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Goldcorp Canada Ltd.
North Caribou Greenstone Belt Project
2018 Assessment report

2018 Arseno Lake Field Work
2018 Opapimiskan Lake Field Work
2018 North Caribou Greenstone Belt Generative Exploration

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Introduction

This report summarizes helicopter supported generative exploration work conducted on behalf of Goldcorp Canada Ltd. in three project areas within a contiguous land package throughout the North Caribou Greenstone Belt, North and Northwest of Musselwhite Mine. All the work detailed in this report was conducted in the year of 2018 and includes claim staking, research and data compilation, lithogeochemical sampling and grassroots prospecting, as well as a biogeochemical orientation survey. The work was undertaken by staff geologists and other support and technical staff employed by Goldcorp Canada Ltd. with operational support and technical services commissioned from third party specialists and contractor groups.

Summary

Arseno Lake

2018 field work on Goldcorp Canada Ltd.'s Arseno Lake Claims, Northwest of Musselwhite Mine, was conducted over 5 cumulative days through the summer of 2018. Dominantly the work consisted of grassroots style prospecting with some outcrop mapping. Samples of all outcropping bedrock encountered were submitted to Activation laboratories in Dryden Ontario for whole rock analysis by 4-acid ICP-MS as well as analysis for gold by fire assay. Field activities were helicopter supported with crew transportation provided by Wisk Air Helicopters Ltd. of Thunder Bay Ontario. Field crews consisted of two individuals, one geologist and one field assistant.

Opapimiskan Lake

2018 field work on Goldcorp Canada Ltd.'s Opapimiskan Lake claim area was conducted over 6 cumulative days through the summer of 2018. The work consisted of grassroots style prospecting and lithogeochemical sampling. Samples of all outcropping bedrock encountered were submitted to Activation laboratories in Dryden Ontario for whole rock analysis by 4-acid ICP-MS as well as analysis for gold by fire assay. Field activities were helicopter supported with crew transportation provided by Wisk Air Helicopters Ltd. of Thunder Bay Ontario. Field crews consisted of two individuals, one geologist and one field assistant.

North Caribou Greenstone Belt

To determine priorities for claim staking as well as plan exploration programs in anticipation of the expanded land position a large research and compilation project was undertaken through the winter and spring of 2018. This work was conducted by two professional geoscientists employed by Goldcorp Canada Ltd. at Musselwhite Mine, Stephen Miller and David Murray. The work involved gathering all geological and historical information available for the land encompassed in the newly acquired exploration claims. Support for more technically challenging work such as geophysical compilation and interpretation was provided by Goldcorp's directors of geophysics, and generative exploration Sergio Espinosa and Sally Goodman, respectively.

2018 exploration field work dominantly consisted of grassroots style prospecting with lithogeochemical sampling. Samples of bedrock were collected and sent to Activation Laboratories in Dryden, Ontario for whole rock analysis by 4-Acid ICP-MS and analysis for Au by Fire Assay. Field activities were helicopter supported with crew transportation provided by Wisk Air Helicopters Ltd. of Thunder Bay Ontario. Field crews consisted of two individuals, one geologist and one field assistant.

Additionally, a biogeochemical orientation survey was conducted over an area of historical Au in bedrock mineralization. Samples of labrador tea stems were collected proximal to the bedrock mineralization with the objective of determining if biogeochemical sampling of labrador tea could be an effective exploration tool in the North Caribou Greenstone Belt. As the survey failed to register the known bedrock anomaly it has been deemed unsuccessful and not viable as a tool for future regional exploration.

Regional Geology

The North Caribou greenstone belt (NCGB) is located on the northern edge of the North Caribou terrane, south of the Island Lake domain. It comprises various volcanic-dominated assemblages formed during two major magmatic phases dated at ca. 2980 and ca. 2870 Ma. Sedimentary-dominated assemblages lie in the core of the NCGB. They are interpreted to have been deposited after 2980 Ma in the northern NCGB, and after 2850 Ma in the southeastern NCGB. The greenstones are intruded by several batholiths emplaced during the two magmatic phases at ca. 2870-2850 Ma and ca. 2750-2690 Ma (Oswald, 2018 and all references therein)

The envelope of the main structural fabric and fold structures is roughly parallel to the contact of the narrow, elongate, two-arc shape of the North Caribou belt. Three major phases of ductile to brittle-ductile deformation have been documented (D1, D2, D3), in addition to minor late structures related to brittle deformation ("D4"). Several regional fault zones separate lithostratigraphic assemblages. The dominant regional structural pattern and main tectonometamorphic phase is related to D2 (Oswald, 2018 and references therein). The rocks of the North Caribou Greenstone Belt were metamorphosed to amphibolite facies around 2660 Ma (Oswald, 2018 and all references therein)

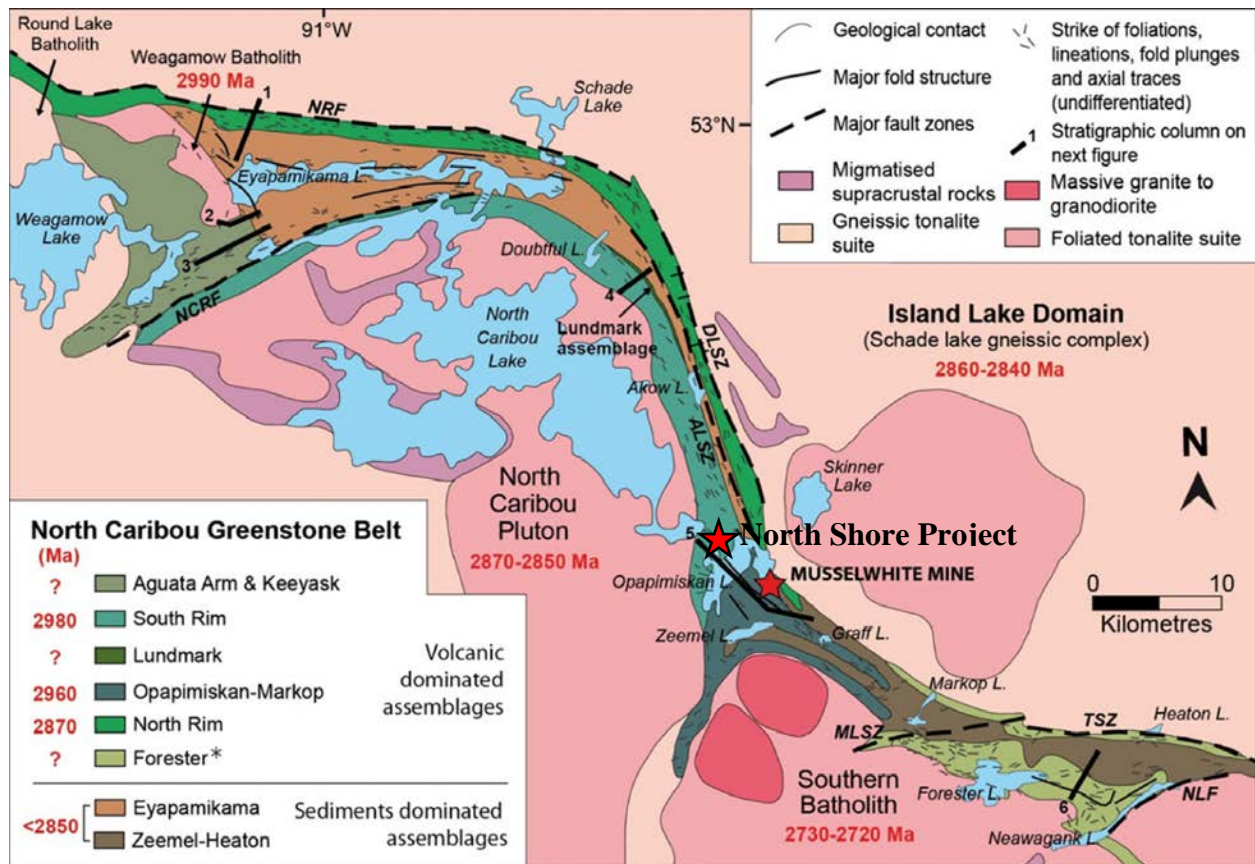


Figure 1. Simplified tectonostratigraphic map of the North Caribou belt modified from Oswald, 2018

Arseno Lake

Location and Access

Goldcorp's Arseno Lake claims are in the District of Kenora, Northwest Ontario. Approximately 15 km East-Northeast of Weagamow First Nation, 175 km North of the town of Pickle Lake.

Access is available through chartered air service with a helicopter or float equipped airplane. A 4 four-Season road extends North to the First Nation community of Weagamow Lake. Additionally, regularly scheduled air service to the town of Weagamow lake is available from the city of Thunder Bay and other smaller communities in the region.



Figure 2. Location of Arseno Lake within the province of Ontario

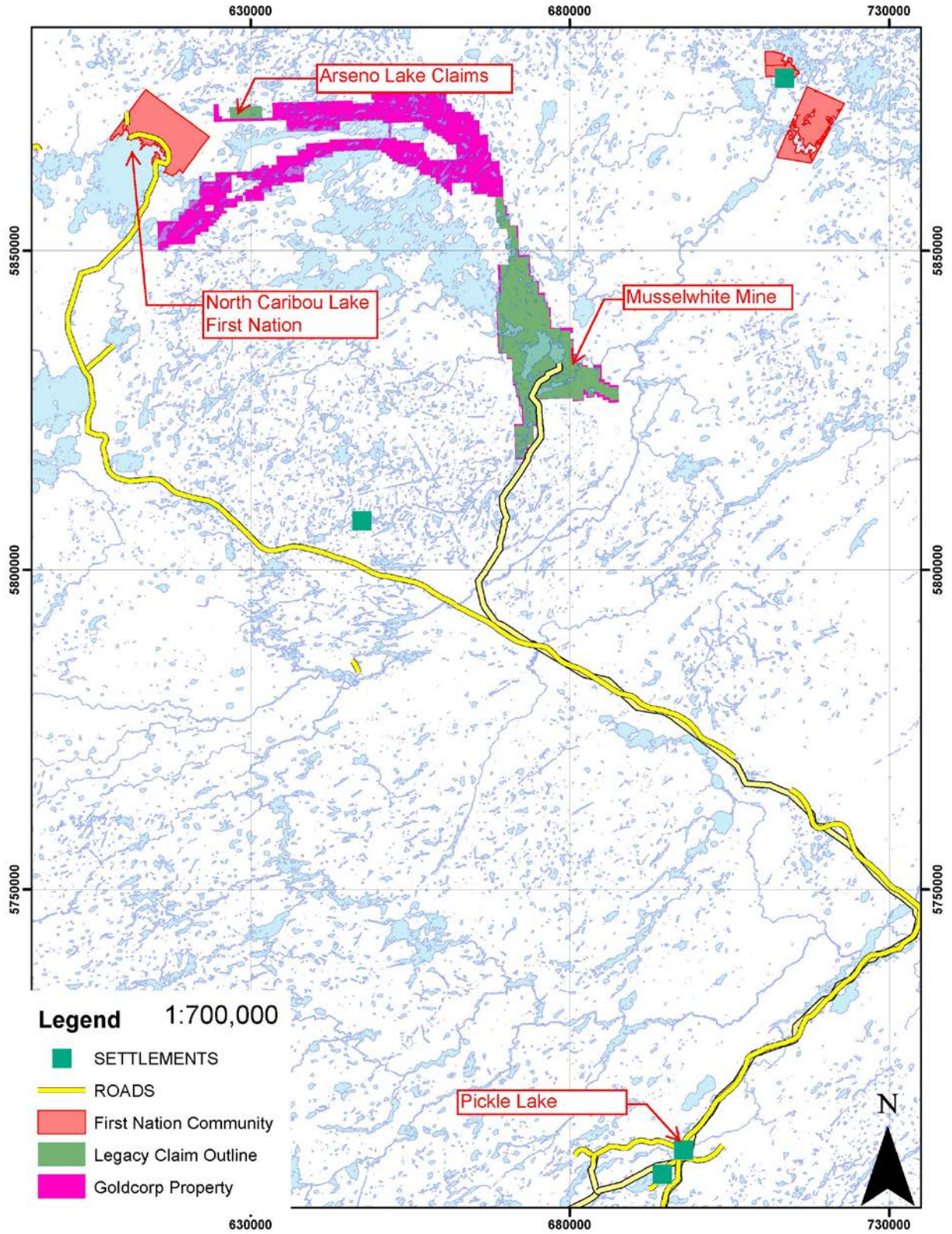


Figure 3. Location of Musselwhite Mine and the Goldcorp Canada Ltd. claim group relative to the town of Pickle Lake, Ontario and compared to former land holdings

History and Previous Work

1984 - A large Ontario Geological Survey (OGS) crew mapped the area from Agutua Arm to the eastern end of Eyapamikama Lake. Dunlop Explorations, under contract to the Ontario Gold Joint Venture, turned up many new and old gold showings in the area through reconnaissance prospecting and carried out the first staking at the properties.

1985 - Work by Northern Dynasty on behalf of Ontario Gold Joint Venture included geological mapping, rock and soil sampling, geophysical surveys, minor trenching and drilling of three holes (C-85-1 to -3) on the Caster Lake grid, East of Arseno Lake claims.

1986 - Exploration by Northern Dynasty, on behalf of Ontario Gold Joint Venture included rock and soil sampling as well as geophysical surveys which further delineated the surface showings and magnetic anomalies which produce the initial diamond drill targets.

1987 - Northern Dynasty, on behalf of Ontario Gold Joint Venture completed field exploration activities including rock and soil sampling, geophysical surveys, and diamond drilling. Geochemical and geophysical surveys were carried out and 1:5,000 scale mapping was conducted. Significant mineralization was

1988 - Diamond drilling at Arseno Lake and Lucy Lake grids. There was further delineation of the massive sulphide mineralization and a drill indicated mineral inventory of 0.92 Mt at 8.7% Zn+Pb and 1.5 oz./t Ag was delineated.

1995 - The property was subject to a Letter Agreement between Inco Ltd., and Energold & Northern Dynasty, dated December 12, 1994. However, Inco was unable to conduct exploration at Arseno Lake, as a Force Majeure was declared on the property on October 12, 1995.

1997- Geological compilation of 1985 and 1996 exploration work including surface geology mapping, trenching and diamond drilling, and geochemical and geophysical surveys conducted primarily on the Arseno Lake/Lucy Lake grid, in the western portion of the property (between 1984 and 1988). The Castor Lake area was included as part of the Arseno Lake property at this time. Ownership was Energold Minerals Inc. (62.5 %), and Northern Dynasty Ltd. (37.5%).

2000 - Northern Dynasty Minerals Ltd. carried out a review of geoscientific data on earlier drilling and completed diamond drill core lithogeochemical analysis of 21 samples in three 3 drill holes from the property

2002 - Northern Dynasty Minerals Ltd. (R. Tremblay) continued its lithogeochemical evaluation of the drill core

2003 - Starting in 2000, Placer Dome Canada conducted a geological compilation, airborne magnetic survey, claim staking, and regional multi-element lake sediment (R. Dyer, OGS) surveys in the northern portion of the North Caribou greenstone belt to evaluate gold potential in the area. The larger area of their coverage includes the Arseno Lake property.

2004 - Northern Dynasty Minerals Ltd. carried out whole rock and multi-element lithogeochemistry on mineralized outcrops

2006 - Northern Dynasty Minerals Ltd. / Energold Minerals Inc. / Solomon Resources Ltd. completed a HLEM survey over the central portion of the 32 claim Arseno Lake

2010 Northern Dynasty Minerals Ltd. conducted a 166-line km helicopter-borne vertical time domain electromagnetic (VTEM) survey. The work was completed by Geotech Ltd.

Physiography and Vegetation

The area bordering Eyapamikima Lake is characterized by low-lying muskeg and boulder till. Further to the north, an east-west mafic volcanic ridge is present with local rolling relief up to approximately 120 m. Bedrock exposure is poor to moderate in many of the low-lying areas. Glacial striae and drumlins are consistently oriented at about 225° azimuth throughout the Greenstone belt. The frequent glaciofluvial land forms are typically vegetated by well spaces jackpine. Low lying regions and muskeg are densely forested by black spruce with a thick undergrowth of labrador tea and forest floor covered with thick moss.

Local Geology

The Arseno Lake Mineralized trend is located within the North Rim Metavolcanic Assemblage. The North Rim assemblage occurs along the northern edge of the upper and central NCGB, from Weagamow Lake to Opapimiskan Lake (Figure 1). It is dominantly composed of pillowed to massive mafic volcanic flows with intercalated horizon of clastic and chemical metasedimentary rocks. The northern margin of the North Rim Assemblage is interpreted to represent an unconformable suture between the North Caribou Terrane and the Island Lake domain

There is a historical VMS style resource 8.7% combined Pb, Zn with 49g/t Ag interpreted to reside in a chemical metasedimentary horizon of siliceous iron formation. It has been well documented throughout history that the numerous historical mineral occurrences within the North Rim Assemblage occur along a 700m wide zone of ductile deformation historically and henceforth referred to as the “Active Zone” A.K.A. the North Rim Fault. The active zone occurs throughout the lower middle of the North Rim Assemblage over a strike documented strike length of approximately 30km and encompasses the siliceous iron formation hosting the historical resource.

Figure 4 below depicts a detailed cross section of the geology across the North Rim Assemblage through the Arseno Lake claims as interpreted from historical work within the property.

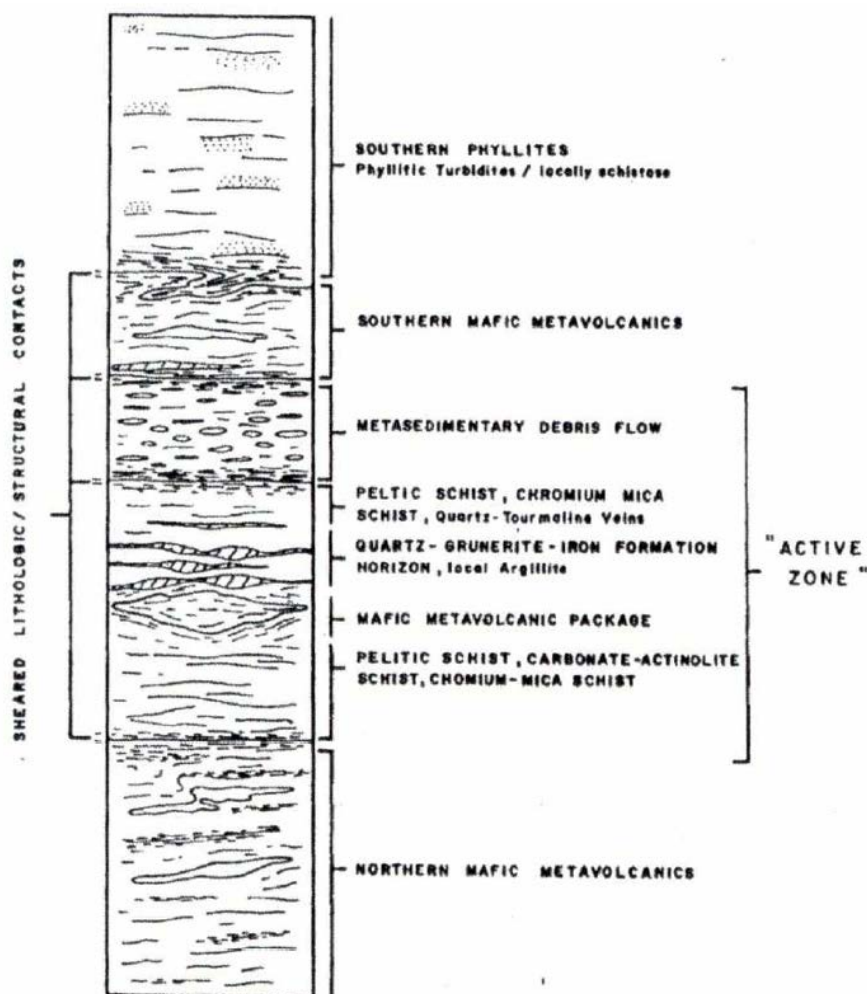


Figure 4. detailed cross section of the geology of the North Rim Assemblage through the Arseno Lake Claims

Table of claims

Table 1. Table of claims within Goldcorp Canada Ltd.'s Arseno Lake group on which field work was conducted

Tenure Number	Claim Type	Claim Status	Date Issued	Date Due	Holder
118270	Single Cell Mining Claim	Active	2018-04-10	2020-11-03	GOLDCORP CANADA LTD.
118276	Single Cell Mining Claim	Active	2018-04-10	2020-11-03	GOLDCORP CANADA LTD.
125842	Single Cell Mining Claim	Active	2018-04-10	2020-11-03	GOLDCORP CANADA LTD.
170965	Single Cell Mining Claim	Active	2018-04-10	2020-11-03	GOLDCORP CANADA LTD.
227092	Single Cell Mining Claim	Active	2018-04-10	2020-11-03	GOLDCORP CANADA LTD.
266333	Single Cell Mining Claim	Active	2018-04-10	2020-11-03	GOLDCORP CANADA LTD.
274307	Single Cell Mining Claim	Active	2018-04-10	2020-11-03	GOLDCORP CANADA LTD.
274311	Single Cell Mining Claim	Active	2018-04-10	2020-11-03	GOLDCORP CANADA LTD.
274313	Single Cell Mining Claim	Active	2018-04-10	2020-11-03	GOLDCORP CANADA LTD.
286424	Single Cell Mining Claim	Active	2018-04-10	2020-11-03	GOLDCORP CANADA LTD.
322936	Single Cell Mining Claim	Active	2018-04-10	2020-11-03	GOLDCORP CANADA LTD.
322939	Single Cell Mining Claim	Active	2018-04-10	2020-11-03	GOLDCORP CANADA LTD.

Description of the Program

2018 field work on Goldcorp Canada Ltd.'s Arseno Lake Claims, Northwest of Musselwhite Mine, was conducted over 5 cumulative days through the summer of 2018 between June 9, 2018 and Sept. 11, 2018. The work consisted of helicopter supported, grassroots style prospecting and lithochemical sampling. Helicopter transportation services were commissioned from Wisk Air Helicopters of Thunder Bay, Ontario. The planning of prospecting traverses considered the following objectives; Locate and assess the condition of historical drill core, traverse the stratigraphic column, locate the discovery outcrop, and traverse the mineralized trend.

Samples of all outcropping bedrock encountered were collected and submitted to Activation laboratories in Dryden Ontario for whole rock analysis by 4-acid ICP-MS as well as analysis for gold by fire assay. The work was planned and conducted by geologists and geotechnical staff from Goldcorp Canada Ltd.'s Musselwhite Mine. Field crews consisted of two individuals, one geologist (either D. Murray or S. Miller) and one field assistant (various).

Samples were collected with conventional geological rock and sledge hammers. Typical garden shovels were often used to uncover or expand the exposure of outcropping bedrocks a total of 21 bedrock samples were collected for analysis. Field data was collected on Apple iPad mini devices using custom form built in the Esri Survey 123 application.

Locations where significant results were obtained or where significant observations were made were followed up with a final field review by Musselwhite Geologists and Technical Experts from Goldcorp's corporate geology team.

Results

Table 1 below details the locations and character of bedrock samples collected from the Arseno Lake claim group. Locations are recorded in Latitude and Longitude decimal degrees. Table 2 below lists the details of each sample location as well as Fire Assay results for gold. A complete table of whole rock ICP-MS Analytical results can be observed in Appendix I. Traverses were planned to accomplish all the program objectives stated above (Figure 7) however not all were effective in accomplishing their intended goal.

The historical diamond drill core was located on the North shore of Eyapamikima Lake. As seen in figures 4 and 5, the core is cross-piled on logs with plywood sheets for top. Most of the plywood lids are heavily degraded and some of the smallest core piles totally are destroyed. It appears that only intervals of iron formation or anomalous sulphide mineralization were sampled. Much of the core still contains original box labels and it is estimated that 50-60% of original drilling could be recovered if desired. The top and bottom few rows in each remaining pile would be totally unrecoverable with a few exceptions.

From the storage location of the historical core on the Northern shore of Eyapamikima Lake the property was traversed directly North perpendicular to the stratigraphy. Unfortunately, little outcrop was discovered. Two generalized lithologies seem to dominate the area. Clastic metasediments and mafic metavolcanics.

The clastic units appear as weakly to moderately silicified phyllite schists, with and without garnet porphyroblasts which occur in significant abundances of 30-40% where present. Garnets are typically fine to medium grained, and anhedral to subhedral. All the metasedimentary outcrops featured an intense E-W trending fabric dipping very steeply (75-89 degrees) to the south.

Two outcrops of mafic metavolcanic units were observed. These rocks appear as melanocratic green, fine grained, amphibole biotite schists with minor abundances of chlorite. There was a well-developed foliation fabric striking near perfect East-West and dipping 75-89 degrees to the south. Often metavolcanic outcrops display acute 5-10cm wide foliation parallel shear zones. Which feature a notable gossanous alteration and small abundances of fine disseminated sulphide minerals, dominantly arsenopyrite and pyrite.

The following series of traverses focused on the previously identified mineralized trend. Planning to zig-zag across a direct line between the Arseno Lake and Castor Lake main zones in hopes it would allow us to characterize the nature of this trend and possibly locate previously undiscovered occurrences. The most significant occurrences are noted below.

The Arseno Lake Main Zone is a small poorly exposed outcrop featuring a several meter wide, horizon of siliceous iron formation. The horizon appears barren except where brecciated. In brecciated intervals the angular fragments are cemented by sulphide minerals. Adjacent to the horizon there is a strongly mineralized interval of clastic sedimentary rocks approximately 50cm wide. Mineralization dissipates distal to the vein with the unit grading into an unmineralized biotite garnet amphibole schist. A grab sample of these mineralized clastic metasediments returned laboratory values of 2.36g/t Au and 9.03 g/t Ag. There is a notable and intense fabric in the outcrop striking 105 degrees dipping 88 to the south. This fabric intensifies with proximity to the siliceous horizon.

700m down strike to the East another significant and well exposed occurrence of the siliceous horizon was encountered. Features of note are this horizon occurs in an area of dense interflow clastic sedimentary layers within the North Rim mafic volcanic package, the most significant mineralization occurs on the southern margin of the siliceous horizon in the clastic metasedimentary host. Mineralization intensifies with increasing proximity to the horizon over an interval of approximately one meter. A sulphide mineralized grab sample of the siliceous horizon assayed 6.28g/t Au and 35.9 g/t Ag (Figure 7).



Figure 5. Historical diamond drill core from the Arseno Lake Pb, Zn, Ag, Au deposit



Figure 6. Historical diamond drill core from the Arseno Lake Pb, Zn, Ag, Au deposit

Table 2. Summary table of lithochemical samples collected from the Arseno Lake claim group during 2018 field work

Date	Sample ID	Claim Number	Geologist	Rock Type	Veining Assemblage	Vein Type	Vein Azimuth	Vein Dip	Fabric	Fabric Intensity	Fabric Azimuth	Fabric Dip	Fault	Fault Intensity	Fault Azimuth	Fault Dip	Magnetic Susceptibility	x	y	Au g mt
6/9/2018	E885601	322939	D.Murray	Clastic Metasediment					Foliation	Moderate	260	66					835	-91.063956	52.975113	0.0025
6/9/2018	E885602	274313	D.Murray	Mafic Metavolcanic					Foliation	Weak	98	88	Shear Zone	Moderate	98	88	548	-91.065344	52.980807	0.0025
6/9/2018	E885603	274313	D.Murray	Clastic Metasediment					Foliation	Intense	94	84					102	-91.065285	52.981469	0.012
6/9/2018	E885605	118276	D.Murray	Mafic Metavolcanic	Quartz	Planar	90	sub vert	Foliation	Intense	92	70	Other	Moderate	0	85	405	-91.068328	52.983655	0.005
6/9/2018	E885606	274311	D.Murray	Mafic Metavolcanic	Quartz	Planar	275	sub vert	Foliation	Intense	96	85	Shear Zone	Weak	96	85	547	-91.068859	52.984487	0.007
6/11/2018	E885607	274313	S.Miller	Quartz Vein	Quartz	Massive	90	85									0.366	-91.062983	52.980461	0.02
6/11/2018	E885608	274313	D.Murray	Garnet-Biotite Schist					Foliation	Intense	88	88	Shear Zone	Intense	88	88	1.07	-91.062955	52.980471	0.006
6/11/2018	E885609	274313	D.Murray	Garnet-Biotite Schist					Foliation	Intense	105	88	Shear Zone	Intense	205	88	0.652	-91.062941	52.98045	2.36
6/9/2018	E885611	274313	D.Murray	Quartz Vein	Quartz	Massive	98	Unknown									2.45	-91.062709	52.980382	0.026
6/11/2018	E885612	274313	D.Murray	Mafic Metavolcanic					Foliation	Moderate	105	82					0.655	-91.062635	52.980584	0.0025
6/11/2018	E885613	274307	D.Murray	Clastic Metasediment					Foliation	Intense	88	86					0.219	-91.061331	52.980654	0.0025
6/11/2018	E885614	227092	D.Murray	Clastic Metasediment	Quartz	Massive	84	sun vert	Foliation	Intense	84	86	Shear Zone	Intense	100	85	0.347	-91.053037	52.979927	0.03
6/11/2018	E885615	227092	D.Murray	Clastic Metasediment	Quartz	Massive	100	sub vert									183	-91.053066	52.979924	6.28
6/11/2018	E885616	227092	D.Murray	Clastic Metasediment					Foliation	Intense	122	90					0.649	-91.05245	52.979838	0.024
6/11/2018	E885617	118270	D.Murray	Clastic Metasediment	Quartz	Planar	260	70	Foliation	Moderate	260	70	Shear Zone	Intense			712	-91.049508	52.979782	0.005
6/11/2018	E885618	118270	D.Murray	Clastic Metasediment					Foliation	Moderate	106	70					0.338	-91.049368	52.979383	0.005
6/12/2018	E885619	118270	D.Murray	Mafic Metavolcanic					Foliation	Moderate	108	86					0.367	-91.047555	52.979669	0.0025
6/12/2018	E885621	266333	D.Murray	Mafic Metavolcanic					Foliation	Intense	92	90					0.55	-91.040571	52.979309	0.006
6/12/2018	E885622	266333	D.Murray	Garnet-bearing Metasediment					Foliation	Intense	102	84					0.395	-91.039764	52.979476	0.027
6/12/2018	E885623	322936	D.Murray	Clastic Metasediment					Foliation	Intense	281	80	Shear Zone	Intense	281	80	0.2	-91.037816	52.978601	0.005
9/11/2018	E886157	227092	D.Murray	Clastic Metasediment	Quartz	Massive											0.488	-91.053092	52.979796	0.502

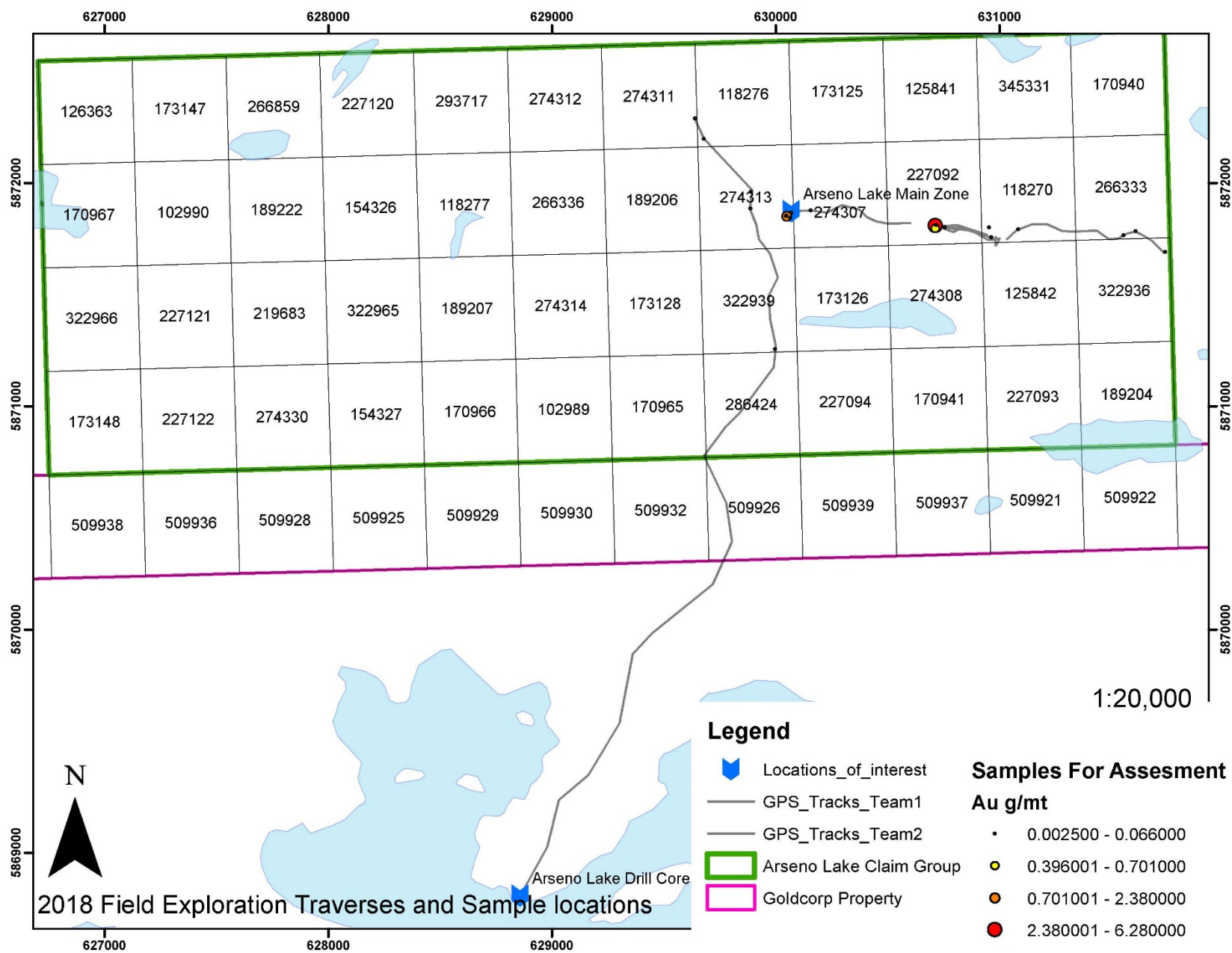
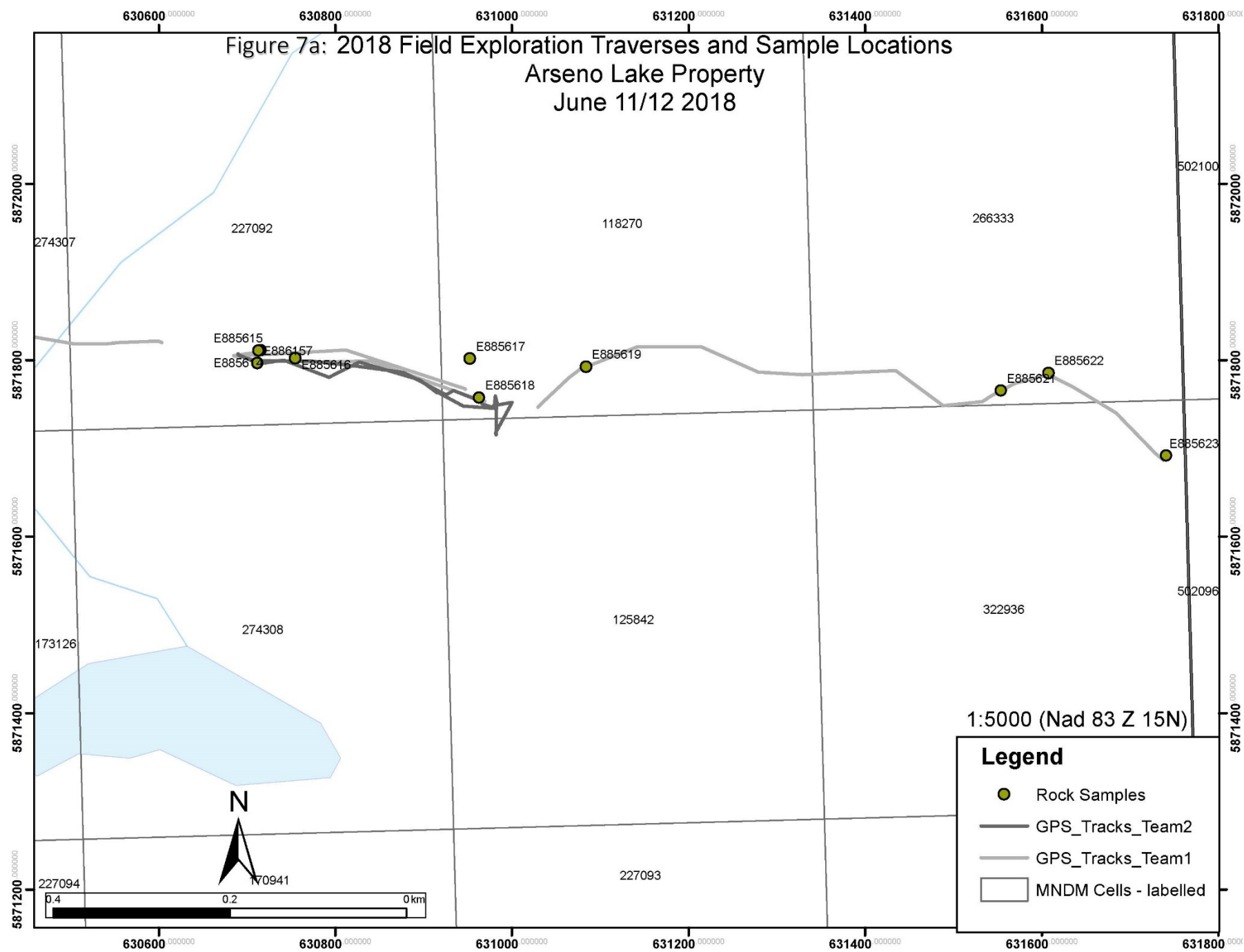
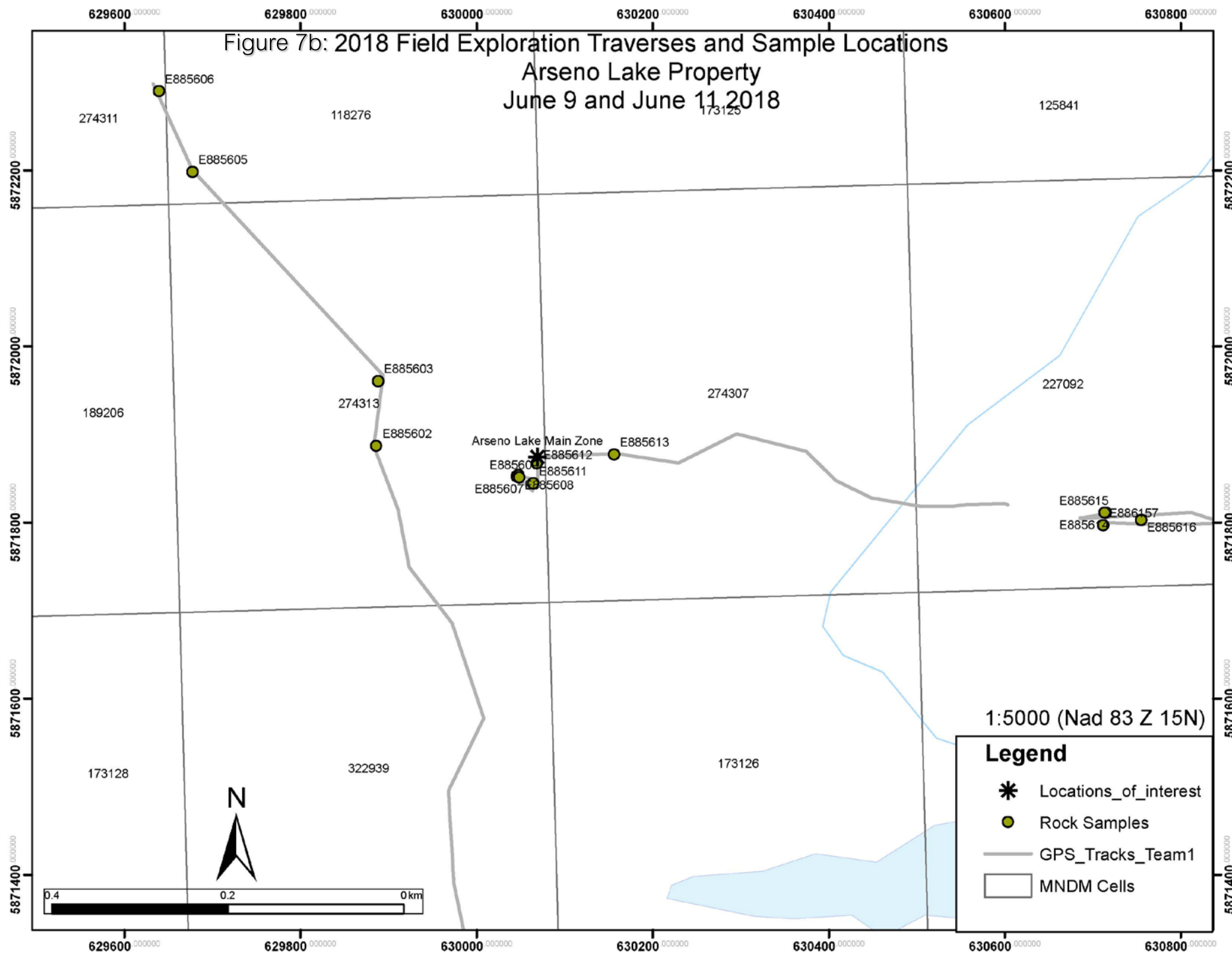
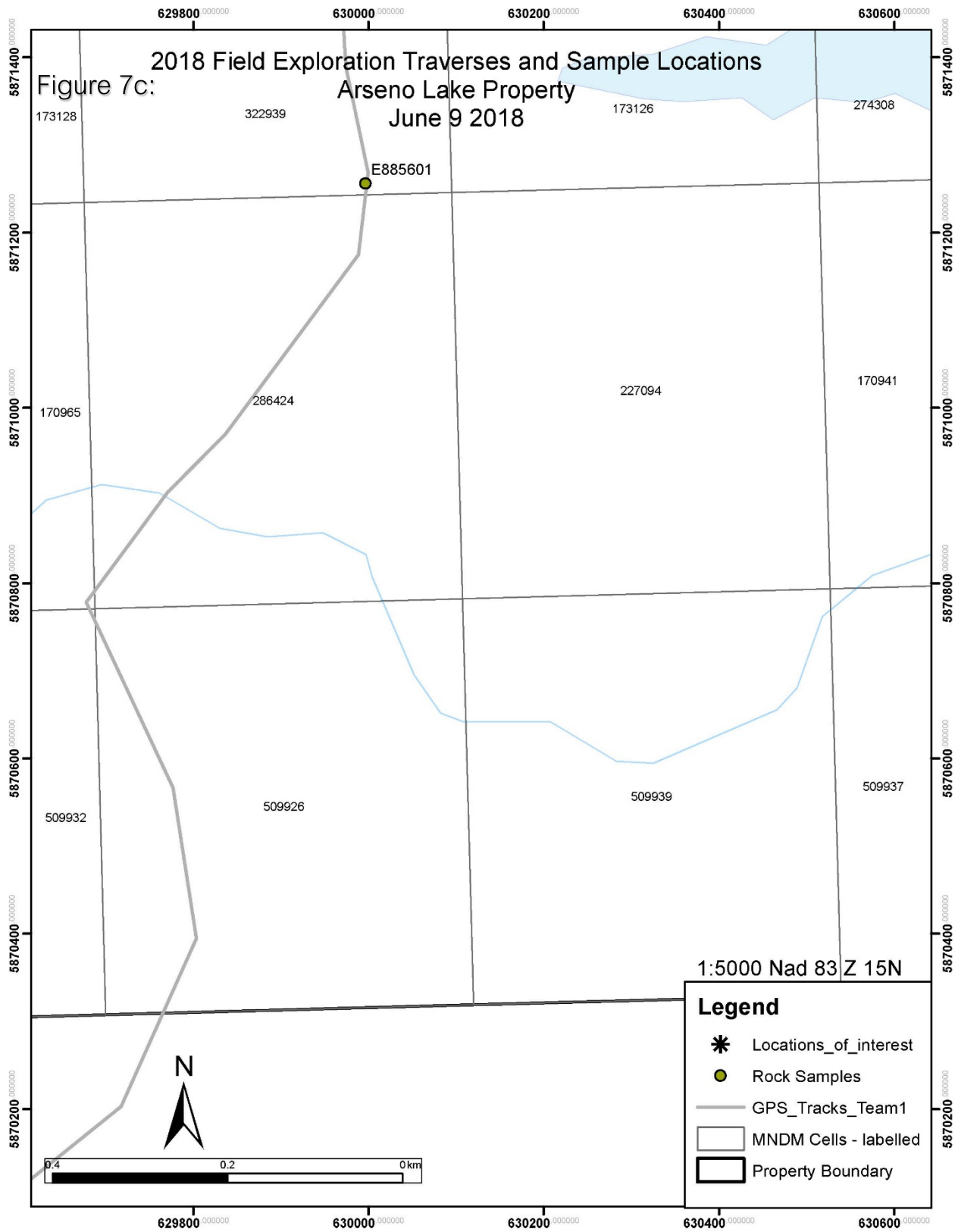
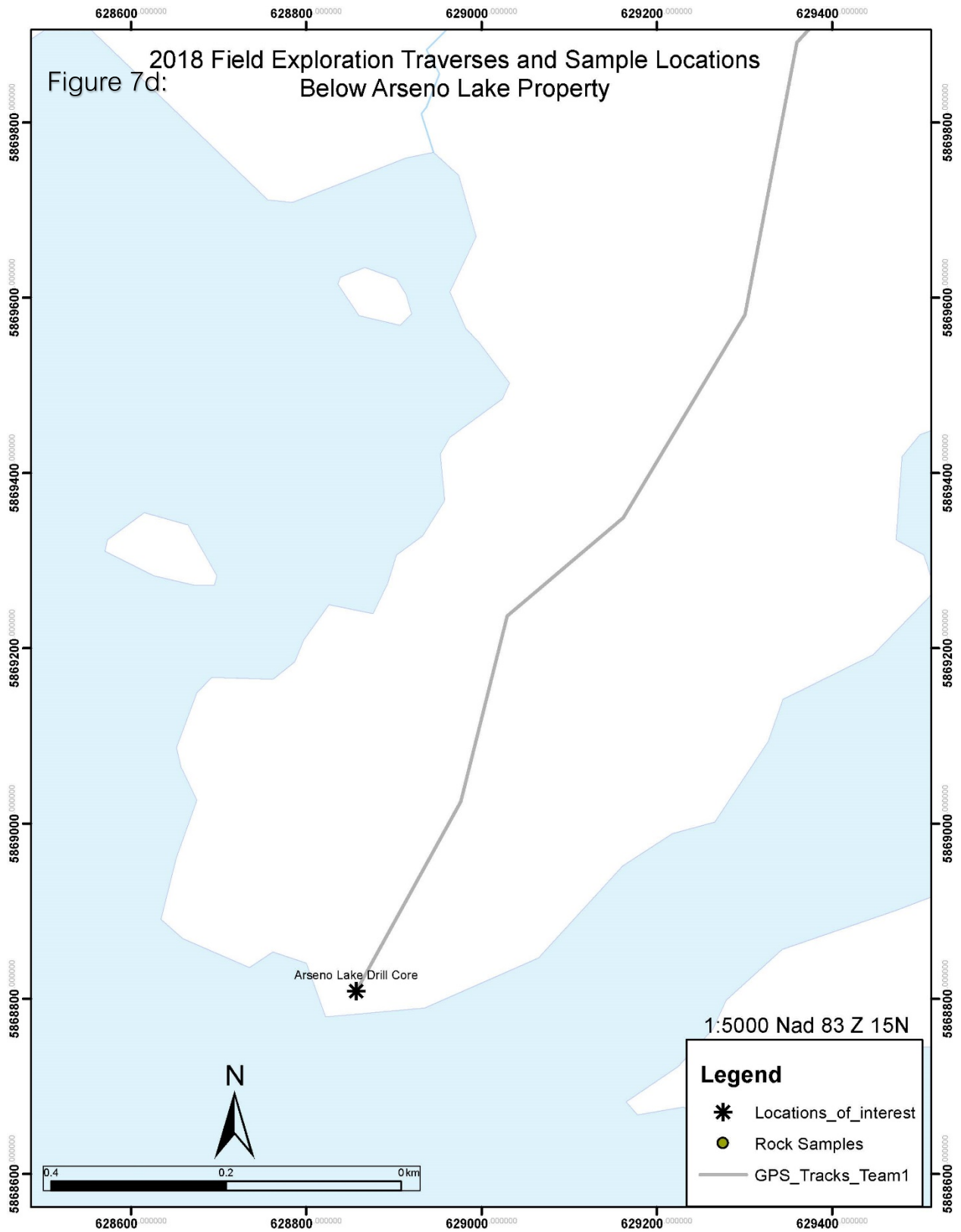


Figure 7. Map of traverses and lithochemical samples collected during 2018 on the Arseno Lake claims. See Figures 7A-D for close-ups of sample locations.









Summary of Costs

Table 2 below details all costs incurred to conduct the exploration activities on the Arseno Lake claims described in this report. All relevant invoices and receipts are appended to this report. All non-applicable charges have been deducted from the totals of each invoice.

Services and Materials

Category	Invoice Date	Invoice Number	Payee	Description	Amount
Transportation	18-Jun-18	6872	Wisk Air Helicopters	5.5 Flight Hrs.	\$7,177.50
	19-Sep-18	6999		1.8 Flight Hrs.	\$2,349.00
	9-Oct-18	7019		0.2 Flight Hrs.	\$261.00
Subtotal					\$9,787.50
Assaying	15-Nov-18	A18-14383	Activation Laboratories Ltd.	UT-4 + Fire Assay 1 Sample	\$36.00
	11-Sep-18	A18-10265		UT-4 + Fire Assay 20 Samples	\$720.00
Subtotal					\$756.00

Personnel

Category	Person	Rate/Day	Person-days	Description	Amount
Field Operations	Exploration Geologist	\$600.00	5	Field Days Only	\$3,000.00
	Field Assistant	\$360.00	5	Field Days Only	\$1,800.00
Subtotal					\$4,800.00
Data compilation and Interpretation	Exploration Geologist	\$600.00	5	Days ahead of field season	\$3,000.00
Subtotal					\$3,000.00
Reporting	Project Geologist	\$750.00	2	salary	\$1,500.00
Subtotal					\$1,500.00
Lodging	Goldcorp Personnel (2)	\$80.00	10	Musselwhite Mine	\$800.00
	Wisk Air Personnel (2)	\$80.00	10	Camp	\$800.00
Subtotal					\$1,600.00
Program Total					\$21,443.50

Recommendations

As was discussed in the results section of this exploration program, two samples of containing significant base metal grades were collected approximately 750m apart along a continuous geological horizon. This horizon is interpreted to be the siliceous iron formation described historically as containing a 1-million-ton base and precious metal resource.

It is recommended that an exhaustive campaign of geological mapping and geochemical sampling be undertaken to assess the potential of this trend. The most detailed work and expenditure of resources should take place in the 750m strike length between these two samples with similar work of lower resolution testing the horizons continuity to the east and west of the 2018 sample locations.

The recommended scope of work includes two phases.

Phase 1: Detailed geological mapping along the mineralized trend of both the bedrock and surficial geology, including whole rock lithochemical sampling of all outcropping bedrock. An expert analysis of the data collected will determine the details of phase 2.

Phase 2: high resolution geochemical sampling of the mineralized trend. The objective of the sampling is to identify mineralized intervals along strike of the known trend under cover. The exact methods of geochemical sampling may include soil sampling, MMI, Biogeochemical, Basal till, or others but should be determined by an analysis of the surficial geology mapping conducted in phase one. A comprehensive understanding of surficial media is critical in selection of the most effective geochemical sampling methods for the local conditions.

Opapimiskan Lake Exploration

Location and Access

The Opapimiskan Lake project area is located in the Skinner Lake township, district of Kenora, Ontario. The area lies approximately 500km North of the Thunder Bay, Ontario, 135km North of the town of Pickle Lake, and between 10km and 20km North Northwest of Goldcorp Canada Ltd.'s Musselwhite Mine across Opapimiskan Lake.

The property is accessible by chartered ski or float equipped aircraft or helicopter. Alternatively, the property can be accessed via boat or ice road across Opapimiskan lake from Goldcorp Canada Ltd.'s Musselwhite Mine. Musselwhite Mine has 4 season road access via Pickle Lake.



Figure 8. Location of Opapimiskan Lake Project Area within the province of Ontario

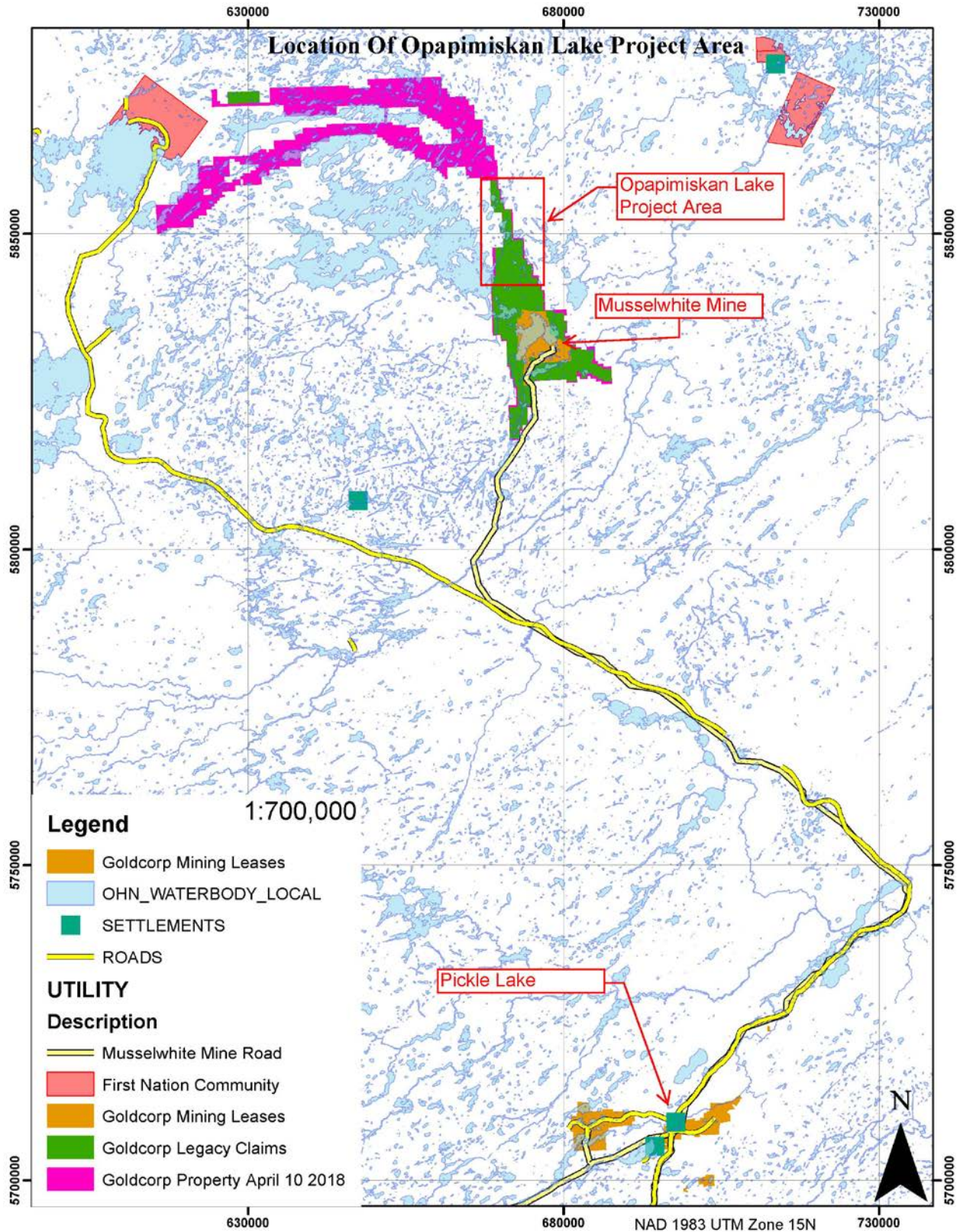


Figure 9. Location of the Opapimiskan Lake Project Area relative to the town of Pickle Lake and Musselwhite Mine

History and Previous Work in the Skinner Lake Township

1963 – Diamond drilling by International Nickel Company of Canada

1978 – Diamond Drilling by Dome Exploration

1982 – Canadian Nickel Company Limited conducts magnetic geophysical survey

1982 – 493217 Ontario Ltd. conducts VLF-EM and magnetic geophysical surveys

1983 – 493217 Ontario Ltd. Geological mapping prospecting and geochemical sampling.

1983 – Canadian Nickel Company Limited. Whole rock geochemical sampling campaign

1985 – Diamond drilling by Dome Exploration (Canada) Limited

1985 – Diamond drilling by Van Horne Gold Exploration Inc.

1986 – Dome Mines Group conducted Line cutting, ground geophysics and diamond drilling

1987 – Oracle Resources Ltd. and Van Horne Gold Exploration Inc. conducted magnetic, and VLF-EM surveys

1987 – Diamond drilling by Oracle Resources Ltd.

1994 – Pangea Goldfields Inc. Geological mapping and lithogeochemical sampling

1995 – Pangea Goldfields Inc. conducts magnetic geophysical survey

1997 – Diamond Drilling by Placer Dome North America Limited

2001 – Placer Dome Canada conducts geological mapping, line cutting, and geophysics

2002 – Placer Dome Limited conducts belt scale airborne magnetic survey

2010-2011 Diamond drilling conducted by Premier Gold Mines Ltd.

Physiography and Vegetation

The landscape is dominated by muskeg which is densely forested with black spruce trees with a thick undergrowth of labrador tea. There is minimal topographical relief present throughout the area aside from a North-Northwest trending ridge of approximately 100m relief running along the eastern margin of the claim group. Typically, the shores of the small lakes which occur abundantly throughout the area are composed of rounded glacial boulders or less commonly bedrock. Outside of these lake shores exposures of outcropping bedrock are rare.

Local Geology

The group of claims held by Goldcorp Canada Ltd. in the Opapimiskan Lake project area are underlain by 5 distinct supracrustal assemblages (Figure 10). The Schade Lake gneiss complex along the eastern margin and the North Caribou Pluton along the western margin are of little economic interest and have not been the focus of much exploration activity. The core of the claim group is underlain by the three dominant assemblages comprising the North Caribou Greenstone Belt; the North Rim and South Rim metavolcanic Assemblages and between them the Eyapamikima Metasedimentary assemblage.

