4	0.2	1.2	0.2	< 0.1	< 0.05	< 0.1	< 0.001	20.7	0.22	18.4	4.8	0.5	< 10
11S171477	0.6	1.6	0.2	1.2	0.2	< 0.1	< 0.05	0.2	0.003	15.4	0.45	23.1	4.8	0.5	< 10
11S171478	0.7	1.8	0.3	1.5	0.2	0.1	< 0.05	< 0.1	< 0.001	20.2	0.31	39.3	3.4	0.5	< 10
11S171479	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.05	< 0.1	< 0.001	< 0.5	0.04	0.93	0.5	< 0.1	< 10
11S171480	0.6	1.6	0.2	1.3	0.2	0.1	< 0.05	0.1	0.006	< 0.5	0.27	29.6	3.9	0.6	< 10
11S171481	0.6	1.6	0.2	1.3	0.2	< 0.1	< 0.05	0.1	0.024	8.6	0.37	33.1	3.7	0.5	< 10
11S171482	0.6	1.7	0.2	1.4	0.2	0.1	< 0.05	0.2	0.007	140	0.52	7.67	5.6	0.8	< 10
11S171483	0.7	1.8	0.2	1.4	0.2	0.2	< 0.05	0.3	0.009	< 0.5	0.49	8.47	6.5	1.0	< 10
11S171484	0.6	1.7	0.2	1.3	0.2	0.2	< 0.05	0.3	0.019	5.0	0.44	14.3	5.9	0.9	< 10
11S171485	0.7	1.9	0.3	1.5	0.2	0.2	< 0.05	0.3	0.011	13.0	0.40	12.2	6.1	1.0	< 10
11S171486	0.7	1.8	0.2	1.4	0.2	0.2	< 0.05	0.3	0.017	29.3	0.34	23.2	6.9	0.9	< 10
11S171487	0.6	1.6	0.2	1.3	0.2	0.2	< 0.05	0.3	0.015	18.5	0.26	22.1	5.6	0.8	10
11S171488	0.6	1.7	0.2	1.4	0.2	0.2	< 0.05	0.5	0.015	12.4	0.33	14.7	5.1	0.8	< 10
11S171489	0.7	1.9	0.3	1.5	0.2	0.1	< 0.05	0.2	0.026	3.7	0.35	144	6.0	0.8	20
11S171490	0.7	1.9	0.2	1.4	0.2	0.2	< 0.05	0.3	0.008	6.7	0.42	11.7	5.6	0.9	< 10
11S171491	0.6	1.8	0.2	1.4	0.2	0.1	< 0.05	0.2	0.007	9.2	0.36	4.84	5.9	0.8	< 10
11S171492	0.6	1.7	0.2	1.3	0.2	0.1	< 0.05	0.1	0.015	5.5	0.57	4.86	4.6	0.8	< 10
11S171493	0.7	1.8	0.2	1.4	0.2	< 0.1	< 0.05	< 0.1	0.041	7.5	0.25	5.45	4.4	0.6	< 10
11S171494	0.1	0.4	< 0.1	0.4	< 0.1	< 0.1	< 0.05	0.1	0.279	387	0.10	31.3	1.1	1.0	2160
11S171495	0.7	1.8	0.2	1.2	0.2	0.1	< 0.05	< 0.1	< 0.001	< 0.5	0.15	10.0	1.7	0.4	30
11S171496	0.6	1.6	0.2	1.3	0.2	< 0.1	< 0.05	0.2	0.019	17.9	0.33	22.6	5.0	0.7	20
11S171497	0.6	1.7	0.2	1.4	0.2	0.1	< 0.05	0.2	0.023	31.0	0.40	6.63	3.7	0.6	20
11S171498	0.6	1.6	0.2	1.3	0.2	0.1	< 0.05	0.2	0.038	18.7	0.36	6.89	3.6	0.6	< 10
11S171499	0.6	1.7	0.2	1.4	0.2	< 0.1	< 0.05	0.3	0.064	20.1	0.39	5.92	3.9	0.6	< 10
11S171500	0.5	1.5	0.2	1.2	0.2	0.1	< 0.05	0.4	0.044	29.7	0.40	5.83	5.2	0.9	< 10
11S171501	0.5	1.3	0.2	1.1	0.2	0.1	< 0.05	0.2	0.040	37.7	0.42	7.51	3.6	0.7	< 10
11S171502	0.5	1.4	0.2	1.2	0.2	0.1	< 0.05	0.3	0.029	3.0	0.47	8.63	3.2	0.6	< 10
11S171503	0.6	1.6	0.2	1.4	0.2	0.1	< 0.05	0.3	0.077	3.3	0.38	6.23	2.5	0.6	< 10
11S171504	0.6	1.6	0.2	1.3	0.2	< 0.1	< 0.05	0.2	0.040	2.7	0.22	8.29	2.7	0.4	20
11S171505	0.4	1.3	0.2	1.2	0.2	< 0.1	< 0.05	0.3	0.063	15.4	0.21	12.0	2.7	0.4	20
11S171506	0.5	1.3	0.2	1.2	0.2	< 0.1	< 0.05	0.4	0.016	21.6	0.31	7.22	4.4	0.7	< 10
11S171507	0.5	1.3	0.2	1.2	0.2	< 0.1	< 0.05	0.5	0.051	< 0.5	0.31	12.1	2.5	0.5	20
11S171508	0.5	1.3	0.2	1.1	0.2	< 0.1	< 0.05	0.4	0.027	5.8	0.29	9.56	2.1	0.4	< 10
11S171509	0.4	1.3	0.2	1.1	0.2	< 0.1	< 0.05	0.3	0.009	< 0.5	0.33	5.48	2.9	0.6	< 10
11S171510	0.5	1.5	0.2	1.3	0.2	< 0.1	< 0.05	0.7	0.023	< 0.5	0.40	6.46	3.2	0.8	< 10
11S171511	0.5	1.4	0.2	1.1	0.2	< 0.1	< 0.05	0.5	0.057	16.7	0.35	6.23	4.3	0.8	< 10
11S171512	0.5	1.4	0.2	1.2	0.2	0.1	< 0.05	0.7	0.025	14.4	0.46	10.2	4.1	0.9	30
11S171513	0.5	1.4	0.2	1.2	0.2	0.1	< 0.05	0.6	0.071	9.6	0.41	10.5	4.4	0.8	< 10
11S171514	0.5	1.3	0.2	1.1	0.2	< 0.1	< 0.05	0.5	0.037	6.4	0.44	5.68	4.0	0.7	< 10
11S171515	0.5	1.3	0.2	1.1	0.2	< 0.1	< 0.05	0.4	0.016	< 0.5	0.30	8.24	3.8	0.5	< 10
11S171516	0.5	1.5	0.2	1.3	0.2	< 0.1	< 0.05	0.4	0.002	5.0	0.28	48.7	4.3	0.6	60
11S171517	0.6	1.7	0.2	1.4	0.2	< 0.1	< 0.05	0.2	0.008	6.6	0.32	35.7	4.3	0.7	10
11S171518	0.6	1.7	0.3	1.4	0.2	< 0.1	< 0.05	0.3	0.057	28.0	0.38	114	2.7	0.6	40
11S171519	0.6	1.8	0.3	1.5	0.2	0.1	< 0.05	0.5	0.031	16.9	0.35	7.50	2.7	0.6	< 10

Analyte Symbol	Ho	Er	Tm	Yb	Lu	Hf	Ta	W	Re	Au	Tl	Pb	Th	U	Hg
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppb
Detection Limit	0.1	0.1	0.1	0.1	0.1	0.1	0.05	0.1	0.001	0.5	0.02	0.01	0.1	0.1	10
Analysis Method	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS
11S171520	0.7	1.9	0.3	1.6	0.2	< 0.1	< 0.05	0.6	0.033	6.2	0.52	8.14	3.4	0.7	< 10
11S171521	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.05	< 0.1	< 0.001	< 0.5	0.05	1.09	0.7	0.1	< 10
11S171522	0.7	2.0	0.3	1.5	0.2	< 0.1	< 0.05	0.4	0.024	6.5	0.53	13.0	4.5	0.9	< 10
11S171523	0.8	2.1	0.3	1.7	0.2	< 0.1	< 0.05	0.5	0.028	18.1	0.57	12.5	4.3	0.7	< 10
11S171524	0.7	2.0	0.3	1.6	0.2	0.1	< 0.05	1.2	0.037	33.8	0.57	18.9	4.1	1.0	< 10
11S171525	0.1	0.4	< 0.1	0.4	< 0.1	< 0.1	< 0.05	< 0.1	0.249	185	0.10	31.7	0.9	1.0	1970
11S171526	0.7	2.0	0.3	1.6	0.2	< 0.1	< 0.05	0.4	0.073	17.9	0.53	20.0	4.2	0.7	40
11S171527	0.8	2.2	0.3	1.6	0.2	< 0.1	< 0.05	0.4	0.077	20.7	0.45	11.2	7.0	1.0	20
11S171528	0.6	1.6	0.2	1.3	0.2	< 0.1	< 0.05	0.4	0.032	171	0.31	25.4	6.7	1.5	100
11S171529	0.5	1.4	0.2	1.2	0.2	< 0.1	< 0.05	0.4	0.067	19.3	0.27	18.1	6.4	1.2	20
11S171530	0.7	1.8	0.2	1.3	0.2	< 0.1	< 0.05	0.6	0.048	161	0.32	10.9	6.7	1.8	30
11S171531	0.6	1.7	0.2	1.3	0.2	< 0.1	< 0.05	0.5	0.028	253	0.34	6.96	6.9	0.7	20
11S171532	0.7	1.9	0.3	1.4	0.2	< 0.1	< 0.05	0.7	0.027	10.8	0.37	8.58	6.0	1.2	20
11S171533	0.7	1.8	0.3	1.4	0.2	< 0.1	< 0.05	0.4	0.036	20.7	0.32	8.53	6.3	1.0	30
11S171534	0.6	1.7	0.2	1.4	0.2	< 0.1	< 0.05	0.6	0.064	9.9	0.28	24.2	5.7	1.1	70
11S171535	0.6	1.7	0.2	1.4	0.2	< 0.1	< 0.05	0.4	0.031	115	0.26	11.0	6.5	1.1	20
11S171536	0.6	1.7	0.2	1.3	0.2	< 0.1	< 0.05	0.5	0.035	18.4	0.38	10.2	5.8	0.7	< 10

QC

Analyte Symbol	Au	Li	Be	B	Na	Mg	Al	K	Bi	Ca	Sc	V	Cr	Mn	Fe	Co	Ni	Cu	Zn	Ga	Ge	As	Rb
Unit Symbol	ppb	ppm	ppm	ppm	%	%	%	%	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	5	0.1	0.1	1	0.001	0.01	0.01	0.01	0.02	0.01	0.1	1	1	1	0.01	0.1	0.1	0.01	0.1	0.02	0.1	0.1	0.1
Analysis Method	FA-AA	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS
GXR-1 Meas		5.6	0.9	14	0.050	0.13	0.36	0.03	1480	0.83	1.1	75	7	937	25.1	8.0	39.9	1180	827	4.29		414	2.2
GXR-1 Cert		8.20	1.22	15.0	0.0520	0.217	3.52	0.050	1380	0.960	1.58	80.0	12.0	852	23.6	8.20	41.0	1110	760	13.8		427	14.0
GXR-4 Meas		11.1	1.6	6	0.136	1.50	2.70	1.83	19.3	0.88	6.6	77	54	146	3.08	13.7	38.3	6450	72.8	10.9		98.5	95.6
GXR-4 Cert		11.1	1.90	4.50	0.564	1.66	7.20	4.01	19.0	1.01	7.70	87.0	64.0	155	3.09	14.6	42.0	6520	73.0	20.0		98.0	160
GXR-6 Meas		33.8	1.3	9	0.080	0.40	7.86	1.32	0.20	0.15	23.4	157	77	1100	5.80	13.3	23.2	66.4	129	12.9		210	68.8
GXR-6 Cert		32.0	1.40	9.80	0.104	0.609	17.7	1.87	0.290	0.180	27.6	186	96.0	1010	5.58	13.8	27.0	66.0	118	35.0		330	90.0
SAR-M (U.S.G.S.) Meas		16.6	1.3		0.040	0.35	1.20	0.31	2.27	0.29	3.1	33	88	4850	2.86	10.4	43.2	328	1050	5.17		35.8	24.3
SAR-M (U.S.G.S.) Cert		27.4	2.20		1.140	0.50	6.30	2.94	1.94	0.61	7.83	67.2	79.7	5220	2.99	10.70	41.5	331	930.0	17		38.8	146
SG56 Meas	992																						
SG56 Cert	1027.00																						
SG56 Meas	1010																						
SG56 Cert	1027.00																						
SG56 Meas	1000																						
SG56 Cert	1027.00																						
SG56 Meas	1030																						
SG56 Cert	1027.00																						
SG56 Meas	1060																						
SG56 Cert	1027.00																						
OxD108 Meas	414																						
OxD108 Cert	414.000																						
OxD108 Meas	424																						
OxD108 Cert	414.000																						
OxD108 Meas	431																						
OxD108 Cert	414.000																						
OxD108 Meas	411																						
OxD108 Cert	414.000																						
OxD108 Meas	414																						
OxD108 Cert	414.000																						
OREAS 923 (AQUA REGIA) Meas						1.43	3.07			0.42				6.15	21.7		4300	355				7.3	
OREAS 923 (AQUA REGIA) Cert						1.43	2.80			0.326				5.91	22.2		4248	335				7.07	
11S171421 Orig	63																						
11S171421 Dup	64																						
11S171433 Orig		9.2	0.4	7	0.066	0.53	1.18	0.41	1.36	2.04	4.2	37	12	706	3.33	9.5	7.0	19.3	65.0	4.52	< 0.1	41.3	16.2
11S171433 Dup		9.1	0.4	7	0.066	0.52	1.11	0.41	1.41	1.98	4.0	35	10	709	3.36	9.6	7.0	19.1	64.5	4.33	< 0.1	42.0	15.9
11S171447 Orig		8.9	0.4	6	0.044	0.39	1.08	0.58	1.12	3.41	3.6	22	10	714	3.43	7.9	8.1	18.9	54.1	3.35	< 0.1	59.2	22.3
11S171447 Dup		9.0	0.4	7	0.045	0.38	1.10	0.57	1.15	3.40	3.6	22	10	705	3.37	7.8	7.7	19.0	52.2	3.29	< 0.1	58.0	21.7
11S171450 Orig	61	13.7	0.5	7	0.073	0.78	1.53	0.66	2.43	2.74	4.5	32	13	570	4.42	10.4	8.2	23.7	98.9	5.38	0.1	58.6	26.3
11S171450 Split	52	16.4	0.6	7	0.066	0.73	1.48	0.65	2.32	2.47	4.3	30	11	506	3.91	9.4	7.2	21.4	89.3	4.88	< 0.1	52.2	24.6
11S171456 Orig	171																						
11S171456 Dup	128																						
11S171460 Orig	145	10.5	0.5	9	0.077	0.43	1.19	0.69	3.57	4.30	3.4	27	12	525	5.68	8.9	7.6	29.1	61.5	4.00	0.1	35.6	29.7
11S171460 Dup	162	10.9	0.5	10	0.082	0.45	1.27	0.73	3.61	4.36	3.6	28	13	544	5.89	9.1	8.1	29.5	64.0	4.31	0.1	36.3	31.4
11S171470 Orig	440	5.5	0.4	6	0.047	0.26	0.92	0.46	3.22	3.88	1.3	9	8	798	2.78	6.2	5.7	26.3	41.0	2.36	< 0.1	21.9	20.5
11S171470 Split	402	6.4	0.4	6	0.042	0.25	0.86	0.46	2.90	3.64	1.2	9	7	705	2.49	5.7	5.1	23.4	40.7	2.01	< 0.1	20.2	19.6
11S171470 Split	402																						
11S171474 Orig		5.3	0.3	7	0.045	0.19	0.83	0.44	1.60	3.30	1.0	9	5	672	2.87	5.5	5.0	22.9	54.7	2.24	< 0.1	29.3	19.5

Analyte Symbol	Au	Li	Be	B	Na	Mg	Al	K	Bi	Ca	Sc	V	Cr	Mn	Fe	Co	Ni	Cu	Zn	Ga	Ge	As	Rb
Unit Symbol	ppb	ppm	ppm	ppm	%	%	%	%	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	5	0.1	0.1	1	0.001	0.01	0.01	0.01	0.02	0.01	0.1	1	1	1	0.01	0.1	0.1	0.01	0.1	0.02	0.1	0.1	0.1
Analysis Method	FA-AA	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS
11S171474 Dup		4.9	0.3	7	0.042	0.19	0.77	0.42	1.61	3.28	0.9	8	5	650	2.81	5.4	4.9	22.9	50.1	2.08	< 0.1	28.6	18.6
11S171480 Orig	33	9.3	0.3	9	0.062	0.49	1.01	0.50	0.88	3.07	2.5	19	3	610	3.49	8.0	4.8	51.2	60.2	3.56	< 0.1	22.7	20.7
11S171480 Split	37	10.4	0.3	8	0.059	0.47	0.93	0.49	0.87	3.18	2.4	17	2	591	3.35	7.7	4.6	50.8	60.9	3.23	< 0.1	22.8	19.0
11S171490 Orig	30																						
11S171490 Dup	28																						
11S171497 Orig		12.7	0.5	9	0.062	0.76	1.60	0.77	0.54	2.68	4.8	30	13	491	3.55	9.3	7.0	252	50.4	5.06	< 0.1	13.3	30.1
11S171497 Dup		12.1	0.5	7	0.057	0.74	1.52	0.74	0.50	2.61	4.7	29	12	479	3.51	9.4	6.9	253	50.3	4.93	< 0.1	13.1	29.0
11S171498 Orig	46																						
11S171498 Dup	50																						
11S171510 Orig	56	12.2	0.5	11	0.074	0.41	1.52	0.74	0.29	2.44	3.5	24	10	384	4.05	8.3	4.7	151	31.0	4.79	< 0.1	20.6	29.2
11S171510 Split	57	12.7	0.5	9	0.069	0.39	1.41	0.71	0.29	2.43	3.3	22	10	360	3.88	8.0	4.7	147	29.7	4.38	< 0.1	20.1	27.4
11S171511 Orig		10.1	0.4	8	0.049	0.30	1.29	0.73	0.32	2.29	3.2	19	6	357	3.46	8.1	4.9	179	24.5	3.70	< 0.1	19.2	27.7
11S171511 Dup		10.2	0.4	7	0.049	0.30	1.27	0.72	0.33	2.29	3.2	18	6	365	3.54	8.4	5.3	184	25.1	3.58	< 0.1	19.2	27.7
11S171520 Orig	54	15.1	0.6	9	0.062	0.67	1.83	0.98	0.40	2.01	5.3	36	11	398	4.59	9.9	6.2	221	57.1	5.56	0.1	27.2	41.9
11S171520 Split	60	15.0	0.6	8	0.055	0.63	1.67	0.90	0.38	1.93	4.8	33	9	365	4.24	9.4	5.9	212	54.4	4.94	0.1	25.5	38.6
11S171524 Orig		19.1	0.8	11	0.076	0.86	2.51	1.25	0.41	3.55	7.2	52	13	531	4.47	11.3	6.4	525	80.0	7.83	0.2	19.9	49.6
11S171524 Dup		19.2	0.8	11	0.077	0.86	2.55	1.28	0.42	3.45	7.1	52	13	537	4.47	11.3	6.2	528	80.1	7.96	0.1	20.1	50.9
11S171526 Orig	87																						
11S171526 Dup	96																						
11S171536 Orig	218	7.1	0.5	7	0.058	0.39	1.08	0.73	0.42	2.44	2.3	16	3	426	2.90	7.1	4.1	495	45.4	2.97	< 0.1	14.0	29.7
11S171536 Split	191	7.5	0.5	7	0.065	0.42	1.13	0.76	0.46	2.58	2.4	17	3	447	3.11	7.6	4.3	524	48.7	3.15	0.1	14.9	31.0
Method Blank	< 5																						
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Analyte Symbol	Sr	Y	Zr	Nb	Mo	Ag	In	Sn	Sb	Te	Cs	Ba	La	Ce	Cd	Pr	Nd	Sm	Se	Eu	Gd	Tb	Dy
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	0.5	0.01	0.1	0.1	0.01	0.002	0.02	0.05	0.02	0.02	0.02	0.5	0.5	0.01	0.01	0.1	0.02	0.1	0.1	0.1	0.1	0.1	0.1
Analysis Method	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS
GXR-1 Meas	204	27.6	9.2	< 0.1	18.3	33.3	0.74	24.5	87.2	15.3	2.67	279	5.7	11.2	2.61		6.57	2.4	16.2	0.5	3.8	0.7	4.9
GXR-1 Cert	275	32.0	38.0	0.800	18.0	31.0	0.770	54.0	122	13.0	3.00	750	7.50	17.0	3.30		18.0	2.70	16.6	0.690	4.20	0.830	4.30
GXR-4 Meas	71.4	11.6	8.8	0.3	322	3.67	0.21	5.51	3.50	1.00	2.37	26.3	48.1	91.3	0.10		35.6	5.7	5.3	1.3	4.7	0.5	2.6
GXR-4 Cert	221	14.0	186	10.0	310	4.00	0.270	5.60	4.80	0.970	2.80	1640	64.5	102	0.860		45.0	6.60	5.60	1.63	5.25	0.360	2.60
GXR-6 Meas	30.9	6.82	5.0	< 0.1	2.59	0.484	0.06	1.05	1.39	< 0.02	3.89	938	11.9	33.9	0.10		12.2	2.5	0.3	0.6	2.2	0.3	1.8
GXR-6 Cert	35.0	14.0	110	7.50	2.40	1.30	0.260	1.70	3.60	0.0180	4.20	1300	13.9	36.0	1.00		13.0	2.67	0.940	0.760	2.97	0.415	2.80
SAR-M (U.S.G.S.) Meas	29.5	18.7		1.9	12.8	2.93	1.07	1.92	3.96	1.05		184	47.4	98.9	5.40				0.8				
SAR-M (U.S.G.S.) Cert	151	28.00		29.9	13.1	3.64	1.08	2.76	6.0	0.96		801	57.4	122.0	5.27				0.39				
SG56 Meas																							
SG56 Cert																							
SG56 Meas																							
SG56 Cert																							



Analyte Symbol	Sr	Y	Zr	Nb	Mo	Ag	In	Sn	Sb	Te	Cs	Ba	La	Ce	Cd	Pr	Nd	Sm	Se	Eu	Gd	Tb	Dy
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	0.5	0.01	0.1	0.1	0.01	0.002	0.02	0.05	0.02	0.02	0.02	0.5	0.5	0.01	0.01	0.1	0.02	0.1	0.1	0.1	0.1	0.1	0.1
Analysis Method	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS
SG56 Meas																							
SG56 Cert																							
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OREAS 923 (AQUA REGIA) Meas						1.74			0.73						0.42								
OREAS 923 (AQUA REGIA) Cert						1.62			0.58						0.40								
11S171421 Orig																							
11S171421 Dup																							
11S171433 Orig	252	12.8	4.1	3.3	1.08	0.569	0.05	1.80	1.25	0.44	0.51	33.1	16.5	32.3	0.24	3.7	14.0	2.8	1.4	0.7	2.7	0.4	2.5
11S171433 Dup	238	12.2	4.1	3.1	0.86	0.541	0.05	0.88	1.15	0.62	0.51	33.1	16.2	32.0	0.28	3.6	13.8	2.6	1.4	0.6	2.7	0.4	2.4
11S171447 Orig	176	15.6	2.4	< 0.1	1.43	0.696	0.05	0.49	1.10	0.56	0.94	34.0	18.4	36.0	0.39	4.2	16.3	3.3	1.6	0.9	3.4	0.5	3.0
11S171447 Dup	176	15.8	2.5	< 0.1	1.37	0.566	0.05	0.61	1.11	0.50	0.95	35.0	18.7	37.0	0.39	4.3	16.5	3.3	1.6	0.9	3.4	0.5	3.1
11S171450 Orig	181	15.0	3.3	< 0.1	1.81	0.653	0.09	1.17	0.83	0.41	1.41	16.4	17.5	35.9	1.03	4.4	17.2	3.6	2.8	1.0	3.7	0.5	3.1
11S171450 Split	161	13.1	3.0	< 0.1	1.63	0.684	0.08	1.09	0.79	0.35	1.38	20.6	16.6	33.7	0.90	4.2	16.2	3.4	1.9	1.0	3.5	0.5	3.0
11S171456 Orig																							
11S171456 Dup																							
11S171460 Orig	249	16.1	3.6	0.1	1.28	1.07	0.06	1.41	0.68	0.58	1.44	17.0	19.4	38.7	0.69	4.6	17.8	3.7	5.8	1.0	3.7	0.5	3.2
11S171460 Dup	256	16.5	3.7	0.1	1.29	1.07	0.06	1.49	0.67	0.65	1.48	11.6	19.8	39.7	0.64	4.7	17.9	3.8	5.7	1.1	3.7	0.5	3.3
11S171470 Orig	264	13.7	3.5	< 0.1	1.05	1.29	0.11	0.39	1.63	0.30	0.58	50.0	20.1	39.2	0.37	4.6	17.3	3.3	1.8	1.0	3.3	0.5	2.9
11S171470 Split	241	12.3	3.6	< 0.1	0.81	1.25	0.11	0.41	1.45	0.15	0.65	55.3	19.0	36.7	0.34	4.3	16.4	3.2	1.4	0.9	3.3	0.5	2.8
11S171470 Split																							
11S171474 Orig	109	14.7	3.9	< 0.1	0.94	0.717	0.02	0.67	2.57	0.06	0.39	52.6	19.1	37.6	0.53	4.4	16.8	3.3	2.0	0.9	3.3	0.5	3.1
11S171474 Dup	110	14.5	3.7	< 0.1	0.76	0.648	< 0.02	0.53	2.65	0.05	0.36	50.7	18.9	37.6	0.51	4.4	16.5	3.3	2.5	0.9	3.4	0.5	3.0
11S171480 Orig	115	14.0	3.8	< 0.1	2.45	0.508	0.02	0.98	2.00	0.03	0.65	31.8	15.9	31.1	0.66	3.7	14.1	3.0	3.4	0.9	3.3	0.5	2.9
11S171480 Split	115	13.9	3.6	< 0.1	2.76	0.672	0.02	0.93	1.98	0.07	0.63	38.5	16.4	31.7	0.64	3.7	14.8	3.2	3.9	1.0	3.4	0.5	3.1
11S171490 Orig																							
11S171490 Dup																							
11S171497 Orig	192	15.1	3.3	0.1	6.70	0.888	0.05	1.28	1.10	0.06	1.01	31.7	16.1	34.2	0.22	4.2	16.5	3.4	3.9	1.0	3.5	0.5	3.3
11S171497 Dup	183	14.4	3.3	0.1	5.66	0.820	0.05	1.25	1.08	0.05	0.95	31.0	15.1	32.3	0.24	4.0	15.8	3.2	4.0	0.9	3.3	0.5	3.1
11S171498 Orig																							
11S171498 Dup																							
11S171510 Orig	192	12.2	2.3	0.3	8.22	0.306	< 0.02	1.16	1.15	< 0.02	0.84	13.6	11.6	24.3	0.15	2.9	11.2	2.4	6.8	0.7	2.6	0.4	2.6
11S171510 Split	184	11.8	2.2	0.3	8.64	0.431	< 0.02	1.17	1.11	0.02	0.79	15.0	11.7	23.9	0.11	2.9	11.3	2.3	6.9	0.7	2.5	0.4	2.6
11S171511 Orig	133	11.8	2.6	0.1	11.1	0.361	< 0.02	0.81	1.18	< 0.02	0.67	15.3	16.2	31.7	0.13	3.6	13.5	2.6	7.1	0.7	2.7	0.4	2.5
11S171511 Dup	128	11.6	2.6	0.1	14.3	0.375	< 0.02	1.00	1.20	0.03	0.66	16.6	15.6	30.6	0.15	3.5	13.3	2.5	6.3	0.7	2.7	0.4	2.4

Analyte Symbol	Sr	Y	Zr	Nb	Mo	Ag	In	Sn	Sb	Te	Cs	Ba	La	Ce	Cd	Pr	Nd	Sm	Se	Eu	Gd	Tb	Dy
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	0.5	0.01	0.1	0.1	0.01	0.002	0.02	0.05	0.02	0.02	0.02	0.5	0.5	0.01	0.01	0.1	0.02	0.1	0.1	0.1	0.1	0.1	0.1
Analysis Method	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS
11S171520 Orig	167	15.9	2.5	0.3	10.4	0.613	< 0.02	1.55	1.57	0.04	1.38	18.7	13.9	28.9	0.20	3.5	14.1	3.0	7.0	0.8	3.3	0.5	3.2
11S171520 Split	156	14.6	2.4	0.3	10.5	0.515	< 0.02	1.41	1.50	0.05	1.27	26.1	13.8	28.1	0.23	3.4	13.2	2.9	6.6	0.8	3.1	0.5	3.1
11S171524 Orig	297	16.7	4.0	1.0	11.6	1.40	0.05	1.94	1.91	0.10	1.44	27.8	17.4	36.1	0.60	4.3	17.3	3.5	8.6	1.0	3.7	0.5	3.6
11S171524 Dup	293	16.7	3.9	1.0	11.7	1.41	0.05	1.92	1.95	< 0.02	1.48	24.3	17.2	35.5	0.60	4.3	17.2	3.5	8.6	1.0	3.8	0.5	3.5
11S171526 Orig																							
11S171526 Dup																							
11S171536 Orig	135	14.5	1.6	< 0.1	9.02	0.994	0.02	0.55	0.42	0.04	0.90	34.4	24.7	47.6	0.25	5.4	20.3	3.9	5.6	1.1	3.9	0.5	3.3
11S171536 Split	146	15.3	1.7	< 0.1	10.5	0.960	0.03	0.64	0.49	0.05	0.95	40.8	26.7	51.2	0.29	5.9	22.1	4.2	6.5	1.1	4.1	0.6	3.5
Method Blank																							
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Analyte Symbol	Ho	Er	Tm	Yb	Lu	Hf	Ta	W	Re	Au	Tl	Pb	Th	U	Hg
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppb
Detection Limit	0.1	0.1	0.1	0.1	0.1	0.1	0.05	0.1	0.001	0.5	0.02	0.01	0.1	0.1	10
Analysis Method	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS
GXR-1 Meas			0.4	2.0	0.3	0.2	< 0.05	139		3440	0.34	693	1.6	31.0	3970
GXR-1 Cert			0.430	1.90	0.280	0.960	0.175	164		3300	0.390	730	2.44	34.9	3900
GXR-4 Meas			0.2	0.8	0.1	0.2	< 0.05	10.6			2.68	42.0	17.5	4.7	
GXR-4 Cert			0.210	1.60	0.170	6.30	0.790	30.8			3.20	52.0	22.5	6.20	
GXR-6 Meas			0.1	0.9	0.1	0.1	< 0.05	< 0.1			1.85	107	4.5	0.9	
GXR-6 Cert			0.0320	2.40	0.330	4.30	0.485	1.90			2.20	101	5.30	1.54	
SAR-M (U.S.G.S.) Meas								2.9			0.84	1020	11.4	2.0	
SAR-M (U.S.G.S.) Cert								9.78			2.7	982	17.2	3.57	
SG56 Meas															
SG56 Cert															
SG56 Meas															
SG56 Cert															
SG56 Meas															
SG56 Cert															
SG56 Meas															
SG56 Cert															
SG56 Meas															
SG56 Cert															
OxD108 Meas															
OxD108 Cert															
OxD108 Meas															
OxD108 Cert															

Analyte Symbol	Ho	Er	Tm	Yb	Lu	Hf	Ta	W	Re	Au	Tl	Pb	Th	U	Hg
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppb
Detection Limit	0.1	0.1	0.1	0.1	0.1	0.1	0.05	0.1	0.001	0.5	0.02	0.01	0.1	0.1	10
Analysis Method	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS
OxD108 Meas															
OxD108 Cert															
OxD108 Meas															
OxD108 Cert															
OxD108 Meas															
OxD108 Cert															
OREAS 923 (AQUA REGIA) Meas												81.1			
OREAS 923 (AQUA REGIA) Cert												81			
11S171421 Orig															
11S171421 Dup															
11S171433 Orig	0.5	1.4	0.2	1.2	0.2	0.2	< 0.05	0.3	< 0.001	189	0.21	15.3	4.9	0.9	< 10
11S171433 Dup	0.5	1.3	0.2	1.2	0.2	0.2	< 0.05	0.3	< 0.001	280	0.20	15.3	4.9	0.9	< 10
11S171447 Orig	0.6	1.6	0.2	1.4	0.2	< 0.1	< 0.05	< 0.1	< 0.001	81.8	0.28	10.0	4.7	0.7	< 10
11S171447 Dup	0.6	1.6	0.2	1.3	0.2	< 0.1	< 0.05	< 0.1	< 0.001	69.4	0.29	12.8	4.8	0.7	20
11S171450 Orig	0.6	1.6	0.2	1.3	0.2	0.1	< 0.05	< 0.1	< 0.001	41.5	0.35	12.2	4.6	0.8	< 10
11S171450 Split	0.6	1.6	0.2	1.1	0.2	0.1	< 0.05	< 0.1	< 0.001	25.7	0.36	12.5	4.5	0.8	10
11S171456 Orig															
11S171456 Dup															
11S171460 Orig	0.6	1.7	0.2	1.4	0.2	0.1	< 0.05	0.2	< 0.001	131	0.41	35.6	4.8	0.8	< 10
11S171460 Dup	0.6	1.7	0.2	1.4	0.2	0.1	< 0.05	0.2	< 0.001	89.4	0.42	37.6	4.7	0.8	< 10
11S171470 Orig	0.6	1.5	0.2	1.3	0.2	< 0.1	< 0.05	0.1	< 0.001	337	0.26	48.0	5.1	0.6	< 10
11S171470 Split	0.6	1.5	0.2	1.1	0.2	< 0.1	< 0.05	0.2	< 0.001	230	0.28	47.9	4.9	0.6	< 10
11S171470 Split															
11S171474 Orig	0.6	1.6	0.2	1.3	0.2	0.1	< 0.05	0.2	< 0.001	194	0.24	18.8	5.3	0.6	< 10
11S171474 Dup	0.6	1.6	0.2	1.3	0.2	< 0.1	< 0.05	0.2	< 0.001	132	0.23	19.1	5.2	0.6	< 10
11S171480 Orig	0.6	1.6	0.2	1.3	0.2	0.1	< 0.05	0.1	0.006	< 0.5	0.27	29.6	3.9	0.6	< 10
11S171480 Split	0.6	1.6	0.2	1.2	0.2	0.1	< 0.05	0.1	0.006	< 0.5	0.30	31.7	4.1	0.6	< 10
11S171490 Orig															
11S171490 Dup															
11S171497 Orig	0.6	1.8	0.2	1.4	0.2	0.1	< 0.05	0.2	0.023	39.2	0.41	6.78	3.8	0.7	10
11S171497 Dup	0.6	1.6	0.2	1.3	0.2	0.1	< 0.05	0.2	0.023	22.7	0.39	6.48	3.6	0.6	20
11S171498 Orig															
11S171498 Dup															
11S171510 Orig	0.5	1.5	0.2	1.3	0.2	< 0.1	< 0.05	0.7	0.023	< 0.5	0.40	6.46	3.2	0.8	< 10
11S171510 Split	0.5	1.5	0.2	1.2	0.2	< 0.1	< 0.05	0.7	0.019	16.5	0.38	6.89	3.4	0.7	< 10
11S171511 Orig	0.5	1.4	0.2	1.1	0.2	< 0.1	< 0.05	0.5	0.048	6.3	0.35	6.20	4.4	0.8	< 10
11S171511 Dup	0.5	1.4	0.2	1.1	0.2	< 0.1	< 0.05	0.5	0.066	27.1	0.36	6.26	4.3	0.8	< 10
11S171520 Orig	0.7	1.9	0.3	1.6	0.2	< 0.1	< 0.05	0.6	0.033	6.2	0.52	8.14	3.4	0.7	< 10
11S171520 Split	0.6	1.8	0.2	1.4	0.2	< 0.1	< 0.05	0.7	0.031	9.2	0.48	7.55	3.4	0.7	20
11S171524 Orig	0.7	2.0	0.3	1.5	0.2	0.1	< 0.05	1.2	0.038	33.8	0.56	18.8	4.2	0.9	< 10
11S171524 Dup	0.7	2.0	0.3	1.6	0.2	0.1	< 0.05	1.2	0.036	33.8	0.57	18.9	4.1	1.0	20
11S171526 Orig															
11S171526 Dup															
11S171536 Orig	0.6	1.7	0.2	1.3	0.2	< 0.1	< 0.05	0.5	0.035	18.4	0.38	10.2	5.8	0.7	< 10
11S171536 Split	0.7	1.9	0.3	1.5	0.2	< 0.1	< 0.05	0.6	0.045	24.2	0.44	11.2	6.3	0.8	20
Method Blank															
Method Blank															

Analyte Symbol	Ho	Er	Tm	Yb	Lu	Hf	Ta	W	Re	Au	Tl	Pb	Th	U	Hg
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppb
Detection Limit	0.1	0.1	0.1	0.1	0.1	0.1	0.05	0.1	0.001	0.5	0.02	0.01	0.1	0.1	10
Analysis Method	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS
Method Blank															
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**Date Submitted:** 30-Jun-14  
**Invoice No.:** A14-04357  
**Invoice Date:** 07-Jul-14  
**Your Reference:**

Renaissance Geosciences  
680 Dairy Road  
Kamloops B.C. V2B8N5  
Canada

ATTN: Leo Lindinger

## CERTIFICATE OF ANALYSIS

59 Rock samples were submitted for analysis.

The following analytical package was requested:

Code 1A2-Kamloops Au - Fire Assay AA  
Code UT-1-Kamloops Aqua Regia ICP/MS

REPORT      **A14-04357**

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:

Assays are recommended for values >10,000 for Cu and Au. The Au from AR-MS is only semi-quantitative. For accurate Au data, fire assay is recommended. If value exceeds upper limit we recommend reassay by fire assay gravimetric-Code 1A3

CERTIFIED BY:

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

Emmanuel Esemé , Ph.D.  
Quality Control



## Results

Analyte Symbol	Au	Li	Be	B	Na	Mg	Al	K	Bi	Ca	Sc	V	Cr	Mn	Fe	Co	Ni	Cu	Zn	Ga	Ge	As	Rb
Unit Symbol	ppb	ppm	ppm	ppm	%	%	%	%	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	5	0.1	0.1	1	0.001	0.01	0.01	0.01	0.02	0.01	0.1	1	1	1	0.01	0.1	0.1	0.01	0.1	0.02	0.1	0.1	0.1
Analysis Method	FA-AA	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS
11S171537	101	5.2	0.3	9	0.038	0.30	0.81	0.57	0.30	2.31	1.9	13	3	433	2.88	7.6	4.1	282	37.3	2.36	< 0.1	16.9	26.2
11S171538	527	3.9	0.3	11	0.036	0.14	0.67	0.47	0.79	2.84	1.4	9	3	696	4.04	8.7	4.8	476	277	1.74	< 0.1	55.4	18.9
11S171539	339	3.5	0.3	9	0.034	0.19	0.58	0.42	0.74	2.39	1.3	9	3	536	4.57	7.9	4.6	556	243	1.59	0.1	53.1	18.2
11S171540	685	4.1	0.3	9	0.032	0.14	0.62	0.46	0.38	2.10	1.1	9	4	515	5.40	7.1	4.6	481	308	1.80	< 0.1	52.8	20.4
11S171541	825	2.9	0.2	11	0.023	0.07	0.60	0.47	0.34	1.88	0.9	7	2	562	5.64	9.4	4.5	900	51.6	1.56	0.1	70.5	19.3
11S171542	1610	3.0	0.3	8	0.017	0.11	0.71	0.54	0.83	1.04	0.9	9	2	714	13.1	9.2	4.8	891	450	1.71	0.1	509	21.3
11S171543	< 5	0.8	< 0.1	6	0.011	0.01	0.06	< 0.01	< 0.02	0.02	0.2	2	< 1	15	0.22	0.5	1.2	0.65	2.9	0.26	< 0.1	1.3	0.9
11S171544	278	3.1	0.3	7	0.019	0.16	0.65	0.53	0.23	2.42	0.9	10	3	1080	5.71	8.5	4.1	359	47.1	1.54	0.1	32.2	21.1
11S171545	146	4.1	0.5	6	0.033	1.27	0.99	0.65	0.56	3.48	6.4	41	51	955	5.45	17.0	53.6	306	50.2	3.08	0.2	33.8	31.4
11S171546	1950	4.0	0.6	4	0.028	1.06	0.81	0.59	0.41	2.37	1.4	17	4	988	14.4	12.0	18.3	664	75.5	2.73	0.2	138	28.1
11S171547	877	2.6	0.3	5	0.049	0.11	0.58	0.27	2.43	0.89	0.7	12	12	317	1.43	5.1	8.7	4800	27.2	2.70	< 0.1	11.8	7.1
11S171548	< 5	6.9	1.2	9	0.054	2.81	1.72	0.79	0.12	6.18	13.9	103	226	1080	4.88	28.9	93.9	37.6	63.6	4.79	< 0.1	3.2	52.8
11S171549	547	3.5	0.3	7	0.021	0.33	0.62	0.46	0.53	2.06	0.9	9	4	892	6.43	6.9	4.5	411	342	1.52	0.1	30.8	18.5
11S171550	977	3.7	0.3	5	0.023	0.23	0.67	0.50	1.75	2.43	1.2	10	3	1020	10.3	7.3	4.3	1020	2070	1.97	0.2	70.6	21.1
11S171551	306	4.4	0.4	7	0.022	0.25	0.70	0.49	0.98	2.65	1.3	10	6	707	7.63	8.4	4.9	404	161	2.13	0.1	25.3	22.9
11S171552	394	4.6	0.3	8	0.028	0.33	0.76	0.50	1.01	3.09	1.8	13	3	694	6.69	9.7	5.2	717	343	2.15	0.1	20.2	24.5
11S171553	< 5	1.0	< 0.1	5	0.015	0.01	0.07	< 0.01	< 0.02	0.02	0.2	2	< 1	30	0.17	0.5	1.2	0.73	2.6	0.27	< 0.1	1.1	0.8
11S171554	162	3.4	0.3	6	0.042	0.34	0.58	0.38	4.70	2.68	2.3	17	5	637	5.42	9.7	6.2	529	93.4	2.19	< 0.1	14.7	16.6
11S171555	259	3.8	0.2	6	0.039	0.23	0.54	0.36	1.83	2.19	2.1	16	6	468	5.70	9.1	5.9	516	1120	2.17	0.1	20.8	15.5
11S171556	164	5.8	0.5	10	0.036	0.60	1.05	0.62	0.64	3.63	2.1	16	5	637	3.84	9.9	6.0	414	114	2.46	< 0.1	17.6	26.1
11S171557	113	5.2	0.4	14	0.032	0.31	0.81	0.51	0.97	3.18	1.5	12	4	568	4.73	9.4	5.2	500	85.0	1.91	< 0.1	21.6	19.7
11S171558	133	6.9	0.3	12	0.041	0.49	0.76	0.46	0.67	3.52	1.6	13	4	520	3.58	8.5	5.5	676	32.7	1.84	< 0.1	22.7	17.1
11S171559	195	4.6	0.4	7	0.033	0.59	0.71	0.41	0.50	2.99	2.7	17	8	479	3.48	8.2	4.9	760	42.0	1.79	< 0.1	21.8	17.5
11S171560	134	5.0	0.4	8	0.040	0.58	0.82	0.49	1.43	3.48	1.9	14	4	470	5.16	13.4	5.7	375	46.8	2.12	< 0.1	41.7	20.8
11S171561	< 5	12.9	0.4	9	0.062	0.68	1.63	0.32	0.83	3.45	2.2	16	4	1390	2.66	6.4	4.6	3.27	69.4	4.41	< 0.1	15.9	9.9
11S171562	< 5	11.3	0.4	9	0.047	0.61	1.42	0.27	0.60	3.78	2.1	14	3	1390	2.32	5.9	4.8	8.75	71.7	3.75	< 0.1	13.9	8.5
11S171563	564	10.4	0.5	9	0.055	0.58	1.25	0.60	2.86	3.27	3.7	24	7	605	8.64	78.8	15.2	480	153	3.99	0.1	71.6	24.4
11S171564	31	6.8	0.4	8	0.050	0.23	0.96	0.50	0.45	3.76	3.2	14	3	662	2.43	4.9	15.7	30.6	18.2	2.75	< 0.1	19.1	18.5
11S171565	168	8.4	0.3	8	0.047	0.34	0.98	0.58	1.43	2.69	3.4	19	3	326	4.36	8.3	5.6	536	25.9	2.99	0.1	20.1	21.8
11S171566	839	3.5	0.3	8	0.062	0.14	0.75	0.32	2.61	1.02	0.8	13	12	330	1.49	5.3	8.7	4740	25.7	2.73	< 0.1	11.5	7.4
11S171567	197	4.9	0.3	8	0.036	0.23	0.66	0.42	2.89	1.93	1.8	12	8	196	3.73	6.7	4.6	821	35.7	1.71	< 0.1	20.8	13.2
11S171568	324	7.0	0.3	7	0.041	0.36	0.88	0.55	0.51	2.76	2.9	18	4	389	2.77	7.1	4.5	725	30.4	2.44	< 0.1	13.3	22.2
11S171569	192	6.4	0.3	9	0.035	0.19	0.76	0.50	1.00	2.49	1.8	12	6	375	3.32	6.0	4.2	591	42.6	1.90	< 0.1	18.6	17.5
11S171570	172	12.1	0.3	8	0.045	0.58	1.04	0.69	0.81	2.64	2.2	18	3	428	3.49	8.0	5.0	589	60.3	2.69	< 0.1	20.9	30.3
11S171571	184	11.6	0.5	10	0.042	0.61	1.16	0.73	0.30	3.36	3.5	22	7	545	2.88	8.4	5.1	521	45.3	2.92	< 0.1	12.0	33.2
11S171572	110	14.1	0.4	9	0.051	0.75	1.08	0.71	0.67	3.02	2.5	22	4	501	4.36	9.3	5.5	345	57.2	3.08	< 0.1	20.1	33.5
11S171573	110	10.3	0.5	7	0.044	0.64	1.12	0.74	0.35	3.40	2.3	20	4	608	3.20	9.0	5.2	295	57.9	2.86	< 0.1	10.9	31.6
11S171574	212	10.8	0.4	6	0.046	0.55	0.93	0.65	0.50	3.84	2.5	19	4	586	3.09	9.1	5.7	321	59.4	2.46	< 0.1	14.6	29.2
11S171575	126	6.4	0.4	7	0.044	0.55	0.88	0.55	0.38	4.55	2.2	17	3	660	3.23	8.6	5.5	280	56.9	2.19	< 0.1	13.4	20.4
11S171576	119	6.1	0.4	8	0.042	0.63	0.86	0.50	0.74	3.21	2.1	17	3	385	4.66	8.8	5.4	339	58.2	2.49	< 0.1	34.0	20.0
11S171577	6	12.1	0.4	6	0.060	0.67	1.60	0.31	0.61	3.18	1.9	15	3	1330	2.61	5.9	4.4	2.30	66.2	4.15	< 0.1	11.6	9.4
11S171578	8	12.0	0.4	7	0.067	0.67	1.69	0.37	0.55	3.58	2.1	16	6	1410	2.94	6.4	5.1	2.06	69.5	4.35	< 0.1	10.4	11.4
11S171579	8	11.5	0.3	23	0.055	0.64	1.50	0.30	0.51	3.41	1.9	14	5	1390	2.77	6.1	4.8	1.99	67.6	3.97	< 0.1	7.8	8.9
11S171580	< 5	10.0	0.4	6	0.056	0.61	1.50	0.35	0.38	3.50	1.8	14	7	1460	2.56	6.0	8.0	3.26	57.5	3.77	< 0.1	6.1	10.4
11S171581	14	13.4	0.4	7	0.080	0.81	1.75	0.43	0.70	3.54	3.2	25	9	1450	3.59	10.2	8.6	18.1	234	4.74	< 0.1	311	12.5
11S171582	16	14.4	0.4	7	0.047	1.00	1.43	0.24	0.56	3.64	3.3	27	9	1400	4.09	12.3	10.9	26.8	590	4.59	< 0.1	73.2	7.8
11S171583	15	17.0	0.5	6	0.046	0.84	1.63	0.46	0.79	3.60	3.5	26	12	1390	4.81	13.1	11.6	32.0	468	4.53	< 0.1	24.9	15.4
11S171584	< 5	0.9	< 0.1	4	0.015	0.02	0.07	0.01	< 0.02	0.02	0.1	2	< 1	15	0.18	0.6	1.6	0.58	2.5	0.26	< 0.1	1.0	0.8
11S171585	854	3.4	0.3	4	0.060	0.13	0.72	0.30	2.55	0.96	0.7	13	13	330	1.48	5.2	8.7	4680	26.5	2.73	< 0.1	11.4	6.9