The South Rim Assemblage extends along the Southern and Western margins of the North Caribou Greenstone Belt from Randall Lake, South of Weagamow Lake, to Opapimiskan Lake (Figure 1). The assemblage is dominantly composed of pillowed and massive mafic metavolcanic flows with minor felsic to intermediate metavolcanic occurrences with subordinate ultramafic and metasedimentary components (Breaks et al, 2001). Metasedimentary components include silicate facies iron formations which are present at numerous locations within the assemblage throughout the greenstone belt.

The North Rim Assemblage occurs along the Northern and Western margins of the North Caribou Greenstone Belt from Weagamow Lake to Opapimiskan Lake (Figure 1). The assemblage is dominantly composed of pillowed and massive metavolcanic mafic flows. Locally ultramafic and felsic to intermediate flows are observable. There are notable metasedimentary components which include silicate-facies banded iron formations and undifferentiated clastic metasedimentary units. (Oswald 2018) Metasedimentary occurrences appear concentrated along the Southern and Eastern margin of the assemblage where it is in contact with the Eyapamikima Lake Metasedimentary assemblage.

The Eyapamikima Lake Metasedimentary Assemblage is a variable package of clastic metasedimentary rocks. The geometry of the assemblage is highly variable however in the project area it occurs as a North-South trending subvertical unit, a few hundred meters in width, bound between the North Rim Assemblage to the East and the South Rim assemblage to the West. The width of the surface expression of the unit.

Although the North and South Rim Assemblages are prospective in their own rights, and have been the focus of much exploration, deeper diamond drilling campaigns in the area have focused on exploring the Opapimiskan Markop Assemblage. This mafic metavolcanic assemblage underlies the South Rim Assemblage and contains a large and laterally continuous horizon of silicate iron formation. This unit of banded iron formation, known as the Northern Iron Formation, is host to the most significant ore bodies within Goldcorp Canada Ltd.'s Musselwhite Mine. Geophysical surveys indicate that the hinge of a map-scale antiformal closure if the Northern Iron Formation plunges to the North into the Opapimiskan Lake project area.

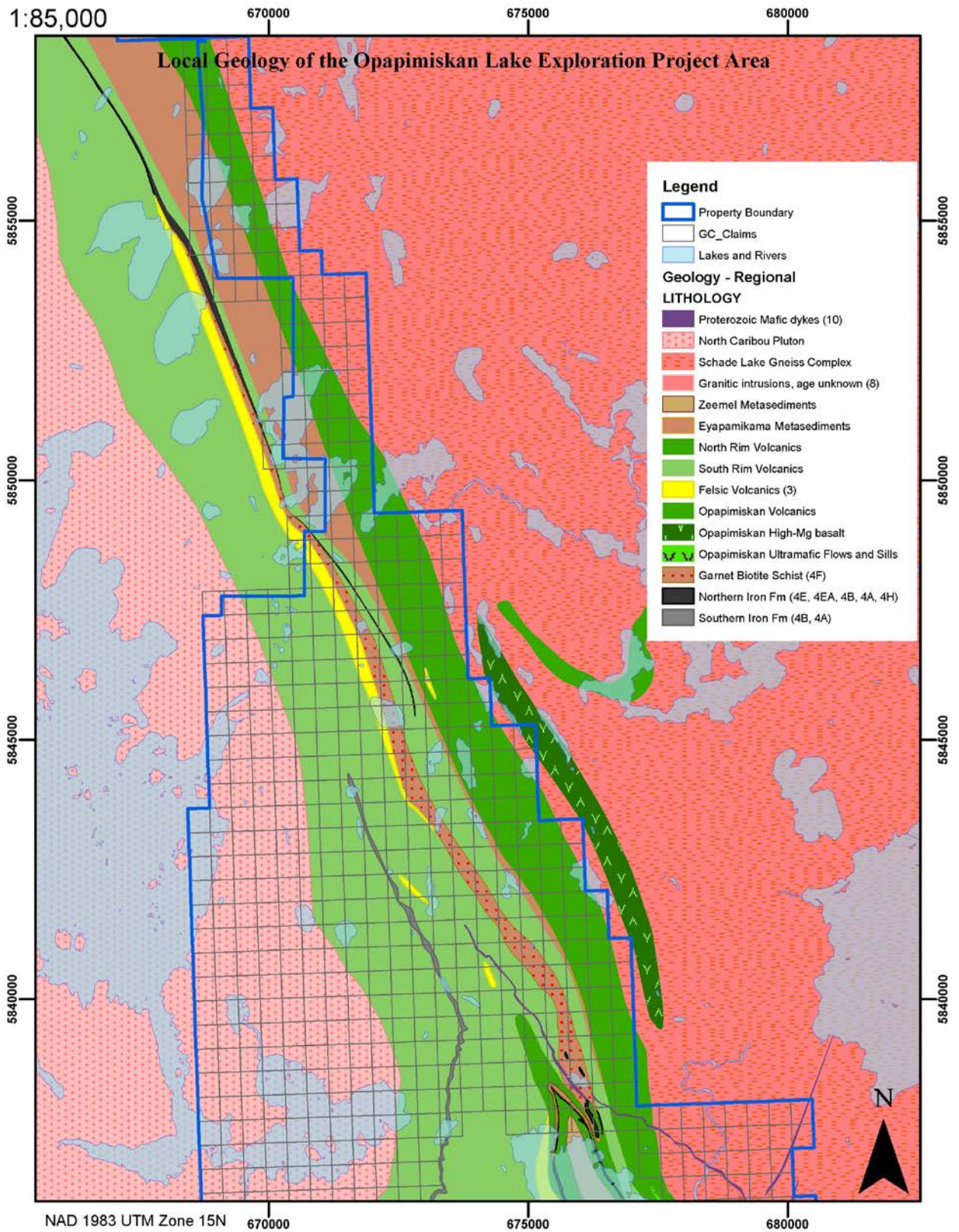


Figure 10. Local Bedrock Geology of the Opapimiskan Lake exploration project area

Table of Claims

Field work associate with the exploration of this project area including prospecting traverses and lithochemical sampling was conducted on the following claims held by Goldcorp Canada Ltd.

Table 3. Claims held by Goldcorp Canada Ltd. on which field exploration activities were conducted during exploration of the Opapimiskan Lake project area

Claim Number	Type	Status	Date Issued	Date Due	Holder
325374	Single Cell Mining Claim	Active	2018-04-10	2020-10-23	(100) GOLDCORP CANADA LTD.
313154	Single Cell Mining Claim	Active	2018-04-10	2020-10-23	(100) GOLDCORP CANADA LTD.
317967	Boundary Cell Mining Claim	Active	2018-04-10	2021-10-22	(100) GOLDCORP CANADA LTD.
258078	Single Cell Mining Claim	Active	2018-04-10	2021-10-22	(100) GOLDCORP CANADA LTD.
239892	Single Cell Mining Claim	Active	2018-04-10	2020-10-22	(100) GOLDCORP CANADA LTD.
197360	Single Cell Mining Claim	Active	2018-04-10	2021-10-22	(100) GOLDCORP CANADA LTD.
331325	Single Cell Mining Claim	Active	2018-04-10	2021-10-22	(100) GOLDCORP CANADA LTD.
153338	Single Cell Mining Claim	Active	2018-04-10	2020-04-12	(100) GOLDCORP CANADA LTD.
217490	Single Cell Mining Claim	Active	2018-04-10	2021-10-22	(100) GOLDCORP CANADA LTD.
305853	Single Cell Mining Claim	Active	2018-04-10	2021-10-22	(100) GOLDCORP CANADA LTD.
314173	Single Cell Mining Claim	Active	2018-04-10	2020-04-12	(100) GOLDCORP CANADA LTD.
304443	Single Cell Mining Claim	Active	2018-04-10	2021-10-20	(100) GOLDCORP CANADA LTD.
234783	Single Cell Mining Claim	Active	2018-04-10	2021-10-20	(100) GOLDCORP CANADA LTD.
113793	Single Cell Mining Claim	Active	2018-04-10	2021-10-22	(100) GOLDCORP CANADA LTD.
151514	Boundary Cell Mining Claim	Active	2018-04-10	2021-10-22	(100) GOLDCORP CANADA LTD.
155981	Single Cell Mining Claim	Active	2018-04-10	2020-10-23	(100) GOLDCORP CANADA LTD.
307468	Single Cell Mining Claim	Active	2018-04-10	2021-10-20	(100) GOLDCORP CANADA LTD.
216951	Boundary Cell Mining Claim	Active	2018-04-10	2021-10-22	(100) GOLDCORP CANADA LTD.
132640	Single Cell Mining Claim	Active	2018-04-10	2021-10-22	(100) GOLDCORP CANADA LTD.
137888	Single Cell Mining Claim	Active	2018-04-10	2021-10-22	(100) GOLDCORP CANADA LTD.
151538	Single Cell Mining Claim	Active	2018-04-10	2021-10-22	(100) GOLDCORP CANADA LTD.
210578	Single Cell Mining Claim	Active	2018-04-10	2021-10-22	(100) GOLDCORP CANADA LTD.
150588	Single Cell Mining Claim	Active	2018-04-10	2020-04-12	(100) GOLDCORP CANADA LTD.
313155	Single Cell Mining Claim	Active	2018-04-10	2020-10-22	(100) GOLDCORP CANADA LTD.
112446	Single Cell Mining Claim	Active	2018-04-10	2020-10-22	(100) GOLDCORP CANADA LTD.
300703	Single Cell Mining Claim	Active	2018-04-10	2021-10-22	(100) GOLDCORP CANADA LTD.
149244	Single Cell Mining Claim	Active	2018-04-10	2021-10-22	(100) GOLDCORP CANADA LTD.
149245	Single Cell Mining Claim	Active	2018-04-10	2021-10-22	(100) GOLDCORP CANADA LTD.
321401	Single Cell Mining Claim	Active	2018-04-10	2020-04-12	(100) GOLDCORP CANADA LTD.
314174	Single Cell Mining Claim	Active	2018-04-10	2020-04-12	(100) GOLDCORP CANADA LTD.
317966	Single Cell Mining Claim	Active	2018-04-10	2021-10-22	(100) GOLDCORP CANADA LTD.
294753	Single Cell Mining Claim	Active	2018-04-10	2021-10-22	(100) GOLDCORP CANADA LTD.
115239	Single Cell Mining Claim	Active	2018-04-10	2020-04-12	(100) GOLDCORP CANADA LTD.
132641	Single Cell Mining Claim	Active	2018-04-10	2021-10-22	(100) GOLDCORP CANADA LTD.

Description of Program

During the summer of 2018 Geological field work was conducted over 6-day period on Goldcorp Canada Ltd.'s Opapimiskan Lake project area, between the Northern margin of Musselwhite Mine leases and the Northern edge of Goldcorp Canada Ltd.'s legacy exploration claims (Figure 9). The work was undertaken by staff geologists employed by Goldcorp at Musselwhite Mine with various supporting functions performed by geotechnical staff or commissioned from contractor groups.

The work involved helicopter supported prospecting traverses as well as lithogeochemical sampling. The primary objectives of this work were to discover down strike occurrences of the mineralized Akow Lake Shear Zone as well as well is prospecting down strike of the doubtful lake shear zone. The Doubtful Lake shear zone is not known to host any economic mineralization however it is parallel and similarly aged to the Akow Lake Shear Zone (Figure 1).

One field crew consisting of one geologist and one field assistant conducted field activities each day. The crews were transported in a Bell 206 Long Ranger helicopter provided and operated by Wisk Air Helicopters of Thunder Bay, Ontario. The locations of exploration traverses were limited by the poor exposure of outcropping bedrock in the area and can be observed in figure 5. Below. All occurrences of outcropping bedrock encountered along traverse were sampled and submitted to Activation Laboratories in Dryden, Ontario for whole rock analysis by 4-acid digestion ICP-MS and for gold by conventional fire Assay. samples exceeding 10g/t gold were re-analyzed by gravimetric fire assay. a total of 31 samples were collected and submitted. Bedrock samples were collected by employing conventional geological rock hammers and small sledge hammers. Field data and sample locations were recorded on Apple iPad in custom forms using the Esri Survey 123 application. Survey 123 records sample locations in latitude and longitude decimal degrees.

Figure 11 below depicts the tracks of each traverse and location of each lithogeochemical sample collected. Table 4 on the following page details the nature and location of each sample including fire assay results. A complete table of all geochemical results can be observed in Appendix IV.

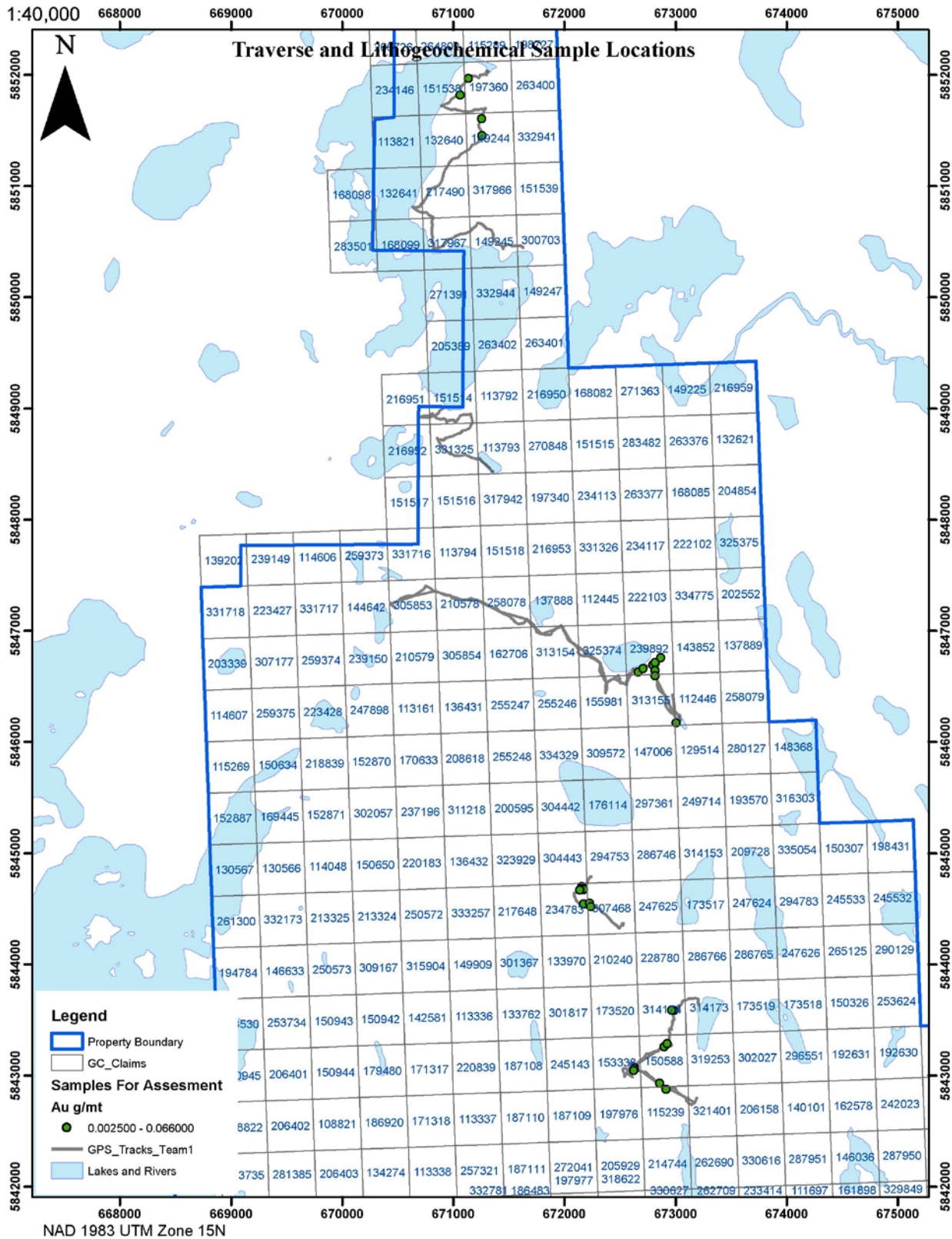
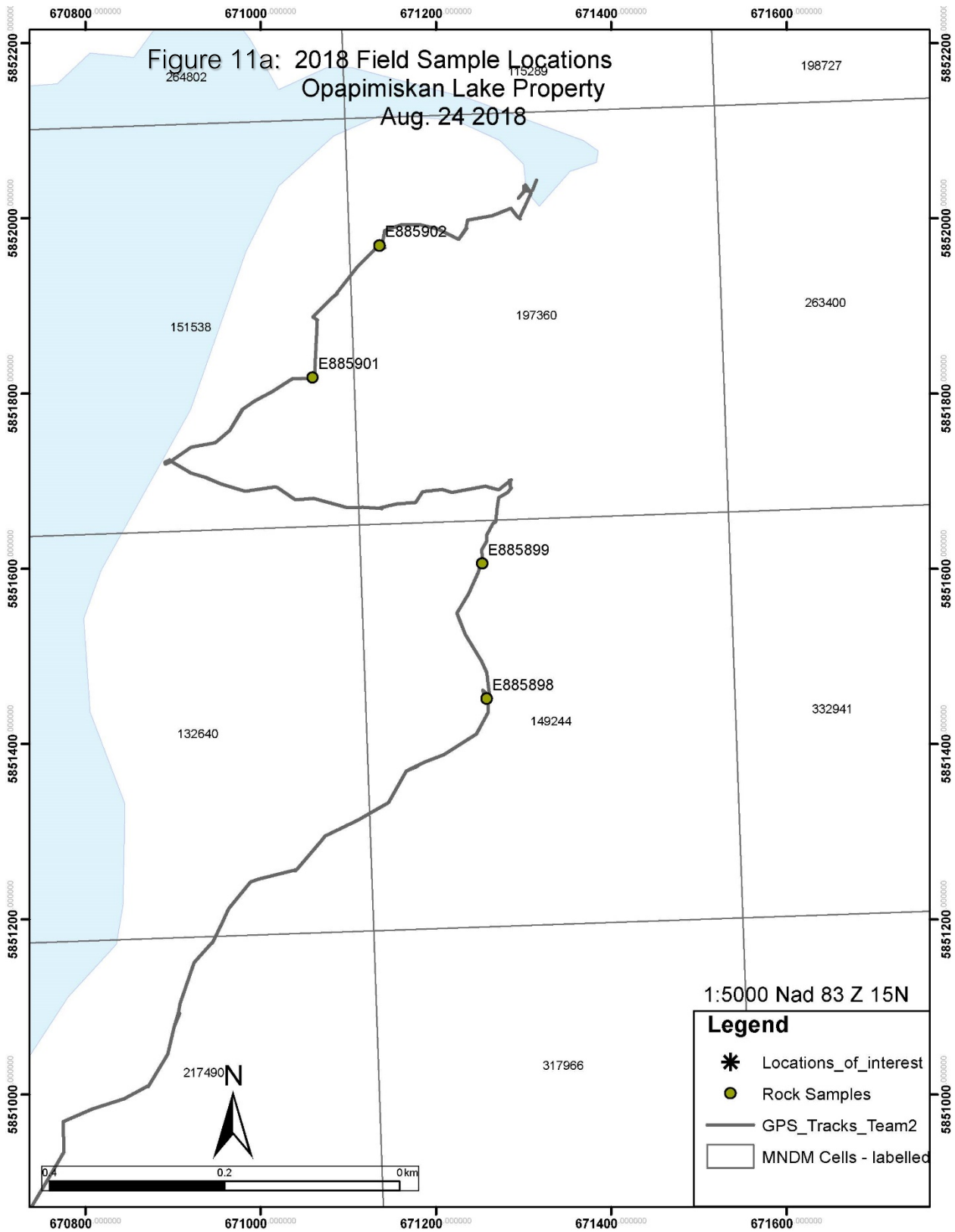
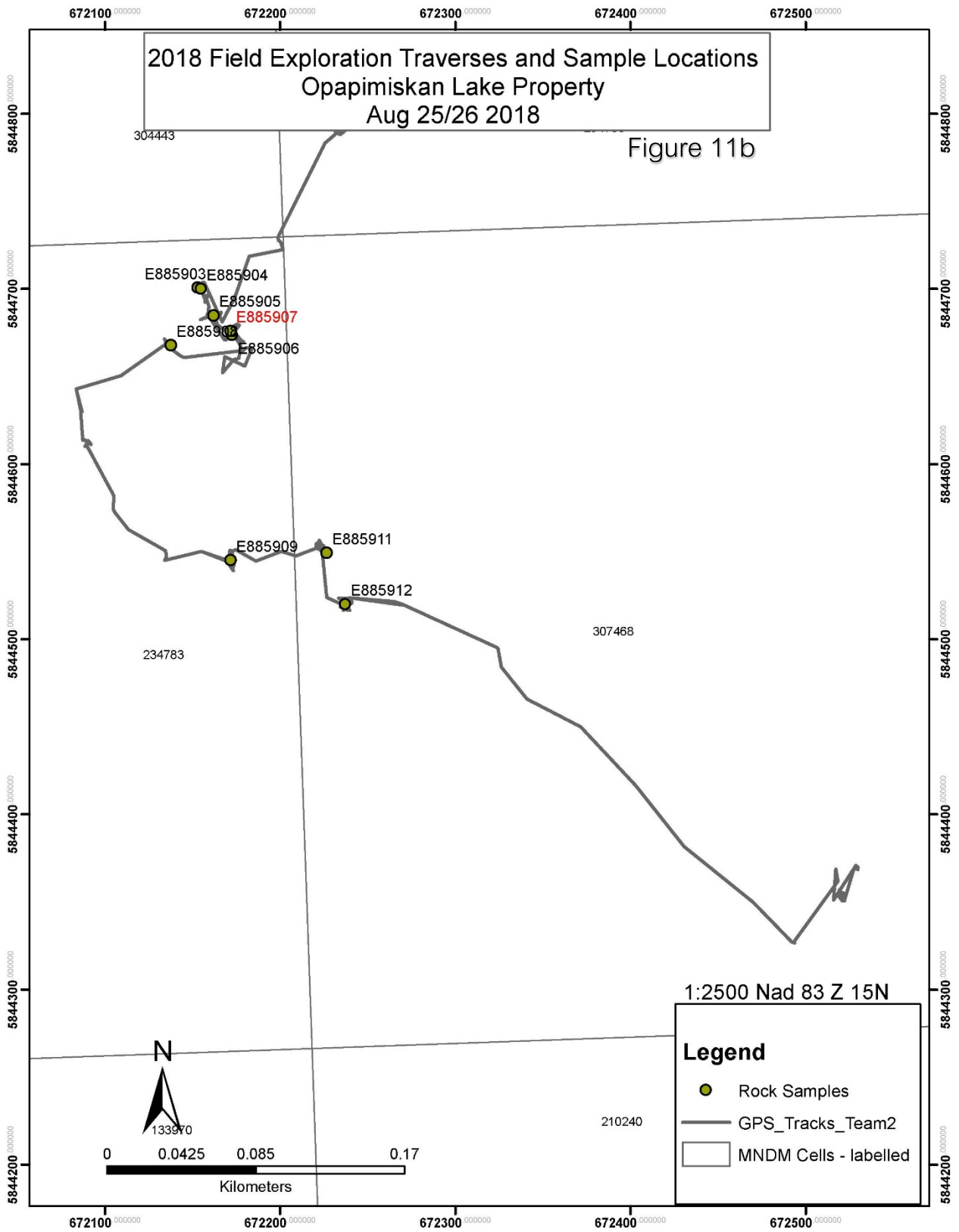
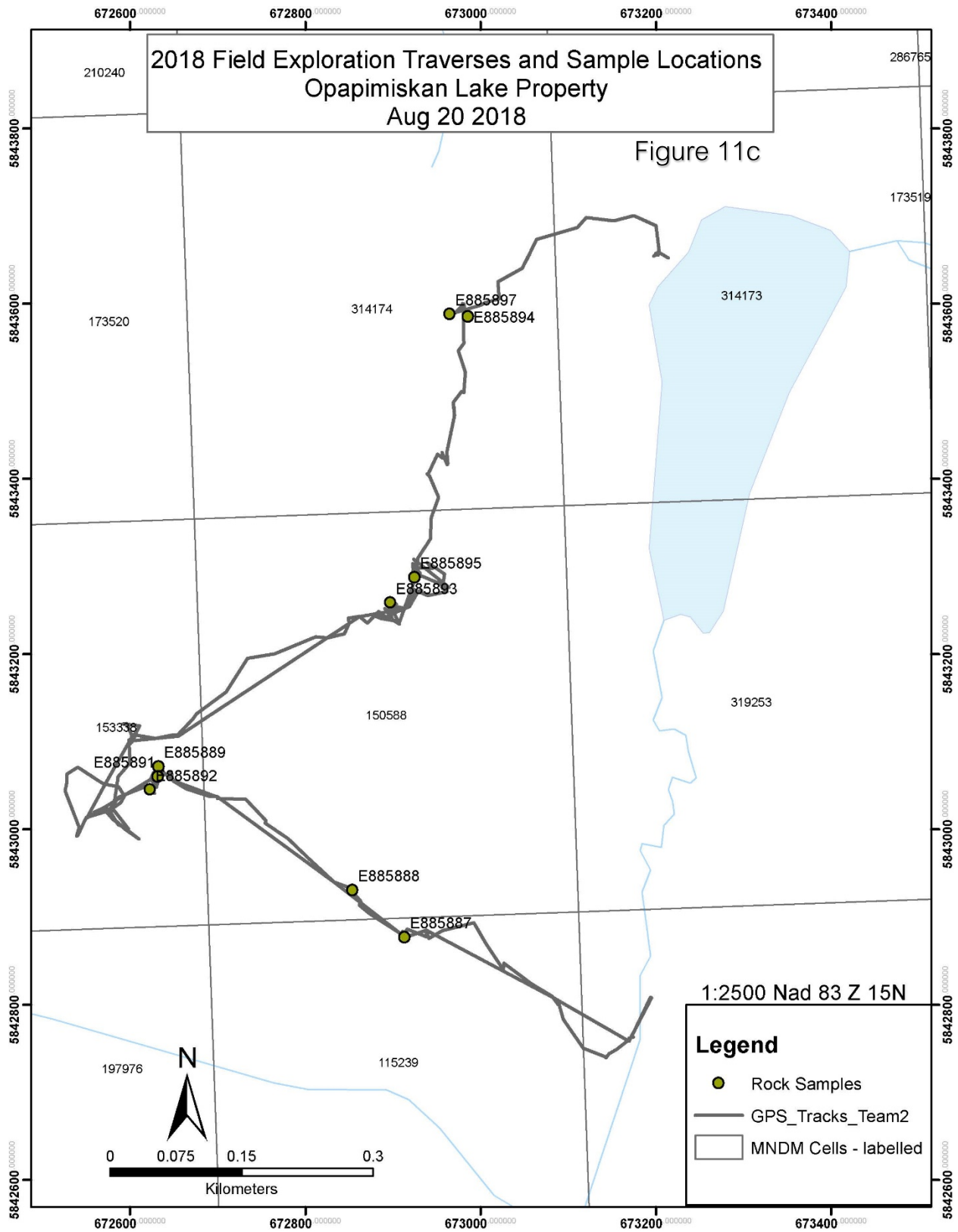
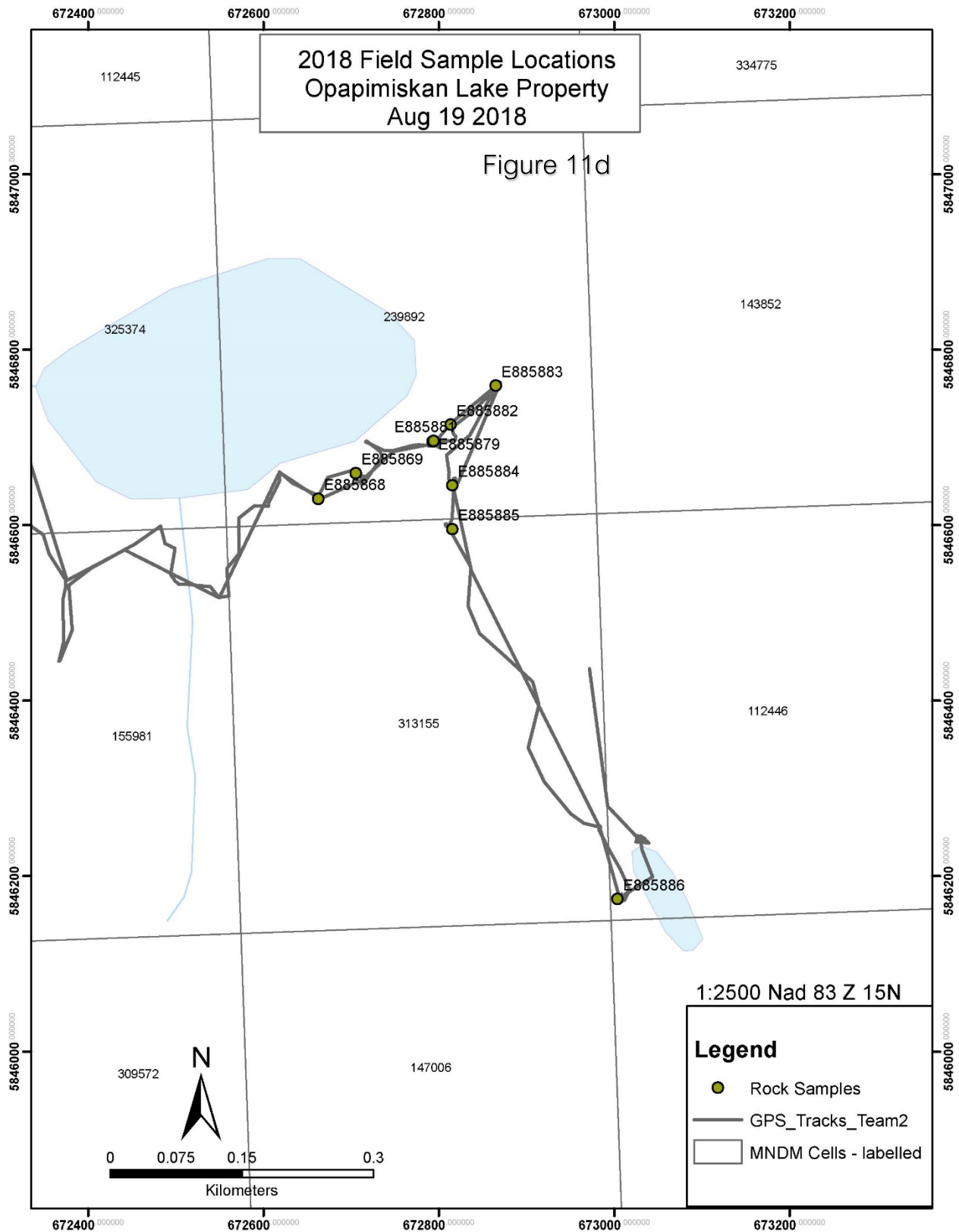


Figure 11. Location of prospecting traverses and lithochemical sampling conducted during the 2018 exploration of the Opapimiskan Lake project area. Figures A-D are the sample locations.









Results

This campaign of prospecting and lithogeochemical sampling failed to identify any confirmed or suspected exposures of the Doubtful Lake or Akow Lake shear zones. Additionally, as observed in figure 11, of 31 samples collected none graded greater than 0.066 g/t gold.

It was noted during field traverses and reconnaissance flights that the area features very little exposures of outcropping metavolcanic or metasedimentary assemblages. Therefore, the discouraging results of this program are not necessarily indicative of the exploration potential in the area.

A table of samples collected from the area may be observed in table 4 below. The table features sample locations in Latitude-Longitude decimal degrees. In addition to field observations related to each sample and gold assay values in g/mt. A complete table of whole rock geochemical results can be observed in Appendix IV.

Table 4. Locations and descriptions of lithochemical samples collected from the Opapimiskan Lake project area during the 2018 regional exploration program

Date	Sample ID	Claim Number	Geologist	Rock Type	Veining Assemblage	Vein Type	Vein Azimuth	Vein Dip	Fabric	Fabric Intensity	Fabric Azimuth	Fabric Dip	Fault	Fault Intensity	Fault Azimuth	Fault Dip	Fold	Fold Azimuth	Fold Dip	Magnetic Susceptibility	x	y	Au g/mt
8/19/2018	E885868	239892	S.Miller	Clastic Metasediment	Quartz	Planar	184	N/A	Primary Bedding	Weak	184	N/A								0.181	-90.442179	52.741918	0.0025
8/19/2018	E885869	239892	S.Miller	Felsic Lapilli Tuff	Quartz	Planar	356	82	Foliation	Moderate	356	82								0.102	-90.441531	52.742166	0.0025
8/19/2018	E885879	239892	S.Miller	Intermediate Tuff	Quartz	Planar	352	76	Foliation	Moderate	352	76								0.619	-90.440215	52.742461	0.0025
8/19/2018	E885881	239892	S.Miller	Chert					Primary Bedding	Moderate	350	N/A								0.711	-90.440198	52.742469	0.012
8/19/2018	E885882	239892	S.Miller	Mafic Metavolcanic					Foliation	Moderate	162	N/A								0.616	-90.4399	52.742628	0.005
8/19/2018	E885883	239892	S.Miller	Mafic Metavolcanic					Foliation	Moderate	156	82								1.31	-90.43912	52.74301	0.009
8/19/2018	E885884	239892	S.Miller	Mafic Metavolcanic					Foliation	Intense	158	70	Shear Zone	Moderate	158	70				0.572	-90.439911	52.742006	0.0025
8/19/2018	E885885	313155	S.Miller	Chert					Primary Bedding	Moderate	166	82					Z-Fold	144	N/A	0.092	-90.439937	52.741557	0.0025
8/19/2018	E885886	112446	S.Miller	Felsic Lapilli Tuff	Quartz	Crack-Seal	166	N/A	Primary Bedding	Weak	166	88								0.034	-90.437375	52.737713	0.0025
8/20/2018	E885887	115239	S.Miller	Mafic Dyke					Foliation	Weak	316	N/A								13.2	-90.440451	52.708134	0.007
8/20/2018	E885888	150588	S.Miller	Mafic Metavolcanic	Quartz	Flooding	136	N/A	Foliation	Moderate	136	N/A								0.434	-90.441296	52.708635	0.005
8/20/2018	E885889	153338	S.Miller	Mafic Metavolcanic	Quartz	Flooding	152	N/A	Foliation	Moderate	152	N/A	Shear Zone	Weak	152	N/A				0.293	-90.444499	52.709972	0.005
8/20/2018	E885891	153338	S.Miller	Mafic Metavolcanic	Quartz	Stringer	154	N/A	Foliation	Moderate	154	N/A	Shear Zone	Weak	154	N/A				0.765	-90.44517	52.70987	0.0025
8/20/2018	E885892	153338	S.Miller	Quartz Vein	Quartz	Massive	110	N/A	Foliation	Moderate	152	80								0.064	-90.444658	52.709738	0.0025
8/20/2018	E885893	150588	S.Miller	Quartz Vein	Quartz	Massive	146	72					Shear Zone	Moderate	146	72				0.03	-90.440486	52.711566	0.028
8/20/2018	E885894	314174	S.Miller	Quartz Vein	Quartz	Flooding							Shear Zone	Intense	155	N/A				0.024	-90.439008	52.714469	0.014
8/20/2018	E885895	150588	S.Miller	Felsic Lapilli Tuff					Foliation	Intense	152	N/A								0.138	-90.440062	52.711819	0.0025
8/20/2018	E885897	314174	S.Miller	Clastic Metasediment	Quartz	Planar	N/A	N/A	Foliation	Moderate	152	N/A								0.122	-90.439316	52.714503	0.0025
8/24/2018	E885898	149244	S.Miller	Intermediate Flow					Foliation	Moderate	346	76								0.434	-90.460449	52.785669	0.0025
8/24/2018	E885899	149244	S.Miller	Mafic Metavolcanic	Quartz	Crack-Seal			Foliation	Intense	350	70	Shear Zone	Moderate	350	70				0.446	-90.460444	52.787054	0.0025
8/24/2018	E885901	197360	S.Miller	Mafic Metavolcanic	Quartz	Stringer	350	80	Foliation	Intense	350	80	Shear Zone	Moderate	350	80				0.47	-90.463198	52.789023	0.0025
8/24/2018	E885902	197360	S.Miller	Quartz Vein	Quartz	Massive	336	N/A	Foliation	Moderate	336	N/A								0.305	-90.461988	52.790352	0.0025
8/25/2018	E885903	234783	S.Miller	Garnet Amphibole IF	Quartz	Replacement	168	80	Primary Bedding	Moderate	168	80								14.8	-90.450735	52.724752	0.0025
8/25/2018	E885904	234783	S.Miller	Mafic Metavolcanic	Quartz	Crack-Seal				Moderate	168	80								0.806	-90.450708	52.724746	0.0025
8/25/2018	E885905	234783	S.Miller	Mafic Metavolcanic	Quartz	Crack-Seal	162	N/A	Foliation	Moderate	162	N/A	Shear Zone	Moderate	162	N/A				0.417	-90.450608	52.724607	0.0025
8/25/2018	E885906	234783	S.Miller	Garnet Amphibole IF	Quartz	Replacement	158	N/A	Primary Bedding	Moderate	158	N/A								0.49	-90.450459	52.724503	0.066
8/25/2018	E885907	234783	S.Miller	Garnet Amphibole IF	Quartz	Replacement	166	N/A	Primary Bedding	Moderate	166	78								0.487	-90.45047	52.724525	0.0025
8/25/2018	E885908	234783	S.Miller	Quartz Vein	Quartz	Massive	340	82												0.008	-90.450977	52.724463	0.0025
8/25/2018	E885909	234783	S.Miller	Quartz Vein	Quartz	Massive														0.427	-90.450539	52.72335	0.0025
8/25/2018	E885911	307468	S.Miller	Mafic Metavolcanic	Quartz	Crack-Seal	348	N/A					Shear Zone	Weak	348	N/A				0.626	-90.449726	52.72337	0.015
8/26/2018	E885912	307468	S.Miller	Garnet Amphibole IF	Quartz	Replacement	348	N/A	Primary Bedding	Weak	348	N/A								0.474	-90.449584	52.723103	0.0025

Summary of Costs

Services and Materials

Category	Invoice Date	Invoice Number	Payee	Description	Amount
Transportation	6-Sep-18	6984	Wisk Air Helicopters	4.4 Flight Hrs.	\$5,742.00
Subtotal					\$5,742.00
Assaying	15-Nov-18	A18-12314	Activation Laboratories Ltd.	UT-4 + Fire Assay 31 Samples	\$1,116.00
Subtotal					\$1,116.00

Personnel

Category	Person	Rate/Day	Person-days	Description	Amount
Field Operations	Exploration Geologist	\$600.00	5	Field Days Only	\$3,000.00
	Field Assistant	\$360.00	5	Field Days Only	\$1,800.00
Subtotal					\$4,800.00
Data compilation and Interpretation	Exploration Geologist	\$600.00	5	Days ahead of field season	\$3,000.00
Subtotal					\$3,000.00
Reporting	Project Geologist	\$750.00	2	salary	\$1,500.00
Subtotal					\$1,500.00
Lodging	Goldcorp Personnel (2)	\$80.00	10	Musselwhite	\$800.00
	Wisk Air Personnel (2)	\$80.00	10	Mine Camp	\$800.00
Subtotal					\$1,600.00
Program Total					\$17,758.00

North Caribou Greenstone Belt

Physiography and Vegetation

Very little topographic relief is present throughout the region. Dominant surficial conditions encountered throughout the North Caribou Green Stone belt are low bogs which are densely forested by black spruce trees rooted in a wet, moss covered, forest floor, moss-covered meadows which are typically dryer and dominantly vegetated by dense Labrador tea shrubs and sparse, small, black spruce trees. And by glacial fluvial landforms, mostly eskers, and terminal or lateral moraines, dominantly composed of a sand and boulder till. Abundance of outcropping bedrock is variable throughout the region depending on several conditions but dominantly ranges between 3-8%. Occurrences of outcropping bedrock have little to no relief and are typically disguised by a thick veneer of moss and/or lichen.

Location and Access

The North Caribou Greenstone Belt (NCGB) claim group encompasses the majority of the NCGB North and Northwest of Goldcorp Canada Ltd.'s legacy exploration claim group around Musselwhite Mine. The western edge of the claim group lies approximately 15km south of North Caribou Lake First Nation and the group extends approximately 50km to the east of the community. The Area lies approximately 550 km North of the City of Thunder Bay, Ontario



Figure 12. Location of the North Caribou Greenstone Belt claim group in the province of Ontario

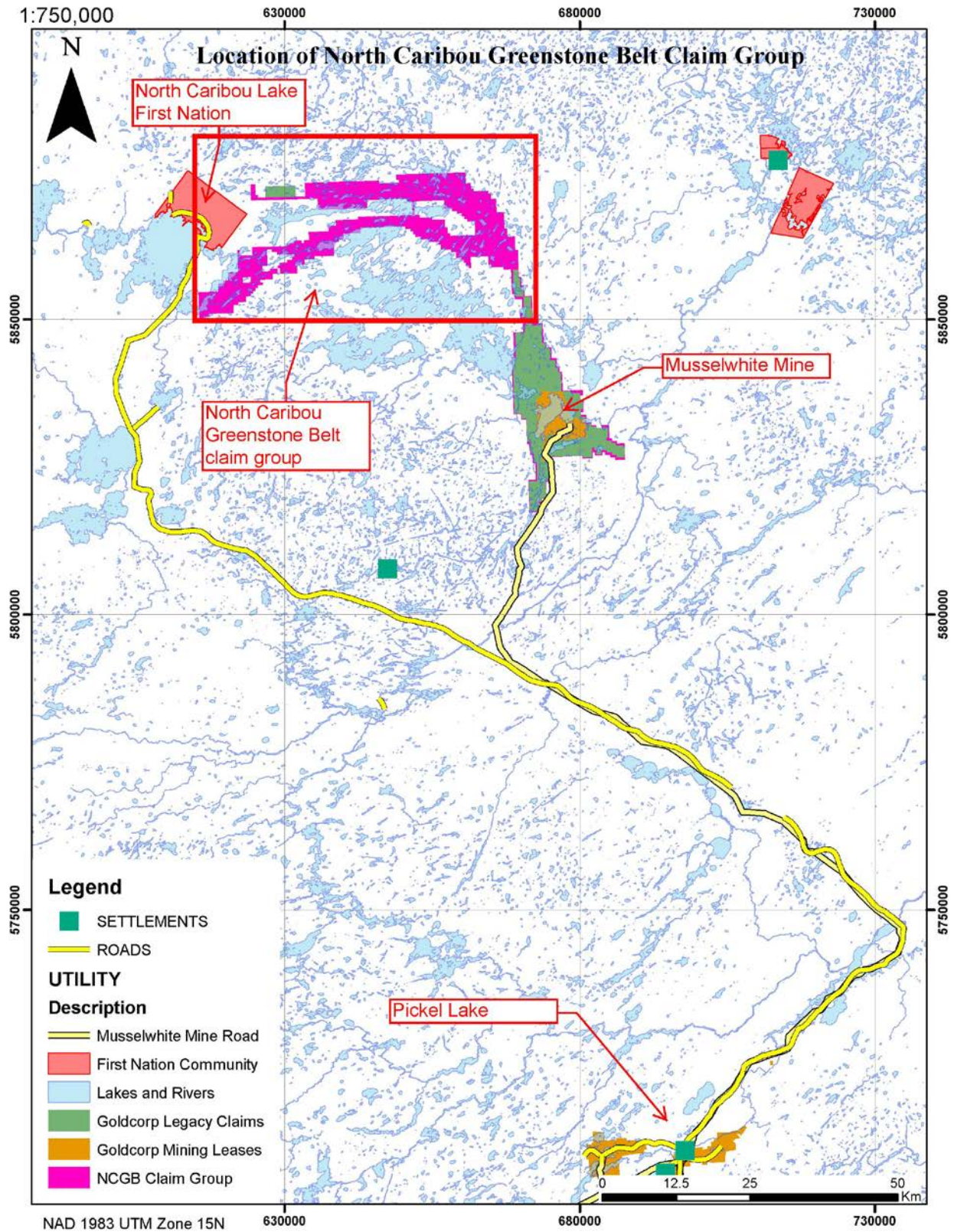


Figure 13. Location of North Caribou Greenstone Belt claim group relative to Musselwhite Mine, the town of Pickle Lake, and North Caribou Lake First Nation.

History and previous work

1938 – (Satterly 1941) First geological map of the North Caribou Greenstone Belt produced at a scale of 1 inch to 1 Mile (1:63360).

1960 – Geological survey of Canada conducted an airborne magnetometer survey of the North Caribou Greenstone Belt.

1962 – Economic gold mineralization was first identified on Musselwhite mining leases by the Musselwhite Brothers in

1979 - Reconnaissance geological surveys by Thurston, Sage and Siragusa

1981 – The Dome Exploration Ltd Consortium. commissioned Aerodat Ltd. to conduct an airborne magnetic and electromagnetic geophysical survey over the area surrounding the Musselwhite deposit.

Andrews, Sharpe and Janes (1981) undertook limited mapping and described the Musselwhite gold occurrence near Opapimiskan Lake.

1982 - The Forester Lake area, in the southeastern portion of the belt, examined by Sage and Breaks

The belt was also reexamined at a reconnaissance scale by R. Hall to complement detailed mapping of the Opapimiskan Lake area, as part of PhD research at Queen's University

1994 Placer dome flew DIGHEM airborne geophysical survey over the Erichsen Lake area

1996 - The Musselwhite Joint Venture partners made the decision to put the property into construction in.

2001 – Geology and mineralization described and mapped by Breaks et al.

2002 Placer Dome flew an airborne geophysical mag survey over the Northwestern part of the greenstone belt

2002 OGS Lake sediment sampling survey throughout the Eyapamikima Lake region.

Local Geology

The group of claims held by Goldcorp Canada Ltd. in the NCGB Claim group is underlain by four distinct supracrustal assemblages (Figure 1). The Schade Lake gneiss complex along the Northern and Eastern margins and the North Caribou Pluton along the Southern and Western margins are of little economic interest and have not been the focus of much exploration activity. The core of the claim group is underlain by the three dominant assemblages comprising the North Caribou Greenstone Belt; the North Rim and South Rim metavolcanic Assemblages and between them the Eyapamikima Metasedimentary assemblage. In the far

west, South of North Caribou Lake First Nation, the Northern margin of the lower arm of the claim group is underlain by the Aguata Arm Assemblage.

The South Rim Assemblage extends along the Southern and Western margins of the North Caribou Greenstone Belt from Randall Lake, South of Weagamow Lake, to Opapimiskan Lake (Figure 1). The assemblage is dominantly composed of pillowed and massive mafic metavolcanic flows with minor felsic to intermediate metavolcanic occurrences with subordinate ultramafic and metasedimentary components (Breaks et al, 2001). Metasedimentary components include silicate facies iron formations which are present at numerous locations within the assemblage throughout the greenstone belt.

The North Rim Assemblage is Occurs along the Northern and Western margins of the North Caribou Greenstone Belt from Weagamow Lake to Opapimiskan Lake (Figure 1). The assemblage is dominantly composed of pillowed and massive metavolcanic mafic flows. Locally ultramafic and felsic to intermediate flows are observable. There are notable metasedimentary components which include silicate-facies banded iron formations and undifferentiated clastic metasedimentary units. (Oswald 2018) Metasedimentary occurrences appear concentrated along the Southern and Eastern margin of the assemblage where it is in contact with the Eyapamikima Lake Metasedimentary assemblage.

The Agutua Arm assemblage is located at the western end of the northern NCGB. It comprises massive, fine-grained mafic volcanic flows, and rare pillowed flows. Frequently intermediate to felsic rocks are can be encountered between Weagamow (North Caribou) Lake and the and the East margin of the assemblage. The sequence is poorly understood relative to the rest of the NCGB due to a scarcity of bedrock exposure, but it is known to include thickly bedded pyroclastic rocks such as fragment-supported felsic tuff (Breaks et al., 2001).

The Eyapamikima Lake Metasedimentary Assemblage is a variable package of clastic metasedimentary rocks. The geometry of the assemblage is highly variable however in the project area it occurs as an East-West trending subvertical unit, 5-10km in width, bound between the North Rim Assemblage to the North, the South Rim assemblage to the South, and the Agutua Arm metavolcanic assemblage to the West. The width of the surface expression of the unit.

Belt scale shear zones are well documented throughout the both the North Rim and South Rim metavolcanic assemblages. These are referred to as the North Rim Fault (NRF) and the North Caribou River Fault (NCRF), respectively. These structures are steeply dipping, 10's to 100's of meters in width and strike parallel to the strike of the host assemblage. Occurrences of anomalous precious and base metals are well documented along the length of both fault zones. generally, each structure extends from the westernmost edge of their host assemblages to the arcuate flexure in the NCGB, at the east end of the claim group, where the dominant orientation of the geology changes from East-West to North-South (Figure 1).

North Caribou Greenstone Belt – Reprocessing historical work.

Beginning in January 2018 a comprehensive campaign of research and data compilation was commenced. The objective of the work was to determine priorities for claim staking as well as plan exploration programs in anticipation of the expanded land package. The scope of this

work included the discovery and evaluation of all historical assessment files for work done within and proximal to the expanded land position. Historical work deemed to be of critical importance was digitized and georeferenced into a GIS data base. This work was completed at Musselwhite Mine by two staff geologists.

When this work was near completion, it was reviewed by a thinktank comprising Goldcorp's technical experts and Musselwhite Mine geologists. One of the corporate structural geologists made the most advances by re-interpreting previously completed airborne geophysics (by the OGS, Placer Dome, and Goldcorp) to identify structural/geological features on the 1:250,000 Scale Bedrock Geology of Ontario map provided by the OGS that was published in 2011.

Figure 1 would provide an example of the base geology map. Figure 14 would be in the re-interpretation; a smaller scale version is provided in Appendix VII.

Main advances on the previous map are:

1. Lot more detail of folded geometry of northern and southern rim sequences, as shown by folded highly magnetic units (presumed to be iron formations, though this will have to be ground-truthed).
2. Continuity of shear zones traced from northern area through the N-S high strain segment towards the mine area where the geology is well-known. This has implications for correlating units/structures from the mine into the northern part of the belt.
3. Attempt to make better sense of the western area – reviewing all the information the best concept was found is that there are a series of east-vergent thrust slices which carry units with refolded fold geometries over the western part of the central basin. To test when working this ground.

The review of this work was successful in identifying 14 priority areas for follow up field work (Figure 15). Determining criteria considered historically significant results, geophysical anomalies, favorable geological geometries and favorable structural settings. The entire group of NCGB claims were subject to the efforts of this research project. A complete table of this group can be viewed in Appendix XI.

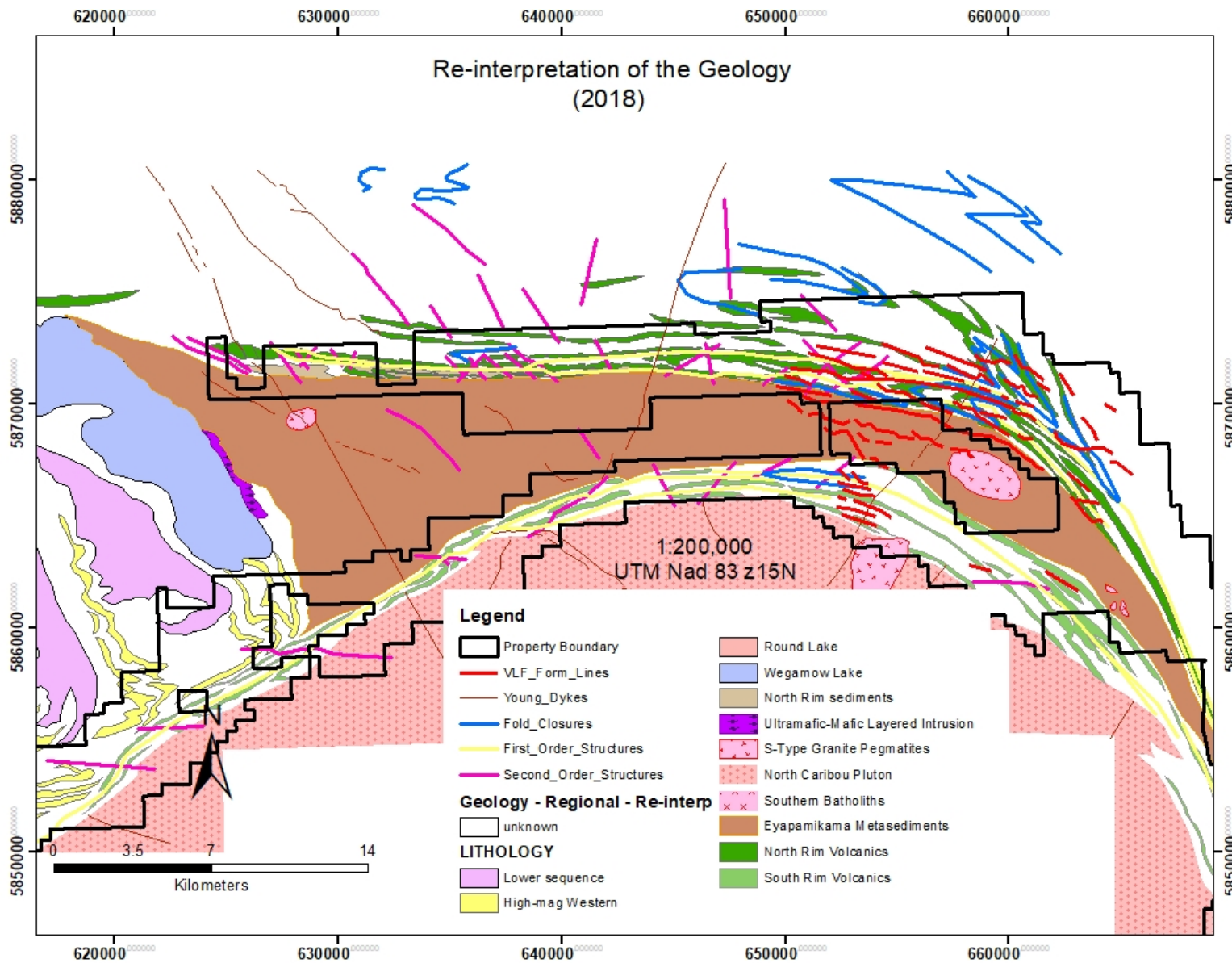


Figure 14. re-interpretation of geophysics and geology to provide further information regarding structures. See Appendix VI for detailed maps

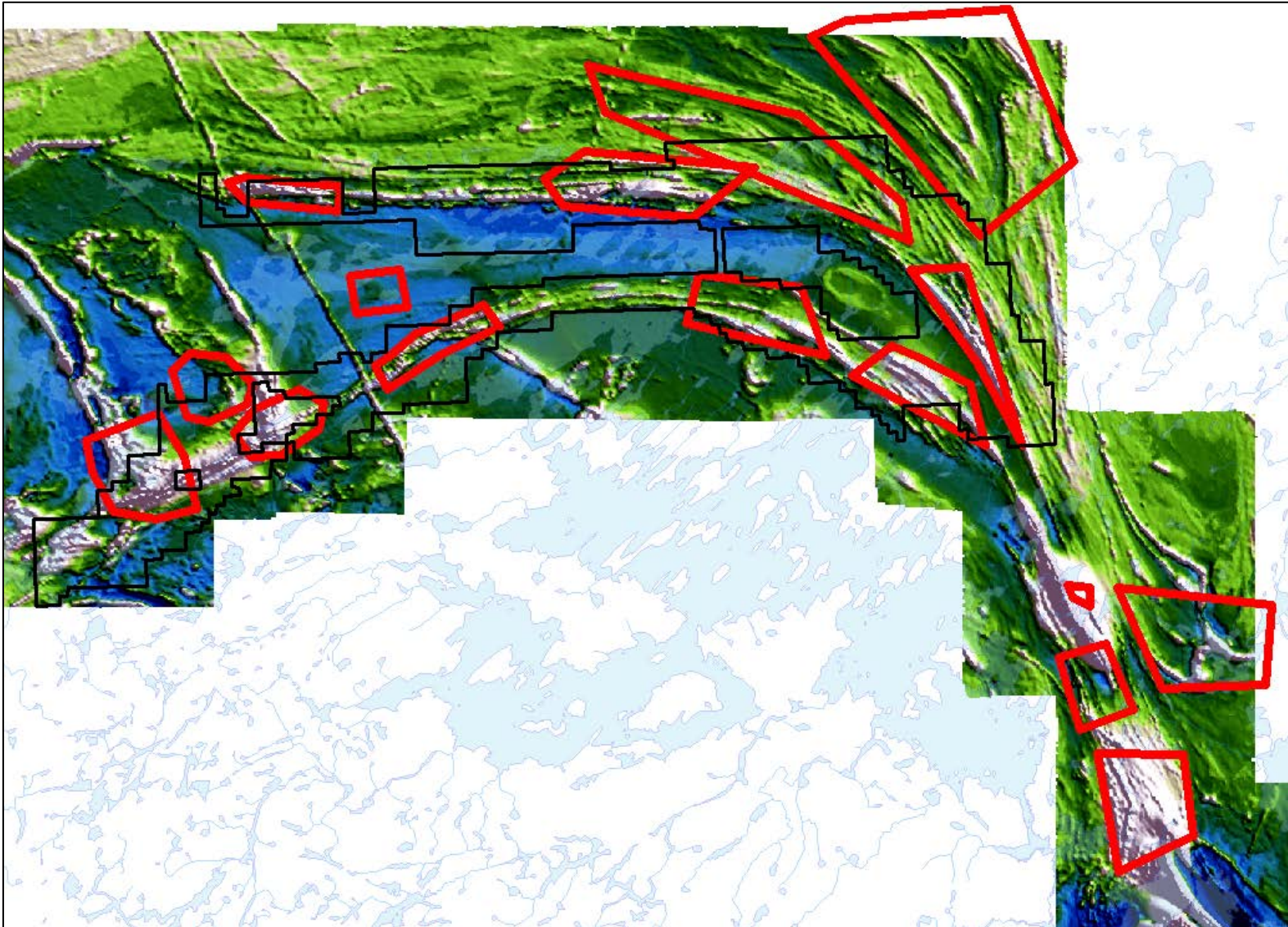


Figure 15: Priority areas for follow-up field work in 2018. Areas targeted as a result of compilation and re-interpretation of previous data.

Table of Claims

Table 5 Below lists all claims in the North Caribou Greenstone Belt claim group on which field exploration activities were conducted during the 2018 exploration program.