Analyte Symbol	Au	Li	Be	B	Na	Mg	Al	K	Bi	Ca	Sc	V	Cr	Mn	Fe	Co	Ni	Cu	Zn	Ga	Ge	As	Rb
Unit Symbol	ppb	ppm	ppm	ppm	%	%	%	%	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	5	0.1	0.1	1	0.001	0.01	0.01	0.01	0.02	0.01	0.1	1	1	1	0.01	0.1	0.1	0.01	0.1	0.02	0.1	0.1	0.1
Analysis Method	FA-AA	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS
11S171586	10	12.1	0.4	4	0.034	0.71	1.19	0.29	0.56	4.88	2.9	24	11	2010	3.38	9.3	8.4	22.3	166	3.63	< 0.1	12.7	10.7
11S171587	62	19.9	0.5	4	0.047	1.04	1.74	0.48	0.50	3.13	4.1	37	12	1430	4.04	12.0	10.7	23.0	389	5.21	< 0.1	100.0	22.5
11S171588	8	16.7	0.5	4	0.055	0.92	1.62	0.71	0.67	2.47	4.4	35	10	1230	4.44	12.0	10.5	28.7	677	5.00	< 0.1	38.0	31.8
11S171589	32	11.1	0.5	4	0.034	0.56	1.13	0.46	1.57	2.84	2.5	17	6	1050	4.15	10.2	9.7	23.6	282	3.17	< 0.1	153	15.6
11S171590	19	11.5	0.5	5	0.046	0.66	1.35	0.49	0.80	2.95	2.3	19	5	1150	4.16	9.5	7.9	22.6	741	3.69	< 0.1	296	15.3
11S171591	8	13.0	0.5	5	0.036	0.70	1.28	0.42	0.66	2.54	2.8	23	5	1080	4.27	10.9	8.4	24.3	560	3.93	< 0.1	279	13.5
11S171592	9	14.5	0.4	4	0.050	0.89	1.47	0.38	0.95	3.85	3.7	31	12	1570	4.83	9.9	9.8	26.4	618	4.94	< 0.1	61.7	13.1
11S171593	7	13.3	0.4	4	0.041	0.86	1.34	0.36	0.29	3.37	3.1	26	12	1360	3.79	9.1	8.4	17.9	470	4.02	< 0.1	73.1	11.1
11S171594	14	15.0	0.5	5	0.061	0.89	1.84	0.56	0.28	2.93	4.3	39	12	1240	3.72	9.2	7.0	14.7	348	5.41	< 0.1	11.9	21.8
11S171595	13	18.0	0.5	4	0.047	0.94	1.61	0.44	0.28	3.99	4.7	41	12	1480	4.02	10.3	8.2	17.5	204	5.48	< 0.1	33.3	19.6

Results

Analyte Symbol	Sr	Y	Zr	Nb	Mo	Ag	In	Sn	Sb	Te	Cs	Ba	La	Ce	Cd	Pr	Nd	Sm	Se	Eu	Gd	Tb	Dy
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	0.5	0.01	0.1	0.1	0.01	0.002	0.02	0.05	0.02	0.02	0.02	0.5	0.5	0.01	0.01	0.1	0.02	0.1	0.1	0.1	0.1	0.1	0.1
Analysis Method	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS
11S171537	134	15.5	1.4	< 0.1	10.2	0.576	< 0.02	0.50	0.39	0.13	0.87	39.1	26.5	49.8	0.18	5.6	21.0	4.0	6.9	1.0	3.7	0.5	3.2
11S171538	149	15.2	1.5	< 0.1	9.77	2.44	0.03	0.47	13.6	0.16	0.25	20.8	24.8	46.5	3.23	5.2	20.1	3.8	6.0	1.0	3.5	0.5	3.1
11S171539	114	12.5	1.6	< 0.1	19.9	4.06	< 0.02	0.59	3.20	0.26	0.23	11.0	25.1	47.3	3.32	5.3	19.8	3.5	7.0	1.0	3.4	0.5	2.7
11S171540	113	11.0	1.7	0.1	18.9	4.76	< 0.02	0.65	2.03	0.11	0.23	5.8	23.2	42.4	3.66	4.7	17.2	3.1	5.9	0.8	2.8	0.4	2.4
11S171541	110	11.1	1.5	0.1	21.3	3.76	< 0.02	0.47	1.37	0.17	0.19	10.0	21.9	40.2	0.92	4.5	16.5	3.1	9.8	0.7	2.9	0.4	2.4
11S171542	58.8	9.90	3.3	0.3	29.5	5.26	0.06	0.51	1.56	0.27	0.27	< 0.5	14.3	27.7	5.77	3.2	12.2	2.3	7.7	0.6	2.4	0.3	2.1
11S171543	3.7	0.78	0.6	< 0.1	0.13	0.557	< 0.02	0.08	0.03	0.05	0.05	1.8	3.0	5.79	0.02	0.6	2.34	0.4	0.1	< 0.1	0.3	< 0.1	0.2
11S171544	158	14.5	1.4	0.1	27.2	1.68	< 0.02	0.31	0.60	0.05	0.22	22.0	23.5	44.1	0.30	4.9	18.2	3.4	10.7	0.8	3.3	0.5	2.9
11S171545	264	13.7	5.8	0.6	29.4	1.46	0.03	0.43	1.34	0.13	2.17	8.6	38.5	78.8	0.31	9.3	35.1	5.7	7.0	1.4	4.6	0.5	3.0
11S171546	120	10.6	2.9	0.2	27.8	4.33	0.03	0.50	1.66	0.11	0.95	< 0.5	8.8	18.6	0.83	2.3	9.09	1.9	24.7	0.4	2.1	0.3	2.1
11S171547	264	3.70	1.5	< 0.1	545	15.9	0.03	0.97	42.6	5.24	0.81	21.9	6.3	13.2	< 0.01	1.6	6.32	1.2	0.7	0.3	1.0	0.1	0.7
11S171548	684	10.8	1.1	< 0.1	2.04	1.30	0.04	0.38	0.28	0.11	4.92	254	20.4	43.3	0.16	5.6	23.4	4.7	0.5	1.2	4.0	0.5	2.5
11S171549	95.3	12.7	1.7	0.1	26.9	2.29	0.04	0.36	0.94	0.14	0.37	9.2	19.2	37.5	5.08	4.2	16.0	3.0	9.9	0.7	3.0	0.4	2.5
11S171550	108	14.4	2.1	0.3	18.9	5.01	0.09	0.69	1.55	0.28	0.46	< 0.5	18.6	36.5	32.5	4.2	16.0	3.1	14.9	0.7	3.2	0.5	2.8
11S171551	98.4	15.5	2.2	0.1	21.4	3.55	0.03	0.93	1.76	0.15	0.66	< 0.5	17.3	35.1	2.47	4.1	15.9	3.1	10.4	0.6	3.2	0.5	2.8
11S171552	101	14.2	2.5	< 0.1	29.2	7.11	0.07	0.65	3.01	0.13	0.95	1.8	17.3	34.3	4.45	4.1	16.2	3.2	8.8	0.8	3.3	0.5	2.9
11S171553	4.2	0.67	0.4	< 0.1	0.12	0.674	< 0.02	0.28	< 0.02	0.05	0.05	3.1	2.5	4.67	< 0.01	0.5	1.99	0.3	0.1	< 0.1	0.2	< 0.1	0.1
11S171554	105	17.3	1.7	< 0.1	21.0	3.02	0.04	0.73	0.83	0.16	0.44	8.8	17.1	34.2	0.60	4.1	16.0	3.5	8.9	0.8	3.9	0.6	3.5
11S171555	68.0	15.9	1.7	< 0.1	22.4	3.85	0.18	0.76	1.22	0.18	0.26	6.0	19.2	37.3	13.2	4.3	16.9	3.5	7.8	0.8	3.8	0.5	3.1
11S171556	110	15.1	2.5	< 0.1	13.0	2.05	0.06	0.58	1.54	0.05	1.63	17.3	21.3	41.5	1.40	4.9	19.1	3.9	4.2	1.0	3.8	0.5	3.4
11S171557	88.9	11.8	1.8	< 0.1	12.9	1.90	0.05	0.80	2.91	0.10	0.62	12.7	17.6	34.0	1.03	4.1	16.0	3.1	4.7	0.9	3.0	0.4	2.6
11S171558	114	14.5	1.7	< 0.1	22.8	1.27	0.04	0.47	2.32	0.15	0.46	32.3	21.9	42.3	0.23	5.0	19.7	4.0	3.6	1.1	3.9	0.5	3.1
11S171559	108	12.6	2.2	< 0.1	12.5	1.33	0.07	0.60	1.56	0.06	1.72	30.0	16.7	32.7	0.26	3.9	15.5	3.2	4.9	0.9	3.2	0.5	2.8
11S171560	131	14.4	2.2	< 0.1	18.3	1.16	0.04	0.74	1.06	0.13	1.59	12.3	17.1	34.2	0.41	4.0	15.9	3.3	4.1	0.9	3.4	0.5	3.0
11S171561	127	12.9	1.0	< 0.1	0.47	0.378	< 0.02	0.40	0.34	0.12	0.24	66.6	16.2	31.8	0.04	3.8	14.9	3.1	0.7	0.9	3.1	0.4	2.7
11S171562	161	12.4	0.7	< 0.1	0.49	0.301	< 0.02	0.35	0.21	0.11	0.21	53.6	15.5	30.3	0.12	3.6	14.4	2.9	0.6	0.8	2.9	0.4	2.6
11S171563	277	18.8	3.4	0.4	12.1	8.88	0.07	33.4	2.03	0.31	1.20	< 0.5	22.7	45.9	1.73	5.4	21.3	4.3	10.4	1.2	4.5	0.6	3.9
11S171564	193	16.9	1.4	< 0.1	8.89	1.01	0.04	0.44	1.70	0.15	0.85	50.7	20.9	41.4	0.07	4.8	18.8	3.8	1.0	1.1	4.0	0.6	3.5
11S171565	274	17.9	1.3	< 0.1	15.1	0.969	0.07	0.77	0.84	0.19	0.94	15.2	20.6	40.7	0.12	4.8	19.4	4.0	6.2	1.1	4.1	0.6	3.8
11S171566	268	3.67	1.5	< 0.1	555	15.9	0.03	0.99	40.9	5.35	0.84	24.4	6.5	13.6	< 0.01	1.7	6.61	1.2	0.5	0.3	1.1	0.1	0.7
11S171567	612	12.0	0.9	< 0.1	15.6	2.32	0.16	0.56	3.39	0.24	0.38	18.7	14.4	28.1	0.51	3.3	13.0	2.8	4.3	0.8	2.9	0.4	2.6
11S171568	237	13.0	0.8	< 0.1	12.0	0.841	0.14	0.59	0.85	0.08	1.25	33.0	14.7	28.4	0.22	3.4	13.5	2.8	2.6	0.9	3.0	0.4	2.8
11S171569	207	13.6	0.9	< 0.1	13.9	1.96	0.08	0.53	6.07	0.12	0.66	19.6	17.1	33.3	0.74	4.0	15.7	3.2	3.0	1.0	3.3	0.5	3.0
11S171570	120	17.9	1.2	< 0.1	24.3	1.53	0.06	0.50	0.94	< 0.02	1.39	27.0	21.6	41.1	0.44	4.9	19.0	3.9	2.6	1.2	4.1	0.6	3.8
11S171571	267	17.0	1.2	< 0.1	14.2	0.976	0.07	0.51	1.80	< 0.02	2.24	54.9	20.0	38.9	0.29	4.6	18.2	3.7	2.4	1.1	3.8	0.6	3.6
11S171572	138	13.9	1.6	< 0.1	10.6	0.803	0.04	0.66	0.52	0.08	2.10	27.1	19.4	37.8	0.27	4.5	17.6	3.5	3.3	1.0	3.7	0.5	3.0
11S171573	198	16.3	1.3	< 0.1	8.97	0.601	0.03	0.45	0.35	0.03	1.94	39.9	20.3	39.3	0.34	4.7	18.2	3.7	2.5	1.1	3.9	0.6	3.6
11S171574	153	17.9	1.0	< 0.1	7.13	0.557	0.05	0.46	0.49	0.04	1.69	61.5	23.1	44.5	0.38	5.2	19.9	4.0	2.2	1.2	4.4	0.6	3.9
11S171575	204	18.0	1.1	< 0.1	4.41	0.585	0.04	0.60	0.52	0.07	0.88	53.4	23.8	44.5	0.48	5.3	20.2	4.1	2.7	1.2	4.3	0.6	3.9
11S171576	151	16.5	1.3	< 0.1	19.7	0.623	0.04	0.89	0.62	0.08	1.35	7.0	20.0	39.7	0.31	4.7	18.7	3.8	3.7	1.0	4.0	0.6	3.6
11S171577	107	11.3	0.8	< 0.1	0.45	0.316	< 0.02	0.34	0.32	0.18	0.21	63.7	14.1	27.9	0.05	3.3	12.7	2.6	0.6	0.8	2.7	0.4	2.4
11S171578	124	13.5	1.1	< 0.1	0.57	0.298	< 0.02	0.44	0.43	0.12	0.24	74.6	14.6	29.4	0.05	3.5	14.0	2.9	1.0	0.8	3.0	0.4	2.8
11S171579	109	14.0	3.2	< 0.1	0.51	0.249	< 0.02	0.40	0.36	0.15	0.17	62.9	13.6	28.0	0.04	3.4	13.6	2.8	1.1	0.8	2.9	0.4	2.8
11S171580	130	11.9	0.9	< 0.1	0.48	0.207	< 0.02	0.35	0.33	0.13	0.19	81.9	13.9	27.7	0.04	3.2	12.8	2.6	0.7	0.7	2.7	0.4	2.4
11S171581	158	13.9	2.0	< 0.1	0.79	0.490	0.03	0.62	0.69	0.12	0.21	91.7	17.4	33.4	2.43	3.9	15.0	3.0	0.8	0.9	3.1	0.5	3.0
11S171582	180	12.9	2.6	0.3	0.83	0.617	0.05	0.47	0.73	0.17	0.21	50.7	16.2	30.4	5.88	3.5	13.3	2.7	1.2	0.8	2.8	0.4	2.8
11S171583	208	15.2	2.6	< 0.1	0.99	1.17	0.08	0.51	1.40	0.40	0.41	36.7	20.8	40.0	5.11	4.7	17.3	3.4	1.4	1.0	3.6	0.5	3.2
11S171584	4.1	0.71	0.5	< 0.1	0.05	0.302	< 0.02	6.79	0.02	< 0.02	0.06	2.7	2.2	4.24	0.01	0.5	1.79	0.3	< 0.1	< 0.1	0.3	< 0.1	0.2
11S171585	258	3.62	0.5	< 0.1	539	14.8	0.03	1.05	38.1	5.10	0.71	14.6	6.3	13.5	< 0.01	1.6	6.44	1.2	0.6	0.3	1.0	0.1	0.8



Analyte Symbol	Sr	Y	Zr	Nb	Mo	Ag	In	Sn	Sb	Te	Cs	Ba	La	Ce	Cd	Pr	Nd	Sm	Se	Eu	Gd	Tb	Dy
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	0.5	0.01	0.1	0.1	0.01	0.002	0.02	0.05	0.02	0.02	0.02	0.5	0.5	0.01	0.01	0.1	0.02	0.1	0.1	0.1	0.1	0.1	0.1
Analysis Method	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS
11S171586	342	11.8	1.7	0.2	1.88	1.75	0.03	0.52	1.08	0.33	0.37	54.0	13.7	25.9	1.53	3.0	11.2	2.2	0.8	0.7	2.4	0.4	2.3
11S171587	216	14.2	2.8	0.3	1.29	0.831	0.04	0.69	1.45	0.34	0.98	45.3	20.4	38.9	3.83	4.4	16.8	3.3	0.9	0.9	3.3	0.5	3.0
11S171588	125	14.7	3.3	0.4	0.96	0.863	0.06	0.74	1.05	0.50	1.40	33.3	18.9	36.2	6.78	4.1	15.7	3.1	1.1	0.9	3.3	0.5	3.0
11S171589	126	16.3	3.1	< 0.1	0.93	1.61	0.04	0.44	1.04	1.21	0.61	26.3	24.2	46.1	2.66	5.2	19.6	3.7	1.8	1.0	3.8	0.5	3.4
11S171590	134	17.8	3.4	< 0.1	1.01	2.75	0.04	0.41	1.08	1.47	0.31	38.5	27.0	51.1	8.12	5.8	21.5	4.1	1.3	1.2	4.2	0.6	3.8
11S171591	146	15.2	2.6	< 0.1	0.98	1.06	0.05	0.32	0.53	0.34	0.29	37.8	24.3	46.0	6.01	5.2	19.6	3.7	1.0	1.1	3.8	0.5	3.3
11S171592	223	15.2	1.6	< 0.1	1.39	1.04	0.05	0.38	0.70	0.26	0.35	48.7	21.4	40.7	6.70	4.7	18.3	3.6	1.0	1.1	3.8	0.5	3.3
11S171593	164	15.7	1.6	0.1	1.23	0.545	0.04	0.47	0.38	0.27	0.20	58.1	22.7	43.6	5.12	5.0	19.0	3.7	0.8	1.1	3.9	0.6	3.3
11S171594	201	13.8	2.8	1.1	1.11	0.454	0.03	4.54	0.77	0.15	0.77	55.2	17.1	33.8	3.33	3.9	15.1	3.0	0.5	0.8	3.2	0.5	2.9
11S171595	325	15.3	2.3	0.4	1.16	0.444	0.04	0.56	0.76	0.17	0.75	56.5	17.4	34.2	2.03	4.0	15.3	3.2	0.8	0.9	3.4	0.5	3.2

## Results

Analyte Symbol	Ho	Er	Tm	Yb	Lu	Hf	Ta	W	Re	Au	Tl	Pb	Th	U	Hg
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppb
Detection Limit	0.1	0.1	0.1	0.1	0.1	0.1	0.05	0.1	0.001	0.5	0.02	0.01	0.1	0.1	10
Analysis Method	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS
11S171537	0.6	1.7	0.2	1.4	0.2	< 0.1	< 0.05	0.4	0.019	58.5	0.35	8.87	5.8	0.7	< 10
11S171538	0.6	1.7	0.2	1.4	0.2	< 0.1	< 0.05	0.5	0.031	425	0.25	90.9	5.5	0.8	230
11S171539	0.5	1.4	0.2	1.2	0.2	< 0.1	< 0.05	0.9	0.062	171	0.22	226	5.6	1.3	180
11S171540	0.5	1.3	0.2	1.0	0.2	< 0.1	< 0.05	1.1	0.058	537	0.22	339	5.4	1.1	100
11S171541	0.5	1.3	0.2	1.1	0.2	< 0.1	< 0.05	1.0	0.042	501	0.20	58.7	5.4	1.0	30
11S171542	0.4	1.2	0.2	1.0	0.2	< 0.1	< 0.05	1.7	0.066	733	0.38	252	5.1	0.9	130
11S171543	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.05	< 0.1	0.001	< 0.5	0.02	1.16	0.8	0.1	< 10
11S171544	0.6	1.7	0.2	1.4	0.2	< 0.1	< 0.05	1.0	0.047	177	0.24	13.9	5.7	1.0	< 10
11S171545	0.6	1.5	0.2	1.1	0.2	< 0.1	< 0.05	0.5	0.085	77.3	0.37	46.8	6.4	1.1	30
11S171546	0.4	1.3	0.2	1.1	0.2	< 0.1	< 0.05	0.8	0.060	1800	0.33	18.3	4.7	0.8	< 10
11S171547	0.1	0.4	< 0.1	0.4	< 0.1	< 0.1	< 0.05	< 0.1	0.255	531	0.07	29.6	0.9	0.9	2310
11S171548	0.5	1.2	0.2	0.9	0.1	< 0.1	< 0.05	< 0.1	< 0.001	< 0.5	0.62	7.66	3.9	0.8	< 10
11S171549	0.5	1.4	0.2	1.1	0.2	< 0.1	< 0.05	0.6	0.049	249	0.24	247	5.2	0.9	170
11S171550	0.6	1.6	0.2	1.3	0.2	< 0.1	< 0.05	1.2	0.045	1510	0.28	412	5.8	1.2	990
11S171551	0.6	1.7	0.2	1.4	0.2	< 0.1	< 0.05	1.2	0.062	159	0.26	137	5.1	1.2	70
11S171552	0.6	1.7	0.2	1.3	0.2	< 0.1	< 0.05	0.9	0.073	273	0.29	171	4.8	0.8	70
11S171553	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.05	< 0.1	< 0.001	< 0.5	< 0.02	1.28	0.5	< 0.1	< 10
11S171554	0.7	2.0	0.3	1.6	0.2	< 0.1	< 0.05	0.5	0.044	123	0.18	46.5	5.3	0.8	< 10
11S171555	0.6	1.7	0.2	1.3	0.2	< 0.1	< 0.05	0.6	0.055	219	0.17	214	5.2	0.7	460
11S171556	0.6	1.8	0.3	1.5	0.2	< 0.1	< 0.05	0.4	0.032	75.8	0.30	57.8	5.4	1.0	< 10
11S171557	0.5	1.4	0.2	1.3	0.2	< 0.1	< 0.05	0.3	0.039	62.2	0.25	54.3	4.2	0.8	< 10
11S171558	0.6	1.7	0.2	1.4	0.2	< 0.1	< 0.05	0.2	0.072	91.3	0.24	17.9	4.5	0.8	< 10
11S171559	0.5	1.5	0.2	1.2	0.2	< 0.1	< 0.05	0.1	0.042	284	0.25	9.82	3.9	0.5	< 10
11S171560	0.6	1.7	0.2	1.4	0.2	< 0.1	< 0.05	0.5	0.053	94.9	0.24	32.5	5.1	1.0	< 10
11S171561	0.5	1.5	0.2	1.1	0.2	< 0.1	< 0.05	< 0.1	< 0.001	< 0.5	0.12	11.5	4.6	1.0	< 10
11S171562	0.5	1.4	0.2	1.2	0.2	< 0.1	< 0.05	< 0.1	< 0.001	< 0.5	0.09	11.4	4.3	0.7	< 10
11S171563	0.8	2.1	0.3	1.6	0.2	0.1	< 0.05	0.6	0.035	195	0.37	85.5	4.7	0.9	< 10
11S171564	0.7	2.0	0.3	1.6	0.2	< 0.1	< 0.05	< 0.1	0.007	11.9	0.22	6.75	5.3	1.1	< 10
11S171565	0.7	2.1	0.3	1.6	0.2	< 0.1	< 0.05	0.4	0.036	205	0.25	42.4	4.5	0.5	< 10
11S171566	0.1	0.4	< 0.1	0.4	< 0.1	< 0.1	< 0.05	< 0.1	0.266	629	0.08	31.5	1.1	1.0	2110
11S171567	0.5	1.4	0.2	1.1	0.2	< 0.1	< 0.05	0.2	0.033	289	0.13	28.2	3.9	0.7	< 10
11S171568	0.6	1.6	0.2	1.2	0.2	< 0.1	< 0.05	0.2	0.045	60.5	0.29	5.37	3.8	0.5	< 10
11S171569	0.6	1.6	0.2	1.2	0.2	< 0.1	< 0.05	0.2	0.030	208	0.20	29.6	3.8	0.4	10
11S171570	0.8	2.2	0.3	1.6	0.2	< 0.1	< 0.05	0.2	0.092	37.6	0.39	11.2	4.6	0.4	< 10
11S171571	0.7	2.1	0.3	1.6	0.2	< 0.1	< 0.05	0.2	0.040	81.0	0.48	5.66	4.9	0.6	< 10
11S171572	0.6	1.7	0.2	1.3	0.2	< 0.1	< 0.05	0.3	0.030	62.8	0.50	14.1	5.0	0.6	< 10
11S171573	0.7	2.1	0.3	1.6	0.2	< 0.1	< 0.05	0.3	0.022	80.1	0.43	8.97	5.2	0.6	< 10
11S171574	0.8	2.2	0.3	1.7	0.3	< 0.1	< 0.05	0.1	0.018	41.7	0.46	9.86	5.7	0.6	< 10
11S171575	0.8	2.2	0.3	1.7	0.3	< 0.1	< 0.05	0.4	0.009	207	0.26	8.09	6.0	0.8	< 10
11S171576	0.7	2.0	0.3	1.4	0.2	< 0.1	< 0.05	0.5	0.054	117	0.24	15.2	5.7	0.9	< 10
11S171577	0.5	1.4	0.2	1.1	0.2	< 0.1	< 0.05	< 0.1	< 0.001	< 0.5	0.11	10.6	4.3	0.8	< 10
11S171578	0.6	1.7	0.2	1.2	0.2	< 0.1	< 0.05	< 0.1	< 0.001	< 0.5	0.13	9.85	4.5	0.8	< 10
11S171579	0.6	1.6	0.2	1.2	0.2	< 0.1	< 0.05	< 0.1	< 0.001	< 0.5	0.11	9.05	4.2	0.7	< 10
11S171580	0.5	1.4	0.2	1.2	0.2	< 0.1	< 0.05	< 0.1	< 0.001	< 0.5	0.12	7.93	4.0	0.7	< 10
11S171581	0.6	1.7	0.2	1.3	0.2	< 0.1	< 0.05	< 0.1	< 0.001	1.1	0.15	85.4	5.3	1.1	< 10
11S171582	0.6	1.6	0.2	1.2	0.2	< 0.1	< 0.05	< 0.1	< 0.001	12.1	0.10	75.2	6.1	1.2	< 10
11S171583	0.6	1.9	0.3	1.5	0.2	< 0.1	< 0.05	< 0.1	< 0.001	2.7	0.27	49.8	7.4	1.6	40
11S171584	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.05	< 0.1	< 0.001	< 0.5	0.03	1.19	0.5	< 0.1	< 10
11S171585	0.1	0.4	< 0.1	0.4	< 0.1	< 0.1	< 0.05	< 0.1	0.258	36.8	0.06	29.0	0.9	0.9	2120

Analyte Symbol	Ho	Er	Tm	Yb	Lu	Hf	Ta	W	Re	Au	Tl	Pb	Th	U	Hg
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppb
Detection Limit	0.1	0.1	0.1	0.1	0.1	0.1	0.05	0.1	0.001	0.5	0.02	0.01	0.1	0.1	10
Analysis Method	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS
11S171586	0.5	1.5	0.2	1.3	0.2	< 0.1	< 0.05	< 0.1	< 0.001	< 0.5	0.14	35.2	4.1	1.0	10
11S171587	0.6	1.7	0.2	1.3	0.2	0.1	< 0.05	< 0.1	0.001	72.5	0.37	41.7	6.5	1.3	10
11S171588	0.6	1.8	0.3	1.3	0.2	0.2	< 0.05	< 0.1	< 0.001	< 0.5	0.53	41.3	5.8	1.2	60
11S171589	0.7	1.9	0.3	1.4	0.2	< 0.1	< 0.05	< 0.1	0.001	24.7	0.22	67.3	6.8	1.4	< 10
11S171590	0.8	2.1	0.3	1.6	0.2	< 0.1	< 0.05	< 0.1	< 0.001	8.2	0.21	338	8.0	1.5	< 10
11S171591	0.7	1.9	0.3	1.3	0.2	< 0.1	< 0.05	< 0.1	< 0.001	< 0.5	0.19	52.1	7.8	2.8	< 10
11S171592	0.6	1.8	0.3	1.4	0.2	< 0.1	< 0.05	< 0.1	< 0.001	< 0.5	0.18	80.8	5.9	1.1	< 10
11S171593	0.7	1.9	0.3	1.4	0.2	< 0.1	< 0.05	0.1	< 0.001	< 0.5	0.14	19.4	6.4	1.2	< 10
11S171594	0.6	1.7	0.2	1.3	0.2	0.1	< 0.05	0.2	< 0.001	< 0.5	0.29	14.5	5.5	1.0	< 10
11S171595	0.6	1.9	0.3	1.4	0.2	0.1	< 0.05	< 0.1	< 0.001	< 0.5	0.29	15.6	5.6	1.0	< 10

QC

Analyte Symbol	Au	Li	Be	B	Na	Mg	Al	K	Bi	Ca	Sc	V	Cr	Mn	Fe	Co	Ni	Cu	Zn	Ga	Ge	As	Rb
Unit Symbol	ppb	ppm	ppm	ppm	%	%	%	%	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	5	0.1	0.1	1	0.001	0.01	0.01	0.01	0.02	0.01	0.1	1	1	1	0.01	0.1	0.1	0.01	0.1	0.02	0.1	0.1	0.1
Analysis Method	FA-AA	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS
GXR-1 Meas		5.7	0.9	9	0.046	0.13	0.35	0.03	1630	0.84	1.1	75	7	910	25.1	7.9	39.6	1140	818	2.63		414	2.2
GXR-1 Cert		8.20	1.22	15.0	0.0520	0.217	3.52	0.050	1380	0.960	1.58	80.0	12.0	852	23.6	8.20	41.0	1110	760	13.8		427	14.0
GXR-4 Meas		11.1	1.8	3	0.132	1.54	2.70	1.81	21.5	0.84	6.7	79	55	144	3.06	13.9	39.3	6390	74.2	11.3		99.5	97.1
GXR-4 Cert		11.1	1.90	4.50	0.564	1.66	7.20	4.01	19.0	1.01	7.70	87.0	64.0	155	3.09	14.6	42.0	6520	73.0	20.0		98.0	160
GXR-6 Meas		34.6	1.3	7	0.078	0.42	8.16	1.31	0.21	0.15	24.1	169	81	1140	5.95	13.6	23.5	65.3	128	12.6		225	67.4
GXR-6 Cert		32.0	1.40	9.80	0.104	0.609	17.7	1.87	0.290	0.180	27.6	186	96.0	1010	5.58	13.8	27.0	66.0	118	35.0		330	90.0
SAR-M (U.S.G.S.) Meas		17.7	1.4		0.037	0.37	1.13	0.28	2.15	0.29	3.1	33	92	5110	2.93	10.9	45.6	340	1080	4.72		38.2	21.8
SAR-M (U.S.G.S.) Cert		27.4	2.20		1.140	0.50	6.30	2.94	1.94	0.61	7.83	67.2	79.7	5220	2.99	10.70	41.5	331	930.0	17		38.8	146
SG56 Meas	1080																						
SG56 Cert	1027.00																						
SG56 Meas	1050																						
SG56 Cert	1027.00																						
OxD108 Meas	430																						
OxD108 Cert	414.000																						
OxD108 Meas	432																						
OxD108 Cert	414.000																						
OREAS 922 (AQUA REGIA) Meas						1.38	2.98			0.41					5.40	19.6		2220	281			7.0	
OREAS 922 (AQUA REGIA) Cert						1.33	2.72			0.324					5.05	19.4		2176	256			6.12	
OREAS 923 (AQUA REGIA) Meas						1.52	3.10			0.41					6.42	23.1		4430	364			8.4	
OREAS 923 (AQUA REGIA) Cert						1.43	2.80			0.326					5.91	22.2		4248	335			7.07	
11S171537 Orig	120																						
11S171537 Dup	82																						
11S171549 Orig		3.7	0.3	8	0.024	0.35	0.68	0.49	0.51	2.10	1.0	10	4	892	6.47	6.9	4.5	412	336	1.62	0.1	30.2	19.4
11S171549 Dup		3.3	0.3	5	0.019	0.31	0.57	0.43	0.54	2.03	0.9	9	4	893	6.39	6.9	4.4	411	349	1.42	0.1	31.5	17.6
11S171563 Orig		10.5	0.5	10	0.057	0.59	1.26	0.60	2.91	3.30	3.7	24	7	600	8.64	79.0	15.0	483	151	3.96	0.1	71.0	24.1
11S171563 Dup		10.4	0.5	7	0.053	0.57	1.24	0.60	2.82	3.25	3.8	24	8	610	8.63	78.7	15.4	477	155	4.02	0.2	72.3	24.7
11S171567 Orig	197	4.9	0.3	8	0.036	0.23	0.66	0.42	2.89	1.93	1.8	12	8	196	3.73	6.7	4.6	821	35.7	1.71	< 0.1	20.8	13.2
11S171567 Split	231	5.4	0.2	5	0.040	0.25	0.74	0.46	3.18	2.04	1.9	14	8	208	3.91	7.0	4.8	884	41.2	2.01	< 0.1	22.5	14.7
11S171572 Orig	108																						
11S171572 Dup	113																						
11S171575 Orig	127																						
11S171575 Dup	124																						
11S171576 Orig		6.0	0.4	8	0.041	0.63	0.83	0.48	0.75	3.17	2.1	16	3	379	4.59	8.8	5.3	336	56.9	2.40	< 0.1	33.7	19.2
11S171576 Dup		6.2	0.4	7	0.043	0.63	0.88	0.52	0.73	3.26	2.2	18	3	392	4.72	8.9	5.4	342	59.5	2.58	< 0.1	34.3	20.8
11S171586 Orig	10	12.1	0.4	4	0.034	0.71	1.19	0.29	0.56	4.88	2.9	24	11	2010	3.38	9.3	8.4	22.3	166	3.63	< 0.1	12.7	10.7
11S171586 Split	8	13.7	0.4	6	0.044	0.79	1.39	0.40	0.66	4.54	3.4	27	18	1840	3.56	10.3	9.0	25.0	177	4.14	< 0.1	9.4	14.4
11S171590 Orig		10.9	0.5	5	0.044	0.64	1.31	0.47	0.81	2.88	2.2	19	5	1150	4.16	9.4	7.8	22.6	744	3.67	< 0.1	304	14.9
11S171590 Dup		12.0	0.5	5	0.048	0.68	1.40	0.51	0.80	3.03	2.4	20	5	1150	4.16	9.5	7.9	22.6	738	3.71	< 0.1	288	15.7
11S171594 Orig	13																						
11S171594 Dup	16																						
11S171595 Orig	13	18.0	0.5	4	0.047	0.94	1.61	0.44	0.28	3.99	4.7	41	12	1480	4.02	10.3	8.2	17.5	204	5.48	< 0.1	33.3	19.6
11S171595 Split	13	18.1	0.5	4	0.046	0.91	1.54	0.43	0.27	3.92	4.6	39	11	1430	3.91	9.8	7.9	17.5	198	5.12	< 0.1	30.9	18.8
Method Blank	< 5																						
Method Blank	< 5																						

Analyte Symbol	Au	Li	Be	B	Na	Mg	Al	K	Bi	Ca	Sc	V	Cr	Mn	Fe	Co	Ni	Cu	Zn	Ga	Ge	As	Rb
Unit Symbol	ppb	ppm	ppm	ppm	%	%	%	%	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	5	0.1	0.1	1	0.001	0.01	0.01	0.01	0.02	0.01	0.1	1	1	1	0.01	0.1	0.1	0.01	0.1	0.02	0.1	0.1	0.1
Analysis Method	FA-AA	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS
Method Blank	< 5																						
Method Blank	< 5																						

QC

Analyte Symbol	Sr	Y	Zr	Nb	Mo	Ag	In	Sn	Sb	Te	Cs	Ba	La	Ce	Cd	Pr	Nd	Sm	Se	Eu	Gd	Tb	Dy
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	0.5	0.01	0.1	0.1	0.01	0.002	0.02	0.05	0.02	0.02	0.02	0.5	0.5	0.01	0.01	0.1	0.02	0.1	0.1	0.1	0.1	0.1	0.1
Analysis Method	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS
GXR-1 Meas	202	27.8	9.4	< 0.1	18.1	35.3	0.79	25.7	86.4	15.4	2.68	423	6.0	11.8	2.69		6.83	2.5	17.8	0.6	4.2	0.8	5.4
GXR-1 Cert	275	32.0	38.0	0.800	18.0	31.0	0.770	54.0	122	13.0	3.00	750	7.50	17.0	3.30		18.0	2.70	16.6	0.690	4.20	0.830	4.30
GXR-4 Meas	75.5	12.0	8.9	0.1	323	4.09	0.22	5.85	3.66	0.98	2.46	24.4	50.9	97.5	0.20		38.2	6.0	5.9	1.4	4.8	0.5	2.9
GXR-4 Cert	221	14.0	186	10.0	310	4.00	0.270	5.60	4.80	0.970	2.80	1640	64.5	102	0.860		45.0	6.60	5.60	1.63	5.25	0.360	2.60
GXR-6 Meas	31.2	6.93	5.6	< 0.1	1.59	0.408	0.06	1.14	1.47	0.05	3.74	924	12.0	34.7	0.11		12.5	2.5	0.3	0.6	2.3	0.3	1.8
GXR-6 Cert	35.0	14.0	110	7.50	2.40	1.30	0.260	1.70	3.60	0.0180	4.20	1300	13.9	36.0	1.00		13.0	2.67	0.940	0.760	2.97	0.415	2.80
SAR-M (U.S.G.S.) Meas	29.8	18.9		2.0	12.9	3.29	1.12	1.86	3.65	0.83		177	49.1	102	5.75				1.0				
SAR-M (U.S.G.S.) Cert	151	28.00		29.9	13.1	3.64	1.08	2.76	6.0	0.96		801	57.4	122.0	5.27				0.39				
SG56 Meas																							
SG56 Cert																							
SG56 Meas																							
SG56 Cert																							
OxD108 Meas																							
OxD108 Cert																							
OxD108 Meas																							
OxD108 Cert																							
OREAS 922 (AQUA REGIA) Meas						0.957			0.62						0.32								
OREAS 922 (AQUA REGIA) Cert						0.851			0.57						0.280								
OREAS 923 (AQUA REGIA) Meas						1.63			0.62						0.44								
OREAS 923 (AQUA REGIA) Cert						1.62			0.58						0.40								
11S171537 Orig																							
11S171537 Dup																							
11S171549 Orig	94.8	12.6	1.7	0.1	27.7	2.26	0.04	0.35	0.92	0.11	0.40	8.9	18.8	36.3	4.97	4.1	15.7	2.9	9.6	0.7	2.9	0.4	2.5
11S171549 Dup	95.7	12.8	1.7	0.1	26.1	2.32	0.04	0.37	0.96	0.17	0.34	9.4	19.7	38.7	5.19	4.3	16.2	3.1	10.1	0.7	3.0	0.4	2.5
11S171563 Orig	275	18.6	3.4	0.4	12.2	8.48	0.07	33.9	2.05	0.32	1.23	0.5	22.9	46.1	1.64	5.5	21.6	4.4	10.4	1.2	4.6	0.6	3.9
11S171563 Dup	280	19.0	3.4	0.4	12.0	9.27	0.08	32.9	2.01	0.29	1.17	< 0.5	22.5	45.7	1.81	5.4	21.0	4.3	10.4	1.1	4.4	0.6	3.8
11S171567 Orig	612	12.0	0.9	< 0.1	15.6	2.32	0.16	0.56	3.39	0.24	0.38	18.7	14.4	28.1	0.51	3.3	13.0	2.8	4.3	0.8	2.9	0.4	2.6
11S171567 Split	667	13.0	1.0	< 0.1	14.6	1.33	0.18	0.60	3.62	0.15	0.43	16.4	15.3	30.5	0.54	3.6	14.0	2.9	4.4	0.9	3.1	0.5	2.8
11S171572 Orig																							
11S171572 Dup																							
11S171575 Orig																							
11S171575 Dup																							
11S171576 Orig	150	16.3	1.3	< 0.1	19.6	0.677	0.04	0.88	0.63	0.09	1.34	9.1	20.0	39.3	0.30	4.6	18.4	3.7	3.4	1.0	4.0	0.6	3.5
11S171576 Dup	153	16.8	1.3	< 0.1	19.7	0.570	0.05	0.90	0.61	0.07	1.36	4.9	20.0	40.0	0.31	4.7	19.0	3.9	4.1	1.1	4.1	0.6	3.6
11S171586 Orig	342	11.8	1.7	0.2	1.88	1.75	0.03	0.52	1.08	0.33	0.37	54.0	13.7	25.9	1.53	3.0	11.2	2.2	0.8	0.7	2.4	0.4	2.3
11S171586 Split	305	12.5	1.8	0.2	1.61	0.894	0.03	0.65	0.96	0.26	0.43	50.5	14.9	28.3	1.60	3.2	12.1	2.4	0.8	0.7	2.6	0.4	2.6
11S171590 Orig	133	17.6	3.3	< 0.1	1.05	2.66	0.05	0.43	1.12	1.38	0.31	36.8	27.1	51.2	8.05	5.8	21.5	4.1	1.4	1.2	4.1	0.6	3.8