Claim Number	Cell Type	Claim Status	Date Issued	Date Due	Holder
506197	Single Cell Mining Claim	Active	2018-04-10	2020-04-10	GOLDCORP CANADA LTD.
506620	Single Cell Mining Claim	Active	2018-04-10	2020-04-10	GOLDCORP CANADA LTD.
507098	Single Cell Mining Claim	Active	2018-04-10	2020-04-10	GOLDCORP CANADA LTD.
507406	Single Cell Mining Claim	Active	2018-04-10	2020-04-10	GOLDCORP CANADA LTD.
508230	Single Cell Mining Claim	Active	2018-04-10	2020-04-10	GOLDCORP CANADA LTD.
509265	Single Cell Mining Claim	Active	2018-04-10	2020-04-10	GOLDCORP CANADA LTD.
507109	Single Cell Mining Claim	Active	2018-04-10	2020-04-10	GOLDCORP CANADA LTD.
509932	Single Cell Mining Claim	Active	2018-04-10	2020-04-10	GOLDCORP CANADA LTD.
507453	Single Cell Mining Claim	Active	2018-04-10	2020-04-10	GOLDCORP CANADA LTD.
507251	Single Cell Mining Claim	Active	2018-04-10	2020-04-10	GOLDCORP CANADA LTD.
506510	Single Cell Mining Claim	Active	2018-04-10	2020-04-10	GOLDCORP CANADA LTD.
507387	Single Cell Mining Claim	Active	2018-04-10	2020-04-10	GOLDCORP CANADA LTD.
509258	Single Cell Mining Claim	Active	2018-04-10	2020-04-10	GOLDCORP CANADA LTD.
506705	Single Cell Mining Claim	Active	2018-04-10	2020-04-10	GOLDCORP CANADA LTD.
506350	Single Cell Mining Claim	Active	2018-04-10	2020-04-10	GOLDCORP CANADA LTD.
507555	Single Cell Mining Claim	Active	2018-04-10	2020-04-10	GOLDCORP CANADA LTD.
507463	Single Cell Mining Claim	Active	2018-04-10	2020-04-10	GOLDCORP CANADA LTD.
507578	Single Cell Mining Claim	Active	2018-04-10	2020-04-10	GOLDCORP CANADA LTD.
507449	Single Cell Mining Claim	Active	2018-04-10	2020-04-10	GOLDCORP CANADA LTD.
509084	Single Cell Mining Claim	Active	2018-04-10	2020-04-10	GOLDCORP CANADA LTD.
507535	Single Cell Mining Claim	Active	2018-04-10	2020-04-10	GOLDCORP CANADA LTD.
506109	Single Cell Mining Claim	Active	2018-04-10	2020-04-10	GOLDCORP CANADA LTD.
508106	Single Cell Mining Claim	Active	2018-04-10	2020-04-10	GOLDCORP CANADA LTD.
507548	Single Cell Mining Claim	Active	2018-04-10	2020-04-10	GOLDCORP CANADA LTD.
506336	Single Cell Mining Claim	Active	2018-04-10	2020-04-10	GOLDCORP CANADA LTD.
509061	Single Cell Mining Claim	Active	2018-04-10	2020-04-10	GOLDCORP CANADA LTD.
507102	Single Cell Mining Claim	Active	2018-04-10	2020-04-10	GOLDCORP CANADA LTD.
508141	Single Cell Mining Claim	Active	2018-04-10	2020-04-10	GOLDCORP CANADA LTD.
506524	Single Cell Mining Claim	Active	2018-04-10	2020-04-10	GOLDCORP CANADA LTD.
507570	Single Cell Mining Claim	Active	2018-04-10	2020-04-10	GOLDCORP CANADA LTD.
508222	Single Cell Mining Claim	Active	2018-04-10	2020-04-10	GOLDCORP CANADA LTD.
507414	Single Cell Mining Claim	Active	2018-04-10	2020-04-10	GOLDCORP CANADA LTD.
506175	Single Cell Mining Claim	Active	2018-04-10	2020-04-10	GOLDCORP CANADA LTD.
507445	Single Cell Mining Claim	Active	2018-04-10	2020-04-10	GOLDCORP CANADA LTD.
505573	Single Cell Mining Claim	Active	2018-04-10	2020-04-10	GOLDCORP CANADA LTD.
508057	Single Cell Mining Claim	Active	2018-04-10	2020-04-10	GOLDCORP CANADA LTD.
510142	Single Cell Mining Claim	Active	2018-04-10	2020-04-10	GOLDCORP CANADA LTD.
507104	Single Cell Mining Claim	Active	2018-04-10	2020-04-10	GOLDCORP CANADA LTD.
506192	Single Cell Mining Claim	Active	2018-04-10	2020-04-10	GOLDCORP CANADA LTD.
507091	Single Cell Mining Claim	Active	2018-04-10	2020-04-10	GOLDCORP CANADA LTD.
508108	Single Cell Mining Claim	Active	2018-04-10	2020-04-10	GOLDCORP CANADA LTD.
507262	Single Cell Mining Claim	Active	2018-04-10	2020-04-10	GOLDCORP CANADA LTD.

Description of Program

Prospecting activities were undertaken by Musselwhite Mine geologists Stephen Miller and David Murray with various summer students and geological technicians serving as field assistants. Typically, one team composed of one geologist and one field assistant were conducting field activities per day. field activities were conducted over 40 days between June 1st to September 30th, 2018. The remoteness of the project area required the employment of a Bell 204 helicopter for the transportation of field crews. Helicopter transportation services were provided by Wisk Air Helicopters of Thunder Bay, Ontario.

Standard procedure was to sample and describe all occurrences of outcropping bedrock encountered. Rock samples were shipped to Activation Laboratories Ltd. in Dryden, Ontario for whole rock analysis by 4 acid ICP-MS and analysis for gold by fire assay. Reference samples of all rocks interpreted to be potentially metalliferous were retained for additional study.

Samples were collected using a standard geological rock hammers or small sledge hammers. A short-handled spade or grub hoe were often used to uncover poorly exposed outcrops by removing moss or digging out the margins of the exposure.

The staging area for all field activities was Goldcorp Canada Ltd's Musselwhite Mine. All personnel involved were lodged at the mine camp.

Throughout the program three days were spent traversing and sampling in areas immediately adjacent to the NCGB claim group. It was necessary to examine the adjacent geological units and their contacts to create a comprehensive understanding of the geology within the claim group and maximize the effectiveness of our exploration planning.

Additionally, a biogeochemical orientation survey was conducted across a location along the North Caribou River Fault proximal to historical gold mineralization in bedrock. The purpose of this small orientation survey was to test the viability of this method as a large-scale geochemical exploration tool.

The survey was planned in two phases, a "shotgun style" high density sampling program in the immediate vicinity of the known bedrock mineralization to identify the geochemical signature of auriferous bedrock. Phase two consisted of two parallel lines across the South Rim metavolcanic assemblage perpendicular to the mineralized trend and the North Caribou River Fault. The sample media for both phases was labrador tea stems, chosen for its ubiquitous occurrences and demonstrated success by others. Samples along the parallel survey lines were collected at an approximate spacing of 30m, dependent on plant availability. For a subset of the samples both stems and leaves of the plants were analyzed for comparison. Figure 14 below displays the distribution of samples collected and media analyzed as well as their proximity to bedrock samples containing anomalous gold assay values.

Samples were collected by clipping the plant of at ground level with a standard pair of garden shears. Each sample consisted of a bundle of twigs approximately 5 inches long and 4 inches in diameter. Each sample was stored in a breathable cloth bag and marked with a unique sample ID. Samples were shipped to ALS Canada Ltd in Vancouver British Columbia for chemical analysis. Preparation involved separation of the leaves and stems, and ashing of the selected media in a low temperature kiln for 24 hours. The resulting ashes undergo an acid digestion and ICP-MS analysis as well as fire assay. the raw data is leveled to the dry weight of samples prior to ashing.

Laboratory oversight and reference samples were provided by Colin Dunn of Colin Dunn Consulting.

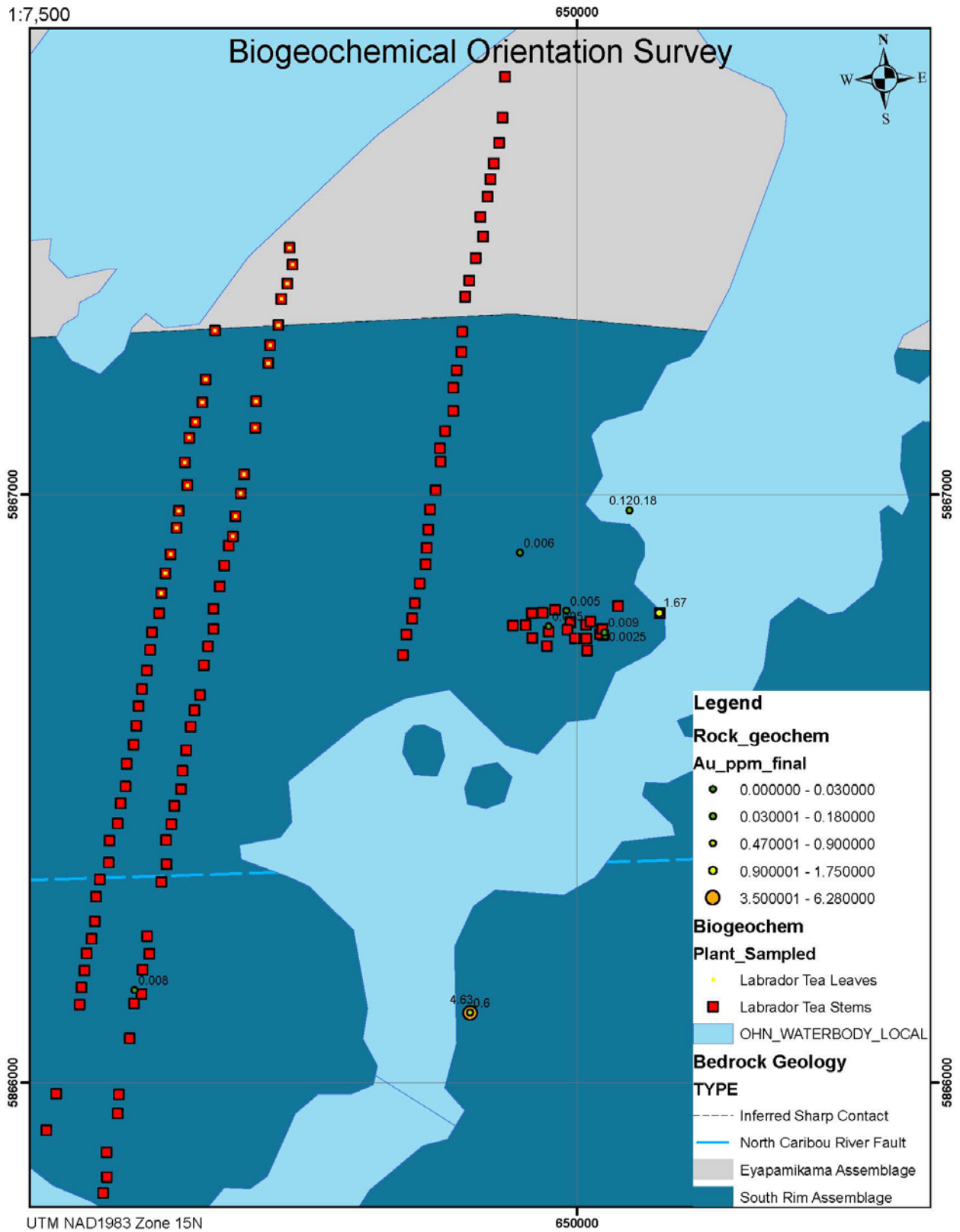


Figure 16. Map of biogeochemical samples collected during the 2018 NCGB orientation survey. bedrock samples in the area are labelled by G/mt Au. biogeochemical samples are expressed by type of media sampled.

Results and Conclusions

As one can observe in Figure 17 below. The labrador tea biogeochemical samples collected ultimately failed to indicate any geochemical signature of the known bedrock mineralization. Additionally, there is only a single sample which returned anomalous gold values, the significance of which is difficult to determine without a comparative geochemical signature over known bedrock mineralization.

207 Lithogeochemical bedrock samples were collected from within or adjacent to the NCGB claim group. Table 6 below contains the locations of these samples in Latitude Longitude decimal degrees as well as field observations of each bedrock exposure and fire assay values for gold. A complete table of whole rock ICP-MS Data for each sample can be observed in Appendix IX. Additionally, Appendix VIII contains maps of sample locations as well as traverses.

An examination of Table 6 reveals six sample containing notable grades of gold. These samples will be discussed in detail below and are depicted in figure 16.

E885508 - 2.38g/t: The material sampled is described as a fine grained, porphyroblastic, biotite garnet schist. Moderate compositional banding is interpreted to represent primary sedimentary bedding. On the outcrop scale there are intercalated beds of conglomerate. Localized veins included in the sample are parallel to compositional banding and contains a 5-10% modal abundance of arsenopyrite. This sample comes from an area of the North Rim assemblage where referred to as McGruer Lake which has been extensively explored since the 1960's. Historically high-grade Au Assays were obtained from grab and channel samples of arsenopyrite bearing quartz veins in banded iron formation.

It is significant that the sample collected from the 2018 exploration program occurred in veins of similar composition the those which were the focus of historical exploration but in a different lithological host. This occurrence creates the need for new considerations on the controls of historical mineralization and expands the economic potential of the area beyond the limited occurrences of banded iron formation.

E886103 – 0.396g/t, E886104 – 2.24g/t, E886105 – 0.701g/t: These samples were collected from adjacent to historical channel samples through a massive 10-30 cm wide quartz vein. The vein is hosted in an intensely sheared mafic metavolcanic unit. The vein mass is described as grey to white and weakly translucent. There is pervasive red hematite staining throughout. The vein contains fine grained oxidized pyrite small modal abundances and Trace chalcopyrite. The historical channels assayed up to 2.0g/t. these samples are located in the South Rim metavolcanic assemblage within the North Caribou River Fault.

These results are significant not only because it confirms the historical anomaly, but because this vein is mineralogically and structurally identical to other veins with above background gold values observed over a 10km strike length along the North Caribou River Fault. These mineralogically identical, auriferous, vein sets over such a great strike length along the fault potentially indicate that a very large belt scale mineralizing system may exist.

E885754 – 1.67g/t: This sample is described as Intensely silicified chemical-clastic metasedimentary rock. Melanocratic grey-brown, very fine grained. Appears to be abundant chert banding. Fine to medium grained pyrite in clastic beds. This rock is strongly strained with a well-developed shear fabric striking 110 degrees with a subvertical dip. This outcrop is located near the easternmost known extents of the North Caribou River Fault. It is believed that this shear fabric is sympathetic to the fault zone. Additional sampling of this horizon has taken place during historical exploration activities with lower but consistently anomalous values. The biogeochemical orientation survey described above was planned with this sample in consideration (Figure 17)

E885533 - 0.396g/t: Assay returned from a quartz vein hosted within a sheared contact between schistose clastic metasedimentary unit of amphibolite grade and a foliated unit interpreted to be an intermediate tuff. The tuff is characterized as having 1-2mm lapilli in an aphanitic groundmass. This sample was collected from an area of known mineralization and historical exploration referred to as Stanley Lake. This area lies along the central part of the North Rim Fault between Arseno Lake to the West (discussed in earlier sections) and McGruer Lake to the East.

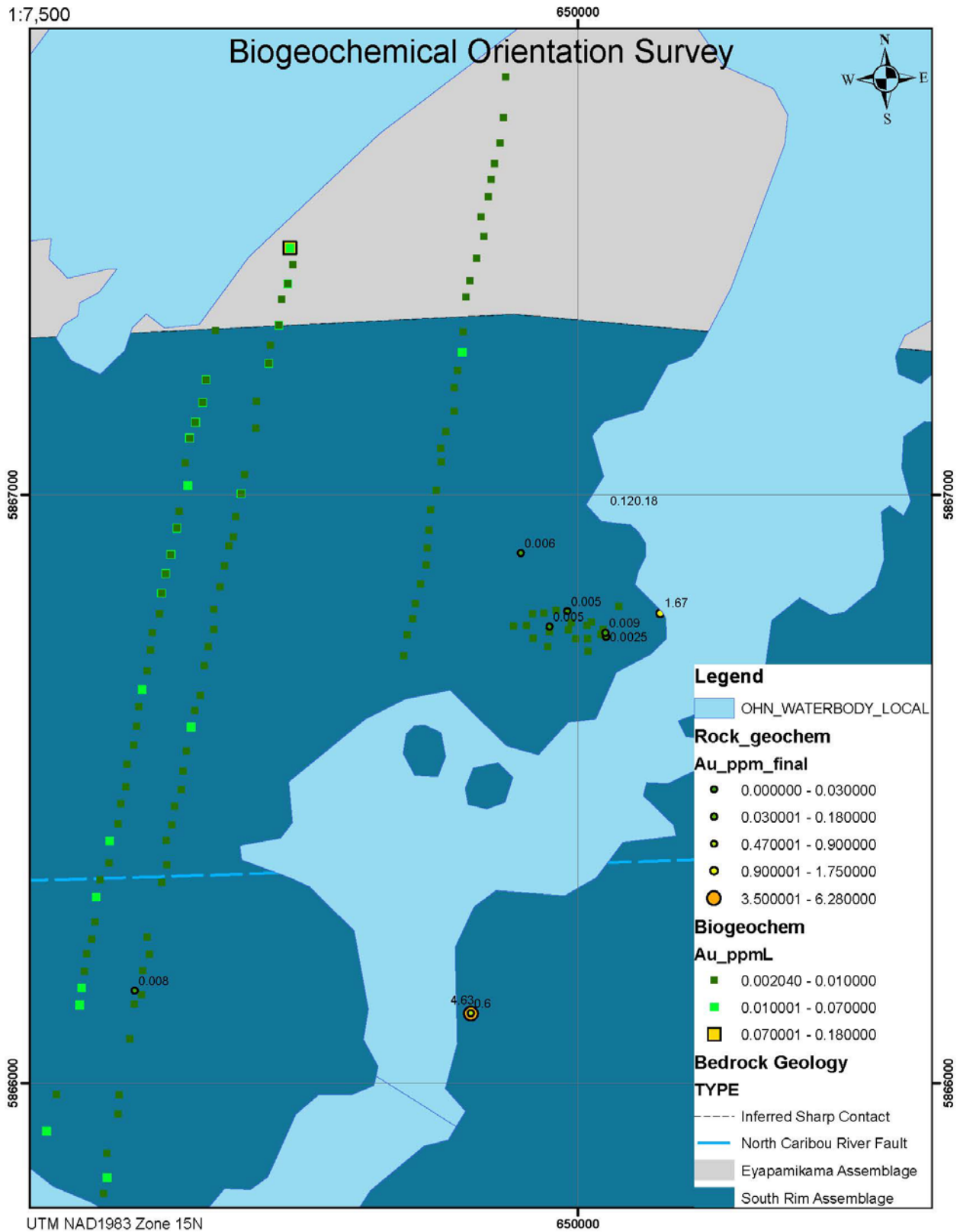


Figure 17. Au in labrador tea biogeochemical samples and outcropping bedrock.

Recommendations

Nearly all notable precious metal assays obtained through the 2018 exploration of the NCGB claim group as well as the Arseno Lake claim group occur along the North Rim Fault A.K.A. Active Zone or the North Caribou River Fault. It is also worth noting that these occurrences are present over significant strike lengths of both structures. The presence of anomalous metal values over 10's of kilometers along both structures may indicate that one or more large mineralizing systems exist. For these reasons it is recommended that these two structures be the focus of future exploration efforts.

Given the limited exposure of outcropping bedrock in the region two initial phases of exploration along these structures is recommended. Firstly, a campaign of high-resolution bedrock and surficial geology mapping should be undertaken over each structure along the strike length of each structure known to contain anomalous metal occurrences. This program should include geochemical and petrophysical analysis of all outcropping bedrock encountered.

Phase 2 involves methods to explore areas of these structures which are hidden under cover. This may involve geochemical methods, geophysical methods or both however, the exploration should be chosen through careful and expert analysis of the surficial geology and petrophysical data collected in phase 1. A comprehensive understanding of surficial sample media is critical in the appropriate selection of geochemical exploration methods. Therefore, without comprehensive mapping the author is not willing to recommend a specific method at this time. Similarly, there is a poor understanding of the petrophysical characteristics of the mineralization of interest as well as the geological units in this region. Therefore, the response of these units to individual geophysical exploration methods cannot be precisely anticipated. A petrophysical characterization of the metalliferous rocks will aid in refining which, if any, geophysical methods are likely to offer the greatest opportunity for successful detection of metal bearing rocks under cover.

Lastly, it is not recommended that biogeochemical sampling of Labrador tea be any further pursued as an exploration tool in the North Caribou Greenstone belt claim group. It is considered probably that the limited distribution of the plants root system and relatively short lifespan contributed to the failures. It is the opinion of the author that biogeochemical sampling of vegetation still has potential to be a useful tool; more surveys of different plant materials should be undertaken. It would be prudent to conduct these surveys over the largest and most well delineated bedrock anomalies available.

Table 5. Table of Lithogeochemical Samples Collected from the NCGB Claim group. Locations are reported in Longitude and Latitude decimal degrees.

Date	Sample ID	Claim Number	Geologist	Rock Type	Veining Assemblage	Vein Type	Vein Azimuth	Vein Dip	Fabric	Fabric Intensity	Fabric Azimuth	Fabric Dip	Fault	Fault Intensity	Fault Azimuth	Fault Dip	Magnetic Susceptibility	x	y	Au g mt
6/14/2018	E881963	507463	D.Murray	Mafic Metavolcanic	Quartz				Foliation	Moderate	95	85					0.491	-90.981241	52.98006357	0.0025
6/22/2018	E885501	507548	S.Miller	Clastic Metasediment					Foliation	Moderate	280	80					0.133	-90.7476445	52.96257053	0.0025
6/22/2018	E885502	507548	S.Miller	Amphibolite													0.54	-90.74643682	52.96267365	0.011
6/22/2018	E885503	507548	S.Miller	Clastic Metasediment					Foliation	Moderate	276	78					0.068	-90.74592147	52.96304933	0.005
6/22/2018	E885504	507548	S.Miller	Gabbro													0.474	-90.74588732	52.96314482	0.0025
6/22/2018	E885505	507548	S.Miller	Argillite	Quartz	Planar	280		Cleavage	Moderate	280						0.333	-90.74475638	52.96318557	0.016
6/22/2018	E885506	507548	S.Miller	Quartz Vein	Quartz	Planar	286										0.007	-90.7447571	52.96317017	0.0025
6/22/2018	E885507	507548	S.Miller	Clastic Metasediment	Quartz	Planar	280		Primary Bedding	Moderate	280						0.24	-90.74834905	52.96583807	0.05
6/22/2018	E885508	507548	S.Miller	Garnet Biotite Schist	Quartz	Flooding	100	80	Primary Bedding	Moderate	100	80					0.188	-90.74884958	52.96612457	2.38
6/22/2018	E885509	507535	S.Miller	Graphitic Iron Formation					Primary Bedding	Moderate	120	80					0.389	-90.7518309	52.96551132	0.011
6/22/2018	E885511	507535	S.Miller	Clastic Metasediment					Foliation	Moderate	100	78					0.451	-90.75184558	52.96553143	0.007
6/22/2018	E885512	507535	S.Miller	Chert Magnetite BIF					Primary Bedding	Moderate	92	85					109	-90.75157088	52.965264	0.0025
6/22/2018	E885513	507535	S.Miller	Clastic Metasediment					Foliation	Moderate	92	85					0.325	-90.75160857	52.9652132	0.0025
6/23/2018	E885514		S.Miller	Gabbro									Shear Zone	Moderate	290		0.348	-90.75833245	52.96239112	0.021
6/24/2018	E885515	508124	S.Miller	Amphibolite	Quartz	Planar	274	85	Foliation	Intense	274	85					0.706	-90.8270763	52.98134933	0.0025
6/24/2018	E885516	508124	S.Miller	Mafic Metavolcanic	Quartz	Massive	280		Foliation	Moderate	275		Shear Zone	Moderate	280		0.381	-90.8262291	52.98068822	0.0025
6/24/2018	E885517	508124	S.Miller	Quartz Vein	Quartz	Massive	280										0.017	-90.82631278	52.98070178	0.0025
6/24/2018	E885518	508124	S.Miller	Mafic Metavolcanic	Quartz	Massive	90		Foliation	Intense	97	82					0.836	-90.82657198	52.98048582	0.006
6/24/2018	E885519	508124	S.Miller	Mafic Metavolcanic					Foliation	Moderate	96						0.515	-90.82579648	52.98086692	0.0025
6/24/2018	E885521	508232	S.Miller	Gabbro					Foliation	Weak	110						0.362	-90.82122712	52.97622208	0.0025
6/25/2018	E885522	508109	S.Miller	Argillite					Foliation	Intense	296	80	Shear Zone	Moderate	296	80	0.391	-90.82628463	52.9711773	0.006
6/25/2018	E885523	508109	S.Miller	Argillite					Primary Bedding	Intense	296	80	Shear Zone	Intense	296	80	0.441	-90.8262569	52.97119172	0.008
6/25/2018	E885524	508109	S.Miller	Chert Magnetite BIF	Quartz	Planar			Primary Bedding	Moderate	265	79	Shear Zone	Moderate	265	80	612	-90.82602488	52.97147945	0.005
6/25/2018	E885525	508109	S.Miller	Garnet Amphibole IF	Quartz	Planar	98		Primary Bedding	Moderate	98						0.318	-90.8260109	52.97140722	0.0025
6/25/2018	E885526	508109	S.Miller	Garnet Amphibole IF					Foliation	Intense	265	79	Shear Zone	Intense	265	79	0.35	-90.8259697	52.97144092	0.0025
6/25/2018	E885527	508236	S.Miller	Chert Magnetite BIF					Primary Bedding	Moderate	100						26.1	-90.82488535	52.97132647	0.0025
6/25/2018	E885528	508236	S.Miller	Clastic Metasediment					Primary Bedding	Moderate	100	80					0.131	-90.82492968	52.9713267	0.0025
6/25/2018	E885529	508236	S.Miller	Clastic Metasediment					Foliation	Moderate	130						0.455	-90.82437575	52.97143653	0.0025
6/25/2018	E885531	508236	S.Miller	Chert Magnetite BIF					Primary Bedding	Moderate	85	85					664	-90.82334433	52.97131838	0.0025
6/25/2018	E885532	508236	S.Miller	Clastic Metasediment					Foliation	Intense	85	85					0.545	-90.82343687	52.97128578	0.0025
6/25/2018	E885533	508236	S.Miller	Quartz Vein	Quartz	Flooding	258	82	Foliation	Moderate	258	82	Shear Zone	Moderate	258	82	0.2	-90.82471307	52.97205552	0.396
6/26/2018	E885534	508109	S.Miller	Chert					Primary Bedding	Moderate	284	82		Weak	284		0.759	-90.8275107	52.97200845	0.0025
6/26/2018	E885535	508109	S.Miller	Clastic Metasediment					Foliation	Intense	284	84	Shear Zone	Moderate	284	84	0.337	-90.82743727	52.97201278	0.0025
6/26/2018	E885536	508108	S.Miller	Clastic Metasediment					Foliation	Moderate	276	72					0.325	-90.8278508	52.9701722	0.005
6/26/2018	E885537	508109	S.Miller	Actinolite Schist					Primary Bedding	Moderate	266	70					0.61	-90.82872605	52.97167625	0.01
6/26/2018	E885538	508109	S.Miller	Clastic Metasediment	Quartz	Flooding	268	78	Foliation	Moderate	268	78					0.209	-90.82873642	52.971634	0.0025
6/26/2018	E885539	508109	S.Miller	Clastic Metasediment					Foliation	Moderate	280	88					0.28	-90.82930692	52.97190252	0.0025
6/26/2018	E885541	508106	S.Miller	Clastic Metasediment		Flooding			Foliation	Moderate	100	74					0.358	-90.83657772	52.97425792	0.0025
6/26/2018	E885542	508109	S.Miller	Gabbro	Quartz	Flooding			Foliation	Moderate	110	80	Shear Zone	Moderate	110	80	0.323	-90.83003155	52.97352053	0.0025
6/27/2018	E885543	508205	S.Miller	Mafic Metavolcanic	Quartz	Flooding	96	84	Foliation	Moderate	112	78	Shear Zone	Moderate	96	84	1	-90.80119193	52.98065165	0.0025
6/27/2018	E885544	508198	S.Miller	Mafic Metavolcanic	Quartz	Planar	104	82	Foliation	Weak	104	82					1.2	-90.7956673	52.98118842	0.0025
6/28/2018	E885545	508233	S.Miller	Clastic Metasediment	Quartz	Planar	260	82	Primary Bedding	Moderate	260	82					0.446	-90.79859442	52.97183008	0.017
6/28/2018	E885546	508202	S.Miller	Mafic Metavolcanic					Foliation	Moderate	278	86	Shear Zone	Moderate	278	86	0.686	-90.80021853	52.97144327	0.0025
6/28/2018	E885547	508202	S.Miller	Clastic Metasediment	Quartz-Feldspar	Planar	258	80	Primary Bedding	Weak	258	80					0.416	-90.8004095	52.97133103	0.007

6/28/2018	E885548	508202	S.Miller	Clastic Metasediment					Primary Bedding	Moderate	276	78					0.432	-90.80044023	52.97132512	0.0025
6/28/2018	E885549	508202	S.Miller	Mafic Metavolcanic	Quartz	Planar	286	88	Foliation	Moderate	286	88					0.465	-90.80082185	52.9712501	0.0025
6/29/2018	E885551	508202	S.Miller	Gabbro					Foliation	Weak	276	89					47.1	-90.80508135	52.97365708	0.0025
6/29/2018	E885552	508222	S.Miller	Clastic Metasediment	Quartz	Stringer			Foliation	Weak	182						0.045	-90.80405728	52.9696136	0.0025
6/29/2018	E885553	508195	S.Miller	Garnet Amphibole IF					Primary Bedding	Moderate	96	84					0.39	-90.80820217	52.97144243	0.0025
6/29/2018	E885554	508195	S.Miller	Clastic Metasediment					Foliation	Moderate	92	88					0.432	-90.80852785	52.97142557	0.0025
6/29/2018	E885555	508195	S.Miller	Chert Magnetite BIF					Primary Bedding	Moderate	130	88					24.1	-90.80925345	52.97149008	0.0025
6/29/2018	E885556	508195	S.Miller	Garnet Amphibole IF					Primary Bedding	Moderate	120	88					1.31	-90.8092097	52.9714712	0.0025
6/29/2018	E885557	508195	S.Miller	Clastic Metasediment					Foliation	Moderate	120	88					0.384	-90.80920527	52.97149567	0.0025
6/29/2018	E885558	508195	S.Miller	Chert Magnetite BIF					Primary Bedding	Moderate	88	88					31.2	-90.81043222	52.97156378	0.0025
6/29/2018	E885559	508195	S.Miller	Garnet Grunerite BIF					Primary Bedding	Moderate	88	88					13.6	-90.81044427	52.9716011	0.0025
6/30/2018	E885561	508195	S.Miller	Clast Supported Conglomerate	Quartz	Planar			Foliation	Moderate	264	78					0.236	-90.81045128	52.97132578	0.038
6/30/2018	E885562	508195	S.Miller	Chert Magnetite BIF					Primary Bedding	Moderate	96	88					117	-90.81085233	52.97156087	0.015
6/30/2018	E885563	508195	S.Miller	Clastic Metasediment	Quartz	Flooding	95		Primary Bedding	Moderate	80	80					0.289	-90.8108934	52.9715303	0.0025
6/30/2018	E885564	508195	S.Miller	Chert Magnetite BIF					Primary Bedding	Moderate	102	86					83	-90.81113668	52.97156832	0.058
6/30/2018	E885565	508195	S.Miller	Garnet Amphibole IF					Primary Bedding	Moderate	90	86					1.33	-90.81198795	52.9716988	0.005
6/30/2018	E885566	508195	S.Miller	Chert Magnetite BIF					Primary Bedding	Moderate	90	86					251	-90.81196117	52.9717177	0.0025
6/30/2018	E885567	508195	S.Miller	Garnet Amphibole IF					Foliation	Moderate	90	86					0.566	-90.81196525	52.97170953	0.0025
6/30/2018	E885568	508195	S.Miller	Chert Magnetite BIF					Primary Bedding	Moderate	90	86					2.08	-90.81194192	52.9716711	0.014
7/22/2018	E885569	506757	S.Miller	Mafic Metavolcanic					Primary Bedding	Weak	118	68					0.841	-90.5909937	52.88890348	0.01
7/22/2018	E885571	506757	S.Miller	Amphibolite					Foliation	Moderate	124	76					0.454	-90.59152213	52.88919833	0.007
7/23/2018	E885572	507406	S.Miller	Mafic Metavolcanic	Quartz	Planar	124	76	Foliation	Moderate	124	76	Shear Zone	Weak	124	76	0.607	-90.57731515	52.88444028	0.0025
7/23/2018	E885573	507406	S.Miller	Mafic Metavolcanic	Quartz	Flooding	102		Foliation	Moderate	136	76					0.623	-90.57692848	52.8843855	0.0025
7/23/2018	E885574	507406	S.Miller	Quartz Vein	Quartz	Massive	138										0.006	-90.57657955	52.88429095	0.0025
7/23/2018	E885575	507406	S.Miller	Mafic Metavolcanic					Foliation	Weak	98	30					0.444	-90.5763055	52.88416138	0.0025
7/23/2018	E885576	507406	S.Miller	Mafic Metavolcanic					Foliation	Intense	134	68					0.278	-90.58029932	52.88400247	0.0025
7/23/2018	E885577	507406	S.Miller	Mafic Metavolcanic	Quartz	Planar	136	72	Foliation	Moderate	136	72					0.429	-90.57714282	52.88395868	0.0025
7/24/2018	E885578	505573	S.Miller	Mafic Metavolcanic	Quartz	Planar	144	60	Foliation	Moderate	144	60					0.733	-90.56905737	52.8783211	0.0025
7/24/2018	E885579	505573	S.Miller	Mafic Metavolcanic	Quartz	Crack-Sea	166		Foliation	Moderate	144	68					0.363	-90.56911152	52.87848495	0.0025
7/24/2018	E885581	505573	S.Miller	Clastic Metasediment	Quartz	Planar	148		Foliation	Moderate	148						0.628	-90.56934857	52.87873072	0.006
7/24/2018	E885582	505573	S.Miller	Mafic Metavolcanic					Foliation	Moderate	144	66					0.352	-90.56961628	52.87895477	0.0025
7/24/2018	E885583	505573	S.Miller	Clastic Metasediment					Foliation	Moderate	141						0.375	-90.57007422	52.87895225	0.0025
7/24/2018	E885584	505573	S.Miller	Mafic Metavolcanic					Foliation	Moderate	142	78					1.16	-90.57053207	52.8790257	0.005
7/24/2018	E885585	507414	S.Miller	Clastic Metasediment					Foliation	Moderate	126	68					0.307	-90.57080727	52.87927179	0.0025
7/24/2018	E885586	507414	S.Miller	Mafic Dyke					Foliation	Moderate	126						0.55	-90.57081267	52.8797541	0.005
7/24/2018	E885587	507414	S.Miller	Mafic Metavolcanic	Quartz	Planar	132	70	Foliation	Moderate	132	70					0.952	-90.57058923	52.88008125	0.005
7/24/2018	E885588	507414	S.Miller	Mafic Metavolcanic					Foliation	Moderate	128						0.661	-90.57128983	52.88036372	0.0025
7/24/2018	E885589	507414	S.Miller	Mafic Metavolcanic					Foliation	Weak	144						1.11	-90.57006055	52.87997977	0.0025
7/24/2018	E885591	507414	S.Miller	Mafic Metavolcanic					Foliation	Moderate	138						0.084	-90.56900005	52.88007352	0.0025
7/24/2018	E885592	507389	S.Miller	Mafic Metavolcanic					Foliation	Moderate	141						0.626	-90.56872988	52.87970885	0.0025
7/24/2018	E885593	507414	S.Miller	Gabbro						Weak	106						0.649	-90.56885595	52.8792138	0.0025
7/26/2018	E885594	508069	S.Miller	Garnet Amphibole IF					Primary Bedding	Moderate	144	78					0.317	-90.55879213	52.93145053	0.0025
7/26/2018	E885596	508069	S.Miller	Mafic Metavolcanic	Quartz-carbonate	Planar	176		Foliation	Intense	176						0.458	-90.55877663	52.9314706	0.0025
7/26/2018	E885597	508069	S.Miller	Garnet Amphibole IF	Quartz	Flooding	140		Primary Bedding	Moderate	140						3.48	-90.55825358	52.9311939	0.0025
7/26/2018	E885598	508069	S.Miller	Garnet Amphibole IF	Quartz	Flooding	140		Primary Bedding	Moderate	140						13.4	-90.55832528	52.93122342	0.0025
7/26/2018	E885599	508039	S.Miller	Graphitic Iron Formation					Primary Bedding	Moderate	156						0.388	-90.55914387	52.92897148	0.0025
6/14/2018	E885632	507447	D.Murray	Mafic Metavolcanic					Foliation	Intense	110	90					1.03	-91.00690062	52.97713118	0.012
6/14/2018	E885633	507473	D.Murray	Gabbro													0.701	-91.00529218	52.97915763	0.005
6/14/2018	E885634	507471	D.Murray	Mafic Metavolcanic						Shear Zone	Moderate	275	88				0.342	-90.98329527	52.97871343	0.0025
6/14/2018	E885635	507462	D.Murray	Gabbro													0.693	-90.98222215	52.97917433	0.017

6/17/2018	E885636	507262	D.Murray	Pyroclastic Breccia					Foliation	Intense	271	85			0.4	-90.97295747	52.97664317	0.03
6/17/2018	E885637	507262	D.Murray	Chert Magnetite BIF					Primary Bedding	Moderate	271	80			46.2	-90.97297903	52.9766713	0.0025
6/17/2018	E885638	507262	D.Murray	Quartz Vein					Foliation	Intense	91	85			3.49	-90.9729493	52.97668327	0.029
6/17/2018	E885639	507262	D.Murray	Mafic Dyke											0.298	-90.97280738	52.97714518	0.006
6/17/2018	E885641	507262	D.Murray	Mafic Metavolcanic					Foliation	Moderate	75	85			1.4	-90.97275135	52.97710123	0.006
6/17/2018	E885642	507262	D.Murray	Quartz Vein		Planar	88	85							2.52	-90.9742827	52.97663807	0.026
6/17/2018	E885643	507262	D.Murray	Mafic Metavolcanic					Foliation	Intense	89	85			4.11	-90.97427588	52.97664673	0.017
6/17/2018	E885644	507262	D.Murray	Mafic Metavolcanic					Foliation	Moderate	84	85			0.58	-90.97482208	52.97635553	0.0025
6/17/2018	E885645	507499	D.Murray	Pyroclastic Breccia					Foliation	Moderate	265	80			0.098	-90.97608503	52.97593782	0.028
7/19/2018	E885646	506509	S.Miller	Clastic Metasediment					Foliation	Weak	102	82			0.334	-90.71910593	52.9222141	0.005
7/19/2018	E885647	506547	S.Miller	Mafic Metavolcanic					Cleavage	Intense	108	78			0.533	-90.71807033	52.91732312	0.005
7/22/2018	E885648	506727	S.Miller	Mafic Metavolcanic					Foliation	Moderate	120	72	Shear Zone	Weak	120	72	52.88837908	0.006
7/22/2018	E885649	506727	S.Miller	Mafic Metavolcanic	Quartz	Flooding	144		Foliation	Moderate	124	68	Knife	Weak	228		52.88836558	0.0025
7/10/2018	E885751	509308	D.Murray	Gabbro	Quartz	Planar									0.365	-90.77982015	52.924303	0.008
7/11/2018	E885752	506336	D.Murray	Mafic Metavolcanic					Foliation	Intense	112	80			0.442	-90.76973367	52.93079653	0.006
7/11/2018	E885753	506367	D.Murray	Mafic Metavolcanic									Shear Zone	Intense	110	80	52.92988355	0.005
7/11/2018	E885754	506367	D.Murray	Clastic Metasediment	Quartz	Replacement			Foliation	Intense	110	80	Shear Zone	Intense	110	80	52.92980795	1.67
7/13/2018	E885755	506367	D.Murray	Mafic Metavolcanic	Quartz	Stringer									0.579	-90.7676504	52.92953835	0.009
7/13/2018	E885756	506367	D.Murray	Mafic Metavolcanic	Quartz										0.603	-90.76764688	52.9294744	0.0025
7/13/2018	E885757	506336	D.Murray	Mafic Metavolcanic					Foliation	Intense	80	80			0.315	-90.7690563	52.92966215	0.005
7/13/2018	E885758		D.Murray	Granitic Gneiss											0.775	-90.38008385	52.73177175	0.0025
7/14/2018	E885833		D.Murray	Granitic Gneiss					Other	Intense	300	85			71.4	-90.58539372	53.01599232	0.0025
7/14/2018	E885834		D.Murray	Granitic Pegmatite					Other	Intense	300	85			0.56	-90.58557752	53.01616102	0.0025
7/14/2018	E885835		D.Murray	Granite											15.2	-90.58562532	53.01617188	0.0025
8/3/2018	E885836	506200	D.Murray	Quartz Vein	Quartz	Planar	350	64	Foliation						0.044	-90.99504085	52.89845095	0.163
8/3/2018	E885837	506200	D.Murray	Mafic Metavolcanic	Quartz	Planar	350	64	Foliation	Moderate	44	80	Breccia	Moderate	350	64	52.89844272	0.0025
8/3/2018	E885838	506200	D.Murray	Quartz Vein	Quartz	Planar	350	64							0.028	-90.99505157	52.89844588	0.014
8/3/2018	E885839	506200	D.Murray	Quartz Vein	Quartz	Planar	55	89							0.022	-90.99506735	52.89844893	0.0025
8/3/2018	E885841	506200	D.Murray	Mafic Metavolcanic					Foliation	Moderate	55	62			0.309	-90.99478142	52.8986035	0.0025
8/3/2018	E885842	506192	D.Murray	Mafic Dyke					Foliation	Moderate	46	60			0.436	-90.993121	52.89915535	0.0025
8/3/2018	E885843	506192	D.Murray	Mafic Dyke	Carbonate	Planar			Foliation	Intense	46	60				-90.99316582	52.89920293	0.0025
8/4/2018	E885844	506186	D.Murray	Clastic Metasediment	Carbonate	Planar	54	60	Foliation	Intense	54	60	Shear Zone	Intense	54	60	52.90308687	0.0025
8/4/2018	E885845	506186	D.Murray	Quartz Vein	Quartz	Planar	242	85							0.061	-90.99224885	52.90365355	0.006
8/4/2018	E885846	506186	D.Murray	Mafic Metavolcanic	Quartz-carbonate				Foliation	Moderate	54	60			0.16	-90.99220433	52.90364023	0.048
8/4/2018	E885847	506186	D.Murray	Mafic Metavolcanic	Quartz	Planar	54	70	Foliation	Intense	54	70			0.201	-90.99131595	52.90392105	0.0025
8/4/2018	E885848	506174	D.Murray	Mafic Metavolcanic	Quartz	Planar	236	80	Foliation	Intense	236	80	Shear Zone	Intense	236	80	52.90517255	0.006
8/4/2018	E885849	506174	D.Murray	Mafic Metavolcanic					Foliation	Intense	58	70			0.331	-90.98805432	52.90544192	0.011
7/26/2018	E885851	508039	S.Miller	Chert Magnetite BIF					Primary Bedding	Moderate	125				0.233	-90.55888847	52.9288903	0.0025
7/26/2018	E885852	508039	S.Miller	Mafic Metavolcanic	Quartz-carbonate	Planar	125	78	Foliation	Moderate	125				0.56	-90.55884593	52.92895017	0.005
7/26/2018	E885853	508039	S.Miller	Garnet Amphibole IF	Quartz-carbonate	Planar	125		Primary Bedding	Intense	125		Shear Zone	Moderate	125		52.9289439	0.005
7/26/2018	E885854	508039	S.Miller	Garnet Amphibole IF					Primary Bedding	Moderate	192	80			0.737	-90.55859208	52.92878127	0.005
7/26/2018	E885855	508039	S.Miller	Mafic Metavolcanic	Quartz	Crack-Sea	146	66	Foliation	Moderate	146	66			0.482	-90.55958952	52.92858152	0.0025
7/28/2018	E885856	508036	S.Miller	Clastic Metasediment					Foliation	Moderate	146	62			0.416	-90.54510572	52.90580537	0.005
7/28/2018	E885857	508036	S.Miller	Clastic Metasediment		Planar	156	58	Foliation	Moderate	156	58			0.646	-90.54417653	52.90549138	0.0025
7/28/2018	E885858	508036	S.Miller	Clastic Metasediment					Foliation	Moderate	148				0.456	-90.54419333	52.9053783	0.0025
7/28/2018	E885859	508070	S.Miller	Mafic Metavolcanic	Quartz	Planar	152		Foliation	Moderate	152				0.565	-90.54090513	52.90304128	0.0025
7/28/2018	E885871	508070	S.Miller	Mafic Metavolcanic	Quartz	Massive	150		Foliation	Intense	150	60	Shear Zone	Moderate	150	60	52.90282942	0.0025
7/28/2018	E885872	508070	S.Miller	Mafic Metavolcanic	Quartz	Planar	156	70	Foliation	Moderate	156	70	Shear Zone	Moderate	156	70	52.90239732	0.028
7/28/2018	E885873	508070	S.Miller	Mafic Metavolcanic	Quartz	Planar	146	58	Foliation	Intense	146	58	Shear Zone	Moderate	146	58	52.90228992	0.0025
7/28/2018	E885874	510142	S.Miller	Chert Magnetite BIF	Quartz	Replacement	134	68	Primary Bedding	Moderate	134	68			53.4	-90.53704175	52.90236515	0.0025

7/28/2018	E885875	510142	S.Miller	Chert Magnetite BIF					Primary Bedding	Intense	134	70					87.5	-90.53673928	52.90262182	0.0025
7/28/2018	E885876	510142	S.Miller	Chert Magnetite BIF					Primary Bedding	Moderate	147	74					1.34	-90.53633853	52.90247612	0.03
7/29/2018	E885877	507415	S.Miller	Clastic Metasediment	Quartz	Planar	144		Primary Bedding	Moderate	144						0.425	-90.5627652	52.91420225	0.0025
7/29/2018	E885878	507415	S.Miller	Mafic Metavolcanic					Foliation	Moderate	150						0.633	-90.56306945	52.91395185	0.0025
8/4/2018	E885913		D.Murray	Argillite													0.164	-91.02480375	52.93076928	0.0025
9/20/2018	E885914	507535	S.Miller	Clastic Metasediment	Quartz	Flooding	130	62	Foliation	Moderate	130	62	Shear Zone	Moderate	130	62	0.71	-90.75042407	52.96431088	0.005
9/20/2018	E885915	507535	S.Miller	Quartz Vein	Quartz	Massive	122	70										-90.75037127	52.96433033	0.008
9/25/2018	E886083	508195	S.Miller	Chert Magnetite BIF					Primary Bedding	Moderate							136	-90.81048762	52.97149272	0.015
8/4/2018	E886101	506175	D.Murray	Mafic Metavolcanic					Foliation	Intense	70	42					0.339	-90.98511428	52.90551472	0.0025
8/4/2018	E886102	506175	D.Murray	Mafic Metavolcanic							62	79					0.33	-90.9817427	52.90629572	0.0025
8/6/2018	E886103	508584	D.Murray	Quartz Vein	Quartz	Planar	90	80					Shear Zone	Intense	90	80	0.04	-90.88762492	52.91959772	0.396
8/6/2018	E886104	508584	D.Murray	Quartz Vein	Quartz	Planar	90	80					Shear Zone	Intense	90	80	0.021	-90.88761428	52.91959692	2.24
8/6/2018	E886105	508584	D.Murray	Quartz Vein	Quartz	Planar	90	80					Shear Zone	Intense	90	80	0.063	-90.88756165	52.91959322	0.701
8/6/2018	E886106	508584	D.Murray	Quartz Vein	Quartz	Planar	85	88	Foliation	Intense	85	88					0.485	-90.88844327	52.91906493	0.0025
8/6/2018	E886107	508584	D.Murray	Mafic Metavolcanic					Foliation	Intense	264	84	Shear Zone	Intense	264	84	0.288	-90.88793327	52.91838798	0.0025
8/7/2018	E886108	509234	D.Murray	Quartz Vein	Quartz	Massive	268	85									0.05	-91.13357205	52.84986255	0.0025
8/7/2018	E886109	509258	D.Murray	Gabbro													0.595	-91.13221533	52.85051622	0.0025
8/7/2018	E886111	509258	D.Murray	Mafic Metavolcanic					Foliation	Moderate	238	78					0.64	-91.13204515	52.85068553	0.011
8/7/2018	E886112	509258	D.Murray	Mafic Metavolcanic	Quartz	Planar	150	38									0.531	-91.13187125	52.85066082	0.01
8/7/2018	E886113	509258	D.Murray	Pillowed Metavolcanic					Foliation	Intense	54	88					0.407	-91.13170445	52.85107702	0.0025
8/7/2018	E886114	509258	D.Murray	Mafic Metavolcanic	Quartz	Planar	72	80	Foliation	Moderate	72	80					0.062	-91.13152802	52.8511036	0.0025
8/7/2018	E886115	509265	D.Murray	Mafic Metavolcanic	Quartz	Planar											0.28	-91.13101908	52.85089483	0.0025
8/7/2018	E886116	509265	D.Murray	Mafic Metavolcanic					Foliation	Intense	182	70					0.451	-91.12875477	52.85097385	0.01
8/7/2018	E886117	509265	D.Murray	Mafic Metavolcanic							20	78	Shear Zone	Intense	20	78	0.135	-91.12866192	52.85095535	0.0025
8/7/2018	E886118	509265	D.Murray	Mafic Metavolcanic									Shear Zone	Intense	20	78	7.8	-91.12866115	52.85096563	0.015
8/7/2018	E886119	509265	D.Murray	Mafic Metavolcanic									Shear Zone	Intense	20	78	7.8	-91.12865178	52.85097167	0.009
8/7/2018	E886121	509265	D.Murray	Mafic Metavolcanic									Shear Zone	Moderate	20	78	6.01	-91.12865045	52.85097007	0.025
8/9/2018	E886122	509374	D.Murray	Quartz Vein	Quartz	Massive	230	70									0.025	-91.18231548	52.84375103	0.014
8/9/2018	E886123	509374	D.Murray	Quartz Vein	Quartz	Massive	230	70									0.041	-91.18229265	52.84372883	0.22
8/9/2018	E886124	509374	D.Murray	Felsic Metavolcanic	Quartz	Massive	259	58					Shear Zone	Intense	230	70	1.8	-91.18229053	52.84372347	0.049
8/9/2018	E886125	509374	D.Murray	Felsic Metavolcanic	Quartz												0.66	-91.18229755	52.84370383	0.023
8/9/2018	E886126	509374	D.Murray	Felsic Metavolcanic	Quartz								Shear Zone	Intense	230	70	1.88	-91.18232893	52.84370988	0.007
8/9/2018	E886127	509374	D.Murray	Felsic Metavolcanic									Shear Zone	Intense	230	70	0.22	-91.18230923	52.8437099	0.02
8/9/2018	E886128	509374	D.Murray	Felsic Metavolcanic									Shear Zone	Intense	230	70	0.395	-91.18235113	52.8435849	0.0025
8/9/2018	E886129	509374	D.Murray	Felsic Metavolcanic									Shear Zone	Intense	230	71	0.227	-91.18272907	52.84350345	0.0025
8/9/2018	E886131	509374	D.Murray	Felsic Metavolcanic									Shear Zone	Intense	230	70	0.201	-91.1826947	52.84347342	0.0025
8/9/2018	E886132	509374	D.Murray	Felsic Metavolcanic									Shear Zone	Intense	230	70	0.404	-91.18268653	52.84347982	0.0025
8/9/2018	E886133	509374	D.Murray	Felsic Metavolcanic									Shear Zone	Intense	230	70	0.119	-91.18263857	52.84344288	0.0025
8/9/2018	E886134	509374	D.Murray	Felsic Metavolcanic	Quartz	Planar	230	70					Shear Zone	Intense	230	70	0.384	-91.18286813	52.84339402	0.0025
8/9/2018	E886135	509374	D.Murray	Felsic Metavolcanic	Quartz	Planar											0.295	-91.18284603	52.8433695	0.0025
8/10/2018	E886136	506620	D.Murray	Mafic Metavolcanic					Foliation	Moderate	65	85					0.144	-91.01408312	52.88977623	0.0025
8/10/2018	E886137	506620	D.Murray	Mafic Metavolcanic	Quartz-carbonate	Crack-Sea	60	60					Breccia	Weak	60	60	0.157	-91.01390047	52.88980813	0.0025
8/10/2018	E886138	506620	D.Murray	Mafic Metavolcanic					Foliation	Intense	36	76					0.325	-91.01367317	52.89011112	0.0025
8/10/2018	E886139	506620	D.Murray	Pillowed Metavolcanic					Foliation	Intense	250	74					0.318	-91.0202835	52.88923598	0.0025
8/11/2018	E886141	509084	D.Murray	Mafic Metavolcanic					Foliation	Intense	195	80					0.206	-91.17797443	52.87725015	0.0025
8/11/2018	E886142	509084	D.Murray	Mafic Dyke	Carbonate	Crack-Sea	8	85	Foliation	Moderate	110	64	Brittle	Moderate	8	85	0.403	-91.17892298	52.87669477	0.0025
8/11/2018	E886143	509061	D.Murray	Mafic Metavolcanic					Foliation	Intense	235	75	Brittle	Moderate	6	84	0.378	-91.18180032	52.87623195	0.0025
8/11/2018	E886144	509061	D.Murray	Mafic Metavolcanic					Foliation	Weak			Brittle	Moderate	40	85	0.371	-91.18207368	52.87594567	0.0025
8/11/2018	E886145	509061	D.Murray	Quartz Vein	Quartz												0.014	-91.1828072	52.87539703	0.053
8/11/2018	E886146	509061	D.Murray	Mafic Metavolcanic													0.127	-91.18399987	52.87599232	0.0025

8/12/2018	E886147	508916	D.Murray	Intermediate Metavolcanic					Foliation	Weak					Brittle	Intense	192	78	0.074	-91.12891352	52.88713565	0.0025	
8/12/2018	E886148	508916	D.Murray	Diorite																0.504	-91.12894965	52.88714405	0.0025
8/12/2018	E886149	508916	D.Murray	Intermediate Metavolcanic											Brittle	Intense	250	70	0.029	-91.1300805	52.88720567	0.0025	
8/12/2018	E886151	886151	D.Murray	Gabbro																32	-91.13160553	52.89074048	0.0025
9/9/2018	E886152	509374	D.Murray	Quartz Vein	Quartz	Planar									Shear Zone	Intense	210	46	0.202	-91.18367175	52.84304085	0.005	
9/9/2018	E886153	509374	D.Murray	Quartz Vein																0.168	-91.18379285	52.8430615	0.006
9/9/2018	E886154	509374	D.Murray	Quartz Vein																0.682	-91.18354217	52.84313655	0.0025
9/9/2018	E886155	509374	D.Murray	Quartz Vein																0.088	-91.18318518	52.84318902	0.0025
9/9/2018	E886156	509374	D.Murray	Quartz Vein	Quartz-carbonate	Massive	275	46												0.188	-91.18304908	52.84332575	0.013
9/12/2018	E886158	509374	D.Murray	Quartz Vein	Quartz	Massive	238	62												0.051	-91.18383377	52.84313427	0.0025
9/12/2018	E886159	509374	D.Murray	Clastic Metasediment											Shear Zone	Intense	238	62	0.25	-91.18385257	52.8431429	0.034	
9/12/2018	E886161	509374	D.Murray	Quartz Vein	Quartz	Planar	224	60												0.061	-91.18384375	52.84312633	0.0025
9/12/2018	E886162	509374	D.Murray	Clastic Metasediment											Shear Zone	Intense	238	62	0.427	-91.18381868	52.84310192	0.008	

Summary of costs

Table 7 below details all the costs incurred to complete the body of work described above. All relevant invoices and receipts are attached to this report. All non-relevant charges on each invoice have been subtracted.

Table 6. Summary of costs incurred to complete the 2018 exploration program of the NCGB claim group described above.

Services and Materials

Category	Invoice Date	Invoice Number	Payee	Description	Amount
Transportation	18-Jun-18	6872	Wisk Air Helicopters	1.8 Flight Hrs.	\$2,349.00
	4-Jul-18	6900		16.1 Flight Hrs.	\$21,010.50
	18-Jul-18	6921		12.1 Flight Hrs.	\$15,790.50
	7-Aug-18	6945		12.8 Flight Hrs.	\$16,704.00
	27-Aug-18	6976		11.2 Flight Hrs.	\$14,616.00
	6-Sep-18	6984		2.2 Flight Hrs.	\$2,871.00
	19-Sep-18	6999		3 Flight Hrs.	\$3,915.00
	9-Oct-18	7019		5.0 Flight Hrs.	\$6,525.00
				Subtotal	\$83,781.00
Assaying	22-Oct-18	A18-14186	Activation Laboratories Ltd.	3 Samples	\$108.00
	12-Oct-18	A18-11076		66 Samples	\$2,376.00
	12-Oct-18	A18-12314		1 Samples	\$36.00
	15-Nov-18	A18-14383		4-Acid ICP-MS and Fire Assay	10 Samples
	13-Sep-18	A18-10521	ALS Canada Ltd.	123 Samples	\$4,428.00
	11-Sep-18	A18-10265		26 Samples	\$936.00
	5-Sep-18	4408160		ME-VEG4Aa	\$1,984.69
	6-Sep-18	4408323			\$4,376.00
				Subtotal	\$14,604.69
Consulting	5-Aug-18	110-18	Colin Dunn Consulting	control samples & technical guidance	\$893.77
				Subtotal	\$893.77
Materials	4-Apr-18	N/A	Deakin Industries	Field Safety Equipment	\$2,535.56
	13-Aug-18	N/A		Tools	\$217.85
	16-Apr-18	N/A	Services Exploration	Field Safety Equipment	\$91.50
	17-Apr-18	N/A	Canadian Tire	Field Safety Equip.	\$901.57
				Subtotal	\$3,746.48
Personnel					
Category	Person	Rate/Day	Person-days	Description	Amount
Field Operations	S.VP of Exploration	\$2,000.00	1	Field review of initial findings	\$2,000.00
	Director of Exploration	\$2,000.00	1		\$2,000.00
	Exploration Geologist	\$600.00	112	Field Season	\$67,200.00
	Field Assistant	\$360.00	40	Field Days Only	\$14,400.00
				Subtotal	\$85,600.00
Data compilation and Interpretation	Exploration Geologist	\$600.00	80	Days ahead of field season	\$48,000.00

					Subtotal	\$48,000.00
Planning and Consultation	Exploration Geologist	\$600.00	4	Data review and exploration strategy workshop involving technical experts and project staff	\$2,400.00	
	Database Geologist	\$750.00	2		\$1,500.00	
	Director of Exploration	\$2,000.00	2		\$4,000.00	
	Director of Geochemistry	\$2,000.00	2		\$4,000.00	
	Director of Geophysics	\$2,000.00	2		\$4,000.00	
	Director of Generative Exp	\$2,000.00	2		\$4,000.00	
	Exploration Manger	\$1,200.00	2		\$2,400.00	
	Exploration Supervisor	\$840.00	2		\$1,680.00	
Subtotal					\$23,980.00	
Reporting	Project Geologist	\$750.00	10	salary	\$7,500.00	
Subtotal					\$7,500.00	
Lodging	Goldcorp Personnel	\$80.00	267	Musselwhite Mine Camp	\$21,360.00	
	Wisk Air Personnel (2)	\$80.00	80		\$6,400.00	
Subtotal					\$27,760.00	
Miscellaneous						
Category	Expense	Rate	Person-Days	Description	Amount	
First Nations Consultation. Victoria Inn Thunder Bay Ontario	Conference room and catering	-	-	-	\$2,608.91	
	Sustainability Manager	1200	1		\$1,200.00	
	Environmental Coordinator	840	1		\$840.00	
	Environmental Technician	600	1	Salary	\$600.00	
	First Nations HR Specialist	500	1		\$500.00	
	Administrative assistant	360	1		\$360.00	
Subtotal					\$6,108.91	
Category	Invoice Date	Invoice Number	Payee	Description	Amount	
Field Communications	1-Jul-18	ICAD00036642	inReach Inc.	Subscription for Garmin inReach Devices	\$785.80	
	1-Aug-18	ICAD00050505			\$1,147.16	
	1-Oct-18	ICAD00070417			\$722.72	
	1-Sep-18	ICAD00050790			\$361.36	
Subtotal					\$3,017.04	
Program Total					\$304,991.89	

References

Oswald, W. (2018). GEOLOGY OF THE BANDED IRON FORMATION-HOSTED MUSSELWHITE GOLD DEPOSIT, SUPERIOR PROVINCE, ONTARIO, CANADA (Unpublished master's thesis). Université du Québec Institut National de la Recherche Scientifique Centre Eau Terre Environnement.

Breaks, F.W., Osmani, I.A. and deKemp, E.A. 2001. Geology of the North Caribou Lake area, northwestern Ontario; Ontario Geological Survey, Open File Report 6023, 80p.

Statement of Qualifications

I, David M. Murray, do hereby certify that:

I am a resident of the city of Halifax, Nova Scotia, Canada

I am a graduate of St. Francis Xavier University receiving Advanced Major Degree in Earth Science, concentrating in hard rock geoscience in 2011.

I am a professional geoscientist registered in good standing with the Association of Professional Geoscientists of Nova Scotia, member #236.

I am a core member in good standing of the Association of Prospectors and Developers of Canada.

I am a member in good standing of the Society of Economic Geologists.

I am employed by Goldcorp Canada Ltd, as a Project Geologist at Musselwhite Mine in the District of Kenora, Northwestern Ontario.

I agree with all the information contained within this report and believe that it is an accurate description of the work performed.

The above statements are valid as of the date signed below



Signature: _____
Date: _____

Statement of Qualifications

I, Kristy-Lee Beal, do hereby certify that:

I am a resident of the city of Thunder Bay, Ontario, Canada

I am a graduate of the University of New Brunswick receiving a Bachelor of Science Degree in Earth Science in 2008 followed by a Masters of Science in 2014.

I am a professional geoscientist registered in good standing with the Professional Geoscientists Ontario, member #2486.

I am employed by Newmont Goldcorp Inc, as a Senior Database and Land Geologist at Musselwhite Mine in the District of Kenora, Northwestern Ontario.

I agree with all the information contained within this report and believe that it is an accurate description of the work performed.

The above statements are valid.



Appendices

2018 Arseno Lake Exploration

Appendix IFull table of samples and results

Appendix IIAssay Certificates

Appendix IIIInvoices and Receipts

- Activation Laboratories Ltd.
- Wisk Air Helicopters

2018 Opapimiskan Lake Exploration

Appendix IV.....Full table of samples and results

Appendix VAssay Certificates

Appendix VIInvoices and Receipts

- Activation Laboratories Ltd.
- Wisk Air Helicopters

2018 North Caribou Greenstone Belt Exploration

Appendix VII Re-interpretation of Geology (maps)

Appendix VIIIMaps of prospecting traverses and lithogeochemical samples

Appendix IX.....Full table of samples and results

- Lithogeochemical Samples
- Biogeochemical Samples

Appendix X.....Assay Certificates

- Activation Laboratories, Lithogeochemical
- ALS Canada Ltd., Biogeochemical

Appendix XIInvoices and Receipts

- Activation Laboratories Ltd.
- ALS Canada Ltd.
- InReach Inc.
- Wisk Air Helicopters
- Colin Dunn Consulting

- Canadian Tire
- Deakin Industries
- Services Exploration
- Victoria Inn

Appendix XII...Complete table of claims in NCGB group subject to research and compilation

2018 Arseno Lake Exploration

Appendix I – Full table of samples and results

2018 Arseno Lake Lithogeochemical Samples 4 Acid ICPMS and Fire Assay

Date	Project	Chain ID	Sample Number	Rock Type	Veining Assemblage	Vein Type	Vein Percentaging	Azimuth	Vein Dip	Fabric Intensity	Fabric Azimuth	Fabric Dip	Fault	Fault Intensity	Fault Azimuth	Fault Dip	Longitude	Latitude	Laboratory	Analytical Method	Elemental Concentrations (ppm)																																																											
																					As	B	Li	Na	Me	Al	K	Ca	Cd	V	Cr	Mn	Fe	Hf	Ni	Er	Be	Ho	Hg	Ag	Cs	Co	Eu	Bi	Sr	Zn	Ga	As	Rb	Y	Zr	Nb	Mo	In	Sn	Sb	Te	Ba	La	Ce	Pr	Nd	Sm	Gd	Tb	Dy	Cu	Ge	Tm	Lu	Ta	Se	W	Re	Tl	Pb	Th	U		
5/29/2018	2018 Regional	E885601	322939	6 Metasediment						Foliation	Moderate	260	66			-91.063956	52.9751132	Actlabs	ICPMS + I-A2 FA	0.0025	10	24.7	2.6	3.77	7.37	0.12	5.68	0.05	211	48	1640	8.44	1.9	41	4.2	0.7	1.4	10	0.003	0.13	39.2	0	0.07	0.5	41.3	20.3	0.5	0.9	37.4	75	0.4	0.08	0.05	0.5	0.05	0.05	39	2.2	6.3	1	5.3	2.8	4.9	0.9	6.1	4.3	0.5	0.6	4.1	0.6	0.05	115	0.1	0.001	0.003	0.8	1.2	0.4		
5/29/2018	2018 Regional	E885602	274313	2 Mafic Volcanic						Foliation	Weak	98	88	Shear Zone	Moderate	98	88	-91.065344	52.9808072	Actlabs	ICPMS + I-A2 FA	0.0025	10	15.7	0.62	3.33	5.98	0.23	6.59	0.2	197	270	3380	8.95	1	81.5	1.6	0.3	0.5	50	0.14	0.77	40.7	0	0.09	0.7	105	12.3	2.3	6.7	13.9	39	1.8	0.36	0.05	0.5	1.4	0.05	181	5.1	10.4	1.2	5.3	1.5	1.9	0.3	2.4	114	0.7	0.2	1.6	0.2	0.1	88.1	0.6	SE-04	0.003	6.4	1.8	0.5
5/29/2018	2018 Regional	E885603	274313	6 Metasediment						Foliation	Intense	94	84			-91.065285	52.9814687	Actlabs	ICPMS + I-A2 FA	0.012	10	29.9	0.72	1.99	8.43	1.25	6.27	0.3	251	130	2680	8.69	1.4	144	2.6	0.5	0.8	5	1.61	1.27	64.3	0	0.21	1.1	54.8	19.5	21.9	51.6	20.7	50	0.4	0.21	0.05	0.5	0.2	0.05	130	4.9	12.3	1.6	8.5	2.7	3.2	0.6	3.5	264	0.5	0.4	2.5	0.3	0.05	52.6	0.1	0.002	0.53	29.6	0.6	0.2		
5/29/2018	2018 Regional	E885605	118276	2 Mafic Volcanic	Quartz	Planar	0.5	90	Subvertical	Foliation	Intense	92	70	Other	Moderate	0	85	-91.068328	52.9836551	Actlabs	ICPMS + I-A2 FA	0.005	10	20.2	1.4	1.86	8.47	0.31	6.4	0.05	294	137	2410	9.46	1.3	136	2.6	0.5	0.9	20	0.09	0.21	62.9	0	0.07	0.6	97	20.6	0.1	7.1	21.9	47	0.4	0.13	0.05	0.5	0.05	0.05	71	5.2	13.3	1.9	9.3	2.9	3.4	0.6	3.8	154	0.5	0.4	2.5	0.3	0.05	92.3	0.1	SE-04	0.003	0.25	0.5	0.2
6/9/2018	2018 Regional	E885606	274311	2 Mafic Volcanic	Quartz	Planar	Tr	275	Subvertical	Foliation	Intense	96	85	Shear Zone	Weak	96	85	-91.068859	52.9844866	Actlabs	ICPMS + I-A2 FA	0.007	10	52.1	3	3.01	8.66	0.3	1.38	0.05	270	142	1580	9.4	1.2	153	2.3	1.1	0.7	5	0.09	0.82	65.1	0	0.34	0.9	102	16.9	2.1	12.5	17.6	42	1	0.16	0.05	0.5	0.05	0.05	55	2.1	5.9	0.9	4.8	1.4	2.3	0.4	3	262	0.3	0.2	2.2	0.3	0.05	110	0.2	SE-04	0.003	3	0.6	0.2
6/10/2018	2018 Regional	E885607	274313	Quartz Vein	Quartz	Massive	99	90	85							-91.062983	52.9804614	Actlabs	ICPMS + I-A2 FA	0.02	40	0.9	0.01	0.35	0.25	0.02	0.09	0.2	8	17	6740	2.51	0.1	1.6	0.3	0.05	0.1	5	3.31	0.003	0.8	0	0.8	0.2	95.4	0.6	111	0.3	4	2	0.05	0.35	0.05	0.5	1.5	0.05	2	1.2	2	0.2	1	0.3	0.4	0.1	0.4	23.5	0.1	0.05	0.2	0.05	0.05	3.2	0.5	SE-04	0.003	129	0.05	0.05		
6/10/2018	2018 Regional	E885608	274313	4F Garnet-Biotite Schist						Foliation	Intense	88	88	Shear Zone	Intense	88	88	-91.062955	52.9804706	Actlabs	ICPMS + I-A2 FA	0.006	10	68.2	0.09	2.25	7.93	1.08	0.81	0.5	266	486	8310	11.4	1.6	113	2.1	0.3	0.7	5	0.65	4.78	46	0	0.16	0.6	124	14.8	26.7	60.1	18.1	61	2.6	0.47	0.05	0.5	0.7	0.05	136	4.7	9.7	1.1	4.8	1.3	2.2	0.4	3.1	75.1	0.6	0.3	2.1	0.3	0.2	7.4	0.8	SE-04	0.99	92.5	2.4	0.7
6/10/2018	2018 Regional	E885609	274313	4F Garnet-Biotite Schist						Foliation	Intense	105	88	Shear Zone	Intense	205	88	-91.062941	52.9804503	Actlabs	ICPMS + I-A2 FA	2.36	10	68.7	0.15	1.13	8.59	1.18	0.6	0.9	269	487	10000	12.7	2.1	35.4	2.3	0.6	0.8	5	9.03	5.49	7.3	0	0.31	0.5	2920	16.8	25.7	46	21.3	82	3.8	1.29	0.1	4	1.3	0.05	258	8.7	17.4	2	7.9	2.2	3	0.5	3.1	88	0.2	0.3	2.1	0.3	0.3	29.6	3.6	SE-04	0.98	349	3.4	0.8
5/28/2018	2018 Regional	E885611	274313	Quartz Vein	Quartz	Massive	99	98								-91.062709	52.9803819	Actlabs	ICPMS + I-A2 FA	0.026	30	1.7	0.01	0.15	0.32	0.07	0.14	71.3	14	37	2080	6.76	0.1	29	0.2	0.05	0.1	220	6.14	0.37	6	0	2.5	0.6	10000	1.6	169	2.7	2.4	5	0.2	0.52	0.8	0.5	1.4	0.05	19	0.5	0.8	0.1	0.5	0.2	0.2	0.05	0.2	298	0.1	0.05	0.2	0.05	0.05	1.9	0.8	SE-04	0.003	154	0.1	0.1		
6/10/2018	2018 Regional	E885612	274313	2 Mafic Volcanic						Foliation	Moderate	105	82			-91.062635	52.9805842	Actlabs	ICPMS + I-A2 FA	0.0025	10	23.2	1.86	4.45	7.21	0.18	6.26	0.3	234	285	2590	7.83	1.4	94.3	1.7	0.5	0.6	30	0.52	0.62	45.8	0	0.1	0.3	82.2	13.7	2.5	4.5	14.9	49	2.4	0.5	0.05	0.5	0.5	0.05	65	3.1	7.3	0.8	4.2	1.5	2.1	0.4	2.6	1.8	0.4	0.3	1.7	0.2	0.2	184	0.3	SE-04	0.003	13	2	0.5		
6/10/2018	2018 Regional	E885613	274307	6 Metasediment						Foliation	Intense	88	86			-91.061331	52.9806543	Actlabs	ICPMS + I-A2 FA	0.0025	10	33	0.19	1.11	7.5	2.04	2.06	0.1	28	71	1160	3.31	3	75.8	0.3	0.7	0.1	5	4.51	4.95	15.6	0	0.24	0.3	47	19.5	24.9	67.8	3.6	129	4.3	0.74	0.05	0.5	2.3	0.05	812	24.1	41.7	3.9	13	2	1.3	0.1	0.6	13.2	0.2	0.05	0.3	0.05	0.3	80	0.7	SE-04	1.24	109	8.6	1.8		
7/12/2018	2018 Regional	E885614	227092	6 Metasediment	Quartz	Massive	50	84	Subvertical	Foliation	Intense	84	86	Shear Zone	Intense	100	85	-91.053037	52.9799266	Actlabs	ICPMS + I-A2 FA	0.03	40	10	0.23	0.34	2.72	0.94	0.17	33.6	34	41	5220	9.54	1.6	30.6	0.7	0.3	0.3	230	18.2	4.64	4	0	5.25	0.9	5200	7.9	219	34.1	7.7	58	3.8	1.48	0.7	3	7.6	0.05	67	8.9	16.6	1.7	5.8	1.1	1.1	0.2	1	298	0.1	0.1	0.9	0.1	0.3	21	2.5	SE-04	1.64	488	5.8	1.4
6/10/2018	2018 Regional	E885615	227092	6 Metasediment	Quartz	Massive	100	Subvertical								-91.053066	52.9799238	Actlabs	ICPMS + I-A2 FA	6.28	10	0.25	0.01	0.88	0.06	0.02	0.29	14.5	5	12	10000	16.5	0.05	73.5	0.4	0.1	0.1	60	35.9	0.14	21.2	0	9.94	0.3	2340	0.7	1390	0.7	5.9	5	0.1	0.39	0.3	2	29.8	0.1	3	1.8	2.5	0.3	1.1	0.2	0.6	0.1	0.7	50	0.1	0.1	0.5	0.1	0.05	0.5	0.6	SE-04	0.003	613	0.1	0.2		
6/10/2018	2018 Regional	E885616	227092	6 Metasediment						Foliation	Intense	122	90			-91.052345	52.9798376	Actlabs	ICPMS + I-A2 FA	0.024	10	34	0.27	4.44	6.86	0.88	4	0.4	236	378	4600	10.6	1.5	184	2.5	0.9	0.8	5	1.99	4.53	59.5	0	0.2	0.7	160	13.7	7.3	36.1	20.3	56	2.3	0.3	0.05	0.5	2.6	0.05	185	6.9	14.5	1.7	7.6	1.7	2.9	0.5	3.4	230	0.2	0.3	2.3	0.3	0.2	39	0.5	SE-04	0.42	33.2	2	0.6		
6/10/2018	2018 Regional	E885617	118270	6 Metasediment	Quartz	Planar	50	260	70							-91.049508	52.9797824	Actlabs	ICPMS + I-A2 FA	0.005	10	0.6	0.01	1.45	0.18	0.02	0.09	0.8	14	17	10000	43.9	0.1	66.9	1.8	0.1	0.5	5	0.63	0.3	14.3	0	0.09	0.3	315	1.1	1460	2.7	26.9	6	0.2	0.22	0.05	0.5	23.3	0.05	13	9.4	12.1	1.3	5.6	1.4	1.5	0.2	1.7	41.4	0.2	0.3	1.8	0.3	0.05	1.9	0.7	SE-04	0.003	3.9	0.1	0.7		
6/10/2018	2018 Regional	E885618	118270	6 Metasediment						Foliation	Moderate	106	70			-91.049268	52.9793833	Actlabs	ICPMS + I-A2 FA	0.005	10	25.9	1.17	4.18	6.51	0.23	6.46	0.2	175	12	1220	7.34	1.8	98.1	1.6	0.4	0.5	20	0.17	0.79	46.5	0	0.13	0.4	80.3	15.3	12.8	5.2	14.1	72	1.																													

Appendix II – Assay Certificates



Date Submitted: 02-Aug-18
Invoice No.: A18-10265
Invoice Date: 10-Sep-18
Your Reference: Exploration

GOLDCORP Canada Ltd--Musselwhite Mine
P.O. Box 7500
Thunder bay Ontario P7B 6S8
Canada

ATTN: Katie Lucas

CERTIFICATE OF ANALYSIS

59 Core samples were submitted for analysis.

The following analytical package(s) were requested:

Code 1A2-GC Musselwhite Dryden Au - Fire Assay AA

REPORT **A18-10265**

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

Notes:

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

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

CERTIFIED BY:

A handwritten signature in black ink, appearing to be "Emmanuel Esemé". The signature is written in a cursive style with some loops and is positioned above a horizontal line.

Emmanuel Esemé , Ph.D.
Quality Control

ACTIVATION LABORATORIES LTD.
264 Government Road, Dryden, Ontario, Canada, P8N 2R3
TELEPHONE +807 223-6168 or +1.888.228.5227 FAX +1.905.648.9613
E-MAIL Dryden@actlabs.com ACTLABS GROUP WEBSITE www.actlabs.com

Date Submitted: 02-Aug-18
Invoice No.: A18-10265
Invoice Date: 10-Sep-18
Your Reference: Exploration

GOLDCORP Canada Ltd--Musselwhite Mine
P.O. Box 7500
Thunder bay Ontario P7B 6S8
Canada

ATTN: Katie Lucas

CERTIFICATE OF ANALYSIS

59 Core samples were submitted for analysis.

The following analytical package(s) were requested: Code UT-4 Total Digestion ICP/MS

REPORT **A18-10265**

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

Notes:

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

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

CERTIFIED BY:



Emmanuel Esemé , Ph.D.
Quality Control

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Results

Activation Laboratories Ltd.

Report: A18-10265

	FA-AA	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS
SAMPLE	Au	B	Li	Na	Mg	Al	K	Ca	Cd	V	Cr	Mn	Fe	Hf	Ni	Er	Be	Ho	Hg	Ag	Cs	Co	Eu
DESCRIPTION	g/mt	ppm	ppm	%	%	%	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm
E885701	0.005	< 20	32.1	> 3.00	0.90	8.49	1.21	2.44	0.1	50	13	821	4.93	2.3	4.6	1.3	1.3	0.4	10	0.05	2.04	13.6	1.10
E885702	< 0.005	< 20	6.4	2.84	0.14	7.36	1.58	0.70	< 0.1	14	9	171	1.44	1.8	1.0	0.5	2.7	0.2	30	0.08	1.25	2.7	0.40
E885703	< 0.005	< 20	5.7	2.99	0.01	7.43	1.72	0.87	< 0.1	7	7	76	0.79	1.1	< 0.5	0.9	2.9	0.3	20	0.05	2.21	0.3	0.20
E885751	0.008	< 20	17.9	2.45	3.33	8.02	0.16	4.45	0.1	190	360	1140	7.55	0.5	68.7	2.0	0.2	0.7	10	0.06	0.41	37.2	0.60
E885752	0.006	< 20	13.3	0.74	2.79	8.63	0.02	7.70	0.1	260	294	1600	8.86	0.8	144	2.5	0.3	0.8	30	< 0.05	0.08	48.9	1.00
E885753	0.005	< 20	32.2	1.32	4.11	8.30	0.81	1.19	< 0.1	225	264	1230	8.83	1.1	132	2.1	0.3	0.7	20	< 0.05	0.81	41.5	0.60
E885754	1.67	< 20	3.6	0.11	1.13	1.63	0.10	3.04	0.4	28	18	2610	7.59	1.0	15.7	1.3	0.4	0.4	30	0.21	0.10	8.2	0.70
E885755	0.009	30	15.2	1.63	4.49	8.02	0.07	7.24	0.1	231	260	1520	9.01	0.8	129	2.3	0.4	0.9	10	0.06	0.15	47.8	0.80
E885756	< 0.005	< 20	14.7	1.45	4.30	7.88	0.06	7.40	0.1	225	174	1490	8.52	0.8	126	2.4	0.4	0.7	< 10	0.05	0.13	45.3	0.70
E885757	0.005	< 20	20.1	1.56	3.62	7.86	0.05	5.76	< 0.1	212	194	1400	8.28	0.6	136	2.2	0.2	0.8	10	< 0.05	0.06	45.1	0.70
E885758	< 0.005	< 20	27.7	> 3.00	0.35	8.25	0.93	2.28	< 0.1	23	11	211	1.87	3.0	4.2	0.2	0.8	0.1	< 10	0.12	0.86	5.4	0.50
E885601	< 0.005	< 20	24.7	2.60	3.77	7.37	0.12	5.68	< 0.1	211	48	1640	8.44	1.9	41.0	4.2	0.7	1.4	10	< 0.05	0.13	39.2	1.00
E885602	< 0.005	< 20	15.7	0.62	3.33	5.98	0.23	6.59	0.2	197	270	3380	8.95	1.0	81.5	1.6	0.3	0.5	50	0.14	0.77	40.7	0.50
E885603	0.012	< 20	29.9	0.72	1.99	8.43	1.25	6.27	0.3	251	130	2680	8.69	1.4	144	2.6	0.5	0.8	< 10	1.61	1.27	64.3	0.80
E885605	0.005	< 20	20.2	1.40	1.86	8.47	0.31	6.40	< 0.1	294	137	2410	9.46	1.3	136	2.6	0.5	0.9	20	0.09	0.21	62.9	0.90
E885606	0.007	< 20	52.1	> 3.00	3.01	8.66	0.30	1.38	< 0.1	270	142	1580	9.40	1.2	153	2.3	1.1	0.7	< 10	0.09	0.82	65.1	0.50
E885607	0.020	40	0.9	0.01	0.35	0.25	0.02	0.09	0.2	8	17	6740	2.51	0.1	1.6	0.3	< 0.1	0.1	< 10	3.31	< 0.05	0.8	0.10
E885608	0.006	< 20	68.2	0.09	2.25	7.93	1.08	0.81	0.5	266	486	8310	11.4	1.6	113	2.1	0.3	0.7	< 10	0.65	4.78	46.0	0.50
E885609	2.36	< 20	68.7	0.15	1.13	8.59	1.18	0.60	0.9	269	487	> 10000	12.7	2.1	35.4	2.3	0.6	0.8	< 10	9.03	5.49	7.3	0.70
E885610	1.08	< 20	25.1	0.29	1.66	4.68	1.32	1.54	46.1	83	51	1880	7.50	2.1	27.4	1.8	0.7	0.6	840	> 100	1.50	17.6	0.60
E885611	0.026	30	1.7	0.01	0.15	0.32	0.07	0.14	71.3	14	37	2080	6.76	0.1	29.0	0.2	< 0.1	0.1	220	6.14	0.37	6.0	0.10
E885612	< 0.005	< 20	23.2	1.86	4.45	7.21	0.18	6.26	0.3	234	285	2590	7.83	1.4	94.3	1.7	0.5	0.6	30	0.52	0.62	45.8	0.50
E885613	< 0.005	< 20	33.0	0.19	1.11	7.50	2.04	2.06	0.1	28	71	1160	3.31	3.0	75.8	0.3	0.7	0.1	< 10	4.51	4.95	15.6	0.50
E885614	0.030	40	10.0	0.22	0.34	2.72	0.94	0.17	33.6	34	41	5220	9.54	1.6	30.6	0.7	0.3	0.3	230	18.2	4.64	4.0	0.30
E885615	6.28	< 20	< 0.5	< 0.01	0.88	0.06	0.02	0.29	14.5	5	12	> 10000	16.5	< 0.1	73.5	0.4	0.1	0.1	60	35.9	0.14	21.2	0.30
E885616	0.024	< 20	34.0	0.27	4.44	6.86	0.88	4.00	0.4	236	378	4600	10.6	1.5	184	2.5	0.9	0.8	< 10	1.99	4.53	59.5	0.60
E885617	0.005	< 20	0.6	< 0.01	1.45	0.18	0.02	0.09	0.8	14	17	> 10000	43.9	0.1	66.9	1.8	0.1	0.5	< 10	0.63	0.30	14.3	0.40
E885618	0.005	< 20	25.9	1.17	4.18	6.51	0.23	6.46	0.2	175	12	1220	7.34	1.8	98.1	1.6	0.4	0.5	20	0.17	0.79	46.5	0.40
E885619	< 0.005	< 20	25.0	1.97	3.95	7.85	0.18	5.68	0.6	233	283	2460	6.40	1.4	87.2	1.5	0.5	0.5	< 10	0.08	0.49	41.4	0.50
E885620	< 0.005	20	5.6	0.05	0.01	0.18	0.06	0.01	< 0.1	3	11	57	0.52	0.8	0.9	0.2	0.1	< 0.1	< 10	< 0.05	0.13	0.4	< 0.05
E885621	0.006	< 20	22.7	0.99	3.22	9.06	0.52	7.94	0.2	283	396	3320	6.26	1.5	160	1.8	0.6	0.6	10	0.17	1.85	67.7	0.70
E885622	0.027	< 20	50.4	0.65	2.34	7.57	1.23	3.01	0.1	225	129	1850	9.32	1.2	116	2.1	0.6	0.7	20	0.25	4.01	49.2	0.80
E885623	0.005	< 20	16.5	0.09	1.41	3.33	0.72	2.18	0.2	74	379	927	3.41	1.1	108	0.4	0.6	0.1	< 10	0.13	2.25	39.0	0.30
E885624	0.008	< 20	19.8	0.11	3.22	5.62	0.75	0.92	0.7	209	334	> 10000	21.7	1.0	132	3.4	0.3	0.9	< 10	< 0.05	3.78	31.8	0.50
E885625	< 0.005	< 20	4.0	0.01	0.31	2.63	0.10	0.73	0.5	78	152	> 10000	6.06	0.5	12.6	2.2	< 0.1	0.7	20	< 0.05	0.74	5.6	0.50
E885626	0.007	< 20	75.8	0.46	2.83	> 10.0	3.18	2.37	0.1	13	130	1290	6.16	17.4	55.1	7.2	5.0	2.3	< 10	0.23	20.6	9.5	3.00
E885627	0.020	< 20	2.0	0.01	1.30	0.72	0.08	0.31	0.2	28	44	3840	19.0	0.3	22.1	0.8	0.3	0.3	30	0.15	0.41	8.0	0.30
E885628	0.008	< 20	40.0	2.31	2.35	8.13	0.30	5.62	0.2	217	132	2470	8.91	1.5	133	2.5	0.5	0.9	20	0.09	0.60	58.8	0.90
E885629	0.013	< 20	26.8	0.19	0.86	2.91	0.94	0.61	< 0.1	10	11	745	4.13	5.2	9.4	1.0	0.7	0.4	50	0.21	6.95	9.1	0.50
E885630	1.12	< 20	24.3	0.28	1.66	4.65	1.32	1.51	43.7	81	46	1830	7.54	2.1	26.1	1.7	0.7	0.5	1310	> 100	1.48	17.5	0.50
E885631	< 0.005	< 20	34.8	0.22	2.18	8.55	0.93	3.43	0.1	51	47	3540	7.17	3.0	156	1.0	0.3	0.3	< 10	0.20	4.29	23.7	0.70
E885632	0.012	< 20	28.8	0.52	4.83	6.03	0.41	7.04	0.2	158	1870	4670	13.3	0.7	512	1.2	0.9	0.3	< 10	0.10	0.75	86.2	0.50
E885633	0.005	< 20	7.8	0.40	8.91	3.62	0.08	8.35	0.1	182	1500	1630	9.96	1.2	543	1.1	0.3	0.4	20	0.12	0.16	77.3	0.50

Results

Activation Laboratories Ltd.

Report: A18-10265

	FA-AA	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS		
SAMPLE	Au	B	Li	Na	Mg	Al	K	Ca	Cd	V	Cr	Mn	Fe	Hf	Ni	Er	Be	Ho	Hg	Ag	Cs	Co	Eu	
DESCRIPTION	g/mt	ppm	ppm	%	%	%	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	
E885634	< 0.005	< 20	106	0.88	1.49	8.53	1.49	0.69	< 0.1	368	277	1420	8.40	1.7	106	1.7	0.6	0.5	10	0.12	1.85	41.1	0.80	
E885635	0.017	< 20	8.3	2.81	2.64	8.13	0.40	5.78	< 0.1	315	10	1920	12.8	3.8	3.8	5.6	0.8	1.7	< 10	0.38	0.54	19.9	1.10	
E885636	0.030	50	10.4	0.02	0.24	0.56	0.10	0.09	< 0.1	13	262	202	3.00	0.7	44.6	0.2	0.1	0.1	200	0.33	0.65	23.0	0.10	
E885637	< 0.005	30	0.5	< 0.01	0.85	0.03	0.01	0.05	< 0.1	2	10	1610	10.7	< 0.1	7.7	0.1	0.4	< 0.1	1620	0.06	0.10	1.2	0.10	
E885638	0.029	< 20	5.5	0.03	0.70	0.93	0.12	0.50	< 0.1	19	632	1350	5.58	0.8	77.3	0.3	0.3	0.1	1640	0.20	1.04	31.9	0.10	
E885639	0.006	< 20	10.1	0.42	1.55	6.87	0.03	0.72	< 0.1	197	108	1750	6.39	1.0	32.0	1.4	0.2	0.4	10	0.10	0.19	17.7	0.30	
E885640	< 0.005	20	5.8	0.06	0.02	0.22	0.08	0.02	< 0.1	3	12	61	0.57	0.7	1.3	0.2	0.1	0.1	20	< 0.05	0.16	0.5	0.10	
E885641	0.006	< 20	41.7	0.25	1.89	8.36	0.61	2.55	0.1	370	144	2770	11.9	1.9	173	2.3	0.3	0.8	20	0.17	8.52	68.2	0.80	
E885642	0.026	< 20	17.0	0.03	0.46	0.91	0.16	0.24	< 0.1	24	242	341	2.68	0.9	42.8	0.2	0.1	0.1	320	0.18	0.72	28.7	0.10	
E885643	0.017	< 20	47.8	0.07	0.91	2.73	0.36	0.42	0.1	71	568	1010	3.62	1.5	74.5	0.5	0.3	0.2	110	0.09	1.25	18.5	0.20	
E885644	< 0.005	< 20	86.2	0.17	2.26	7.66	2.03	3.69	0.2	181	16	1330	8.39	4.3	26.9	2.6	1.3	0.8	50	0.09	3.29	43.7	1.00	
E885645	0.028	< 20	43.5	0.44	2.22	6.18	1.05	4.66	0.1	90	373	1400	1.38	1.2	156	0.9	0.3	0.3	50	0.47	3.06	39.9	0.40	
E885833	< 0.005	< 20	17.2	2.50	1.61	7.25	0.81	4.67	0.1	72	22	2340	11.8	2.3	83.3	2.2	1.3	0.8	30	0.10	0.58	57.6	1.20	
E885834	< 0.005	< 20	5.7	2.69	0.05	6.99	2.40	1.18	< 0.1	4	7	91	0.72	1.6	2.6	0.1	0.7	< 0.1	20	< 0.05	0.43	1.7	0.70	
E885835	< 0.005	< 20	3.1	1.74	0.03	6.82	3.75	0.30	< 0.1	3	6	67	0.78	2.3	< 0.5	1.4	1.2	0.4	< 10	0.05	1.00	0.7	0.30	
E881963	< 0.005	< 20	8.9	1.55	4.21	7.60	0.16	7.81	0.2	276	165	1700	9.41	0.5	124	2.5	0.3	0.8	20	0.31	0.09	49.4	0.80	
GXR-4 Meas	< 20	11.5	0.53	1.62	7.02	4.42	0.99	0.2		86	40	151	3.04	1.3	39.0				< 10	3.94	2.49	14.7	1.20	
GXR-4 Cert	4.50	11.1	0.564	1.66	7.20	4.01	1.01	0.860		87.0	64.0	155	3.09	6.30	42.0			1.90	110	4.00	2.80	14.6	1.63	
GXR-4 Meas	< 20	10.7	0.51	1.58	6.68	4.44	0.92	0.3		86	49	139	2.99	1.3	39.4				2.0	< 10	3.75	2.33	14.7	1.20
GXR-4 Cert	4.50	11.1	0.564	1.66	7.20	4.01	1.01	0.860		87.0	64.0	155	3.09	6.30	42.0			1.90	110	4.00	2.80	14.6	1.63	
SDC-1 Meas	< 20	36.3	1.57	0.96	8.40	1.46	0.97			45	43	848	4.68	0.7	34.9	3.5	3.0	1.1	< 10		3.45	17.6	1.40	
SDC-1 Cert	13.00	34.0	1.52	1.02	8.34	2.72	1.00			102.00	64.00	880.00	4.82	8.30	38.0	4.10	3.00	1.50	200.00		4.00	18.0	1.70	
SDC-1 Meas	< 20	36.5	1.63	0.99	8.79	1.84	1.05			53	54	925	4.97	1.1	36.5	3.7	2.9	1.2	30		3.65	18.8	1.50	
SDC-1 Cert	13.00	34.0	1.52	1.02	8.34	2.72	1.00			102.00	64.00	880.00	4.82	8.30	38.0	4.10	3.00	1.50	200.00		4.00	18.0	1.70	
GXR-6 Meas	< 20	33.5	0.09	0.56	> 10.0	1.57	0.15	< 0.1		122	58	1020	5.45	2.0	22.5			1.1	40	0.32	3.60	13.1	0.60	
GXR-6 Cert	9.80	32.0	0.104	0.609	17.7	1.87	0.180	1.00		186	96.0	1010	5.58	4.30	27.0			1.40	68.0	1.30	4.20	13.8	0.760	
OREAS 97 (4 Acid) Meas																					20.3		65.0	
OREAS 97 (4 Acid) Cert																					19.6		62.9	
OREAS 97 (4 Acid) Meas																					21.3		69.0	
OREAS 97 (4 Acid) Cert																					19.6		62.9	
OREAS 98 (4 Acid) Meas																					48.6		124	
OREAS 98 (4 Acid) Cert																					45.1		121	
OREAS 98 (4 Acid) Meas																					47.4		128	
OREAS 98 (4 Acid) Cert																					45.1		121	
DNC-1a Meas			5.2							154	165				275							57.9	0.50	
DNC-1a Cert			5.2							148	270				247							57	0.59	
DNC-1a Meas			5.0							153	172				280							59.4	0.50	

Results

Activation Laboratories Ltd.

Report: A18-10265

	FA-AA	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	
SAMPLE	Au	B	Li	Na	Mg	Al	K	Ca	Cd	V	Cr	Mn	Fe	Hf	Ni	Er	Be	Ho	Hg	Ag	Cs	Co	Eu
DESCRIPTION	g/mt	ppm	ppm	%	%	%	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm
DNC-1a Cert			5.2							148	270				247							57	0.59
SBC-1 Meas			171						0.3	218	89			3.4	86.5	3.5	3.4	1.1			7.05	22.5	1.70
SBC-1 Cert			163						0.40	220.0	109			3.7	82.8	3.80	3.20	1.40			8.2	22.7	1.98
SBC-1 Meas			169						0.4	219	90			3.4	85.3	3.4	3.2	1.1			6.91	22.5	1.70
SBC-1 Cert			163						0.40	220.0	109			3.7	82.8	3.80	3.20	1.40			8.2	22.7	1.98
OREAS 45d (4-Acid) Meas			22.5	0.10	0.24	8.09	0.46	0.17		102	543	487	14.6	2.2	239	1.4	0.8	0.4			3.48	30.6	0.50
OREAS 45d (4-Acid) Cert			21.5	0.101	0.245	8.150	0.412	0.185		235.0	549	490.000	14.5	3.830	231.0	1.38	0.79	0.46			3.910	29.50	0.57
OREAS 45d (4-Acid) Meas			20.5	0.10	0.22	7.72	0.44	0.17		128	548	464	13.5	2.3	232	1.3	0.8	0.4			3.14	29.2	0.50
OREAS 45d (4-Acid) Cert			21.5	0.101	0.245	8.150	0.412	0.185		235.0	549	490.000	14.5	3.830	231.0	1.38	0.79	0.46			3.910	29.50	0.57
OREAS 220 (Fire Assay) Meas	0.855																						
OREAS 220 (Fire Assay) Cert	0.866																						
OREAS 220 (Fire Assay) Meas	0.879																						
OREAS 220 (Fire Assay) Cert	0.866																						
OREAS 220 (Fire Assay) Meas	0.850																						
OREAS 220 (Fire Assay) Cert	0.866																						
OREAS 96 (4 Acid) Meas																				12.0		50.1	
OREAS 96 (4 Acid) Cert																				11.5		49.9	
OREAS 96 (4 Acid) Meas																				12.5		53.1	
OREAS 96 (4 Acid) Cert																				11.5		49.9	
OREAS 209 (Fire Assay) Meas	1.53																						
OREAS 209 (Fire Assay) Cert	1.58																						
OREAS 209 (Fire Assay) Meas	1.57																						
OREAS 209 (Fire Assay) Cert	1.58																						
E885701 Orig	0.005																						
E885701 Dup	< 0.005																						
E885608 Orig		< 20	68.2	0.09	2.25	7.93	1.08	0.81	0.5	266	486	8310	11.4	1.6	113	2.1	0.3	0.7	< 10	0.65	4.78	46.0	0.50
E885608 Dup		< 20	67.8	0.09	2.31	7.82	1.21	0.81	0.4	268	467	8320	11.4	1.6	116	2.1	0.3	0.7	< 10	0.63	4.79	46.9	0.50
E885611 Orig	0.026																						
E885611 Dup	0.027																						

	FA-AA	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	
SAMPLE	Au	B	Li	Na	Mg	Al	K	Ca	Cd	V	Cr	Mn	Fe	Hf	Ni	Er	Be	Ho	Hg	Ag	Cs	Co	Eu
DESCRIPTION	g/mt	ppm	ppm	%	%	%	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm
E885613 Orig		< 20	33.0	0.19	1.11	7.50	2.04	2.06	0.1	28	71	1160	3.31	3.0	75.8	0.3	0.7	0.1	< 10	4.51	4.95	15.6	0.50
E885613 Dup		< 20	32.7	0.19	1.11	7.43	1.79	2.06	0.1	28	63	1200	3.37	3.3	76.7	0.3	0.6	0.1	50	4.67	5.09	16.3	0.50
E885622 Orig	0.027																						
E885622 Dup	0.021																						
E885631 Orig	< 0.005																						
E885631 Dup	< 0.005																						
E885640 Orig	< 0.005	20	5.8	0.06	0.02	0.22	0.08	0.02	< 0.1	3	12	61	0.57	0.7	1.3	0.2	0.1	0.1	20	< 0.05	0.16	0.5	0.10
E885640 Dup	< 0.005	< 20	5.7	0.06	0.02	0.22	0.08	0.02	< 0.1	3	12	65	0.56	0.7	1.3	0.2	0.1	0.1	20	< 0.05	0.17	0.6	0.10
E885641 Orig	0.006	< 20	40.7	0.24	1.83	8.30	0.60	2.51	< 0.1	359	140	2720	11.7	1.8	170	2.3	0.3	0.8	20	0.17	8.11	66.8	0.75
E885641 Split	0.007	< 20	42.8	0.25	1.96	8.67	0.64	2.64	< 0.1	347	152	2920	12.5	1.8	180	2.3	0.4	0.7	< 10	0.17	8.34	70.9	0.80
E885641 Orig		< 20	41.7	0.25	1.89	8.36	0.61	2.55	0.1	370	144	2770	11.9	1.9	173	2.3	0.3	0.8	20	0.17	8.52	68.2	0.80
E885641 Dup		< 20	39.7	0.23	1.78	8.24	0.59	2.46	< 0.1	348	136	2680	11.6	1.8	167	2.2	0.3	0.7	20	0.17	7.70	65.4	0.70
E885833 Orig	< 0.005																						
E885833 Dup	< 0.005																						
Method Blank		20	< 0.5	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.1	1	4	1	< 0.01	< 0.1	< 0.5	< 0.1	< 0.1	< 0.1	40	< 0.05	< 0.05	< 0.1	< 0.05
Method Blank		20	< 0.5	< 0.01	< 0.01	< 0.01	0.01	< 0.01	< 0.1	1	5	1	0.01	< 0.1	< 0.5	< 0.1	< 0.1	< 0.1	20	< 0.05	< 0.05	< 0.1	< 0.05
Method Blank		30	< 0.5	< 0.01	< 0.01	< 0.01	0.01	< 0.01	< 0.1	1	4	7	< 0.01	< 0.1	< 0.5	< 0.1	0.1	< 0.1	20	< 0.05	< 0.05	< 0.1	< 0.05
Method Blank		30	< 0.5	< 0.01	< 0.01	< 0.01	0.01	< 0.01	< 0.1	1	4	2	0.01	< 0.1	< 0.5	< 0.1	< 0.1	< 0.1	40	< 0.05	< 0.05	< 0.1	< 0.05
Method Blank		30	< 0.5	< 0.01	< 0.01	< 0.01	0.01	< 0.01	< 0.1	1	6	1	0.01	< 0.1	< 0.5	< 0.1	< 0.1	< 0.1	10	< 0.05	< 0.05	< 0.1	< 0.05
Method Blank		20	< 0.5	< 0.01	< 0.01	< 0.01	0.01	< 0.01	< 0.1	1	5	3	< 0.01	< 0.1	< 0.5	< 0.1	< 0.1	< 0.1	50	< 0.05	< 0.05	< 0.1	< 0.05
Method Blank	< 0.005																						
Method Blank	< 0.005																						
Method Blank	< 0.005																						
Method Blank	< 0.005																						

	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	
SAMPLE	Bi	Se	Zn	Ga	As	Rb	Y	Zr	Nb	Mo	In	Sn	Sb	Te	Ba	La	Ce	Pr	Nd	Sm	Gd	Tb	Dy
DESCRIPTION	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
E885701	0.09	0.3	88.4	20.8	0.5	57.2	12.5	116	0.5	0.19	< 0.1	< 1	< 0.1	< 0.1	556	20.1	47.4	5.3	22.2	4.9	3.6	0.4	2.5
E885702	0.15	0.4	21.6	22.9	3.3	58.9	5.3	77	5.2	1.96	< 0.1	< 1	0.2	< 0.1	895	1.9	7.1	0.8	4.0	1.1	1.4	0.2	1.1
E885703	0.09	0.2	5.4	21.3	1.6	80.5	8.8	20	4.6	0.25	< 0.1	< 1	0.1	< 0.1	418	0.7	1.2	0.1	0.5	0.4	0.6	0.1	1.2
E885751	0.05	0.5	83.7	15.6	0.3	6.5	17.9	17	0.1	0.16	< 0.1	< 1	< 0.1	< 0.1	35	2.4	6.9	1.1	5.7	1.8	2.7	0.5	3.0
E885752	0.05	0.5	99.7	19.6	5.1	0.2	21.1	24	0.3	0.16	< 0.1	< 1	0.1	< 0.1	11	3.7	10.0	1.4	7.4	2.3	3.3	0.5	3.5
E885753	0.05	0.4	97.7	18.8	1.7	24.9	18.1	38	0.2	0.10	< 0.1	< 1	< 0.1	< 0.1	187	2.0	5.9	1.0	4.7	2.0	2.6	0.5	3.0
E885754	0.11	2.8	110	6.0	11.1	3.1	12.5	42	2.2	1.38	< 0.1	< 1	0.3	0.2	12	11.1	21.0	2.3	9.4	1.8	2.0	0.2	1.6
E885755	0.05	0.5	137	16.9	0.3	1.5	21.1	23	0.2	0.14	< 0.1	< 1	< 0.1	< 0.1	23	3.3	9.3	1.4	7.3	2.2	3.2	0.6	3.7
E885756	0.05	0.6	102	16.1	< 0.1	1.2	19.4	24	0.3	0.12	< 0.1	< 1	0.1	< 0.1	19	3.1	8.6	1.3	6.7	2.2	3.0	0.5	3.4
E885757	0.04	0.6	94.7	17.2	0.5	0.8	19.9	19	0.1	0.09	< 0.1	< 1	< 0.1	< 0.1	18	3.0	8.4	1.3	6.7	2.3	2.9	0.5	3.2
E885758	0.08	0.3	43.1	18.5	1.9	30.0	2.4	117	2.8	0.23	< 0.1	< 1	< 0.1	< 0.1	360	21.1	36.8	3.4	10.9	1.4	1.0	0.1	0.4
E885601	0.07	0.5	41.3	20.3	0.5	0.9	37.4	75	0.4	0.08	< 0.1	< 1	< 0.1	< 0.1	39	2.2	6.3	1.0	5.3	2.8	4.9	0.9	6.1
E885602	0.09	0.7	105	12.3	2.3	6.7	13.9	39	1.8	0.36	< 0.1	< 1	1.4	< 0.1	181	5.1	10.4	1.2	5.3	1.5	1.9	0.3	2.4
E885603	0.21	1.1	54.8	19.5	21.9	51.6	20.7	50	0.4	0.21	< 0.1	< 1	0.2	< 0.1	130	4.9	12.3	1.6	8.5	2.7	3.2	0.6	3.5
E885605	0.07	0.6	97.0	20.6	0.1	7.1	21.9	47	0.4	0.13	< 0.1	< 1	< 0.1	< 0.1	71	5.2	13.3	1.9	9.3	2.9	3.4	0.6	3.8
E885606	0.34	0.9	102	16.9	2.1	12.5	17.6	42	1.0	0.16	< 0.1	< 1	< 0.1	< 0.1	55	2.1	5.9	0.9	4.8	1.4	2.3	0.4	3.0

	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS
SAMPLE	Bi	Se	Zn	Ga	As	Rb	Y	Zr	Nb	Mo	In	Sn	Sb	Te	Ba	La	Ce	Pr	Nd	Sm	Gd	Tb	Dy
DESCRIPTION	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
E885607	0.80	0.2	95.4	0.6	111	0.3	4.0	2	< 0.1	0.35	< 0.1	< 1	1.5	< 0.1	2	1.2	2.0	0.2	1.0	0.3	0.4	0.1	0.4
E885608	0.16	0.6	124	14.8	26.7	60.1	18.1	61	2.6	0.47	< 0.1	< 1	0.7	< 0.1	136	4.7	9.7	1.1	4.8	1.3	2.2	0.4	3.1
E885609	0.31	0.5	2920	16.8	25.7	46.0	21.3	82	3.8	1.29	0.1	4	1.3	< 0.1	258	8.7	17.4	2.0	7.9	2.2	3.0	0.5	3.1
E885610	7.90	19.7	6260	14.0	340	39.9	15.5	74	3.8	8.16	3.1	17	31.1	0.1	78	11.4	24.6	3.3	13.2	3.7	2.9	0.5	2.5
E885611	2.50	0.6	> 10000	1.6	169	2.7	2.4	5	0.2	0.52	0.8	< 1	1.4	< 0.1	19	0.5	0.8	0.1	0.5	0.2	0.2	< 0.1	0.2
E885612	0.10	0.3	82.2	13.7	2.5	4.5	14.9	49	2.4	0.50	< 0.1	< 1	0.5	< 0.1	65	3.1	7.3	0.8	4.2	1.5	2.1	0.4	2.6
E885613	0.24	0.3	47.0	19.5	24.9	67.8	3.6	129	4.3	0.74	< 0.1	< 1	2.3	< 0.1	812	24.1	41.7	3.9	13.0	2.0	1.3	0.1	0.6
E885614	5.25	0.9	5200	7.9	219	34.1	7.7	58	3.8	1.48	0.7	3	7.6	< 0.1	67	8.9	16.6	1.7	5.8	1.1	1.1	0.2	1.0
E885615	9.94	0.3	2340	0.7	1390	0.7	5.9	5	0.1	0.39	0.3	2	29.8	0.1	3	1.8	2.5	0.3	1.1	0.2	0.6	0.1	0.7
E885616	0.20	0.7	160	13.7	7.3	36.1	20.3	56	2.3	0.30	< 0.1	< 1	2.6	< 0.1	185	6.9	14.5	1.7	7.6	1.7	2.9	0.5	3.4
E885617	0.09	0.3	315	1.1	1460	2.7	26.9	6	0.2	0.22	< 0.1	< 1	23.3	< 0.1	13	9.4	12.1	1.3	5.6	1.4	1.5	0.2	1.7
E885618	0.13	0.4	80.3	15.3	12.8	5.2	14.1	72	1.8	0.50	< 0.1	< 1	0.9	< 0.1	123	6.4	13.4	1.4	6.0	1.4	1.8	0.3	2.2
E885619	0.08	0.4	248	14.8	1.2	3.1	13.7	55	2.1	0.44	< 0.1	< 1	0.3	< 0.1	69	2.9	7.6	0.9	4.6	1.8	2.2	0.3	2.2
E885620	0.05	0.3	4.2	0.7	1.2	2.1	1.3	22	0.6	0.30	< 0.1	< 1	0.2	< 0.1	19	1.8	3.4	0.4	1.5	0.2	0.2	< 0.1	0.2
E885621	0.41	0.7	130	17.3	27.2	23.8	16.1	55	1.8	0.28	< 0.1	< 1	0.2	< 0.1	163	5.5	11.5	1.4	6.5	1.9	2.3	0.4	2.7
E885622	0.27	0.7	134	18.0	7.9	40.5	16.4	45	0.2	0.15	< 0.1	< 1	< 0.1	< 0.1	107	3.9	10.3	1.4	7.3	2.0	2.9	0.5	3.0
E885623	0.31	0.4	54.6	7.9	132	22.9	4.1	43	1.4	2.44	< 0.1	< 1	1.3	< 0.1	70	5.0	9.8	1.0	3.9	0.9	0.8	0.1	0.7
E885624	0.21	0.3	350	10.4	52.7	35.0	26.5	41	1.5	0.52	< 0.1	< 1	2.7	< 0.1	85	3.7	7.4	0.8	4.0	1.1	2.0	0.4	3.3
E885625	0.06	0.4	22.3	3.0	26.8	5.8	21.1	17	0.7	0.50	< 0.1	< 1	0.4	< 0.1	10	1.0	2.1	0.2	1.6	1.0	1.8	0.4	3.0
E885626	0.07	0.6	181	36.9	< 0.1	103	61.1	709	26.2	1.09	< 0.1	3	0.9	< 0.1	338	90.2	184	19.9	77.0	17.1	14.4	2.0	11.5
E885627	1.03	1.0	234	3.0	11.7	3.6	6.9	13	0.5	0.42	< 0.1	< 1	1.5	0.2	9	1.4	3.1	0.3	1.5	0.4	0.9	0.1	1.1
E885628	0.07	0.5	186	20.2	< 0.1	7.8	23.2	58	0.1	0.10	< 0.1	< 1	< 0.1	< 0.1	141	4.5	12.1	1.7	8.6	2.2	3.5	0.5	3.6
E885629	0.69	0.4	72.9	9.0	2.3	27.7	12.6	200	10.5	0.65	< 0.1	1	1.7	< 0.1	98	15.3	33.2	3.5	13.6	3.2	2.5	0.3	1.7
E885630	7.72	19.0	6190	13.6	330	38.8	15.6	75	3.7	7.93	2.8	17	34.5	0.2	75	11.1	24.2	3.2	13.0	3.3	2.8	0.4	2.4
E885631	0.10	0.5	82.2	19.9	3.6	29.8	9.8	78	8.6	0.53	< 0.1	< 1	0.4	< 0.1	61	33.1	60.3	5.5	19.2	3.3	2.8	0.3	1.8
E885632	0.90	0.6	177	12.2	18.0	13.0	9.6	28	1.2	0.31	< 0.1	< 1	0.8	0.2	61	2.6	5.9	0.7	3.2	0.8	1.2	0.2	1.7
E885633	0.35	0.6	103	10.1	1.4	0.6	10.1	44	1.9	0.15	< 0.1	< 1	0.2	< 0.1	11	1.6	5.1	0.9	4.5	1.5	1.9	0.3	1.8
E885634	0.08	1.9	149	17.9	1.1	30.4	13.1	63	2.1	0.36	0.1	1	< 0.1	< 0.1	249	5.6	14.0	1.8	9.2	2.2	2.6	0.4	2.4
E885635	1.02	5.0	105	21.9	< 0.1	5.4	45.5	147	3.6	0.43	< 0.1	< 1	< 0.1	< 0.1	66	11.2	27.1	2.9	11.1	3.0	5.3	1.0	7.6
E885636	1.40	1.2	32.0	1.6	11.5	4.4	1.7	27	0.4	2.68	< 0.1	< 1	0.8	0.2	18	1.5	3.1	0.3	1.5	0.1	0.3	< 0.1	0.2
E885637	0.14	0.3	26.5	0.6	12.7	0.5	1.4	1	< 0.1	0.21	< 0.1	< 1	4.1	< 0.1	16	0.5	0.9	0.1	0.4	0.1	0.1	< 0.1	0.1
E885638	0.61	1.1	39.1	2.5	6.6	7.0	2.9	29	1.0	2.96	< 0.1	< 1	1.4	0.1	64	1.9	3.7	0.4	1.6	0.4	0.4	0.1	0.4
E885639	0.38	0.9	29.0	14.9	1.6	0.8	10.7	36	0.1	0.15	< 0.1	< 1	< 0.1	< 0.1	2	1.4	3.3	0.4	1.7	0.7	1.2	0.2	1.6
E885640	0.05	0.3	6.4	0.8	1.6	2.9	1.9	21	0.6	0.33	< 0.1	< 1	0.2	< 0.1	19	2.8	5.9	0.7	2.4	0.5	0.3	0.1	0.3
E885641	0.18	1.0	109	19.8	19.7	26.2	17.6	72	3.1	0.44	< 0.1	< 1	0.1	< 0.1	75	4.9	13.1	1.8	9.0	2.4	3.4	0.5	3.8
E885642	1.67	0.8	43.6	2.7	12.9	8.4	2.2	35	0.7	2.37	< 0.1	< 1	0.6	0.1	39	1.8	3.4	0.4	1.5	0.3	0.2	< 0.1	0.4
E885643	0.50	0.6	78.4	7.2	14.4	15.8	4.5	58	2.9	4.38	< 0.1	< 1	0.9	< 0.1	72	3.5	7.4	0.8	3.2	0.7	0.6	0.1	0.7
E885644	0.29	0.7	159	23.2	4.2	61.5	21.8	168	0.6	0.60	< 0.1	< 1	< 0.1	< 0.1	728	20.7	43.4	4.8	20.6	3.5	4.3	0.6	3.9
E885645	0.24	0.3	99.7	15.8	489	28.5	7.6	49	0.1	0.14	< 0.1	< 1	0.9	< 0.1	701	10.7	19.7	2.1	7.6	1.7	1.3	0.2	1.2
E885833	0.26	0.5	154	20.7	0.8	26.2	19.4	96	0.4	0.26	< 0.1	< 1	< 0.1	< 0.1	179	16.7	40.9	5.1	23.0	4.6	4.3	0.6	3.9
E885834	0.06	0.4	6.8	18.0	1.0	55.9	1.2	36	0.8	0.85	< 0.1	< 1	< 0.1	< 0.1	1050	3.0	4.2	0.4	1.3	0.5	0.2	< 0.1	0.1
E885835	0.07	0.3	7.6	17.0	0.8	140	10.7	41	5.3	0.32	< 0.1	< 1	< 0.1	< 0.1	178	2.4	5.3	0.6	2.8	0.8	1.6	0.3	1.9
E881963	0.07	0.6	104	17.9	< 0.1	1.2	20.7	11	1.3	0.17	< 0.1	< 1	< 0.1	< 0.1	26	3.0	8.4	1.3	6.7	2.3	3.1	0.5	3.6

Results

Activation Laboratories Ltd.