Analyte Symbol	Sr	Y	Zr	Nb	Mo	Ag	In	Sn	Sb	Te	Cs	Ba	La	Ce	Cd	Pr	Nd	Sm	Se	Eu	Gd	Tb	Dy
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	0.5	0.01	0.1	0.1	0.01	0.002	0.02	0.05	0.02	0.02	0.02	0.5	0.5	0.01	0.01	0.1	0.02	0.1	0.1	0.1	0.1	0.1	0.1
Analysis Method	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS
11S171590 Dup	136	17.9	3.4	< 0.1	0.97	2.84	0.04	0.39	1.03	1.56	0.31	40.3	26.9	51.0	8.20	5.7	21.4	4.1	1.2	1.2	4.2	0.6	3.8
11S171594 Orig																							
11S171594 Dup																							
11S171595 Orig	325	15.3	2.3	0.4	1.16	0.444	0.04	0.56	0.76	0.17	0.75	56.5	17.4	34.2	2.03	4.0	15.3	3.2	0.8	0.9	3.4	0.5	3.2
11S171595 Split	311	14.6	2.2	0.4	1.03	0.504	0.04	0.48	0.69	0.17	0.73	55.3	17.1	33.2	1.84	3.9	14.9	3.0	0.6	0.9	3.3	0.5	3.1
Method Blank																							
Method Blank																							
Method Blank																							
Method Blank																							

QC

Analyte Symbol	Ho	Er	Tm	Yb	Lu	Hf	Ta	W	Re	Au	Tl	Pb	Th	U	Hg
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppb
Detection Limit	0.1	0.1	0.1	0.1	0.1	0.1	0.05	0.1	0.001	0.5	0.02	0.01	0.1	0.1	10
Analysis Method	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS
GXR-1 Meas			0.4	2.1	0.3	0.2	< 0.05	154		3330	0.40	735	1.8	35.0	3700
GXR-1 Cert			0.430	1.90	0.280	0.960	0.175	164		3300	0.390	730	2.44	34.9	3900
GXR-4 Meas			0.2	0.9	0.1	0.3	< 0.05	11.5			3.11	44.5	19.3	5.1	
GXR-4 Cert			0.210	1.60	0.170	6.30	0.790	30.8			3.20	52.0	22.5	6.20	
GXR-6 Meas			0.2	0.8	0.1	0.1	< 0.05	< 0.1			1.93	108	4.7	0.9	
GXR-6 Cert			0.0320	2.40	0.330	4.30	0.485	1.90			2.20	101	5.30	1.54	
SAR-M (U.S.G.S.) Meas								2.8			0.91	1030	12.4	2.2	
SAR-M (U.S.G.S.) Cert								9.78			2.7	982	17.2	3.57	
SG56 Meas															
SG56 Cert															
SG56 Meas															
SG56 Cert															
OxD108 Meas															
OxD108 Cert															
OxD108 Meas															
OxD108 Cert															
OREAS 922 (AQUA REGIA) Meas												59.6			
OREAS 922 (AQUA REGIA) Cert												60			
OREAS 923 (AQUA REGIA) Meas												82.5			
OREAS 923 (AQUA REGIA) Cert												81			
11S171537 Orig															
11S171537 Dup															
11S171549 Orig	0.5	1.4	0.2	1.1	0.2	< 0.1	< 0.05	0.6	0.050	249	0.24	241	5.1	0.9	180
11S171549 Dup	0.5	1.4	0.2	1.2	0.2	< 0.1	< 0.05	0.6	0.048	249	0.24	254	5.4	0.9	170
11S171563 Orig	0.8	2.2	0.3	1.6	0.2	0.1	< 0.05	0.5	0.035	205	0.37	87.0	4.7	0.9	20
11S171563 Dup	0.8	2.1	0.3	1.6	0.2	0.1	< 0.05	0.8	0.035	185	0.37	84.0	4.6	0.9	< 10
11S171567 Orig	0.5	1.4	0.2	1.1	0.2	< 0.1	< 0.05	0.2	0.033	289	0.13	28.2	3.9	0.7	< 10
11S171567 Split	0.5	1.5	0.2	1.1	0.2	< 0.1	< 0.05	0.3	0.032	359	0.17	30.5	4.2	0.8	< 10

Analyte Symbol	Ho	Er	Tm	Yb	Lu	Hf	Ta	W	Re	Au	Tl	Pb	Th	U	Hg
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppb
Detection Limit	0.1	0.1	0.1	0.1	0.1	0.1	0.05	0.1	0.001	0.5	0.02	0.01	0.1	0.1	10
Analysis Method	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS
11S171572 Orig															
11S171572 Dup															
11S171575 Orig															
11S171575 Dup															
11S171576 Orig	0.7	2.0	0.3	1.4	0.2	< 0.1	< 0.05	0.5	0.055	164	0.24	15.8	5.7	0.9	< 10
11S171576 Dup	0.7	2.0	0.3	1.4	0.2	< 0.1	< 0.05	0.5	0.054	69.9	0.24	14.6	5.7	0.9	< 10
11S171586 Orig	0.5	1.5	0.2	1.3	0.2	< 0.1	< 0.05	< 0.1	< 0.001	< 0.5	0.14	35.2	4.1	1.0	10
11S171586 Split	0.5	1.6	0.2	1.4	0.2	< 0.1	< 0.05	< 0.1	< 0.001	< 0.5	0.22	42.1	4.5	1.1	< 10
11S171590 Orig	0.7	2.2	0.3	1.6	0.2	< 0.1	< 0.05	< 0.1	0.001	6.9	0.21	334	8.1	1.5	< 10
11S171590 Dup	0.8	2.1	0.3	1.6	0.2	< 0.1	< 0.05	< 0.1	< 0.001	9.4	0.21	342	7.8	1.5	< 10
11S171594 Orig															
11S171594 Dup															
11S171595 Orig	0.6	1.9	0.3	1.4	0.2	0.1	< 0.05	< 0.1	< 0.001	< 0.5	0.29	15.6	5.6	1.0	< 10
11S171595 Split	0.6	1.9	0.3	1.4	0.2	< 0.1	< 0.05	< 0.1	< 0.001	2.8	0.28	15.0	5.5	1.0	< 10
Method Blank															
Method Blank															
Method Blank															
Method Blank															



**Date Submitted:** 02-Jul-14  
**Invoice No.:** A14-04403  
**Invoice Date:** 14-Jul-14  
**Your Reference:**

Renaissance Geosciences  
680 Dairy Road  
Kamloops B.C. V2B 8N5  
Canada

ATTN: Richard Buzbuzian

## CERTIFICATE OF ANALYSIS

97 Core samples were submitted for analysis.

The following analytical package was requested:

Code 1A2-Kamloops Au - Fire Assay AA  
Code UT-1-Kamloops Aqua Regia ICP/MS

REPORT      **A14-04403**

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:

Assays are recommended for values >10,000 for Cu and Au. The Au from AR-MS is only semi-quantitative. For accurate Au data, fire assay is recommended. If value exceeds upper limit we recommend reassay by fire assay gravimetric-Code 1A3

CERTIFIED BY:

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

Emmanuel Esemé , Ph.D.  
Quality Control





## Results

Analyte Symbol	Au	Li	Be	B	Na	Mg	Al	K	Bi	Ca	Sc	V	Cr	Mn	Fe	Co	Ni	Cu	Zn	Ga	Ge	As	Rb
Unit Symbol	ppb	ppm	ppm	ppm	%	%	%	%	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	5	0.1	0.1	1	0.001	0.01	0.01	0.01	0.02	0.01	0.1	1	1	1	0.01	0.1	0.1	0.01	0.1	0.02	0.1	0.1	0.1
Analysis Method	FA-AA	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS
11s171596	10	11.8	0.5	3	0.047	0.77	1.56	0.70	0.76	3.06	4.1	32	11	1160	4.47	10.3	9.0	29.0	398	4.91	< 0.1	155	26.0
11s171597	658	15.3	0.5	4	0.051	0.77	1.64	0.68	1.83	3.11	4.1	31	8	1400	4.78	11.6	9.0	29.3	170	4.66	0.1	902	24.0
11s171598	108	13.9	0.6	4	0.050	0.84	1.60	0.63	0.97	3.07	3.9	32	10	1420	4.54	11.2	8.5	21.0	428	4.58	0.1	2450	22.3
11s171599	135	11.0	0.5	4	0.049	0.67	1.31	0.52	1.00	4.79	3.2	26	7	1560	4.07	9.6	7.3	21.9	457	3.78	< 0.1	925	19.2
11s171600	62	14.8	0.6	5	0.041	0.63	1.59	0.61	1.00	2.86	2.6	20	9	932	4.82	9.8	7.1	29.7	412	4.01	< 0.1	518	20.3
11s171601	< 5	14.5	0.4	4	0.045	0.92	1.53	0.36	0.61	3.42	3.7	29	9	1310	3.98	12.3	13.6	28.8	934	4.36	< 0.1	532	11.3
11s171602	47	16.3	0.6	4	0.034	0.72	1.63	0.54	1.47	3.30	2.8	22	6	1100	4.71	9.4	7.7	30.2	396	4.14	< 0.1	1530	17.5
11s171603	17	13.2	0.5	4	0.044	0.66	1.42	0.60	1.01	4.10	2.8	24	9	1150	3.51	6.8	6.6	19.9	472	3.97	< 0.1	188	21.9
11s171604	13	20.8	0.5	6	0.054	0.84	1.90	0.56	0.93	3.11	4.6	34	6	957	4.41	10.2	6.3	22.9	924	5.86	< 0.1	590	18.4
11s171605	6	22.2	0.7	4	0.057	0.98	2.06	0.64	0.50	2.28	6.0	47	9	888	4.51	9.4	6.3	20.5	339	6.85	< 0.1	72.9	27.7
11s171606	15	16.8	0.6	4	0.062	0.80	1.91	0.60	0.79	2.59	5.4	40	5	889	4.16	9.1	5.7	17.9	837	6.45	< 0.1	312	22.4
11s171607	16	15.0	0.6	3	0.055	0.71	1.43	0.64	0.96	3.90	4.4	29	5	1020	3.91	8.8	5.7	21.9	854	4.79	< 0.1	378	25.6
11s171608	13	14.7	0.5	3	0.049	0.71	1.52	0.66	0.84	3.93	4.3	31	3	1120	3.99	8.6	5.5	22.8	1090	5.16	< 0.1	1080	26.5
11s171609	12	19.4	0.6	4	0.057	0.76	1.75	0.63	1.35	2.54	4.8	37	4	885	3.73	8.4	5.2	15.2	870	5.90	< 0.1	65.0	24.6
11s171610	10	14.9	0.5	4	0.054	0.73	1.64	0.81	0.41	2.86	4.4	36	7	944	3.71	9.0	5.6	13.8	812	5.06	< 0.1	21.7	32.6
11s171611	7	12.1	0.6	2	0.045	0.61	1.26	0.68	0.49	3.52	3.9	30	5	985	3.82	9.0	5.9	19.4	705	4.54	< 0.1	150	28.6
11s171612	11	12.9	0.4	3	0.067	0.70	1.34	0.57	0.38	3.09	4.4	39	7	934	3.83	9.0	5.7	17.2	405	5.16	< 0.1	58.8	25.1
11s171613	7	15.3	0.5	4	0.058	0.72	1.53	0.58	0.49	2.43	4.4	36	5	772	3.88	8.5	5.6	18.0	544	5.22	< 0.1	68.7	22.5
11s171614	23	17.4	0.7	7	0.051	0.75	1.68	0.56	1.01	3.37	4.4	43	6	936	3.94	8.7	6.4	18.3	824	5.49	< 0.1	89.9	24.2
11s171615	< 5	12.9	0.6	5	0.049	0.77	1.50	0.47	0.41	3.52	4.0	32	5	863	3.58	8.2	8.0	17.1	242	4.83	< 0.1	12.9	15.7
11s171616	9	9.6	0.5	5	0.045	0.67	1.29	0.40	0.65	3.70	2.6	22	3	785	3.96	7.6	5.3	20.6	258	3.64	< 0.1	36.5	13.2
11s171617	15	9.5	0.6	5	0.042	0.67	1.40	0.53	0.55	3.10	2.4	20	3	823	4.00	8.6	5.8	27.7	226	3.62	< 0.1	35.0	16.9
11s171618	16	7.3	0.6	4	0.045	0.39	0.93	0.35	0.38	4.34	2.4	13	4	861	3.28	7.8	5.7	26.0	152	2.28	< 0.1	34.0	11.9
11s171619	17	10.2	0.5	4	0.047	0.63	1.20	0.34	0.39	5.08	3.0	21	8	1090	3.41	8.1	6.1	24.3	175	3.29	< 0.1	56.7	11.6
11s171620	27	16.0	0.8	3	0.052	0.87	1.86	0.44	0.44	4.08	5.4	38	5	1120	4.04	9.2	5.9	21.0	232	5.72	< 0.1	20.5	15.7
11s171621	24	13.9	0.6	4	0.050	0.70	1.71	0.70	0.75	2.90	4.3	32	4	698	3.79	9.1	5.9	19.4	222	5.10	< 0.1	54.4	25.9
11s171622	840	3.3	0.3	4	0.060	0.13	0.82	0.34	2.68	0.96	0.7	13	13	301	1.39	5.1	8.9	4520	27.2	2.96	< 0.1	11.6	7.9
11s171623	10	15.8	0.6	3	0.051	0.81	1.89	0.80	0.50	3.12	4.9	36	4	790	3.57	7.9	5.5	32.4	218	5.68	< 0.1	16.5	30.6
11s171624	41	11.6	0.5	3	0.047	0.70	1.43	0.56	0.37	3.06	3.7	28	4	787	3.18	7.5	5.1	21.1	134	4.50	< 0.1	15.3	20.1
11s171625	16	16.7	0.6	3	0.055	0.82	1.93	0.66	0.39	2.72	5.5	41	5	736	3.72	8.4	5.5	29.1	175	6.63	< 0.1	27.1	27.4
11s171626	21	15.8	0.6	3	0.056	0.83	1.68	0.68	0.46	3.99	4.6	37	8	912	3.50	7.9	5.7	30.8	278	5.31	< 0.1	41.7	29.4
11s171627	< 5	0.8	0.1	2	0.022	0.02	0.14	0.01	< 0.02	0.02	< 0.1	2	1	19	0.17	0.5	2.0	1.07	4.3	0.37	< 0.1	1.8	0.8
11s171628	15	17.4	0.6	3	0.054	0.78	1.84	0.61	0.45	2.83	5.0	38	5	768	3.78	8.2	5.2	28.9	365	6.31	< 0.1	41.2	26.4
11s171629	15	14.1	0.5	4	0.055	0.67	1.57	0.75	0.60	4.77	4.5	32	6	1110	3.81	9.0	6.2	33.3	279	5.07	0.1	36.5	29.7
11s171630	91	11.5	0.5	2	0.042	0.60	1.43	0.55	0.84	2.74	4.3	28	3	767	4.41	9.0	5.9	32.7	247	4.56	0.1	63.3	21.7
11s171631	37	11.4	0.5	4	0.043	0.56	1.31	0.44	0.55	3.89	3.3	20	3	843	4.01	11.1	5.9	43.7	230	3.91	< 0.1	82.9	15.8
11s171632	41	11.4	0.6	4	0.049	0.70	1.40	0.47	0.60	3.83	4.2	26	3	911	3.98	9.3	5.9	39.9	203	4.21	< 0.1	41.9	16.9
11s171633	41	11.0	0.5	4	0.053	0.66	1.37	0.57	1.02	3.61	3.6	27	5	835	3.97	8.9	5.6	42.8	208	3.92	< 0.1	60.0	21.2
11s171634	33	10.8	0.5	3	0.046	0.61	1.29	0.46	2.63	4.22	2.8	21	5	922	4.13	8.7	5.6	42.4	153	3.28	< 0.1	75.0	14.8
11s171635	27	12.2	0.6	3	0.056	0.76	1.58	0.55	0.92	3.29	3.9	30	4	822	4.08	9.7	5.5	47.5	232	4.62	< 0.1	59.2	20.3
11s171636	30	13.5	0.4	3	0.053	0.89	2.03	0.82	0.80	2.96	5.5	41	5	691	3.69	8.7	5.4	61.2	557	6.60	< 0.1	54.2	34.0
11s171637	62	11.8	0.3	4	0.049	0.69	1.59	0.61	1.04	3.22	4.1	31	4	715	3.61	8.9	5.4	82.0	919	4.77	< 0.1	98.3	23.1
11s171638	59	11.4	0.4	4	0.053	0.71	1.71	0.73	1.39	2.94	4.6	33	4	649	4.32	9.3	5.6	52.5	230	5.24	< 0.1	60.1	30.2
11s171639	59	18.1	0.4	6	0.065	0.82	1.94	0.87	0.83	1.86	4.8	37	6	481	3.93	9.8	5.7	90.0	121	5.44	< 0.1	59.9	35.1
11s171640	65	16.8	0.3	4	0.060	0.82	1.80	0.95	0.73	1.55	4.4	38	5	499	3.61	9.0	7.4	106	209	5.07	< 0.1	57.9	39.2
11s171641	41	12.2	0.3	4	0.054	0.74	1.55	0.81	1.33	2.15	4.3	34	5	590	4.43	10.2	5.5	76.8	161	4.79	< 0.1	81.8	33.9
11s171642	55	10.8	0.4	3	0.049	0.69	1.26	0.68	1.95	2.41	3.2	28	4	610	4.43	9.2	5.4	102	85.7	4.08	0.1	77.3	28.9
11s171643	38	11.2	0.3	3	0.055	0.70	1.27	0.73	1.02	2.68	3.2	29	5	629	4.23	9.1	5.3	55.4	105	4.00	< 0.1	50.7	31.0
11s171644	91	12.2	0.3	3	0.050	0.68	1.47	0.76	1.46	2.78	3.5	31	12	848	4.60	9.8	6.6	84.4	150	4.07	< 0.1	138	31.7

Analyte Symbol	Au	Li	Be	B	Na	Mg	Al	K	Bi	Ca	Sc	V	Cr	Mn	Fe	Co	Ni	Cu	Zn	Ga	Ge	As	Rb
Unit Symbol	ppb	ppm	ppm	ppm	%	%	%	%	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	5	0.1	0.1	1	0.001	0.01	0.01	0.01	0.02	0.01	0.1	1	1	1	0.01	0.1	0.1	0.01	0.1	0.02	0.1	0.1	0.1
Analysis Method	FA-AA	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS
11s171645	58	11.7	0.4	3	0.052	0.82	1.44	0.55	0.61	2.75	3.5	33	6	635	3.72	8.6	5.7	118	90.7	4.56	< 0.1	47.7	23.9
11s171646	42	21.6	0.6	5	0.089	1.39	1.69	0.52	0.73	3.27	5.4	56	51	656	3.86	11.3	33.0	50.7	74.2	6.09	0.1	62.1	23.5
11s171647	38	10.7	0.4	4	0.052	0.70	1.33	0.41	0.83	2.72	2.9	29	4	682	4.16	9.8	5.7	98.4	68.9	4.05	< 0.1	50.6	15.9
11s171648	870	3.0	0.3	4	0.064	0.13	0.82	0.34	2.52	0.97	0.7	14	14	304	1.40	5.2	8.7	4650	25.4	2.95	< 0.1	11.7	8.0
11s171649	10	9.4	0.4	4	0.062	0.58	1.39	0.46	0.40	3.39	2.1	18	5	817	3.06	6.7	5.3	46.2	63.1	3.81	< 0.1	14.6	13.7
11s171650	101	9.1	0.3	6	0.072	0.65	1.70	0.34	0.19	3.16	2.5	20	6	887	2.44	5.3	4.6	3.25	54.5	4.84	< 0.1	11.6	10.7
11s171651	106	7.8	0.3	3	0.054	0.47	1.30	0.40	0.54	3.41	1.8	14	4	883	2.55	5.4	4.3	3.26	49.5	3.47	< 0.1	11.8	13.5
11s171652	91	6.4	0.3	3	0.057	0.47	1.22	0.38	0.38	3.71	1.6	13	3	920	2.43	5.7	4.6	9.24	58.9	3.31	< 0.1	9.3	13.5
11s171653	32	7.1	0.3	5	0.056	0.59	1.30	0.33	0.17	3.63	1.8	15	4	994	2.49	5.4	4.9	2.23	77.9	3.97	< 0.1	6.5	11.7
11s171654	< 5	42.8	0.9	3	0.172	4.86	3.50	0.66	0.07	4.59	14.2	125	200	1010	5.64	36.2	209	27.9	70.0	9.27	0.2	4.2	32.9
11s171655	34	6.2	0.3	3	0.055	0.53	1.19	0.37	0.46	2.41	1.6	15	8	623	2.45	5.4	7.5	7.37	50.8	3.54	< 0.1	11.9	16.4
11s171656	254	4.6	0.4	4	0.040	0.24	1.11	0.52	0.49	3.79	1.0	10	3	986	2.38	4.9	4.5	5.85	68.6	2.35	< 0.1	37.1	20.3
11s171657	142	6.7	0.3	5	0.042	0.44	1.36	0.51	1.41	4.07	1.6	19	2	947	2.99	7.1	4.0	16.7	494	3.13	< 0.1	44.0	20.5
11s171658	36	6.8	0.3	4	0.057	0.45	1.26	0.39	0.51	2.95	2.0	15	3	807	2.24	5.1	4.1	4.77	47.3	3.62	< 0.1	9.1	17.9
11s171659	93	9.5	0.4	6	0.075	0.64	1.76	0.41	0.26	2.85	2.7	23	8	987	2.31	6.0	5.5	16.2	335	5.04	< 0.1	13.9	19.5
11s171660	73	9.3	0.3	4	0.085	0.74	1.34	0.53	1.67	2.93	2.9	29	4	682	4.10	8.2	5.4	109	100	4.29	< 0.1	44.5	26.5
11s171661	46	9.9	0.4	6	0.071	0.78	1.67	0.50	1.08	3.39	2.6	24	5	705	4.20	9.6	5.9	118	121	4.10	< 0.1	92.8	16.6
11s171662	62	8.8	0.4	8	0.061	0.49	1.43	0.73	1.24	3.21	3.3	24	3	540	3.96	9.2	5.5	146	65.6	3.63	< 0.1	37.3	28.0
11s171663	55	11.5	0.4	5	0.075	0.77	1.57	0.75	0.96	2.62	4.4	36	7	522	3.26	8.7	5.3	218	98.5	4.90	< 0.1	27.9	31.7
11s171664	52	13.1	0.5	5	0.092	0.81	1.73	0.87	0.51	2.38	5.3	42	6	491	3.91	10.2	6.0	145	62.8	5.74	< 0.1	25.6	36.1
11s171665	53	12.5	0.5	7	0.072	0.76	1.65	0.83	0.66	2.59	4.7	36	8	498	3.37	9.3	6.6	162	56.8	5.24	< 0.1	23.0	36.5
11s171666	113	3.3	0.3	3	0.060	0.12	0.79	0.45	0.79	2.44	2.1	14	2	450	3.45	8.8	5.3	164	25.9	2.20	< 0.1	28.7	15.6
11s171667	75	10.9	0.4	3	0.043	0.58	1.34	0.80	0.79	2.59	2.9	26	6	573	3.83	11.4	6.6	344	61.7	4.06	< 0.1	24.2	44.1
11s171668	75	6.9	0.4	4	0.053	0.45	0.95	0.56	1.79	2.48	2.7	23	5	473	5.14	12.5	6.8	278	34.5	3.31	< 0.1	30.6	28.3
11s171669	163	8.4	0.5	5	0.053	0.45	1.27	0.77	0.96	2.00	3.0	24	4	347	4.43	10.0	5.6	254	36.1	3.98	< 0.1	33.6	35.8
11s171670	79	11.3	0.5	3	0.050	0.71	1.36	0.68	1.05	3.60	3.9	28	4	540	3.70	10.0	5.2	240	50.2	4.11	0.1	19.9	32.5
11s171671	49	13.1	0.6	4	0.064	0.70	1.66	0.87	0.66	2.94	4.7	36	18	485	3.58	11.8	14.0	284	47.9	5.10	< 0.1	17.1	36.2
11s171672	216	13.6	0.6	3	0.067	0.70	1.62	0.76	0.73	2.81	4.4	34	5	453	3.74	10.2	5.4	271	43.0	4.94	< 0.1	14.6	31.0
11s171673	185	13.9	0.5	2	0.050	0.69	1.32	0.55	0.55	2.60	3.1	29	14	416	3.64	9.4	9.1	280	42.4	3.95	< 0.1	12.6	22.1
11s171674	151	10.3	0.5	2	0.043	0.56	1.16	0.49	0.45	3.39	2.2	18	2	459	3.10	7.8	5.0	133	37.4	3.11	< 0.1	9.1	19.9
11s171675	146	12.3	0.5	2	0.062	0.57	1.42	0.62	0.67	2.65	3.0	26	4	424	3.05	8.8	5.0	159	48.5	4.28	< 0.1	10.5	25.7
11s171676	< 5	0.8	< 0.1	< 1	0.018	0.02	0.09	0.01	< 0.02	0.02	0.1	2	< 1	15	0.15	0.5	1.4	0.43	2.2	0.29	< 0.1	0.7	0.9
11s171677	457	11.2	0.4	2	0.052	0.61	1.29	0.60	0.50	2.74	3.3	29	7	460	3.61	9.4	4.5	341	54.2	4.45	< 0.1	18.7	26.8
11s171678	150	9.2	0.4	3	0.046	0.46	1.21	0.59	0.55	3.09	2.9	22	2	528	3.07	7.9	4.3	345	59.7	3.65	< 0.1	15.8	24.5
11s171679	251	6.1	0.3	3	0.038	0.29	0.98	0.61	0.57	2.88	2.3	16	3	472	2.67	8.4	4.9	348	24.7	2.48	< 0.1	15.2	23.0
11s171680	187	13.4	0.4	5	0.043	0.54	1.42	0.57	0.41	3.22	3.8	26	3	539	3.18	9.0	5.1	370	43.4	3.98	< 0.1	14.8	24.0
11s171681	74	11.2	0.5	6	0.056	0.61	1.60	0.71	0.60	2.76	4.7	31	3	507	3.09	9.0	5.0	384	53.1	4.87	< 0.1	12.6	29.8
11s171682	83	12.2	0.5	7	0.045	0.66	1.52	0.59	0.30	2.91	4.4	30	5	593	2.95	8.3	5.1	366	67.5	4.48	< 0.1	8.6	24.7
11s171684	86	21.2	0.6	4	0.053	1.07	1.78	0.58	0.37	3.69	5.5	44	33	639	3.77	11.4	19.0	468	69.4	5.38	< 0.1	12.6	22.4
11s171685	349	15.4	0.4	4	0.044	0.69	1.48	0.42	0.39	2.65	4.1	30	4	515	3.81	9.2	5.2	439	63.7	4.45	< 0.1	9.8	16.9
11s171686	71	16.4	0.6	6	0.069	0.78	1.92	0.65	0.35	3.49	4.8	36	6	632	3.15	8.6	5.2	378	59.7	5.59	< 0.1	7.7	24.6
11s171687	367	13.0	0.4	4	0.045	0.65	1.34	0.42	0.42	3.42	3.6	26	4	588	3.15	9.1	5.3	349	51.8	3.83	< 0.1	6.0	16.6
11s171688	185	13.2	0.6	5	0.053	0.78	1.69	0.67	0.44	4.23	4.0	31	4	662	3.41	8.2	5.3	427	58.9	4.83	< 0.1	6.8	24.7
11s171689	62	10.2	0.5	5	0.053	0.80	1.82	0.95	0.32	3.47	4.8	33	3	602	3.38	9.2	5.3	335	55.8	4.68	< 0.1	8.5	40.3
11s171690	100	11.7	0.5	5	0.048	0.62	1.65	0.89	0.54	2.89	4.0	29	3	564	3.37	9.1	5.1	466	426	4.27	< 0.1	10.5	36.1
11s171691	82	12.4	0.5	4	0.053	0.74	1.66	0.90	0.35	2.74	4.2	31	3	506	3.48	9.0	5.0	536	55.1	4.58	< 0.1	8.3	38.6
11s171692	63	10.8	0.4	7	0.075	0.55	1.59	0.75	0.46	3.16	3.1	24	4	526	3.03	7.4	4.4	251	59.1	4.54	< 0.1	8.8	27.4
11s171693	36	11.9	0.5	5	0.057	0.55	1.38	0.74	0.46	3.17	3.0	22	3	513	2.62	7.8	4.7	131	61.5	3.58	< 0.1	9.1	27.7

## Results

Analyte Symbol	Sr	Y	Zr	Nb	Mo	Ag	In	Sn	Sb	Te	Cs	Ba	La	Ce	Cd	Pr	Nd	Sm	Se	Eu	Gd	Tb	Dy	
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	0.5	0.01	0.1	0.1	0.01	0.002	0.02	0.05	0.02	0.02	0.02	0.5	0.5	0.01	0.01	0.1	0.02	0.1	0.1	0.1	0.1	0.1	0.1	
Analysis Method	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS
11s171596	124	18.8	2.2	0.2	1.80	0.891	0.04	0.73	0.79	0.76	0.71	33.4	23.2	45.0	3.79	5.3	20.1	4.1	1.2	1.2	4.3	0.6	4.0	
11s171597	116	18.4	3.5	0.4	1.11	2.25	0.04	0.71	1.16	7.01	0.75	37.9	23.5	44.8	1.54	5.2	20.0	3.9	1.6	1.1	4.3	0.6	3.8	
11s171598	114	16.7	4.8	0.6	1.12	1.66	0.06	0.77	1.16	4.89	0.58	35.9	20.9	40.1	3.88	4.7	17.9	3.5	1.0	1.0	3.8	0.5	3.5	
11s171599	196	17.5	3.2	0.3	1.07	1.52	0.06	0.99	1.46	3.88	0.62	48.8	22.0	41.6	4.99	4.8	18.4	3.6	1.0	1.0	3.9	0.6	3.6	
11s171600	136	18.8	2.7	< 0.1	1.52	1.56	0.05	0.57	1.05	2.08	0.50	39.1	25.8	49.6	4.14	5.7	21.9	4.3	1.3	1.2	4.7	0.6	4.1	
11s171601	176	14.3	3.3	0.4	0.83	0.938	0.08	0.69	9.24	0.32	0.22	53.5	19.5	37.0	8.65	4.2	16.3	3.2	1.2	1.0	3.3	0.5	3.0	
11s171602	217	16.6	3.4	< 0.1	1.39	1.47	0.06	1.33	1.69	3.48	0.34	53.1	19.7	38.6	3.89	4.5	17.2	3.4	1.5	1.0	3.7	0.5	3.4	
11s171603	186	17.0	1.9	< 0.1	1.44	1.12	0.05	0.59	0.77	0.62	0.62	65.2	21.8	41.9	4.73	4.9	18.5	3.8	1.0	1.1	4.0	0.6	3.5	
11s171604	183	20.1	2.4	< 0.1	1.58	1.01	0.10	1.48	1.85	0.97	0.43	48.4	25.5	49.9	8.91	5.9	23.1	4.7	1.5	1.3	4.9	0.7	4.3	
11s171605	128	16.3	3.0	< 0.1	0.92	0.651	0.07	1.00	1.32	0.19	1.31	35.9	20.5	39.8	2.41	4.6	17.5	3.5	0.8	1.0	3.8	0.5	3.5	
11s171606	139	17.8	2.7	0.1	0.84	0.773	0.08	0.96	1.90	0.48	0.70	53.1	17.3	33.9	6.87	4.0	15.5	3.2	1.1	1.0	3.6	0.6	3.7	
11s171607	183	18.9	2.1	< 0.1	1.52	0.776	0.07	0.83	1.76	0.56	0.95	46.1	21.6	41.3	8.32	4.8	18.6	3.7	1.1	1.1	4.1	0.6	3.9	
11s171608	177	16.7	3.5	< 0.1	1.59	0.816	0.10	0.80	1.57	0.86	0.89	49.1	17.6	34.6	10.6	4.1	15.7	3.3	1.3	1.0	3.7	0.5	3.5	
11s171609	157	14.3	2.7	< 0.1	0.73	1.04	0.09	0.78	0.94	0.33	0.84	56.6	15.9	31.0	8.63	3.6	14.0	3.0	1.3	0.9	3.4	0.5	3.1	
11s171610	145	13.5	3.7	0.8	0.83	0.672	0.06	0.85	1.11	0.19	1.45	59.3	12.9	25.5	6.95	3.0	11.9	2.6	1.0	0.7	2.8	0.4	2.8	
11s171611	176	17.1	3.6	0.1	2.35	0.598	0.06	1.30	1.28	0.30	1.01	47.4	16.5	32.6	6.16	3.8	15.1	3.2	1.5	0.9	3.6	0.5	3.4	
11s171612	180	14.6	4.6	0.5	3.15	0.487	0.06	1.38	0.81	0.15	0.88	54.4	15.1	29.6	3.39	3.5	13.7	2.9	1.0	0.8	3.2	0.5	3.0	
11s171613	97.3	16.4	3.7	0.3	0.89	0.554	0.08	1.09	0.91	0.21	0.64	47.7	16.6	32.5	4.15	3.9	15.1	3.2	1.1	1.0	3.5	0.5	3.4	
11s171614	159	15.0	3.0	< 0.1	1.50	0.544	0.10	0.89	1.65	0.23	1.05	45.9	17.9	35.7	7.50	4.2	16.4	3.3	1.5	0.9	3.6	0.5	3.2	
11s171615	210	15.7	2.2	< 0.1	0.61	0.485	0.04	0.67	0.95	0.13	0.55	72.7	22.0	41.6	2.19	4.8	18.7	3.8	0.8	1.1	4.0	0.6	3.4	
11s171616	220	19.9	2.1	< 0.1	0.61	0.627	0.04	1.05	1.07	0.25	0.41	64.0	22.1	42.7	2.17	4.9	19.3	4.0	1.3	1.2	4.3	0.6	4.0	
11s171617	197	16.2	2.7	< 0.1	1.00	0.639	0.04	0.51	0.87	0.23	1.31	46.7	21.2	41.3	1.89	4.8	18.4	3.8	1.5	1.1	4.1	0.6	3.6	
11s171618	344	9.19	2.6	< 0.1	1.40	0.588	0.04	0.41	0.49	0.18	0.26	75.7	8.6	17.1	1.21	2.0	8.06	1.8	1.1	0.6	2.0	0.3	1.9	
11s171619	390	11.6	2.4	< 0.1	1.52	0.614	0.04	0.60	0.73	0.18	0.38	74.4	14.0	27.3	1.53	3.2	12.8	2.7	1.2	0.8	2.9	0.4	2.6	
11s171620	228	18.3	3.0	< 0.1	1.08	0.578	0.07	1.03	1.46	0.16	0.73	69.8	21.0	41.4	1.88	4.9	19.3	4.1	1.9	1.2	4.5	0.6	4.1	
11s171621	179	14.5	3.6	< 0.1	0.74	0.512	0.06	1.06	0.97	0.18	1.12	40.7	16.2	31.9	2.48	3.7	14.8	3.2	2.3	0.9	3.4	0.5	3.1	
11s171622	249	3.57	1.3	< 0.1	531	14.6	0.03	1.16	35.1	5.23	0.87	25.3	6.2	13.8	< 0.01	1.6	6.23	1.2	0.2	0.3	1.0	0.1	0.7	
11s171623	186	16.9	4.0	< 0.1	1.77	1.36	0.05	0.81	0.87	0.15	1.49	52.0	18.2	35.8	1.98	4.3	16.9	3.6	2.0	1.0	3.8	0.5	3.5	
11s171624	165	15.2	3.3	< 0.1	1.29	0.616	0.05	0.61	0.75	0.13	0.70	60.1	17.2	34.2	1.06	4.0	15.7	3.3	1.5	0.9	3.5	0.5	3.2	
11s171625	203	17.0	3.9	< 0.1	1.87	0.564	0.06	0.93	1.10	0.12	1.21	47.3	20.0	39.4	1.26	4.7	18.2	3.8	1.9	1.0	4.0	0.6	3.6	
11s171626	512	15.8	4.1	< 0.1	2.23	0.553	0.07	0.99	0.82	0.17	1.36	73.7	19.8	38.8	2.48	4.5	17.6	3.7	2.3	1.0	3.8	0.5	3.3	
11s171627	5.2	0.73	0.6	< 0.1	0.24	0.265	< 0.02	0.70	< 0.02	0.04	0.06	14.1	3.0	6.61	0.03	0.7	2.30	0.4	< 0.1	< 0.1	0.3	< 0.1	0.2	
11s171628	210	16.4	3.2	< 0.1	1.04	0.477	0.08	0.91	1.20	0.26	1.10	41.9	19.4	38.7	3.99	4.6	17.7	3.7	2.3	1.0	3.8	0.5	3.4	
11s171629	214	18.4	3.3	< 0.1	2.05	0.540	0.08	0.97	0.94	0.18	0.88	53.3	21.3	43.2	2.66	5.1	19.8	4.1	2.3	1.1	4.3	0.6	3.9	
11s171630	141	16.6	3.6	< 0.1	2.66	0.666	0.06	0.96	0.87	0.21	0.62	30.4	23.3	45.6	2.55	5.3	20.3	4.1	3.1	1.1	4.1	0.6	3.5	
11s171631	309	10.2	2.5	< 0.1	6.86	0.561	0.06	0.60	0.52	0.12	0.27	39.6	11.7	23.2	3.20	2.7	10.5	2.2	2.0	0.7	2.4	0.3	2.1	
11s171632	245	13.3	3.0	< 0.1	11.0	0.603	0.06	0.75	0.83	0.15	0.41	57.5	17.2	34.1	2.29	4.0	15.4	3.2	2.2	0.9	3.3	0.5	2.9	
11s171633	154	15.9	2.4	< 0.1	7.18	0.613	0.06	1.05	0.81	0.18	0.57	33.4	21.8	43.8	2.69	5.2	20.1	4.1	3.3	1.1	4.2	0.6	3.5	
11s171634	216	13.4	2.2	< 0.1	8.92	1.38	0.04	0.65	0.73	0.30	0.29	46.5	18.1	36.0	3.12	4.2	16.4	3.4	3.3	1.0	3.5	0.5	2.9	
11s171635	239	15.0	3.0	< 0.1	3.83	0.764	0.04	0.76	1.29	0.30	0.63	41.9	16.9	34.2	2.38	4.0	15.9	3.3	2.5	1.0	3.6	0.5	3.3	
11s171636	239	18.6	2.9	< 0.1	2.96	0.468	0.06	1.00	1.24	0.17	1.49	35.7	17.9	36.1	5.06	4.3	16.9	3.5	2.4	1.0	4.0	0.6	3.7	
11s171637	240	14.9	2.2	< 0.1	6.48	1.18	0.09	0.72	1.22	0.37	0.70	33.9	16.6	33.5	18.2	4.0	15.4	3.2	2.9	0.9	3.4	0.5	3.1	
11s171638	237	15.0	2.6	< 0.1	4.30	0.846	0.04	0.94	0.89	0.43	1.21	28.5	15.9	32.4	2.73	3.9	15.8	3.4	3.7	0.9	3.6	0.5	3.2	
11s171639	274	14.8	2.9	< 0.1	5.16	0.541	0.04	1.05	0.75	0.33	1.09	31.9	16.5	33.9	0.85	4.0	16.0	3.3	2.7	0.8	3.6	0.5	3.1	
11s171640	151	13.5	3.6	0.6	9.70	0.462	0.04	1.23	0.72	0.26	1.11	27.6	13.5	28.6	1.70	3.4	13.7	2.9	2.8	0.7	3.0	0.4	2.8	
11s171641	140	13.7	3.0	0.2	13.6	0.676	0.04	1.08	0.56	0.46	0.93	26.3	14.2	29.7	1.46	3.6	14.4	3.1	2.9	0.8	3.3	0.5	2.9	
11s171642	133	14.2	2.4	0.3	14.5	0.873	0.04	0.97	0.49	0.40	1.23	29.4	13.8	28.3	0.68	3.3	13.4	2.9	3.7	0.8	3.1	0.4	2.9	
11s171643	123	14.4	2.6	0.2	6.51	0.648	0.03	1.04	0.36	0.31	1.10	34.4	14.4	29.3	1.04	3.5	13.8	3.0	3.7	0.8	3.2	0.5	3.0	
11s171644	130	14.8	3.2	0.6	8.70	0.643	0.04	1.11	0.61	0.45	0.93	28.7	14.5	29.8	1.59	3.5	14.0	2.9	3.4	0.8	3.2	0.5	2.9	

Analyte Symbol	Sr	Y	Zr	Nb	Mo	Ag	In	Sn	Sb	Te	Cs	Ba	La	Ce	Cd	Pr	Nd	Sm	Se	Eu	Gd	Tb	Dy
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	0.5	0.01	0.1	0.1	0.01	0.002	0.02	0.05	0.02	0.02	0.02	0.5	0.5	0.01	0.01	0.1	0.02	0.1	0.1	0.1	0.1	0.1	0.1
Analysis Method	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS
11s171645	174	16.8	2.6	0.3	8.98	0.517	0.04	1.07	0.56	0.16	1.16	31.8	17.5	36.1	0.46	4.2	16.8	3.5	3.1	0.9	3.7	0.5	3.4
11s171646	200	16.9	5.5	0.3	6.54	0.502	0.06	1.23	0.86	0.20	1.20	30.3	20.7	44.6	0.37	5.5	21.9	4.4	2.5	1.1	4.3	0.6	3.6
11s171647	139	17.1	2.3	0.2	7.73	0.523	0.05	0.85	0.88	0.16	0.55	32.6	20.3	39.9	0.42	4.6	18.0	3.7	2.9	1.1	3.8	0.6	3.5
11s171648	261	3.64	1.4	< 0.1	521	14.4	0.03	1.07	39.7	5.22	0.81	26.9	6.2	14.0	< 0.01	1.6	6.29	1.1	0.3	0.3	1.0	0.1	0.7
11s171649	152	16.4	1.7	< 0.1	3.85	1.03	0.03	0.67	0.92	0.17	0.20	61.5	20.2	38.7	0.40	4.4	16.9	3.4	1.9	1.0	3.6	0.5	3.4
11s171650	225	12.8	1.1	< 0.1	0.68	0.269	0.03	0.49	0.85	< 0.02	0.29	104	14.6	29.0	0.06	3.4	13.5	2.7	0.5	0.7	2.8	0.4	2.4
11s171651	161	14.8	1.5	< 0.1	0.68	0.331	0.02	0.41	1.01	0.11	0.25	94.8	15.6	31.5	0.13	3.7	14.7	3.1	0.8	0.9	3.4	0.5	3.1
11s171652	235	16.5	2.1	< 0.1	0.61	0.367	0.02	0.43	1.37	0.07	0.20	93.0	17.3	34.5	0.22	4.1	15.8	3.4	0.7	1.0	3.6	0.5	3.2
11s171653	232	13.5	1.4	< 0.1	0.49	0.242	0.02	0.34	1.16	< 0.02	0.17	74.2	16.8	33.9	0.17	3.9	15.6	3.2	0.5	0.9	3.2	0.4	2.8
11s171654	479	12.9	1.0	< 0.1	0.28	0.234	0.03	0.48	< 0.02	< 0.02	2.57	135	15.5	36.2	0.14	4.8	20.3	4.2	0.2	1.2	3.9	0.5	2.9
11s171655	156	9.05	1.6	< 0.1	0.91	0.247	< 0.02	0.35	0.25	0.09	0.22	48.6	11.9	23.5	0.24	2.6	10.2	2.1	0.7	0.6	2.1	0.3	1.8
11s171656	176	7.16	2.5	< 0.1	0.64	0.387	< 0.02	0.29	0.46	0.09	0.48	65.2	10.9	21.9	0.75	2.5	10.1	2.0	0.6	0.6	1.9	0.2	1.5
11s171657	199	7.69	2.6	< 0.1	0.63	0.843	0.10	0.36	0.58	0.15	0.35	49.2	12.6	25.1	4.91	2.9	11.3	2.2	1.1	0.7	2.2	0.3	1.7
11s171658	292	10.8	1.7	< 0.1	0.39	0.357	0.03	0.31	1.10	< 0.02	0.39	79.4	13.1	26.3	0.07	3.0	11.8	2.4	0.4	0.7	2.4	0.3	2.2
11s171659	258	11.6	1.8	< 0.1	0.80	0.492	0.04	0.60	1.99	< 0.02	0.71	78.7	13.9	28.0	3.91	3.2	12.5	2.5	0.3	0.7	2.5	0.4	2.3
11s171660	147	15.1	2.7	< 0.1	16.3	0.757	0.08	0.69	0.50	0.19	1.09	33.7	19.9	41.0	0.74	4.8	19.1	3.8	2.8	1.1	3.9	0.5	3.4
11s171661	211	15.5	2.7	< 0.1	9.01	0.806	0.05	0.80	0.90	0.17	0.34	38.1	21.4	41.7	1.44	4.8	18.6	3.8	2.5	1.1	3.9	0.6	3.5
11s171662	246	15.6	2.9	< 0.1	46.0	0.698	0.10	0.90	0.43	0.19	1.02	34.1	19.3	39.7	0.45	4.7	18.6	3.8	3.7	1.0	4.0	0.6	3.6
11s171663	204	14.6	3.9	0.2	47.8	0.733	0.11	1.12	1.24	0.06	1.68	41.0	17.0	34.9	0.68	4.1	16.3	3.3	2.8	0.9	3.4	0.5	3.2
11s171664	212	12.9	3.1	< 0.1	16.3	0.567	0.04	1.06	1.49	0.04	1.86	34.5	17.0	35.2	0.28	4.2	16.2	3.3	2.7	0.9	3.4	0.5	3.1
11s171665	177	14.4	3.0	< 0.1	9.83	0.640	0.05	0.97	1.00	0.09	1.50	44.5	19.4	39.0	0.22	4.6	18.0	3.6	2.2	1.0	3.7	0.5	3.2
11s171666	104	12.0	1.9	< 0.1	17.5	1.72	0.03	0.78	3.10	0.20	0.61	36.9	15.8	31.8	0.31	3.6	14.3	2.9	3.4	0.8	3.0	0.4	2.6
11s171667	180	15.3	1.7	< 0.1	12.5	1.36	0.07	1.31	1.15	0.15	2.79	28.6	19.6	40.6	0.43	4.7	18.7	3.7	4.2	1.0	3.8	0.5	3.3
11s171668	187	14.7	1.9	< 0.1	90.1	1.27	0.04	1.04	0.68	0.21	1.40	24.5	14.9	30.1	0.28	3.5	13.7	2.8	5.6	0.8	2.8	0.4	2.8
11s171669	217	13.0	2.0	< 0.1	29.2	0.858	0.04	1.07	0.67	0.19	1.47	21.1	17.3	35.8	0.25	4.1	16.1	3.2	5.9	0.8	3.3	0.4	2.8
11s171670	271	17.2	3.5	< 0.1	21.7	0.997	0.05	0.95	0.68	0.09	2.49	41.4	29.5	55.6	0.31	6.0	22.3	4.2	4.1	1.1	4.1	0.6	3.6
11s171671	207	13.2	3.2	< 0.1	18.5	0.717	0.05	1.04	0.88	0.10	1.84	34.8	25.5	50.3	0.23	5.5	20.5	3.7	3.4	1.0	3.6	0.5	2.9
11s171672	186	14.8	3.0	< 0.1	15.3	0.819	0.08	1.79	0.71	0.06	1.34	26.6	28.1	54.7	0.26	6.1	22.8	4.2	3.5	1.2	4.0	0.5	3.4
11s171673	162	11.7	2.6	< 0.1	32.7	0.766	0.04	0.76	0.48	0.03	0.84	31.7	18.1	35.0	0.19	3.9	14.7	2.8	4.4	0.8	2.9	0.4	2.7
11s171674	281	15.5	2.6	< 0.1	11.4	0.643	< 0.02	0.68	0.41	0.08	0.85	41.9	21.1	41.7	0.26	4.7	18.0	3.4	3.1	0.9	3.6	0.5	3.3
11s171675	178	14.6	2.6	< 0.1	8.26	0.568	0.02	0.95	0.52	0.04	0.65	36.0	25.4	48.9	0.26	5.4	20.1	3.8	3.1	1.1	3.8	0.5	3.2
11s171676	5.2	0.99	0.5	< 0.1	0.11	0.189	< 0.02	0.18	< 0.02	< 0.02	0.08	12.6	3.6	6.09	< 0.01	0.9	3.08	0.5	< 0.1	< 0.1	0.4	< 0.1	0.2
11s171677	185	14.6	1.9	< 0.1	26.9	0.900	0.06	1.05	0.78	0.05	1.11	37.4	19.1	38.7	0.32	4.5	17.5	3.5	4.0	1.0	3.7	0.5	3.2
11s171678	205	15.3	1.3	< 0.1	11.4	1.08	0.05	0.93	1.01	0.12	0.83	40.5	16.7	34.0	0.95	4.0	16.0	3.4	3.2	1.0	3.6	0.5	3.4
11s171679	141	13.0	1.1	< 0.1	23.4	1.20	0.05	0.85	0.58	0.04	0.64	33.3	20.7	39.6	0.46	4.4	16.9	3.2	3.6	0.9	3.3	0.5	2.9
11s171680	198	14.3	1.6	< 0.1	29.3	0.993	0.05	1.15	1.27	0.08	0.96	51.4	21.4	41.7	0.31	4.8	18.2	3.7	3.8	1.0	3.8	0.5	3.3
11s171681	199	15.2	2.0	< 0.1	44.6	0.909	0.06	0.99	1.07	0.03	1.80	51.7	20.1	39.9	0.35	4.6	18.0	3.6	3.7	1.0	3.8	0.6	3.5
11s171682	213	15.0	1.9	< 0.1	32.1	0.785	0.04	0.89	0.85	< 0.02	1.39	61.6	18.6	37.2	0.29	4.3	17.0	3.4	2.5	1.0	3.7	0.5	3.3
11s171684	248	16.7	4.3	0.1	22.2	0.951	0.05	0.81	0.74	0.04	1.16	47.3	25.7	51.9	0.29	6.2	24.3	4.6	3.1	1.3	4.6	0.6	3.9
11s171685	207	13.6	2.1	< 0.1	49.5	0.870	0.06	0.84	1.01	0.07	0.62	40.3	17.9	36.0	0.34	4.2	16.9	3.4	4.3	0.9	3.6	0.5	3.1
11s171686	258	16.4	2.4	< 0.1	14.2	0.777	0.04	0.86	0.81	< 0.02	0.78	51.0	19.6	39.6	0.35	4.8	18.7	3.9	2.4	1.0	4.1	0.6	3.7
11s171687	221	14.7	1.7	< 0.1	34.4	0.700	0.04	0.72	0.66	< 0.02	0.54	49.8	19.0	38.4	0.22	4.6	18.3	3.7	3.1	1.0	3.9	0.5	3.4
11s171688	230	18.8	1.7	< 0.1	24.3	0.737	0.05	0.87	0.76	< 0.02	0.65	38.7	19.2	38.0	0.31	4.5	17.5	3.5	3.1	1.0	3.8	0.6	3.9
11s171689	237	17.1	2.3	< 0.1	42.6	0.724	0.04	1.03	1.07	0.03	1.90	52.1	19.2	38.3	0.17	4.5	17.2	3.6	3.6	1.0	3.9	0.6	3.6
11s171690	213	15.3	2.1	< 0.1	39.6	0.868	0.05	1.38	1.04	0.06	1.48	44.0	20.5	40.6	6.32	4.8	18.8	3.8	3.5	1.0	4.1	0.6	3.6
11s171691	220	13.9	2.0	< 0.1	19.4	0.842	0.05	0.81	0.81	< 0.02	1.65	44.1	17.0	34.2	0.16	4.0	15.9	3.3	3.8	0.8	3.3	0.5	3.1
11s171692	241	16.2	1.8	< 0.1	17.2	0.634	0.05	0.89	0.79	0.03	1.02	51.2	16.1	32.3	0.26	3.8	15.1	3.2	3.0	0.9	3.6	0.5	3.4
11s171693	331	13.2	1.9	0.2	13.8	0.447	0.05	0.72	0.56	< 0.02	0.88	40.0	20.4	39.9	0.36	4.5	17.0	3.2	2.3	0.9	3.3	0.4	2.9

## Results

Analyte Symbol	Ho	Er	Tm	Yb	Lu	Hf	Ta	W	Re	Au	Tl	Pb	Th	U	Hg
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppb
Detection Limit	0.1	0.1	0.1	0.1	0.1	0.1	0.05	0.1	0.001	0.5	0.02	0.01	0.1	0.1	10
Analysis Method	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS
11s171596	0.8	2.2	0.3	1.5	0.2	< 0.1	< 0.05	0.2	< 0.001	13.9	0.35	43.9	5.6	1.2	30
11s171597	0.8	2.2	0.3	1.6	0.2	0.1	< 0.05	0.3	< 0.001	1160	0.35	46.5	6.1	1.2	< 10
11s171598	0.7	2.0	0.3	1.5	0.2	0.1	< 0.05	0.3	< 0.001	127	0.30	62.5	5.8	1.1	30
11s171599	0.7	2.1	0.3	1.5	0.2	< 0.1	< 0.05	0.2	< 0.001	155	0.31	36.4	5.4	0.9	< 10
11s171600	0.8	2.3	0.3	1.6	0.2	< 0.1	< 0.05	0.2	< 0.001	151	0.26	34.5	5.7	1.1	< 10
11s171601	0.6	1.8	0.2	1.3	0.2	0.1	< 0.05	< 0.1	< 0.001	1.8	0.15	58.7	6.2	1.3	110
11s171602	0.7	2.0	0.3	1.4	0.2	< 0.1	< 0.05	0.2	< 0.001	62.9	0.24	63.6	5.8	1.0	< 10
11s171603	0.7	2.1	0.3	1.5	0.2	< 0.1	< 0.05	< 0.1	< 0.001	18.1	0.29	69.6	5.6	0.9	20
11s171604	0.8	2.3	0.3	1.6	0.2	< 0.1	< 0.05	0.1	< 0.001	10.0	0.23	52.0	5.6	1.0	20
11s171605	0.7	2.0	0.3	1.4	0.2	0.1	< 0.05	< 0.1	0.001	6.4	0.35	9.74	4.8	0.9	< 10
11s171606	0.7	2.1	0.3	1.6	0.2	< 0.1	< 0.05	0.1	< 0.001	9.9	0.30	16.8	4.5	0.8	110
11s171607	0.8	2.2	0.3	1.5	0.2	< 0.1	< 0.05	0.3	< 0.001	19.1	0.35	34.6	4.8	0.8	50
11s171608	0.7	1.9	0.3	1.4	0.2	< 0.1	< 0.05	< 0.1	< 0.001	18.1	0.35	33.9	4.2	0.7	100
11s171609	0.6	1.7	0.2	1.2	0.2	< 0.1	< 0.05	< 0.1	< 0.001	7.1	0.35	94.0	4.4	0.7	60
11s171610	0.6	1.6	0.2	1.2	0.2	0.1	< 0.05	0.3	< 0.001	10.7	0.46	19.5	3.8	0.7	80
11s171611	0.7	2.0	0.3	1.4	0.2	0.1	< 0.05	0.2	0.001	11.5	0.37	22.9	4.2	0.7	80
11s171612	0.6	1.7	0.2	1.3	0.2	0.2	< 0.05	0.7	0.001	18.3	0.33	17.1	4.1	0.8	20
11s171613	0.7	1.9	0.3	1.4	0.2	0.1	< 0.05	0.2	< 0.001	5.9	0.29	22.5	4.5	0.8	30
11s171614	0.6	1.7	0.2	1.2	0.2	< 0.1	< 0.05	0.2	< 0.001	28.4	0.24	27.2	4.6	0.8	10
11s171615	0.7	1.8	0.2	1.3	0.2	< 0.1	< 0.05	< 0.1	< 0.001	3.1	0.21	17.0	4.7	0.6	< 10
11s171616	0.8	2.2	0.3	1.5	0.2	< 0.1	< 0.05	< 0.1	< 0.001	6.6	0.18	36.1	4.5	0.6	< 10
11s171617	0.7	2.0	0.3	1.4	0.2	< 0.1	< 0.05	< 0.1	< 0.001	21.1	0.24	21.0	5.1	0.7	< 10
11s171618	0.4	1.1	0.2	0.8	0.1	< 0.1	< 0.05	0.2	0.001	30.5	0.15	19.5	3.8	0.5	< 10
11s171619	0.5	1.4	0.2	1.1	0.2	< 0.1	< 0.05	< 0.1	< 0.001	34.1	0.14	18.8	3.9	0.6	< 10
11s171620	0.8	2.2	0.3	1.6	0.2	< 0.1	< 0.05	< 0.1	< 0.001	28.2	0.22	16.3	5.1	0.7	< 10
11s171621	0.6	1.7	0.2	1.3	0.2	0.1	< 0.05	< 0.1	< 0.001	26.5	0.29	23.0	4.1	0.8	< 10
11s171622	0.1	0.4	< 0.1	0.4	< 0.1	< 0.1	< 0.05	< 0.1	0.256	710	0.08	27.7	1.0	0.9	1980
11s171623	0.7	1.9	0.3	1.4	0.2	0.1	< 0.05	< 0.1	< 0.001	11.1	0.32	15.6	4.4	0.7	10
11s171624	0.6	1.8	0.2	1.3	0.2	< 0.1	< 0.05	< 0.1	< 0.001	7.0	0.22	12.9	4.2	0.6	10
11s171625	0.7	2.0	0.3	1.4	0.2	0.1	< 0.05	< 0.1	< 0.001	22.7	0.30	13.9	4.6	0.7	< 10
11s171626	0.7	1.8	0.3	1.3	0.2	< 0.1	< 0.05	0.3	< 0.001	25.6	0.34	18.4	4.4	0.7	20
11s171627	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.05	< 0.1	< 0.001	< 0.5	0.03	0.79	0.8	< 0.1	< 10
11s171628	0.7	1.9	0.3	1.5	0.2	0.1	< 0.05	< 0.1	< 0.001	19.5	0.29	25.2	4.8	0.8	< 10
11s171629	0.7	2.1	0.3	1.6	0.2	< 0.1	< 0.05	0.2	< 0.001	12.9	0.34	28.7	5.0	0.8	< 10
11s171630	0.7	1.9	0.2	1.3	0.2	< 0.1	< 0.05	0.2	0.003	29.0	0.22	61.9	5.1	0.8	< 10
11s171631	0.4	1.2	0.2	1.0	0.1	< 0.1	< 0.05	0.3	0.008	31.4	0.16	38.9	3.7	0.6	< 10
11s171632	0.6	1.5	0.2	1.2	0.2	< 0.1	< 0.05	0.2	0.016	26.9	0.19	31.2	4.3	0.6	< 10
11s171633	0.7	1.8	0.2	1.3	0.2	< 0.1	< 0.05	0.2	0.009	53.4	0.25	43.4	4.9	0.7	< 10
11s171634	0.6	1.5	0.2	1.1	0.2	< 0.1	< 0.05	0.2	0.007	35.4	0.18	146	4.8	0.7	< 10
11s171635	0.6	1.8	0.2	1.4	0.2	< 0.1	< 0.05	< 0.1	0.004	24.5	0.27	20.5	4.7	0.7	< 10
11s171636	0.8	2.1	0.3	1.7	0.2	0.1	< 0.05	< 0.1	0.006	24.4	0.44	16.1	4.4	0.6	80
11s171637	0.6	1.8	0.2	1.3	0.2	< 0.1	< 0.05	< 0.1	0.014	59.8	0.30	270	4.3	0.6	40
11s171638	0.6	1.7	0.2	1.2	0.2	0.1	< 0.05	< 0.1	0.002	56.5	0.36	59.1	4.0	0.6	< 10
11s171639	0.6	1.6	0.2	1.1	0.2	0.1	< 0.05	< 0.1	0.015	48.9	0.44	8.57	3.7	0.6	< 10
11s171640	0.6	1.6	0.2	1.2	0.2	0.2	< 0.05	0.2	0.023	55.9	0.51	8.45	3.2	0.6	30
11s171641	0.6	1.6	0.2	1.2	0.2	0.1	< 0.05	0.1	0.040	45.4	0.42	16.0	3.5	0.7	< 10
11s171642	0.6	1.6	0.2	1.2	0.2	< 0.1	< 0.05	0.2	0.039	43.4	0.36	23.5	3.7	0.7	< 10
11s171643	0.6	1.6	0.2	1.2	0.2	0.1	< 0.05	0.1	0.020	52.6	0.39	21.7	4.0	0.7	< 10
11s171644	0.6	1.7	0.2	1.3	0.2	0.1	< 0.05	0.3	0.024	102	0.39	27.3	3.9	0.8	< 10

Analyte Symbol	Ho	Er	Tm	Yb	Lu	Hf	Ta	W	Re	Au	Tl	Pb	Th	U	Hg
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppb
Detection Limit	0.1	0.1	0.1	0.1	0.1	0.1	0.05	0.1	0.001	0.5	0.02	0.01	0.1	0.1	10
Analysis Method	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS
11s171645	0.7	1.9	0.3	1.5	0.2	0.1	< 0.05	0.2	0.019	68.6	0.29	10.3	4.5	0.7	< 10
11s171646	0.7	1.9	0.3	1.4	0.2	0.2	< 0.05	0.1	0.015	41.1	0.31	20.7	4.6	0.9	< 10
11s171647	0.7	1.9	0.3	1.5	0.2	< 0.1	< 0.05	0.2	0.013	39.6	0.18	25.0	4.6	0.8	< 10
11s171648	0.1	0.4	< 0.1	0.4	< 0.1	< 0.1	< 0.05	< 0.1	0.249	732	0.08	27.4	1.0	0.9	1950
11s171649	0.7	1.9	0.3	1.5	0.2	< 0.1	< 0.05	< 0.1	0.008	7.6	0.16	15.2	4.9	0.9	< 10
11s171650	0.5	1.4	0.2	1.1	0.2	< 0.1	< 0.05	< 0.1	< 0.001	4.3	0.10	5.94	4.0	0.6	< 10
11s171651	0.6	1.6	0.2	1.3	0.2	< 0.1	< 0.05	< 0.1	0.002	4.5	0.16	7.93	4.4	0.9	< 10
11s171652	0.6	1.8	0.2	1.4	0.2	< 0.1	< 0.05	< 0.1	< 0.001	2.0	0.17	8.95	4.4	0.8	< 10
11s171653	0.5	1.5	0.2	1.2	0.2	< 0.1	< 0.05	< 0.1	< 0.001	< 0.5	0.17	5.31	4.4	0.9	< 10
11s171654	0.5	1.4	0.2	1.0	0.2	< 0.1	< 0.05	< 0.1	< 0.001	< 0.5	0.27	4.78	1.8	0.4	< 10
11s171655	0.4	1.1	0.2	0.9	0.1	< 0.1	< 0.05	< 0.1	< 0.001	36.2	0.15	9.38	3.7	0.7	< 10
11s171656	0.3	0.8	0.1	0.8	0.1	< 0.1	< 0.05	< 0.1	< 0.001	161	0.20	30.2	3.9	0.7	< 10
11s171657	0.3	0.9	0.1	0.8	0.1	< 0.1	< 0.05	0.1	< 0.001	99.9	0.22	94.6	4.0	0.7	< 10
11s171658	0.4	1.2	0.2	1.0	0.2	< 0.1	< 0.05	< 0.1	< 0.001	42.8	0.21	7.74	3.7	0.8	< 10
11s171659	0.5	1.3	0.2	1.1	0.2	< 0.1	< 0.05	< 0.1	< 0.001	12.0	0.23	121	3.8	0.6	< 10
11s171660	0.6	1.8	0.2	1.3	0.2	< 0.1	< 0.05	0.1	0.050	103	0.35	39.1	5.2	1.0	< 10
11s171661	0.7	1.9	0.3	1.6	0.2	< 0.1	< 0.05	0.3	0.021	60.0	0.23	34.0	6.0	1.0	< 10
11s171662	0.7	1.9	0.3	1.5	0.2	< 0.1	< 0.05	0.3	0.100	59.2	0.31	13.2	5.1	0.9	< 10
11s171663	0.6	1.8	0.2	1.5	0.2	0.1	< 0.05	0.2	0.147	88.4	0.41	13.1	4.5	0.7	< 10
11s171664	0.6	1.6	0.2	1.2	0.2	0.1	< 0.05	0.2	0.046	36.2	0.51	7.39	4.6	0.6	< 10
11s171665	0.6	1.6	0.2	1.2	0.2	< 0.1	< 0.05	0.2	0.023	62.2	0.54	7.35	4.9	0.6	< 10
11s171666	0.5	1.4	0.2	1.2	0.2	< 0.1	< 0.05	0.4	0.037	139	0.18	16.4	5.1	0.8	< 10
11s171667	0.6	1.8	0.2	1.4	0.2	< 0.1	< 0.05	0.3	0.029	143	0.67	9.36	5.1	0.7	< 10
11s171668	0.6	1.7	0.2	1.4	0.2	< 0.1	< 0.05	0.3	0.199	84.9	0.41	23.4	4.7	0.6	< 10
11s171669	0.5	1.5	0.2	1.2	0.2	< 0.1	< 0.05	0.3	0.080	67.7	0.47	13.0	4.0	0.6	< 10
11s171670	0.7	2.1	0.3	1.6	0.2	< 0.1	< 0.05	0.3	0.060	74.0	0.46	15.8	7.2	0.8	< 10
11s171671	0.6	1.6	0.2	1.2	0.2	< 0.1	< 0.05	0.3	0.050	50.2	0.52	9.02	6.1	0.9	< 10
11s171672	0.7	1.8	0.2	1.4	0.2	< 0.1	< 0.05	0.2	0.046	274	0.40	9.47	6.2	0.9	< 10
11s171673	0.5	1.5	0.2	1.2	0.2	< 0.1	< 0.05	0.2	0.094	254	0.25	9.25	5.5	0.9	< 10
11s171674	0.7	1.9	0.3	1.5	0.2	< 0.1	< 0.05	0.2	0.044	183	0.22	14.4	6.5	1.2	< 10
11s171675	0.6	1.8	0.2	1.3	0.2	< 0.1	< 0.05	0.4	0.016	171	0.29	14.0	6.5	0.6	< 10
11s171676	< 0.1	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.05	< 0.1	< 0.001	< 0.5	0.03	0.67	0.5	< 0.1	< 10
11s171677	0.6	1.8	0.2	1.3	0.2	< 0.1	< 0.05	0.3	0.084	99.4	0.33	9.38	4.5	0.5	< 10
11s171678	0.7	1.9	0.3	1.4	0.2	< 0.1	< 0.05	0.2	0.035	103	0.29	13.3	3.8	0.4	< 10
11s171679	0.6	1.6	0.2	1.2	0.2	< 0.1	< 0.05	0.2	0.052	991	0.23	21.1	5.3	0.8	< 10
11s171680	0.6	1.7	0.2	1.3	0.2	< 0.1	< 0.05	0.2	0.080	165	0.27	11.0	5.5	0.5	< 10
11s171681	0.7	1.9	0.2	1.3	0.2	< 0.1	< 0.05	0.2	0.103	75.5	0.36	11.1	5.3	0.6	< 10
11s171682	0.6	1.8	0.2	1.3	0.2	< 0.1	< 0.05	0.1	0.082	134	0.30	8.29	4.7	0.5	< 10
11s171684	0.7	2.0	0.3	1.5	0.2	0.1	< 0.05	0.2	0.064	120	0.24	12.0	5.5	1.1	< 10
11s171685	0.6	1.7	0.2	1.3	0.2	< 0.1	< 0.05	< 0.1	0.129	159	0.18	8.06	4.7	0.4	< 10
11s171686	0.7	2.0	0.3	1.4	0.2	< 0.1	< 0.05	< 0.1	0.041	74.3	0.24	5.36	4.8	0.6	< 10
11s171687	0.7	1.9	0.3	1.4	0.2	< 0.1	< 0.05	< 0.1	0.094	151	0.17	4.17	5.2	0.6	< 10
11s171688	0.8	2.5	0.3	1.8	0.3	< 0.1	< 0.05	0.2	0.079	109	0.25	5.72	4.9	0.8	< 10
11s171689	0.7	2.0	0.3	1.5	0.2	< 0.1	< 0.05	0.3	0.126	36.6	0.51	5.73	4.7	0.6	< 10
11s171690	0.7	1.8	0.2	1.3	0.2	< 0.1	< 0.05	0.6	0.117	53.9	0.45	11.9	4.8	0.6	430
11s171691	0.6	1.7	0.2	1.3	0.2	< 0.1	< 0.05	0.2	0.053	42.0	0.50	4.78	4.0	0.6	< 10
11s171692	0.7	2.0	0.3	1.5	0.2	< 0.1	< 0.05	0.2	0.063	46.1	0.31	9.28	3.9	0.6	< 10
11s171693	0.6	1.6	0.2	1.3	0.2	< 0.1	< 0.05	0.2	0.030	30.2	0.30	10.6	5.8	0.9	< 10

QC

Analyte Symbol	Au	Li	Be	B	Na	Mg	Al	K	Bi	Ca	Sc	V	Cr	Mn	Fe	Co	Ni	Cu	Zn	Ga	Ge	As	Rb
Unit Symbol	ppb	ppm	ppm	ppm	%	%	%	%	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	5	0.1	0.1	1	0.001	0.01	0.01	0.01	0.02	0.01	0.1	1	1	1	0.01	0.1	0.1	0.01	0.1	0.02	0.1	0.1	0.1
Analysis Method	FA-AA	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS
GXR-1 Meas		4.7	0.8	9	0.047	0.13	0.34	0.03	1470	0.80	1.0	70	5	817	23.9	7.3	38.9	1120	787	4.16		398	2.1
GXR-1 Cert		8.20	1.22	15.0	0.0520	0.217	3.52	0.050	1380	0.960	1.58	80.0	12.0	852	23.6	8.20	41.0	1110	760	13.8		427	14.0
GXR-4 Meas		9.4	1.6	2	0.134	1.43	2.69	1.70	19.3	0.85	6.5	77	52	140	2.87	12.9	38.3	6200	70.2	10.5		97.9	95.9
GXR-4 Cert		11.1	1.90	4.50	0.564	1.66	7.20	4.01	19.0	1.01	7.70	87.0	64.0	155	3.09	14.6	42.0	6520	73.0	20.0		98.0	160
GXR-6 Meas		30.7	1.2	7	0.082	0.42	7.85	1.26	0.19	0.15	23.0	164	76	1040	5.50	12.4	22.9	64.3	122	11.1		223	65.9
GXR-6 Cert		32.0	1.40	9.80	0.104	0.609	17.7	1.87	0.290	0.180	27.6	186	96.0	1010	5.58	13.8	27.0	66.0	118	35.0		330	90.0
SAR-M (U.S.G.S.) Meas		14.5	1.1		0.038	0.35	1.17	0.29	1.82	0.27	2.9	32	85	4490	2.68	9.6	42.9	317	935	4.81		34.5	22.3
SAR-M (U.S.G.S.) Cert		27.4	2.20		1.140	0.50	6.30	2.94	1.94	0.61	7.83	67.2	79.7	5220	2.99	10.70	41.5	331	930.0	17		38.8	146
SG56 Meas	1090																						
SG56 Cert	1027.00																						
SG56 Meas	1070																						
SG56 Cert	1027.00																						
OxD108 Meas	419																						
OxD108 Cert	414.000																						
OxD108 Meas	421																						
OxD108 Cert	414.000																						
OxD108 Meas	431																						
OxD108 Cert	414.000																						
OREAS 922 (AQUA REGIA) Meas						1.51	3.51			0.47					5.72	19.9		2280	287			6.9	
OREAS 922 (AQUA REGIA) Cert						1.33	2.72			0.324					5.05	19.4		2176	256			6.12	
OREAS 923 (AQUA REGIA) Meas						1.53	3.41			0.46					6.53	22.3		4400	365			7.6	
OREAS 923 (AQUA REGIA) Cert						1.43	2.80			0.326					5.91	22.2		4248	335			7.07	
11s171603 Orig	19																						
11s171603 Dup	15																						
11s171608 Orig		14.6	0.5	3	0.050	0.72	1.54	0.68	0.86	3.99	4.5	32	3	1120	3.98	8.6	5.5	26.1	1100	5.30	< 0.1	1080	27.2
11s171608 Dup		14.8	0.5	3	0.047	0.70	1.49	0.64	0.82	3.86	4.2	30	4	1130	4.01	8.6	5.6	19.4	1080	5.03	< 0.1	1080	25.8
11s171618 Orig	17																						
11s171618 Dup	15																						
11s171625 Orig	16	16.7	0.6	3	0.055	0.82	1.93	0.66	0.39	2.72	5.5	41	5	736	3.72	8.4	5.5	29.1	175	6.63	< 0.1	27.1	27.4
11s171625 Split	17	20.1	0.8	3	0.058	0.89	2.09	0.69	0.42	2.77	5.5	40	5	747	3.78	8.2	5.5	28.4	164	6.41	< 0.1	27.4	27.5
11s171635 Orig		12.3	0.6	3	0.054	0.75	1.54	0.54	0.90	3.30	3.9	29	4	821	4.04	9.8	5.5	48.2	233	4.56	< 0.1	58.4	19.8
11s171635 Dup		12.0	0.5	3	0.058	0.76	1.61	0.56	0.93	3.28	3.9	30	3	822	4.12	9.6	5.5	46.8	231	4.69	< 0.1	60.1	20.7
11s171639 Orig	56																						
11s171639 Dup	61																						
11s171645 Orig	58	11.7	0.4	3	0.052	0.82	1.44	0.55	0.61	2.75	3.5	33	6	635	3.72	8.6	5.7	118	90.7	4.56	< 0.1	47.7	23.9
11s171645 Split	61	13.5	0.3	3	0.052	0.82	1.46	0.56	0.62	2.76	3.6	33	6	630	3.71	8.3	5.6	114	85.9	4.33	< 0.1	49.8	23.3
11s171649 Orig		9.4	0.4	6	0.065	0.60	1.41	0.46	0.39	3.39	2.0	18	5	789	2.96	6.5	5.2	45.4	60.6	3.68	< 0.1	14.6	13.5
11s171649 Dup		9.3	0.4	3	0.059	0.57	1.37	0.45	0.41	3.39	2.2	18	5	845	3.16	7.0	5.4	47.0	65.6	3.94	< 0.1	14.7	13.9
11s171654 Orig	< 5																						
11s171654 Dup	< 5																						
11s171655 Orig	34	6.2	0.3	3	0.055	0.53	1.19	0.37	0.46	2.41	1.6	15	8	623	2.45	5.4	7.5	7.37	50.8	3.54	< 0.1	11.9	16.4
11s171655 Split	38	8.6	0.4	2	0.059	0.63	1.28	0.41	0.53	2.62	1.6	16	8	662	2.61	5.6	8.0	8.37	50.3	3.51	< 0.1	12.1	16.2
11s171672 Orig		13.8	0.6	4	0.069	0.72	1.63	0.77	0.74	2.84	4.5	35	5	454	3.78	10.4	5.4	277	44.1	5.04	< 0.1	14.6	31.7
11s171672 Dup		13.4	0.5	3	0.064	0.69	1.61	0.76	0.72	2.78	4.3	33	5	451	3.70	10.1	5.3	265	41.9	4.85	0.1	14.7	30.4

Analyte Symbol	Au	Li	Be	B	Na	Mg	Al	K	Bi	Ca	Sc	V	Cr	Mn	Fe	Co	Ni	Cu	Zn	Ga	Ge	As	Rb
Unit Symbol	ppb	ppm	ppm	ppm	%	%	%	%	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	5	0.1	0.1	1	0.001	0.01	0.01	0.01	0.02	0.01	0.1	1	1	1	0.01	0.1	0.1	0.01	0.1	0.02	0.1	0.1	0.1
Analysis Method	FA-AA	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS
11s171675 Orig	155																						
11s171675 Dup	136																						
11s171687 Orig		13.0	0.4	5	0.044	0.65	1.37	0.42	0.40	3.38	3.7	26	4	582	3.09	8.9	5.2	344	52.5	3.86	< 0.1	5.8	16.8
11s171687 Dup		12.9	0.4	4	0.047	0.65	1.32	0.41	0.43	3.45	3.6	26	4	594	3.21	9.3	5.5	353	51.1	3.80	< 0.1	6.2	16.3
11s171691 Orig	81																						
11s171691 Dup	83																						
11s171693 Orig	36	11.9	0.5	5	0.057	0.55	1.38	0.74	0.46	3.17	3.0	22	3	513	2.62	7.8	4.7	131	61.5	3.58	< 0.1	9.1	27.7
11s171693 Split	37	10.7	0.5	3	0.051	0.52	1.28	0.70	0.45	3.06	2.8	21	3	516	2.60	7.8	4.6	134	62.2	3.54	< 0.1	9.2	27.0
Method Blank	< 5																						
Method Blank	< 5																						
Method Blank	< 5																						
Method Blank	< 5																						
Method Blank	< 5																						

QC

Analyte Symbol	Sr	Y	Zr	Nb	Mo	Ag	In	Sn	Sb	Te	Cs	Ba	La	Ce	Cd	Pr	Nd	Sm	Se	Eu	Gd	Tb	Dy
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	0.5	0.01	0.1	0.1	0.01	0.002	0.02	0.05	0.02	0.02	0.02	0.5	0.5	0.01	0.01	0.1	0.02	0.1	0.1	0.1	0.1	0.1	0.1
Analysis Method	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS
GXR-1 Meas	198	27.5	8.7	< 0.1	17.4	32.3	0.70	22.7	78.9	14.9	2.51	192	5.2	11.0	2.53		6.03	2.2	16.9	0.5	3.7	0.7	4.8
GXR-1 Cert	275	32.0	38.0	0.800	18.0	31.0	0.770	54.0	122	13.0	3.00	750	7.50	17.0	3.30		18.0	2.70	16.6	0.690	4.20	0.830	4.30
GXR-4 Meas	73.0	11.6	8.7	0.2	308	3.74	0.19	5.41	3.55	1.04	2.31	23.5	45.2	86.7	0.12		34.0	5.3	5.6	1.2	4.5	0.5	2.7
GXR-4 Cert	221	14.0	186	10.0	310	4.00	0.270	5.60	4.80	0.970	2.80	1640	64.5	102	0.860		45.0	6.60	5.60	1.63	5.25	0.360	2.60
GXR-6 Meas	29.7	6.62	8.4	< 0.1	1.68	0.475	0.06	1.17	1.73	< 0.02	3.73	918	11.1	31.9	0.10		11.5	2.4	< 0.1	0.6	2.1	0.3	1.8
GXR-6 Cert	35.0	14.0	110	7.50	2.40	1.30	0.260	1.70	3.60	0.0180	4.20	1300	13.9	36.0	1.00		13.0	2.67	0.940	0.760	2.97	0.415	2.80
SAR-M (U.S.G.S.) Meas	26.9	17.5		2.2	11.8	2.87	0.98	1.80	3.77	0.89		167	41.7	88.6	4.76				0.6				
SAR-M (U.S.G.S.) Cert	151	28.00		29.9	13.1	3.64	1.08	2.76	6.0	0.96		801	57.4	122.0	5.27				0.39				
SG56 Meas																							
SG56 Cert																							
SG56 Meas																							
SG56 Cert																							
OxD108 Meas																							
OxD108 Cert																							
OxD108 Meas																							
OxD108 Cert																							
OxD108 Meas																							
OxD108 Cert																							
OREAS 922 (AQUA REGIA) Meas						1.21			0.55						0.27								
OREAS 922 (AQUA REGIA) Cert						0.851			0.57						0.280								
OREAS 923 (AQUA REGIA) Meas						1.65			0.66						0.43								
OREAS 923 (AQUA REGIA) Cert						1.62			0.58						0.40								
11s171603 Orig																							
11s171603 Dup																							
11s171608 Orig	179	17.0	3.6	< 0.1	1.62	0.802	0.10	0.87	1.65	0.89	0.92	47.7	18.1	35.3	10.6	4.1	15.9	3.4	1.3	1.0	3.8	0.5	3.5
11s171608 Dup	174	16.4	3.5	< 0.1	1.55	0.829	0.10	0.73	1.49	0.83	0.86	50.4	17.2	33.9	10.5	4.0	15.6	3.3	1.3	1.0	3.7	0.5	3.4



Analyte Symbol	Sr	Y	Zr	Nb	Mo	Ag	In	Sn	Sb	Te	Cs	Ba	La	Ce	Cd	Pr	Nd	Sm	Se	Eu	Gd	Tb	Dy
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	0.5	0.01	0.1	0.1	0.01	0.002	0.02	0.05	0.02	0.02	0.02	0.5	0.5	0.01	0.01	0.1	0.02	0.1	0.1	0.1	0.1	0.1	0.1
Analysis Method	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS
11s171618 Orig																							
11s171618 Dup																							
11s171625 Orig	203	17.0	3.9	< 0.1	1.87	0.564	0.06	0.93	1.10	0.12	1.21	47.3	20.0	39.4	1.26	4.7	18.2	3.8	1.9	1.0	4.0	0.6	3.6
11s171625 Split	203	17.0	4.0	< 0.1	1.86	0.443	0.06	0.97	1.22	0.09	1.27	41.3	20.0	39.9	1.33	4.8	19.1	3.9	2.0	1.1	4.3	0.6	3.7
11s171635 Orig	239	15.0	3.0	< 0.1	3.79	0.855	0.04	0.72	1.28	0.26	0.62	43.7	16.8	33.8	2.35	4.0	15.7	3.3	2.7	1.0	3.6	0.5	3.3
11s171635 Dup	240	15.1	3.1	< 0.1	3.87	0.673	0.04	0.81	1.30	0.33	0.64	40.0	17.0	34.6	2.42	4.0	16.1	3.4	2.3	1.0	3.7	0.5	3.2
11s171639 Orig																							
11s171639 Dup																							
11s171645 Orig	174	16.8	2.6	0.3	8.98	0.517	0.04	1.07	0.56	0.16	1.16	31.8	17.5	36.1	0.46	4.2	16.8	3.5	3.1	0.9	3.7	0.5	3.4
11s171645 Split	175	16.5	2.6	0.3	9.53	0.470	0.04	1.23	0.66	0.14	1.16	37.8	17.3	35.5	0.49	4.3	17.0	3.5	2.8	1.0	3.9	0.6	3.6
11s171649 Orig	150	16.0	1.6	< 0.1	4.04	1.45	0.03	0.80	0.92	0.12	0.19	63.4	19.6	37.4	0.39	4.3	16.4	3.3	1.9	1.0	3.6	0.5	3.3
11s171649 Dup	155	16.7	1.7	< 0.1	3.65	0.611	0.04	0.53	0.93	0.21	0.20	59.5	20.8	39.9	0.42	4.5	17.4	3.5	1.9	1.0	3.7	0.5	3.5
11s171654 Orig																							
11s171654 Dup																							
11s171655 Orig	156	9.05	1.6	< 0.1	0.91	0.247	< 0.02	0.35	0.25	0.09	0.22	48.6	11.9	23.5	0.24	2.6	10.2	2.1	0.7	0.6	2.1	0.3	1.8
11s171655 Split	160	9.35	1.6	< 0.1	0.83	0.312	< 0.02	0.48	0.26	0.04	0.21	47.4	12.5	24.8	0.27	2.9	11.3	2.3	0.7	0.7	2.4	0.3	2.1
11s171672 Orig	187	15.0	3.1	< 0.1	15.9	0.859	0.08	0.97	0.72	0.09	1.37	26.6	28.5	55.6	0.31	6.2	23.0	4.3	3.1	1.2	4.1	0.6	3.5
11s171672 Dup	184	14.6	3.0	< 0.1	14.7	0.779	0.08	2.61	0.71	0.02	1.32	26.6	27.6	53.9	0.20	6.0	22.5	4.1	3.9	1.2	4.0	0.5	3.3
11s171675 Orig																							
11s171675 Dup																							
11s171687 Orig	222	14.7	1.7	< 0.1	34.3	0.688	0.04	0.71	0.64	< 0.02	0.54	51.5	18.6	37.9	0.19	4.5	18.1	3.7	3.1	1.0	3.8	0.5	3.4
11s171687 Dup	219	14.6	1.7	< 0.1	34.6	0.711	0.04	0.74	0.67	< 0.02	0.54	48.1	19.3	38.9	0.24	4.6	18.6	3.8	3.0	1.0	3.9	0.5	3.3
11s171691 Orig																							
11s171691 Dup																							
11s171693 Orig	331	13.2	1.9	0.2	13.8	0.447	0.05	0.72	0.56	< 0.02	0.88	40.0	20.4	39.9	0.36	4.5	17.0	3.2	2.3	0.9	3.3	0.4	2.9
11s171693 Split	330	13.3	1.9	0.3	11.6	0.391	0.05	0.67	0.57	< 0.02	0.88	42.1	20.5	40.0	0.41	4.5	16.6	3.2	2.3	0.8	3.2	0.4	2.9
Method Blank																							
Method Blank																							
Method Blank																							
Method Blank																							
Method Blank																							