Report: A18-10265

	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS
SAMPLE	Bi	Se	Zn	Ga	As	Rb	Y	Zr	Nb	Mo	In	Sn	Sb	Te	Ba	La	Ce	Pr	Nd	Sm	Gd	Tb	Dy
DESCRIPTION	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
GXR-4 Meas	19.5	6.2	71.3	19.4	102	153	13.2	47	9.4	315	0.3	8	4.4	0.9	237	55.3	108		39.9	6.4	4.8	0.5	2.6
GXR-4 Cert	19.0	5.60	73.0	20.0	98.0	160	14.0	186	10.0	310	0.270	5.60	4.80	0.970	1640	64.5	102		45.0	6.60	5.25	0.360	2.60
GXR-4 Meas	18.1	6.2	69.3	18.1	101	149	12.9	46	9.2	316	0.2	7	4.2	0.9	206	56.5	109		40.6	6.1	4.5	0.5	2.5
GXR-4 Cert	19.0	5.60	73.0	20.0	98.0	160	14.0	186	10.0	310	0.270	5.60	4.80	0.970	1640	64.5	102		45.0	6.60	5.25	0.360	2.60
SDC-1 Meas			105	25.0	< 0.1	60.3		23	0.1			< 1	< 0.1		605	38.1	85.0		38.6	7.1	6.9	1.0	5.6
SDC-1 Cert			103.00	21.00	0.220	127.00		290.00	21.00			3.00	0.54		630	42.00	93.00		40.00	8.20	7.00	1.20	6.70
SDC-1 Meas			112	24.5	< 0.1	78.2		37	0.6			< 1	< 0.1		662	41.0	90.5		40.8	8.7	7.3	1.0	5.8
SDC-1 Cert			103.00	21.00	0.220	127.00		290.00	21.00			3.00	0.54		630	42.00	93.00		40.00	8.20	7.00	1.20	6.70
GXR-6 Meas	0.20	0.8	129	35.1	237	63.6	12.2	71	0.1	0.73	< 0.1	< 1	0.5	< 0.1	1220	12.2	33.0		11.9	2.5	2.3	0.3	2.1
GXR-6 Cert	0.290	0.940	118	35.0	330	90.0	14.0	110	7.50	2.40	0.260	1.70	3.60	0.0180	1300	13.9	36.0		13.0	2.67	2.97	0.415	2.80
OREAS 97 (4 Acid) Meas	41.3	72.8	604									98	6.8										
OREAS 97 (4 Acid) Cert	40.1	71.4	646									95.7	9.23										
OREAS 97 (4 Acid) Meas	41.0	71.2	637									103	6.8										
OREAS 97 (4 Acid) Cert	40.1	71.4	646									95.7	9.23										
OREAS 98 (4 Acid) Meas	97.2	173	1320									> 200	11.3										
OREAS 98 (4 Acid) Cert	97.2	158	1360									206	20.1										
OREAS 98 (4 Acid) Meas	94.5	161	1340									> 200	7.4										
OREAS 98 (4 Acid) Cert	97.2	158	1360									206	20.1										
DNC-1a Meas			70.9	14.9		3.3	15.6	39	1.5				0.8		101	3.4			4.8				
DNC-1a Cert			70	15		5	18.0	38.0	3				0.96		118	3.6			5.20				
DNC-1a Meas			69.7	14.8		3.4	15.3	37	1.4				0.7		101	3.4			4.8				
DNC-1a Cert			70	15		5	18.0	38.0	3				0.96		118	3.6			5.20				
SBC-1 Meas	0.74		199	30.7	25.4	113	30.2	122	13.5	2.19		4	0.9		709	47.5	106	12.0	46.1	9.7	8.4	1.1	6.1
SBC-1 Cert	0.70		186	27.0	25.7	147	36.5	134.0	15.3	2.40		3.3	1.01		788.0	52.5	108.0	12.6	49.2	9.6	8.5	1.20	7.10
SBC-1 Meas	0.69		209	29.6	25.8	125	29.4	119	13.7	2.22		3	0.9		665	46.6	101	11.5	46.4	8.7	7.6	1.0	5.7
SBC-1 Cert	0.70		186	27.0	25.7	147	36.5	134.0	15.3	2.40		3.3	1.01		788.0	52.5	108.0	12.6	49.2	9.6	8.5	1.20	7.10
OREAS 45d (4-Acid) Meas	0.34		44.1	22.2	6.7	41.8	10.9	91	0.3	0.24	< 0.1	< 1	< 0.1		176	15.8	35.2	3.6	13.4	2.9	2.4	0.4	2.3
OREAS 45d (4-Acid) Cert	0.31		45.7	21.20	13.8	42.1	9.53	141	14.50	2.500	0.096	2.78	0.82		183.0	16.9	37.20	3.70	13.4	2.80	2.42	0.400	2.26
OREAS 45d (4-Acid) Meas	0.34		42.8	20.9	8.3	38.5	10.0	88	0.7	0.81	< 0.1	< 1	< 0.1		169	15.0	33.3	3.3	12.7	2.7	2.3	0.3	2.0
OREAS 45d (4-Acid) Cert	0.31		45.7	21.20	13.8	42.1	9.53	141	14.50	2.500	0.096	2.78	0.82		183.0	16.9	37.20	3.70	13.4	2.80	2.42	0.400	2.26
OREAS 220 (Fire Assay) Meas																							
OREAS 220 (Fire Assay) Cert																							

	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS
SAMPLE	Bi	Se	Zn	Ga	As	Rb	Y	Zr	Nb	Mo	In	Sn	Sb	Te	Ba	La	Ce	Pr	Nd	Sm	Gd	Tb	Dy
DESCRIPTION	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
OREAS 220 (Fire Assay) Meas																							
OREAS 220 (Fire Assay) Cert																							
OREAS 220 (Fire Assay) Meas																							
OREAS 220 (Fire Assay) Cert																							
OREAS 96 (4 Acid) Meas	27.5	43.8	439									69	4.9										
OREAS 96 (4 Acid) Cert	26.3	40.7	457									65.6	5.09										
OREAS 96 (4 Acid) Meas	27.6	42.9	465									71	5.0										
OREAS 96 (4 Acid) Cert	26.3	40.7	457									65.6	5.09										
OREAS 209 (Fire Assay) Meas																							
OREAS 209 (Fire Assay) Cert																							
OREAS 209 (Fire Assay) Meas																							
OREAS 209 (Fire Assay) Cert																							
E885701 Orig																							
E885701 Dup																							
E885608 Orig	0.16	0.6	124	14.8	26.7	60.1	18.1	61	2.6	0.47	< 0.1	< 1	0.7	< 0.1	136	4.7	9.7	1.1	4.8	1.3	2.2	0.4	3.1
E885608 Dup	0.16	0.8	120	14.5	26.8	64.8	18.2	61	2.7	0.47	< 0.1	< 1	0.7	< 0.1	138	4.9	9.9	1.1	5.0	1.1	2.3	0.4	3.0
E885611 Orig																							
E885611 Dup																							
E885613 Orig	0.24	0.3	47.0	19.5	24.9	67.8	3.6	129	4.3	0.74	< 0.1	< 1	2.3	< 0.1	812	24.1	41.7	3.9	13.0	2.0	1.3	0.1	0.6
E885613 Dup	0.26	0.4	49.2	20.5	24.3	59.7	3.7	134	4.2	0.73	< 0.1	< 1	2.4	< 0.1	826	24.9	43.1	4.1	13.4	2.1	1.4	0.1	0.7
E885622 Orig																							
E885622 Dup																							
E885631 Orig																							
E885631 Dup																							
E885640 Orig	0.05	0.3	6.4	0.8	1.6	2.9	1.9	21	0.6	0.33	< 0.1	< 1	0.2	< 0.1	19	2.8	5.9	0.7	2.4	0.5	0.3	0.1	0.3
E885640 Dup	0.05	0.3	4.5	0.8	1.0	3.0	1.8	19	0.6	0.29	< 0.1	< 1	0.2	< 0.1	19	2.6	5.4	0.6	2.2	0.5	0.4	0.1	0.3
E885641 Orig	0.18	1.0	108	19.3	19.5	25.3	17.0	70	3.1	0.38	< 0.1	< 1	0.1	< 0.1	71	4.6	12.3	1.8	8.5	2.3	3.2	0.5	3.5
E885641 Split	0.19	1.0	114	20.2	18.9	25.9	17.6	68	2.2	0.31	< 0.1	< 1	0.1	< 0.1	73	4.6	12.2	1.7	8.6	2.6	3.4	0.5	3.3
E885641 Orig	0.18	1.0	109	19.8	19.7	26.2	17.6	72	3.1	0.44	< 0.1	< 1	0.1	< 0.1	75	4.9	13.1	1.8	9.0	2.4	3.4	0.5	3.8
E885641 Dup	0.17	1.0	107	18.9	19.2	24.3	16.5	68	3.1	0.32	< 0.1	< 1	0.1	< 0.1	67	4.2	11.6	1.7	7.9	2.2	3.0	0.5	3.2
E885833 Orig																							
E885833 Dup																							
Method Blank	0.04	0.1	0.6	0.2	0.2	< 0.2	< 0.1	< 1	< 0.1	0.10	< 0.1	< 1	< 0.1	< 0.1	< 1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Method Blank	0.04	0.4	< 0.2	0.2	0.4	< 0.2	< 0.1	< 1	< 0.1	0.31	< 0.1	< 1	< 0.1	< 0.1	< 1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1

	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS
SAMPLE	Bi	Se	Zn	Ga	As	Rb	Y	Zr	Nb	Mo	In	Sn	Sb	Te	Ba	La	Ce	Pr	Nd	Sm	Gd	Tb	Dy
DESCRIPTION	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Method Blank	0.04	0.4	< 0.2	0.2	< 0.1	< 0.2	< 0.1	< 1	< 0.1	0.09	< 0.1	< 1	< 0.1	< 0.1	< 1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Method Blank	0.04	0.1	< 0.2	0.2	0.4	< 0.2	< 0.1	< 1	< 0.1	0.11	< 0.1	< 1	< 0.1	< 0.1	< 1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Method Blank	0.03	< 0.1	< 0.2	0.2	0.4	< 0.2	< 0.1	< 1	< 0.1	0.06	< 0.1	< 1	< 0.1	< 0.1	< 1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Method Blank	0.03	0.1	0.5	0.2	0.4	< 0.2	< 0.1	< 1	< 0.1	0.13	< 0.1	< 1	< 0.1	< 0.1	< 1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Method Blank																							
Method Blank																							
Method Blank																							
Method Blank																							

	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS
SAMPLE	Cu	Ge	Tm	Yb	Lu	Ta	Sr	W	Re	Tl	Pb	Th	U
DESCRIPTION	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
E885701	11.2	0.2	0.2	1.1	0.1	< 0.1	599	0.1	< 0.001	0.40	9.8	5.3	0.6
E885702	10.3	0.1	0.1	0.5	0.1	0.2	271	0.4	< 0.001	0.54	18.7	9.9	3.9
E885703	1.9	0.2	0.2	1.2	0.2	1.0	222	0.6	< 0.001	0.98	34.0	13.5	5.3
E885751	143	0.2	0.3	2.0	0.2	< 0.1	66.0	0.2	0.001	< 0.05	< 0.5	0.2	0.1
E885752	116	0.4	0.3	2.2	0.3	< 0.1	219	0.1	0.001	< 0.05	0.9	0.4	0.1
E885753	64.4	0.2	0.3	2.0	0.3	< 0.1	22.7	0.1	< 0.001	< 0.05	< 0.5	0.3	0.1
E885754	47.1	0.1	0.2	1.2	0.2	0.1	11.2	0.7	< 0.001	< 0.05	2.6	1.7	0.4
E885755	136	0.4	0.3	2.2	0.3	< 0.1	163	0.1	0.001	< 0.05	< 0.5	0.3	0.1
E885756	135	0.6	0.3	2.1	0.3	< 0.1	149	0.1	< 0.001	< 0.05	< 0.5	0.3	0.1
E885757	89.5	0.3	0.3	2.1	0.2	< 0.1	62.7	0.1	< 0.001	< 0.05	< 0.5	0.3	0.1
E885758	28.3	0.1	< 0.1	0.2	< 0.1	0.1	375	0.2	< 0.001	0.09	5.8	4.1	0.4
E885601	4.3	0.5	0.6	4.1	0.6	< 0.1	115	0.1	0.001	< 0.05	0.8	1.2	0.4
E885602	114	0.7	0.2	1.6	0.2	0.1	88.1	0.6	< 0.001	< 0.05	6.4	1.8	0.5
E885603	264	0.5	0.4	2.5	0.3	< 0.1	52.6	0.1	0.002	0.53	29.6	0.6	0.2
E885605	154	0.5	0.4	2.5	0.3	< 0.1	92.3	0.1	< 0.001	< 0.05	< 0.5	0.5	0.2
E885606	262	0.3	0.3	2.2	0.3	< 0.1	110	0.2	< 0.001	< 0.05	3.0	0.6	0.2
E885607	23.5	0.1	< 0.1	0.2	< 0.1	< 0.1	3.2	0.5	< 0.001	< 0.05	129	< 0.1	< 0.1
E885608	75.1	0.6	0.3	2.1	0.3	0.2	7.4	0.8	< 0.001	0.99	92.5	2.4	0.7
E885609	88.0	0.2	0.3	2.1	0.3	0.3	29.6	3.6	< 0.001	0.98	349	3.4	0.8
E885610	1970	0.2	0.3	1.8	0.3	0.1	78.4	2.8	0.012	5.73	> 5000	3.1	2.1
E885611	298	0.1	< 0.1	0.2	< 0.1	< 0.1	1.9	0.8	< 0.001	< 0.05	154	0.1	0.1
E885612	1.8	0.4	0.3	1.7	0.2	0.2	184	0.3	< 0.001	< 0.05	13.0	2.0	0.5
E885613	13.2	0.2	< 0.1	0.3	< 0.1	0.3	80.0	0.7	< 0.001	1.24	109	8.6	1.8
E885614	298	0.1	0.1	0.9	0.1	0.3	21.0	2.5	< 0.001	1.64	488	5.8	1.4
E885615	50.0	0.1	0.1	0.5	0.1	< 0.1	0.5	0.6	< 0.001	< 0.05	613	0.1	0.2
E885616	230	0.2	0.3	2.3	0.3	0.2	39.0	0.5	< 0.001	0.42	33.2	2.0	0.6
E885617	41.4	0.2	0.3	1.8	0.3	< 0.1	1.9	0.7	< 0.001	< 0.05	3.9	0.1	0.7
E885618	30.4	0.7	0.2	1.5	0.2	0.1	95.1	0.3	< 0.001	< 0.05	8.6	2.4	0.9
E885619	35.6	0.8	0.2	1.5	0.2	0.2	91.6	0.3	< 0.001	< 0.05	7.8	2.3	0.6
E885620	1.4	0.2	< 0.1	0.2	< 0.1	< 0.1	2.6	0.3	< 0.001	< 0.05	< 0.5	1.0	0.4
E885621	78.9	0.5	0.3	1.8	0.2	0.1	134	0.8	< 0.001	0.15	11.2	1.6	0.4
E885622	102	0.4	0.3	2.0	0.3	< 0.1	30.1	0.1	< 0.001	0.46	7.5	0.5	0.2

	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS
SAMPLE	Cu	Ge	Tm	Yb	Lu	Ta	Sr	W	Re	Tl	Pb	Th	U
DESCRIPTION	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
E885623	48.9	0.9	0.1	0.4	0.1	< 0.1	43.7	0.4	< 0.001	0.19	10.8	1.8	0.5
E885624	10.2	0.2	0.5	3.8	0.6	0.1	17.7	0.5	< 0.001	0.40	4.1	1.0	0.6
E885625	1.0	0.1	0.3	2.0	0.3	< 0.1	1.1	0.4	< 0.001	< 0.05	< 0.5	0.4	0.2
E885626	< 0.2	1.0	0.9	5.9	0.8	1.4	197	0.3	0.001	1.09	23.6	29.1	8.5
E885627	62.5	0.1	0.1	0.9	0.1	< 0.1	0.9	0.3	< 0.001	< 0.05	< 0.5	0.4	0.1
E885628	182	0.3	0.4	2.6	0.3	< 0.1	120	0.1	< 0.001	< 0.05	3.6	0.5	0.2
E885629	75.3	0.4	0.1	0.8	0.1	0.8	22.7	0.5	< 0.001	0.26	10.8	8.8	2.1
E885630	1940	0.2	0.2	1.8	0.2	0.1	74.9	3.4	0.010	5.48	> 5000	2.9	1.9
E885631	46.9	0.2	0.2	1.0	0.1	0.9	34.2	0.6	< 0.001	0.39	15.7	16.0	3.3
E885632	109	0.1	0.2	1.2	0.1	< 0.1	11.5	24.5	0.005	0.10	0.6	0.9	0.3
E885633	93.9	0.8	0.2	1.0	0.1	0.1	10.9	0.4	< 0.001	< 0.05	< 0.5	0.5	0.1
E885634	195	0.7	0.3	1.7	0.2	< 0.1	44.8	0.3	< 0.001	0.32	2.9	0.4	0.1
E885635	250	0.6	0.8	5.5	0.7	0.1	167	0.2	0.007	< 0.05	3.7	1.6	0.3
E885636	87.3	0.1	< 0.1	0.2	< 0.1	< 0.1	9.6	0.8	< 0.001	0.15	< 0.5	1.3	0.6
E885637	7.7	0.2	< 0.1	0.1	< 0.1	< 0.1	0.9	1.8	< 0.001	< 0.05	< 0.5	< 0.1	< 0.1
E885638	132	0.1	0.1	0.4	0.1	< 0.1	12.7	2.7	< 0.001	0.14	< 0.5	2.1	0.7
E885639	54.1	0.3	0.2	1.3	0.2	< 0.1	57.5	0.1	< 0.001	< 0.05	2.0	0.2	0.2
E885640	2.2	0.1	< 0.1	0.3	< 0.1	< 0.1	3.5	0.2	< 0.001	< 0.05	< 0.5	1.2	0.3
E885641	272	0.8	0.3	2.4	0.3	0.2	49.0	0.4	0.001	0.22	1.7	0.7	0.2
E885642	118	0.1	0.1	0.3	< 0.1	< 0.1	12.8	1.4	< 0.001	0.15	1.0	1.5	0.6
E885643	68.2	0.1	0.1	0.6	0.1	0.2	26.9	4.2	< 0.001	0.35	2.5	3.0	1.1
E885644	85.3	0.3	0.4	2.5	0.3	< 0.1	128	0.1	< 0.001	0.76	16.3	8.2	2.5
E885645	20.6	0.5	0.1	1.0	0.1	< 0.1	37.1	0.1	< 0.001	0.27	15.5	1.6	0.7
E885833	136	0.3	0.3	2.1	0.3	< 0.1	234	0.1	< 0.001	0.09	8.2	2.1	0.9
E885834	6.8	0.4	< 0.1	0.1	< 0.1	< 0.1	237	0.1	< 0.001	0.38	20.8	1.0	0.7
E885835	2.9	0.4	0.2	1.6	0.2	0.4	76.5	0.4	< 0.001	1.32	36.0	43.5	2.3
E881963	115	0.5	0.4	2.4	0.3	< 0.1	124	0.1	< 0.001	< 0.05	< 0.5	0.4	0.1
GXR-4 Meas	6310		0.2	1.0	0.1	0.5	228	37.4		3.50	50.1	19.8	5.8
GXR-4 Cert	6520		0.210	1.60	0.170	0.790	221	30.8		3.20	52.0	22.5	6.20
GXR-4 Meas	6280		0.2	1.0	0.1	0.5	215	33.7		3.40	49.0	19.5	5.7
GXR-4 Cert	6520		0.210	1.60	0.170	0.790	221	30.8		3.20	52.0	22.5	6.20
SDC-1 Meas	27.8		0.5	3.2		< 0.1	165	0.1		0.59	24.0	11.8	2.8
SDC-1 Cert	30.000		0.65	4.00		1.20	180.00	0.80		0.70	25.00	12.00	3.10
SDC-1 Meas	29.8		0.5	3.4		< 0.1	182	0.1		0.62	24.5	12.3	2.9
SDC-1 Cert	30.000		0.65	4.00		1.20	180.00	0.80		0.70	25.00	12.00	3.10
GXR-6 Meas	65.4			1.6	0.2	< 0.1	37.4	0.1		2.30	102	5.2	1.4
GXR-6 Cert	66.0			2.40	0.330	0.485	35.0	1.90		2.20	101	5.30	1.54
OREAS 97 (4 Acid) Meas	> 10000										149		
OREAS 97 (4 Acid) Cert	63100.00										147		
OREAS 97 (4 Acid) Meas	> 10000										150		
OREAS 97 (4 Acid) Cert	63100.00										147		

	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS
SAMPLE	Cu	Ge	Tm	Yb	Lu	Ta	Sr	W	Re	Tl	Pb	Th	U
DESCRIPTION	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Acid) Cert	00												
OREAS 98 (4 Acid) Meas	> 10000										353		
OREAS 98 (4 Acid) Cert	14800 0.0										345		
OREAS 98 (4 Acid) Meas	> 10000										347		
OREAS 98 (4 Acid) Cert	14800 0.0										345		
DNC-1a Meas	99.2			1.9			149				5.5		
DNC-1a Cert	100			2.0			144				6.3		
DNC-1a Meas	97.8			1.9			142				5.2		
DNC-1a Cert	100			2.0			144				6.3		
SBC-1 Meas	30.0		0.5	3.4	0.5	0.8	188	1.6		0.92	37.0	15.5	5.9
SBC-1 Cert	31.0		0.56	3.64	0.54	1.10	178.0	1.60		0.89	35.0	15.8	5.76
SBC-1 Meas	29.0		0.5	3.3	0.5	0.8	177	1.5		0.90	39.4	15.5	5.8
SBC-1 Cert	31.0		0.56	3.64	0.54	1.10	178.0	1.60		0.89	35.0	15.8	5.76
OREAS 45d (4-Acid) Meas	374			1.4	0.2	< 0.1	31.9	0.1		0.18	21.0	14.7	2.9
OREAS 45d (4-Acid) Cert	371			1.33	0.18	1.02	31.30	1.62		0.27	21.8	14.5	2.63
OREAS 45d (4-Acid) Meas	356			1.3	0.2	< 0.1	29.1	0.1		0.15	20.0	13.8	2.7
OREAS 45d (4-Acid) Cert	371			1.33	0.18	1.02	31.30	1.62		0.27	21.8	14.5	2.63
OREAS 220 (Fire Assay) Meas													
OREAS 220 (Fire Assay) Cert													
OREAS 220 (Fire Assay) Meas													
OREAS 220 (Fire Assay) Cert													
OREAS 220 (Fire Assay) Meas													
OREAS 220 (Fire Assay) Cert													
OREAS 96 (4 Acid) Meas	> 10000										101		
OREAS 96 (4 Acid) Cert	39300										101		
OREAS 96 (4 Acid) Meas	> 10000										101		
OREAS 96 (4 Acid) Cert	39300										101		
OREAS 209 (Fire Assay) Meas													

	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS
SAMPLE	Cu	Ge	Tm	Yb	Lu	Ta	Sr	W	Re	Tl	Pb	Th	U
DESCRIPTION	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
OREAS 209 (Fire Assay) Cert													
OREAS 209 (Fire Assay) Meas													
OREAS 209 (Fire Assay) Cert													
E885701 Orig													
E885701 Dup													
E885608 Orig	75.1	0.6	0.3	2.1	0.3	0.2	7.4	0.8	< 0.001	0.99	92.5	2.4	0.7
E885608 Dup	74.5	0.5	0.3	2.1	0.3	0.2	6.9	1.1	< 0.001	1.00	93.7	2.5	0.7
E885611 Orig													
E885611 Dup													
E885613 Orig	13.2	0.2	< 0.1	0.3	< 0.1	0.3	80.0	0.7	< 0.001	1.24	109	8.6	1.8
E885613 Dup	18.3	0.2	< 0.1	0.3	< 0.1	0.3	82.7	0.8	< 0.001	1.26	111	8.8	1.9
E885622 Orig													
E885622 Dup													
E885631 Orig													
E885631 Dup													
E885640 Orig	2.2	0.1	< 0.1	0.3	< 0.1	< 0.1	3.5	0.2	< 0.001	< 0.05	< 0.5	1.2	0.3
E885640 Dup	1.6	0.1	< 0.1	0.2	< 0.1	< 0.1	3.2	0.2	< 0.001	< 0.05	0.7	1.2	0.3
E885641 Orig	269	0.8	0.3	2.3	0.3	0.2	47.5	0.4	< 0.001	0.20	1.6	0.6	0.2
E885641 Split	290	0.8	0.3	2.3	0.3	0.1	49.2	0.1	0.002	0.21	1.6	0.6	0.2
E885641 Orig	272	0.8	0.3	2.4	0.3	0.2	49.0	0.4	0.001	0.22	1.7	0.7	0.2
E885641 Dup	266	0.8	0.3	2.1	0.3	0.2	45.9	0.5	< 0.001	0.18	1.5	0.5	0.2
E885833 Orig													
E885833 Dup													
Method Blank	0.3	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.2	0.1	< 0.001	< 0.05	< 0.5	< 0.1	< 0.1
Method Blank	0.4	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.2	< 0.1	< 0.001	< 0.05	< 0.5	< 0.1	< 0.1
Method Blank	< 0.2	0.1	< 0.1	< 0.1	< 0.1	< 0.1	0.2	0.1	< 0.001	< 0.05	< 0.5	< 0.1	< 0.1
Method Blank	0.7	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.2	0.1	< 0.001	< 0.05	< 0.5	< 0.1	< 0.1
Method Blank	0.5	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.2	< 0.1	< 0.001	< 0.05	< 0.5	< 0.1	< 0.1
Method Blank	0.4	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.2	< 0.1	< 0.001	< 0.05	< 0.5	< 0.1	< 0.1
Method Blank													
Method Blank													
Method Blank													
Method Blank													

Date Submitted: 03-Oct-18
Invoice No.: A18-14383
Invoice Date: 09-Nov-18
Your Reference: Exploration

GOLDCORP Canada Ltd--Musselwhite Mine
P.O. Box 7500
Thunder bay Ontario P7B 6S8
Canada

ATTN: Katie Lucas

CERTIFICATE OF ANALYSIS

11 Core samples were submitted for analysis.

The following analytical package(s) were requested:

Code UT-4 Total Digestion ICP/MS

REPORT **A18-14383**

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

Notes:

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

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

CERTIFIED BY:



Emmanuel Esemé , Ph.D.
Quality Control

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	FA-AA	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS		
SAMPLE	Au	B	Li	Na	Mg	Al	K	Ca	Cd	V	Cr	Mn	Fe	Hf	Ni	Er	Be	Ho	Hg	Ag	Cs	Co	Eu	
DESCRIPTION	g/mt	ppm	ppm	%	%	%	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	
E886152	0.005	< 20	3.9	0.01	13.9	1.03	0.01	6.01	< 0.1	45	384	1260	4.62	0.1	905	0.2	< 0.1	< 0.1	30	< 0.05	0.08	47.1	0.17	
E886153	0.006	130	3.8	0.04	8.59	0.62	< 0.01	3.91	< 0.1	18	778	940	3.89	< 0.1	563	0.2	< 0.1	< 0.1	20	0.10	0.12	41.5	0.09	
E886154	< 0.005	220	4.8	0.20	3.50	2.48	< 0.01	3.44	< 0.1	62	748	503	2.38	0.2	208	0.4	0.2	0.1	< 10	< 0.05	0.09	14.3	0.30	
E886155	< 0.005	140	1.8	0.08	3.37	0.79	0.01	5.29	< 0.1	29	218	626	1.68	0.2	122	0.3	0.2	0.2	30	< 0.05	< 0.05	4.5	0.37	
E886156	0.013	< 20	5.7	0.03	9.82	1.00	< 0.01	10.4	0.3	35	497	1830	4.94	0.1	528	0.5	0.1	0.2	30	< 0.05	< 0.05	46.9	0.57	
E886157	0.502	< 20	< 0.5	< 0.01	1.16	0.21	0.01	0.19	26.6	11	20	> 10000	12.1	< 0.1	72.4	0.8	0.2	0.2	20	64.4	0.06	11.9	0.24	
E886158	< 0.005	30	2.6	0.02	6.00	< 0.01	< 0.01	1.89	0.1	17	287	639	2.72	< 0.1	216	0.2	< 0.1	< 0.1	20	0.19	0.05	15.8	0.06	
E886159	0.034	< 20	9.7	0.01	11.6	1.84	< 0.01	5.67	0.2	55	1440	1330	5.90	0.2	975	0.3	< 0.1	0.2	10	4.21	0.10	61.3	0.27	
E886160	< 0.005	< 20	5.6	0.04	0.03	0.23	0.08	0.02	< 0.1	3	11	57	0.50	0.5	2.6	0.2	< 0.1	< 0.1	50	< 0.05	0.20	0.6	< 0.05	
E886161	0.008	< 20	0.9	0.02	3.16	0.01	< 0.01	0.91	< 0.1	10	143	400	1.87	< 0.1	105	< 0.1	< 0.1	< 0.1	50	0.18	< 0.05	8.3	< 0.05	
E886162	0.015	< 20	11.9	0.01	14.4	1.79	< 0.01	6.70	0.1	50	1600	1390	5.64	0.2	1430	0.3	0.2	< 0.1	30	0.05	0.10	81.9	0.15	
GXR-4 Meas		< 20	11.4	0.56	1.81	6.79	4.34	1.01	0.3	93	56	160	3.31	1.3	40.6			2.0	< 10	3.73	2.39	15.0	1.39	
GXR-4 Cert		4.50	11.1	0.564	1.66	7.20	4.01	1.01	0.860	87.0	64.0	155	3.09	6.30	42.0			1.90	110	4.00	2.80	14.6	1.63	
SDC-1 Meas		< 20	38.2	1.56	1.01	8.79	2.06	1.06		35	56	884	4.98	1.0	35.4	3.6	3.0	1.3	20		3.58	18.0	1.47	
SDC-1 Cert		13.00	34.0	1.52	1.02	8.34	2.72	1.00		102.00	64.00	880.00	4.82	8.30	38.0	4.10	3.00	1.50	200.00		4.00	18.0	1.70	
GXR-6 Meas		< 20	35.9	0.10	0.57	> 10.0	1.91	0.16	0.1	192	79	1060	5.58	2.9	23.1			0.9	< 10	0.35	3.77	13.3	0.61	
GXR-6 Cert		9.80	32.0	0.104	0.609	17.7	1.87	0.180	1.00	186	96.0	1010	5.58	4.30	27.0			1.40	68.0	1.30	4.20	13.8	0.760	
OREAS 97 (4 Acid) Meas																					20.5		67.9	
OREAS 97 (4 Acid) Cert																					19.6		62.9	
OREAS 98 (4 Acid) Meas																					46.8		124	
OREAS 98 (4 Acid) Cert																					45.1		121	
DNC-1a Meas			5.0	1.45				7.92		149	148		6.68		252							54.7	0.55	
DNC-1a Cert			5.2	1.40				8.21		148	270		6.97		247							57	0.59	
DNC-1a Meas			5.1	1.45				8.56		159	150		7.21		266							56.9	0.52	
DNC-1a Cert			5.2	1.40				8.21		148	270		6.97		247							57	0.59	
SBC-1 Meas			173						0.4	215	98			3.4	78.6	3.4	3.3	1.2			7.26	21.0	1.79	
SBC-1 Cert			163						0.40	220.0	109			3.7	82.8	3.80	3.20	1.40			8.2	22.7	1.98	
SBC-1 Meas			181						0.4	224	105			3.4	84.0	3.4	3.3	1.2			7.02	22.5	1.77	
SBC-1 Cert			163						0.40	220.0	109			3.7	82.8	3.80	3.20	1.40			8.2	22.7	1.98	
OREAS 45d (4-Acid) Meas			22.6	0.10	0.24	8.64	0.44	0.19		154	548	511	15.0	2.7	231	1.4	0.7	0.4			3.37	30.6	0.62	
OREAS 45d (4-Acid) Cert			21.5	0.101	0.245	8.150	0.412	0.185		235.0	549	490.000	14.5	3.830	231.0	1.38	0.79	0.46			3.910	29.50	0.57	
OREAS 220 (Fire Assay) Meas	0.841																							
OREAS 220 (Fire Assay) Cert	0.866																							
OREAS 96 (4 Acid) Meas																					11.3		51.0	
OREAS 96 (4 Acid) Cert																					11.5		49.9	

Results

Activation Laboratories Ltd.

Report: A18-14383

	FA-AA	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	
SAMPLE	Au	B	Li	Na	Mg	Al	K	Ca	Cd	V	Cr	Mn	Fe	Hf	Ni	Er	Be	Ho	Hg	Ag	Cs	Co	Eu
DESCRIPTION	g/mt	ppm	ppm	%	%	%	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm
OREAS 621 (4 Acid) Meas			15.4	1.39	0.39	7.21	2.27	2.06	311	35	38	544	3.92	4.6	28.6		2.0			68.1	3.01	30.1	
OREAS 621 (4 Acid) Cert			14.2	1.31	0.507	6.40	2.20	1.97	284	31.8	37.1	532	3.70	4.41	26.2		1.69			69.0	3.28	29.3	
OREAS 209 (Fire Assay) Meas	1.58																						
OREAS 209 (Fire Assay) Cert	1.58																						
E886152 Orig	0.005																						
E886152 Dup	< 0.005																						
E886157 Orig		< 20	< 0.5	< 0.01	1.16	0.21	0.01	0.19	26.6	11	20	> 10000	12.1	< 0.1	72.4	0.8	0.2	0.2	20	64.4	0.06	11.9	0.24
E886157 Dup		< 20	< 0.5	< 0.01	1.07	0.19	0.01	0.15	26.1	10	15	> 10000	11.4	< 0.1	68.9	0.7	0.2	0.2	< 10	60.5	0.06	11.3	0.28
Method Blank		< 20	< 0.5	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.1	1	3	2	< 0.01	< 0.1	< 0.5	< 0.1	< 0.1	< 0.1	20	< 0.05	< 0.05	< 0.1	< 0.05
Method Blank		< 20	< 0.5	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.1	1	4	1	< 0.01	< 0.1	< 0.5	< 0.1	< 0.1	< 0.1	< 10	< 0.05	< 0.05	< 0.1	< 0.05
Method Blank		< 20	< 0.5	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.1	1	2	1	< 0.01	< 0.1	< 0.5	< 0.1	< 0.1	< 0.1	20	< 0.05	< 0.05	< 0.1	< 0.05
Method Blank	< 0.005																						
Method Blank	< 0.005																						

	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	
SAMPLE	Bi	Se	Zn	Ga	As	Rb	Y	Zr	Nb	Mo	In	Sn	Sb	Te	Ba	La	Ce	Pr	Nd	Sm	Gd	Tb	Dy
DESCRIPTION	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
E886152	< 0.02	< 0.1	33.8	1.9	16.1	0.5	2.2	4	< 0.1	0.26	< 0.1	< 1	1.5	< 0.1	8	0.7	1.7	0.2	1.1	0.2	0.3	< 0.1	0.4
E886153	< 0.02	0.3	31.5	1.3	346	0.4	1.7	2	< 0.1	0.29	< 0.1	< 1	2.1	< 0.1	9	0.4	0.9	0.1	0.6	0.1	0.2	< 0.1	0.3
E886154	0.03	< 0.1	30.8	4.9	41.8	0.4	3.2	10	< 0.1	0.43	< 0.1	< 1	1.7	< 0.1	3	1.5	3.7	0.5	2.3	1.0	0.9	0.1	0.8
E886155	0.03	< 0.1	11.7	1.7	9.5	0.5	3.2	7	< 0.1	0.24	< 0.1	< 1	1.5	< 0.1	9	0.9	2.7	0.4	1.9	0.9	0.6	< 0.1	0.7
E886156	0.08	0.2	34.2	2.1	343	0.3	3.8	5	< 0.1	0.31	< 0.1	< 1	2.7	< 0.1	4	1.3	3.2	0.4	2.1	0.6	0.8	0.1	0.7
E886157	40.3	0.2	3580	1.0	489	0.6	9.6	4	< 0.1	0.24	0.3	2	56.5	0.1	7	1.0	1.4	0.1	0.7	0.2	0.5	0.1	0.9
E886158	0.08	< 0.1	19.5	0.5	124	< 0.2	1.1	< 1	< 0.1	0.33	< 0.1	< 1	1.2	< 0.1	3	0.2	0.6	< 0.1	0.4	0.1	0.3	< 0.1	0.2
E886159	0.08	0.2	59.2	3.2	255	0.3	3.4	7	< 0.1	0.19	< 0.1	< 1	14.8	< 0.1	11	1.4	2.7	0.4	2.2	0.3	0.6	0.1	0.6
E886160	0.03	< 0.1	3.8	0.8	0.4	3.0	1.7	17	< 0.1	0.36	< 0.1	< 1	0.2	< 0.1	31	2.0	3.7	0.4	1.7	0.3	0.3	< 0.1	0.2
E886161	< 0.02	< 0.1	11.7	0.3	37.0	0.2	0.7	< 1	< 0.1	0.19	< 0.1	< 1	0.5	< 0.1	7	0.2	0.5	< 0.1	0.3	< 0.1	< 0.1	< 0.1	0.1
E886162	0.05	0.4	82.8	3.2	490	0.4	2.5	7	< 0.1	0.47	< 0.1	< 1	4.1	< 0.1	8	0.8	1.6	0.2	1.1	0.3	0.4	< 0.1	0.4
GXR-4 Meas	18.5	6.8	76.5	18.7	101	139	13.3	41	9.6	331	0.2	8	4.7	1.0	238	54.4	105		41.3	6.4	4.9	0.5	2.8
GXR-4 Cert	19.0	5.60	73.0	20.0	98.0	160	14.0	186	10.0	310	0.270	5.60	4.80	0.970	1640	64.5	102		45.0	6.60	5.25	0.360	2.60
SDC-1 Meas			105	23.5	< 0.1	82.3		37	0.1			< 1	< 0.1		613	37.5	83.8		39.7	6.5	6.7	1.0	6.4
SDC-1 Cert			103.00	21.00	0.220	127.00		290.00	21.00			3.00	0.54		630	42.00	93.00		40.00	8.20	7.00	1.20	6.70
GXR-6 Meas	0.18	1.3	121	32.0	305	66.4	11.3	93	4.9	1.98	< 0.1	1	2.4	< 0.1	1170	11.5	30.6		12.1	2.0	2.3	0.4	2.4
GXR-6 Cert	0.290	0.940	118	35.0	330	90.0	14.0	110	7.50	2.40	0.260	1.70	3.60	0.0180	1300	13.9	36.0		13.0	2.67	2.97	0.415	2.80
OREAS 97 (4 Acid) Meas	40.3	80.9	630									101	8.1										
OREAS 97 (4 Acid) Cert	40.1	71.4	646									95.7	9.23										
OREAS 98 (4 Acid) Meas	94.5	192	1320									> 200	9.9										
OREAS 98 (4 Acid) Cert	97.2	158	1360									206	20.1										

	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS
SAMPLE	Bi	Se	Zn	Ga	As	Rb	Y	Zr	Nb	Mo	In	Sn	Sb	Te	Ba	La	Ce	Pr	Nd	Sm	Gd	Tb	Dy
DESCRIPTION	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Acid) Cert																							
DNC-1a Meas			61.6	12.8		2.7	14.1	34	1.4				1.4		96	3.2			4.7				
DNC-1a Cert			70	15		5	18.0	38.0	3				0.96		118	3.6			5.20				
DNC-1a Meas			66.5	13.8		2.9	14.6	35	1.4				0.8		96	3.3			4.6				
DNC-1a Cert			70	15		5	18.0	38.0	3				0.96		118	3.6			5.20				
SBC-1 Meas	0.67		175	25.7	21.3	118	28.6	114	14.3	2.00		3	1.0		692	45.4	95.9	11.7	46.1	8.8	8.1	1.1	6.3
SBC-1 Cert	0.70		186	27.0	25.7	147	36.5	134.0	15.3	2.40		3.3	1.01		788.0	52.5	108.0	12.6	49.2	9.6	8.5	1.20	7.10
SBC-1 Meas	0.64		197	28.1	23.3	114	29.3	113	14.4	2.50		3	1.0		727	46.1	96.5	11.4	45.7	7.8	8.0	1.1	6.4
SBC-1 Cert	0.70		186	27.0	25.7	147	36.5	134.0	15.3	2.40		3.3	1.01		788.0	52.5	108.0	12.6	49.2	9.6	8.5	1.20	7.10
OREAS 45d (4-Acid) Meas	0.31		43.2	22.1	8.3	36.8	10.5	99	0.7	0.51	0.1	< 1	< 0.1		172	15.4	33.0	3.5	13.6	2.6	2.6	0.4	2.4
OREAS 45d (4-Acid) Cert	0.31		45.7	21.20	13.8	42.1	9.53	141	14.50	2.500	0.096	2.78	0.82		183.0	16.9	37.20	3.70	13.4	2.80	2.42	0.400	2.26
OREAS 220 (Fire Assay) Meas																							
OREAS 220 (Fire Assay) Cert																							
OREAS 96 (4 Acid) Meas	26.4	48.7	424									64	5.3										
OREAS 96 (4 Acid) Cert	26.3	40.7	457									65.6	5.09										
OREAS 621 (4 Acid) Meas	3.89	4.5	> 10000	25.2	64.9	72.0	12.4	171	9.4	13.1	2.0	5	23.9		17.8	43.2						0.5	
OREAS 621 (4 Acid) Cert	3.93	5.64	52200	24.6	77.0	84.0	11.1	168	8.61	13.6	1.83	5.25	139		21.6	46.6						0.460	
OREAS 209 (Fire Assay) Meas																							
OREAS 209 (Fire Assay) Cert																							
E886152 Orig																							
E886152 Dup																							
E886157 Orig	40.3	0.2	3580	1.0	489	0.6	9.6	4	< 0.1	0.24	0.3	2	56.5	0.1	7	1.0	1.4	0.1	0.7	0.2	0.5	0.1	0.9
E886157 Dup	38.4	0.3	3360	0.9	474	0.6	8.7	4	< 0.1	0.23	0.2	2	54.1	< 0.1	8	0.9	1.4	0.1	0.6	0.2	0.6	0.1	0.8
Method Blank	< 0.02	0.1	0.9	0.2	< 0.1	< 0.2	< 0.1	< 1	< 0.1	< 0.05	< 0.1	< 1	< 0.1	< 0.1	< 1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Method Blank	< 0.02	0.2	< 0.2	0.2	< 0.1	< 0.2	< 0.1	< 1	< 0.1	0.05	< 0.1	< 1	< 0.1	< 0.1	< 1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Method Blank	< 0.02	0.2	0.2	0.2	< 0.1	< 0.2	< 0.1	< 1	< 0.1	0.07	< 0.1	< 1	< 0.1	< 0.1	< 1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Method Blank																							
Method Blank																							

	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS
SAMPLE	Cu	Ge	Tm	Yb	Lu	Ta	Sr	W	Re	Ti	Pb	Th	U
DESCRIPTION	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
E886152	64.5	< 0.1	< 0.1	0.2	< 0.1	< 0.1	127	0.2	< 0.001	< 0.05	2.6	0.1	< 0.1
E886153	15.5	< 0.1	< 0.1	0.2	< 0.1	< 0.1	89.2	0.2	< 0.001	< 0.05	6.3	< 0.1	< 0.1
E886154	4.1	< 0.1	< 0.1	0.4	< 0.1	< 0.1	159	6.8	< 0.001	0.07	1.8	0.4	0.2
E886155	3.4	0.2	< 0.1	0.3	< 0.1	< 0.1	201	1.2	< 0.001	< 0.05	1.9	0.2	0.1

	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS
SAMPLE	Cu	Ge	Tm	Yb	Lu	Ta	Sr	W	Re	Tl	Pb	Th	U
DESCRIPTION	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
E886156	7.1	< 0.1	< 0.1	0.4	< 0.1	< 0.1	375	1.7	< 0.001	< 0.05	2.4	0.1	< 0.1
E886157	150	< 0.1	0.1	0.8	0.1	< 0.1	1.3	0.6	< 0.001	< 0.05	1330	0.1	0.1
E886158	8.8	< 0.1	< 0.1	0.2	< 0.1	< 0.1	65.7	0.2	< 0.001	< 0.05	6.7	< 0.1	< 0.1
E886159	110	< 0.1	< 0.1	0.4	< 0.1	< 0.1	163	0.3	< 0.001	< 0.05	3.0	0.2	< 0.1
E886160	5.6	< 0.1	< 0.1	0.2	< 0.1	< 0.1	3.5	< 0.1	< 0.001	0.15	2.1	1.0	0.4
E886161	16.6	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	32.3	< 0.1	< 0.001	< 0.05	3.7	< 0.1	< 0.1
E886162	16.0	< 0.1	< 0.1	0.3	< 0.1	< 0.1	142	0.5	< 0.001	< 0.05	3.1	0.1	< 0.1
GXR-4 Meas	6800		0.2	1.1	0.2	0.6	226	36.0		3.49	45.4	21.2	5.6
GXR-4 Cert	6520		0.210	1.60	0.170	0.790	221	30.8		3.20	52.0	22.5	6.20
SDC-1 Meas	27.3		0.5	3.4		< 0.1	181	< 0.1		0.68	21.8	11.9	2.7
SDC-1 Cert	30.000		0.65	4.00		1.20	180.00	0.80		0.70	25.00	12.00	3.10
GXR-6 Meas	60.6			1.7	0.3	0.3	34.0	1.1		2.30	90.1	4.9	1.4
GXR-6 Cert	66.0			2.40	0.330	0.485	35.0	1.90		2.20	101	5.30	1.54
OREAS 97 (4 Acid) Meas	> 10000										130		
OREAS 97 (4 Acid) Cert	63100.00										147		
OREAS 98 (4 Acid) Meas	> 10000										307		
OREAS 98 (4 Acid) Cert	14800.0										345		
DNC-1a Meas	84.8			1.8			139				5.3		
DNC-1a Cert	100			2.0			144				6.3		
DNC-1a Meas	90.9			1.9			139				5.2		
DNC-1a Cert	100			2.0			144				6.3		
SBC-1 Meas	25.4		0.5	3.4	0.5	1.1	174	1.8		0.94	31.0	15.1	5.5
SBC-1 Cert	31.0		0.56	3.64	0.54	1.10	178.0	1.60		0.89	35.0	15.8	5.76
SBC-1 Meas	25.4		0.5	3.4	0.5	1.0	178	1.5		0.93	30.8	15.8	5.4
SBC-1 Cert	31.0		0.56	3.64	0.54	1.10	178.0	1.60		0.89	35.0	15.8	5.76
OREAS 45d (4-Acid) Meas	367			1.5	0.2	< 0.1	31.8	< 0.1		0.26	18.6	14.8	2.6
OREAS 45d (4-Acid) Cert	371			1.33	0.18	1.02	31.30	1.62		0.27	21.8	14.5	2.63
OREAS 220 (Fire Assay) Meas													
OREAS 220 (Fire Assay) Cert													
OREAS 96 (4 Acid) Meas	> 10000										88.1		
OREAS 96 (4 Acid) Cert	39300										101		
OREAS 621 (4 Acid) Meas	3700			1.1	0.2		67.6	2.3		2.24	> 5000	5.2	2.8
OREAS 621 (4 Acid) Cert	3630			0.990	0.140		91.0	2.35		1.96	13600	7.48	2.83
OREAS 209 (Fire													

	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS
SAMPLE	Cu	Ge	Tm	Yb	Lu	Ta	Sr	W	Re	Tl	Pb	Th	U
DESCRIPTION	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Assay) Meas													
OREAS 209 (Fire Assay) Cert													
E886152 Orig													
E886152 Dup													
E886157 Orig	150	< 0.1	0.1	0.8	0.1	< 0.1	1.3	0.6	< 0.001	< 0.05	1330	0.1	0.1
E886157 Dup	139	< 0.1	0.1	0.7	0.1	< 0.1	1.2	1.1	< 0.001	0.05	1280	0.1	0.1
Method Blank	< 0.2	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.2	< 0.1	< 0.001	< 0.05	< 0.5	< 0.1	< 0.1
Method Blank	1.0	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.2	< 0.1	< 0.001	< 0.05	< 0.5	< 0.1	< 0.1
Method Blank	0.3	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.2	< 0.1	0.001	< 0.05	< 0.5	< 0.1	< 0.1
Method Blank													
Method Blank													

Appendix III – Invoices and Receipts

Activation Laboratories
Wisk Air Helicopters

2018 Opapimiskan Lake Exploration

Appendix IV – Full table of samples and results

2018 Opapimiskan Lake Lithochemical Sampling 4 Acid ICPMS and Fire Assay

Date	Project	Sample ID	Claim Number	Sample Type	Rock Type	Veining	Vein Type	Vein	Vein	Fabric	Fabric Intensity	Fabric Azimuth	Fabric Dip	Fault Intensity	Fault Azimuth	Fault Dip	Magnetic Susceptibility	Longitude	Latitude	Laboratory	Analytical Method	As g/t	B ppm	Li ppm	Na ppm	Mg ppm	Al ppm	K ppm	Ca ppm	Sc ppm	V ppm	Cr ppm	Mn ppm	Fe ppm	Co ppm	Ni ppm	Fe ppm	Be ppm	Hg ppm	Ag ppm	Cs ppm	Co ppm	Eu ppm	Bi ppm	Se ppm	Zn ppm	Ga ppm	As ppm	Rb ppm	Y ppm	Zr ppm	Nb ppm	Mo ppm	In ppm	Sn ppm	Sb ppm	Te ppm	Ba ppm	La ppm	Ce ppm	Pr ppm	Nd ppm	Sm ppm	Gd ppm	Tb ppm	Dy ppm	Ca ppm	Ge ppm	Tm ppm	Yb ppm	Lu ppm	Ta ppm	Sr ppm	W ppm	Re ppm	Th ppm	Pb ppm	Th ppm	U ppm		
8/19/2018	Regional	E885868	239892	Outcrop	6 Metasediment	Quartz	Planar	184		Primary Bedding	Weak	184					0.181	-90.442179	52.7419181	Actlabs	ICPMS + I2 FA	0.0025	10	22.8	2.97	1.35	7.4	0.89	1.72	0.1	55	129	470	2.75	3.6	63.3	0.7	0.7	0.2	0.5	0.11	1.95	14.3	0	0.14	0.4	59	15.5	0.7	31.7	5.9	124	4.4	0.95	0.05	0.5	0.1	0.05	194	19.8	36	4.2	14.7	2.2	2.1	0.2	1.3	29.1	0.05	0.05	0.7	0.05	0.4	226	0.5	5E-04	0.19	10.1	6	1.7	
8/19/2018	Regional	E885869	239892	Outcrop	Tuff	Quartz	Planar	356	82	Foliation	Moderate	356	82				0.102	-90.441531	52.7421655	Actlabs	ICPMS + I2 FA	0.0025	10	16.3	2.54	0.93	7.01	0.86	1.94	0.1	41	70	341	2.04	2.8	42.2	0.5	0.7	0.2	0.5	0.06	1.48	10.6	0	0.11	0.4	43.1	13.7	0.05	31.9	4.3	93	1.9	0.52	0.05	0.5	0.05	0.05	193	13.9	25.4	2.9	9.8	1.7	1.4	0.1	0.8	15.7	0.3	0.05	0.5	0.05	0.1	188	1.5	5E-04	0.29	9.9	4.6	1.1	
8/19/2018	Regional	E885879	239892	Outcrop	3C Intermediate Tuff	Quartz	Planar	352	76	Foliation	Moderate	352	76				0.619	-90.440215	52.7424607	Actlabs	ICPMS + I2 FA	0.0025	10	25.2	2.31	1.99	9.09	0.69	1.23	0.1	182	397	1250	9.69	2.4	124	1.5	1.2	0.4	0.5	0.025	2.03	51.6	0	0.08	0.4	129	18.3	61.2	26.2	10.5	80	0.9	0.62	0.05	0.5	1.1	0.05	252	11.3	22	2.8	10.4	2	2.4	0.3	2.3	36.5	0.2	0.2	1.3	0.2	0.05	125	0.4	5E-04	0.42	20	3.6	1.2	
8/19/2018	Regional	E885881	239892	Outcrop	4CH Chert					Primary Bedding	Moderate	350					0.711	-90.440198	52.7424687	Actlabs	ICPMS + I2 FA	0.012	10	2.9	0.06	0.47	1.23	0.16	0.07	0.6	21	37	2800	8.56	0.5	6.2	0.6	0.2	0.1	40	0.13	0.43	2.5	0	0.31	1.6	325	4.4	22.2	5.1	4.8	20	1.2	1.1	0.2	1	2.7	0.3	51	5.1	9.2	1	3.9	0.5	0.7	0.05	0.7	23.4	0.05	0.05	0.5	0.05	0.05	19.5	0.8	5E-04	0.16	10.4	1.3	0.3	
8/19/2018	Regional	E885882	239892	Outcrop	2 Mafic Volcanic					Foliation	Moderate	162					0.616	-90.4399	52.7426279	Actlabs	ICPMS + I2 FA	0.005	10	18.9	2.82	4.55	7.97	0.39	5.88	0.05	229	142	1510	8.05	2.6	82.1	2.7	0.5	0.9	0.5	0.13	0.18	57.3	0	0.13	0.4	80	18.3	15.5	7.6	20.7	86	4.7	0.5	0.05	0.5	1.2	0.05	859	8.5	19	2.6	11	2.6	3.8	0.6	4.2	83.8	0.3	0.4	2.4	0.3	0.4	188	0.4	0.001	0.025	2.7	2.5	0.7	
8/19/2018	Regional	E885883	239892	Outcrop	2 Mafic Volcanic					Foliation	Moderate	156	82				1.31	-90.43912	52.7430103	Actlabs	ICPMS + I2 FA	0.009	10	21	0.57	5.11	8.01	0.51	7.97	0.05	260	906	1530	7.89	2.1	435	2	0.3	0.6	130	0.07	0.91	77.7	0	0.23	0.6	88.9	14.2	1600	20.6	14.6	62	2.7	0.41	0.05	0.5	2.8	0.1	85	6.3	13.2	1.8	7.7	1.4	2.4	0.4	2.9	89.8	0.2	0.3	1.8	0.3	0.2	109	89.8	0.002	0.27	2.4	1.8	0.4	
8/19/2018	Regional	E885884	239892	Outcrop	2 Mafic Volcanic					Foliation	Intense	158	70	Shear Zone	Moderate	158	70	0.572	-90.439911	52.7420063	Actlabs	ICPMS + I2 FA	0.0025	10	5.3	1.53	8.57	4.22	0.07	6.46	0.05	172	836	1410	7.38	1.2	470	1.2	0.2	0.4	0.5	0.08	0.62	62.1	0	0.06	0.4	71.8	7.4	14.1	3	9.2	35	1.5	0.22	0.05	0.5	3	0.05	13	2	5	0.7	3.5	0.9	1.4	0.2	1.8	153	0.2	0.2	1.2	0.2	0.1	52.9	0.7	5E-04	0.025	1.7	0.9	0.2
8/19/2018	Regional	E885885	313155	Outcrop	4CH Chert					Primary Bedding	Moderate	166	82				0.092	-90.439917	52.7415567	Actlabs	ICPMS + I2 FA	0.0025	10	17.6	1.68	0.73	7.74	0.96	1.42	0.05	20	25	573	2.58	7.8	15.2	1.8	1.5	0.6	0.5	0.14	0.67	4	0	0.08	0.5	36.3	19	3	35.3	15.7	247	12.3	2.07	0.05	2	6.9	0.05	547	35.4	68.3	7.6	26.8	4.6	3.8	0.5	2.9	4.9	0.05	0.3	1.8	0.2	1.1	320	1.4	0.001	0.3	17.6	12.5	3.8	
8/19/2018	Regional	E885886	112446	Outcrop	Tuff					Primary Bedding	Weak	166	88				0.034	-90.437375	52.7377126	Actlabs	ICPMS + I2 FA	0.0025	10	9.7	1.53	0.12	5.25	0.76	0.05	0.05	11	9	37	0.63	1.2	3.7	0.3	0.4	0.05	0.5	0.025	1.02	1.8	0	0.19	0.4	17.6	12.1	11.1	20.4	2.5	48	0.5	0.36	0.05	0.5	0.2	0.05	298	18.6	33.6	3.5	12.3	1.7	1.3	0.1	0.6	6.2	0.3	0.05	0.3	0.05	0.05	36	0.2	5E-04	0.23	6.9	5.8	1	
8/20/2018	Regional	E885887	115239	Outcrop	2K Mafic Dike					Foliation	Weak	316					13.2	-90.440451	52.7081341	Actlabs	ICPMS + I2 FA	0.007	10	4.3	1.59	3.61	7.43	0.13	7.73	0.1	208	62	1780	10.9	2.9	76.5	3	0.6	1.1	0.5	0.08	0.94	50.2	0	0.01	0.3	119	19.2	0.05	7	25.3	91	0.2	0.67	0.05	0.5	0.05	0.05	25	5	14	2.4	12.4	3.6	4.6	0.8	5.3	273	0.1	0.5	2.8	0.4	0.05	152	0.1	0.002	0.17	1.1	0.5	0.1	
8/20/2018	Regional	E885888	150588	Outcrop	2 Mafic Volcanic	Quartz	Flooding	136		Foliation	Moderate	136					0.434	-90.441296	52.7086354	Actlabs	ICPMS + I2 FA	0.005	10	6.3	0.31	5.56	2.93	0.07	6.69	0.2	146	828	1400	7.88	0.9	239	1.1	0.05	0.3	0.5	0.06	0.55	54.2	0	0.06	0.2	94.4	7.1	0.05	2.5	8.3	27	0.05	0.06	0.05	0.5	0.2	0.05	13	1.5	4	0.7	3.2	0.9	1.4	0.3	1.8	57.8	0.2	0.2	0.9	0.1	0.05	36.6	0.05	5E-04	0.025	2.5	0.4	0.05	
8/20/2018	Regional	E885889	153338	Outcrop	2 Mafic Volcanic	Quartz	Flooding	152		Foliation	Moderate	152		Shear Zone	Weak	152	0.293	-90.444999	52.7099723	Actlabs	ICPMS + I2 FA	0.005	10	9.5	0.9	3.08	4.52	0.09	3.93	0.1	122	171	1000	5.59	0.6	85	1.1	0.05	0.3	10	0.025	0.14	24.3	0	0.06	0.3	100	8.8	0.7	2.4	8	18	0.05	0.11	0.05	0.5	0.05	0.05	20	1.2	2.9	0.5	2.5	0.8	1.1	0.2	1.5	28.6	0.2	0.2	1	0.1	0.05	28.9	0.1	5E-04	0.025	2.4	0.1	0.05	
8/20/2018	Regional	E885891	153338	Outcrop	2 Mafic Volcanic	Quartz	Stringer	154		Foliation	Moderate	154		Shear Zone	Weak	154	0.765	-90.444517	52.7098701	Actlabs	ICPMS + I2 FA	0.0025	10	15	1.52	2.7	6.89	0.12	5.66	0.1	228	55	1890	11.1	0.8	45.6	3.2	0.2	1.1	0.5	0.1	0.16	36.8	0	0.1	1	95.8	17	0.05	3.1	25.7	25	0.1	0.15	0.05	0.5	0.05	0.05	43	4.3	11.1	1.8	8.7	2.9	3.7	0.7	4.9	160	0.3	0.5	3.1	0.4	0.05	54.7	0.05	0.002	0.025	3.7	0.4	0.05	
8/20/2018	Regional	E885892	153338	Outcrop	Quartz Vein	Quartz	Massive	110		Foliation	Moderate	152	80				0.064	-90.444638	52.7097377	Actlabs	ICPMS + I2 FA	0.0025	10	7.4	0.48	2.06	2.94	0.03	3.44	0.05	101	108	639	3.66	0.2	55.6	0.8	0.05	0.2	0.5	0.025	0.08	19.3	0	0.01	0.1	40.9	5.6	0.05	0.6	5.8	5	0.1	0.14	0.05	0.5	0.1	0.05	5	0.7	1.9	0.3	1.8	0.5	0.8	0.2	1.1	11.7	0.3	0.05	0.7	0.05	28.6	0.05	5E-04	0.025	1.2	0.05	0.05		
8/20/2018	Regional	E885893	150588	Outcrop	Quartz Vein	Quartz	Massive	146	72					Shear Zone	Moderate	146	72	0.03	-90.440486	52.7115658	Actlabs	ICPMS + I2 FA	0.028	10	14.4	0.21	2.88	2.79	0.05	1.87	0.2	100	116	2500	7.7	0.6	35.1	0.8	0.05	0.2	0.5	0.31	0.28	10.4	0	0.03	1.7	217	6.4	14.4	1.6	5.8	19	0.8	0.46	0.05	0.5	0.4	0.2	9	1.8	3.2	0.4	1.8	0.4	0.7	0.1	1	44.6	0.4	0.1	0.7	0.05	0.05	8.2	0.2	5E-04	0.025	9.5	0.3	0.05
8/20/2018	Regional	E885894	314174	Outcrop	Quartz Vein	Quartz	Flooding							Shear Zone	Intense	155	0.024	-90.439908	52.7144691	Actlabs	ICPMS + I2 FA	0.014	20	3	0.14	0																																																							

Appendix V – Assay Certificates



Date Submitted: 04-Sep-18
Invoice No.: A18-12314
Invoice Date: 09-Oct-18
Your Reference: Exploration

GOLDCORP Canada Ltd--Musselwhite Mine
P.O. Box 7500
Thunder bay Ontario P7B 6S8
Canada

ATTN: Katie Lucas

CERTIFICATE OF ANALYSIS

44 Core samples were submitted for analysis.

The following analytical package(s) were requested:

Code UT-4 Total Digestion ICP/MS

REPORT **A18-12314**

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

Notes:

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

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

CERTIFIED BY:

A handwritten signature in black ink, appearing to be "Emmanuel Esemé". The signature is written in a cursive style with some loops and is positioned above a horizontal line.