QC

Analyte Symbol	Ho	Er	Tm	Yb	Lu	Hf	Ta	W	Re	Au	Tl	Pb	Th	U	Hg
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppb
Detection Limit	0.1	0.1	0.1	0.1	0.1	0.1	0.05	0.1	0.001	0.5	0.02	0.01	0.1	0.1	10
Analysis Method	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS
GXR-1 Meas			0.4	1.9	0.3	0.2	< 0.05	130		3160	0.33	626	1.6	31.8	3700
GXR-1 Cert			0.430	1.90	0.280	0.960	0.175	164		3300	0.390	730	2.44	34.9	3900
GXR-4 Meas			0.2	0.8	0.1	0.2	< 0.05	9.9			2.64	39.5	17.2	4.6	
GXR-4 Cert			0.210	1.60	0.170	6.30	0.790	30.8			3.20	52.0	22.5	6.20	
GXR-6 Meas			0.1	0.8	0.1	0.2	< 0.05	< 0.1			1.84	98.8	4.3	0.8	
GXR-6 Cert			0.0320	2.40	0.330	4.30	0.485	1.90			2.20	101	5.30	1.54	
SAR-M (U.S.G.S.) Meas								2.3			0.78	824	11.5	1.8	
SAR-M (U.S.G.S.) Cert								9.78			2.7	982	17.2	3.57	
SG56 Meas															

Analyte Symbol	Ho	Er	Tm	Yb	Lu	Hf	Ta	W	Re	Au	Tl	Pb	Th	U	Hg
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppb
Detection Limit	0.1	0.1	0.1	0.1	0.1	0.1	0.05	0.1	0.001	0.5	0.02	0.01	0.1	0.1	10
Analysis Method	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS
SG56 Cert															
SG56 Meas															
SG56 Cert															
OxD108 Meas															
OxD108 Cert															
OxD108 Meas															
OxD108 Cert															
OxD108 Meas															
OxD108 Cert															
OxD108 Meas															
OxD108 Cert															
OREAS 922 (AQUA REGIA) Meas												60.6			
OREAS 922 (AQUA REGIA) Cert												60			
OREAS 923 (AQUA REGIA) Meas												80.9			
OREAS 923 (AQUA REGIA) Cert												81			
11s171603 Orig															
11s171603 Dup															
11s171608 Orig	0.7	1.9	0.3	1.4	0.2	< 0.1	< 0.05	< 0.1	0.001	18.1	0.36	35.1	4.3	0.7	110
11s171608 Dup	0.7	1.9	0.3	1.4	0.2	< 0.1	< 0.05	< 0.1	< 0.001	18.1	0.34	32.8	4.2	0.7	80
11s171618 Orig															
11s171618 Dup															
11s171625 Orig	0.7	2.0	0.3	1.4	0.2	0.1	< 0.05	< 0.1	< 0.001	22.7	0.30	13.9	4.6	0.7	< 10
11s171625 Split	0.7	2.1	0.3	1.5	0.2	0.1	< 0.05	< 0.1	0.001	13.3	0.34	14.4	4.9	0.8	< 10
11s171635 Orig	0.6	1.7	0.2	1.4	0.2	< 0.1	< 0.05	0.1	0.004	24.1	0.27	20.8	4.7	0.7	< 10
11s171635 Dup	0.6	1.8	0.2	1.4	0.2	< 0.1	< 0.05	< 0.1	0.005	24.9	0.26	20.3	4.7	0.7	10
11s171639 Orig															
11s171639 Dup															
11s171645 Orig	0.7	1.9	0.3	1.5	0.2	0.1	< 0.05	0.2	0.019	68.6	0.29	10.3	4.5	0.7	< 10
11s171645 Split	0.7	2.0	0.3	1.5	0.2	0.1	< 0.05	0.2	0.026	68.4	0.30	10.9	4.7	0.8	< 10
11s171649 Orig	0.6	1.9	0.3	1.4	0.2	< 0.1	< 0.05	0.1	0.007	1.6	0.16	14.7	4.8	0.9	< 10
11s171649 Dup	0.7	1.9	0.3	1.6	0.2	< 0.1	< 0.05	< 0.1	0.008	13.6	0.17	15.6	5.1	0.9	< 10
11s171654 Orig															
11s171654 Dup															
11s171655 Orig	0.4	1.1	0.2	0.9	0.1	< 0.1	< 0.05	< 0.1	< 0.001	36.2	0.15	9.38	3.7	0.7	< 10
11s171655 Split	0.4	1.2	0.2	1.0	0.1	< 0.1	< 0.05	< 0.1	< 0.001	25.1	0.17	10.7	4.3	0.8	< 10
11s171672 Orig	0.7	1.9	0.2	1.4	0.2	0.1	< 0.05	0.2	0.045	306	0.41	9.67	6.3	0.9	< 10
11s171672 Dup	0.7	1.8	0.2	1.4	0.2	< 0.1	< 0.05	0.2	0.046	242	0.39	9.28	6.1	0.9	< 10
11s171675 Orig															
11s171675 Dup															
11s171687 Orig	0.7	1.8	0.3	1.3	0.2	< 0.1	< 0.05	< 0.1	0.093	213	0.17	4.10	5.0	0.6	< 10
11s171687 Dup	0.7	1.9	0.3	1.4	0.2	< 0.1	< 0.05	< 0.1	0.095	89.1	0.16	4.24	5.3	0.6	< 10
11s171691 Orig															
11s171691 Dup															
11s171693 Orig	0.6	1.6	0.2	1.3	0.2	< 0.1	< 0.05	0.2	0.030	30.2	0.30	10.6	5.8	0.9	< 10
11s171693 Split	0.6	1.6	0.2	1.3	0.2	< 0.1	< 0.05	0.3	0.019	20.5	0.31	10.7	5.7	0.8	< 10
Method Blank															
Method Blank															

Analyte Symbol	Ho	Er	Tm	Yb	Lu	Hf	Ta	W	Re	Au	Tl	Pb	Th	U	Hg
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppb
Detection Limit	0.1	0.1	0.1	0.1	0.1	0.1	0.05	0.1	0.001	0.5	0.02	0.01	0.1	0.1	10
Analysis Method	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS
Method Blank															
Method Blank															
Method Blank															



**Date Submitted:** 04-Jul-14  
**Invoice No.:** A14-04498  
**Invoice Date:** 21-Jul-14  
**Your Reference:**

Renaissance Geosciences  
680 Dairy Road  
Kamloops B.C. V2B8N5  
Canada

ATTN: Leo Lindinger

## CERTIFICATE OF ANALYSIS

9 Soil samples were submitted for analysis.

The following analytical package was requested:

Code 1A2-Kamloops Au - Fire Assay AA  
Code UT-1-Kamloops Aqua Regia ICP/MS

REPORT      **A14-04498**

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:

Assays are recommended for values >10,000 for Cu and Au. The Au from AR-MS is only semi-quantitative. For accurate Au data, fire assay is recommended.  
If value exceeds upper limit we recommend reassay by fire assay gravimetric-Code 1A3

CERTIFIED BY:

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

Emmanuel Esemé , Ph.D.  
Quality Control



Results

Analyte Symbol	Au	Li	Be	B	Na	Mg	Al	K	Bi	Ca	Sc	V	Cr	Mn	Fe	Co	Ni	Cu	Zn	Ga	Ge	As	Rb
Unit Symbol	ppb	ppm	ppm	ppm	%	%	%	%	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	5	0.1	0.1	1	0.001	0.01	0.01	0.01	0.02	0.01	0.1	1	1	1	0.01	0.1	0.1	0.01	0.1	0.02	0.1	0.1	0.1
Analysis Method	FA-AA	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS
11s171299	124																						
11s171294	397																						
11s171295	936																						
11s171296	207																						
11s171297	115																						
11s171298	352																						
11s171683	1810	3.1	0.2	5	0.046	0.27	0.93	0.53	1.76	3.27	0.2	19	12	3010	2.16	3.8	4.4	4700	> 5000	3.54	< 0.1	127	15.6
11s171694	104																						
11s171695	90																						

Results

Analyte Symbol	Sr	Y	Zr	Nb	Mo	Ag	In	Sn	Sb	Te	Cs	Ba	La	Ce	Cd	Pr	Nd	Sm	Se	Eu	Gd	Tb	Dy
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	0.5	0.01	0.1	0.1	0.01	0.002	0.02	0.05	0.02	0.02	0.02	0.5	0.5	0.01	0.01	0.1	0.02	0.1	0.1	0.1	0.1	0.1	0.1
Analysis Method	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS
11s171299																							
11s171294																							
11s171295																							
11s171296																							
11s171297																							
11s171298																							
11s171683	191	3.68	1.9	< 0.1	119	23.2	0.41	2.24	19.0	0.92	0.49	34.7	5.4	10.4	76.2	1.3	5.24	1.1	1.5	0.3	0.9	0.1	0.7
11s171694																							
11s171695																							

Results

Analyte Symbol	Ho	Er	Tm	Yb	Lu	Hf	Ta	W	Re	Au	Tl	Pb	Th	U	Hg
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppb
Detection Limit	0.1	0.1	0.1	0.1	0.1	0.1	0.05	0.1	0.001	0.5	0.02	0.01	0.1	0.1	10
Analysis Method	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS
11s171299															
11s171294															
11s171295															
11s171296															
11s171297															
11s171298															
11s171683	0.1	0.4	< 0.1	0.3	< 0.1	< 0.1	< 0.05	0.2	0.109	343	0.18	> 5000	0.6	0.6	100
11s171694															
11s171695															

QC

Analyte Symbol	Au	Li	Be	B	Na	Mg	Al	K	Bi	Ca	Sc	V	Cr	Mn	Fe	Co	Ni	Cu	Zn	Ga	Ge	As	Rb
Unit Symbol	ppb	ppm	ppm	ppm	%	%	%	%	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	5	0.1	0.1	1	0.001	0.01	0.01	0.01	0.02	0.01	0.1	1	1	1	0.01	0.1	0.1	0.01	0.1	0.02	0.1	0.1	0.1
Analysis Method	FA-AA	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS
GXR-1 Meas		4.7	0.8	12	0.046	0.15	0.35	0.04	1320	0.82	0.3	76	7	795	23.0	7.6	39.7	1270	821	4.96		438	2.2
GXR-1 Cert		8.20	1.22	15.0	0.0520	0.217	3.52	0.050	1380	0.960	1.58	80.0	12.0	852	23.6	8.20	41.0	1110	760	13.8		427	14.0
GXR-4 Meas		8.4	1.3	5	0.121	1.44	2.52	1.70	16.6	0.83	5.7	77	55	141	2.80	13.5	37.9	6410	73.3	10.9		102	98.3
GXR-4 Cert		11.1	1.90	4.50	0.564	1.66	7.20	4.01	19.0	1.01	7.70	87.0	64.0	155	3.09	14.6	42.0	6520	73.0	20.0		98.0	160
GXR-6 Meas		26.4	0.9	7	0.068	0.43	7.33	1.26	0.16	0.15	22.6	165	78	1020	5.48	13.2	23.3	72.4	133	15.3		251	70.7
GXR-6 Cert		32.0	1.40	9.80	0.104	0.609	17.7	1.87	0.290	0.180	27.6	186	96.0	1010	5.58	13.8	27.0	66.0	118	35.0		330	90.0
SAR-M (U.S.G.S.) Meas		13.2	1.0		0.039	0.36	1.14	0.32	1.64	0.28	2.3	34	87	4490	2.73	10.4	42.5	360	1080	5.24		38.3	26.2
SAR-M (U.S.G.S.) Cert		27.4	2.20		1.140	0.50	6.30	2.94	1.94	0.61	7.83	67.2	79.7	5220	2.99	10.70	41.5	331	930.0	17		38.8	146
SF67 Meas	878																						
SF67 Cert	835.000																						
SE68 Meas	626																						
SE68 Cert	599																						
SE68 Meas	608																						
SE68 Cert	599																						
OREAS 922 (AQUA REGIA) Meas						1.30	2.92			0.42					5.04	19.0		2220	286			6.4	
OREAS 922 (AQUA REGIA) Cert						1.33	2.72			0.324					5.05	19.4		2176	256			6.12	
OREAS 923 (AQUA REGIA) Meas						1.41	2.95			0.44					5.92	22.3		4510	373			7.6	
OREAS 923 (AQUA REGIA) Cert						1.43	2.80			0.326					5.91	22.2		4248	335			7.07	
11s171683 Orig		3.0	0.2	5	0.046	0.27	0.92	0.52	1.68	3.22	0.2	19	12	2970	2.13	3.8	4.3	4660	> 5000	3.52	< 0.1	122	15.6
11s171683 Dup		3.2	0.2	5	0.047	0.28	0.94	0.53	1.84	3.33	0.2	19	11	3050	2.19	3.8	4.5	4750	> 5000	3.56	< 0.1	131	15.6
11s171695 Orig	83																						
11s171695 Dup	98																						
Method Blank	< 5																						
Method Blank	< 5																						

QC

Analyte Symbol	Sr	Y	Zr	Nb	Mo	Ag	In	Sn	Sb	Te	Cs	Ba	La	Ce	Cd	Pr	Nd	Sm	Se	Eu	Gd	Tb	Dy
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	0.5	0.01	0.1	0.1	0.01	0.002	0.02	0.05	0.02	0.02	0.02	0.5	0.5	0.01	0.01	0.1	0.02	0.1	0.1	0.1	0.1	0.1	0.1
Analysis Method	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS
GXR-1 Meas	201	27.0	9.6	< 0.1	18.0	34.4	0.68	22.6	74.3	13.0	2.49	318	6.0	11.6	2.26		6.61	2.4	16.4	0.5	3.3	0.6	4.3
GXR-1 Cert	275	32.0	38.0	0.800	18.0	31.0	0.770	54.0	122	13.0	3.00	750	7.50	17.0	3.30		18.0	2.70	16.6	0.690	4.20	0.830	4.30
GXR-4 Meas	74.2	11.7	9.1	< 0.1	317	3.83	0.18	5.23	3.13	0.81	2.17	17.0	51.8	95.3	< 0.01		36.8	5.7	5.6	1.1	4.1	0.4	2.3
GXR-4 Cert	221	14.0	186	10.0	310	4.00	0.270	5.60	4.80	0.970	2.80	1640	64.5	102	0.860		45.0	6.60	5.60	1.63	5.25	0.360	2.60
GXR-6 Meas	31.4	6.74	8.8	< 0.1	1.62	0.540	0.06	1.30	1.50	< 0.02	3.51	847	12.0	33.4	0.09		11.8	2.4	< 0.1	0.5	1.9	0.3	1.6
GXR-6 Cert	35.0	14.0	110	7.50	2.40	1.30	0.260	1.70	3.60	0.0180	4.20	1300	13.9	36.0	1.00		13.0	2.67	0.940	0.760	2.97	0.415	2.80
SAR-M (U.S.G.S.) Meas	30.1	18.9		2.3	12.1	3.05	0.98	1.96	3.00	0.85		168	50.3	104	4.97				0.3				
SAR-M (U.S.G.S.) Cert	151	28.00		29.9	13.1	3.64	1.08	2.76	6.0	0.96		801	57.4	122.0	5.27				0.39				
SF67 Meas																							
SF67 Cert																							
SE68 Meas																							
SE68 Cert																							



Analyte Symbol	Sr	Y	Zr	Nb	Mo	Ag	In	Sn	Sb	Te	Cs	Ba	La	Ce	Cd	Pr	Nd	Sm	Se	Eu	Gd	Tb	Dy
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	0.5	0.01	0.1	0.1	0.01	0.002	0.02	0.05	0.02	0.02	0.02	0.5	0.5	0.01	0.01	0.1	0.02	0.1	0.1	0.1	0.1	0.1	0.1
Analysis Method	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS
SE68 Meas																							
SE68 Cert																							
OREAS 922 (AQUA REGIA) Meas						0.714			0.48						0.28								
OREAS 922 (AQUA REGIA) Cert						0.851			0.57						0.280								
OREAS 923 (AQUA REGIA) Meas						2.09			0.45						0.35								
OREAS 923 (AQUA REGIA) Cert						1.62			0.58						0.40								
11s171683 Orig	189	3.65	1.9	< 0.1	118	22.0	0.40	2.39	17.9	0.96	0.49	33.6	5.4	10.4	75.1	1.3	5.19	1.0	1.5	0.3	0.8	0.1	0.7
11s171683 Dup	194	3.71	2.0	< 0.1	119	24.4	0.41	2.09	20.0	0.89	0.49	35.8	5.4	10.4	77.2	1.3	5.29	1.1	1.5	0.3	0.9	0.1	0.7
11s171695 Orig																							
11s171695 Dup																							
Method Blank																							
Method Blank																							

QC

Analyte Symbol	Ho	Er	Tm	Yb	Lu	Hf	Ta	W	Re	Au	Tl	Pb	Th	U	Hg
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppb
Detection Limit	0.1	0.1	0.1	0.1	0.1	0.1	0.05	0.1	0.001	0.5	0.02	0.01	0.1	0.1	10
Analysis Method	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS
GXR-1 Meas			0.3	1.9	0.3	0.2	< 0.05	146		3170	0.32	720	1.6	29.7	4040
GXR-1 Cert			0.430	1.90	0.280	0.175	164			3300	0.390	730	2.44	34.9	3900
GXR-4 Meas			0.1	0.7	0.1	0.2	< 0.05	11.5			2.26	44.0	15.6	4.0	
GXR-4 Cert			0.210	1.60	0.170	6.30	0.790	30.8			3.20	52.0	22.5	6.20	
GXR-6 Meas			0.1	0.7	< 0.1	0.2	< 0.05	< 0.1			1.56	106	3.7	0.7	
GXR-6 Cert			0.0320	2.40	0.330	4.30	0.485	1.90			2.20	101	5.30	1.54	
SAR-M (U.S.G.S.) Meas								3.3			0.70	932	10.4	1.7	
SAR-M (U.S.G.S.) Cert								9.78			2.7	982	17.2	3.57	
SF67 Meas															
SF67 Cert															
SE68 Meas															
SE68 Cert															
SE68 Meas															
SE68 Cert															
OREAS 922 (AQUA REGIA) Meas												59.4			
OREAS 922 (AQUA REGIA) Cert												60			
OREAS 923 (AQUA REGIA) Meas												84.1			
OREAS 923 (AQUA REGIA) Cert												81			
11s171683 Orig	0.1	0.4	< 0.1	0.3	< 0.1	< 0.1	< 0.05	0.2	0.110	357	0.18	> 5000	0.5	0.6	90
11s171683 Dup	0.1	0.4	< 0.1	0.3	< 0.1	< 0.1	< 0.05	0.2	0.109	329	0.18	> 5000	0.6	0.5	120
11s171695 Orig															
11s171695 Dup															

Analyte Symbol	Ho	Er	Tm	Yb	Lu	Hf	Ta	W	Re	Au	Tl	Pb	Th	U	Hg
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppb
Detection Limit	0.1	0.1	0.1	0.1	0.1	0.1	0.05	0.1	0.001	0.5	0.02	0.01	0.1	0.1	10
Analysis Method	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS
Method Blank															
Method Blank															

**Appendix II**  
Diamond Drill Logs

ASHER RESOURCES INC. LAVINGTON GOLD PROJECT MAIN ZONE DIAMOND DRILL HOLE L14-01							DOWN HOLE TESTS (UNCORRECTED)																					
LOCAL GRID CO-ORDINATES LOCATION AND ORIENTATION DATA (UTM)							DEPTH	STR	DIP	DEPTH	STR	DIP	DEPTH	STR	DIP	DEPTH	STR	DIP	DEPTH	STR	DIP							
N	E	ELEV	BRG	DIP AT COLLAR	DEPTH	CORE SIZE	17.1	13.5	-45.7	105.3	12.3	-46.0	200.0	13.2	-44.9													
		1200	28	-45	245.67	HQ	64.8	12.8	-45.9	159.1	17.7	-44.7	245.7	13.1	-44.3													
UTM N UTM E 1200 HOLE TARGET: Undercut hole L90-07 BY 25 metres							SAMPLE AND ASSAY INFORMATION																					
5588529	692524						FROM	TO	GEOCODE	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION AND VEINING	MINERALIZATION	SAMP prefix	SAMP#	FROM	TO	WIDTH	Au ppb	Ag ppm	Bi ppm	As ppm	Cu ppm	Hg ppm	Mo ppm	Pb ppm	Sb ppm	Zn ppm
							0.00	9.14	CASG		CASING NO RECOVERY																	
							9.14	22.00	SZ	Shearing - 25-35 D tca.	Intermixed black schist and clay altered volcanic. Remnant black carbonaceous zones or tourmaline stringers, laminations and crosscutting planar sulphidic veins. Remnant black carbon forms dark mottled zones in silicified zone, planar, undulating stylistic and fabric cross cutting wispy laminations. rock is	Strong to intense quartz-white sericite alteration overprint bleaching all protoliths. Local fabric parallel intense silicified zones with open cockscomb vugs.	7% pyrite as euhedral disseminations but most commonly as fabric parallel stringers. Rare fine grained chalcopyrite. Possible trace sphalerite. Possible very rare trace galena.	11S	171159	9.14	11.00	1.86	277	2.34	3.05	170	291	90	19.2	90.6	75.1	92.6
											black carbonaceous intervals, decreasing open silicified zones.			11S	171160	11.00	13.00	2.00	221	1.99	2.92	160	330	70	23.2	81.5	68.8	94.3
														11S	171161	13.00	15.00	2.00	217	2.8	3.99	140.0	301	50	22.9	52	48.3	44
														11S	171162	15.00	17.07	2.07	310	3.3	3.96	153.0	441	80	23.3	23.9	39.8	47
														11S	171163	17.07	19.00	1.93	277	2.3	2.95	89.8	535	< 10	30.4	13.1	1.2	49
														11S	171164	19.00	21.00	2.00	1050	2.2	2.56	137.0	673	< 10	33.9	14.1	0.9	86
							22.00	30.10	QFPT		QUARTZ-SERICITE CATACLASITE Uncommon relict fine grained quartz-feldspar crystal tuff 1/2 grain size forming augens in fine grained ivory to khaki sericite-quartz cataclasite. Cataclasite also hosts 5% fabric subparallel quartz veins and zones.	Strong to intense quartz-white sericite alteration overprint bleaching all protoliths. Local fabric parallel intense silicified zones with open cockscomb vugs. Uncommon black stringers and cross cutting veins of tourmaline.	7% pyrite as euhedral disseminations but most commonly as fabric parallel stringers. Rare fine grained chalcopyrite. Possible trace sphalerite. Possible very rare trace galena. Remnant porphyry hosts at least 5% disseminated pyrite with strong trace cores of chalcopyrite. coarse brassy pyrite in veins. cataclasite hosts less than 5% very fine grained secondary [pyrite.	11S	171165	21.00	23.00	2.00	260	2.4	2.9	102.0	547	< 10	36.1	17.6	0.7	50
														11S	171166	23.00	25.00	2.00	364	2.6	3.44	114.0	475	< 10	26.8	29.9	1.9	29
														11S	171167	25.00	27.00	2.00	459	3.0	3	57.9	522	< 10	39.4	29.7	0.4	34
														11S	171168	27.00	29.00	2.00	205	5.0	2.79	97.9	1030	10	27.6	131	4.3	182
														11S	171169				1030	62.2	3.96	60.8	6440	1590	877	92.6	128.0	502
											clay altered contact			11S	171170				< 5	1.2	< 0.02	1.3	1	< 10	1.17	1.35	0.0	3
							30.10	41.00	SZ	0-65 AVG 20	late SHEAR ZONE	intense quartz-sericite alteration overprinted by shear synchronous clay alteration. Cataclasite hosted disrupted quartz "veins" although first episode appears to be quartz feldspar porphyritic.	Minimum 2 and probably there sulphide episodes. First is ~5% fine grained disseminated pyrite in cataclasite which may be synchronous with disrupted quartz pyrite "veins". Latest phase is microscopic for very fine grained grey massive > 20 cm by 1 to 10 mm these commonly have a very low core angle. Sulphide stringers hosted by late intense clay	11S	171171	29.00	31.00	2.00	410	1.9	1.52	47.1	465	< 10	16.6	14.4	1.3	21
														11S	171172	31.00	33.00	2.00	286	2.8	3.45	83.4	461	< 10	18.8	15.4	17.4	37
														11S	171173	33.00	35.00	2.00	1080	2.0	2.92	104.0	329	< 10	15.5	45.4	1.3	55
														11S	171174	35.00	37.00	2.00	277	2.0	3.62	104.0	301	20	19.8	102	1.8	272
														11S	171175	37.00	39.00	2.00	340	3.4	7.14	79.7	633	60	19.6	119	3.1	490
														11S	171176				< 5	0.6	0.03	0.6	1	< 10	0.12	1.13	< 0.02	3

FROM	TO	GEOCODE	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION AND VEINING	MINERALIZATION	SAMP prefix	SAMP#	FROM	TO	WIDTH	Au ppb	Ag ppm	Bi ppm	As ppm	Cu ppm	Hg ppm	Mo ppm	Pb ppm	Sb ppm	Zn ppm
41.00	51.00	QFPT	35+/-20	QUARTZ-SERICITE CATACLASITE Similar to unit above except for more common late stage but still truncated and deformed quartz veining. 30% of interval is almost pure white fine grained sericite.	Strong to intense quartz-white sericite alteration overprint bleaching all protoliths. Local fabric parallel intense silicified zones with open cockscomb vugs. Uncommon black stringers and cross cutting veins of tourmaline.	7% pyrite as euhedral disseminations but most commonly as fabric parallel stringers. And late hairline fracture fillings and small stockwork zones. 1-2 % VFG black to dark grey nondescript sulphides in sericite. Sphalerite? Or tetrahedrite. QV shapes have outer rims of semi massive pyrite with strong trace chalcopyrite, sphalerite and tetrahedrite?.	11S	171177	39.00	41.00	2.00	251	2.5	5.76	44.4	541	< 10	16.8	16.1	4.3	53
				Gradational contact - increase in late sulphidic shearing.			11S	171178	41.00	43.00	2.00	175	1.8	3.79	52.2	463	< 10	15.2	13.4	0.8	36
			44-51 40+/-10		Strong to intense quartz-white sericite alteration overprint bleaching all protoliths. Local fabric parallel intense silicified zones with open cockscomb vugs. Rare black stringers and cross cutting veins of tourmaline. Over 15% of interval is composed of foliation parallel 4 to 15 mm thick white-grey quartz veins with disseminated pyrite.	7% pyrite as euhedral disseminations but most commonly as fabric parallel stringers. And late hairline fracture fillings and small stockwork zones. 3-4% medium grained disseminated hematite and 1-2 % VFG black to dark grey non descript sulphides in sericite schist. Sphalerite? Or tetrahedrite. QV have outer rims of semi massive pyrite with strong trace chalcopyrite, 5% (vein content) sphalerite and	11S	171179	43.00	45.00	2.00	349	1.5	2.19	48.1	556	< 10	18.2	6.25	0.4	40
						49.2 - 50.8 core axis subparallel semi brittle sulphidic fault zone 25% black microscopic sulphides.	11S	171180	45.00	47.00	2.00	372	0.9	2.08	26.3	247	< 10	14.7	5.58	0.4	36
							11S	171181	47.00	49.00	2.00	240	0.9	3.05	34.0	365	< 10	15.5	9.17	0.5	47
				Gradational contact -increased secondary curvilinear folding of schist.			11S	171182	49.00	51.00	2.00	438	1.4	1.75	34.7	452	< 10	20.9	10.9	1.3	117
51.00	59.70	SZ	0-90 avg 10-15 shearing.	late SHEAR ZONE	Intense quartz-sericite alteration overprinted by shear synchronous clay alteration. Cataclasite hosted disrupted quartz "veins" although first episode appears to be quartz feldspar porphyritic.	Minimum 2 and probably three sulphide episodes. First is ~5% fine grained disseminated pyrite in cataclasite which may be synchronous with disrupted quartz pyrite "veins" and sericite schist augens. Second is syn shear pyrite veinlets that parallel and form 'stylitic' cross cutting veinlets (deformed stockwork) Latest phase is microscopic for very fine grained grey massive > 20 cm by 1 to 10 mm these commonly have a very low core angle sulphide stringers hosted by late intense clay microbreccia zones. common in	11S	171183	51.00	53.00	2.00	770	0.9	0.94	21.9	292	< 10	15	13.7	0.8	68
							11S	171184	53.00	55.00	2.00	1550	0.7	0.88	17.7	214	< 10	7.7	6.96	0.5	40
							11S	171185	55.00	57.00	2.00	503	0.6	0.99	21.8	215	< 10	8.58	7.24	0.5	54
				Gradational contact.			11S	171186	57.00	59.00	2.00	147	0.9	1.33	33.0	303	< 10	18.6	10.5	0.7	58
59.70	63.00	QFPT		QUARTZ-SERICITE CATACLASITE Similar to unit above except for more common late stage but still truncated and deformed quartz veining. 30% of interval is almost pure white fine grained sericite.	Strong to intense quartz-white sericite alteration overprint bleaching all protoliths. Local fabric parallel intense silicified zones with open cockscomb vugs. Rare black stringers and cross cutting veins of tourmaline. Over 15% of interval is composed of foliation parallel 4 to 15 mm thick white-grey quartz veins with disseminated pyrite.	7% pyrite as euhedral disseminations but most commonly as fabric parallel stringers, and late hairline fracture fillings and small stockwork zones, and 1-2 % VFG black to dark grey non descript sulphides in sericite schist. Sphalerite? or tetrahedrite. QV have outer rims of semi massive pyrite with strong trace chalcopyrite, 5% (vein content sphalerite and rare	11S	171187	59.00	61.00	2.00	177	0.8	1.76	41.2	300	< 10	19.2	9.95	0.7	50
				Gradational contact over 4 metres decreasing white sericite cataclastic schist fabric down hole.			11S	171188	61.00	63	2.00	208	1.0	2.28	36.7	359	< 10	23.7	10.2	0.9	35

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63.00	80.00	FQPT	32+/- 10 schistosity, veining	DACITE TUFF? Grey very to extremely fine grained feldspathic volcanic rock. Commonly schistose with numerous fabric parallel quartz and sulphide veinlets.	Rock strongly clay altered which overprints local sericite alteration.	Similar to preceding interval. 55 disseminated and stringers veinlets of pyrite. Rare trace chalcocopyrite with larger pyrite masses. 2-3 % black powdery tourmaline? or sulphide accompanies quartz and	11S	171189	63.00	65	2.00	216	0.8	1.08	28.4	278	< 10	16.3	6.06	0.4	61
					72.5 - 74.3 - Decreasing core angles ~ 15 deg. Increased late shearing and both shear parallel and very late grey planar quartz-sulphide veins. Apparent dip of vein at 72.4 is less than 20 deg.	10% total sulphide content. 4% as early brassy disseminated pyrite and 6% hosted by multiepisodic shear and latest planar crosscutting quartz veins.	11S	171190	65.00	67	2.00	250	0.7	1.4	53.3	306	< 10	21.5	7.7	0.7	45
					75.5 - 76 1-1.5 cm white barren quartz vein semi parallel to C.A. Cross cut by later planar fabric parallel quartz-sulphide veins.		11S	171191	67.00	69	2.00	321	1.4	2.07	61.6	744	< 10	33.4	9.69	0.5	55
					76.5 - 80 increase multiepisodic quartz-sulphide veining including core axis parallel phase.		11S	171192	69.00	71	2.00	173	1.0	0.71	17.5	307	< 10	22.3	10.3	0.5	90
					gradational contact			171193	71.00	73	2.00	386	1.0	0.62	20.1	364	< 10	31	9.58	0.7	95
							11S	171194	73.00	75	2.00	574	2.6	2.74	29.1	567	< 10	16.7	104	0.7	206
							11S	171195	BLANK			< 5	0.4	< 0.02	0.9	0	< 10	0.15	1.21	< 0.02	3
							11S	171196	75.00	77	2.00	2050	0.9	1.16	37.2	417	< 10	14.7	6.87	0.4	53
							11S	171197	77.00	79	2.00	859	1.8	0.94	30.5	595	< 10	17.9	6.88	0.6	44
80.00	92.50	SZ	0+/-90 avg 5	late SHEAR ZONE	intense quartz-sericite alteration overprinted by shear synchronous clay alteration. Cataclasite hosted disrupted quartz "veins" although first episode appears to be quartz feldspar porphyritic. Very late planar to curvilinear gypsum veining associated with dark grey clay slips. various orientations	Minimum 2 and probably there sulphide episodes. First is ~5% fine grained disseminated pyrite in cataclasite which may be synchronous with disrupted quartz pyrite "veins". Latest phase is microscopic for very fine grained grey massive > 20 cm by 1 to 10 mm these commonly have a very low core angle. Sulphide stringers hosted by late intense clay	11S	171198	STD WCM CU 157			860	15.0	2.76	11.8	4730	1940	524	30.6	42.3	26
					86.5 - 87.2 - Less intensely sheared and clay altered interval.	~ 4% Fine grained brassy pyrite.	11S	171199	79.00	81	2.00	173	2.2	1.23	40.6	449	20	13	8.46	1.1	57
					87.6 - 89 -weakly mineralized gougy shear convoluted fabric bottom planar grey clay contact 25 deg. To C.A.		11S	171200	81.00	83	2.00	178	1.4	1.05	55.8	445	< 10	16	11.1	1.7	81
				Schistosity 35 deg to C.A. shallowing to 25 deg to C.A. down hole shallow to CA fractures and slips.	89-90 bleached shear tuff.	4% very finely disseminated pyrite.	11S	171201	83.00	85	2.00	174	1.0	0.97	31.3	358	< 10	12.7	10.9	1.2	61
				90 planar fault contact 32 deg to C.A.	90-92.5 - undulating dark grey sulphide shear 0-15 deg to C.A. 1-2 cm thick . Top unit is strongly brecciated wallrock with wispy grey clay slips arcing out of shear. Bottom rock less deformed with foliation reversal from normal I.E. shallow south dipping.		11S	171202	85.00	87	2.00	245	0.9	0.62	19.4	338	< 10	10.2	9.29	1.0	61
				92.5 - curvilinear black sulphide clay contact grading from 5 to 20 deg to C.A. significant gypsum as deformed vein fragments.			11S	171203	87.00	89	2.00	298	0.9	0.69	46.2	399	< 10	11.3	10.2	1.6	70
							11S	171204	89.00	90	1.00	134	0.5	0.7	10.5	185	< 10	3.76	6.56	0.6	72
				92.5-92.7 schist wallrock dip reversal - parasitic fold hinge?			11S	171205	90.00	92.5	2.50	143	0.9	0.96	23.0	380	< 10	11.7	12.5	1.6	94



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92.50	152.20	FQPT	35+/5-10 2-4/1 stretching of tuff fabric.	DACITE TUFF? Grey very to extremely fine grained feldspathic volcanic/ rock. Uncommon rock fragments common feldspar 75% and less common quartz 20% crystals. Commonly schistose with numerous fabric parallel quartz and sulphide veinlets. At least 20% of sequence is white quartz sericite schist varying from 5 to	Rock strongly clay altered which overprints local sericite alteration. 5-85 of interval hosts white barren deformed quartz veins. Rare to locally 2% tourmaline most commonly as late stage veinlets.	Similar to preceding interval. 5% disseminated and stringers veinlets of pyrite. Rare trace chalcocopyrite with larger pyrite masses. 2-3 % black powdery tourmaline? or sulphide accompanies quartz and pyrite..	11S	171206	92.50	94.5	2.00	173	1.0	0.89	23.4	447	< 10	13.5	5.31	0.6	47
			105.9 - 106.1 small buckle fold complete dip reversal.		strong clay gypsum overprint.		11S	171207	94.50	96.5	2.00	132	0.6		15.2	250	< 10	9.97	6.07	0.6	63
					106-106.4 - late core axis parallel veining, clay and gypsum zone.	6% pyrite and other sulphides	11S	171208	96.50	98.5	2.00	84	0.5	0.82	15.8	198	< 10	7.93	7.47	0.6	58
			106.5 - 109 core angles ~ 5-10 deg. With small buckle and near fabric normal clayey fault at 108.7.		increase late clay-gypsum alteration.		11S	171209	98.50	100.5	2.00	254	0.5	0.62	15.2	248	< 10	6.78	5.58	1.0	53
						110.5 - 111.6 increased pyrite mineralization 6-7% 'stringer disseminated"	11S	171210	100.50	102.5	2.00	121	0.6	0.74	10.4	320	< 10	10.3	5.84	0.7	60
						111.8 - 1.5 cm dark grey sericite? Pyrite vein 30 deg to C.A.	11S	171211	102.50	104.5	2.00	110	0.6	0.71	12.3	328	< 10	16.1	6.21	0.7	47
					115 117- 5% tourmaline as late veins commonly associated with quartz sericite veins.		11S	171212	104.50	106.5	2.00	58	0.7	0.6	15.0	327	< 10	22.1	8.36	0.8	36
					119.2 - 6 mm thick gypsum vein II for schistosity at 35 deg.		11S	171213	106.50	108.51	2.01	148	0.6	0.47	15.6	413	< 10	24.7	7.28	0.4	47
					127.2 - 127.6 increasing silicification. And weak crackle brecciation.		11S	171214	108.51	110.5	1.99	66	0.5	0.25	14.0	278	< 10	10.4	7.18	0.7	59
					127.6 - 128.3 - quartz vein - upper contact indistinct and undulation somewhat cross cutting fabric, lower contact II to fabric. Contact host black clay sulphide veins. Late disconnected pink dolomite veinlets associated with late open	4% early raggedly disseminated pyrite. 1-2% black sulphide in latest ragged fractures and shear clay zone-veins.	11S	171215	110.50	112.50	2.00	76	0.5	0.34	13.4	259	< 10	10.8	7.75	0.8	64
					slight increase in late tan dolomite? Fracture veining.		11S	171216	112.50	114.50	2.00	81	0.4	0.23	13.7	298	< 10	23	5.96	0.7	50
							11S	171217	STD WCM CU 151			1030	60.7	3.94	56.8	6210	1400	846	88.9	120.0	490
							11S	171218	114.50	116.50	2.00	647	3.0	0.25	17.8	1120	< 10	18.3	5.13	1.5	55
							11S	171219	116.50	118.50	2.00	400	2.1	0.32	19.2	962	< 10	29.3	10.2	1.0	52
							11S	171220	118.50	120.50	2.00	183	1.5	0.7	25.0	437	< 10	23.2	49.4	1.4	44
							11S	171221	BLANK			< 5	0.3	< 0.02	0.5	1	< 10	0.18	1.31	< 0.02	3
							11S	171222	120.50	122.50	2.00	91	0.8	0.3	35.1	295	< 10	17.7	8.57	0.8	24
							11S	171223	122.50	124.50	2.00	163	1.2	0.49	50.7	375	< 10	15	157	1.8	55
				130 rock becoming increasingly harder. Less clay altered rather than more silicified.			11S	171224	124.50	126.50	2.00	121	1.5	0.71	33.7	361	110	16.4	187	0.9	205
				130 - 133.6 Generally finer grained wall rock. Possible breccia with very faint xenolith boundaries. Notable increased	130-131.6 several small silicified zones cored by 0.5 to 1.5 cm fabric parallel quartz pyrite grey sulphide veins,	5% evenly disseminated brassy pyrite in wallrock. 1% as hairline stringers. Veins host 5-10% pyrite and 5% grey sulphide.	11S	171225	126.50	128.50	2.00	498	2.1	0.39	36.2	465	30	18	26.4	14.4	14
					132.05 massive deformed quartz vein ~ 2 cm thick generally normal to fabric. Foliation parallel veins truncated at vein contact.	5% coarse grained pyrite. 5% fine to coarse grained brown sphalerite, 1% very fine tourmaline, 1% dark grey sulphide.	11S	171226	128.50	130.50	2.00	177	2.3	0.83	30.9	352	< 10	14.7	5	2.6	46
				132.5 Minor clay core loss.	1 to 3 cm quartz tourmaline-pyrite veins at 133.3 134.5 and 136.6. 5% tourmaline	3% fine grained pyrite.	11S	171227	130.50	132.47	1.97	176	7.7	10.5	143.0	352	40	14.8	43.1	5.8	228

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					133.7 - 133.8 4 late small tourmaline veins crosscutting fabric a low core angles. Lower veins appear to be later and less deformed.		11S	171228	132.47	134.50	2.03	217	3.48	2.59	38.9	427	< 10	21.8	32.7	2.6	50
					138.6 1 cm quartz pyrite vein. Vein fabric parallel.	10% pyrite in vein medium disseminated. 5 to 20% in 2 cm wide silicified selvages.	11S	171229	134.50	136.50	2.00	123	1.4	2.23	19.7	246	< 10	9.31	8.8	0.6	103
				138 - 142 highly variable grain texture possible breccia protolith (<1 to > 5 cm fragments. Alteration and small swarms of quartz veins with silicified selvages make identification	Increased erratic pervasive silicification associated with small quartz veins.	1 to locally 6% fine to medium grained pyrite. Pyrite associated but often peripheral to QV's	11S	171230	136.50	138.50	2.00	73	1.7	0.52	15.3	192	< 10	10.1	40.7	3.9	50
					140.5 small quartz-pyrite		11S	171231	138.50	140.50	2.00	178	9.1	3.71	66.8	90	790	8.67	632	20.1	1740
				143.9 - 147.8 increased apparent fine grained schistosity and pervasive weak tan clay alteration. Rock appears to be an altered mudstone?	slight decrease in veining.	~4% very finely disseminated pyrite. As disseminations and three orientation planar veins and disseminations.	11S	171232	140.50	142.50	2.00	220	3.0	3.53	209.0	125	< 10	14.4	51.2	6.0	77
							11S	171233	142.50	144.50	2.00	359	1.1	0.4	15.7	144	< 10	10.3	7.84	0.8	19
				147.8 -152.2 Distinct change in composition and grain size. Possible intrusive protolith. 55% fine-medium grained feldspar, 30% anhedral quartz, 10% fine grained biotite. 2% tourmaline and 3% very finely disseminated	similar to previous 20 metres.		11S	171234	144.50	146.50	2.00	77	0.7	0.72	16.0	127	< 10	7.82	20.9	2.1	17
					Indistinct quartz veined contact.		11S	171235	146.50	148.50	2.00	90	0.5	0.77	18.4	108	< 10	11.3	26.1	1.0	30
152.2	160.8	DALT		<b>Dacitic Lapilli Tuff</b> Heterogeneous deformed volcanoclastic. Very indistinct highly deformed fragments of quartz feldspar and feldspar quartz porphyry. Distinct lapilli tuff textures from 154 to 158.5	Similar to 138. Possible mafic minerals replaced by tourmaline 10% and pyrite 3-5% in coarse grained lapilli fragments.	Similar to 138 m.	11S	171236	148.50	150.50	2.00	187	0.3	0.49	17.1	116	< 10	9.31	13.3	1.0	43
					152.05 - 1 to 7 cm quartz-carbonate vein. Highly variable width. Clay altered contacts.	2% very fine disseminated grey sulphides.	11S	171237	150.50	152.50	2.00	918	0.274	0.29	19.3	119	< 10	9.18	8.6	0.78	44.3
					152.9 - 154 several fabric parallel clay altered zones. Some core loss. Intervening rock is silicified with 5% quartz-tourmaline		11S	171238	152.50	154.50	2.00	128	0.346	0.36	21.5	126	< 10	10.1	13.4	1.1	42.5
					Pink dolomite veining at lower portion of clay alteration - 154.1		11S	171239	BLANK			1	0.111	< 0.02	1.4	0.91	< 10	0.12	1	0.03	3
				155 Fabric 42 +/- 10 deg. to C.A. gradual change from 151 - 154.9			11S	171240	154.50	156.50	2.00	163	0.383	0.42	29.4	142	< 10	18	24.4	1.36	38.8
					156.35 - 1.2 cm quartz pyrite vein. Fabric parallel.	20% irregularly disseminated medium to coarse grained pyrite. 2% fine grey sulphides.	11S	171241	156.50	158.50	2.00	66	0.554	0.48	30.4	159	< 10	11.3	14.4	0.94	36.1
					160.2 1 cm deformed quartz hematite vein. ~ near normal to C.A.		11S	171242	158.50	160.20	1.70	80	0.496	0.31	33.6	122	< 10	12.7	18.1	0.95	42.2
					160.5 - 160.7 0.5 to 1 cm erratically oriented hematite-quartz vein (steepening down hole)	50% hematite, 25% quartz forming border phase. 15% light brown sphalerite 6^ brassy pyrite, probably chalcopyrite, trace galena and 3% dark grey sulphide.	11S	171243	160.20	160.90	0.70	119	0.568	0.29	22.6	158	< 10	19.5	9.65	1.76	49.6



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				160.8 Rock distinctly finer grained and equigranular. No discernible fragments. 75% feldspar, 25% anhedral quartz, 4% pyrite. Moderate sauseritization of feldspars.	Probably weakly silicified and moderate clay overprint. Rare tourmaline.	5% very finely disseminated pyrite.	11S	171244		BLANK		1	0.207	<0.02	1	7.78	<10	0.09	0.82	<0.02	5.8	
160.80	188.50	QFPT		<b>DACITE QF PORPHYRY TUFF</b> back to fine grained unit. Very indistinct and gradational contacts.	Continuation from previous unit	Continuation from previous unit	11S	171245	160.90	163.00	2.10	346	0.601	0.39	33.8	162	<10	10.1	12.3	2.18	11	
					162 - 162.6 Several fabric parallel clay altered zones. Associated with small quartz-	10% brassy medium grained pyrite in veins.	11S	171246	163.00	165.00	2.00	671	1.42	0.43	19	308	<10	9.64	14.2	1.03	42.9	
							11S	171247	STD	WCM	CU	157	868	13.7	2.5	12.8	4420	1960	503	32.6	43.4	29.2
							11S	171248	165.00	167.00	2.00	80	1.24	0.3	23.7	159	<10	10.4	8.46	0.91	53.2	
							11S	171249	167.00	169.00	2.00	114	0.481	0.32	17	202	<10	9.61	7.79	0.79	64.3	
							11S	171250	169.00	171.00	2.00	99	0.417	0.36	14.4	194	<10	8.44	7.56	1.03	58.5	
					169-169.3 Strong grey clay in shears ~ 25 deg to C.A. Minor buckling.	2% brassy pyrite in clay zones.	11S	171251	171.00	173.00	2.00	69	0.47	1.58	14.7	158	<10	3.13	9.21	0.64	66.7	
				170-174.6 Small indistinct lapilli tuff interval			11S	171252	173.00	175.00	2.00	136	0.293	0.61	12.5	138	<10	12.1	6.76	0.92	59.3	
			170-180 Fabric ~ 35+/-10 more common variation in CA.			172.5 - 173.2 Silicified zone with core axis parallel shearing. 4% medium grained dark grey sulphide. 3% very finely disseminated pyrite.	11S	171253	175.00	177.00	2.00	36	0.184	0.87	10.4	51.5	<10	5.12	4.81	1.26	28.3	
			174.3 - 174.6 Strong clay alteration buckle zone rotated sections of	174.6 Lithology change from lapilli tuff to fine grained white tuff grain size gradually increasing down hole. Coarse crystal and fine lapilli tuff present by 179 m.	Very strong clay alteration - increased deformed gypsum veinlets.		11S	171254	177.00	179.00	2.00	19	0.118	0.32	9	11.6	<10	1.51	5.04	0.74	20.7	
					174.5 - 181 Weak to locally strong clay alteration. Late clay slips common in multioriented late fractures. Fabric parallel appear multiepisodic.	4% bright finely disseminated pyrite easily seen on fresh broken surfaces.	11S	171255	179.00	181.00	2.00	13	0.106	0.28	10.3	29.4	<10	2.22	5.13	1.1	25.3	
					183.4 - 188 - numerous generally fabric parallel clay alteration zones rock locally soft destroyed by swelling clays.		11S	171256	181.00	183.00	2.00	41	0.088	0.35	10.9	13.5	<10	2.97	5.98	0.87	22.7	
							11S	171257	183.00	185.00	2.00	39	0.158	0.51	15.8	10.6	30	6.25	10.7	0.74	118	
							11S	171258	185.00	187.00	2.00	35	0.114	0.31	11.9	13.4	<10	3.62	6.61	1	26.2	
							11S	171259	187.00	189.00	2.00	26	0.09	0.24	11.6	11.5	<10	6.53	5.65	0.86	10.5	
188.5	245.67	DALT		<b>Dacitic Lapilli Tuff</b> Heterogeneous deformed volcanoclastic. Very indistinct highly deformed fragments of quartz feldspar and feldspar quartz porphyry.	Continuation from previous unit	Continuation from previous unit	11S	171260	189.00	191.00	2.00	60	0.084	0.25	10.5	17.1	<10	9.22	5.17	0.92	14.2	
			191.3 - 193.3 Several dry shears cross cutting fabric 15-40 deg to C.A.				11S	171261	191.00	193.00	2.00	56	0.101	0.56	9.9	31.2	<10	4.24	7.85	1.19	36.2	
			192.7 - 193.3 deformation zone between cross cutting ragged faults. Rock is well annealed.				11S	171262	193.00	195.00	2.00	140	0.225	0.68	14.2	58.1	<10	5.68	17.4	0.92	47	
							11S	171263	195.00	197.00	2.00	225	0.222	0.58	22	65.3	<10	2.55	12.4	1.41	49.3	

FROM	TO	GEOCODE	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION AND VEINING	MINERALIZATION	SAMP prefix	SAMP#	FROM	TO	WIDTH	Au ppb	Ag ppm	Bi ppm	As ppm	Cu ppm	Hg ppm	Mo ppm	Pb ppm	Sb ppm	Zn ppm
			193.3 crosscutting shear fault 25 deg to C.A. ~ 57 to fabric. Hosts 7 cm of dark grey gouge. Semi brittle upper fault ~ 8 deg. To CA	wall rock on other sides of shear is very similar.			11S	171264	197.00	199.00	2.00	216	0.236	0.58	25	105	< 10	3.79	11.3	1.06	40.5
			195.4 - 199 buckled core shear slips, reversals and rotation in rock		195.4 - 199 Significant increase in late clay alteration. No tourmaline noted	2-3% very finely disseminated pyrite. Slight grey sulphide staining.	11S	171265	BLANK			1	0.083	< 0.02	0.7	0.75	< 10	0.09	0.93	< 0.02	1.7
						197 - 5 mm grey sulphide slip 15 deg. To C.A. 197.4-199 increased sulphides. 6% as late shear veinlets and disseminations.	11S	171266	199.00	201.00	2.00	93	0.26	1.05	10.7	48.8	< 10	4.43	11.4	0.69	47.3
							11S	171267	201.00	203.00	2.00	298	0.252	0.56	18.1	71.3	< 10	5.22	7.64	1.46	59.3
							11S	171268	203.00	205.00	2.00	86	0.302	0.61	16.5	56.9	< 10	1.61	11.9	0.53	38.2
							11S	171269	BLANK			1	0.107	0.03	1.3	1.53	< 10	0.09	1.95	0.02	3
			Ruptured rock,		202.4 - 206.8 Significant increase in late clay alteration. No tourmaline noted. Several zone of white clay with mineralized quartz vein fragments.	Variably mineralized wallrock fragments up to 8% pyrite average 4%, heavily mineralized small rounded quartz vein fragments throughout interval.	11S	171270	205.00	207.00	2.00	156	0.286	0.88	14.2	207	< 10	4.68	15.2	0.95	51.5
							11S	171271	207.00	209.00	2.00	170	0.447	1.21	17.2	208	< 10	8.88	12.5	1.8	76.3
							11S	171272	STD WCM CU 151			931	55.5	4.07	62.4	5760	1450	756	105	120	581
						207.85 - 209 6 cm quartz vein fabric II 35 deg. To C.A. bounded by sulphide filled clayey shears.	11S	171273	209.00	211.00	2.00	163	1.54	0.95	18.3	217	< 10	4.41	8.77	1.41	59.7
				209.2 clayey veined shear. Distinctly fine grained tuff below. Occasionally coarser lapilli intervals.	1-3 cm quartz sulphide vein. Sulphide phase 80% of vein late white barren amorphous phase.	209.4 - 1- 3 cm finely disseminated semi massive pyrite vein fabric parallel 30 deg to C.A. Minor dark grey sulphides. No cpy noted.	11S	171274	211.00	212.70	1.70	76	0.668	1.14	18.9	218	< 10	4.49	13	1.03	69.1
					210.7 massive white quartz vein 'blob' with ragged dark chlorite-hematite zone along lower contact zone.	minor microcrystalline hematite in chlorite masses.	11S	171275	212.70	214.92	2.22	120	0.632	0.99	22.3	265	< 10	5	10.2	1.34	62.8
					211.4 - 8 mm undulating crosscutting white quartz, green epidote hematite veinlet 70 deg to CA. cross cut by ivory dolomite low to C.A. veinlets. Later clayey	25% hematite as 'wormy' zone in QV.	11S	171276	214.92	217.20	2.28	126	0.84	1.11	18.1	471	< 10	7.09	17	0.89	51
					212.7 - 217.1 Multiepisodic shear and crosscutting quartz vein zone. Relict variably silicified tuff and sericite schist wallrock zones and fragments. Late clay breaks with gypsum veins further disrupt the interval truncating mineralized quartz veins. 2 to 8 cm crosscutting white quartz veins spaced a 0.5 cm interval dominant	212.7 - pyrite core axis sub parallel shear veins begins. Very erratically distributed ~4% overall.	11S	171277	217.20	219.00	1.80	101	0.615	0.69	31.2	293	< 10	6.64	7.1	1.15	55.7
						217.1 - 217.2 fabric subparallel quartz pyrite hematite veinlets	11S	171278	219.00	221.03	2.03	73	0.614	1.25	21	171	< 10	4.68	15.3	1.87	63.1
					217.2 - 220.8 Quartz -tourmaline-pyrite veining subparallel to C.A. ~ 35 deg. To C.A. 30% tourmaline in vein ~ 4% overall.	217.2 - 220.8 - 6% brassy pyrite in fabric parallel quartz vein swarm.	11S	171279	221.03	223.10	2.07	66	0.539	0.73	24.5	103	< 10	2.71	14.6	1.19	79.8
							11S	171280	223.10	225.00	1.90	70	0.327	0.69	27.5	68.2	< 10	3.46	12.8	1.13	71.1

FROM	TO	GEOCODE	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION AND VEINING	MINERALIZATION	SAMP prefix	SAMP#	FROM	TO	WIDTH	Au ppb	Ag ppm	Bi ppm	As ppm	Cu ppm	Hg ppm	Mo ppm	Pb ppm	Sb ppm	Zn ppm
			221 - 222.9 two sequential buckle folds. Latest near normal crosscutting fractures offset fabric		Moderate to strong clay alteration and moderate bleaching. Weak late synchronous gypsum veining. Quartz-tourmaline sulphide veining deformed with wallrock.	6% fine grained brassy pyrite, 2-3% dark very fine grained pyrite and other sulphides.	11S	171281	225.00	227.00	2.00	62	0.238	0.54	22.3	70.4	< 10	1.4	7.59	1.12	70.9
							11S	171282	227.00	229.00	2.00	33	0.376	0.79	28.1	107	< 10	5.93	9.99	0.64	71.8
					226.5 - 230.5 late chlorite lined late cross cutting fractures and quartz vein margins. Gypsum as ragged veinlets and pervasive late overprint with clay.	3-4% fine grained disseminated and vein pyrite. 1% dark grey sulphidic clay slips. 1% dark massive pyrite veinlets. Trace chalcopyrite and malachite?	11S	171283	229.00	230.80	1.80	59	0.628	0.97	33.1	253	< 10	13.1	12.3	0.87	69.4
							11S	171284	230.80	232.20	1.40	68	0.412	0.54	29.1	84.8	< 10	6.38	7.94	0.82	59.5
					229.6 - 232.2- strong quartz-tourmaline pyrite veining in highly sheared wallrock ~ 25 +/- 10 deg to C.A.	4% wallrock disseminated pyrite. Quartz tourmaline pyrite veins host 15-20% fine and coarse grained (polycrystalline) pyrite.	11S	171285	232.20	234.20	2.00	34	0.209	0.37	19.5	52.5	< 10	3	7.46	1.29	69.1
							11S	171286	234.20	236.20	2.00	59	0.433	1	24.4	155	< 10	5.54	12.9	1.08	60.5
					232.65 grey and 232.8 white massive crosscutting quartz vein with epidote with hematite selvage veins. Veins also hosts large felted chloritized biotite	strong trace hematite in epidote,	11S	171287	236.20	238.20	2.00	55	0.498	1.12	25.6	136	< 10	6.82	15.9	1.01	53.8
			buckle fold centered at 237	234.4 - 237.2 - deformation zone broken and buckle folded wallrock. Alteration and mineralization similar to previous interval with less late gypsum-clay		weaker than at previous deformation zone.	11S	171288	238.20	240.20	2.00	46	0.362	0.68	24.9	90.9	< 10	5.2	9.57	0.92	48.5
					4% 3 to 8 mm quartz-pyrite grey sulphide fabric parallel veins.	10% pus sulphides in veinlets.	11S	171289	240.20	242.20	2.00	145	0.388	0.74	27.5	101	< 10	3.93	12.4	1.32	52.3
							11S	171290	242.20	244.00	1.80	40	0.449	1.02	27.4	63.1	< 10	11.5	21.2	2.2	53.8
					241.1 - 241.4 - shear fault 23 deg to C.A. lower planar contact mylonitized with grey sulphide shear vein indistinct fabric suggest dominant horizontal movement. Upper contact zone somewhat gradational with ragged quart-carbonate and epidote stockworks. probably interstitial	5 mm average thickness dark grey sulphide shear veinlet.	11S	171291	STD WCM CU 157			889	13	2.5	12	4250	1860	492	32.9	39.6	27.3
			50 deg. To C.A. 20 deg to fabric.		242.55 les intense version of above.							49	1.15	0.46	21.8	77.6	< 10	3.63	7.84	1.49	47
245.67		EOH			245.67 End of Hole.		11S	171292	244.00	245.67	1.67	480									

LOCAL GRID CO-ORDINATES			LOCATION AND ORIENTATION DATA (UTM)				DEPTH	STR	DIP	DEPTH	STR	DIP	DEPTH	STR	DIP	DEPTH	STR	DIP	DEPTH	STR	DIP					
N	E	ELEV	BRG	DIP AT COLLAR	DEPTH	CORE SIZE																				
5570750	6100	1200	180	-45	508.70	HQ					17.1	167	-43.3	154.2	169.8	-41.9	245.6	171.8	-41	428.6	173.8	-36.4				
UTM N UTM E		1200	HOLE TARGET:			Undercut hole L89-02 by 100 metres. Test IP and geochemical anomaly.					108.5	168.4	-43	233.5	169	-41.5	382.8	173.6	-38.3	507.8	176.9	-34.5	DECLINATION +16.127			
FROM	TO	GEOCODE	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION AND VEINING	MINERALIZATION					SAMPLE AND ASSAY INFORMATION					Au ppb	Ag ppm	Bi ppm	As ppm	Cd ppm	Cu ppm	Hg ppm	Mo ppm	Pb ppm	Sb ppm	Zn ppm
							SAMP prefix	SAMP#	FROM	TO	WIDTH															
0.00	6.10	CASG		CASING NO RECOVERY																						
6.10	99.1	FQPT	Uncommon shearing at no preferred angle.	Grey, medium to fine grained, massive quartz feldspar porphyritic tuff? intermediate volcanic flow complex. Possibly in part or largely? intrusive. 50% 0.5 to 1.5 mm subhedral quartz, 30% 0.5 to 2 mm subhedral feldspar and 20% anhedral black biotite wrapping around the other silicates. Local fine grained dykelets at steep core angles. Local 'breccia' zones with quartz veined angular and disrupted fragments.	Interval is weakly to moderately pervasively silicified. Presence of biotite as dominant mafic may indicate potassic alteration. overprinted by weak to moderate carbonate fracture infill and stringers; associated with chlorite and clay. Late occasional < 1cm to > 25 cm quartz veins with massive anhedral masses of biotite and chlorite and pyrrhotite-pyrite clots. Grey-green chlorite filled late clayey fractures and, irregular and hackly fractures. Quartz with biotite veinlets often accompanied by clay altered margins.	Weak to strong trace pyrite as fine disseminations but generally associated with veining, pyrite increases downhole. Up to 1.5 cm pyrrhotite-pyrite clots in quartz veins.	11S	171301	6.43	8.50	2.07	2	0.24	0.02	10	0.1	14	< 10	1.0	7	1.5	59				
							11S	171302	8.50	10.50	2.00	2	0.09	0.03	34	0.1	15	< 10	0.9	9	2.2	76				
							11S	171303	10.50	12.50	2.00	2	0.06	< 0.02	27	0.1	18	< 10	0.9	6	2.1	74				
							11S	171304	12.50	14.50	2.00	2	0.06	< 0.02	26	0.3	33	< 10	0.8	21	2.2	89				
							11S	171305	14.50	16.60	2.10	7	0.15	0.03	92	0.2	24	< 10	0.9	10	1.6	69				
							11S	171306	16.60	18.60	2.00	2	0.11	< 0.02	15	0.0	18	< 10	1.0	7	3.0	51				
							11S	171307	18.60	20.60	2.00	8	0.41	0.07	9	0.2	23	< 10	0.7	5	1.7	71				
							11S	171308	20.60	22.60	2.00	6	0.19	0.03	157	0.1	26	< 10	0.9	4	2.7	56				
							11S	171309	22.60	24.60	2.00	15	0.41	0.11	12	0.1	14	< 10	1.2	7	2.7	48				
							11S	171310	24.60	26.60	2.00	110	0.24	0.06	8	0.1	28	< 10	1.9	4	2.0	47				
			Locally weak shear fabrics. 55-6-0 deg to C.A.				11S	171311	26.60	28.74	2.14	17	0.20	0.02	9	0.1	17	< 10	0.9	4	2.4	45				
							11S	171312	28.74	30.88	2.14	46	0.39	0.1	20	1.0	19	< 10	1.1	9	2.5	87				
							11S	171313	30.88	32.90	2.02	89	2.85	0.59	212	0.8	35	< 10	1.3	83	2.0	85				
							11S	171314	BLANK			<5	0.46	< 0.02	1	0.0	1	< 10	0.1	1	< 0.02	3				
							11S	171315	32.90	35.00	2.10	37	0.50	0.06	35	0.2	16	< 10	1.0	6	1.6	60				
							11S	171316	35.00	37.00	2.00	2	0.31	0.02	11	0.2	15	< 10	1.1	5	4.2	57				
			35.1 - subplanar chlorite-clay lined fracture. 30 deg to C.A. Moderate core axis parallel calcite tensional stockwork below.																							

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					36-38.5 - quartz epidote and epidote fracture veining and epidote veinlet and wallrock feldspar replacement. Biotite alteration of mafics prior to chloritization-epidotization. Several vein episodes early chlorite-quartz-calcite shear veinlets, later epidote and later quartz-calcite and latest calcite tension.	Several small massive VFG pyrite veinlets associated with chlorite vein episode.	11S	171317	37.00	39.00	2.00	14	0.22	< 0.02	12	0.2	16	< 10	0.9	4	2.3	53
							11S	171318	STD WCM Cu157			860	15.20	2.48	12	< 0.01	4350	1790	540.0	30	43.9	25
					39.3 - 39.8 dark chlorite+biotite? altered zone between 2 pyrite clay shear veins. Strong calcite overprint with tension gash		11S	171319	39.00	40.35	1.35	7	1.36	0.03	12	0.2	18	< 10	2.2	5	4.1	59
					40.1 43.6 - Several large white erratic quartz vein zones with strong silicification-epidotization zones with large felted often partially or complete chloritized biotite masses. Peripheral tensional quartz calcite stockwork veinlets and 20X vein width grey wallrock alteration. Earliest altered zones have black biotite-pyrite replacing	4% pyrite associated with biotite in early altered zones. Trace brassy pyrite associated with epidote.	11S	171320	40.35	42.00	1.65	2	0.38	< 0.02	7	0.1	10	< 10	2.1	4	3.4	38
				Rock ~ 35-45% 1-2 mm ovoid aligned normal to C.A. quartz phenocrysts with ~ 15-20% corroded? kspar?, 15% epidote - sausseritized plagioclase, 15% silicate phenocrysts wrapping biotite.	43.6 P 48.5 Weaker version of previous interval. 60% preservation of early altered biotite-pyrite altered quartz feldspar porphyry tuff?	2% fine grained pyrite associated with biotite. 1% coarser in fracture veinlet intersections with epidote.	11S	171321	42.00	44.00	2.00	2	0.38	0.17	14	0.2	17	< 10	1.4	8	4.4	58
					44.5 - 45 - Distinct black undeformed rosettes of secondary black biotite. Associated with quartz zones.	2% brassy disseminated and 1% as dark brown microcrystalline veinlets.	11S	171322	44.00	46.00	2.00	6	0.52	0.12	14	0.2	19	< 10	1.5	9	2.9	46
			Dolomite veinlet 35-40 deg. to C.A. Clay sulphide veinlets 70-75 deg. to C.A. veinlets. Multioriented tourmaline ragged fracture veinlets and zones.		45.5 - 45.75 Grey rock texture destroying pervasive silicification. Minor dolomite - tension veining with later grey clay line fractures near normal to earlier dolomite veining.	2% 1-3 mm by 40 mm discontinuous very fine grained brown pyrite in clay shear veinlets at high core angles.	11S	171323	46.00	47.80	1.80	6	0.38	0.06	22	0.1	13	< 10	1.2	5	3.3	54
					47.8 - 48.6 Quartz vein zone with large epidote veins and zones	Coarse up to 5 cm polycrystalline semi massive pyrite aggregates. Smaller more massive zones. 5% overall.	11S	171324	47.80	48.60	0.80	13	0.38	0.16	47	0.1	13	< 10	1.1	6	3.4	40
					48.6 - 60.3 Varying alteration zones over 1-2 metres varying from grey texture destroying silicification, chlorite sulphide clay shears and all types of later (earlier described) alteration and veining. Alteration appearance may be in part affected by protolith with fine grained silicified zones possibly more siliceous originally.	Up to 3% disseminated pyrite, up to 2% shear fracture associated pyrite.	11S	171325	48.60	50.60	2.00	8	0.39	0.08	17	0.4	20	< 10	1.1	6	3.3	103
					51.3 - 51.5 Disrupted tourmaline vein swarm, 80 deg to C.A.	7% 1 to 6 mm by 20 mm brown massive very fine pyrite (altered pyrrhotite?) associated with cross cutting fracture in tourmaline zone.	11S	171326	50.60	52.60	2.00	14	0.55	0.5	15	0.3	18	< 10	1.1	8	2.6	57



FROM	TO	GEOCODE	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION AND VEINING	MINERALIZATION	SAMPLE AND ASSAY INFORMATION				Au ppb	Ag ppm	Bi ppm	As ppm	Cd ppm	Cu ppm	Hg ppm	Mo ppm	Pb ppm	Sb ppm	Zn ppm	
					52.7 - 53.1 Shear, 25 deg. to C.A. Strong grey silicification with clay overprint. Possible dolomite-ankerite stockwork associated with 3% brassy pyrite in same fractures.	3% brassy pyrite in dolomite-ankerite stwk.	11S	171327	52.60	54.20	1.60	28	1.22	0.94	19	0.5	21	< 10	1.7	10	2.6	107
							11S	171328	54.20	56.20	2.00	8	0.71	0.13	11	0.4	21	< 10	1.4	8	3.1	93
							11S	171329	56.20	58.10	1.90	6	0.41	0.04	24	0.2	18	< 10	0.9	7	3.5	78
					60.3 - 68.8 Rock mass weakly pervasively silicified. Moderate random quartz-felted biotite-pyrrhotite-pyrite veining, quartz-calcite tension gashes followed by gypsum-dolomite? tension veining. Chlorite- minor pyrite lined fractures. Distinct lack of late sulphide clay fracture coatings.		11S	171330	58.10	60.06	1.96	7	0.47	0.08	380	1.0	20	< 10	1.0	7	3.0	143
					63.5 - 64.7 Increasing disseminated secondary rosettes of black biotite up to 5% of rock.		11S	171331	60.06	62	1.94	32	1.02	0.13	51	0.5	26	< 10	1.1	7	1.8	100
			Undulating vein contact.		64.7 grey sulphidic clay slip contact. 45 deg to C.A.		11S	171332	62	64	2.00	10	0.69	0.05	427	0.3	24	< 10	1.4	6	1.6	83
			Possible shearing sub parallel to long axis of vein. Fabric cross cutting fracture vein display fabric subparallel veinlets.		64.7 - 65.5 Bleached shear silicified zone associated with 6.5 cm dark grey quartz sulphide shear vein 45 deg. to C.A. Late barren white quartz with minor calcite vine (1.2 cm thick)	5% dusting of dark sulphide in Q shear vein. 3% dark brown pyrite (altered pyrrhotite?) and 3% dark grey sulphide (in part arsenopyrite) in shear stockwork fracture veinlets. At least 3 orientations.	11S	171333	64	66	2.00	120	0.57	0.13	776	0.3	24	< 10	1.0	7	6.6	89
							11S	171334	BLANK			<5	0.21	< 0.02	2	0.0	1	< 10	0.1	1	< 0.02	3
					67.9 - 68.6 Smaller version of previous interval at 64.7 m. with smaller grey quartz sulphide vein(let)s at 68 (1-3 mm), 68.18 (6-8 mm) 68.5 (0.7-1.2 cm)	Numerous massive sulphide (pyrite+dark grey sulphide (arsenopyrite)) fabric elongated net textured and subparallel veinlets. 6% sulphide overall. Quartz veins host 15% sulphides.	11S	171335	66.00	68	2.00	11	0.39	0.09	226	3.4	24	< 10	1.0	5	1.7	205
					Gradational change at 68.65 m. over 8 cm. Peripheral secondary biotite zone from 68.65 to 68.85.		11S	171336	68	69.3	1.30	176	1.16	0.23	2460	17.2	36	< 10	0.9	6	12.9	849
				68.86 - 77.8 6% distinct secondary biotite replacing primary hornblende? 40% 0.5 to 1.5 mm ovoid quartz phenocrysts in fine grained feldspathic groundmass. Compared to intervals above this could be an intrusive.	Groundmass may be cryptically silicified.. Early brown corroded biotite and secondary (or tertiary) black euhedral 2 to 6 mm long by up to 3 mm thick books. Late calcite overprint with minute fracture veinlets. 4-75 small late calcite tension gashes throughout, the larger one with white quartz.	3% finely disseminated pyrite with secondary biotite.	11S	171337	69.3	71.5	2.20	20	0.71	0.03	241	0.1	17	< 10	1.1	5	3.0	66
						68.65 - 69.3 Decreasing sulphide stockwork veinlet contact.	11S	171338	71.5	73.5	2.00	2	0.35	0.03	278	0.2	16	< 10	0.8	6	1.6	51
					71.6-72.2 Weak tan clay-sericite gypsum? overprint	72-72.2 Small sulphidic shear veinlets 55 deg. to C.A. 4% of rock composition.	11S	171339	73.5	75.7	2.20	2	0.47	0.03	249	0.2	20	< 10	0.9	5	2.0	58
					73.1 - ~74.5 Increased weak to locally strong grey clay overprint centered around 7 cm soft punky core at 73.7		11S	171340	75.7	78.03	2.33	2	0.57	0.03	277	0.3	19	< 10	1.1	5	2.7	69
				77.8 - 79 Rock has similar appearance to higher tuff intervals.	Onset of pink and grey irregularly shaped quartz-tourmaline 50-50 veining, 15-80 deg to C.A. 0.5-4 cm thick. Wallrock weakly to locally moderately epidote stained. 5% late gypsum veining.		11S	171341	78.03	80.06	2.03	2	0.36	< 0.02	334	0.2	22	< 10	1.3	4	2.9	47

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				79 - 99 6% distinct secondary biotite replacing primary hornblende? 40% 0.5 to 1.5 mm ovoid quartz phenocrysts in fine grained feldspathic groundmass. Possible fine grained intrusive	Random white 0.5 to 3 cm quartz with calcite tension veinlets comprising 7% of rock.	Random 0.5 to 5 cm pyrrhotite +/- pyrite zones in quartz veins sulphides 0 to 70% of vein. ~4% sulphides.	11S	171342	80.06	82	1.94	12	0.28	< 0.02	73	0.1	14	< 10	1.0	4	3.2	61
							11S	171343	82.00	84	2.00	68	0.51	0.02	492	0.1	19	< 10	0.9	4	3.2	56
			Clay gypsum shear vein, 15 deg. to C.A.		84.5 - 85.1 large 12 cm quartz-epidote felted biotite vein. 15 deg. to C.A.		11S	171344	84.00	85.7	1.70	15	0.33	0.02	60	0.1	16	< 10	1.3	4	2.7	67
			Undulating vein contact.				11S	171345	85.70	87.5	1.80	7	0.24	0.02	115	0.3	13	< 10	1.0	4	2.3	87
			85.7-86.8 Several grey clayey shear zones, 20-25 deg. to C.A.				11S	171346	87.50	89.5	2.00	2	0.25	0.04	135	2.2	22	< 10	1.0	4	3.7	156
							11S	171347	89.50	91.5	2.00	6	0.31	0.06	123	1.3	21	< 10	0.9	6	3.5	143
					Sulphide veins have chlorite lining and ragged near normal veinlet swarms into wallrock.	90.8-91.2, 91.45 - 91.75 Dark brown VFG pyrite-calcite veins, 15 deg to C.A. Veinlet swarms near normal.	11S	171348	91.50	93.5	2.00	11	0.62	0.07	249	0.3	23	< 10	1.0	6	3.2	77
								171349	93.50	95.5	2.00	2	0.42	0.07	142	0.3	23	< 10	1.0	8	2.8	99
							11S	171350	95.50	97.5	2	2	0.31	0.04	60	0.4	20	< 10	0.8	9	4.0	130
							11S	171351	97.50	99.1	1.60	2	0.45	0.14	77	0.4	24	< 10	1.0	16	3.1	133
99.10	101.00	QVN	Upper and lower contacts ~75 deg. to C.A.	<b>MASSIVE WHITE QUARTZ VEIN</b> Sheared and disrupted upper and lower annealed contacts. Small internal wallrock xenoliths highly clay altered	Probable clay overprint.	Late dark brown pyrite tension fractures filling zones and veinlets. 4-5% of interval. Coatings of blue grey sulphides 2%.	11S	171352	99.10	101.5	2.40	30	0.97	0.24	257	0.3	22	< 10	1.9	14	4.2	33
					ragged irregular contact ~ 75 deg. To C.A.		11S	171353	STD WCM Cu157			860	16.40	2.6	13	< 0.01	4600	1880	555.0	31	43.3	27
101.00	164.25	FQPT		<b>Grey, medium to fine grained, massive quartz feldspar porphyritic tuff? intermediate volcanic flow complex. Possibly in part or largely? intrusive.</b> 50% 0.5 to 1.5 mm subhedral quartz, 30% 0.5 to 2 mm subhedral feldspar and 20% anhedral black biotite wrapping around the other silicates.	Highly variable alteration - generally moderately silicified with variable but continuous clay overprint.	Highly variable - described below.	11S	171354	101.50	103.5	2.00	27	1.55	0.1	192	1.6	23	< 10	1.8	46	1.2	230
					101.02 - 101.55 - dark blue grey staining. 20% fine to medium grained tourmaline with interstitial? blue sulphide. 6% calcite in latest core axis subparallel tensional fracture veinlets. Lower contact quartz-calcite shear vein with annealed gouge.		11S	171355	103.5	105.55	2.05	23	1.11	0.14	253	0.3	19	< 10	1.1	11	2.4	63
					101.65 - 101.95 white quartz vein identical to interval at 99.1.		11S	171356	105.55	107.5	1.95	2	0.56	0.07	95	0.4	19	< 10	1.0	8	2.9	84
					101.5 - 107.9 Moderately silicified intrusive or tuff, several episodes of fracture veining. Minimal to 6% of interval with late fracture associated felted chloritized biotite veinlet and	Strong trace to locally 6% brown pyrite in multioriented fractures veinlet to 3 mm thick.	11S	171357	107.5	109.5	2.00	2	0.42	0.1	145	3.1	25	< 10	1.0	9	2.6	165
			Vein ~ 15-20 deg top C.A.		107.9 - 6 cm grey-green quartz vein with disseminated and vein marginal biotite (10% of vein). Vein is fractured and late tensional white calcite veinlets again with thin felted biotite rims. Biotite is moderately chloritized.	2% widely disseminated brassy pyrite.	11S	171358	109.5	111.56	2.06	2	0.61	0.14	158	0.8	22	< 10	0.9	7	1.1	115

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					Cont'd from 107.9 m. Zones of increased pyrite stockwork veining host increased silicification and pervasive clay overprint. Late gypsum veinlet also more common.	Dark brown pyrite veinlets and thin stock work increasing gradually down hole. 2 - locally 6% over 0.5 m. 2- locally 4% very fine grained disseminated pyrite.	11S	171359	111.56	113.5	1.94	11	1.04	0.37	273	3.1	22	< 10	0.9	13	2.2	211
							11S	171360	BLANK			<5	0.25	< 0.02	1	0.0	1	< 10	0.1	1	0.0	3
					113 - 142 Irregular zones of disseminated secondary biotite, thin dykes and alteration? (silicification) induced textural variation give the rock a faint breccia appearance. Uncommon zones of epidotization. Corroded brown biotite as dominant mafic, fine grained QF groundmass with VFG disseminated biotite and pyrite.	111.7 - 112.2 8% brown shear and tension void filling brown VFG pyrite. Shearing 75-90 deg. to C.A.	11S	171361	113.50	115.5	2.00	2	0.42	0.09	257	1.1	17	< 10	0.7	7	2.6	154
							11S	171362	115.5	117.5	2.00	2	0.41	0.05	318	0.5	19	< 10	0.8	5	2.7	134
							11S	171363	117.5	119.5	2.00	2	0.41	0.06	204	0.2	22	< 10	0.7	5	1.8	84
				119-119.5 Coarse feldspar-quartz crystal tuff zone. Grades off into apparently finer grained zones that are silicified. Probable agglomerate (seen a faint rounded fragments) protolith masked by alteration.			11S	171364	119.5	121.5	2.00	9	0.37	0.06	344	0.8	17	< 10	0.7	4	2.1	140
							11S	171365	121.5	123.5	2.00	2	0.37	0.22	128	0.5	17	< 10	0.7	5	1.4	88
				123.3 15 cm rounded cobble.			11S	171366	123.5	125.5	2.00	6	0.37	0.2	13	0.2	20	< 10	0.7	5	1.3	54
					125.3 - Ragged quartz vein with large wallrock zones; avg 75 deg. to C.A.	124.8-139.5 4-6% irregularly spaced strongly magnetic and weakly magnetic pyrrhotite in biotite lined quartz fracture veinlets.	11S	171367	125.5	127.5	2.00	2	0.31	0.14	13	0.1	15	< 10	0.7	6	2.4	58
							11S	171368	127.5	129.55	2.05	2	0.49	0.58	9	0.4	17	< 10	0.9	9	1.5	82
				129.9 - 130.05 Fault zone, 80 deg. to C.A.	Moderate clay alteration.		11S	171369	129.55	131.5	1.95	12	1.23	0.92	64	0.3	20	< 10	0.8	12	0.5	47
							11S	171370	131.5	133.5	2.00	2	0.72	0.21	18	0.2	18	< 10	1.0	6	1.4	61
					133.7 134 Two 2-6 cm undulating shallow to C.A. quartz veins 0-35 deg. to C.A. Hosting 7 cm pyrrhotite and 8 by 2 cm felted biotite masses. Biotite ~20% of vein content.	15 % strongly magnetic pyrrhotite in quartz biotite lined and zones fracture vein. Large 7 cm clot at 133.8 m	11S	171371	133.5	135.5	2.00	2	0.48	0.1	8	0.2	17	< 10	1.0	5	1.6	48
							11S	171372	135.5	137.5	2.00	2	0.63	0.23	22	0.2	24	< 10	1.1	7	1.2	53
					139.5 - 140 Slightly sheared, 60 deg to C.A. disseminated tourmaline zone. Rock has dark blue shade. Distinct decrease in wallrock silicification.	6% finely disseminated pyrite. Possible 2% dark blue sulphide associated with pyrite and tourmaline.		171373	137.5	139.5	2.00	10	0.42	0.23	14	0.3	26	< 10	1.4	7	1.1	47
					140- 143 2% disseminated a hairline fracture associated tourmaline. Wallrock distinctly weakly to strongly clay altered.	Continuation of fracture associated brown pyrite veinlets. Veinlets are deformed, preceding tourmaline fracture veinlets.		171374	139.5	141.5	2.00	7	0.54	0.36	11	0.4	32	< 10	1.0	7	0.8	50
					141.95 - 142.1 Similar to zone at 139.5 but with increased late clay alteration.		11S	171375	141.5	143.5	2.00	5	0.57	0.45	67	0.3	28	< 10	1.2	15	0.7	48
				142.05 - 142.35 Shearing and veining, 60 deg. to C.A.	Late calcite and gypsum veining.		11S	171376	143.5	145.5	2.00	8	0.38	0.22	38	0.3	21	< 10	1.5	12	0.6	75
					145 - 147.5 Several white quartz veins 1-16 cm associated with small to large felted biotite masses.		11S	171377	145.5	147.5	2.00	17	0.51	0.56	35	0.5	24	< 10	1.2	39	0.7	73
							11S	171378	147.5	149.5	2.00	2	0.36	0.1	13	0.2	25	< 10	0.9	8	1.5	48
					151 18 cm barren calcite quartz vein 70 deg. to C.A.		11S	171379	149.5	151.5	2.00	85	0.37	0.1	16	0.3	32	< 10	0.8	8	1.1	58



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					151.5 - 1-3 CM White barren quartz veins. Increasing calcite content down hole. To 70% + calcite.	3% small dark brown pyrite veins. Crosscutting both rock and white QV's	11S	171380	151.5	153.5	2.00	2	0.32	0.1	5	0.2	27	< 10	1.0	6	0.9	61
					Increased carbonate alteration overprinting silicified-biotite pyrite alteration. Sausseritized plagioclase to yellow-green	1-2% brassy pyrite in late fractures with dark green chlorite.	11S	171381	153.5	155.5	2.00	84	0.68	0.28	62	0.3	22	< 10	1.0	11	1.0	71
				158.5 - 17 cm biotite 'porphyry' rock fragment.			11S	171382	155.5	157.5	2.00	24	0.39	0.23	66	0.4	26	< 10	1.6	10	1.4	71
				Intrusive contact - undulating 60 deg. To C.A.			11S	171383	157.5	159.5	2.00	2	0.42	0.33	36	0.6	24	< 10	1.5	14	1.3	90
164.25	165.35	BAS		Dark grey Tertiary mafic feldspar porphyry dyke. Chilled margins hosts several wallrock fragments.	Crosscut by latest calcite fracture veinlets. Weakly carbonate altered.	Weakly magnetic. No sulphide noted.	11S	171384	159.5	161.5	2.00	5	0.32	0.25	54	0.2	22	< 10	1.1	9	1.3	59
					165.06 -.2 Large quartz-calcite vein (fragment?) with 10% brassy irregularly disseminated pyrite.		11S	171385	161.5	163.8	2.30	60	0.34	0.12	44	0.4	28	< 10	1.3	5	0.9	81
				Intrusive contact - undulating 60 deg. to C.A.			11S	171386	163.8	165.75	1.95	12	0.24	0.14	19	0.3	28	< 10	1.3	7	0.6	76
165.5	362.90	QFPT		Grey, medium to fine grained, massive quartz feldspar porphyritic tuff? intermediate volcanic flow complex. Possibly in part or largely? intrusive. 50% 0.5 to 1.5 mm subhedral quartz, 30% 0.5 to 2 mm subhedral feldspar and 20% anhedral black biotite wrapping around the other silicates.	Variable alteration - generally moderately silicified with variable calcite veinlet and clay overprint.	Highly variable - described below.	11S	171387	165.75	168	2.25	7	0.30	0.24	34	0.2	21	< 10	1.1	12	1.8	84
					165.8 - 169 Increasing late dark green chlorite fracture veining. Chloritized overprint of biotite in wallrock and as quartz vein selvages. End of large calcite quartz veins.	1-2% brassy pyrite in late fractures with dark green chlorite.	11S	171388	STD WCM Cu157			871	15.40	2.49	13	< 0.01	4430	1810	550.0	30	42.6	25
							11S	171389	168	170	2.00	7	1.30	0.28	66	0.3	14	< 10	1.7	8	1.6	71
					170 - 191.5 Very gradually increasing grey clay overprint.		11S	171390	170	172	2.00	2	0.52	0.22	31	0.2	15	< 10	1.4	8	1.4	64
							11S	171391	172	174	2.00	12	0.49	0.57	93	3.2	15	< 10	0.9	15	1.2	264
					174.8 - 178 - sheared 90 deg. to C.A. with grey sulphide clay		11S	171392	174	176	2.00	21	0.43	0.28	125	0.3	18	< 10	0.9	7	1.6	68
					176.5 - 177 white quartz-calcite tensional breccia filling zone. Chloritized vein margins.		11S	171393	176	178	2.00	32	0.35	0.46	53	0.3	17	< 10	1.0	7	1.6	65
							11S	171394	178	180	2.00	24	0.34	0.49	53	0.3	19	< 10	1.2	6	1.1	77
						183 Increasing brassy pyrite in late fractures.	11S	171395	180	182	2.00	14	0.30	0.38	82	0.3	10	< 10	1.1	7	0.6	74
						183.3 - 183.5 Shear zone 55-65 deg. to C.A. with tourmaline-pyrite veining. 40% pyrite, 30% tourmaline 30% quartz-calcite in vein. 15% sulphides in interval	11S	171396	182	184	2.00	16	0.29	0.49	98	0.4	16	< 10	1.2	8	0.8	87
							11S	171397	BLANK			<5	0.11	< 0.02	1	0.0	1	< 10	0.1	1	< 0.02	2
							11S	171398	184	186	2.00	14	0.33	0.43	46	0.8	30	< 10	1.0	6	1.0	104
					185 - 190.5 Random dark sulphidic quartz veins with small masses of brown pyrite. A second earlier quartz-epidote vein event also. Both about 10% of interval.	Dark sulphides in dark quartz veins, 3% dark brown pyrite in fine shear-stockwork veinlets. Trace late brassy pyrite in chlorite calcite veinlet.	11S	171399	186	188	2.00	6	0.30	0.26	19	0.3	22	< 10	1.0	7	1.3	82
							11S	171400	188	190	2.00	6	0.41	0.28	87	0.5	33	< 10	1.4	15	1.3	110
							11S	171401	190	192	2.00	11	0.33	0.43	45	0.5	20	< 10	1.4	9	1.6	107
			Shear fabric 45-70 deg to C.A.	192 - 192.5 30 cm piece in backwards. (image)	191.5 - 196 Lavington style shearing, alteration and veining begins. Dark primary and possibly secondary biotite overprinted by sericite +/- pyrite and clay.		11S	171402	192	193.99	1.99	17	0.30	0.68	67	1.0	25	< 10	1.0	8	0.9	119