Emmanuel Esemé , Ph.D.
Quality Control

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

Date Submitted: 04-Sep-18
Invoice No.: A18-12314
Invoice Date: 09-Oct-18
Your Reference: Exploration

GOLDCORP Canada Ltd--Musselwhite Mine
P.O. Box 7500
Thunder bay Ontario P7B 6S8
Canada

ATTN: Katie Lucas

CERTIFICATE OF ANALYSIS

44 Core samples were submitted for analysis.

The following analytical package(s) were requested:

Code 1A2-GC Musselwhite Dryden Au - Fire Assay AA

REPORT **A18-12314**

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

Notes:

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

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

CERTIFIED BY:



Emmanuel Esemé , Ph.D.
Quality Control

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

Results

Activation Laboratories Ltd.

Report: A18-12314

	FA-AA	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	
SAMPLE	Au	B	Li	Na	Mg	Al	K	Ca	Cd	V	Cr	Mn	Fe	Hf	Ni	Er	Be	Ho	Hg	Ag	Cs	Co	Eu
DESCRIPTION	g/mt	ppm	ppm	%	%	%	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm
E885861	> 10.0	< 20	31.4	> 3.00	0.47	6.87	0.54	1.61	< 0.1	21	12	198	1.33	0.4	5.7	0.3	1.1	< 0.1	20	1.33	1.13	3.4	0.26
E885862	0.019	< 20	56.0	0.31	3.01	8.27	1.12	5.72	< 0.1	259	123	1590	9.84	1.4	105	3.9	0.9	1.2	< 10	0.06	0.53	58.7	0.94
E885863	0.005	< 20	0.5	< 0.01	0.78	0.02	< 0.01	0.07	< 0.1	3	9	2290	14.0	< 0.1	1.1	0.1	< 0.1	< 0.1	40	< 0.05	< 0.05	1.1	0.10
E885864	0.006	< 20	22.4	0.38	7.94	3.45	0.08	8.83	0.2	187	925	2000	9.90	0.9	426	0.9	0.2	0.3	< 10	0.08	0.32	74.0	0.47
E885865	< 0.005	< 20	12.6	0.71	9.00	3.29	0.05	8.28	0.2	199	947	1930	10.2	1.0	408	1.1	< 0.1	0.4	20	0.10	0.14	73.0	0.45
E885866	0.026	< 20	7.5	0.21	0.25	7.71	1.25	0.06	< 0.1	31	15	275	1.87	4.4	2.4	0.6	0.7	0.2	< 10	0.17	1.08	2.1	0.30
E885867	0.009	< 20	21.9	0.07	0.98	6.84	2.15	0.12	0.1	71	53	729	9.34	4.2	15.5	1.3	0.7	0.4	< 10	0.48	0.97	18.3	0.68
E885868	< 0.005	< 20	22.8	2.97	1.35	7.40	0.89	1.72	0.1	55	129	470	2.75	3.6	63.3	0.7	0.7	0.2	< 10	0.11	1.95	14.3	0.62
E885869	< 0.005	< 20	16.3	2.54	0.93	7.01	0.86	1.94	0.1	41	70	341	2.04	2.8	42.2	0.5	0.7	0.2	< 10	0.06	1.48	10.6	0.45
E885879	< 0.005	< 20	25.2	2.31	1.99	9.09	0.69	1.23	0.1	182	397	1250	9.69	2.4	124	1.5	1.2	0.4	< 10	< 0.05	2.03	51.6	0.62
E885880	< 0.005	< 20	5.4	0.09	0.03	0.32	0.07	0.04	< 0.1	5	14	78	0.67	1.0	2.0	0.2	< 0.1	< 0.1	< 10	< 0.05	0.15	1.1	0.05
E885881	0.012	< 20	2.9	0.06	0.47	1.23	0.16	0.07	0.6	21	37	2800	8.56	0.5	6.2	0.6	0.2	0.1	40	0.13	0.43	2.5	0.27
E885882	0.005	< 20	18.9	2.82	4.55	7.97	0.39	5.88	< 0.1	229	142	1510	8.05	2.6	82.1	2.7	0.5	0.9	< 10	0.13	0.19	57.3	0.94
E885883	0.009	< 20	21.0	0.57	5.11	8.01	0.51	7.97	< 0.1	260	906	1530	7.89	2.1	435	2.0	0.3	0.6	130	0.07	0.91	77.7	0.63
E885884	< 0.005	< 20	5.3	1.53	8.57	4.22	0.07	6.46	< 0.1	172	836	1410	7.38	1.2	470	1.2	0.2	0.4	< 10	0.08	0.62	62.1	0.40
E885885	< 0.005	< 20	17.6	1.68	0.73	7.74	0.96	1.42	< 0.1	20	25	573	2.58	7.8	15.2	1.8	1.5	0.6	< 10	0.14	0.67	4.0	0.97
E885886	< 0.005	< 20	9.7	1.53	0.12	5.25	0.76	0.05	< 0.1	11	9	37	0.63	1.2	3.7	0.3	0.4	< 0.1	< 10	< 0.05	1.02	1.8	0.28
E885887	0.007	< 20	4.3	1.59	3.61	7.43	0.13	7.73	0.1	208	62	1780	10.9	2.9	76.5	3.0	0.6	1.1	< 10	0.08	0.94	50.2	1.26
E885888	0.005	< 20	6.3	0.31	5.56	2.93	0.07	6.69	0.2	146	828	1400	7.88	0.9	239	1.1	< 0.1	0.3	< 10	0.06	0.35	54.2	0.40
E885889	0.005	< 20	9.5	0.90	3.08	4.52	0.09	3.93	0.1	122	171	1000	5.59	0.6	85.0	1.1	< 0.1	0.3	10	< 0.05	0.14	24.3	0.48
E885890	3.04	< 20	6.1	1.46	1.29	5.44	0.82	2.87	< 0.1	58	56	514	3.36	0.1	27.0	1.4	1.0	0.5	< 10	1.15	16.7	16.0	0.61
E885891	< 0.005	< 20	15.0	1.52	2.70	6.89	0.12	5.66	0.1	228	55	1890	11.1	0.8	45.6	3.2	0.2	1.1	< 10	0.10	0.16	36.8	0.88
E885892	< 0.005	< 20	7.4	0.48	2.06	2.94	0.03	3.44	< 0.1	101	108	639	3.66	0.2	55.6	0.8	< 0.1	0.2	< 10	< 0.05	0.08	19.3	0.20
E885893	0.028	< 20	14.4	0.21	2.88	2.79	0.05	1.87	0.2	100	116	2500	7.70	0.6	35.1	0.8	< 0.1	0.2	< 10	0.31	0.28	10.4	0.21
E885894	0.014	20	3.0	0.14	0.20	1.24	0.23	0.43	< 0.1	20	14	163	1.16	0.1	5.9	0.3	< 0.1	0.1	< 10	0.63	0.26	4.4	0.13
E885895	< 0.005	< 20	27.7	> 3.00	0.73	> 10.0	0.58	3.57	< 0.1	129	177	249	2.14	2.0	104	3.6	0.5	1.1	20	< 0.05	0.96	33.6	1.35
E885896 (Missing)																							
E885897	< 0.005	< 20	30.1	1.10	1.32	8.94	0.89	1.79	< 0.1	67	53	468	3.43	3.9	40.0	1.4	0.7	0.5	< 10	0.06	2.15	22.7	0.69
E885898	< 0.005	< 20	14.3	2.85	3.20	8.28	0.08	6.11	0.2	349	126	1910	9.94	1.8	76.0	3.2	0.4	1.1	< 10	0.06	0.11	48.7	1.26
E885899	< 0.005	< 20	9.4	> 3.00	3.74	7.78	0.12	6.32	0.1	339	135	1560	8.67	1.3	98.4	2.6	0.3	0.9	< 10	0.06	0.20	44.4	0.76
E885900	< 0.005	< 20	5.7	0.05	0.02	0.23	0.09	0.02	< 0.1	4	9	60	0.62	0.8	1.5	0.1	< 0.1	< 0.1	< 10	< 0.05	0.16	0.8	0.05
E885901	< 0.005	< 20	9.8	2.46	3.81	8.17	0.22	6.80	0.1	270	134	1770	9.05	1.0	105	2.8	0.2	0.8	< 10	< 0.05	0.82	48.5	0.83
E885902	< 0.005	< 20	9.9	0.76	2.29	4.05	0.10	3.68	< 0.1	144	105	890	5.18	0.4	49.7	1.4	< 0.1	0.4	< 10	< 0.05	0.33	23.8	0.52
E885903	< 0.005	< 20	9.9	0.46	2.05	4.19	0.01	1.48	< 0.1	35	23	3700	14.1	0.2	11.3	2.6	0.6	0.8	< 10	0.12	0.14	6.8	0.37
E885904	< 0.005	< 20	11.4	0.67	4.52	7.76	0.03	7.67	< 0.1	292	99	2300	10.6	0.8	123	2.5	< 0.1	0.8	< 10	< 0.05	0.13	41.6	0.78
E885905	< 0.005	< 20	14.4	1.70	4.18	7.09	0.05	6.41	0.1	254	81	1570	8.43	1.0	122	1.8	0.1	0.6	20	0.12	0.25	44.2	0.56
E885906	0.066	< 20	9.8	2.72	3.49	8.09	0.03	2.99	0.2	159	116	1460	10.7	3.4	53.6	1.7	1.5	0.5	10	0.99	0.20	39.3	0.82
E885907	< 0.005	< 20	10.8	0.78	3.16	4.60	0.04	3.27	0.2	81	50	1340	10.4	2.5	53.2	2.2	< 0.1	0.7	< 10	0.24	0.27	31.9	0.62
E885908	< 0.005	< 20	0.9	< 0.01	0.01	0.03	< 0.01	0.01	< 0.1	3	8	49	0.43	< 0.1	4.0	< 0.1	< 0.1	< 0.1	< 10	< 0.05	0.08	0.9	< 0.05
E885909	< 0.005	< 20	8.0	0.20	1.39	1.59	0.08	1.60	0.4	130	36	402	2.85	< 0.1	38.9	0.3	< 0.1	< 0.1	< 10	0.07	0.88	12.8	0.10
E885910	1.12	< 20	25.7	0.30	1.90	5.10	1.34	1.64	48.3	81	42	1980	8.19	2.8	27.7	1.8	0.7	0.6	1570	> 100	1.54	18.3	0.59
E885911	0.015	< 20	12.5	2.21	4.65	8.40	0.07	6.82	0.2	292	135	1730	9.71	1.3	108	2.5	0.2	0.8	< 10	0.20	0.20	49.2	0.83

Results

Activation Laboratories Ltd.

Report: A18-12314

	FA-AA	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	
SAMPLE	Au	B	Li	Na	Mg	Al	K	Ca	Cd	V	Cr	Mn	Fe	Hf	Ni	Er	Be	Ho	Hg	Ag	Cs	Co	Eu
DESCRIPTION	g/mt	ppm	ppm	%	%	%	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm
E885912	< 0.005	40	8.7	0.12	0.91	1.84	0.07	0.91	< 0.1	49	29	604	4.92	0.8	46.8	0.9	< 0.1	0.3	< 10	0.09	0.48	30.4	0.21
E885913	< 0.005	< 20	51.2	1.22	5.09	8.74	0.62	0.08	< 0.1	137	541	619	6.17	2.5	475	1.2	0.7	0.3	< 10	< 0.05	1.39	45.3	0.63
GXR-4 Meas		< 20	10.5	0.55	1.71	6.80	4.39	0.99	0.4	81	43	134	2.97	1.6	37.1		1.9		< 10	3.74	2.61	13.8	1.30
GXR-4 Cert		4.50	11.1	0.564	1.66	7.20	4.01	1.01	0.860	87.0	64.0	155	3.09	6.30	42.0		1.90		110	4.00	2.80	14.6	1.63
SDC-1 Meas		< 20	31.8	1.63	1.04	8.56	1.33	1.03		43	47	864	4.73	1.2	34.4	3.6	2.6	1.2	20		3.81	17.5	1.55
SDC-1 Cert		13.00	34.0	1.52	1.02	8.34	2.72	1.00		102.00	64.00	880.00	4.82	8.30	38.0	4.10	3.00	1.50	200.00		4.00	18.0	1.70
GXR-6 Meas		< 20	32.8	0.10	0.62	> 10.0	1.28	0.16	0.2	166	65	1020	5.48	3.3	23.1		1.0		< 10	0.35	3.70	12.9	0.59
GXR-6 Cert		9.80	32.0	0.104	0.609	17.7	1.87	0.180	1.00	186	96.0	1010	5.58	4.30	27.0		1.40		68.0	1.30	4.20	13.8	0.760
OREAS 97 (4 Acid) Meas																						16.9	60.5
OREAS 97 (4 Acid) Cert																						19.6	62.9
OREAS 98 (4 Acid) Meas																						48.2	130
OREAS 98 (4 Acid) Cert																						45.1	121
DNC-1a Meas			4.4	1.46				8.00		140	138		6.76		260							55.2	0.55
DNC-1a Cert			5.2	1.40				8.21		148	270		1.25		247							57	0.59
SBC-1 Meas			156						0.4	213	78			4.1	85.4	3.7	3.2	1.2			7.74	22.2	1.85
SBC-1 Cert			163						0.40	220.0	109			3.7	82.8	3.80	3.20	1.40			8.2	22.7	1.98
OREAS 45d (4-Acid) Meas			21.6	0.11	0.24	8.21	0.46	0.18		90	476	465	14.6	1.6	236	1.3	0.7	0.4			3.68	29.4	0.56
OREAS 45d (4-Acid) Cert			21.5	0.101	0.245	8.150	0.412	0.185		235.0	549	490.000	14.5	3.830	231.0	1.38	0.79	0.46			3.910	29.50	0.57
OREAS 214 Meas																							
OREAS 214 Cert																							
OREAS 216 (Fire Assay) Meas																							
OREAS 216 (Fire Assay) Cert																							
OREAS 220 (Fire Assay) Meas	0.827																						
OREAS 220 (Fire Assay) Cert	0.866																						
OREAS 220 (Fire Assay) Meas	0.833																						
OREAS 220 (Fire Assay) Cert	0.866																						
OREAS 96 (4 Acid) Meas																						10.4	50.8
OREAS 96 (4 Acid) Cert																						11.5	49.9
OREAS 621 (4 Acid) Meas			13.7	1.44	0.38	6.82	2.10	2.12	288	34	33	541	3.98	5.3	29.1		1.7				71.3	3.17	31.0
OREAS 621 (4 Acid) Cert			14.2	1.31	0.507	6.40	2.20	1.97	284	31.8	37.1	532	3.70	4.41	26.2		1.69				69.0	3.28	29.3
OREAS 209 (Fire	1.50																						

	FA-AA	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS
SAMPLE	Au	B	Li	Na	Mg	Al	K	Ca	Cd	V	Cr	Mn	Fe	Hf	Ni	Er	Be	Ho	Hg	Ag	Cs	Co	Eu
DESCRIPTION	g/mt	ppm	ppm	%	%	%	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm
Assay) Meas																							
OREAS 209 (Fire Assay) Cert	1.58																						
OREAS 209 (Fire Assay) Meas	1.53																						
OREAS 209 (Fire Assay) Cert	1.58																						
OREAS 209 (Fire Assay) Meas	1.54																						
OREAS 209 (Fire Assay) Cert	1.58																						
E885881 Orig		< 20	2.9	0.06	0.47	1.23	0.16	0.07	0.6	21	37	2800	8.56	0.5	6.2	0.6	0.2	0.1	40	0.13	0.43	2.5	0.27
E885881 Dup		< 20	3.0	0.06	0.46	1.23	0.16	0.07	0.6	21	49	2850	8.62	0.4	5.8	0.4	0.3	0.2	10	0.12	0.47	2.5	0.25
E885884 Orig	< 0.005																						
E885884 Dup	< 0.005																						
E885891 Orig	< 0.005																						
E885891 Dup	< 0.005																						
E885892 Orig		< 20	7.4	0.48	2.06	2.94	0.03	3.44	< 0.1	101	108	639	3.66	0.2	55.6	0.8	< 0.1	0.2	< 10	< 0.05	0.08	19.3	0.20
E885892 Dup		< 20	7.7	0.47	2.08	3.00	0.03	3.47	< 0.1	113	115	660	3.71	0.2	56.9	0.8	< 0.1	0.2	10	< 0.05	0.10	19.8	0.21
E885909 Orig	< 0.005																						
E885909 Dup	< 0.005																						
E885911 Orig		< 20	12.5	2.21	4.65	8.40	0.07	6.82	0.2	292	135	1730	9.71	1.3	108	2.5	0.2	0.8	< 10	0.20	0.20	49.2	0.83
E885911 Dup		< 20	12.3	2.12	4.49	8.07	0.06	6.41	0.2	201	109	1670	9.67	1.0	106	2.6	0.2	0.8	< 10	0.19	0.22	48.8	0.78
E885912 Orig		40	8.7	0.12	0.91	1.84	0.07	0.91	< 0.1	49	29	604	4.92	0.8	46.8	0.9	< 0.1	0.3	< 10	0.09	0.48	30.4	0.21
E885912 Dup		< 20	8.7	0.12	0.93	1.80	0.07	0.94	< 0.1	49	31	604	5.03	0.8	48.2	0.9	< 0.1	0.2	30	0.10	0.50	30.4	0.20
Method Blank	< 0.005																						
Method Blank	< 0.005																						
Method Blank	< 0.005																						
Method Blank		< 20	< 0.5	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.1	< 1	14	6	< 0.01	< 0.1	< 0.5	< 0.1	< 0.1	< 0.1	< 10	< 0.05	< 0.05	< 0.1	< 0.05
Method Blank	< 0.005																						
Method Blank																							

	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS
SAMPLE	Bi	Se	Zn	Ga	As	Rb	Y	Zr	Nb	Mo	In	Sn	Sb	Te	Ba	La	Ce	Pr	Nd	Sm	Gd	Tb	Dy
DESCRIPTION	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
E885861	0.10	0.4	32.8	13.0	2.7	25.7	2.5	21	1.1	0.17	< 0.1	< 1	0.7	< 0.1	473	3.8	7.5	0.9	3.4	0.6	0.7	< 0.1	0.4
E885862	0.02	0.7	138	19.7	2.7	44.6	29.6	41	0.3	0.08	< 0.1	< 1	0.2	< 0.1	243	7.3	17.5	2.7	12.0	3.4	4.3	0.8	5.8
E885863	< 0.02	0.4	12.9	0.4	5.7	0.4	1.1	1	< 0.1	0.20	< 0.1	< 1	0.9	< 0.1	4	1.1	2.0	0.2	0.8	0.1	0.2	< 0.1	0.1
E885864	0.04	0.6	97.1	8.4	76.7	1.2	7.9	29	0.4	0.39	< 0.1	< 1	0.6	< 0.1	29	2.0	4.7	0.7	3.5	1.2	1.4	0.2	1.6
E885865	0.06	0.4	107	8.6	14.8	0.5	8.3	26	1.2	0.18	< 0.1	< 1	1.3	< 0.1	24	2.2	5.5	0.9	4.1	1.4	1.7	0.3	1.8
E885866	0.15	0.4	42.7	16.9	13.9	47.4	4.2	152	4.8	0.33	< 0.1	< 1	0.4	< 0.1	261	11.9	19.7	1.9	5.8	0.9	1.1	0.2	0.9
E885867	2.38	1.1	40.6	15.0	3.4	84.2	9.7	142	6.5	1.39	0.1	19	0.4	0.2	268	21.2	40.9	4.7	16.2	3.6	2.7	0.4	2.0
E885868	0.14	0.4	59.0	15.5	0.7	31.7	5.9	124	4.4	0.95	< 0.1	< 1	0.1	< 0.1	194	19.8	36.0	4.2	14.7	2.2	2.1	0.2	1.3
E885869	0.11	0.4	43.1	13.7	< 0.1	31.9	4.3	93	1.9	0.52	< 0.1	< 1	< 0.1	< 0.1	193	13.9	25.4	2.9	9.8	1.7	1.4	0.1	0.8
E885879	0.08	0.4	129	18.3	61.2	26.2	10.5	80	0.9	0.62	< 0.1	< 1	1.1	< 0.1	252	11.3	22.0	2.8	10.4	2.0	2.4	0.3	2.3

Results

Activation Laboratories Ltd.

Report: A18-12314

	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS
SAMPLE	Bi	Se	Zn	Ga	As	Rb	Y	Zr	Nb	Mo	In	Sn	Sb	Te	Ba	La	Ce	Pr	Nd	Sm	Gd	Tb	Dy
DESCRIPTION	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
E885880	< 0.02	0.2	5.2	1.0	1.8	3.0	1.9	28	0.7	0.30	< 0.1	< 1	0.3	< 0.1	17	2.3	4.2	0.5	1.8	0.4	0.3	< 0.1	0.3
E885881	0.31	1.6	325	4.4	22.2	5.1	4.8	20	1.2	1.10	0.2	1	2.7	0.3	51	5.1	9.2	1.0	3.9	0.5	0.7	< 0.1	0.7
E885882	0.13	0.4	80.0	18.3	15.5	7.6	20.7	86	4.7	0.50	< 0.1	< 1	1.2	< 0.1	859	8.5	19.0	2.6	11.0	2.6	3.8	0.6	4.2
E885883	0.23	0.6	88.9	14.2	1600	20.6	14.6	62	2.7	0.41	< 0.1	< 1	2.8	0.1	85	6.3	13.2	1.8	7.7	1.4	2.4	0.4	2.9
E885884	0.06	0.4	71.8	7.4	14.1	3.0	9.2	35	1.5	0.22	< 0.1	< 1	3.0	< 0.1	13	2.0	5.0	0.7	3.5	0.9	1.4	0.2	1.8
E885885	0.08	0.5	36.3	19.0	3.0	35.3	15.7	247	12.3	2.07	< 0.1	2	0.9	< 0.1	547	35.4	68.3	7.6	26.8	4.6	3.8	0.5	2.9
E885886	0.19	0.4	17.6	12.1	11.1	20.4	2.5	48	0.5	0.36	< 0.1	< 1	0.2	< 0.1	298	18.6	33.6	3.5	12.3	1.7	1.3	0.1	0.6
E885887	< 0.02	0.3	119	19.2	< 0.1	7.0	25.3	91	0.2	0.67	< 0.1	< 1	< 0.1	< 0.1	25	5.0	14.0	2.4	12.4	3.6	4.6	0.8	5.3
E885888	0.06	0.2	94.4	7.1	< 0.1	2.5	8.3	27	< 0.1	0.06	< 0.1	< 1	0.2	< 0.1	13	1.5	4.0	0.7	3.2	0.9	1.4	0.3	1.8
E885889	0.06	0.3	100	8.8	0.7	2.4	8.0	18	< 0.1	0.11	< 0.1	< 1	< 0.1	< 0.1	20	1.2	2.9	0.5	2.5	0.8	1.1	0.2	1.5
E885890	1.14	0.3	49.6	13.7	4.4	267	11.5	9	< 0.1	0.42	< 0.1	< 1	< 0.1	< 0.1	49	3.8	8.8	1.2	6.3	1.8	2.4	0.4	2.6
E885891	0.10	1.0	95.8	17.0	< 0.1	3.1	25.7	25	0.1	0.15	< 0.1	< 1	< 0.1	< 0.1	43	4.3	11.1	1.8	8.7	2.9	3.7	0.7	4.9
E885892	< 0.02	0.1	40.9	5.6	< 0.1	0.6	5.8	5	0.1	0.14	< 0.1	< 1	0.1	< 0.1	5	0.7	1.9	0.3	1.8	0.5	0.8	0.2	1.1
E885893	0.03	1.7	217	6.4	14.4	1.6	5.8	19	0.8	0.46	< 0.1	< 1	0.4	0.2	9	1.8	3.2	0.4	1.8	0.4	0.7	0.1	1.0
E885894	0.07	< 0.1	15.5	3.1	2.5	8.7	2.7	4	1.3	0.23	< 0.1	< 1	0.6	< 0.1	39	2.3	4.8	0.5	2.0	0.4	0.5	< 0.1	0.4
E885895	0.05	0.4	58.1	23.8	< 0.1	16.9	29.3	61	0.1	0.18	< 0.1	< 1	0.1	< 0.1	242	7.1	19.1	2.9	13.0	4.0	4.5	0.8	5.4
E885896 (Missing)																							
E885897	0.14	< 0.1	47.4	17.7	< 0.1	29.1	10.9	131	0.2	0.17	< 0.1	< 1	< 0.1	< 0.1	182	16.5	34.7	4.1	14.5	2.7	2.6	0.4	2.3
E885898	< 0.02	0.5	145	21.3	< 0.1	0.7	26.8	60	1.9	0.15	< 0.1	< 1	< 0.1	< 0.1	21	5.0	13.7	2.3	11.3	3.8	4.7	0.8	5.4
E885899	0.03	0.6	90.2	14.9	< 0.1	1.7	20.3	40	2.4	0.18	< 0.1	< 1	< 0.1	< 0.1	29	2.8	8.1	1.3	6.9	2.2	3.0	0.5	4.0
E885900	< 0.02	0.3	3.6	0.8	1.0	3.3	1.6	27	0.6	0.32	< 0.1	< 1	0.2	< 0.1	28	2.1	4.0	0.5	1.8	0.4	0.3	< 0.1	0.3
E885901	< 0.02	0.5	109	16.1	< 0.1	6.5	21.0	28	0.2	0.07	< 0.1	< 1	< 0.1	< 0.1	24	3.1	8.6	1.5	7.2	2.2	3.1	0.6	4.1
E885902	< 0.02	0.3	55.2	8.5	< 0.1	1.9	10.7	10	0.2	0.14	< 0.1	< 1	< 0.1	< 0.1	15	1.9	5.2	0.8	4.2	1.5	1.5	0.3	2.0
E885903	0.04	0.8	57.6	10.0	1.2	0.4	21.1	28	5.9	0.76	< 0.1	1	0.2	< 0.1	10	7.4	13.6	1.6	5.8	1.5	2.1	0.4	3.1
E885904	0.03	0.5	98.2	14.9	< 0.1	0.7	18.7	24	0.8	0.18	< 0.1	< 1	< 0.1	< 0.1	6	3.7	9.2	1.4	7.1	1.7	2.7	0.5	3.7
E885905	< 0.02	0.6	113	13.6	0.8	0.9	14.3	30	0.8	0.17	< 0.1	< 1	< 0.1	< 0.1	17	2.3	6.0	1.0	5.0	1.7	2.2	0.4	2.9
E885906	0.63	11.1	283	20.0	0.2	0.4	12.5	113	6.4	4.70	0.1	< 1	0.3	3.3	26	8.7	15.9	1.7	5.4	1.2	1.4	0.3	2.3
E885907	0.25	4.7	265	11.0	< 0.1	1.4	16.4	88	4.2	2.47	< 0.1	< 1	0.4	1.0	7	11.0	23.2	2.9	10.8	2.8	2.7	0.4	3.2
E885908	< 0.02	0.6	1.2	0.3	0.3	0.2	< 0.1	< 1	< 0.1	0.32	< 0.1	< 1	0.2	< 0.1	< 1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
E885909	< 0.02	0.3	69.5	3.5	2.0	2.9	2.4	3	0.4	0.18	< 0.1	< 1	0.1	< 0.1	16	0.2	0.5	< 0.1	0.5	< 0.1	0.2	< 0.1	0.3
E885910	7.99	21.4	7210	13.0	330	44.7	14.2	84	4.0	8.60	3.1	20	43.7	0.2	39	12.0	25.3	3.5	14.5	2.7	3.1	0.6	2.8
E885911	0.04	0.8	122	16.4	< 0.1	0.8	19.2	43	0.9	0.16	< 0.1	< 1	0.1	< 0.1	19	2.6	6.9	1.1	6.4	1.6	3.0	0.5	3.8
E885912	0.14	2.6	47.1	4.4	26.7	2.0	6.5	31	1.2	0.64	< 0.1	< 1	0.2	0.8	9	1.6	3.5	0.5	2.0	0.5	0.7	0.1	1.0
E885913	0.11	0.3	127	18.1	< 0.1	24.1	9.5	85	0.3	0.25	< 0.1	< 1	< 0.1	< 0.1	216	13.3	28.4	3.2	12.2	2.8	2.2	0.3	2.0
GXR-4 Meas	19.1	6.4	68.7	16.5	89.4	158	11.5	44	9.2	336	0.2	8	4.4	1.1	244	57.5	108		40.8	6.7	4.7	0.4	2.4
GXR-4 Cert	19.0	5.60	73.0	20.0	98.0	160	14.0	186	10.0	310	0.270	5.60	4.80	0.970	1640	64.5	102		45.0	6.60	5.25	0.360	2.60
SDC-1 Meas			111	20.2	< 0.1	61.1		37	0.3			< 1	< 0.1		656	43.4	93.3		43.6	7.8	6.9	1.0	6.1
SDC-1 Cert			103.00	21.00	0.220	127.00		290.00	21.00			3.00	0.54		630	42.00	93.00		40.00	8.20	7.00	1.20	6.70
GXR-6 Meas	0.17	1.1	127	31.1	282	57.7	10.7	97	4.2	1.89	< 0.1	1	2.5	< 0.1	1160	12.7	32.9		12.0	2.4	2.2	0.3	2.3
GXR-6 Cert	0.290	0.940	118	35.0	330	90.0	14.0	110	7.50	2.40	0.260	1.70	3.60	0.0180	1300	13.9	36.0		13.0	2.67	2.97	0.415	2.80
OREAS 97 (4 Acid) Meas	41.8	70.2	598									87	6.0										
OREAS 97 (4	40.1	71.4	646									95.7	9.23										

	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS
SAMPLE	Bi	Se	Zn	Ga	As	Rb	Y	Zr	Nb	Mo	In	Sn	Sb	Te	Ba	La	Ce	Pr	Nd	Sm	Gd	Tb	Dy
DESCRIPTION	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Acid) Cert																							
OREAS 98 (4 Acid) Meas	99.5	190	1430									> 200	13.2										
OREAS 98 (4 Acid) Cert	97.2	158	1360									206	20.1										
DNC-1a Meas			69.0	12.9		3.7	13.9	37	1.5				0.8		95	3.5			4.7				
DNC-1a Cert			70	15		5	18.0	38.0	3				0.96		118	3.6			5.20				
SBC-1 Meas	0.69		196	24.3	23.2	158	28.9	129	14.9	2.36		4	1.0		267	51.3	110	13.3	51.6	9.4	8.0	1.1	6.3
SBC-1 Cert	0.70		186	27.0	25.7	147	36.5	134.0	15.3	2.40		3.3	1.01		788.0	52.5	108.0	12.6	49.2	9.6	8.5	1.20	7.10
OREAS 45d (4-Acid) Meas	0.32		45.3	20.4	5.5	46.3	10.6	52	0.4	0.49	< 0.1	< 1	< 0.1		178	17.3	36.1	4.0	14.2	2.7	2.5	0.4	2.2
OREAS 45d (4-Acid) Cert	0.31		45.7	21.20	13.8	42.1	9.53	141	14.50	2.500	0.096	2.78	0.82		183.0	16.9	37.20	3.70	13.4	2.80	2.42	0.400	2.26
OREAS 214 Meas																							
OREAS 214 Cert																							
OREAS 216 (Fire Assay) Meas																							
OREAS 216 (Fire Assay) Cert																							
OREAS 220 (Fire Assay) Meas																							
OREAS 220 (Fire Assay) Cert																							
OREAS 220 (Fire Assay) Meas																							
OREAS 220 (Fire Assay) Cert																							
OREAS 96 (4 Acid) Meas	29.2	44.1	459									63	4.1										
OREAS 96 (4 Acid) Cert	26.3	40.7	457									65.6	5.09										
OREAS 621 (4 Acid) Meas	4.05	5.4	> 10000	26.5	65.3	86.0	11.3	190	10.3	14.4	1.8	6	47.8			19.9	46.6					0.4	
OREAS 621 (4 Acid) Cert	3.93	5.64	52200	24.6	77.0	84.0	11.1	168	8.61	13.6	1.83	5.25	139			21.6	46.6					0.460	
OREAS 209 (Fire Assay) Meas																							
OREAS 209 (Fire Assay) Cert																							
OREAS 209 (Fire Assay) Meas																							
OREAS 209 (Fire Assay) Cert																							
OREAS 209 (Fire Assay) Meas																							
OREAS 209 (Fire Assay) Cert																							
E885881 Orig	0.31	1.6	325	4.4	22.2	5.1	4.8	20	1.2	1.10	0.2	1	2.7	0.3	51	5.1	9.2	1.0	3.9	0.5	0.7	< 0.1	0.7

	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS
SAMPLE	Bi	Se	Zn	Ga	As	Rb	Y	Zr	Nb	Mo	In	Sn	Sb	Te	Ba	La	Ce	Pr	Nd	Sm	Gd	Tb	Dy
DESCRIPTION	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
E885881 Dup	0.31	1.4	333	4.2	22.4	4.9	4.5	14	1.2	1.05	0.2	1	2.7	0.2	53	5.1	9.2	1.0	3.8	0.6	0.7	< 0.1	0.7
E885884 Orig																							
E885884 Dup																							
E885891 Orig																							
E885891 Dup																							
E885892 Orig	< 0.02	0.1	40.9	5.6	< 0.1	0.6	5.8	5	0.1	0.14	< 0.1	< 1	0.1	< 0.1	5	0.7	1.9	0.3	1.8	0.5	0.8	0.2	1.1
E885892 Dup	< 0.02	0.2	39.3	5.8	0.3	0.6	6.0	5	0.6	0.20	< 0.1	< 1	0.3	< 0.1	5	0.8	2.0	0.4	1.8	0.4	0.9	0.1	1.2
E885909 Orig																							
E885909 Dup																							
E885911 Orig	0.04	0.8	122	16.4	< 0.1	0.8	19.2	43	0.9	0.16	< 0.1	< 1	0.1	< 0.1	19	2.6	6.9	1.1	6.4	1.6	3.0	0.5	3.8
E885911 Dup	0.04	0.3	120	16.0	< 0.1	0.9	19.0	34	< 0.1	< 0.05	< 0.1	< 1	< 0.1	< 0.1	19	2.5	6.9	1.2	5.9	2.2	3.0	0.5	3.7
E885912 Orig	0.14	2.6	47.1	4.4	26.7	2.0	6.5	31	1.2	0.64	< 0.1	< 1	0.2	0.8	9	1.6	3.5	0.5	2.0	0.5	0.7	0.1	1.0
E885912 Dup	0.15	2.7	48.5	4.4	25.5	2.0	6.5	32	1.2	1.96	< 0.1	< 1	0.2	0.7	10	1.6	3.7	0.5	2.1	0.7	0.7	0.1	1.1
Method Blank																							
Method Blank																							
Method Blank																							
Method Blank	< 0.02	0.2	0.3	0.2	< 0.1	< 0.2	< 0.1	< 1	< 0.1	0.14	< 0.1	< 1	< 0.1	< 0.1	< 1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Method Blank																							
Method Blank																							

	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	FA- GRA
SAMPLE	Cu	Ge	Tm	Yb	Lu	Ta	Sr	W	Re	Ti	Pb	Th	U	Au
DESCRIPTION	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	g/tonne
E885861	0.6	< 0.1	< 0.1	0.2	< 0.1	< 0.1	88.7	3.6	0.001	0.40	6.3	1.5	0.7	20.4
E885862	70.1	0.2	0.6	3.6	0.5	< 0.1	77.4	0.2	0.001	1.13	4.1	1.4	0.3	
E885863	1.0	< 0.1	< 0.1	0.2	< 0.1	< 0.1	0.7	1.6	< 0.001	< 0.05	0.7	< 0.1	< 0.1	
E885864	34.1	0.6	0.1	0.9	0.1	< 0.1	45.5	1.3	< 0.001	< 0.05	2.0	0.3	< 0.1	
E885865	83.8	0.6	0.1	0.9	0.1	< 0.1	15.5	0.5	< 0.001	< 0.05	0.9	0.3	< 0.1	
E885866	4.3	< 0.1	< 0.1	0.5	< 0.1	0.4	34.9	3.3	< 0.001	0.66	16.9	6.2	1.7	
E885867	156	< 0.1	0.2	1.3	0.2	0.5	7.2	2.9	< 0.001	0.48	6.2	4.6	1.1	
E885868	29.1	< 0.1	< 0.1	0.7	< 0.1	0.4	226	0.5	< 0.001	0.19	10.1	6.0	1.7	
E885869	15.7	0.3	< 0.1	0.5	< 0.1	0.1	188	1.5	< 0.001	0.29	9.9	4.6	1.1	
E885879	36.5	0.2	0.2	1.3	0.2	< 0.1	125	0.4	< 0.001	0.42	20.0	3.6	1.2	
E885880	1.9	< 0.1	< 0.1	0.3	< 0.1	< 0.1	7.3	0.2	< 0.001	< 0.05	1.7	1.2	0.3	
E885881	23.4	< 0.1	< 0.1	0.5	< 0.1	< 0.1	19.5	0.8	< 0.001	0.16	10.4	1.3	0.3	
E885882	83.8	0.3	0.4	2.4	0.3	0.4	188	0.4	0.001	< 0.05	2.7	2.5	0.7	
E885883	89.8	0.2	0.3	1.8	0.3	0.2	109	89.8	0.002	0.27	2.4	1.8	0.4	
E885884	153	0.2	0.2	1.2	0.2	0.1	52.9	0.7	< 0.001	< 0.05	1.7	0.9	0.2	
E885885	4.9	< 0.1	0.3	1.8	0.2	1.1	320	1.4	0.001	0.30	17.6	12.5	3.8	
E885886	6.2	0.3	< 0.1	0.3	< 0.1	< 0.1	36.0	0.2	< 0.001	0.23	6.9	5.8	1.0	
E885887	273	0.1	0.5	2.8	0.4	< 0.1	152	0.1	0.002	0.17	1.1	0.5	0.1	
E885888	57.8	0.2	0.2	0.9	0.1	< 0.1	36.6	< 0.1	< 0.001	< 0.05	2.5	0.4	< 0.1	
E885889	28.6	0.2	0.2	1.0	0.1	< 0.1	28.9	0.1	< 0.001	< 0.05	2.4	0.1	< 0.1	

	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	FA- GRA
SAMPLE	Cu	Ge	Tm	Yb	Lu	Ta	Sr	W	Re	Ti	Pb	Th	U	Au
DESCRIPTION	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	g/tonne
E885890	30.4	0.1	0.2	1.2	0.2	< 0.1	99.7	< 0.1	< 0.001	5.65	8.4	0.6	0.2	
E885891	160	0.3	0.5	3.1	0.4	< 0.1	54.7	< 0.1	0.002	< 0.05	3.7	0.4	< 0.1	
E885892	11.7	0.3	< 0.1	0.7	< 0.1	< 0.1	28.6	< 0.1	< 0.001	< 0.05	1.2	< 0.1	< 0.1	
E885893	44.6	0.4	0.1	0.7	< 0.1	< 0.1	8.2	0.2	< 0.001	< 0.05	9.5	0.3	< 0.1	
E885894	41.6	< 0.1	< 0.1	0.3	< 0.1	< 0.1	17.4	0.2	< 0.001	< 0.05	7.8	0.8	0.2	
E885895	46.4	0.2	0.5	3.5	0.5	< 0.1	139	0.2	0.001	0.79	6.4	0.4	0.2	
E885896 (Missing)														
E885897	29.8	0.3	0.2	1.4	0.2	< 0.1	106	< 0.1	< 0.001	0.26	8.9	7.7	2.0	
E885898	69.0	0.3	0.5	2.9	0.4	< 0.1	112	0.1	< 0.001	< 0.05	0.8	0.4	< 0.1	
E885899	80.8	0.5	0.3	2.4	0.3	0.1	92.0	0.2	< 0.001	< 0.05	0.7	0.2	< 0.1	
E885900	3.2	< 0.1	< 0.1	0.2	< 0.1	< 0.1	4.0	0.2	< 0.001	< 0.05	1.6	1.0	0.5	
E885901	27.5	0.2	0.4	2.4	0.3	< 0.1	126	< 0.1	0.001	< 0.05	0.7	0.2	< 0.1	
E885902	52.5	0.1	0.2	1.2	0.2	< 0.1	59.9	< 0.1	0.001	< 0.05	< 0.5	0.1	< 0.1	
E885903	97.4	0.1	0.4	2.7	0.4	< 0.1	22.0	0.1	< 0.001	< 0.05	2.8	5.4	1.3	
E885904	21.2	0.4	0.3	2.2	0.3	< 0.1	73.2	< 0.1	0.002	< 0.05	3.0	0.2	< 0.1	
E885905	143	0.4	0.3	1.8	0.2	< 0.1	70.2	0.1	< 0.001	< 0.05	2.5	0.2	< 0.1	
E885906	1460	0.3	0.3	2.3	0.3	0.6	125	0.3	0.010	< 0.05	6.5	7.0	1.5	
E885907	532	0.1	0.3	2.3	0.3	0.4	17.0	0.2	0.003	< 0.05	2.1	3.9	0.9	
E885908	10.5	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.2	< 0.1	< 0.001	< 0.05	< 0.5	< 0.1	< 0.1	
E885909	16.0	0.5	< 0.1	0.3	< 0.1	< 0.1	14.1	< 0.1	< 0.001	< 0.05	2.1	< 0.1	< 0.1	
E885910	2190	0.1	0.3	1.8	0.2	< 0.1	84.1	5.4	0.013	5.36	> 5000	2.8	2.0	
E885911	204	0.5	0.3	2.3	0.3	< 0.1	112	0.1	0.001	< 0.05	3.4	0.2	< 0.1	
E885912	199	< 0.1	0.1	0.9	0.1	< 0.1	2.4	< 0.1	0.002	< 0.05	0.7	1.0	0.2	
E885913	29.2	0.3	0.2	1.2	0.1	< 0.1	54.4	< 0.1	< 0.001	0.40	5.3	3.5	0.9	
GXR-4 Meas	6600		0.2	1.0	0.1	0.6	225	35.3		3.03	44.1	17.3	5.4	
GXR-4 Cert	6520		0.210	1.60	0.170	0.790	221	30.8		3.20	52.0	22.5	6.20	
SDC-1 Meas	27.6		0.5	3.3		< 0.1	187	0.1		0.63	22.8	11.3	2.7	
SDC-1 Cert	30.000		0.65	4.00		1.20	180.00	0.80		0.70	25.00	12.00	3.10	
GXR-6 Meas	59.7			1.7	0.2	0.2	38.5	0.7		2.15	97.8	5.0	1.4	
GXR-6 Cert	66.0			2.40	0.330	0.485	35.0	1.90		2.20	101	5.30	1.54	
OREAS 97 (4 Acid) Meas	> 10000										136			
OREAS 97 (4 Acid) Cert	63100.00										147			
OREAS 98 (4 Acid) Meas	> 10000										333			
OREAS 98 (4 Acid) Cert	14800.0										345			
DNC-1a Meas	91.1			1.9			146				5.7			
DNC-1a Cert	100			2.0			144				6.3			
SBC-1 Meas	26.8		0.5	3.4	0.4	1.0	188	1.5		0.92	34.2	15.3	5.7	
SBC-1 Cert	31.0		0.56	3.64	0.54	1.10	178.0	1.60		0.89	35.0	15.8	5.76	
OREAS 45d	367			1.5	0.2	< 0.1	34.7	0.2		0.25	20.5	14.4	2.7	

	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	FA- GRA
SAMPLE	Cu	Ge	Tm	Yb	Lu	Ta	Sr	W	Re	Ti	Pb	Th	U	Au
DESCRIPTION	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	g/tonne
(4-Acid) Meas														
OREAS 45d (4-Acid) Cert	371			1.33	0.18	1.02	31.30	1.62		0.27	21.8	14.5	2.63	
OREAS 214 Meas														3.02
OREAS 214 Cert														3.03
OREAS 216 (Fire Assay) Meas														6.82
OREAS 216 (Fire Assay) Cert														6.66
OREAS 220 (Fire Assay) Meas														
OREAS 220 (Fire Assay) Cert														
OREAS 220 (Fire Assay) Meas														
OREAS 220 (Fire Assay) Cert														
OREAS 96 (4 Acid) Meas	> 10000										101			
OREAS 96 (4 Acid) Cert	39300										101			
OREAS 621 (4 Acid) Meas	4020			1.0	0.1		76.1	1.9		2.06	> 5000	5.3	2.8	
OREAS 621 (4 Acid) Cert	3630			0.990	0.140		91.0	2.35		1.96	13600	7.48	2.83	
OREAS 209 (Fire Assay) Meas														
OREAS 209 (Fire Assay) Cert														
OREAS 209 (Fire Assay) Meas														
OREAS 209 (Fire Assay) Cert														
OREAS 209 (Fire Assay) Meas														
OREAS 209 (Fire Assay) Cert														
E885881 Orig	23.4	< 0.1	< 0.1	0.5	< 0.1	< 0.1	19.5	0.8	< 0.001	0.16	10.4	1.3	0.3	
E885881 Dup	23.6	< 0.1	< 0.1	0.5	< 0.1	< 0.1	19.6	0.8	0.001	0.17	10.7	1.3	0.3	
E885884 Orig														
E885884 Dup														
E885891 Orig														
E885891 Dup														
E885892 Orig	11.7	0.3	< 0.1	0.7	< 0.1	< 0.1	28.6	< 0.1	< 0.001	< 0.05	1.2	< 0.1	< 0.1	
E885892 Dup	7.0	0.3	0.1	0.7	< 0.1	< 0.1	28.7	0.1	< 0.001	< 0.05	1.3	< 0.1	< 0.1	
E885909 Orig														

Results

Activation Laboratories Ltd.

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	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	FA- GRA
SAMPLE	Cu	Ge	Tm	Yb	Lu	Ta	Sr	W	Re	Tl	Pb	Th	U	Au
DESCRIPTION	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	g/tonne
E885909 Dup														
E885911 Orig	204	0.5	0.3	2.3	0.3	< 0.1	112	0.1	0.001	< 0.05	3.4	0.2	< 0.1	
E885911 Dup	202	0.2	0.4	2.3	0.3	< 0.1	110	< 0.1	0.001	< 0.05	3.3	0.2	< 0.1	
E885912 Orig	199	< 0.1	0.1	0.9	0.1	< 0.1	2.4	< 0.1	0.002	< 0.05	0.7	1.0	0.2	
E885912 Dup	205	< 0.1	0.1	1.0	0.1	< 0.1	2.3	0.1	0.002	0.05	0.6	1.0	0.2	
Method Blank														
Method Blank														
Method Blank														
Method Blank	0.6	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.2	< 0.1	< 0.001	< 0.05	< 0.5	< 0.1	< 0.1	
Method Blank														
Method Blank														< 0.03

Appendix VI – Invoices and receipts

Activation Laboratories Ltd.
Wisk Air Helicopters

2018 North Caribou Greenstone Belt Exploration

Appendix VII – Re-interpretation of the northern portion of North Caribou Belt

620000

630000

Re-interpretation of the Geology
(2018)
West portion of North Caribou Claim Group

5870000

5870000

5860000

5860000

5850000







5850000

620000




630000

1:60,000
UTM Nad 83 z15N










Legend

-  Property Boundary
-  VLF_Form_Lines
-  Young_Dykes
-  Fold_Closures
-  First_Order_Structures
-  Second_Order_Structures

Geology - Regional - Re-interp

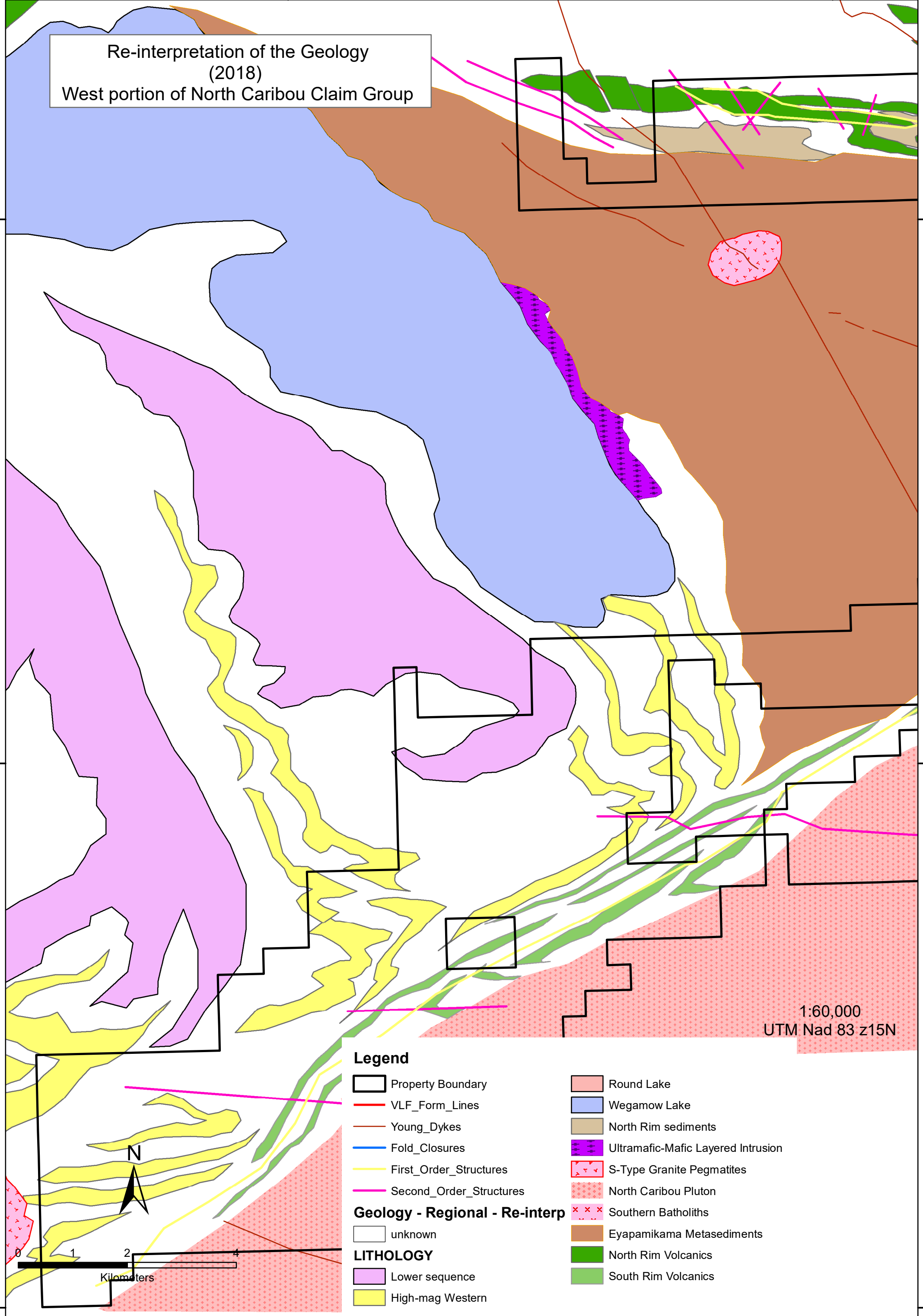
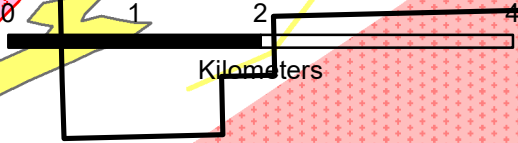
-  unknown
-  Lower sequence
-  High-mag Western

LITHOLOGY

-  Round Lake
-  Wegamow Lake
-  North Rim sediments
-  Ultramafic-Mafic Layered Intrusion
-  S-Type Granite Pegmatites
-  North Caribou Pluton
-  Southern Batholiths
-  Eyapamikama Metasediments
-  North Rim Volcanics
-  South Rim Volcanics



Kilometers



640000

650000

Re-interpretation of the Geology
(2018)
Central Caribou Claim Group

5870000

5870000

5860000




















5860000

640000

650000

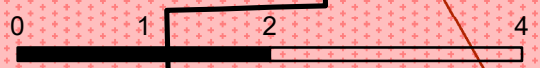
1:60,000
UTM Nad 83 z15N

Legend

-  Property Boundary
-  VLF_Form_Lines
-  Young_Dykes
-  Fold_Closures
-  First_Order_Structures
-  Second_Order_Structures
-  unknown
-  Lower sequence
-  High-mag Western
-  Round Lake
-  Wegamow Lake
-  North Rim sediments
-  Ultramafic-Mafic Layered Intrusion
-  S-Type Granite Pegmatites
-  North Caribou Pluton
-  Southern Batholiths
-  Eyapamikama Metasediments
-  North Rim Volcanics
-  South Rim Volcanics

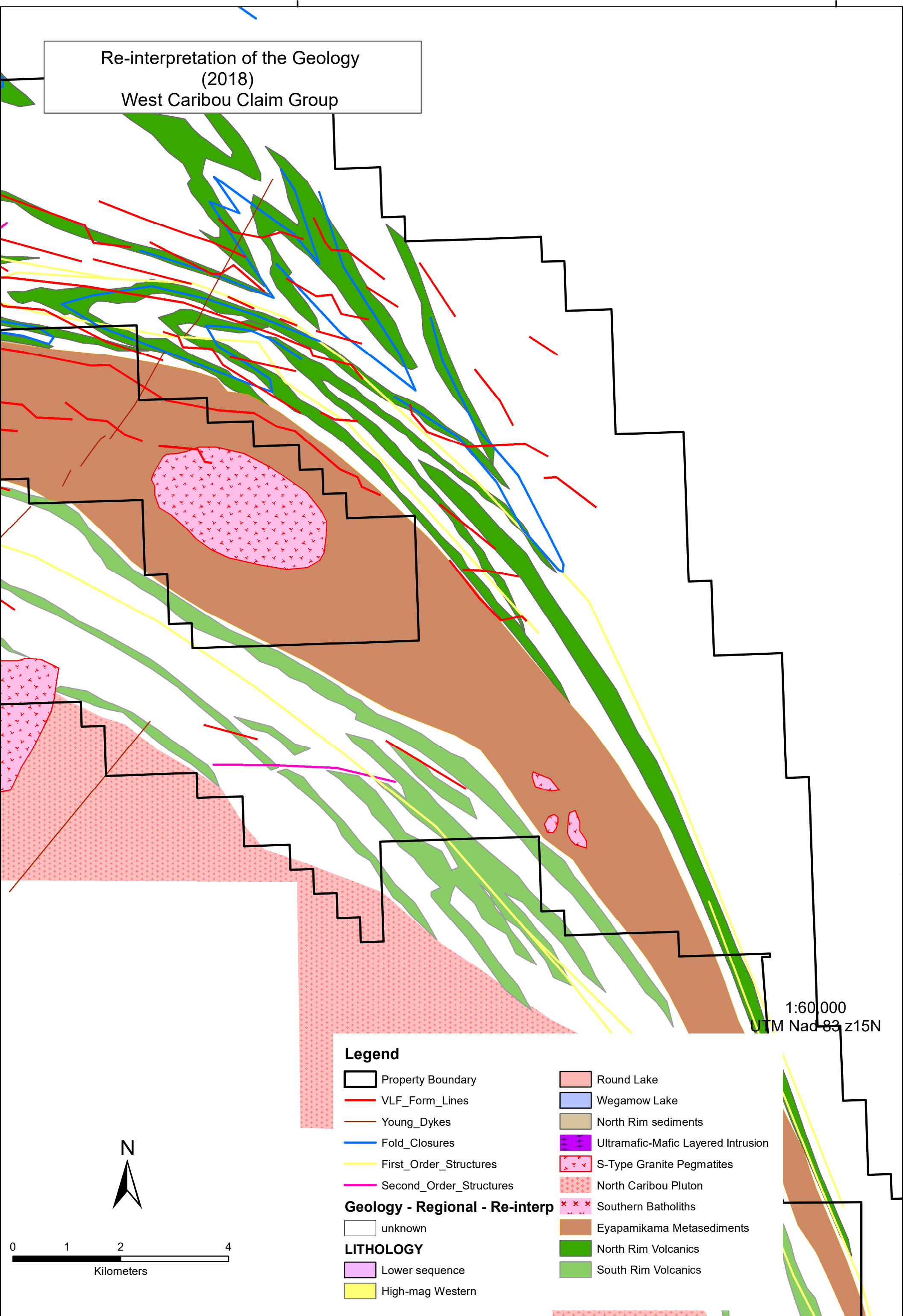
Geology - Regional - Re-interp

LITHOLOGY



Kilometers

Re-interpretation of the Geology
(2018)
West Caribou Claim Group



Legend

- | | |
|---------------------------------------|------------------------------------|
| Property Boundary | Round Lake |
| VLF_Form_Lines | Wegamow Lake |
| Young_Dykes | North Rim sediments |
| Fold_Closures | Ultramafic-Mafic Layered Intrusion |
| First_Order_Structures | S-Type Granite Pegmatites |
| Second_Order_Structures | North Caribou Pluton |
| Geology - Regional - Re-interp | |
| unknown | Southern Batholiths |
| LITHOLOGY | |
| Lower sequence | Eyapamikama Metasediments |
| High-mag Western | North Rim Volcanics |
| | South Rim Volcanics |