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							11S	171403	193.99	195.98	1.99	14	0.27	0.5	61	0.4	38	< 10	1.0	6	0.7	78
						196.95 - 198.5 4% brassy and 3% dark brown pyrite in deformed and shear stockwork veinlets. Up to 6 cm thick. Fabric normal veining is deformed and thickened. Crosscut by late planar shearing.	11S	171404	196	198	2.00	23	0.27	0.7	102	0.4	24	< 10	1.1	7	0.6	75
							11S	171405	198	200	2.00	22	0.37	1.11	115	0.8	14	< 10	1.0	12	0.4	91
							11S	171406	200	201.8	1.80	35	0.23	0.53	183	0.7	23	< 10	1.0	8	0.5	96
			201.85 - 202.95 Shear zone, 40-50 deg to C.A.		Erratic disseminated zones of tourmaline. Strong clay-gypsum overprint	6% fine grained pyrite 3% in deformed stockwork (stretched) and 3% in late calcite tension veining.	11S	171407	201.8	204	2.20	60	0.68	2.76	47	3.6	20	< 10	1.7	32	0.5	196
							11S	171408	204	206.04	2.04	77	0.29	0.76	45	0.3	23	< 10	1.1	5	0.9	73
							11S	171409	206.04	208	1.96	33	0.20	0.55	42	0.4	26	< 10	0.7	5	0.9	73
						Moderate to strong quartz-sericite overprint. Biotite 75-100% replaced by pyrite +/- sericite-gypsum?	11S	171410	208	210	2.00	49	0.42	1.09	43	1.2	7	< 10	0.8	22	0.4	132
			212.4 - 213 Shear zone 45 deg. to C.A.		Strong clay overprint.	6% dark grey sulphidic clay increasing to bottom fault contact.	11S	171411	210	212	2.00	55	0.37	0.66	64	0.9	8	< 10	0.5	16	0.4	109
						213.5 - 214 Chloritic altered fractures and clay replacement of brittle fractures.	11S	171412	212	214	2.00	79	0.37	0.73	170	1.5	15	< 10	0.7	16	0.8	130
							11S	171413	214	216	2.00	38	0.35	0.56	40	0.3	4	< 10	0.8	12	0.4	74
							11S	171414	216	218	2.00	64	0.44	0.88	41	1.0	10	< 10	1.0	20	0.5	119
			Foliation 50+/- 5 deg. to C.A. Locally sheared where very faint much steeper 65-75 TCA foliation		218 - 228 Increasing sericite overprint and shear fabric. 55 deg. to C.A.	4% brassy fine pyrite in late curvilinear fracture veinlets, irregularly spaced shear veinlets and 1% as widely spaced clusters of up to 8 mm masses associated with late tensional calcite-gypsum fracture veinlets	11S	171415	218	220	2.00	95	0.46	0.94	45	0.4	12	< 10	1.0	12	1.0	93
						222.25 8 cm epidote - quartz vein 80 deg. to C.A. Crosscut by calcite-gypsum veinlet with selvage of hematite and black dusty sulphide.	11S	171416	220	222	2.00	81	0.62	1.33	44	1.1	13	< 10	1.1	21	0.8	117
						224.7-226 Increasing coarse disseminated pyrite as clots associated with hairline weak dark sulphide stockwork.	11S	171417	222	224	2.00	70	0.47	0.96	33	0.8	14	< 10	1.3	19	0.9	95
						225.25 - 225.45 White quartz vein top contact 80 bottom 70 deg. to C.A. bottom contact thin clay zone.	11S	171418	224	226	2.00	148	0.64	0.85	101	0.5	32	< 10	1.5	14	0.3	72
						226 - 230 1-2% brassy fine pyrite in late curvilinear fracture veinlets, and 3-5% as widely spaced clusters of up to 8 mm masses associated with late tensional calcite-gypsum fracture veinlets	11S	171419	BLANK			<5	0.20	< 0.02	1	0.0	1	< 10	0.1	1	< 0.02	3
						226.75 - 2.5 cm quartz-calcite vein. 78 deg. to C.A. 4% tourmaline and possible dark sulphide in vein central fracture veinlets	11S	171420	226	228	2.00	73	0.33	0.61	32	0.3	20	< 10	1.0	9	0.8	72
							11S	171421	228	230	2.00	63	0.33	0.52	30	0.8	15	< 10	1.5	6	1.1	102
						230 - 234.7 Increased sericite overprint and shear fabric. 40-55 deg. to C.A.	11S	171422	230	232	2.00	277	0.63	1.16	45	1.3	18	< 10	1.1	16	0.5	107
							11S	171423	232	234	2.00	199	0.52	0.74	36	0.7	22	< 10	1.3	9	0.7	106
							11S	171424	STD WCM Cu157			858	14.70	2.46	12	< 0.01	4770	2060	561.0	26	40.9	25

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				234 - Lithic crystal tuff fabric dominant. 5% dark andesite shards 3-7 mm.		5-6% very fine grained disseminated pyrite replacing mafics and 1-2% dark brown pyrite in late calcitic-gypsum? fracture veinlets.	11S	171425	234	236	2.00	1100	1.93	0.73	37	0.9	30	< 10	2.0	9	1.1	129
			Rotating shear fabrics -	Wallrock hard massive crystal with trace lithic tuff fragments. Late calcite overprint.	237.3 - 244.5 Several quartz epidote vein and flood-replacement zones. ~ 35% of interval up to 1 m core length. They crosscut early brown sulphide veinlets and are crosscut by late white calcite+/- gypsum veinlets. White calcite veinlets cut epidote. There is a 3-4x veinlet width chloritized zone.	3% very finely disseminated pyrite, 2% in hairline to 3 mm massive sulphide planar stockwork veinlets. Trace hematite at epidote quartz contacts.	11S	171426	236	238	2.00	302	0.66	0.36	27	0.3	12	< 10	1.7	7	1.3	123
							11S	171427	238	240	2.00	290	0.64	1.06	40	2.0	22	< 10	1.5	11	0.9	141
					240.25 Massive white calcite vein-zones. Have irregular shapes over 15 cm of core. Wallrock is irregularly replaced by dark green chlorite.	3% very finely disseminated pyrite, 2% in hairline to 3 mm massive sulphide planar stockwork veinlets.. Trace hematite at epidote quartz contacts.	11S	171428	240	242	2.00	148	0.41	0.98	34	0.3	14	< 10	1.0	13	0.8	100
			244-245.7 shallowing and increased shear fabric - from 60 to 35 deg. to C.A.		244.5 - 248 Increased sericite overprint and shear fabric. 40-55 deg. to C.A.	244.5 - 247.3 10% plus pyrite as disseminations 3-4%, fracture veinlets and stockwork 6-7%	11S	171429	242	244	2.00	206	0.34	0.73	29	0.6	14	< 10	0.9	7	0.6	115
					247.4 Quartz sulphide veinlet 8 mm thick.	35% brown medium grained pyrite in fw of vein.	11S	171430	244	246	2.00	199	0.87	2.2	55	1.6	22	< 10	1.6	31	0.8	137
					249.5 250.5 Epidote flood zones. 30% of interval. Wallrock fabric apparent high core angles.		11S	171431	BLANK			<5	0.27	< 0.02	1	< 0.01	1	< 10	0.1	1	0.1	3
					250.6 - 250.8 One large and several smaller dolomite-calcite vein zones. Very irregular shapes. Thin chloritized biotite zone margins lower zone has 50% light grey quartz with pale epidote margins, and late hairline to 6 mm thick felted 50% chloritized biotite.	3-4% finely disseminated pyrite in wallrock	11S	171432	246	248	2.00	115	0.80	2.64	44	0.5	21	< 10	1.6	25	0.7	87
					250.95 - Sheared zone over 3 cm. 45 deg. to C.A.		11S	171433	248	250	2.00	208	0.56	1.38	42	0.3	19	< 10	1.0	15	1.2	65
			250-265 Shallowing and increased shear fabric - from 60 to 35 to CA		251.1 Sudden increase in sericite clay pyrite overprint. Strong calcite overprint. Increasing chlorite in late fractures down hole. Also increasing thin grey sulphide slips and weak stockwork.	4-5 % very fine grained disseminated pyrite replacing mafics (biotite) and 1-3% dark brown pyrite in late calcitic-gypsum? fracture veinlets and stockwork..	11S	171434	250	252	2.00	219	0.49	1.3	37	0.5	14	< 10	1.2	10	0.6	98
							11S	171435	252	254	2.00	173	0.40	0.95	30	1.4	17	< 10	1.3	6	0.8	164
					256.7 quartz vein - 40 deg to C.A. 9 cm thick with tan and lime green epidote margins (~ 1 cm thick)		11S	171436	254	256	2.00	122	0.56	1.82	39	5.1	25	70	1.1	16	0.7	554
						257.06 quartz vein zone with 1% irregularly clustered honey sphalerite.	11S	171437	256	258	2.00	84	0.68	1.74	51	9.3	19	90	2.2	14	0.9	980
							11S	171438	258	260	2.00	45	0.58	1.31	43	1.5	20	< 10	1.0	11	0.8	187
					259.7 - 261.2 Increasing silicification associated with shearing 50 deg. to C.A.	Cont'd from 251.1	11S	171439	260	262	2.00	81	1.44	3.87	67	2.3	23	< 10	1.9	51	0.7	223
					261.5 - 261.9 Core axis parallel calcite-quartz pyrite vein 7-10 mm thick	20% raggedly disseminated pyrite in vein.	11S	171440	262	264	2.00	56	0.73	1.42	53	3.4	25	40	1.0	11	0.8	349
					265.2 - 265.5 Green chlorite and clay fractures shear 15 , 30 and 50 deg to C.A.	No decrease in wallrock mineralization. Clay sulphide deficient.	11S	171441	264	266	2.00	219	0.43	1.07	51	1.9	23	< 10	0.8	6	1.0	182
			Zone 60 deg to C.A.		268.95 - 269.4 Strong wallrock destructive beige clay-calcite alteration after strong carbonate bleaching.	Cont'd from 251.1	11S	171442	266	268	2.00	76	0.46	1.49	46	0.3	12	< 10	0.9	7	0.7	84



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					269.4 - 275.8 Strong bleaching calcitic flooding. Mafics and biotite replaced by pyrite cored calcite porphyroblasts. Weak clay.	2% finely disseminated biotite replacement pyrite. 2-3% in hairline generally fabric sub parallel fractures.	11S	171443	268	270	2.00	58	0.75	2.25	51	0.8	15	< 10	1.1	20	0.5	88
							11S	171444	270	272	2.00	69	0.55	1.73	49	0.4	26	< 10	0.7	11	0.8	102
							11S	171445	STD WCM Cu157		858	14.40	2.51	12	< 0.01	4700	2040	552.0	29	41.8	25	
							11S	171446	272	274	2.00	103	1.77	2.28	81	1.3	21	120	2.0	20	1.4	111
					275.8 - 276.1 Grey quartz, white quartz with calcite and pink dolomite ragged fracture veining 15% of rock mass in interval.	2% finely disseminated biotite replacement pyrite. 2-3% in hairline generally fabric sub parallel fractures.	11S	171447	274	276	2.00	134	0.63	1.13	59	0.4	19	< 10	1.4	11	1.1	53
					275.8 - 286.1 Significant decrease in quartz sericite shear alteration and back to massive tuff dominated but strongly silicified fabric. Pyrite mineralization similar to previous intervals. Locally sericite-quartz shearing ~ 50+/- 10 deg. TCA.	2% finely disseminated biotite replacement pyrite. 2-3% in hairline generally fabric sub parallel fractures.	11S	171448	276	278	2.00	82	0.39	0.97	48	0.2	18	< 10	1.8	5	1.2	58
							11S	171449	278	280	2.00	68	0.44	1.41	47	0.2	23	< 10	1.1	7	1.4	72
							11S	171450	280	282	2.00	61	0.65	2.43	59	1.0	24	< 10	1.8	12	0.8	99
							11S	171451	282	284	2.00	83	0.42	1.28	38	0.5	21	< 10	0.9	8	0.7	68
					285 - 287.5 Minor disseminated tourmaline. Replacing biotite?		11S	171452	284	286	2.00	278	0.42	1.12	38	0.4	23	< 10	1.1	9	0.9	75
					286.1 Beginning of strong bleaching sericite-quartz shearing again.		11S	171453	286	288	2.00	100	0.50	2.44	70	0.5	39	< 10	1.7	17	0.9	82
						286.8 - 6% veinlet associated pyrite stockwork mineralization.	11S	171454	288	290	2.00	66	0.42	2.38	42	0.4	38	< 10	1.4	12	0.8	54
					Crosscut by latest calcite fracture veinlets. Weakly carbonate altered.	287.5 - Gradually increasing sulphide contact from 5% to 8% at 299 M. to 301 m. 300-300.5 15% pyrite. Mostly in fracture veinlets.	11S	171455	290	292	2.00	48	0.49	2.46	33	0.2	23	< 10	1.4	14	0.9	45
							11S	171456	292	294	2.00	149	0.43	3.56	24	0.2	34	< 10	1.1	12	1.2	45
							11S	171457	294	296	2.00	58	0.62	4.19	22	0.3	32	< 10	1.5	14	0.8	33
							11S	171458	296	298	2.00	68	0.69	3.55	29	0.2	21	< 10	2.6	17	0.7	34
							11S	171459	298	300	2.00	90	0.86	2.88	43	0.5	30	< 10	1.4	29	1.0	43
						301 to 302.3 Decreasing sulphides from 10% to 6%	11S	171460	300	302	2.00	154	1.07	3.59	36	0.7	29	< 10	1.3	37	0.7	63
						302.3 3-5% dominantly finely disseminated pyrite begins.	11S	171461	302	304	2.00	146	0.70	4.46	30	0.3	45	< 10	0.7	16	1.2	63
			fabric 55+/-15 deg. to C.A.		308.5 - 308.9 Rock fabric destroying fabric parallel clay alteration .		11S	171462	304	306	2.00	208	0.58	2.18	30	0.2	50	< 10	0.7	11	0.7	49
							11S	171463	306	308	2.00	92	0.38	1.28	28	0.2	19	< 10	0.6	8	0.7	48
							11S	171464	308	310	2.00	691	0.45	2.57	33	0.1	23	< 10	0.9	14	0.5	28
							11S	171465	310	312	2.00	392	0.37	1.7	23	0.1	13	< 10	0.8	10	0.5	42
							11S	171466	312	314	2.00	385	0.69	5.59	28	0.2	18	< 10	0.8	22	0.6	43
							11S	171467	STD WCM Cu157		875	15.60	2.56	12	< 0.01	4700	2070	574.0	29	45.6	26	
							11S	171468	314	316	2.00	169	1.96	4.7	40	1.1	35	40	1.8	38	2.1	92
					315 - Pale and often medium and uncommon dark grey clay line fractures. Ragged ones often only calcite lined. Occasional chlorite lined fractures.		11S	171469	316	318	2.00	197	0.78	3.26	29	0.3	19	< 10	1.0	19	1.3	43
					318.3 - 319.5 Increased white clay alteration bracketing grey sulphidic 8 mm near core axis normal shear at 319. 1 in center of small buckle fold.	Small grey sulphidic shears at 318.3 45 deg. to C.A 2-3 mm., 318.4 50 deg. to C.A. 1-2 mm, 319.1 80 deg. to C.A. 50 mm.	11S	171470	318	320	2.00	440	1.29	3.22	22	0.4	26	< 10	1.1	48	1.6	41
				Lavington style mineralized zone.	321-326.2 - Several intensely clay altered buckle folds and sulphidic clay shear vein zones. 45-70 deg to C.A. 1-6 mm thick.	4% disseminated pyrite 1% dark sulphidic clay shear veinlets.	11S	171471	320	322	2.00	78	1.35	2.15	37	0.3	31	< 10	1.4	33	2.5	33
							11S	171472	322	324	2.00	27	0.88	1.9	22	0.3	15	< 10	1.0	21	0.7	34
							11S	171473	324	326	2.00	146	1.13	2.43	38	0.3	58	< 10	0.9	16	11.4	20

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			Fabric 55 +/-5 deg. to C.A. unless stated otherwise.			327 - Planar fracture associate brown pyrite becoming dominant. 3-6% with 2-3 disseminated pyrite.	11S	171474	326	328	2.00	133	0.68	1.61	29	0.5	23	< 10	0.9	19	2.6	52
							11S	171475	328	330	2.00	166	0.67	1.89	23	1.0	13	< 10	0.8	42	1.6	79
					331-332.4- Several intensely clay altered buckle folds and sulphidic clay shear vein zones. 45-70 deg to C.A. 1-6 mm thick.		11S	171476	330	332	2.00	99	0.67	1.06	31	0.2	25	< 10	0.7	18	1.4	24
							11S	171477	332	334	2.00	76	0.81	3.32	25	0.4	45	< 10	3.3	23	2.3	47
						335.4 - 335.6 Dark grey strongly sulphidic shear veins. 15% disseminated pyrite in dark grey sulphidic shear material. 50% over 10 cm 45-55 deg to CA.	11S	171478	334	336	2.00	111	0.84	12.5	29	1.1	48	< 10	1.6	39	2.3	89
							11S	171479	BLANK			1	0.24	0.04	1	< 0.01	1	< 10	0.0	1	< 0.02	2
							11S	171480	336	338	2.00	33	0.51	0.88	23	0.7	51	< 10	2.5	30	2.0	60
						338.9 - 339.4 Quartz calcite breccia vein in foliation subparallel shear 35 deg to C.A.. Strong rock destructive clay alteration.	11S	171481	338	340	2.00	48	0.79	1.59	36	0.8	125	< 10	6.6	33	0.9	69
						342.55 7 cm white QV 80 deg. to C.A. annealed contacts.	11S	171482	340	342.03	2.03	46	0.43	0.62	36	0.2	72	< 10	2.2	8	0.8	54
						342.8 - 1 cm quartz pyrite-calcite veinlet 20 deg to C.A. Shear fabric changes dip to subparallel veinlet.	11S	171483	342.03	344	1.97	37	0.40	0.56	42	0.2	84	< 10	3.8	8	0.4	60
						344.3 - 344.8 Irregular textured zone. Largely tensional white quartz vein. Minor late chlorite and less epidote in center of vein. Tan bleached wallrock comprises 50% of zone. Latest what calcite fracture veinlet in quartz.	11S	171484	344	346	2.00	629	0.51	0.78	25	0.2	80	< 10	4.6	14	0.4	50
							11S	171485	346	348	2.00	67	0.44	0.79	31	0.2	77	< 10	2.9	12	0.7	45
							11S	171486	348	350	2.00	48	0.45	0.89	32	0.2	28	< 10	4.0	23	1.0	30
							11S	171487	350	352	2.00	58	0.53	0.83	35	0.4	50	10	3.7	22	4.7	29
							11S	171488	352	354	2.00	70	0.44	0.69	20	0.2	95	< 10	6.0	15	1.5	24
						355 - 355.8 - Late clay alteration of stockwork fractures.	11S	171489	354	356	2.00	75	1.50	1.75	19	0.9	186	20	9.6	144	3.0	70
							11S	171490	356	358	2.00	29	0.79	0.73	15	0.2	68	< 10	3.5	12	0.8	38
							11S	171491	358	360	2.00	53	0.54	0.53	14	0.2	138	< 10	4.3	5	1.0	35
			Top contact 65 deg. to C.A. Bottom contact 15 deg. to C.A. both undulating.	360.25 - 360.45 Heterolithic intermediate fine lapilli tuff? Mottled medium to dark green to grey due to widely varying fragment composition basalt to feldspar crystal tuff.		12% medium to fine grained evenly disseminated pyrite. Replacing biotite?	11S	171492	360	362	2.00	95	0.38	0.54	15	0.2	134	< 10	4.6	5	1.4	60
							11S	171493	362	362.9	0.90	107	0.39	0.46	12	0.1	137	< 10	7.4	5	1.8	40
362.90	364.10	BAS	Numerous steep to core angle shears throughout.	AMYGDULAR BASALT DYKE. Dark olive grey green very fine grained basalt. 15-20% evenly spaced vesicles filled with white calcite, or dark green chlorite. Weakly to moderately magnetic at 363.4 m.	Strong chloritic alteration throughout. 2 generations of calcitic tensional and shear veining.	Moderately magnetic at 363.4	11S	171494	STD WCM Cu157			837	14.50	2.74	11	< 0.01	4390	2160	549.0	31	43.1	24
							11S	171495	362.9	364.1	1.20	9	1.24	0.09	5	0.2	29	30	2.2	10	0.3	76

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							ppb															
364.10	395.00	DLT	schistosity 45+/-10 deg to c.a.	<b>Grey, Green Dacitic Lapilli Tuff.</b> Distinct fragmental. 3 to 50 mm lenticular dacitic fragments 5 to 75% of rock. Fragments monolithic, 50% 0.5 to 1.5 mm subhedral quartz, 30% 0.5 to 2 mm subhedral feldspar and 20% anhedral black biotite wrapping around the other silicates. Local fine grained dykelets at steep core angles. Local 'breccia' zones with quartz veined angular and disrupted	Highly variable alteration - generally weakly to moderately silicified and sericitized with variable clay overprint. Several generations of veinlets. Early fabric subparallel sulphidic with chlorite veinlets. Later veins host calcite and gypsum.	3-4% fine grained disseminated pyrite. 2-5% brown pyrite in planar fabric subparallel and less commonly crosscutting planar to subplanar 0.5 to 2 mm fracture veinlets.	11S	171496	364.1	366.5	2.40	<b>107</b>	0.95	0.8	16	0.4	<b>147</b>	20	5.2	23	0.9	57
							11S	171497	366.5	368.75	2.25	78	0.85	0.52	13	0.2	<b>253</b>	20	6.2	7	1.1	50
				370.6 - 370.82 Felsic andesite or basalt dykes. Buff green-grey very fine to fine grained slightly feldspar porphyritic. Upper one is finer grained and 15 cm wide with distinctly more fracture veining than a slightly coarser grained member below.	Strong sericite-quartz alteration.	3% very fine grained disseminated pyrite throughout.	11S	171498	368.75	371	2.25	48	0.48	0.47	11	0.2	120	< 10	9.8	7	1.3	53
			Weak to strong foliation fabric. Weaker at higher core angles.		371 - 381.2 Weak to locally strong epidote overprint accompanied by 370.9 - disseminated and vein marginal rims of tourmaline and lesser dark chlorite. Quartz zones rimmed by weak hematite and deformed calcite veins and zone rimmed by tourmaline and hosting strong sulphides. Relatively weak late white clay lined fractures	3% very fine grained disseminated pyrite in original altered protolith. 2 to locally 12% brassy pyrite associated with deformed carbonate veins and zone. Up to 40% of vein.	11S	171499	371	373	2.00	<b>112</b>	0.74	0.45	14	0.3	<b>406</b>	< 10	17.9	6	1.3	33
					372.5 - 373 Calcite tension fracture zone 0.5 to 2 cm at shallow core angles.	15% coarse multicrystalline pyrite in centre of vein.	11S	171500	373	375	2.00	<b>414</b>	0.66	0.56	17	0.2	<b>324</b>	< 10	11.0	6	1.4	26
					374 - 1 cm grey quartz sulphide veinlet. 45 deg to C.A. Parallel to fabric.		11S	171501	375	377	2.00	<b>201</b>	0.92	0.54	16	0.3	<b>582</b>	< 10	9.7	8	1.7	32
							11S	171502	377	379	2.00	<b>102</b>	0.83	0.65	17	0.3	<b>498</b>	< 10	6.1	9	1.4	29
							11S	171503	379	381	2.00	31	0.45	0.41	16	0.1	110	< 10	13.1	6	1.1	24
			50+/-10 schistosity		381.2 - 395 Trace to 3% stringers and disseminations of tourmaline with epidote rims. Late pale grey clay in fractures - up to 2 cm thick normally fabric subparallel. Locally weak epidote without		11S	171504	381	383.2	2.20	25	0.39	0.31	11	0.1	103	<b>20</b>	8.3	8	1.1	23
							11S	171505	383.2	385	1.80	59	0.60	0.4	15	0.3	<b>260</b>	<b>20</b>	13.6	12	2.8	26
						386.7 - Deformed banded-laminated calcite-chlorite-epidote vein.	11S	171506	385	387	2.00	41	0.39	0.28	13	0.2	115	< 10	4.4	7	1.1	32
				388 - 395 Gradually decreasing fragment size back to dominantly crystal tuff	388.1 - 6 cm quartz with late calcite and pink stained carbonate? vein sub normal to C.A.		11S	171507	387	389	2.00	24	0.32	0.33	10	0.2	94	<b>20</b>	11.2	12	1.5	33
							11S	171508	389	391	2.00	<b>132</b>	0.30	0.28	11	0.1	137	< 10	9.4	10	1.1	29
							11S	171509	391	393	2.00	23	0.16	0.25	11	0.1	59	< 10	5.7	5	1.0	29
					393.5 - 393.7 Crosscutting white and green mottled quartz-chlorite, brown epidote vein. Irregular annealed contacts. No alteration selvages	Trace VFG pyrite	11S	171510	393	395.02	2.02	56	0.31	0.29	21	0.2	151	< 10	8.2	6	1.2	31



FROM	TO	GEOCODE	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION AND VEINING	MINERALIZATION	SAMPLE AND ASSAY INFORMATION					Au ppb	Ag ppm	Bi ppm	As ppm	Cd ppm	Cu ppm	Hg ppm	Mo ppm	Pb ppm	Sb ppm	Zn ppm
395.00	458.25	FQPT		Grey, medium to fine grained, massive quartz feldspar porphyritic tuff? intermediate volcanic flow complex. Possibly in part or largely? intrusive. 50% 0.5 to 1.5 mm subhedral quartz, 30% 0.5 to 2 mm subhedral feldspar and 20% anhedral formerly black biotite wrapping around the other silicates.	Highly variable alteration - generally moderately silicified with variable clay-calcite overprint.	3-4% fine grained disseminated pyrite. 2-5% brown pyrite in planar fabric subparallel and less commonly crosscutting planar to subplanar 0.5 to 2 mm fracture veinlets. Variations described separately below.	11S	171511	395.02	397	1.98	53	0.37	0.33	19	0.1	182	< 10	12.7	6	1.2	25
							11S	171512	397	399	2.00	89	0.39	0.43	19	0.1	123	30	8.1	10	1.2	40
				401.5 - 403.2 Fine lapilli tuff. Up to 7 mm by 4 mm rounded dacitic FQP fragments.			11S	171513	399	401	2.00	59	0.54	0.46	16	0.1	235	< 10	16.8	11	1.1	37
				403.2 - 425 Gradually decreasing grain size to volcanic mudstone? However certain coarse ovoid objects up to 5 cm by 2 cm may be deformed tuff fragments.			11S	171514	401	403	2.00	71	0.43	0.22	17	0.1	129	< 10	13.3	6	1.8	42
					404.8, 405 Large almost pegmatitic quartz-dolomite zones. Late crosscutting tensional pyrite.	5% late stage tensional pyrite veinlets.	11S	171515	403	405	2.00	11	0.32	0.14	15	0.1	33	< 10	17.8	8	1.5	39
							11S	171516	405	407	2.00	29	0.55	0.33	22	1.6	43	60	6.0	49	2.7	109
					407.8 - 408 Clay altered shear - very thin late grey sulphidic shear clay zones.	2% finely disseminated pyrite. Trace dark sulphides in clay shears.	11S	171517	407	409	2.00	23	0.34	0.28	17	0.2	39	10	4.9	36	1.5	40
					409 - 415.5 Weak to moderate selective epidote (up to 30% green and tan) replacement of host rock (andesitic lapilli fragments??). Lesser tourmaline (trace to 3%). Late calcite-chlorite fracture veinlets.	Up to 20% pyrite in epidote-quartz-tourmaline veins and possible replacement zones.	11S	171518	409	411	2.00	214	1.13	0.44	25	1.3	364	40	17.5	114	1.6	113
					415.3 - Visually striking ptymatic banded dark chlorite-epidote-calcite veinlet overall axis normal to fabric. Probably deformed by syn vein movement.		11S	171519	411	413	2.00	98	0.90	0.28	18	0.3	385	< 10	15.0	8	1.5	43
							11S	171520	413	415	2.00	54	0.61	0.4	27	0.2	221	< 10	10.4	8	1.6	57
							11S	171521	BLANK			1	0.22	< 0.02	1	0.0	1	< 10	0.2	1	< 0.02	3
					416.05 - 416.8 Several visually striking irregularly banded deformed grey quartz (20% of interval)-bright green epidote (10% or interval), tourmaline (1.5% or interval) vein zones. Various orientation to rock fabric but veining fabric normal and fabric subparallel.	4% very finely disseminated pyrite in epidote. Minor vein rimming hematite.	11S	171522	415	417	2.00	103	0.58	0.43	19	0.3	253	< 10	8.2	13	1.7	71
					417.2 - 417.4 Clayey fault gouge zone fabric parallel fault. 38 deg. to C.A.	At least 5% very finely disseminated pyrite in gouge. Lower contact zone had hematite staining.	11S	171523	417	419	2.00	71	0.64	0.4	16	0.3	218	< 10	11.0	13	1.6	67
							11S	171524	419	421	2.00	237	1.41	0.41	20	0.6	527	< 10	11.6	19	1.9	80
							11S	171525	STD WCM Cu157			827	14.70	2.63	11	< 0.01	4480	1970	519.0	32	41.2	25
					424 - Slight increase in late calcite overprint and veining.		11S	171526	421	423	2.00	92	1.78	0.58	20	0.4	249	40	23.9	20	1.9	77
					425.2 Tourmaline-white calcite vein 1.2 cm subparallel to fabric.		11S	171527	423	425	2.00	96	1.12	0.55	22	0.2	184	20	21.4	11	1.4	61
			Fabric stable at ~45 deg. to C.A.		425.7 - 426.6 Calcite-pyrite veinlets 5% of rock. 10-60% pyrite in v veins. Thinner veinlet more sulphide rich.	4% overall calcite vein pyrite.	11S	171528	425	427	2.00	373	1.98	0.67	31	0.4	390	100	11.0	25	1.7	30
			428 - Small S fold 45-10-45 over 40 cm				11S	171529	427	429	2.00	144	2.04	0.29	28	0.3	293	20	24.8	18	0.7	30

FROM	TO	GEOCODE	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION AND VEINING	MINERALIZATION	SAMPLE AND ASSAY INFORMATION					Au ppb	Ag ppm	Bi ppm	As ppm	Cd ppm	Cu ppm	Hg ppm	Mo ppm	Pb ppm	Sb ppm	Zn ppm
			Fabric steepening to 55+/-10 deg. to C.A.		429.2 - 7 cm quartz-calcite tourmaline pyrite vein zone - 60% wallrock 40% vein.	7% brassy and brown pyrite a fine to coarse dissemination in vein and vein-wallrock margins.	11S	171530	429	431	2.00	313	3.00	0.37	35	0.3	557	30	13.6	11	1.2	21
				431 - Grain size increasing slightly, distinctly crystal tuff component.		431.5 0 432.8 5% 1-3 mm red haematitic quartz shards?.	11S	171531	431	433	2.00	171	1.64	0.31	20	0.3	482	20	11.6	7	0.8	41
				433.8 - 434.9 Fine lapilli-coarse crystal tuff interval			11S	171532	433	435	2.00	120	0.70	0.35	16	0.1	154	20	9.3	9	1.2	41
				435.95 - 436.9 Fine lapilli-coarse crystal tuff interval			11S	171533	435	437	2.00	140	0.66	0.31	16	0.2	273	30	13.4	9	0.9	33
					437.4 - 437.6 10% quartz with minor calcite stockwork.	437.4 - 437.6 6% brown pyrite stockwork zone associated with but not paralleling quartz calcite stockwork.	11S	171534	437	439	2.00	222	1.12	0.49	34	0.3	322	70	17.9	24	9.6	11
				443.7 - 445.7 Ash tuff-fine lapilli tuff.	443.7 - 444.4 7% stringer and disseminations of tourmaline with brassy and brown pyrite. Give host rock a much darker cast.	4% fracture and tourmaline associated pyrite. 2% fine grained disseminated biotite? replacement pyrite.	11S	171535	439	441	2.00	83	0.87	0.34	19	0.3	270	20	8.4	11	0.5	39
						444.5 - 446.5 Several semi massive to massive pyrite veins and veinlets. 1 to 11 mm thick. Associated with grey quartz and less commonly tourmaline.	11S	171536	441	443	2.00	218	0.99	0.42	14	0.3	495	< 10	9.0	10	0.4	45
						445.75 - 5 mm massive pyrite (65%) tourmaline 35% fabric parallel veinlet.	11S	171537	443	445	2.00	101	0.58	0.3	17	0.2	282	< 10	10.2	9	0.4	37
					446.15 - 11 mm grey quartz-pyrite veinlet.	25% brassy pyrite forming fabric parallel stretched net textured stockwork in QV	11S	171538	445	447	2.00	527	2.44	0.79	55	3.2	476	230	9.8	91	13.6	277
					447 - 455 Significant increase in quartz-calcite pyrite fabric subparallel veining. Veining ~ 10-30% of interval over 1 metre increasing to 454 m then decreasing markedly to 455 m. 2 generations of veining a possibly earlier hosting minor tourmaline and the other without and greater	447-453.3 6% vein hosted brassy pyrite.	11S	171539	447	449	2.00	339	4.06	0.74	53	3.3	556	180	19.9	226	3.2	243
							11S	171540	449	451	2.00	685	4.76	0.38	53	3.7	481	100	18.9	339	2.0	308
							11S	171541	451	453	2.00	825	3.76	0.34	71	0.9	900	30	21.3	59	1.4	52
						453.3 - 454.4 12% strongly disseminated to semi massive (25% over 30 cm) on lower side of clay altered quartz vein shear. 35 deg to C.A.	11S	171542	453	455	2.00	1610	5.26	0.83	509	5.8	891	130	29.5	252	1.6	450
							11S	171543	BLANK			1	0.56	< 0.02	1	0.0	1	< 10	0.1	1	0.0	3
					457.6 - 458.05 Grey clay altered pseudobreccia bracketing 2 cm dark grey sulphidic clay fault.	Finely disseminated pyrite in dark grey clay shear. Unknown quantity of microscopic dark grey sulphide. Interval becoming increasing mineralized down hole to >10% semi massive interconnected net textured pyrite.	11S	171544	455	457	2.00	278	1.68	0.23	32	0.3	359	< 10	27.2	14	0.6	47
				458.25 Dark grey sulphidic clay altered intrusive contact - undulating 40 deg. To C.A.			11S	171545	457	459.25	2.25	146	1.46	0.56	34	0.3	306	30	29.4	47	1.3	50
458.25	458.70	BAS		MAFIC DYKE - Buff green very fine to fine grained massive to moderately modular dyke.	Moderate calcite overprint amygdalae at contact calcite filled. In center strongly chloritic altered hornblende? Phenocrysts. Weak to moderate dolomite and ankerite undulating stockwork	None noted.	11S	171546	459.25	460.1	0.85	1950	4.33	0.41	138	0.8	664	< 10	27.8	18	1.7	76
				458.70 Chlorite clay altered intrusive contact - undulating, 80 deg. to C.A.			11S	171547	STD WCM Cu157			877	15.90	2.43	12	< 0.01	4800	2310	545.0	30	42.6	27



FROM	TO	GEOCODE	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION AND VEINING	MINERALIZATION	SAMPLE AND ASSAY INFORMATION				Au ppb	Ag ppm	Bi ppm	As ppm	Cd ppm	Cu ppm	Hg ppm	Mo ppm	Pb ppm	Sb ppm	Zn ppm	
458.70	460.60	QFPT		Grey, medium to fine grained, massive quartz feldspar crystal tuff. 50% 0.5 to 1.5 mm subhedral quartz, 30% 0.5 to 2 mm subhedral feldspar and 20% anhedral black biotite wrapping around the other silicates.	Highly variable alteration - generally moderately to weakly silicified with variable clay overprint.	3-4% fine grained disseminated pyrite. 2-5% brown pyrite in planar fabric subparallel and less commonly crosscutting planar to subplanar 0.5 to 2 mm fracture veinlets.	11S	171548	460.1	461.3	1.20	2	1.30	0.12	3	0.2	38	< 10	2.0	8	0.3	64
					459.28 - 460.05 - quartz calcite shear vein zone. 60% silicified weak jasperoid appearing fabric parallel wallrock zones interrupted by deformed foliated silicified jasperoid wallrock, and dark sulphidic quartz shear veins and later white calcite tension and weak stockwork.	6-7% fine to medium grained brassy pyrite and 10-15% dark brown and grey pyrite-sulphide within disrupted finely laminated quartz vein (or very strongly silicified wallrock) zones. Dark red hematite staining and jasperoidal veinlets	11S	171549	461.3	463.4	2.10	547	2.29	0.53	31	5.1	411	170	26.9	247	0.9	342
				460.06 Weakly chlorite clay altered intrusive contact - undulating 45 deg. to C.A.			11S	171550	463.4	465.5	2.10	977	5.01	1.75	71	32.5	1020	990	18.9	412	1.6	2070
460.60	461.30	TBAS		MAFIC DYKE - Buff green very fine to fine grained massive to moderately amygdular dyke.	Moderate calcite overprint amygdales at contact are calcite filled. In center strongly chloritic altered hornblende? phenocrysts. Moderate dolomite and ankerite undulating stockwork	None noted.	11S	171551	465.5	467.5	2.00	306	3.55	0.98	25	2.5	404	70	21.4	137	1.8	161
				461.3 Intrusive contact - undulating, annealed. 70 deg. to			11S	171552	467.5	469.5	2.00	394	7.11	1.01	20	4.5	717	70	29.2	171	3.0	343
461.30	500.50	FQPT		Grey, medium to fine grained, massive quartz feldspar crystal tuff. 50% 0.5 to 1.5 mm subhedral quartz, 30% 0.5 to 2 mm subhedral feldspar and 20% anhedral black biotite wrapping around the other silicates. Local fine grained dykelets at steep core angles. Local "breccia" zones with quartz veined angular and disrupted fragments.	Highly variable alteration - generally moderately to weakly silicified with variable clay overprint.	3-4% fine grained disseminated pyrite. 2-5% brown pyrite in planar fabric subparallel and less commonly crosscutting planar to subplanar 0.5 to 2 mm fracture veinlets.	11S	171553	BLANK			<5	0.67	< 0.02	1	< 0.01	1	< 10	0.1	1	< 0.02	3
					461.45 - 466 Dark grey sulphidic quartz, quartz-tourmaline silicified and vein zones with semi massive sulphides. Veining comprises 50% of core over 30 cm, average ~ 30% Sulphides often post quartz and pre to syn calcite. Later white calcite tension and weak stockwork.	3% wallrock hosted fine disseminated pyrite. Quartz-tourmaline veins host up to 60% massive (over 8 cm) and semi massive pyrite as 2 to 15 mm sometimes interconnecting masses. Up to 10% of pyrite is chalcopyrite (464.4 m) Occasional 10-15% dark brown and grey pyrite-sulphide within disrupted finely laminated quartz vein (or very strongly silicified wallrock) zones. Rare dark red hematite (or cinnabar?) staining and jasperoidal veinlets.	11S	171554	469.5	471.5	2.00	162	3.02	4.7	15	0.6	529	< 10	21.0	47	0.8	93
					463.5 White quartz vein 80 deg to C.A.	3% medium grained weakly disseminated chalcopyrite.	11S	171555	471.5	473	1.50	259	3.85	1.83	21	13.2	516	460	22.4	214	1.2	1120
					466.7 - 469.25 Faulted and folded grey sulphidic quartz vein zone. Numerous late shears at 15-25 and 55-80 deg. to C.A. Quartz veins are broken and rotated. Many faults host thin grey sulphidic	3% pyrite as fine grained disseminations in wallrock. Up to 10% over 10 cm in veining.	11S	171556	473	475	2.00	164	2.05	0.64	18	1.4	414	< 10	13.0	58	1.5	114
				Below 469.25 fabric is 60-80 deg. to C.A. average ~ 70.			11S	171557	475	477.32	2.32	113	1.90	0.97	22	1.0	500	< 10	12.9	54	2.9	85
					473.2 - 474.5 Strongly clay altered buckle and shear zone. 50-70% strongly silicified wallrock 20% of interval is deformed grey clay sulphidic gouge.	5% fine disseminated wallrock pyrite, grey sulphidic clay hosts 5% very finely disseminated pyrite and unknown but probably similar amount of microcrystalline dark sulphides.	11S	171558	477.32	479.5	2.18	133	1.27	0.67	23	0.2	676	< 10	22.8	18	2.3	33

FROM	TO	GEOCODE	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION AND VEINING	MINERALIZATION	SAMPLE AND ASSAY INFORMATION					Au ppb	Ag ppm	Bi ppm	As ppm	Cd ppm	Cu ppm	Hg ppm	Mo ppm	Pb ppm	Sb ppm	Zn ppm
			50 deg to C.A.		476.2 - 477.6 strongly clay altered buckle and shear zone. 50% strongly silicified wallrock 20% of interval is deformed grey clay sulphidic gouge. Bracketing grey sulphidic quartz vein-silicified zone at 477.25 m.	5% fine disseminated wallrock pyrite, grey sulphidic clay hosts 5% very finely disseminated pyrite and unknown but probably similar amount of microcrystalline dark sulphides.	11S	171559	479.5	481.5	2.00	195	1.33	0.5	22	0.3	760	< 10	12.5	10	1.6	42
					477.6 - 478.25 Strongly silicified quartz flood zone.	3% Fine disseminated wallrock pyrite, grey sulphidic clay hosts 5% very finely disseminated pyrite.	11S	171560	481.5	483.5	2.00	134	1.16	1.43	42	0.4	375	< 10	18.3	33	1.1	47
				Wallrock strongly laminated fine grained and apparently highly sheared.	480 - 486.4 Wallrock host much stronger late calcite overprint and tension fracture veining than before 480 m. rock mass hosts 10-15% early often deformed and anastomosing semi translucent quartz veins, 5-7% quartz-tourmaline-25% pyrite veinlets. And 15% late calcite tension fracture veins with weak to moderate calcite overprint	3% wallrock hosted fine disseminated pyrite. 2-5% 1 to 7 mm quartz-tourmaline veins host up to 60% massive and semi massive pyrite.	11S	171561	483.5	485.5	2.00	2	0.38	0.83	16	0.0	3	< 10	0.5	12	0.3	69
			482.15 - 483.4 Schistosity 40+/-5 TCA		480.25 - 482.15 Strongly clay altered buckle and shear zone. 20% of interval is deformed grey clay sulphidic gouge.	5% fine disseminated wallrock pyrite, grey sulphidic clay hosts 5% very finely disseminated pyrite and unknown but probably similar amount of microcrystalline dark sulphides.	11S	171562	485.5	487.5	2.00	2	0.30	0.6	14	0.1	9	< 10	0.5	11	0.2	72
			483.95 - buckle fold normal to core axis.		483.1 - White quartz vein. 25 deg. to C.A. Late calcite tension fracture veining.	10% brassy pyrite in quartz vein.	11S	171563	487.5	489.51	2.01	564	8.88	2.86	72	1.7	480	< 10	12.1	86	2.0	153
			484 -485 fabric 30+/- 15 to C.A.		483.4 - 483.95 buckle zone many fractures subparallel to C.A. Moderate clay gypsum overprint. Reverse fabric from 483.7 483.95	3% finely disseminated pyrite in wallrock. 4% brassy pyrite in carbonate vein margins.	11S	171564	489.51	491.5	1.99	31	1.01	0.45	19	0.1	31	< 10	8.9	7	1.7	18
			485 on fabric ~ 45+/-10 TCA		486.4 - 488 Rock mass hosts 10-15% early often deformed and anastomosing semi translucent quartz veins, 5-7% quartz-tourmaline-25% pyrite veinlets. 5-8% late calcite tension fracture veins with weak calcite overprint	3% wallrock hosted fine disseminated pyrite. 2-5% 1 to 7 mm quartz-tourmaline veins host up to 60% massive and semi massive pyrite.	11S	171565	491.5	493.5	2.00	168	0.97	1.43	20	0.1	536	< 10	15.1	42	0.8	26
					497.25 - 498.55 - interval hosts 50% dark 2 to 40 mm quartz-tourmaline veining. Fabric parallel vein swarms host thin to 30 mm wallrock laminations and intervene zones. Veins host fabric normal late calcite ladder veinlets.	~4-5% very finely disseminated wallrock pyrite. 7% (overall composition) brassy medium to coarse pyrite (10-30% vein composition) commonly occurring in vein centres.	11S	171566	STD WCM Cu157			839	15.90	2.61	12	< 0.01	4740	2110	555.0	32	40.9	26
					499 - 500.5 Dark grey cast in zone of reduced late calcite overprint. Significant reduction in early grey quartz, moderate reduction in tourmaline veinlets.	3% pyrite as fine grained dissemination in wallrock. 3% as brownish foliation fracture parallel veining.	11S	171567	493.5	495.5	2.00	197	2.32	2.89	21	0.5	821	< 10	15.6	28	3.4	36
500.5	507.80	GDRF		<b>FOLIATED (FLOW BANDED?) GRANODIORITE</b> Distinctly more massive coarser grained proliith possible deformed intrusive. "foliated and/or flow banded granodiorite"? Possible chilled margin at 505.4. Unit varies from pale grey sulphide dominant mineralization to reddish spotted with hematite dominant mineralization (with some pyrite still present.	500.5 - 505.5 Moderate bleaching and increase in deformed early grey quartz veining. Continued reduction in quartz-tourmaline-pyrite veinlets.		11S	171568	495.5	497.5	2.00	324	0.84	0.51	13	0.2	725	< 10	12.0	5	0.9	30
					505.40 cm zone of strong quartz-tourmaline vein hosted pyrite ~ 7%.		11S	171569	497.5	499.5	2.00	192	1.96	1	19	0.7	591	10	13.9	30	6.1	43

FROM	TO	GEOCODE	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION AND VEINING	MINERALIZATION	SAMPLE AND ASSAY INFORMATION					Au	Ag ppm	Bi ppm	As ppm	Cd ppm	Cu ppm	Hg ppm	Mo ppm	Pb ppm	Sb ppm	Zn ppm
							ppb															
					505.5 - 507.8 Decreased wallrock silicification, and all vein episodes.	5% disseminated pyrite now the dominant disseminated sulphide.	11S	171570	499.5	501.5	2.00	172	1.53	0.81	21	0.4	589	< 10	24.3	11	0.9	60
					505.7 - 506.2 - white and grey deformed quartz veining at shallow core angles.	Bright red hematite at vein margins and as ragged within quartz vein ladder veinlets.	11S	171571	501.5	503.5	2.00	194	0.98	0.3	12	0.3	521	< 10	14.2	6	1.8	45
					506.2 - 507.7	6% disseminated pyrite now the dominant sulphide. 4% in foliation parallel stringers.	11S	171572	503.5	505.5	2.00	110	0.80	0.67	20	0.3	345	< 10	10.6	14	0.5	57
	507.80	EOH			507.7 - 507.8 Spotted hematite dominant fabric		11S	171573	505.5	507.8	2.30	110	0.60	0.35	11	0.3	295	< 10	9.0	9	0.4	58

ASHER RESOURCES INC.		LAVINGTON GOLD PROJECT			MAIN ZONE		DIAMOND DRILL HOLE L14-03		DOWN HOLE TESTS (UNCORRECTED)												
LOCAL GRID CO-ORDINATES			LOCATION AND ORIENTATION DATA (UTM)																		
N	E	ELEV	BRG	DIP AT COLLAR		DEPTH	CORE SIZE			DEPTH	STR	DIP	DEPTH	STR	DIP	DEPTH	STR	DIP			
5570775	7100	1280	180	-45		233.48	HQ			11.0	164	-44	102.4	167.3	-42.7	193.9	168.2	-42.4			
UTM N UTM E		1280	HOLE TARGET:					SAMPLE AND ASSAY INFORMATION													
5570775 647100			Drill towards hole L90-06 and test IP and geochemical anomaly.																		
FROM	TO	GEOCODE	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION AND VEINING	MINERALIZATION	SAMP prefix	SAMP#	FROM	TO	WIDTH	Au ppb	Ag ppm	Bi ppm	As ppm	Cu ppm	Hg ppm	Pb ppm	Sb ppm	Zn ppm	
0.00	3.05	CASG		CASING NO RECOVERY																	
3.05	78.35	QFPT	Shear fabric 55+/-10 deg. to C.A.	Grey, medium to fine grained, massive quartz feldspar crystal +/- fine lapilli ash tuff. 50% 0.5 to 1.5 mm subhedral quartz, 30% 0.5 to 2 mm subhedral feldspar and 20% anhedral black biotite wrapping around the other silicates.	Interval is moderately to strongly and locally intensely pervasively silicified. Biotite present in less silicified areas has been replaced by silica and sericite. Overprinted by weak carbonate fracture infill and stringers with minor pale clay.	3% very finely disseminated pyrite. Uncommon ~3-5% late massive sulphide fracture veinlets and weak stockwork (10.5 m) with 70-80% brown pyrite and 10% peripheral very fine grained brassy pyrite and 10-20% very dark brown sphalerite. Veinlets 0.2 to 6 mm. Sometimes with quartz, dolomite and calcite.	11S	171575	3.05	5.00	1.95	126	0.585	0.38	13.4	280	< 10	8.09	0.5	56.9	
				Iron oxidized open fractures down to 6.8 m.	Late weak crackle brecciation open fractures some filled with cockscomb quartz and calcite.	Feox staining fairly strong from 4-6.8 m. 3mm thick goethite fracture filing at 6.8 m.	11S	171576	5.00	7.00	2.00	119	0.6	0.74	34.0	339	< 10	15.2	0.6	58	
					4.0 4 mm quartz-dolomite? Fracture veinlet.		11S	171577	7.00	9.00	2.00	6	0.3	0.61	11.6	2.3	< 10	10.6	0.3	66	
							11S	171578	9.00	11.00	2.00	8	0.3	0.55	10.4	2.06	< 10	9.85	0.4	70	
							11S	171579	11.00	13.00	2.00	8	0.2	0.51	7.8	1.99	< 10	9.05	0.4	68	
							11S	171580	13.00	15.00	2.00	1	0.2	0.38	6.1	3.26	< 10	7.93	0.3	58	
							11S	171581	15.00	17.00	2.00	14	0.5	0.7	311.0	18.1	< 10	85.4	0.7	234	
							11S	171582	17.00	19.00	2.00	16	1.56	1	518	29.7	< 10	34.5	1.05	412	
							11S	171601	19.00	21.00	2.00	2	0.6	0.56	73.2	26.8	< 10	75.2	0.7	590	
					20.5 - 27.9 Moderate increase in wallrock silicification to very strong. Wallrock now very brittle. Sulphide veining cut by and cuts late calcite +/- quartz fracture veinlets as crosscutting and parallel veinlets. Fabric near	20.5 - 27.9 Strong late stockwork and fracture (to 7 mm thick by 25 cm long) massive sulphide veining. 20-90% pyrite, 10-80% or more dark brown sphalerite. Overall interval concentration is 6-7% pyrite and 1-2% sphalerite.	11S	171583	21.00	23.00	2.00	15	1.2	0.79	24.9	32	40	49.8	1.4	468	
							11S	171584	BLANK			1	0.3	< 0.02	1.0	0.58	< 10	1.19	0.0	3	
							11S	171585	STD WCM Cu157			0	0.0	2.55	11.4	4680	2120	29	38.1	27	
					22.9 - 24.8 Several 3 to 25 cm quartz with minor disseminated fine grained muscovite veins. Muscovite surrounding and variably replacing silicified wallrock fragments. Ragged contacts near normal to core angle.	Sulphide veinlets parallel, crosscut and form polycrystalline aggregates within qveins.	11S	171586	23.00	25.00	2.00	10	1.8	0.56	12.7	22.3	10	35.2	1.1	166	
					23.55 - 23.75 Large calcite chloritized felted biotite vein at high core angles. Ragged		11S	171587	25.00	27.00	2.00	62	0.8	0.5	100.0	23	10	41.7	1.5	389	



FROM	TO	GEOCODE	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION AND VEINING	MINERALIZATION	SAMP prefix	SAMP#	FROM	TO	WIDTH	Au ppb	Ag ppm	Bi ppm	As ppm	Cu ppm	Hg ppm	Pb ppm	Sb ppm	Zn ppm
					28.7 - 35.6 Moderate increase in wallrock silicification to very strong. Wallrock now very brittle. Sulphide veining cut by and cuts late calcite+/- quartz fracture veinlets as crosscutting and parallel veinlets. Veining near normal to fabric common. Latest ragged brittle fracture and uncommon quartz veins are chlorite-calcite lined and often open with minor very fine cockscomb quartz and sparry calcite. Random fabric subparallel shears and surrounding wallrock host very late bleached zones that has	28.7 - 35.7 Moderate late stockwork and fracture (to 7 mm thick by 25 cm long) massive sulphide veining. 40-100% pyrite, 10-70% or more dark brown sphalerite. Overall interval concentration is 6-7% pyrite and 1-3% (over 30 cm) sphalerite. Sphalerite concentrated in dense fine tensional stockwork as at 32.6-33.1 m..	11S	171588	27.00	29.00	2.00	8	0.9	0.67	38.0	28.7	60	41.3	1.1	677
					29.4 Dark grey laminated quartz-shear vein 55 deg. to C.A. up to 12 mm thick with 15% dark brown and 20% very dark grey microcrystalline sulphide.	12 mm thick with 15% dark brown and 20% very dark grey microcrystalline sulphide (arsenopyrite) in laminated quartz shear vein.	11S	171589	29.00	31.00	2.00	32	1.6	1.57	153.0	23.6	5	67.3	1.0	282
					32.4 - 38.3 Several quartz calcite veins and masses. Most hosting some form of minor sulphide mineralization (brassy and brownish red (marcasite?) pyrite-sphalerite) and variably chlorite altered muscovite altered wallrock fragments.		11S	171590	31.00	33.00	2.00	19	2.8	0.8	296.0	22.6	5	338	1.1	741
							11S	171591	33.00	35.00	2.00	8	1.1	0.66	279.0	24.3	5	52.1	0.5	560
							11S	171592	35.00	37.00	2.00	9	1.0	0.95	61.7	26.4	5	80.8	0.7	618
						36.15 - 6 by 7 cm medium grained pyrite, sphalerite, magnetite dolomite mass. Extends into several small polysulphide veinlets. Truncated on down hole side by white quartz-calcite vein. Otherwise cusped contact with wallrock.	11S	171593	37.00	39.00	2.00	7	0.5	0.29	73.1	17.9	5	19.4	0.4	470
						42 - 44.5 moderately to highly magnetic pyrrhotite ~2% of rock becomes a minor but persistent sulphide component. Sphalerite appears to not be present.	11S	171594	39.00	41.00	2.00	14	0.5	0.28	11.9	14.7	5	14.5	0.8	348
					44.5 - 45 1 cm undulating annealed to wallrock quartz vein 0-15 deg. To can	44.5 - 45 quartz vein with pyrite 12%, magnetite 1%, 4% brown sphalerite, 4% galena, and 2% dark grey sulphide.	11S	171595	41.00	43.00	2.00	13	0.4	0.28	33.3	17.5	5	15.6	0.8	204
						44-50 Rock hosts very finely disseminated pyrite 3-5%, sphalerite 1%, and arsenopyrite 1-2%.	11S	171596	43.00	45.00	2.00	10	0.89	0.76	155	29	30	43.9	0.79	398
					45.3 10 cm clay altered wallrock zone with chlorite - calcite alteration.	45 - 50 Strong trace to 1% very fine grained arsenopyrite and sphalerite associated with 2-5% pyrite in minute fracture veinlets and quartz veins with poly sulphide sections. Sulphide comprise 5 to 60% of vein and nearly 100% of stockwork	11S	171597	45.00	47.00	2.00	658	2.25	1.83	902	29.3	5	46.5	1.16	170

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					50.2 - 50.45 Ragged large quartz vein with large wallrock	5% raggedly disseminated pyrite 2% pyrrhotite 2% sphalerite 1%.	11S	171598	47.00	49.00	2.00	108	1.66	0.97	2450	21	30	62.5	1.16	428
					50.5 - 65.2 Repeat but slightly stronger silicification and mineralization seen at 28.7 m.	Repeat of silicification and mineralization seen at 28.7 m. except for up to 7% pyrite, 2% very erratically occurring pyrrhotite. Sphalerite and galena similar to previously described interval.	11S	171599	49.00	51.05	2.05	135	1.52	1	925	21.9	5	36.4	1.46	457
						51.75 15 mm quartz 35%, pyrite 50%, pyrrhotite 10%, sphalerite 5% fabric parallel vein.	11S	171600	51.05	53.00	1.95	62	0.938	0.61	532	28.8	110	58.7	9.24	934
			Fabric 55 deg to CA		55-58 Irregular small and ragged large late brittle tensional quartz veins with large wallrock fragments. Cross cuts fabric and earlier sulphide veining a various angles. Late ankerite veinlets paralleling quartz veins. Latest gypsum and calcite fracture veining with chlorite.	Pyrite and pyrrhotite 3 to 7% over 0.4 m in minute to 10 mm stockwork, quartz shear and quartz-calcite fracture veining. Shear and quartz calcite may host over 75% sulphides. Large QVs host 5% fine to coarse pyrite and pyrrhotite. Strong trace to 1% sphalerite in minute tension fractures with some pyrite. May be earlier than iron sulphides.	11S	171602	53.00	55.00	2.00	47	1.47	1.47	1530	30.2	5	63.6	1.69	396
			57.4 - 57.7, 60.5 - 60.9 Quartz carbonate breccia shears 40-45 deg. to C.A.				11S	171603	55.00	57.00	2.00	17	1.12	1.01	188	19.9	20	69.6	0.77	472
							11S	171604	57.00	59.00	2.00	13	1.01	0.93	590	22.9	20	52	1.85	924
						60 - Increase of 1-3% and coarser grained disseminated and fabric parallel pyrite stringers. Overall sulphide content increasing	11S	171605	59.00	61.00	2.00	6	0.651	0.5	72.9	20.5	5	9.74	1.32	339
							11S	171606	61.00	63.00	2.00	15	0.773	0.79	312	17.9	110	16.8	1.9	837
			Buckle fold, reversal of rock dip over 1 m.		63-65.1 Irregular small and ragged large late brittle tensional quartz veins with large wallrock fragments. Cross cuts fabric and earlier sulphide veining a various angles. Late ankerite veinlets paralleling quartz veins. Latest gypsum and calcite fracture veining with chlorite. Faint fine grained disseminated biotite (3-6%) begins to be present in ground mass	Pyrite and pyrrhotite 3 to 7% over 0.4 m in minute to 10 mm stockwork, quartz shear and quartz-calcite fracture veining. Shear and quartz calcite may host over 75% sulphides. Large QVs host 5% fine to coarse pyrite and pyrrhotite. Strong trace to over 2% over 30 cm sphalerite in minute grey quartz tension fracture veinlets with some pyrite. Possible rare trace arsenopyrite. May be earlier than iron sulphides.	11S	171607	63.00	65.00	2.00	16	0.776	0.96	378	21.9	50	34.6	1.76	854
					65 - 76.5 Increasing but patchy presence and decreasing alteration of disseminated biotite. Slight oxidization of late fractures.		11S	171608	65.00	67.00	2.00	13	0.816	0.84	1080	22.8	100	33.9	1.57	1090
						67+/-50 cm 2% sphalerite finely disseminated with pyrite and in minute fracture veinlets.	11S	171609	67.00	69.00	2.00	12	1.04	1.35	65	15.2	60	94	0.94	870
							11S	171610	69.00	71.00	2.00	10	0.672	0.41	21.7	13.8	80	19.5	1.11	812
							11S	171611	71.00	73.00	2.00	7	0.598	0.49	150	19.4	80	22.9	1.28	705

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					72.5 - 76 Irregular small and ragged large late brittle tensional quartz veins with large wallrock fragments. Cross cuts fabric and earlier sulphide veining a various angles. Late ankerite veinlets paralleling quartz veins. Latest gypsum and calcite fracture veining with chlorite.	Pyrrhotite and pyrite 3 to 5% over 0.4 m in minute to 10 mm stockwork, quartz shear and quartz-calcite fracture veining. Shear and quartz calcite may host over 75% sulphides. Large QVs host 5% fine to coarse pyrite and pyrrhotite. Strong trace to over 2% over 30 cm sphalerite in minute grey quartz tension fracture veinlets with some pyrite. Possible rare trace galena.	11S	171612	73.00	75.00	2.00	11	0.487	0.38	58.8	17.2	20	17.1	0.81	405
							11S	171613	75.00	77.00	2.00	7	0.554	0.49	68.7	18	30	22.5	0.91	544
					76.5 Biotite notably present and dominant mafic corresponds with decreasing strong silicification overprint.		11S	171614	77.00	78.35	1.35	23	0.544	1.01	89.9	18.3	10	27.2	1.65	824
				78.35 Calcite veined intrusive contact. Irregular 55 deg. to C.A.			11S	171615	82.80	85.00	2.20	2	0.485	0.41	12.9	17.1	< 10	17	0.95	242
78.35	82.8	TBAS		<b>TERTIARY BASALT DYKE</b> - Dark to medium green spotted mafic porphyritic dyke. Strongly chlorite-calcite altered. Augite? porphyritic (20-25%) with fine to medium grained sausseritized plagioclase (5-10%) in a medium to dark green and white fine to very fine grained groundmass (in centre of dyke) of plagioclase and hornblende. Wide chilled margins.	Strong chlorite-calcite alteration. Plagioclase strongly sausseritized.	Locally weakly magnetic.	11S	171616	85.00	87.00	2.00	9	0.627	0.65	36.5	20.6	< 10	36.1	1.07	258
				82.8 - Sheared intrusive contact			11S	171617	87.00	89.00	2.00	15	0.639	0.55	35	27.7	< 10	21	0.87	226
82.80	127.25	QFPT		<b>Grey, medium to fine grained, massive quartz feldspar crystal +/- fine lapilli ash tuff.</b> Local zone displaying rounded cobbles of dacitic volcanic to 12 by 7 cm. in ash tuff groundmass. Overall rock composition 50% 0.5 to 1.5 mm subhedral quartz, 30% 0.5 to 2 mm subhedral feldspar and 20% anhedral black biotite wrapping around the other silicates.	Interval is moderately to strongly and locally intensely pervasively silicified. Biotite present in less silicified areas has been replaced by silica and sericite in more strongly silicified zones. Overprinted by weak carbonate fracture infill and stringers with minor pale clay.	3% very finely disseminated pyrite. Uncommon ~3-5% late massive sulphide fracture veinlets and weak stockwork (10.5 m) with 70-80% brown pyrite and 10% peripheral very fine grained brassy pyrite and 10-20% very dark brown sphalerite. Veinlet 0.2 to 6 mm. Sometimes with quartz, dolomite and calcite.	11S	171618	89.00	91.00	2.00	16	0.588	0.38	34	26	< 10	19.5	0.49	152
					82.8 - 88.3 Strong to intense silicification and minor sulphidic stockwork.	5% dark brown massive very fine grained sulphides (altered pyrrhotite? (non-magnetic))	11S	171619	91.00	93.00	2.00	27	0.614	0.39	56.7	24.3	< 10	18.8	0.73	175
			85.5 - 106.5 Fold nose area steepening of core angles, dip reversals and large quartz vein				11S	171620	93.00	95.00	2.00	17	0.578	0.44	20.5	21	< 10	16.3	1.46	232

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			87.6 Fold.		88.3 - 93.6 Irregular small and ragged large late brittle tensional quartz veins with large wallrock fragments. Cross cuts fabric and earlier sulphide veining a various angles. Late ankerite veinlets paralleling quartz veins. Latest gypsum and calcite fracture veining with chlorite.	Pyrrhotite (altered and non magnetic) and pyrite 3 to 5% over 0.4 m in minute to 10 mm stockwork, quartz shear and quartz-calcite fracture veining. Shear and quartz calcite may host over 75% sulphides. Large QVs host 5% fine to coarse pyrite and pyrrhotite.	11S	171621	95.00	97.00	2.00	24	0.512	0.75	<b>54.4</b>	19.4	< 10	23	0.97	<b>222</b>
			87.8 - 91.1 Fabric 80+5 deg. to C.A.		Several large buckled quartz-calcite-gypsum sulphide veins.	88.7 2 cm grey sulphidic clay shear vein. 20 deg. to C.A.	11S	171622	STD WCM Cu157			840	14.6	2.68	11.6	4520	1980	27.7	35.1	27.2
			91.2 - 92.2 Fold nose.		Strong clay alteration destruction of rock in hinge buckle zone. High core angles.		11S	171623	97.00	99.00	2.00	10	1.36	0.5	16.5	32.4	10	15.6	0.87	<b>218</b>
					99.5 - 102.6 Strong to intense silicification and minor sulphidic stockwork.	5% dark brown massive very fine grained sulphides (altered pyrrhotite? (non-magnetic))	11S	171624	99.00	101.00	2.00	41	0.616	0.37	15.3	21.1	10	12.9	0.75	134
							11S	171625	101.00	103.00	2.00	16	0.564	0.39	27.1	29.1	< 10	13.9	1.1	175
							11S	171626	103.00	106.00	3.00	21	0.553	0.46	41.7	30.8	20	18.4	0.82	<b>278</b>
					102.35 - 106.5 Moderately silicified wallrock with zones of strong clay alteration. Several large quartz vein zones. Significant lost core.	3% finely disseminated pyrite in wallrock. Much weaker sulphide veinlets than overlying intervals.	11S	171627	BLANK			< 5	0.265	< 0.02	1.8	1.07	< 10	0.79	< 0.02	4.3
							11S	171628	106.00	108.00	2.00	15	0.477	0.45	41.2	28.9	< 10	25.2	1.2	<b>365</b>
			106.5 - 127 weak schistosity 82+/-8 deg. To C.A.	106.5 - 127.35 Rock much finer grained. Massive possible very fine grained intrusive or flow or welded? ash tuff. Local siliceous sub vitreous volcanic glass intervals. Fabric weaker but still defined and much steeper than up	Weakly to moderately silicified with zones of weak to locally strong bleaching clay-calcite overprinting alteration. Random quartz veins host coarser brown altered pyrrhotite with lesser pyrite.	3-4% finely disseminated pyrite often associated with remnant brown biotite. 5-10% by vein content altered pyrrhotite and pyrite.	11S	171629	108.00	110.00	2.00	15	0.54	0.6	36.5	33.3	< 10	28.7	0.94	<b>279</b>
						108 - 114 5-6% brown massive sulphide in veins and weak stockwork.	11S	171630	110.00	112.00	2.00	<b>91</b>	0.666	0.84	<b>63.3</b>	32.7	< 10	61.9	0.87	<b>247</b>
							11S	171631	112.00	114.00	2.00	37	0.561	0.55	<b>82.9</b>	43.7	< 10	38.9	0.52	<b>230</b>
					114.7 - 127.35 Increase in wallrock silicification to strong. Brittle fracture and bleaching.		11S	171632	114.00	116.00	2.00	41	0.603	0.6	41.9	39.9	< 10	31.2	0.83	<b>203</b>
							11S	171633	116.00	118.00	2.00	41	0.613	1.02	<b>60</b>	42.8	< 10	43.4	0.81	<b>208</b>
							11S	171634	118.00	120.00	2.00	33	1.38	2.63	<b>75</b>	42.4	< 10	146	0.73	153
							11S	171635	120.00	122.00	2.00	27	0.764	0.92	<b>59.2</b>	47.5	< 10	20.5	1.29	<b>232</b>
							11S	171636	122.00	124.00	2.00	30	0.468	0.8	<b>54.2</b>	61.2	<b>80</b>	16.1	1.24	<b>557</b>
				127.35 Intrusive contact. 60 deg. to C.A. Strongly clay altered with minor grey sulphidic clay.			11S	171637	124.00	126.00	2.00	<b>62</b>	<b>1.18</b>	1.04	<b>98.3</b>	82	<b>40</b>	<b>270</b>	1.22	<b>919</b>
127.35	131.90	<b>GDRF</b>	Schistosity changing from ~ 55 to 35 deg. to C.A. downhole.	<b>FOLIATED BIOTITE GRANODIORITE.</b> Distinctly a fine grained intermediate intrusive rock. Tan with dark spots of biotite phenocrysts.	Weakly silicified. Biotite altered to brown and partially replaced with pyrite. 30% of interval is bleached by quartz-sericite-pyrite altered selvages of fine fabric subparallel quartz-pyrite veinlets. Late fracture associated clay	4% fine grained pyrite disseminated throughout rock as biotite replacement. 1% fine grained semi massive to massive pyrite veinlets with 2% more in up to 20x phyllic vein selvages.	11S	171638	126.00	128.00	2.00	<b>59</b>	0.846	1.39	<b>60.1</b>	52.5	< 10	<b>59.1</b>	0.89	<b>230</b>
				Lower contact is fold repeated from 130.6 m with underlying unit. 40 deg. to C.A.			11S	171639	128.00	130.00	2.00	<b>59</b>	0.541	0.83	<b>59.9</b>	90	< 10	8.57	0.75	121



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131.90	146.90	QFPT	Schistosity 40 deg. +/- 12 TCA.	<b>Brown-grey, medium to fine grained, massive quartz feldspar crystal +/- fine lapilli ash tuff.</b> 50% 0.5 to 1.5 mm subhedral quartz, 30% 0.5 to 2 mm subhedral feldspar and 20% anhedral black biotite wrapping around the other silicates.	Interval is moderately to strongly and locally intensely pervasively silicified. Biotite present in less silicified areas has been replaced by silica and sericite. Grey weakly to highly sulphidic deformed quartz veinlets 2-5% of interval. Overprinted by weak carbonate fracture infill and stringers with minor pale clay.	3% very finely disseminated pyrite. Uncommon ~3-5% late massive sulphide fracture veinlets and locally weak stockwork with 70-80% brown pyrite and 10% peripheral very fine grained brassy pyrite Occasional 15 mm semi massive sulphide masses in dark grey quartz zones. Variations described below.	11S	171640	130.00	132.00	2.00	65	0.462	0.73	57.9	106	30	8.45	0.72	209
							11S	171641	132.00	134.00	2.00	41	0.676	1.33	81.8	76.8	< 10	16	0.56	161
							11S	171642	134.00	136.00	2.00	55	0.873	1.95	77.3	102	< 10	23.5	0.49	85.7
					135.9 - 137.7 Increase late calcite clay stockwork overprinting slightly increased cryptic silicification. Minor swelling clay.	Slight increase very fine grained dusty sulphide vein mineralization.	11S	171643	136.00	138.00	2.00	38	0.648	1.02	50.7	55.4	< 10	21.7	0.36	105
							11S	171644	138.00	140.00	2.00	91	0.643	1.46	138	84.4	< 10	27.3	0.61	150
					140.8 - 142.85 Several white quartz veins weak muscovite alteration at margins and small wallrock fragments.	138.8 - 1.5 cm semi massive pyrite vein. 35-40 deg. to C.A. 35% brassy pyrite, 20% dark sulphidic quartz,	11S	171645	140.00	142.00	2.00	58	0.517	0.61	47.7	118	< 10	10.3	0.56	90.7
						141.3 - 142.9 Strongly sulphidic clay stockwork and shear veins. 4-6% dark sulphides with magnetic pyrrhotite. 3% very finely disseminated pyrrhotite replacing biotite.	11S	171646	142.00	144.00	2.00	42	0.502	0.73	62.1	50.7	< 10	20.7	0.86	74.2
				142.02 - 142.3 Multiepisodic and sheared mafic Nicola dyke. Slight chilled margin. Upper contact 80 deg to C.A. irregular, lower contact - irregular 70 deg. to C.A.	Chloritically altered	3% very finely disseminated pyrite.	11S	171647	144.00	146.00	2.00	38	0.523	0.83	50.6	98.4	< 10	25	0.88	68.9
							11S	171648	STD WCM Cu157			870	14.4	2.52	11.7	4650	1950	27.4	39.7	25.4
146.90	150.80	FQPT	Fabric 40+/-5 deg. to C.A.	146.9 - 150.8 Massive fine grained feldspar porphyry welded? tuff. 30% sub rounded feldspars, 25% ovoid quartz crystals, fine grained QF groundmass. 3% fabric parallel stringers of magnetic pyrrhotite.	150 - 155 Gradually but irregularly increasing pervasive silicification.	Strongly sulphidic clay stockwork and shear veins. 4-6% dark sulphides with magnetic pyrrhotite. 3% very finely disseminated pyrrhotite replacing biotite.	11S	171649	146.00	148.00	2.00	10	1.03	0.4	14.6	46.2	< 10	15.2	0.92	63.1
150.8	174.3	QFPT		<b>Fine grained ash to lapilli tuff.</b> Interval quite variable.	Interval is moderately to strongly pervasively silicified. Grey weakly to highly sulphidic deformed quartz veinlets 2-5% of interval. Overprinted by weak carbonate fracture infill and stringers with minor pale clay.	3% very finely disseminated pyrite. Uncommon ~3-5% late massive sulphide fracture veinlets and locally weak stockwork with 70-80% brown pyrite and 10% peripheral very fine grained brassy pyrite. Variations described below.	11S	171650	148.00	150.00	2.00	101	0.269	0.19	11.6	3.25	< 10	5.94	0.85	54.5
					151.8 - 153.4 Late brittle calcite veining	Late brittle fractures coated with VFG brassy pyrite grading to 6 mm thick massive veinlets. Weak irregular non magnetic dark brown sulphide stockwork and planar low angle shear veinlets	11S	171651	150.00	152.00	2.00	106	0.331	0.54	11.8	3.26	< 10	7.93	1.01	49.5
				152.8 - 155.2 Heterogeneous medium to coarse to fine lapilli			11S	171652	152.00	154.00	2.00	91	0.367	0.38	9.3	9.24	< 10	8.95	1.37	58.9
						153.5 Magnetic pyrrhotite stops.	11S	171653	154.00	155.85	1.85	32	0.242	0.17	6.5	2.23	< 10	5.31	1.16	77.9
				155.8 - 156.65 Mafic dyke (Nicola?) fine grained weakly magnetic.	Moderately silicified	2% very fine grained pyrite and probably magnetic pyrrhotite.	11S	171654	155.85	156.65	0.80	2	0.234	0.07	4.2	27.9	< 10	4.78	< 0.02	70

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				Lower contact 20 cm of near normal to C.A. grey clay gouge with 50% small calcite vein	155.25 Open brittle fractures.		11S	171655	156.65	158.80	2.15	34	0.247	0.46	11.9	7.37	< 10	9.38	0.25	50.8
			Fabric - 50+/-5 deg. to C.A., possibly increasing down hole.	156.65 Continuation of heterogeneous ash-fine lapilli tuff to 160.4	Decreasing silicification. Uncommon to locally 5% late white calcite tension fracture veinlets.	At least 2% very finely disseminated pyrite. Trace to locally 4% very fine grained hairline fabric subparallel and crosscutting stockwork pyrite and brown sulphide (non magnetic pyrrhotite? Sphalerite?)	11S	171656	158.80	161.00	2.20	254	0.387	0.49	37.1	5.85	< 10	30.2	0.46	68.6
							11S	171657	161.00	163.00	2.00	142	0.843	1.41	44	16.7	< 10	94.6	0.58	494
					164.5 - 165.5 Quartz-epidote veining		11S	171658	163.00	165.00	2.00	36	0.357	0.51	9.1	4.77	< 10	7.74	1.1	47.3
					166.5 - 169 Increasing silicification and bleaching with stronger late calcite bleaching and		11S	171659	165.00	167.00	2.00	93	0.492	0.26	13.9	16.2	< 10	121	1.99	335
					Strongly silicified to 173 m.	169.1 - 173 2-6% fabric subparallel and crosscutting dark sulphide veinlets.	11S	171660	167.00	169.00	2.00	73	0.757	1.67	44.5	109	< 10	39.1	0.5	100
					172.4 Calcitic shear. 45 deg. to C.A.	3% very finely disseminated brassy pyrite.	11S	171661	169.00	171.00	2.00	46	0.806	1.08	92.8	118	< 10	34	0.9	121
174.30	177.20	GDR	Weak foliation 50+/-5 deg. to C.A.	<b>Fine grained biotite granite.</b> Fine grained phaneritic to biotite porphyritic. 35% feldspar, 25% quartz, 35% biotite (possibly hornblende replacing?) 3% very finely disseminated pyrite with biotite.	Weakly silicified. Erratic fabric destroying (biotite destroying) quartz-sericite-pyrite alteration as haloes to semi massive sulphide veinlets. Late dusty bluish chloritic fractures with 1% brassy pyrite.	3% finely disseminated pyrite in wallrock. 1-2% very fine sulphidic fracture and shear veinlets.	11S	171662	171.00	173.00	2.00	62	0.698	1.24	37.3	146	< 10	13.2	0.43	65.6
				Intrusive contact, irregular 30 deg. to C.A.			11S	171663	173.00	175.00	2.00	55	0.733	0.96	27.9	218	< 10	13.1	1.24	98.5
177.20	178.80	TBAS		<b>TERTIARY BASALT DYKE -</b> Dark to medium green spotted and amygdular mafic porphyritic dyke. Strongly chlorite-calcite altered. Augite? Porphyritic (20-25%) with fine to medium grained sausseritized plagioclase (5-10%) in a medium to dark green and white fine to very fine grain	Strong chlorite-calcite alteration. Plagioclase strongly sausseritized. Numerous late calcite tension gashes.	None noted.	11S	171664	175.00	177.20	2.20	52	0.567	0.51	25.6	145	< 10	7.39	1.49	62.8
				178.8 Calcite breccia veined intrusive contact.			11S	171665	178.80	181.00	2.20	53	0.64	0.66	23	162	< 10	7.35	1	56.8
178.80	180.40	GDR		<b>Fine Grained Biotite Granite or Granodiorite.</b> Fine grained phaneritic to biotite porphyritic. 35% feldspar, 25% quartz, 35% biotite (possibly hornblende replacing?) 3% very finely disseminated pyrite with biotite.	Weakly silicified. Erratic fabric destroying (biotite destroying) quartz-sericite-pyrite alteration as haloes to semi massive sulphide veinlets. Late dusty bluish chloritic fractures with 1% brassy pyrite.	3% finely disseminated pyrite in wallrock. 1-2% very fine sulphidic fracture and shear veinlets.	11S	171666	181.00	183.00	2.00	113	1.72	0.79	28.7	164	< 10	16.4	3.1	25.9
				Indistinct intrusive contact ~ 45 deg. To C.A.		179.9 5 mm white, fabric parallel (50 deg. to C.A.) quartz-calcite vein with 0-4 mm thick chalcopryrite vein, ~ 20% of vein.	11S	171667	183.00	185.00	2.00	75	1.36	0.79	24.2	344	< 10	9.36	1.15	61.7

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180.40	233.48	FQPT	Fabric 50+/- 20 deg. to C.A. Quite variable. Lower core angle intervals appear more sheared and altered.	<b>Brown -grey, medium to fine grained, massive quartz feldspar crystal +/- fine lapilli ash tuff.</b> 30-50% 0.5 to 1.5 mm subhedral quartz, 30-50% 0.5 to 2 mm subhedral feldspar and 20% anhedral black biotite wrapping around the other silicates.	Interval is moderately to strongly and locally intensely pervasively silicified. Biotite present in less silicified areas elsewhere has been replaced by silica and sericite. Grey weakly to highly sulphidic deformed quartz veinlets 2-5% of interval. Overprinted by weak to moderate carbonate fracture infill and stringers with minor pale and commonly sulphidic clay. Rock commonly displaced along ragged crosscutting calcite fractures.	3% very finely disseminated pyrite. Uncommon ~3-5% late massive sulphide fracture veinlets and locally weak stockwork with 70-80% brown pyrite and 10% peripheral very fine grained brassy pyrite. Variations described below.	11S	171668	185.00	187.00	2.00	75	1.27	1.79	30.6	278	< 10	23.4	0.68	34.5
					180.4 - 183.5 Very strongly silicified and bleached. Very brittle. Late moderate clay-calcite fracture veining results in very easily parted fractures affecting recovery. Biotite entirely replaced	7% finely disseminated (2%) and 5% in foliation parallel veinlets and stringers.	11S	171669	187.00	189.00	2.00	163	0.858	0.96	33.6	254	< 10	13	0.67	36.1
					183.5 Clay altered fractures undulating, 20 deg. to C.A.	183.75 6 mm white, fabric parallel (50 deg. to C.A.) quartz-calcite vein with 0-4 mm thick chalcocopyrite vein, ~ 20% of vein.	11S	171670	189.00	191.00	2.00	79	0.997	1.05	19.9	240	< 10	15.8	0.68	50.2
					Sudden reduction in silicification with rock back to grey brown cast.		11S	171671	191.00	193.00	2.00	49	0.717	0.66	17.1	284	< 10	9.02	0.88	47.9
					185.6 - Spectacular wiggly fabric crosscutting syndeformational and planar fabric parallel quartz-tourmaline-pyrite veining. Tourmaline forming borders on crosscutting deformed and within vein on fabric parallel veins.	Semi massive pyrite in quartz tourmaline veins. 4-5% finely disseminated and fabric parallel stringers.	11S	171672	193.00	195.00	2.00	216	0.819	0.73	14.6	271	< 10	9.47	0.71	43
						187.75 six cm wide quartz-tourmaline-pyrite vein-zone. 45 deg.	11S	171673	195.00	197.00	2.00	185	0.766	0.55	12.6	280	< 10	9.25	0.48	42.4
						188.9 nine cm quartz-tourmaline-pyrite vein-zone. 45 deg. to C.A. 65% tourmaline 20% pyrite. Platy pyrite in late fractures.	11S	171674	197.00	199.00	2.00	151	0.643	0.45	9.1	133	< 10	14.4	0.41	37.4
						189.7 - 207.4 at least 5% and locally over 10% wallrock hosts disseminated and stringer pyrite. Stronger pyrite in stronger foliated zones. Random usually fabric parallel quartz-calcite sulphide veins 1 to 15 mm. 5 to 20% with minor interstitial tourmaline. ~ 1-2% overall pyrite content.	11S	171675	199.00	201.00	2.00	146	0.568	0.67	10.5	159	< 10	14	0.52	48.5
						190.65 - 2 cm quartz-tourmaline-pyrite vein-zone. 45 deg. to C.A. 65% tourmaline 20% pyrite.	11S	171676	BLANK			< 5	0.189	< 0.02	0.7	0.43	< 10	0.67	< 0.02	2.2
					196 - Slight decrease in		11S	171677	201.00	203.00	2.00	457	0.9	0.5	18.7	341	< 10	9.38	0.78	54.2
			200.4 Fabric changes from 55 to 30 to 45 deg. to C.A. over 40 cm.		Moderately strong late calcite tension gashes. Late open clay variably sulphidic clay lined fractures		11S	171678	203.00	205.00	2.00	150	1.08	0.55	15.8	345	< 10	13.3	1.01	59.7



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			45 deg. to C.A. Contact weakly undulating and fabric parallel.	196.6 - 1896.7 Small augite porphyry dyke. Chilled margins.		2% very fine grained disseminated pyrite	11S	171679	205.00	207.00	2.00	251	1.2	0.57	15.2	348	< 10	21.1	0.58	24.7
					201 - 202 Grey quartz - with minor white calcite with strongly epidotized selvages. Minor 5% of vein marginal medium grained tourmaline.		11S	171680	207.00	209.00	2.00	187	0.993	0.41	14.8	370	< 10	11	1.27	43.4
			Fabric 65 deg. to C.A.	203.3 - 204 Small augite porphyry tuff or flow unit. Moderately silicified.			11S	171681	209.00	211.00	2.00	74	0.909	0.6	12.6	384	< 10	11.1	1.07	53.1
						207.4 Abrupt decrease in in wallrock and vein sulphide content. Calcite veinlet associated 1% medium grained brassy pyrite.	11S	171682	211.00	213.00	2.00	83	0.785	0.3	8.6	366	< 10	8.29	0.85	67.5
				210 - 220 Gradually increasing greenish volcanic component to rock, or decreasing brown biotite - sericite-pyrite alteration with corresponding preservation of black probably secondary disseminated and fabric parallel stringers of biotite. Rock at time appear to be very fine grained "biotite-granodiorite".	Weak to locally moderate epidote alteration. Late clay fracture and shear associated clay alteration continues. Common core axis subparallel open cockscomb quartz lined fractures. Retention of black host rock biotite.		11S	171683	STD WCM PB113			1810	23.2	1.76	127	4700	100	> 5000	19	> 5000
				Crosscutting annealed upper contact 75 deg. to C.A.			11S	171684	213.00	215.00	2.00	86	0.951	0.37	12.6	468	< 10	12	0.74	69.4
			40 deg. to C.A.	214.125 - 214.3 Small amygdular mafic Tertiary dykelet. Strong white clay altered lower contact.			11S	171685	215.00	217.00	2.00	349	0.87	0.39	9.8	439	< 10	8.06	1.01	63.7
					214.5 Abrupt decrease in late calcite clay alteration. Pervasive epidote veining and replacement continues.	Minor increase in both wallrock disseminated and quartz shear vein pyrite mineralization 4-5%.	11S	171686	217.00	219.00	2.00	71	0.777	0.35	7.7	378	< 10	5.36	0.81	59.7
							11S	171687	219.00	221.00	2.00	367	0.7	0.42	6	349	< 10	4.17	0.66	51.8
						218.6 -219 Large quartz calcite zones. Epidote margins, felted biotite zones (usually variably chloritically altered)	11S	171688	221.00	223.00	2.00	185	0.737	0.44	6.8	427	< 10	5.72	0.76	58.9
			Shear fabric 55 deg. to C.A..	220.1 226.15 Abrupt end of epidote veining and alteration. Abrupt increase in grey-brown biotite destructive sericite-pyrite alteration with associated quartz-pyrite shear veining. Erratic in intensity. Minor biotite bearing sections preserved. Strong late calcite-dolomite tension stockwork with many open voids.		222.5 +/- 20 cm grey clay massive sulphide tension veining. 10% of rock. Fine grained pyrite masses to 12 mm dia.	11S	171689	223.00	225.00	2.00	62	0.724	0.32	8.5	335	< 10	5.73	1.07	55.8

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					226.15 - 230.7 Epidote alteration and retention of black biotite. Occasional secondary porphyroblastic biotite. Biotite does not usually occur in zones of weaker epidote alteration but does occur in strong replacement zones. Continuation of core axis very late subparallel dolomite tensional stockwork.	1-3% fine brassy pyrite occurs with epidote. As well as finely disseminated in wallrock.	11S	171690	225.00	227.00	2.00	100	0.868	0.54	10.5	466	430	11.9	1.04	426	
							11S	171691	227.00	229.00	2.00	82	0.842	0.35	8.3	536	< 10	4.78	0.81	55.1	
					230.7 - 233.25 Grey massive fine grained ash tuff. More strongly pervasively but cryptically silicified. Less late clay altered than overlying units.	3% finely disseminated pyrite. Trace to 5% coarse euhedral pyrite.	11S	171692	229.00	231.25	2.25	63	0.634	0.46	8.8	251	< 10	9.28	0.79	59.1	
					233.25 0 233.48 Epidote alteration and retention of black biotite. Occasional secondary porphyroblastic biotite. Biotite does not usually occur in zones of weaker epidote alteration but does occur in strong replacement zones.	2% very finely disseminated pyrite.	11S	171693	231.25	233.48	2.23	36	0.447	0.46	9.1	131	< 10	10.6	0.56	61.5	
	233.48	EOH																			

**Appendix III**

Diamond Drill Cross Section (Figures 8 and 9)