1:60,000
UTM Nad 83 z15N

660000.000000

670000.000000

5870000.000000

5860000.000000

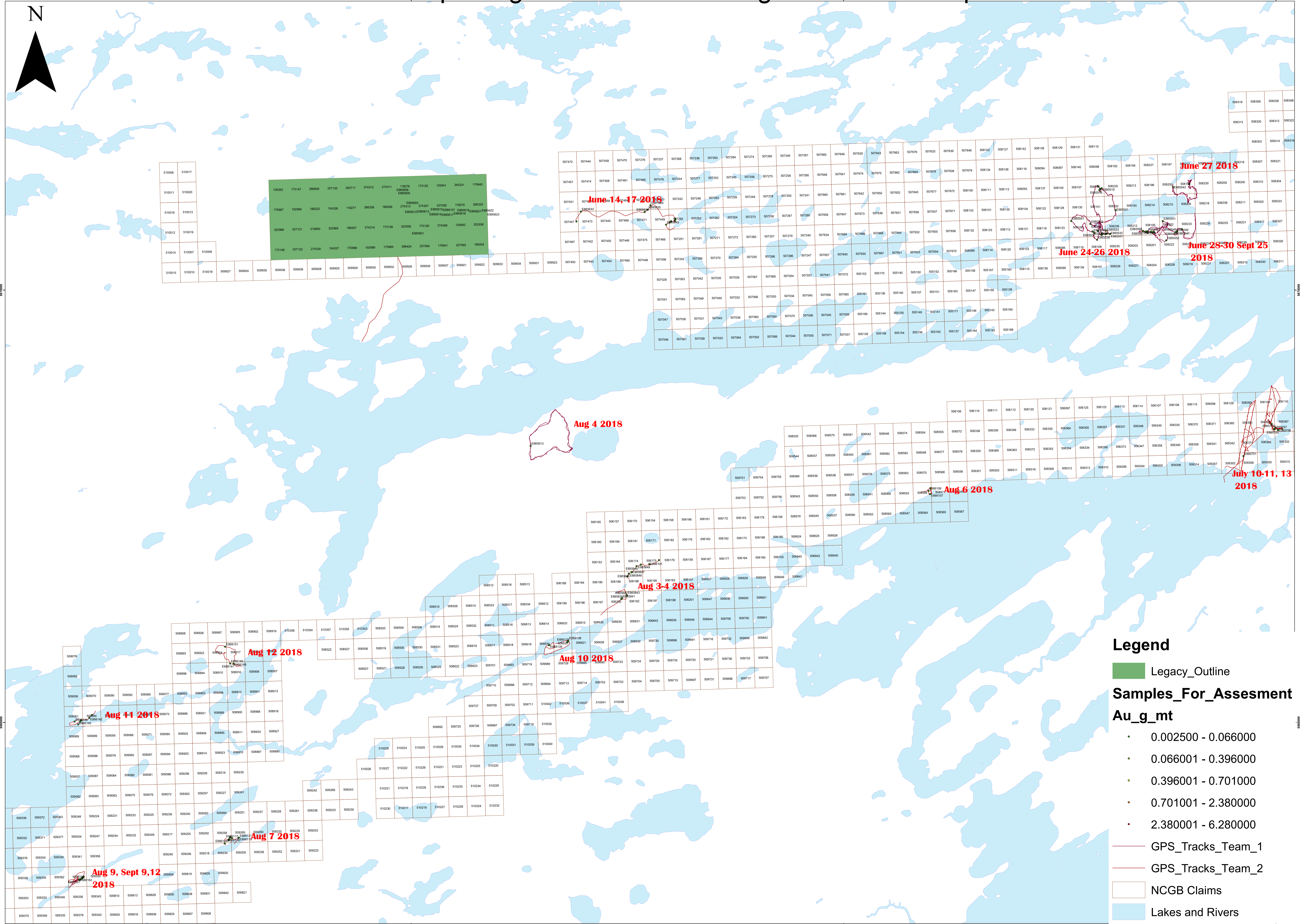
5870000.000000

5860000.000000

Appendix VIII – Maps of prospecting traverses and lithochemical samples

West side of property
East side of property

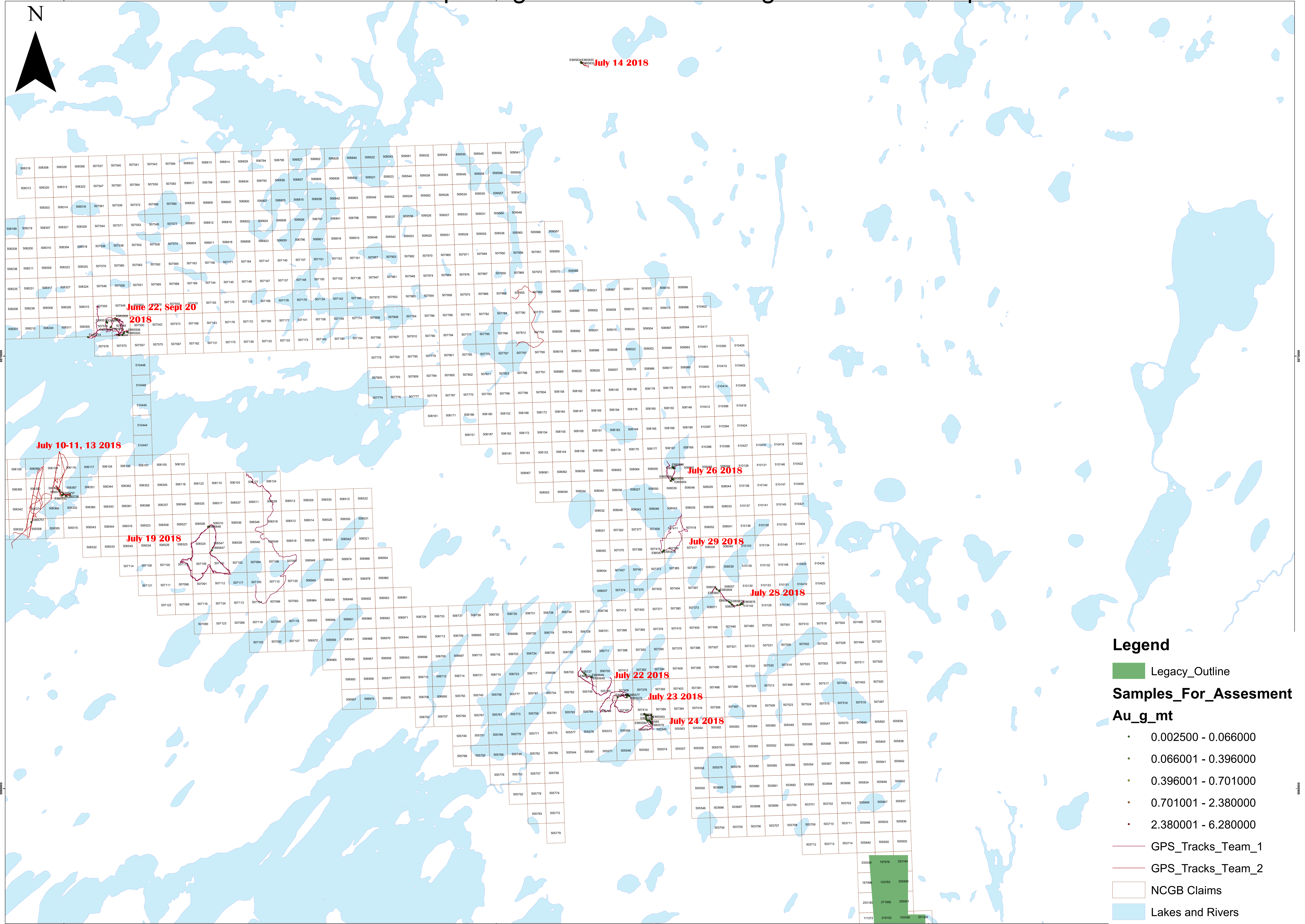
2018 NCGB Prospecting Traverses and Lithochemochemical Samples West



Legend

- Legacy_Outline
- Samples_For_Assesment**
- Au_g_mt**
- 0.002500 - 0.066000
- 0.066001 - 0.396000
- 0.396001 - 0.701000
- 0.701001 - 2.380000
- 2.380001 - 6.280000
- GPS_Tracks_Team_1
- GPS_Tracks_Team_2
- NCGB Claims
- Lakes and Rivers

2018 NCGB Prospecting Traverses and Lithogeochemical Samples East



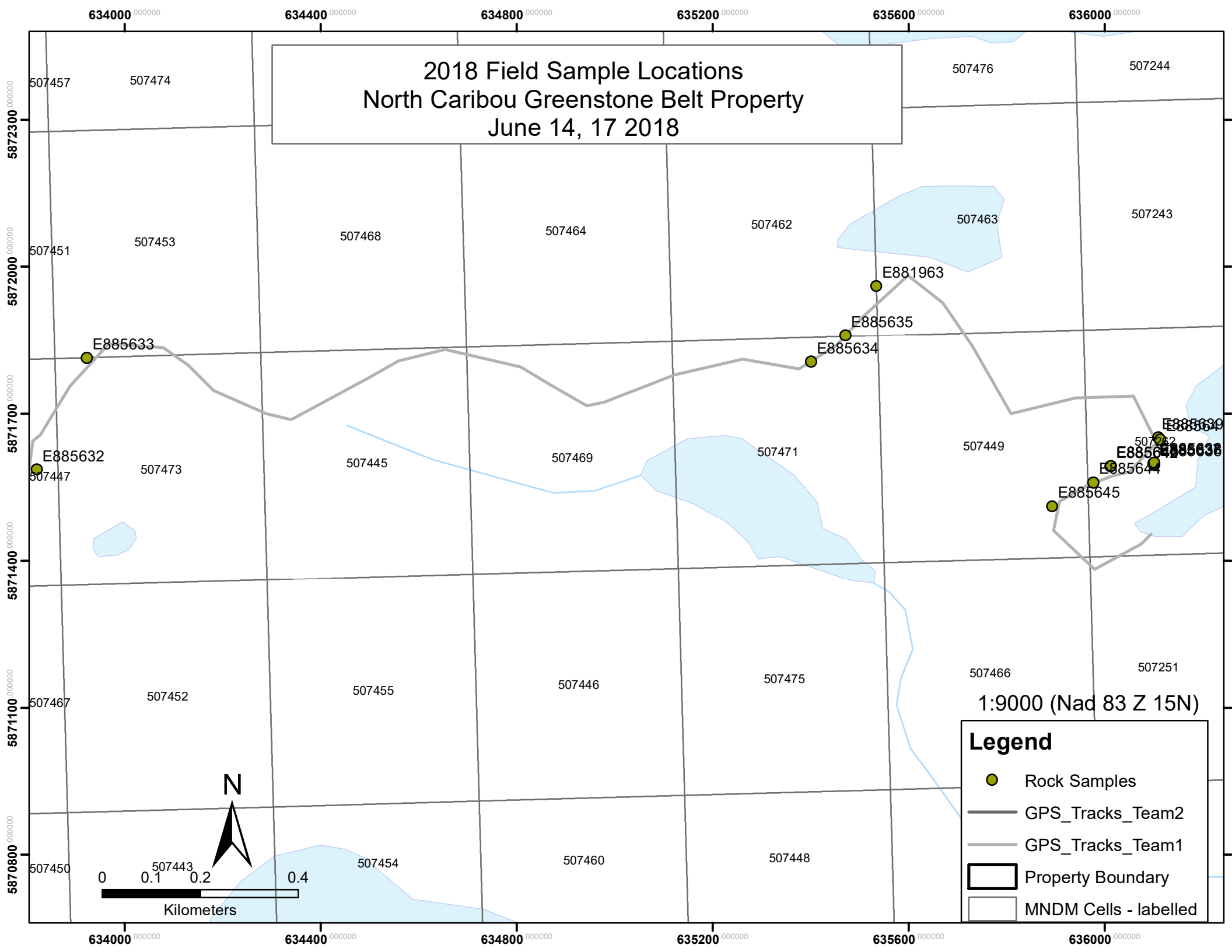
Legend

- Legacy_Outline
- Samples_For_Assesment**
- Au_g_mt**

 - 0.002500 - 0.066000
 - 0.066001 - 0.396000
 - 0.396001 - 0.701000
 - 0.701001 - 2.380000
 - 2.380001 - 6.280000

- GPS_Tracks_Team_1
- GPS_Tracks_Team_2
- NCGB Claims
- Lakes and Rivers

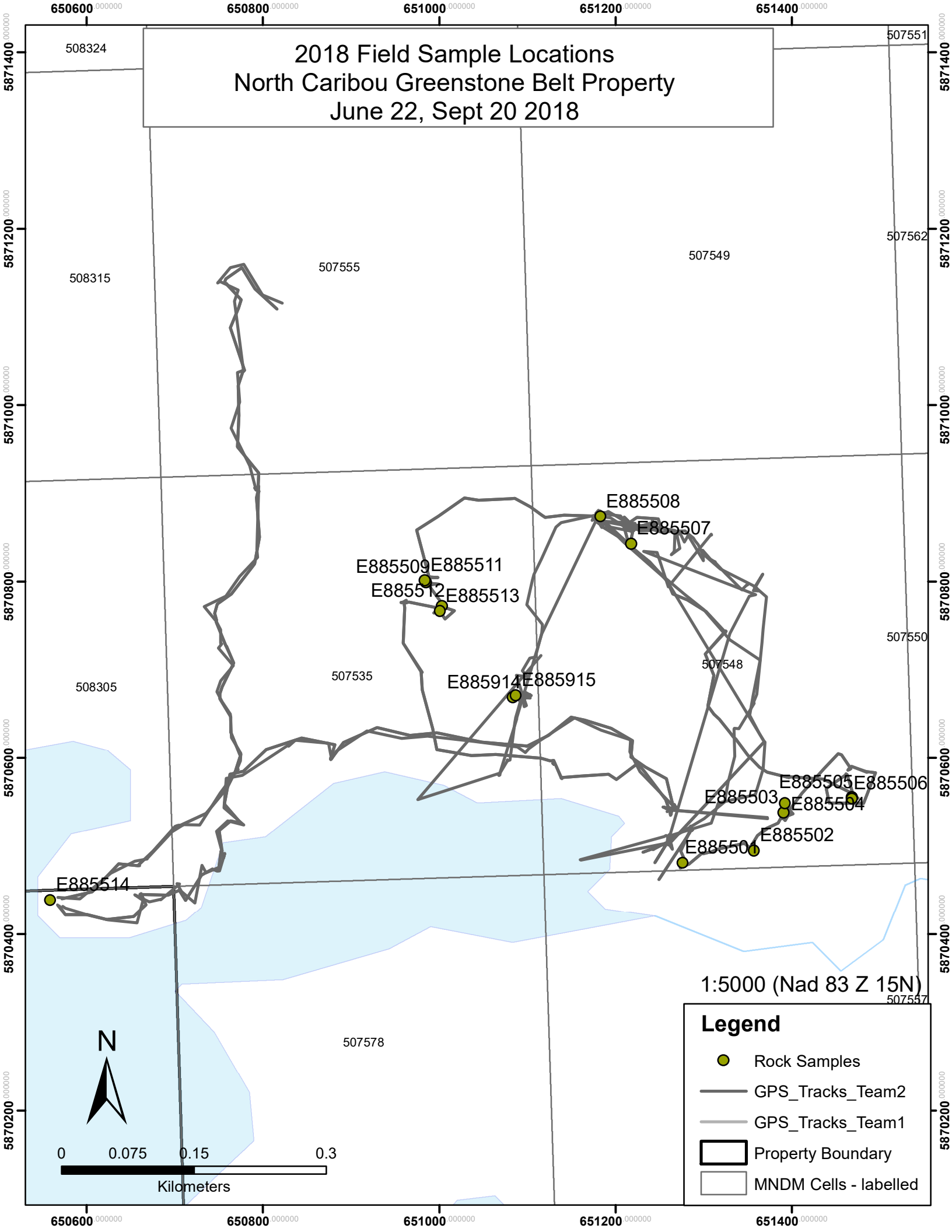
2018 Field Sample Locations
North Caribou Greenstone Belt Property
June 14, 17 2018



Legend

- Rock Samples
- GPS_Tracks_Team2
- GPS_Tracks_Team1
- Property Boundary
- MNDM Cells - labelled

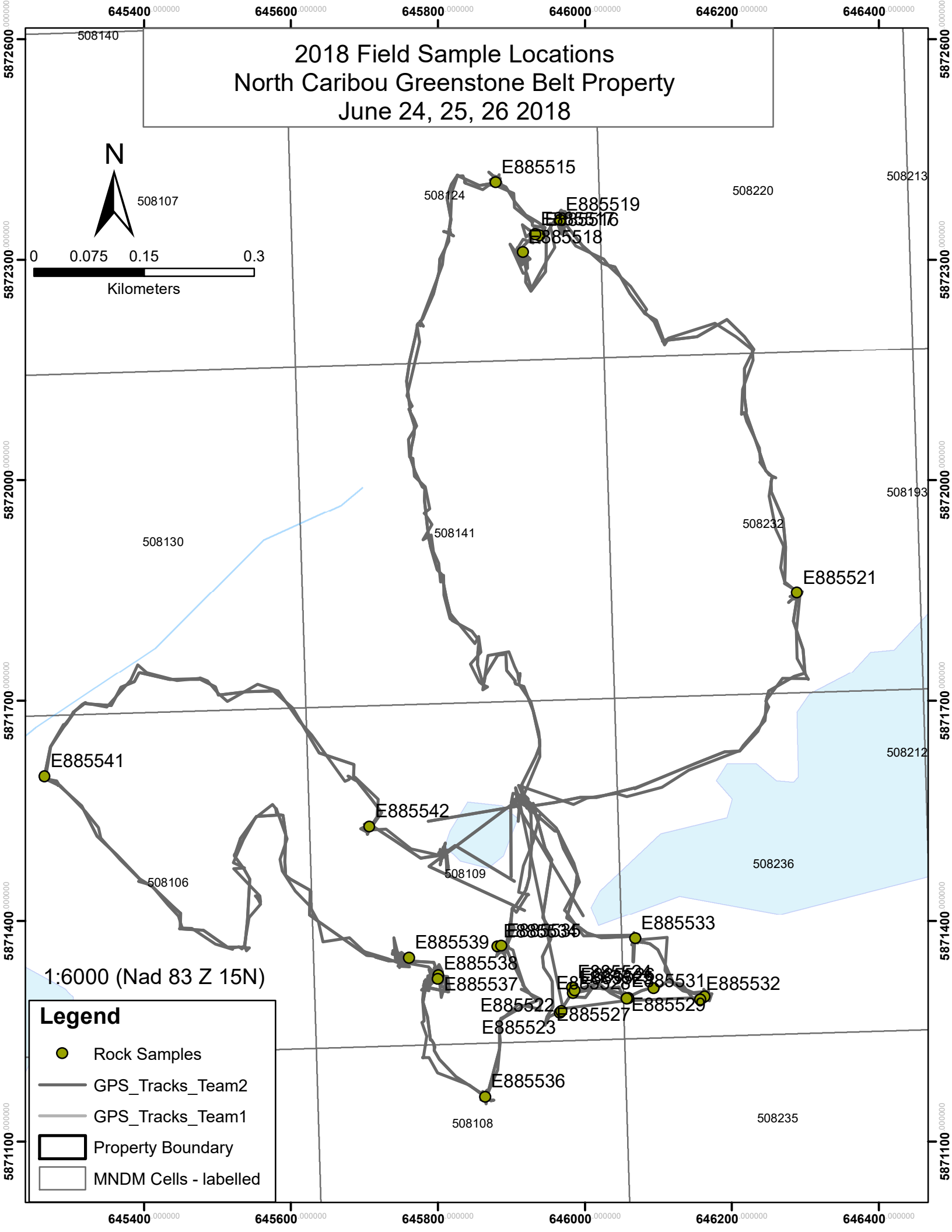
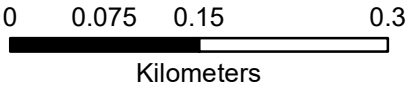
2018 Field Sample Locations North Caribou Greenstone Belt Property June 22, Sept 20 2018



Legend

- Rock Samples
- GPS_Tracks_Team2
- GPS_Tracks_Team1
- ▭ Property Boundary
- ▭ MNDM Cells - labelled

2018 Field Sample Locations North Caribou Greenstone Belt Property June 24, 25, 26 2018

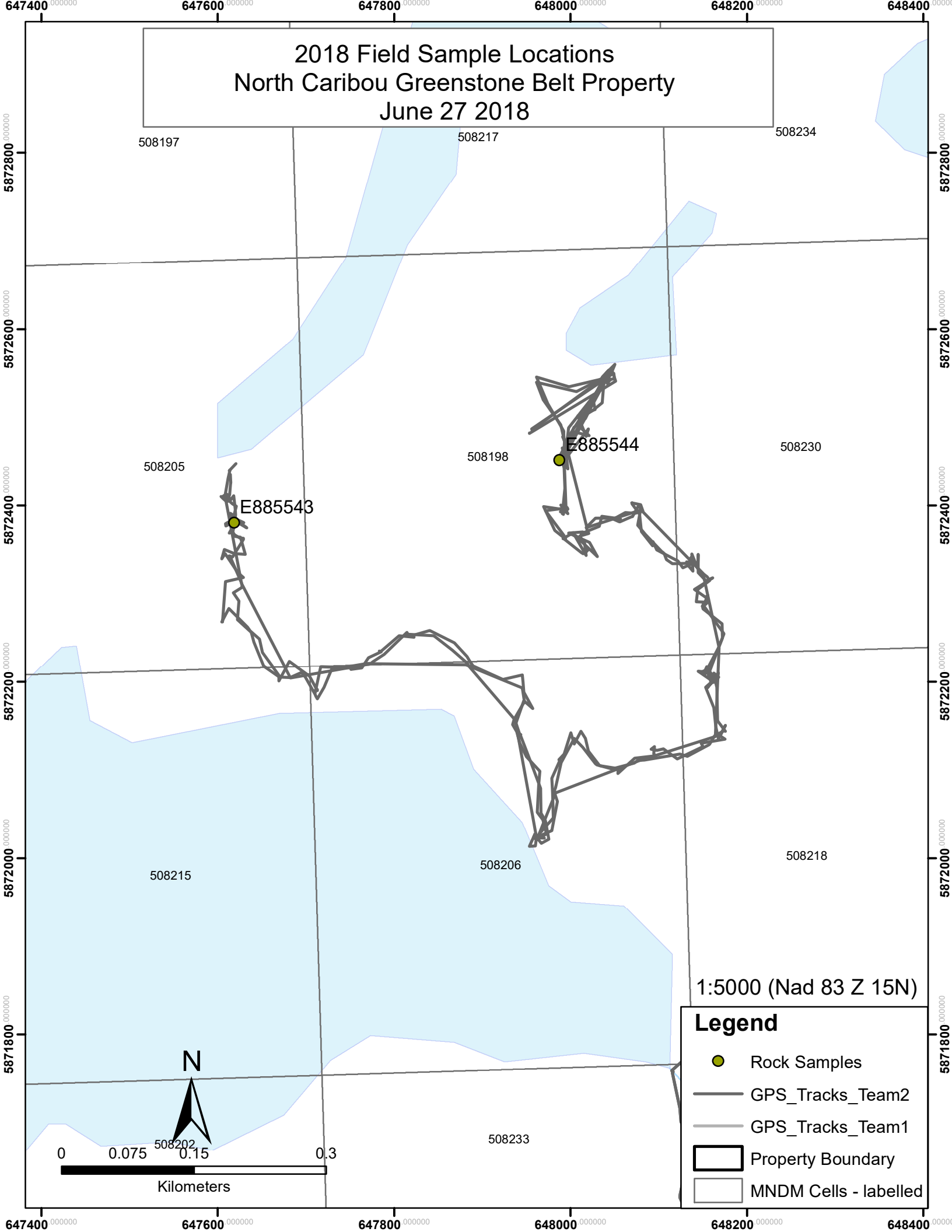


1:6000 (Nad 83 Z 15N)

Legend

- Rock Samples
- GPS_Tracks_Team2
- GPS_Tracks_Team1
- ▭ Property Boundary
- ▭ MNDM Cells - labelled

2018 Field Sample Locations North Caribou Greenstone Belt Property June 27 2018



508197 508217 508234

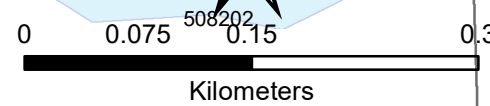
508205 508198 508230

508215 508206 508218

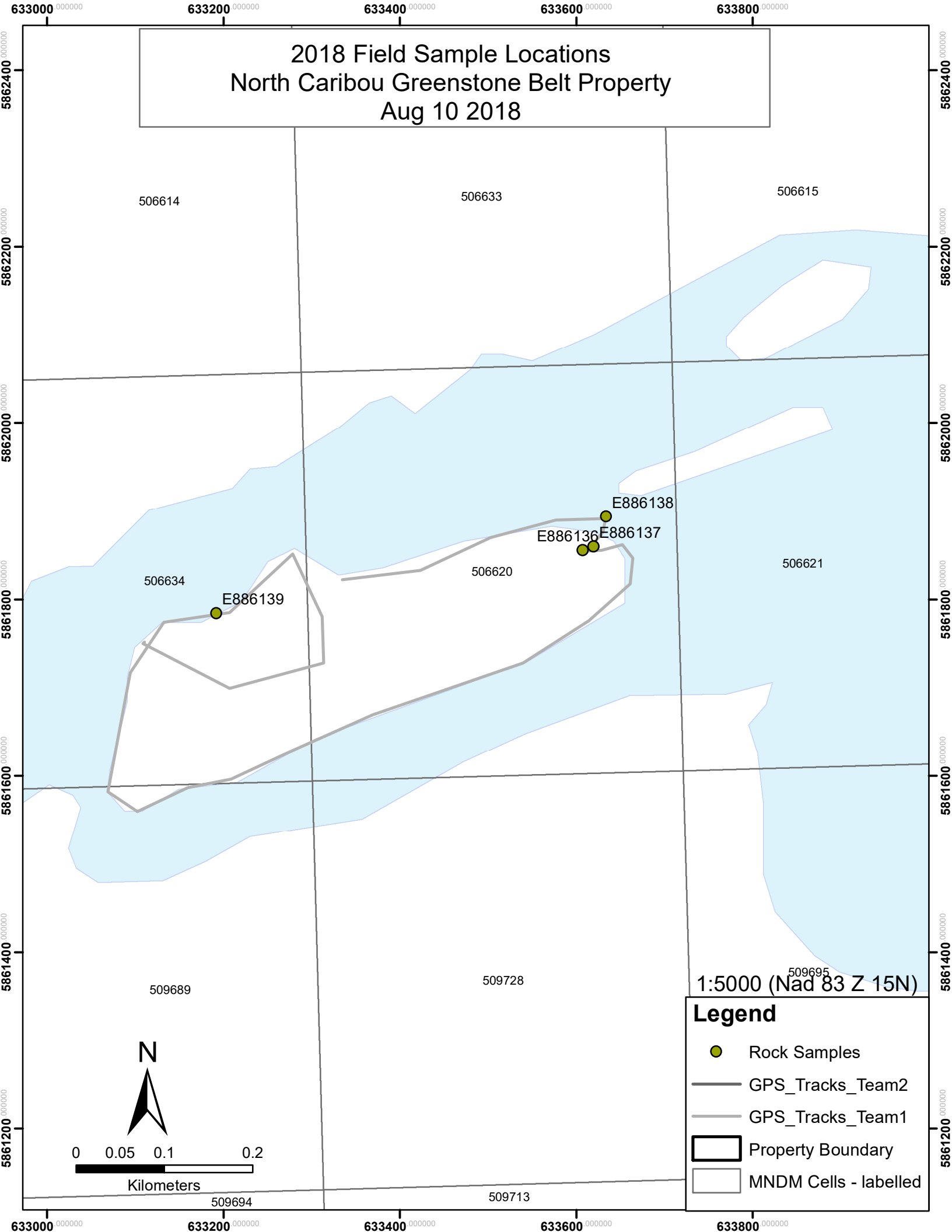
508202 508233

1:5000 (Nad 83 Z 15N)

- Legend**
- Rock Samples
 - GPS_Tracks_Team2
 - GPS_Tracks_Team1
 - ▭ Property Boundary
 - ▭ MNDM Cells - labelled



2018 Field Sample Locations North Caribou Greenstone Belt Property Aug 10 2018



5862400
5862200
5862000
5861800
5861600
5861400
5861200

633000 000000 633200 000000 633400 000000 633600 000000 633800 000000

506614 506633 506615

506634 506620 506621

509689 509728 509694 509713

1:5000 (Nad 83 Z 15N)

Legend

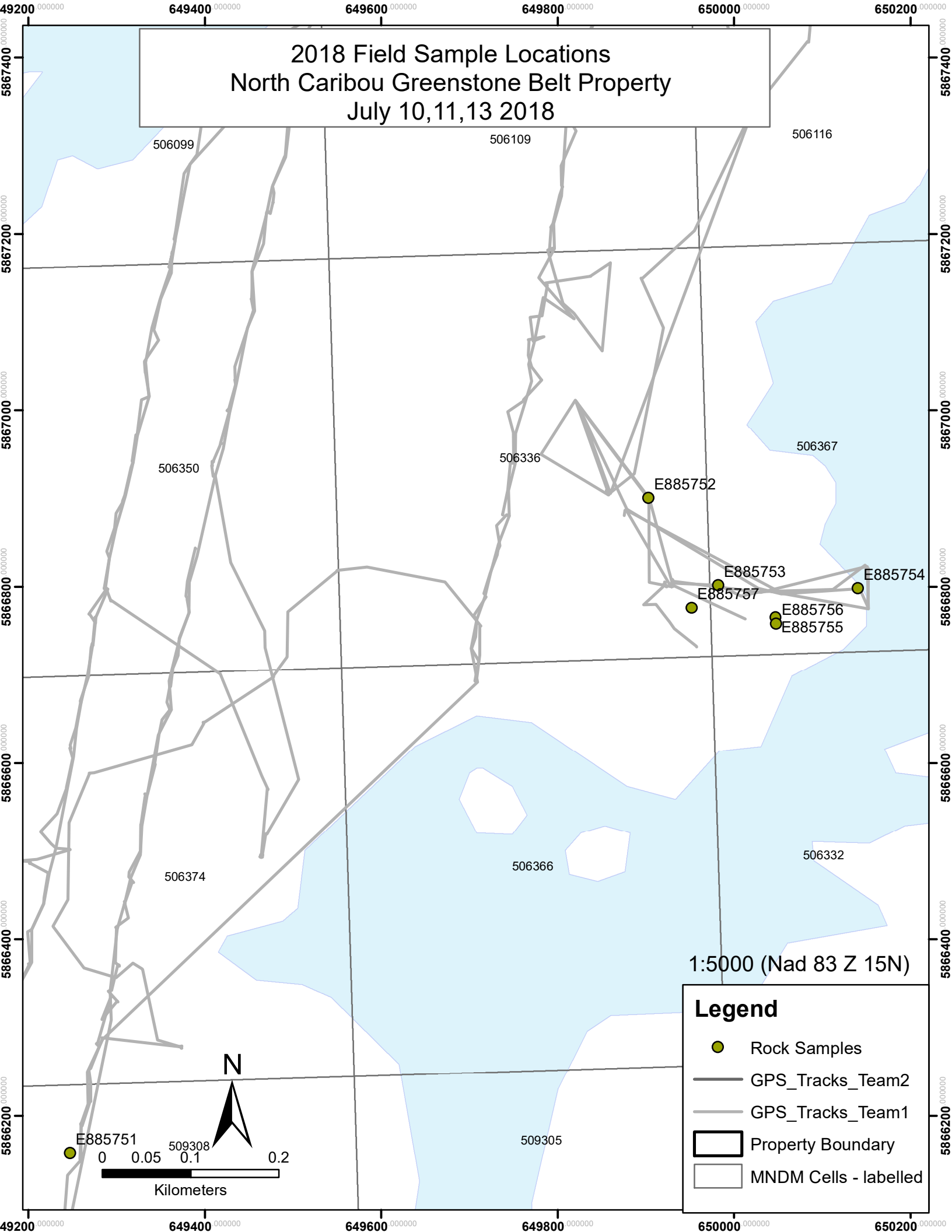
- Rock Samples
- GPS_Tracks_Team2
- GPS_Tracks_Team1
- Property Boundary
- MNDM Cells - labelled

N

0 0.05 0.1 0.2
Kilometers

633000 000000 633200 000000 633400 000000 633600 000000 633800 000000

2018 Field Sample Locations North Caribou Greenstone Belt Property July 10,11,13 2018



1:5000 (Nad 83 Z 15N)

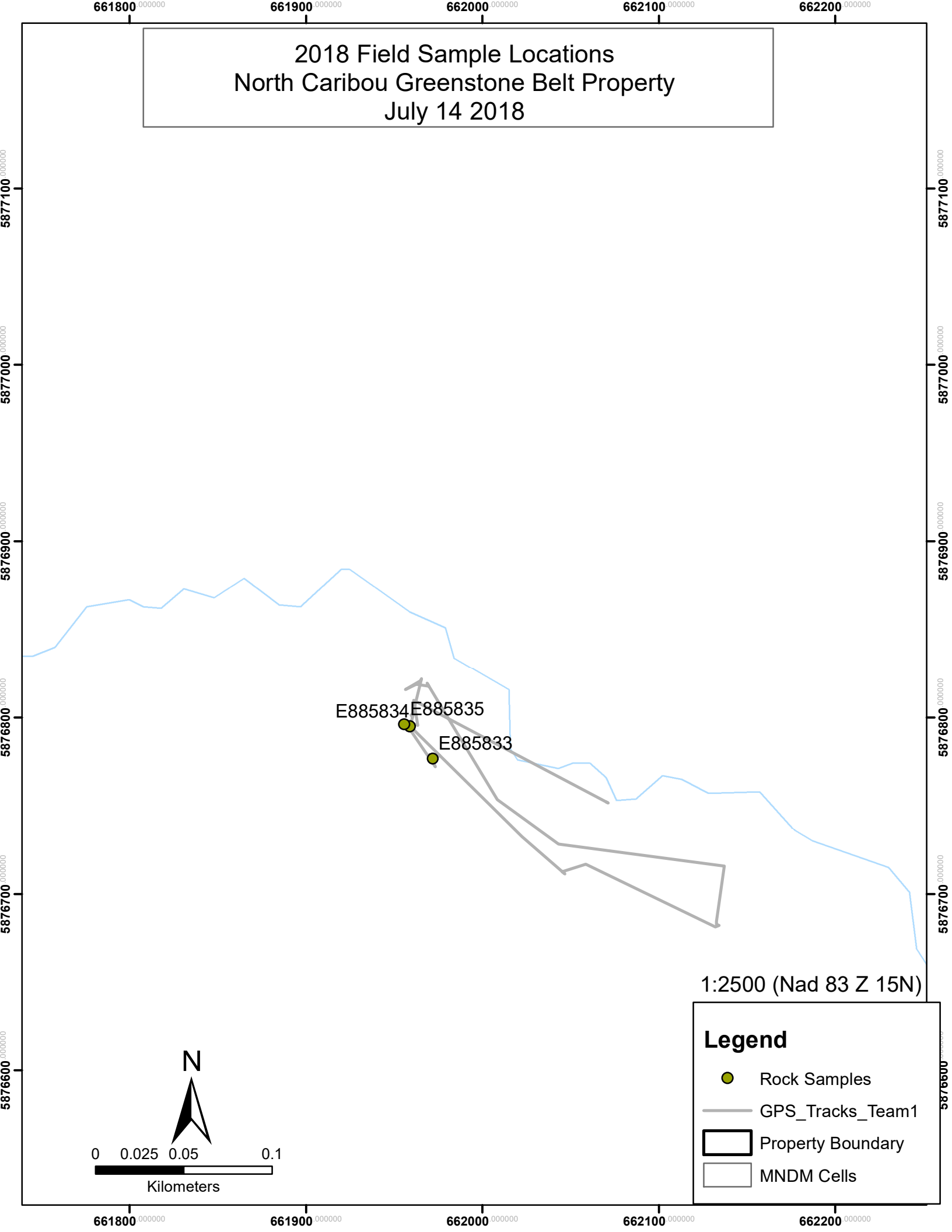
Legend

- Rock Samples
- GPS_Tracks_Team2
- GPS_Tracks_Team1
- ▭ Property Boundary
- ▭ MNDM Cells - labelled

0 0.05 0.1 0.2
Kilometers

N

2018 Field Sample Locations
North Caribou Greenstone Belt Property
July 14 2018



1:2500 (Nad 83 Z 15N)

Legend

- Rock Samples
- GPS_Tracks_Team1
- Property Boundary
- MNDM Cells

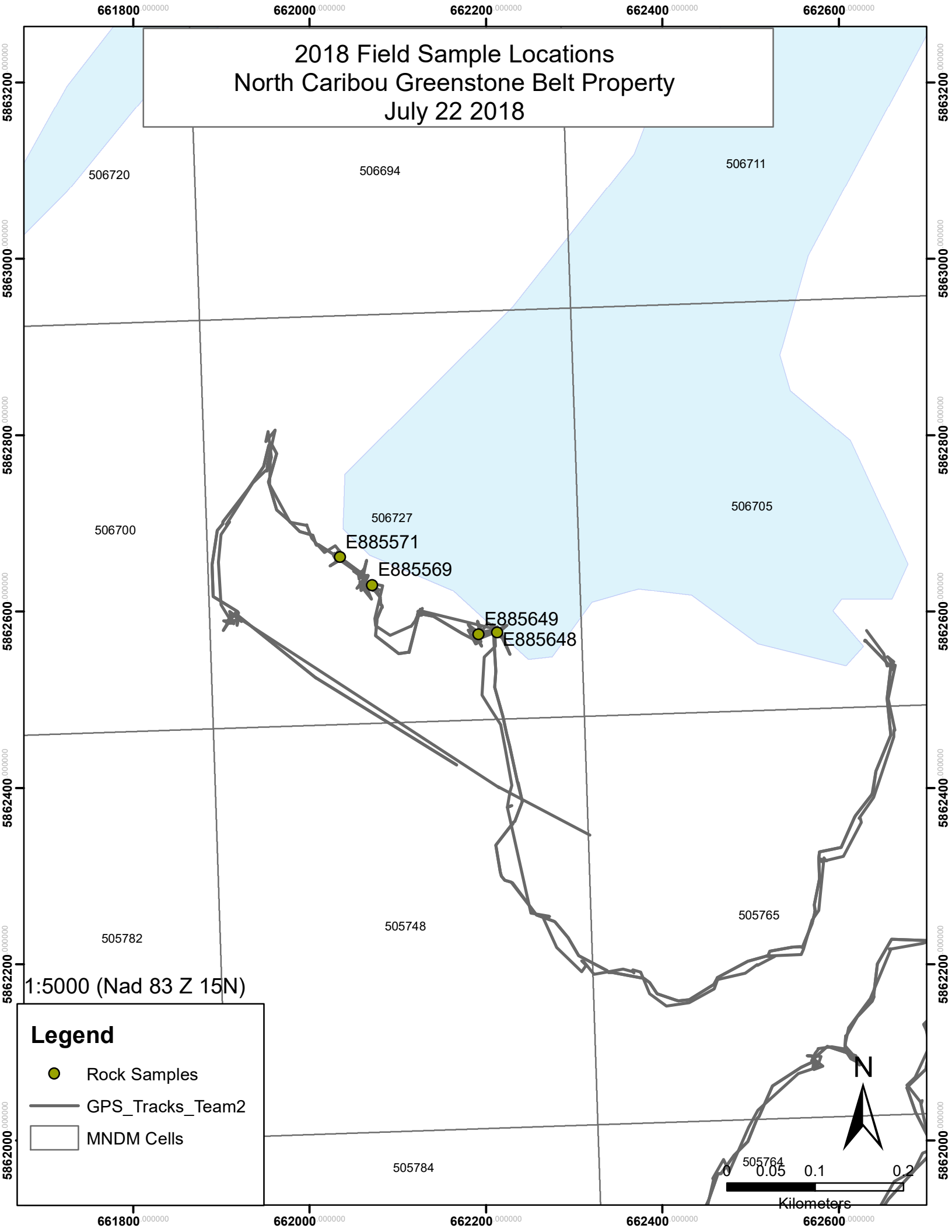
N

0 0.025 0.05 0.1

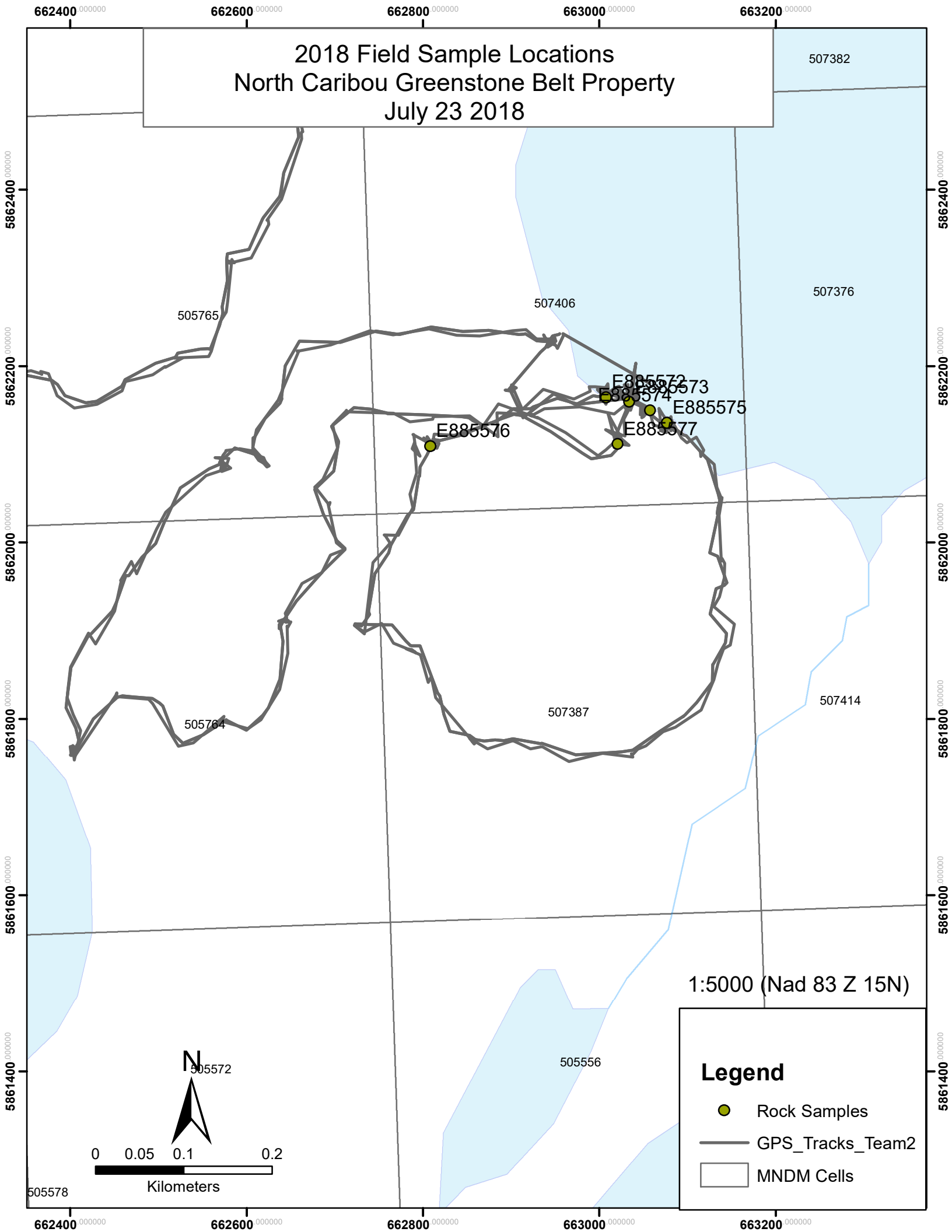
Kilometers

E885834 E885835
E885833

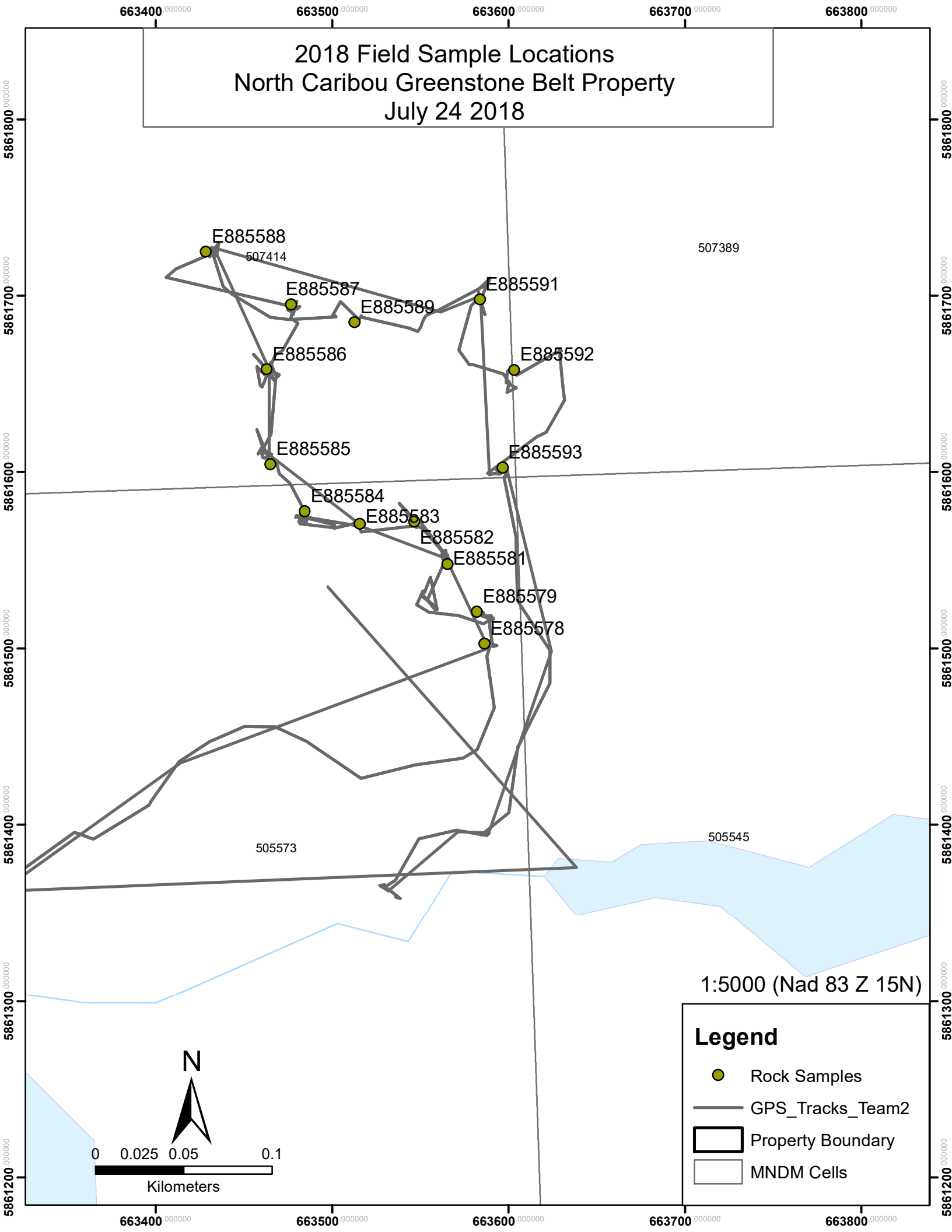
2018 Field Sample Locations North Caribou Greenstone Belt Property July 22 2018



2018 Field Sample Locations North Caribou Greenstone Belt Property July 23 2018



2018 Field Sample Locations North Caribou Greenstone Belt Property July 24 2018



1:5000 (Nad 83 Z 15N)

Legend

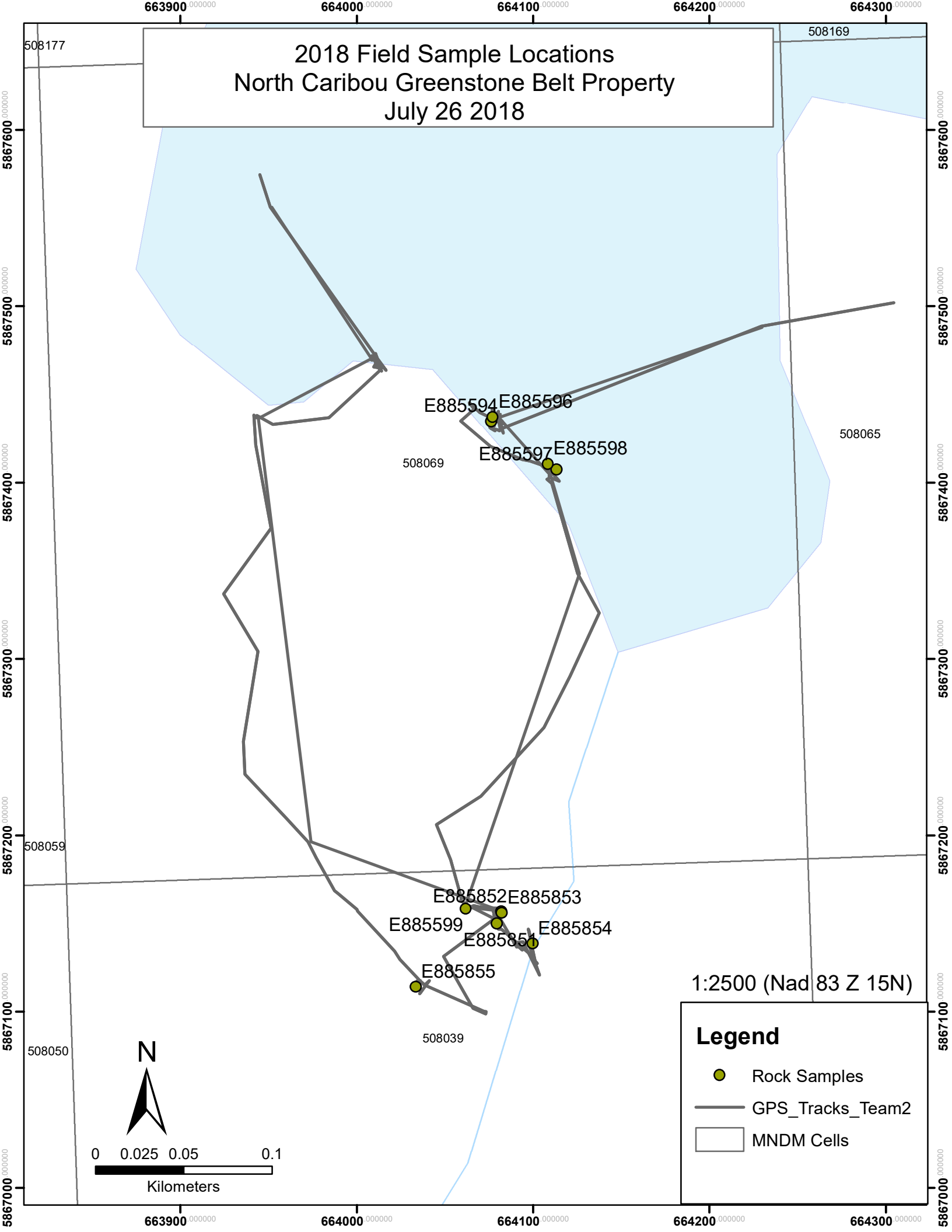
- Rock Samples
- GPS_Tracks_Team2
- ▭ Property Boundary
- ▭ MNDM Cells

N

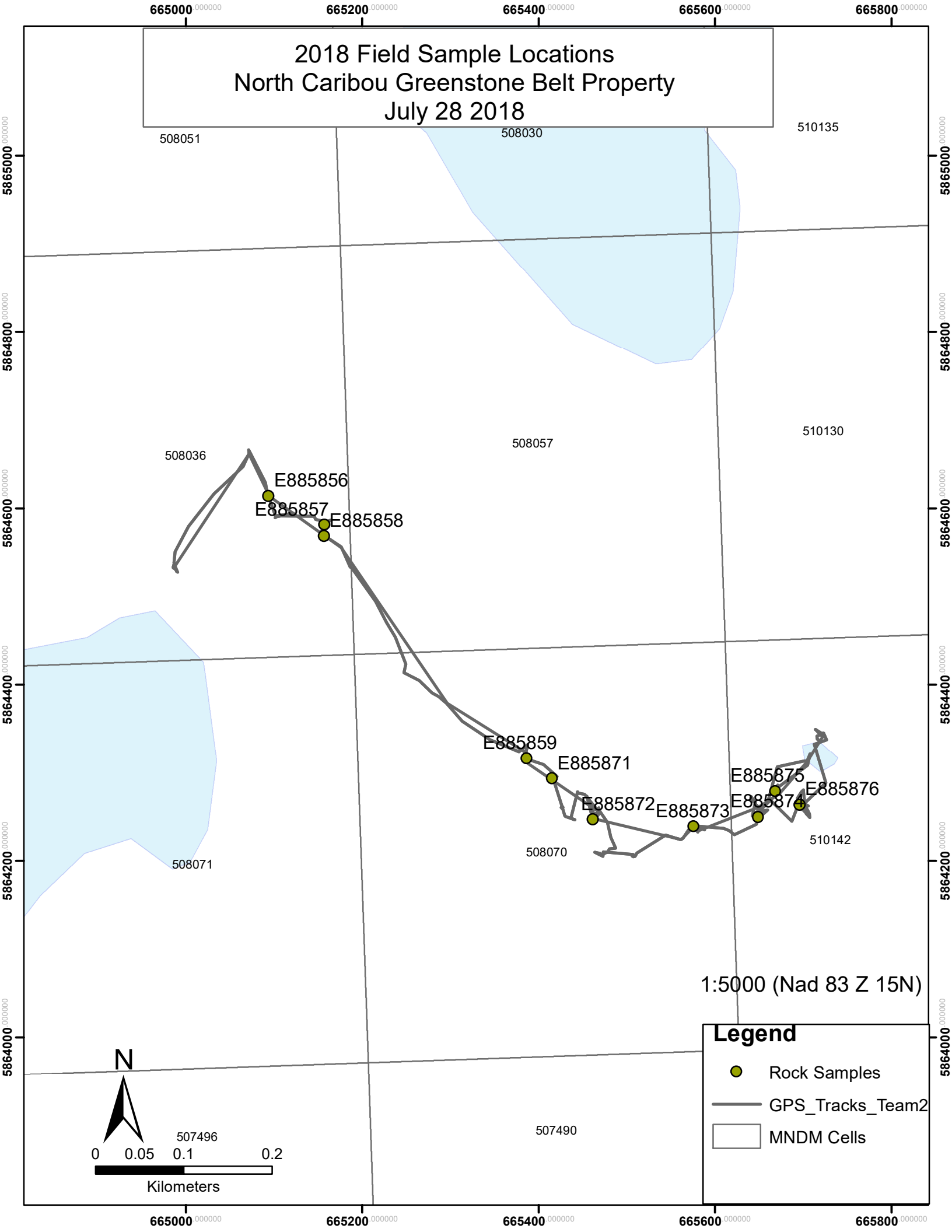
0 0.025 0.05 0.1

Kilometers

2018 Field Sample Locations North Caribou Greenstone Belt Property July 26 2018



2018 Field Sample Locations North Caribou Greenstone Belt Property July 28 2018



1:5000 (Nad 83 Z 15N)

Legend

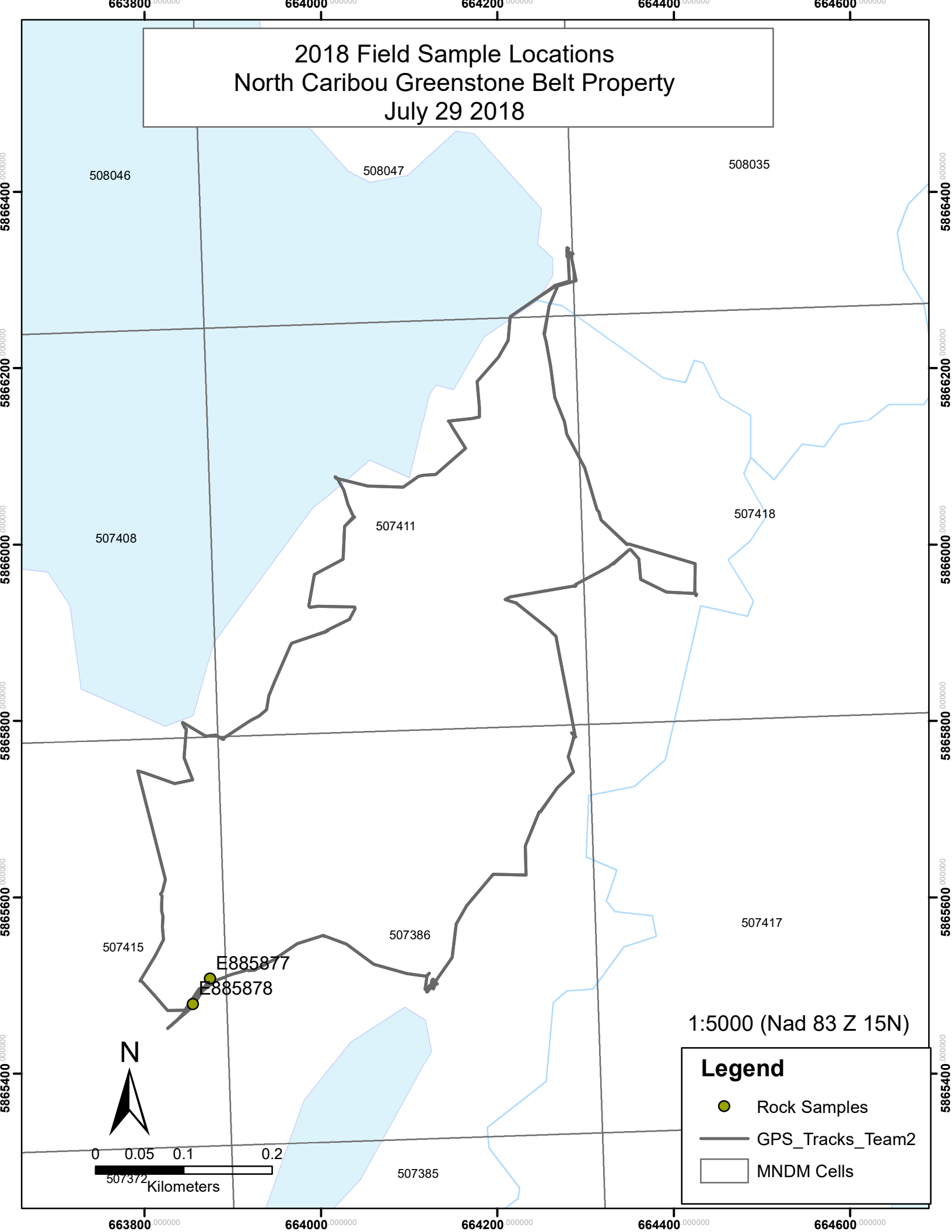
- Rock Samples
- GPS_Tracks_Team2
- MNDM Cells

N

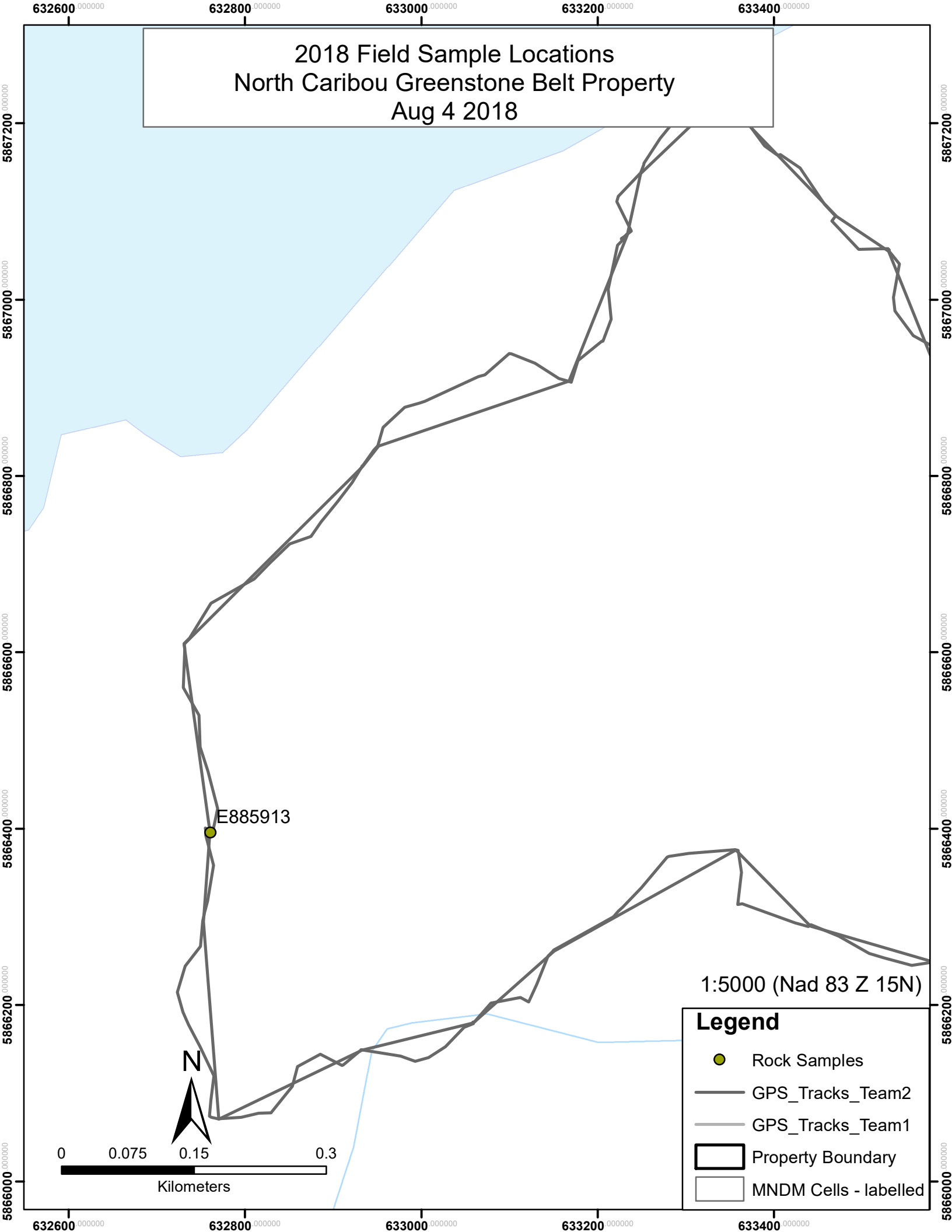
0 0.05 0.1 0.2

Kilometers

2018 Field Sample Locations
North Caribou Greenstone Belt Property
July 29 2018



2018 Field Sample Locations North Caribou Greenstone Belt Property Aug 4 2018

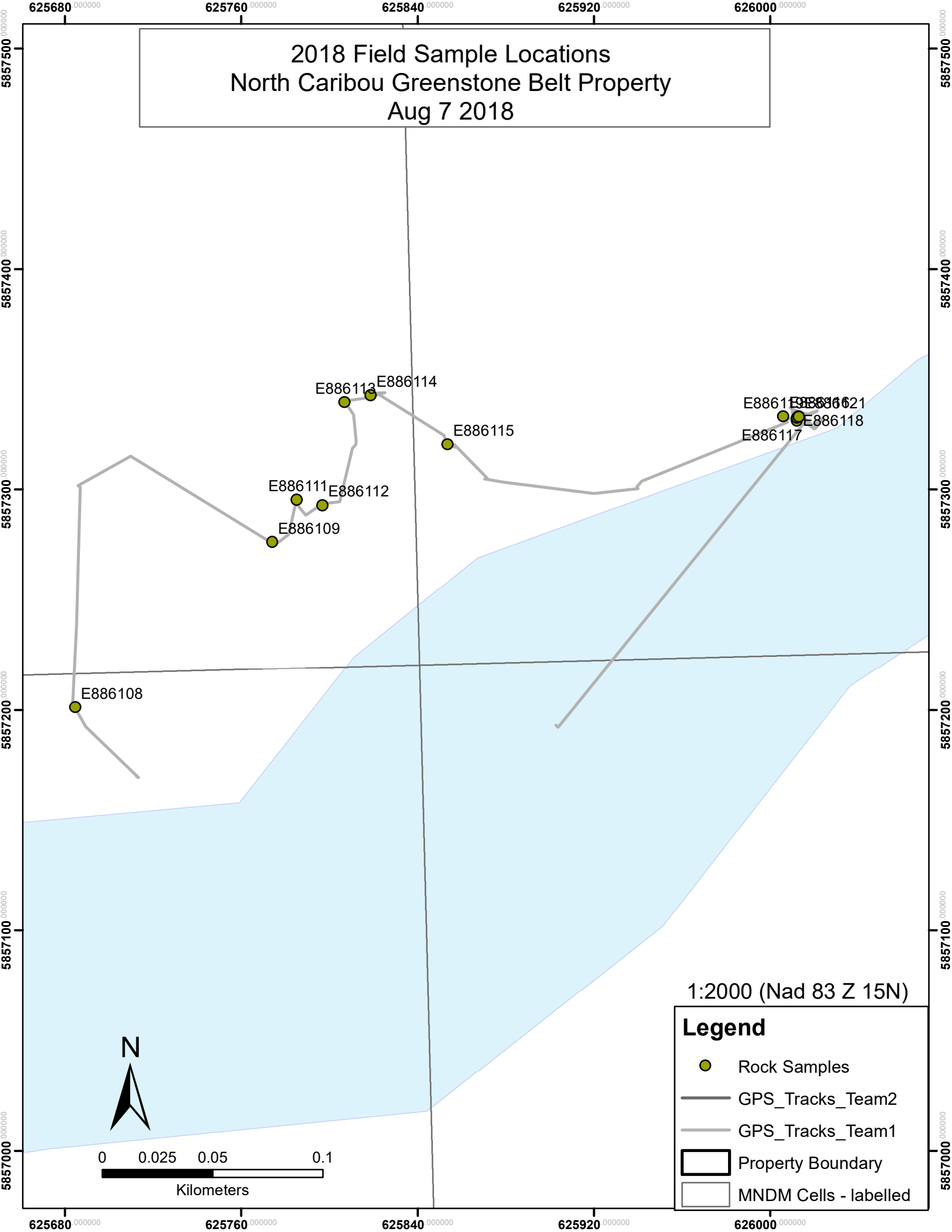


1:5000 (Nad 83 Z 15N)

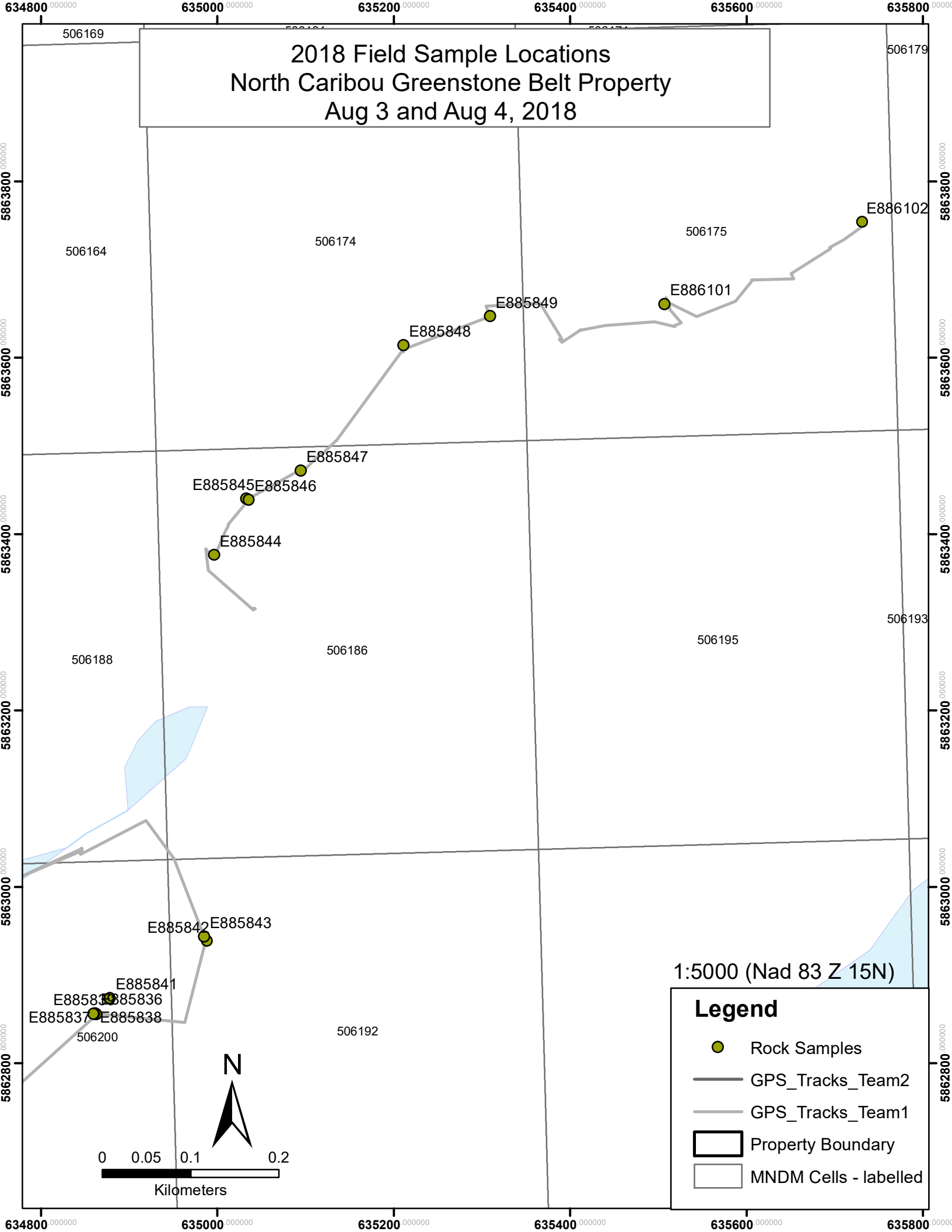
- Legend**
- Rock Samples
 - GPS_Tracks_Team2
 - GPS_Tracks_Team1
 - ▭ Property Boundary
 - ▭ MNDM Cells - labelled

0 0.075 0.15 0.3
Kilometers

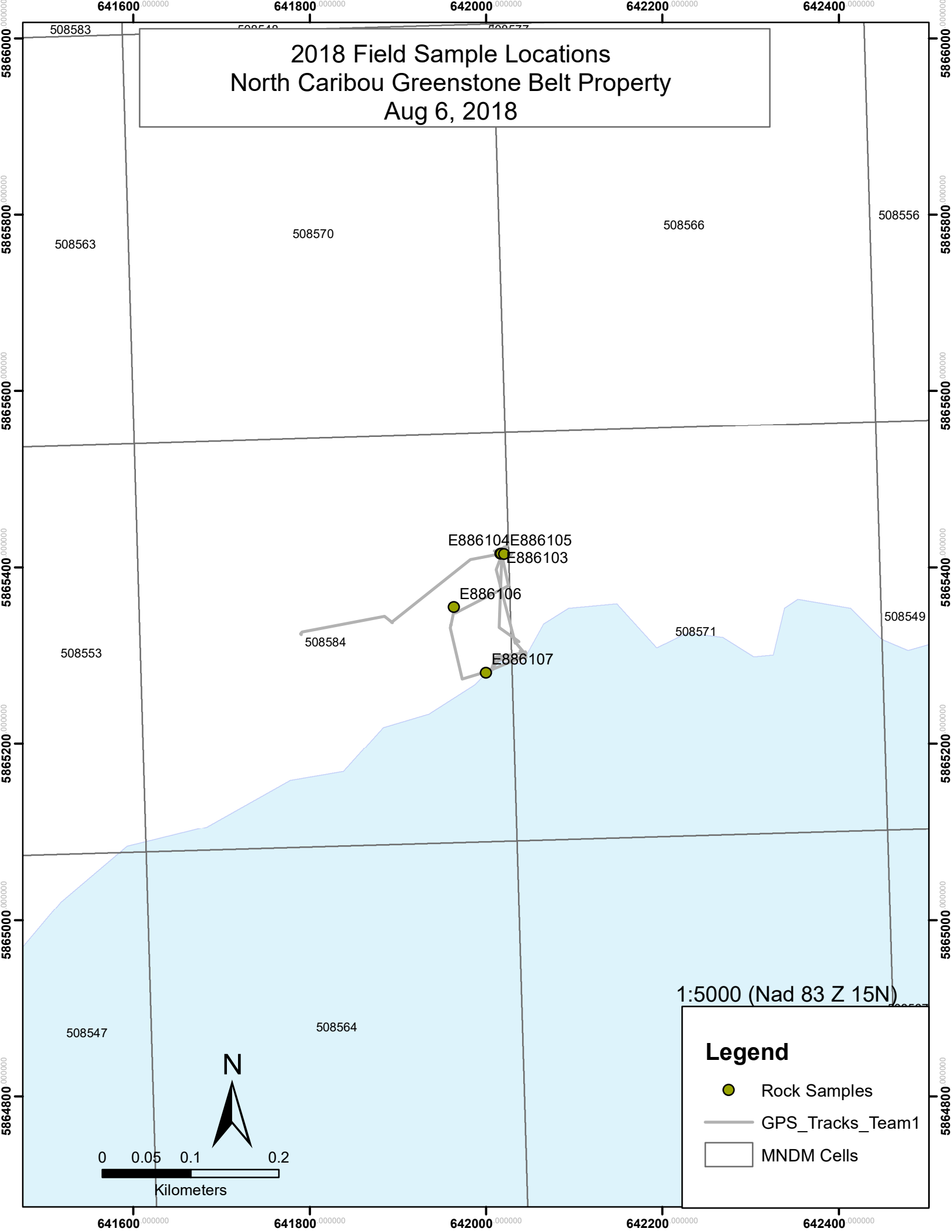
2018 Field Sample Locations North Caribou Greenstone Belt Property Aug 7 2018



2018 Field Sample Locations North Caribou Greenstone Belt Property Aug 3 and Aug 4, 2018






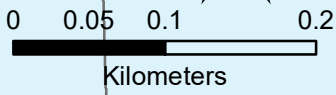
2018 Field Sample Locations North Caribou Greenstone Belt Property Aug 6, 2018



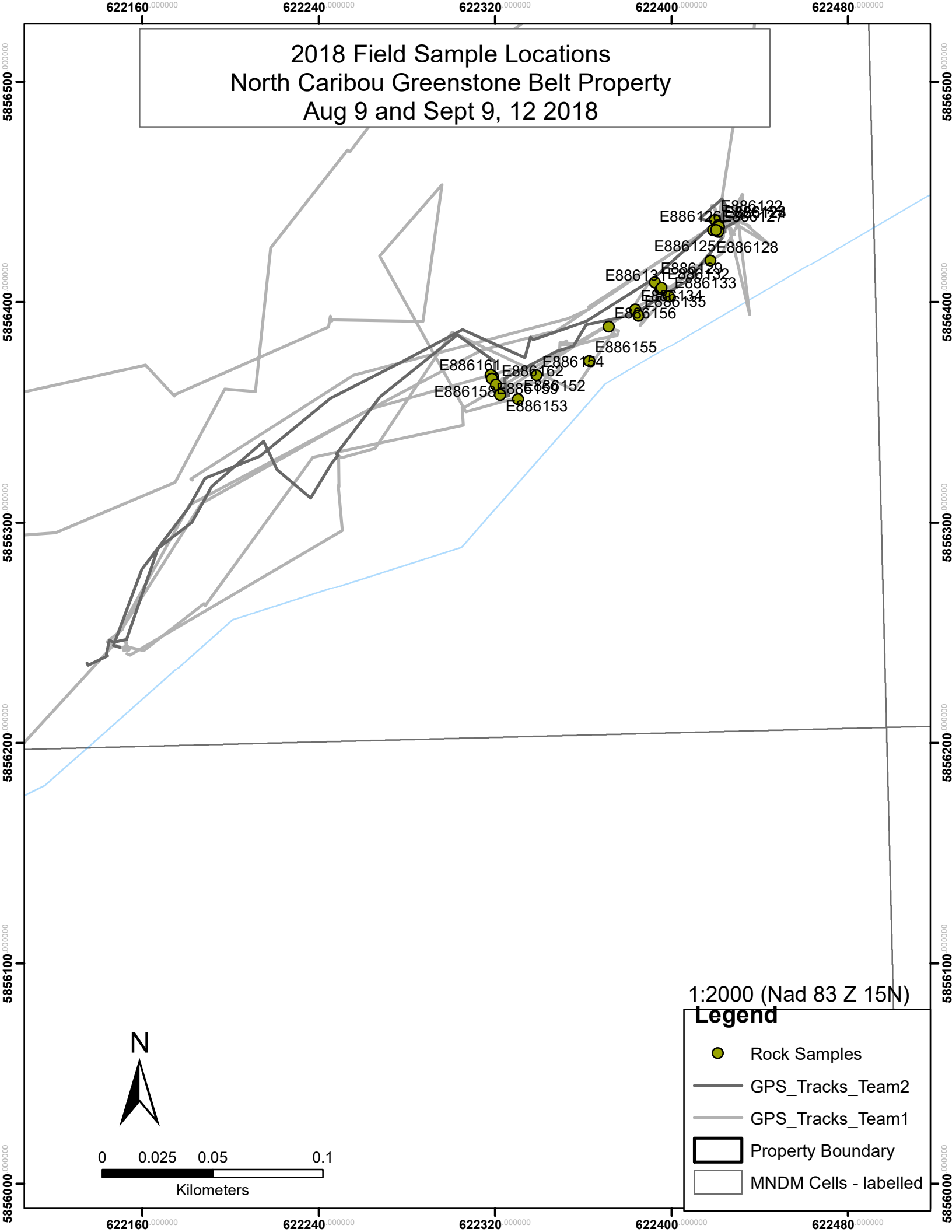
1:5000 (Nad 83 Z 15N)

Legend

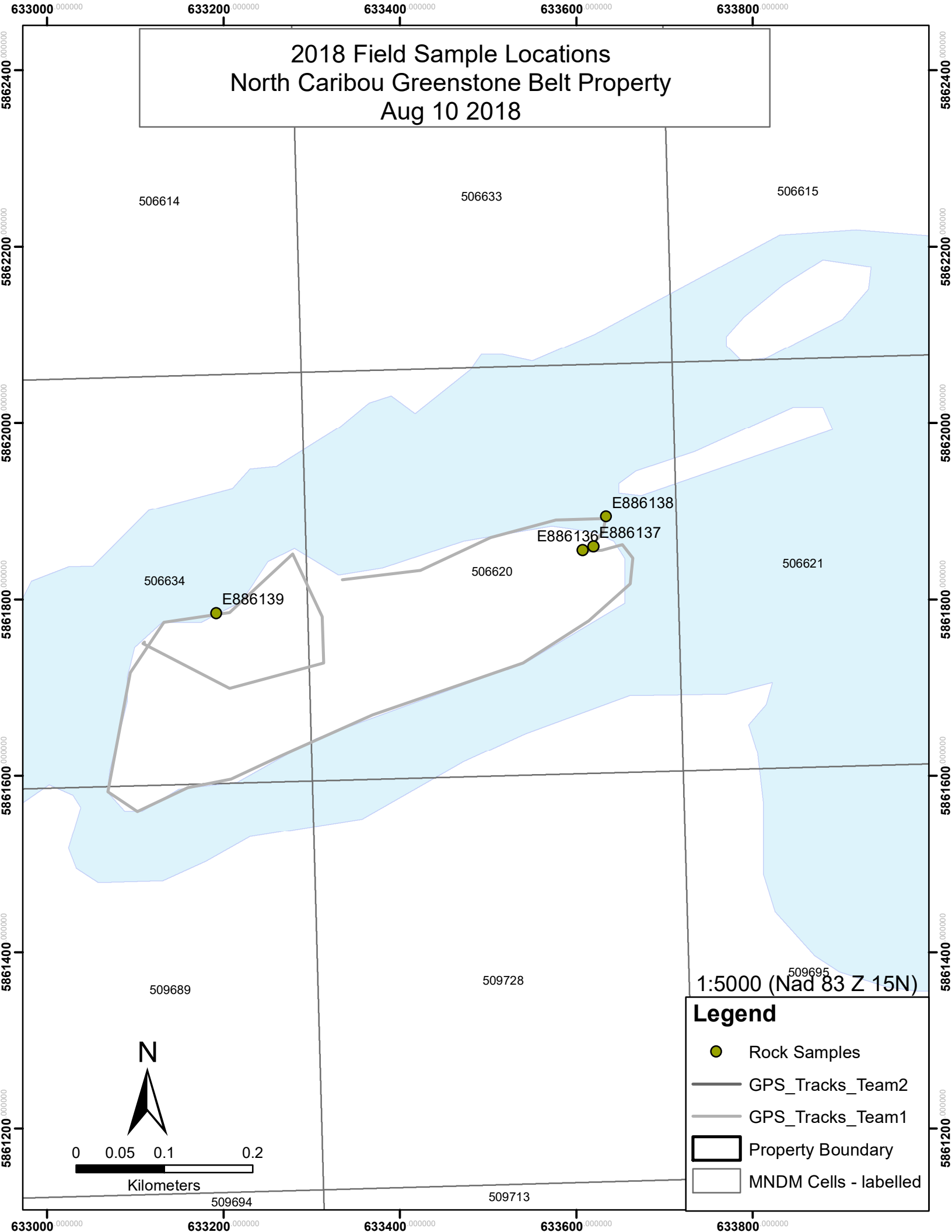
-  Rock Samples
-  GPS_Tracks_Team1
-  MNDM Cells



2018 Field Sample Locations
North Caribou Greenstone Belt Property
Aug 9 and Sept 9, 12 2018



2018 Field Sample Locations North Caribou Greenstone Belt Property Aug 10 2018



5862400
5862200
5862000
5861800
5861600
5861400
5861200

633000 000000 633200 000000 633400 000000 633600 000000 633800 000000

506614 506633 506615

506634 506620 506621

509689 509728 509694 509713

1:5000 (Nad 83 Z 15N)

Legend

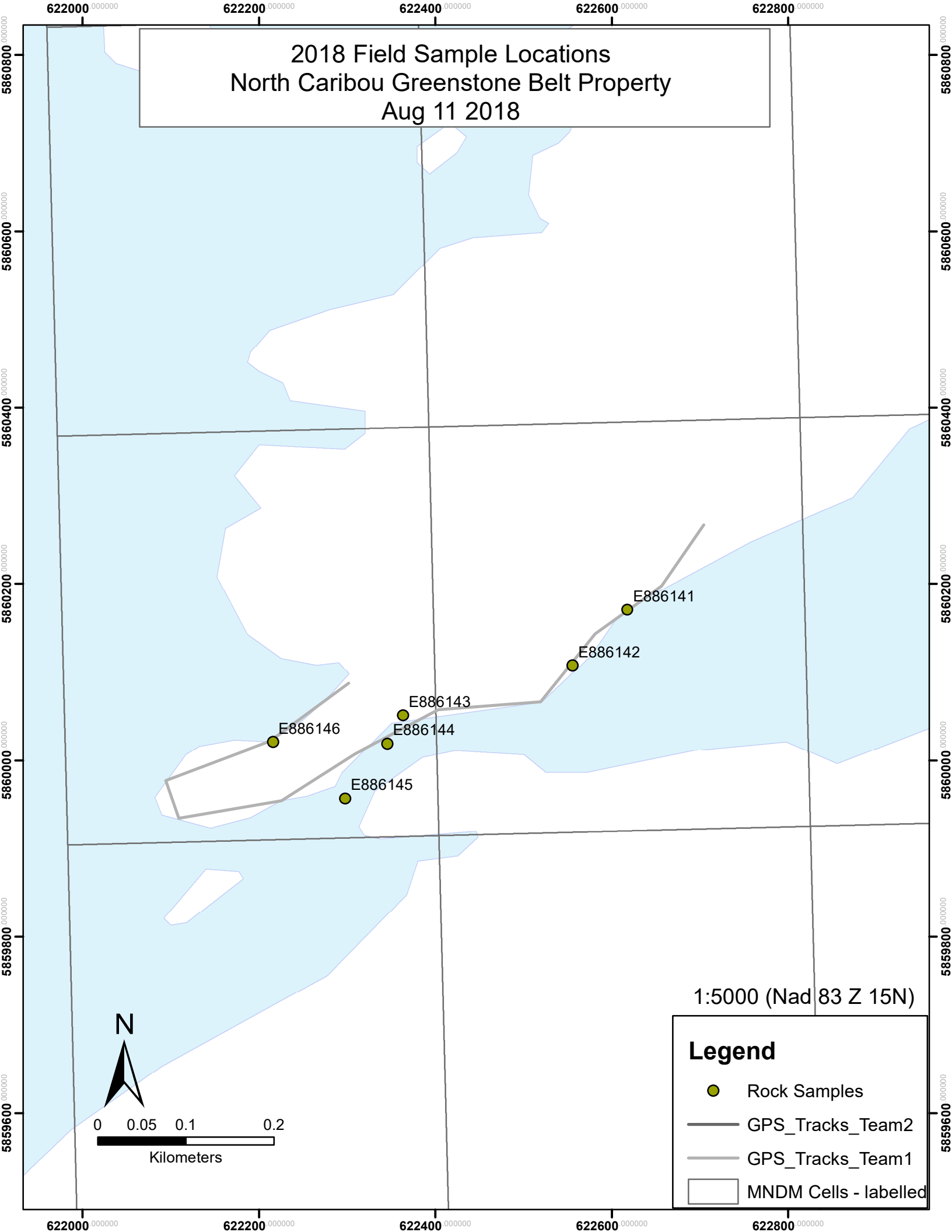
- Rock Samples
- GPS_Tracks_Team2
- GPS_Tracks_Team1
- Property Boundary
- MNDM Cells - labelled

N

0 0.05 0.1 0.2
Kilometers

633000 000000 633200 000000 633400 000000 633600 000000 633800 000000

2018 Field Sample Locations
North Caribou Greenstone Belt Property
Aug 11 2018



1:5000 (Nad 83 Z 15N)

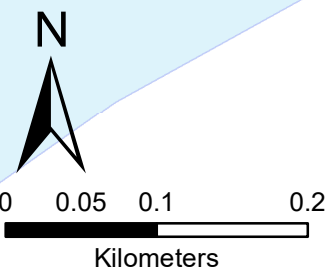
Legend

● Rock Samples

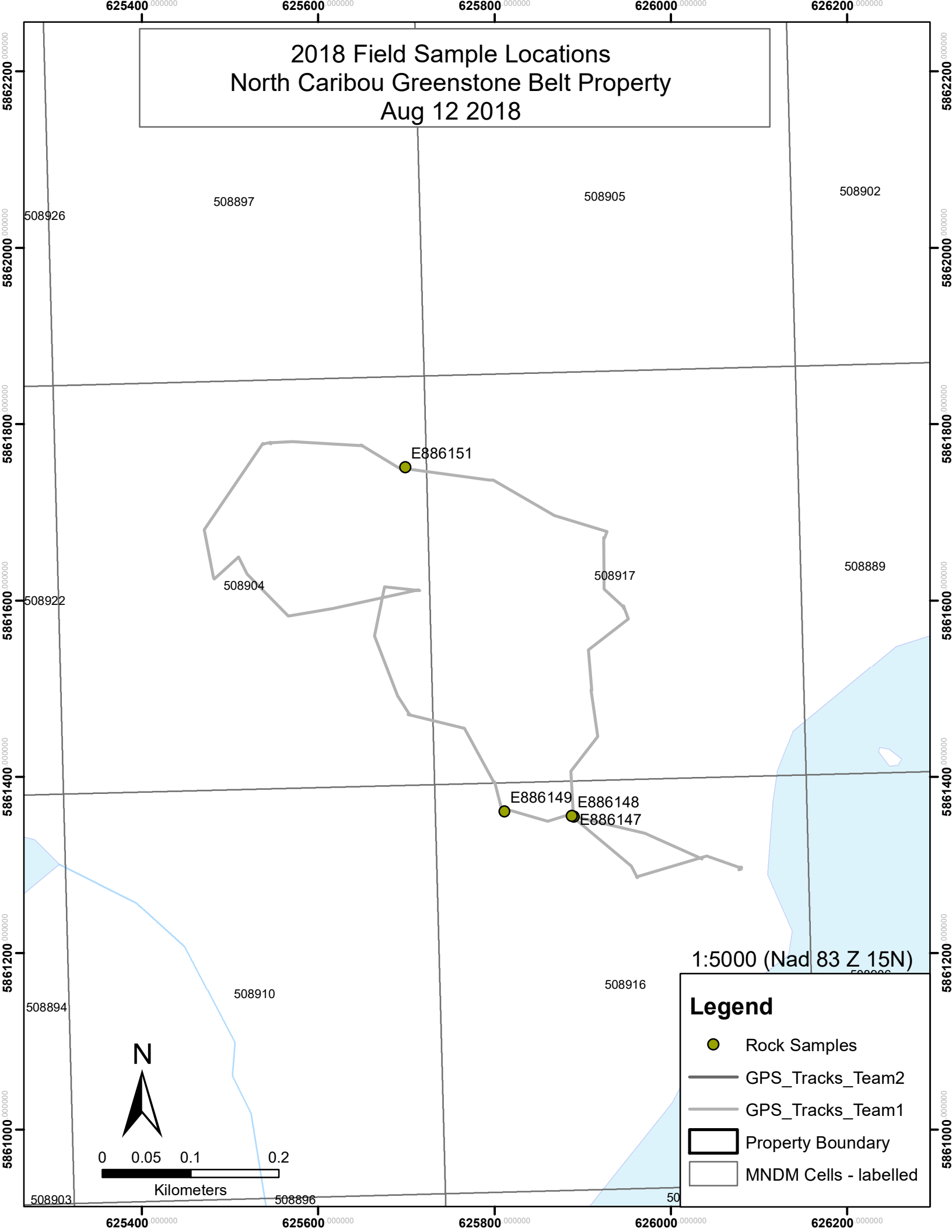
— GPS_Tracks_Team2

— GPS_Tracks_Team1

□ MNDM Cells - labelled



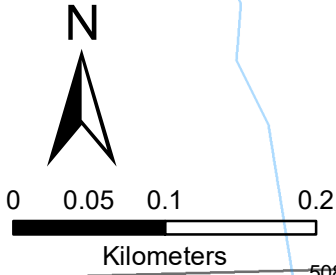
2018 Field Sample Locations North Caribou Greenstone Belt Property Aug 12 2018



1:5000 (Nad 83 Z 15N)

Legend

- Rock Samples
- GPS_Tracks_Team2
- GPS_Tracks_Team1
- Property Boundary
- MNDM Cells - labelled



Appendix IX– Full table of samples and results

Lithogeochemical Samples
Biogeochemical Samples

2018 NCGB Global Group Biochemical Orientation Survey Samples

Sample ID	Year	Plant	Ash	Sample Name	Biogeochem	Cu										Zn										Mn										Ni										Date															
						As	Br	Ca	Co	Cr	Fe	Ge	Mo	P	Pb	S	Se	Si	Te	Ti	V	Ag	Al	Ar	B	C	Cd	Ce	Cu	F	Ga	Hf	Hg	I	In	Ir	K	La	Li	Mg	Nb	Nd	Os	Pr	Rb		Sb	Sc	Sm	Sr	Ta	Tb	Tl	Tm	Tl	U	Va	Y	Zr		
ES85611	649921	ES866824	Biogeochem	2.8	MEVEGA4	VAI8178522	0.05	0.22	0.56	5.4	1954.4	2814	0.14	0.17	54.04	0.93	5.02	3.43	11.62	3.98	45.08	0.53	0.85	0.01	0.02	0.056	0.02	28	2.77	2.52	10.08	51100	3.19	0.28	0.32	112.28	12.34	23.96	-0.0028	-0.0056	21.00	0.01	3.78	2.88	2.4	0.81	15.1	62.72	-0.0028	0.3	0.5	0.01	0.08	0.17	9.15	1.03	1.38	2111.2	1.14	78/2018	Labrador Tea Leaves
ES85611	649921	ES866824	Biogeochem	1.2	MEVEGA4	VAI8178522	0.01	0.18	0.31	4.08	7425	5016	0.08	0.13	23.16	0.57	4.9	2.83	6.78	4.34	40.8	0.36	0.62	-0.006	0.01	-0.0012	0.02	12	2.55	1.68	4.34	56400	1.36	0.2	0.42	49.32	5.3	19.5	0.0024	-0.0024	3.66	0.0012	1.54	2.3	0.9	0.49	1.04	496.8	-0.0012	-0.02	0.42	0.072	0.42	0.16	6.3	0.52	1.54	1674	0.38	78/2018	Labrador Tea Stems
ES85611	649928	ES866864	Biogeochem	2.5	MEVEGA4	VAI8178522	0.02	0.17	0.47	4.8	7025	210	0.1	0.16	45.87	0.74	4.51	4.18	8.85	20.45	48.875	0.55	0.81	-0.001	0.02	0.0075	0.02	25	2.38	3.5	9.3	58400	0.07	0.28	0.31	88	12.5	16.67	0.005	-0.005	21.50	0.01	3.7	3.12	2.55	0.69	1.15	56.0	-0.0025	-0.05	0.48	0.01	0.1	1.66	7.77	0.82	157	2132.5	0.9	78/2018	Labrador Tea Leaves
ES85611	649931	ES866896	Biogeochem	3.4	MEVEGA4	VAI8178522	0.01	0.19	0.31	3.89	7319	331.8	0.1	0.2	23.16	0.57	4.9	2.83	6.78	4.34	40.8	0.36	0.62	-0.006	0.01	-0.0012	0.02	12	2.55	1.68	4.34	56400	1.36	0.2	0.42	49.32	5.3	19.5	0.0024	-0.0024	3.66	0.0012	1.54	2.3	0.9	0.49	1.04	496.8	-0.0012	-0.02	0.42	0.072	0.42	0.16	6.3	0.52	1.54	1674	0.38	78/2018	Labrador Tea Stems
ES85611	649937	ES866896	Biogeochem	3.0	MEVEGA4	VAI8178522	0.02	0.39	0.78	6.42	1782	780	0.15	0.19	62.4	1.14	7.05	3.31	12.87	26.04	44.1	0.69	1.21	0.03	0.03	0.003	0.03	3.79	4.5	11.88	54600	0.63	0.24	0.5	111.9	13.23	15.75	0.003	-0.006	20.40	0.01	4.98	3.06	4.55	1.34	1.17	99.0	0.01	-0.06	0.69	0.02	0.25	1.23	1.86	2.23	240	0.48	78/2018	Labrador Tea Leaves		
ES85611	649937	ES866896	Biogeochem	1.5	MEVEGA4	VAI8178522	0.01	0.24	0.43	3.21	915	565.5	0.12	0.14	34.05	0.85	3.6	2.81	8.43	16.99	34.95	0.49	0.94	0.01	0.02	0.0045	0.01	15	3.13	2.7	5.64	75000	2.28	0.15	0.28	62.1	6.09	16.75	-0.0015	-0.0015	6.60	0.0015	2.07	1.54	1.17	0.73	0.81	99.1	-0.0015	-0.03	0.54	0.01	0.61	0.2	8.82	7.28	2407.5	1.05	78/2018	Labrador Tea Stems	
ES85611	649938	ES866942	Biogeochem	3.8	MEVEGA4	VAI8178522	0.05	0.45	0.95	10.64	1512.4	1206.6	0.22	0.33	69.16	2.23	13.41	9.19	20.97	25.33	60.42	0.98	1.68	0.03	0.02	0.01	-0.01	38	9.15	5.7	17.44	75000	4.09	0.61	140.6	18.77	22.8	0.0076	-0.0076	34.84	0.03	6.19	8.05	4.56	1.88	2.2	2067.1	0.03	0.92	0.33	0.26	16.45	1.86	5.2	3404.8	0.83	78/2018	Labrador Tea Leaves			
ES85611	649939	ES866942	Biogeochem	1.9	MEVEGA4	VAI8178522	0.01	0.19	0.31	3.89	7319	331.8	0.1	0.2	23.16	0.57	4.9	2.83	6.78	4.34	40.8	0.36	0.62	-0.006	0.01	-0.0012	0.02	12	2.55	1.68	4.34	56400	1.36	0.2	0.42	49.32	5.3	19.5	0.0024	-0.0024	3.66	0.0012	1.54	2.3	0.9	0.49	1.04	496.8	-0.0012	-0.02	0.42	0.072	0.42	0.16	6.3	0.52	1.54	1674	0.38	78/2018	Labrador Tea Stems
ES85611	649941	ES866942	Biogeochem	2.2	MEVEGA4	VAI8178522	0.01	0.25	0.48	3.8	7542	454	0.13	0.18	35.4	0.93	3.5	3.12	8.43	16.99	34.95	0.49	0.94	0.01	0.02	0.0045	0.01	15	3.13	2.7	5.64	75000	2.28	0.15	0.28	62.1	6.09	16.75	-0.0015	-0.0015	6.60	0.0015	2.07	1.54	1.17	0.73	0.81	99.1	-0.0015	-0.03	0.54	0.01	0.61	0.2	8.82	7.28	2407.5	1.05	78/2018	Labrador Tea Stems	
ES85611	649941	ES866942	Biogeochem	3.2	MEVEGA4	VAI8178522	0.05	0.45	0.95	10.64	1512.4	1206.6	0.22	0.33	69.16	2.23	13.41	9.19	20.97	25.33	60.42	0.98	1.68	0.03	0.02	0.01	-0.01	38	9.15	5.7	17.44	75000	4.09	0.61	140.6	18.77	22.8	0.0076	-0.0076	34.84	0.03	6.19	8.05	4.56	1.88	2.2	2067.1	0.03	0.92	0.33	0.26	16.45	1.86	5.2	3404.8	0.83	78/2018	Labrador Tea Leaves			
ES85611	649941	ES866942	Biogeochem	1.2	MEVEGA4	VAI8178522	0.01	0.18	0.31	4.08	7425	5016	0.08	0.13	23.16	0.57	4.9	2.83	6.78	4.34	40.8	0.36	0.62	-0.006	0.01	-0.0012	0.02	12	2.55	1.68	4.34	56400	1.36	0.2	0.42	49.32	5.3	19.5	0.0024	-0.0024	3.66	0.0012	1.54	2.3	0.9	0.49	1.04	496.8	-0.0012	-0.02	0.42	0.072	0.42	0.16	6.3	0.52	1.54	1674	0.38	78/2018	Labrador Tea Stems
ES85611	649941	ES866942	Biogeochem	1.5	MEVEGA4	VAI8178522	0.01	0.24	0.43	3.21	915	565.5	0.12	0.14	34.05	0.85	3.6	2.81	8.43	16.99	34.95	0.49	0.94	0.01	0.02	0.0045	0.01	15	3.13	2.7	5.64	75000	2.28	0.15	0.28	62.1	6.09	16.75	-0.0015	-0.0015	6.60	0.0015	2.07	1.54	1.17	0.73	0.81	99.1	-0.0015	-0.03	0.54	0.01	0.61	0.2	8.82	7.28	2407.5	1.05	78/2018	Labrador Tea Stems	
ES85611	649941	ES866942	Biogeochem	3.8	MEVEGA4	VAI8178522	0.05	0.45	0.95	10.64	1512.4	1206.6	0.22	0.33	69.16	2.23	13.41	9.19	20.97	25.33	60.42	0.98	1.68	0.03	0.02	0.01	-0.01	38	9.15	5.7	17.44	75000	4.09	0.61	140.6	18.77	22.8	0.0076	-0.0076	34.84	0.03	6.19	8.05	4.56	1.88	2.2	2067.1	0.03	0.92	0.33	0.26	16.45	1.86	5.2	3404.8	0.83	78/2018	Labrador Tea Leaves			
ES85611	649941	ES866942	Biogeochem	1.2	MEVEGA4	VAI8178522	0.01	0.18	0.31	4.08	7425	5016	0.08	0.13	23.16	0.57	4.9	2.83	6.78	4.34	40.8	0.36	0.62	-0.006	0.01	-0.0012	0.02	12	2.55	1.68	4.34	56400	1.36	0.2	0.42	49.32	5.3	19.5	0.0024	-0.0024	3.66	0.0012	1.54	2.3	0.9	0.49	1.04	496.8	-0.0012	-0.02	0.42	0.072	0.42	0.16	6.3	0.52	1.54	1674	0.38	78/2018	Labrador Tea Stems
ES85611	649941	ES866942	Biogeochem	1.5	MEVEGA4	VAI8178522	0.01	0.24	0.43	3.21	915	565.5	0.12	0.14	34.05	0.85	3.6	2.81	8.43	16.99	34.95	0.49	0.94	0.01	0.02	0.0045	0.01	15	3.13	2.7	5.64	75000	2.28	0.15	0.28	62.1	6.09	16.75	-0.0015	-0.0015	6.60	0.0015	2.07	1.54	1.17	0.73	0.81	99.1	-0.0015	-0.03	0.54	0.01	0.61	0.2	8.82	7.28	2407.5	1.05	78/2018	Labrador Tea Stems	
ES85611	649941	ES866942	Biogeochem	3.8	MEVEGA4	VAI8178522	0.05	0.45	0.95	10.64	1512.4	1206.6	0.22	0.33	69.16	2.23	13.41	9.19	20.97	25.33	60.42	0.98	1.68	0.03	0.02	0.01	-0.01	38	9.15	5.7	17.44	75000	4.09	0.61	140.6	18.77	22.8	0.0076	-0.0076	34.84	0.03	6.19	8.05	4.56	1.88	2.2	2067.1	0.03	0.92	0.33	0.26	16.45	1.86	5.2	3404.8	0.83	78/2018	Labrador Tea Leaves			
ES85611	649941	ES866942	Biogeochem	1.2	MEVEGA4	VAI8178522	0.01	0.18	0.31	4.08	7425	5016	0.08	0.13	23.16	0.57	4.9	2.83	6.78	4.34	40.8	0.36	0.62	-0.006	0.01	-0.0012	0.02	12	2.55	1.68	4.34	56400	1.36	0.2	0.42	49.32	5.3	19.5	0.0024	-0.0024	3.66	0.0012	1.54	2.3	0.9	0.49	1.04	496.8	-0.0012	-0.02	0.42	0.072	0.42	0.16	6.3	0.52	1.54	1674	0.38	78/2018	Labrador Tea Stems
ES85611	649941	ES866942	Biogeochem	1.5	MEVEGA4	VAI8178522	0.01	0.24	0.43	3.21	915	565.5	0.12	0.14	34.05	0.85	3.6	2.81	8.43	16.99	34.95	0.49	0.94	0.01	0.02	0.0045	0.01	15	3.13	2.7	5.64	75000	2.28	0.15	0.28	62.1	6.09	16.75	-0.0015	-0.0015	6.60	0.0015	2.07	1.54	1.17	0.73	0.81	99.1	-0.0015	-0.03	0.54	0.01	0.61	0.2	8.82	7.28	2407.5	1.05	78/2018	Labrador Tea Stems	
ES85611	649941	ES866942	Biogeochem	3.8	MEVEGA4	VAI8178522	0.05	0.45	0.95	10.64	1512.4	1206.6	0.22	0.33	69.16	2.23	13.41	9.19	20.97	25.33	60.42	0.98	1.68	0.03	0.02	0.01	-0.01																																		

Appendix X - Assay Certificates

Activation Laboratories, Lithochemical
ALS Canada Ltd., Biogeochemical



Date Submitted: 02-Aug-18
Invoice No.: A18-10265
Invoice Date: 10-Sep-18
Your Reference: Exploration

GOLDCORP Canada Ltd--Musselwhite Mine
P.O. Box 7500
Thunder bay Ontario P7B 6S8
Canada

ATTN: Katie Lucas

CERTIFICATE OF ANALYSIS

59 Core samples were submitted for analysis.

The following analytical package(s) were requested:

Code 1A2-GC Musselwhite Dryden Au - Fire Assay AA

REPORT **A18-10265**

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

Notes:

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

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

CERTIFIED BY:

A handwritten signature in black ink, appearing to be "Emmanuel Esemé". The signature is written in a cursive style with some loops and is positioned above a horizontal line.

Emmanuel Esemé , Ph.D.
Quality Control

ACTIVATION LABORATORIES LTD.
264 Government Road, Dryden, Ontario, Canada, P8N 2R3
TELEPHONE +807 223-6168 or +1.888.228.5227 FAX +1.905.648.9613
E-MAIL Dryden@actlabs.com ACTLABS GROUP WEBSITE www.actlabs.com

Date Submitted: 02-Aug-18
Invoice No.: A18-10265
Invoice Date: 10-Sep-18
Your Reference: Exploration

GOLDCORP Canada Ltd--Musselwhite Mine
P.O. Box 7500
Thunder bay Ontario P7B 6S8
Canada

ATTN: Katie Lucas

CERTIFICATE OF ANALYSIS

59 Core samples were submitted for analysis.

The following analytical package(s) were requested: Code UT-4 Total Digestion ICP/MS

REPORT **A18-10265**

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

Notes:

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

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

CERTIFIED BY:



Emmanuel Esemé , Ph.D.
Quality Control

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

	FA-AA	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	
SAMPLE	Au	B	Li	Na	Mg	Al	K	Ca	Cd	V	Cr	Mn	Fe	Hf	Ni	Er	Be	Ho	Hg	Ag	Cs	Co	Eu
DESCRIPTION	g/mt	ppm	ppm	%	%	%	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm
E885751	0.008	< 20	17.9	2.45	3.33	8.02	0.16	4.45	0.1	190	360	1140	7.55	0.5	68.7	2.0	0.2	0.7	10	0.06	0.41	37.2	0.60
E885752	0.006	< 20	13.3	0.74	2.79	8.63	0.02	7.70	0.1	260	294	1600	8.86	0.8	144	2.5	0.3	0.8	30	< 0.05	0.08	48.9	1.00
E885753	0.005	< 20	32.2	1.32	4.11	8.30	0.81	1.19	< 0.1	225	264	1230	8.83	1.1	132	2.1	0.3	0.7	20	< 0.05	0.81	41.5	0.60
E885754	1.67	< 20	3.6	0.11	1.13	1.63	0.10	3.04	0.4	28	18	2610	7.59	1.0	15.7	1.3	0.4	0.4	30	0.21	0.10	8.2	0.70
E885755	0.009	30	15.2	1.63	4.49	8.02	0.07	7.24	0.1	231	260	1520	9.01	0.8	129	2.3	0.4	0.9	10	0.06	0.15	47.8	0.80
E885756	< 0.005	< 20	14.7	1.45	4.30	7.88	0.06	7.40	0.1	225	174	1490	8.52	0.8	126	2.4	0.4	0.7	< 10	0.05	0.13	45.3	0.70
E885757	0.005	< 20	20.1	1.56	3.62	7.86	0.05	5.76	< 0.1	212	194	1400	8.28	0.6	136	2.2	0.2	0.8	10	< 0.05	0.06	45.1	0.70
E885758	< 0.005	< 20	27.7	> 3.00	0.35	8.25	0.93	2.28	< 0.1	23	11	211	1.87	3.0	4.2	0.2	0.8	0.1	< 10	0.12	0.86	5.4	0.50
E885632	0.012	< 20	28.8	0.52	4.83	6.03	0.41	7.04	0.2	158	1870	4670	13.3	0.7	512	1.2	0.9	0.3	< 10	0.10	0.75	86.2	0.50
E885633	0.005	< 20	7.8	0.40	8.91	3.62	0.08	8.35	0.1	182	1500	1630	9.96	1.2	543	1.1	0.3	0.4	20	0.12	0.16	77.3	0.50

Results

Activation Laboratories Ltd.

Report: A18-10265

	FA-AA	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS		
SAMPLE	Au	B	Li	Na	Mg	Al	K	Ca	Cd	V	Cr	Mn	Fe	Hf	Ni	Er	Be	Ho	Hg	Ag	Cs	Co	Eu		
DESCRIPTION	g/mt	ppm	ppm	%	%	%	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm		
E885634	< 0.005	< 20	106	0.88	1.49	8.53	1.49	0.69	< 0.1	368	277	1420	8.40	1.7	106	1.7	0.6	0.5	10	0.12	1.85	41.1	0.80		
E885635	0.017	< 20	8.3	2.81	2.64	8.13	0.40	5.78	< 0.1	315	10	1920	12.8	3.8	3.8	5.6	0.8	1.7	< 10	0.38	0.54	19.9	1.10		
E885636	0.030	50	10.4	0.02	0.24	0.56	0.10	0.09	< 0.1	13	262	202	3.00	0.7	44.6	0.2	0.1	0.1	200	0.33	0.65	23.0	0.10		
E885637	< 0.005	30	0.5	< 0.01	0.85	0.03	0.01	0.05	< 0.1	2	10	1610	10.7	< 0.1	7.7	0.1	0.4	< 0.1	1620	0.06	0.10	1.2	0.10		
E885638	0.029	< 20	5.5	0.03	0.70	0.93	0.12	0.50	< 0.1	19	632	1350	5.58	0.8	77.3	0.3	0.3	0.1	1640	0.20	1.04	31.9	0.10		
E885639	0.006	< 20	10.1	0.42	1.55	6.87	0.03	0.72	< 0.1	197	108	1750	6.39	1.0	32.0	1.4	0.2	0.4	10	0.10	0.19	17.7	0.30		
E885640	< 0.005	20	5.8	0.06	0.02	0.22	0.08	0.02	< 0.1	3	12	61	0.57	0.7	1.3	0.2	0.1	0.1	20	< 0.05	0.16	0.5	0.10		
E885641	0.006	< 20	41.7	0.25	1.89	8.36	0.61	2.55	0.1	370	144	2770	11.9	1.9	173	2.3	0.3	0.8	20	0.17	8.52	68.2	0.80		
E885642	0.026	< 20	17.0	0.03	0.46	0.91	0.16	0.24	< 0.1	24	242	341	2.68	0.9	42.8	0.2	0.1	0.1	320	0.18	0.72	28.7	0.10		
E885643	0.017	< 20	47.8	0.07	0.91	2.73	0.36	0.42	0.1	71	568	1010	3.62	1.5	74.5	0.5	0.3	0.2	110	0.09	1.25	18.5	0.20		
E885644	< 0.005	< 20	86.2	0.17	2.26	7.66	2.03	3.69	0.2	181	16	1330	8.39	4.3	26.9	2.6	1.3	0.8	50	0.09	3.29	43.7	1.00		
E885645	0.028	< 20	43.5	0.44	2.22	6.18	1.05	4.66	0.1	90	373	1400	1.38	1.2	156	0.9	0.3	0.3	50	0.47	3.06	39.9	0.40		
E885833	< 0.005	< 20	17.2	2.50	1.61	7.25	0.81	4.67	0.1	72	22	2340	11.8	2.3	83.3	2.2	1.3	0.8	30	0.10	0.58	57.6	1.20		
E885834	< 0.005	< 20	5.7	2.69	0.05	6.99	2.40	1.18	< 0.1	4	7	91	0.72	1.6	2.6	0.1	0.7	< 0.1	20	< 0.05	0.43	1.7	0.70		
E885835	< 0.005	< 20	3.1	1.74	0.03	6.82	3.75	0.30	< 0.1	3	6	67	0.78	2.3	< 0.5	1.4	1.2	0.4	< 10	0.05	1.00	0.7	0.30		
E881963	< 0.005	< 20	8.9	1.55	4.21	7.60	0.16	7.81	0.2	276	165	1700	9.41	0.5	124	2.5	0.3	0.8	20	0.31	0.09	49.4	0.80		
GXR-4 Meas		< 20	11.5	0.53	1.62	7.02	4.42	0.99	0.2	86	40	151	3.04	1.3	39.0				< 10	3.94	2.49	14.7	1.20		
GXR-4 Cert		4.50	11.1	0.564	1.66	7.20	4.01	1.01	0.860	87.0	64.0	155	3.09	6.30	42.0				1.90	110	4.00	2.80	14.6	1.63	
GXR-4 Meas		< 20	10.7	0.51	1.58	6.68	4.44	0.92	0.3	86	49	139	2.99	1.3	39.4				2.0	< 10	3.75	2.33	14.7	1.20	
GXR-4 Cert		4.50	11.1	0.564	1.66	7.20	4.01	1.01	0.860	87.0	64.0	155	3.09	6.30	42.0				1.90	110	4.00	2.80	14.6	1.63	
SDC-1 Meas		< 20	36.3	1.57	0.96	8.40	1.46	0.97		45	43	848	4.68	0.7	34.9	3.5	3.0	1.1	< 10		3.45	17.6	1.40		
SDC-1 Cert		13.00	34.0	1.52	1.02	8.34	2.72	1.00		102.00	64.00	880.00	4.82	8.30	38.0	4.10	3.00	1.50	200.00		4.00	18.0	1.70		
SDC-1 Meas		< 20	36.5	1.63	0.99	8.79	1.84	1.05		53	54	925	4.97	1.1	36.5	3.7	2.9	1.2	30		3.65	18.8	1.50		
SDC-1 Cert		13.00	34.0	1.52	1.02	8.34	2.72	1.00		102.00	64.00	880.00	4.82	8.30	38.0	4.10	3.00	1.50	200.00		4.00	18.0	1.70		
GXR-6 Meas		< 20	33.5	0.09	0.56	> 10.0	1.57	0.15	< 0.1	122	58	1020	5.45	2.0	22.5				1.1		40	0.32	3.60	13.1	0.60
GXR-6 Cert		9.80	32.0	0.104	0.609	17.7	1.87	0.180	1.00	186	96.0	1010	5.58	4.30	27.0				1.40		68.0	1.30	4.20	13.8	0.760
OREAS 97 (4 Acid) Meas																								20.3	65.0
OREAS 97 (4 Acid) Cert																								19.6	62.9
OREAS 97 (4 Acid) Meas																								21.3	69.0
OREAS 97 (4 Acid) Cert																								19.6	62.9
OREAS 98 (4 Acid) Meas																								48.6	124
OREAS 98 (4 Acid) Cert																								45.1	121
OREAS 98 (4 Acid) Meas																								47.4	128
OREAS 98 (4 Acid) Cert																								45.1	121
DNC-1a Meas			5.2							154	165				275								57.9	0.50	
DNC-1a Cert			5.2							148	270				247								57	0.59	
DNC-1a Meas			5.0							153	172				280								59.4	0.50	

Results

Activation Laboratories Ltd.

Report: A18-10265

	FA-AA	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	
SAMPLE	Au	B	Li	Na	Mg	Al	K	Ca	Cd	V	Cr	Mn	Fe	Hf	Ni	Er	Be	Ho	Hg	Ag	Cs	Co	Eu
DESCRIPTION	g/mt	ppm	ppm	%	%	%	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm
DNC-1a Cert			5.2							148	270				247							57	0.59
SBC-1 Meas			171						0.3	218	89			3.4	86.5	3.5	3.4	1.1			7.05	22.5	1.70
SBC-1 Cert			163						0.40	220.0	109			3.7	82.8	3.80	3.20	1.40			8.2	22.7	1.98
SBC-1 Meas			169						0.4	219	90			3.4	85.3	3.4	3.2	1.1			6.91	22.5	1.70
SBC-1 Cert			163						0.40	220.0	109			3.7	82.8	3.80	3.20	1.40			8.2	22.7	1.98
OREAS 45d (4-Acid) Meas			22.5	0.10	0.24	8.09	0.46	0.17		102	543	487	14.6	2.2	239	1.4	0.8	0.4			3.48	30.6	0.50
OREAS 45d (4-Acid) Cert			21.5	0.101	0.245	8.150	0.412	0.185		235.0	549	490.000	14.5	3.830	231.0	1.38	0.79	0.46			3.910	29.50	0.57
OREAS 45d (4-Acid) Meas			20.5	0.10	0.22	7.72	0.44	0.17		128	548	464	13.5	2.3	232	1.3	0.8	0.4			3.14	29.2	0.50
OREAS 45d (4-Acid) Cert			21.5	0.101	0.245	8.150	0.412	0.185		235.0	549	490.000	14.5	3.830	231.0	1.38	0.79	0.46			3.910	29.50	0.57
OREAS 220 (Fire Assay) Meas	0.855																						
OREAS 220 (Fire Assay) Cert	0.866																						
OREAS 220 (Fire Assay) Meas	0.879																						
OREAS 220 (Fire Assay) Cert	0.866																						
OREAS 220 (Fire Assay) Meas	0.850																						
OREAS 220 (Fire Assay) Cert	0.866																						
OREAS 96 (4 Acid) Meas																				12.0		50.1	
OREAS 96 (4 Acid) Cert																				11.5		49.9	
OREAS 96 (4 Acid) Meas																				12.5		53.1	
OREAS 96 (4 Acid) Cert																				11.5		49.9	
OREAS 209 (Fire Assay) Meas	1.53																						
OREAS 209 (Fire Assay) Cert	1.58																						
OREAS 209 (Fire Assay) Meas	1.57																						
OREAS 209 (Fire Assay) Cert	1.58																						
E885701 Orig	0.005																						
E885701 Dup	< 0.005																						
E885608 Orig		< 20	68.2	0.09	2.25	7.93	1.08	0.81	0.5	266	486	8310	11.4	1.6	113	2.1	0.3	0.7	< 10	0.65	4.78	46.0	0.50
E885608 Dup		< 20	67.8	0.09	2.31	7.82	1.21	0.81	0.4	268	467	8320	11.4	1.6	116	2.1	0.3	0.7	< 10	0.63	4.79	46.9	0.50
E885611 Orig	0.026																						
E885611 Dup	0.027																						

	FA-AA	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	
SAMPLE	Au	B	Li	Na	Mg	Al	K	Ca	Cd	V	Cr	Mn	Fe	Hf	Ni	Er	Be	Ho	Hg	Ag	Cs	Co	Eu
DESCRIPTION	g/mt	ppm	ppm	%	%	%	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm
E885613 Orig		< 20	33.0	0.19	1.11	7.50	2.04	2.06	0.1	28	71	1160	3.31	3.0	75.8	0.3	0.7	0.1	< 10	4.51	4.95	15.6	0.50
E885613 Dup		< 20	32.7	0.19	1.11	7.43	1.79	2.06	0.1	28	63	1200	3.37	3.3	76.7	0.3	0.6	0.1	50	4.67	5.09	16.3	0.50
E885622 Orig	0.027																						
E885622 Dup	0.021																						
E885631 Orig	< 0.005																						
E885631 Dup	< 0.005																						
E885640 Orig	< 0.005	20	5.8	0.06	0.02	0.22	0.08	0.02	< 0.1	3	12	61	0.57	0.7	1.3	0.2	0.1	0.1	20	< 0.05	0.16	0.5	0.10
E885640 Dup	< 0.005	< 20	5.7	0.06	0.02	0.22	0.08	0.02	< 0.1	3	12	65	0.56	0.7	1.3	0.2	0.1	0.1	20	< 0.05	0.17	0.6	0.10
E885641 Orig	0.006	< 20	40.7	0.24	1.83	8.30	0.60	2.51	< 0.1	359	140	2720	11.7	1.8	170	2.3	0.3	0.8	20	0.17	8.11	66.8	0.75
E885641 Split	0.007	< 20	42.8	0.25	1.96	8.67	0.64	2.64	< 0.1	347	152	2920	12.5	1.8	180	2.3	0.4	0.7	< 10	0.17	8.34	70.9	0.80
E885641 Orig		< 20	41.7	0.25	1.89	8.36	0.61	2.55	0.1	370	144	2770	11.9	1.9	173	2.3	0.3	0.8	20	0.17	8.52	68.2	0.80
E885641 Dup		< 20	39.7	0.23	1.78	8.24	0.59	2.46	< 0.1	348	136	2680	11.6	1.8	167	2.2	0.3	0.7	20	0.17	7.70	65.4	0.70
E885833 Orig	< 0.005																						
E885833 Dup	< 0.005																						
Method Blank		20	< 0.5	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.1	1	4	1	< 0.01	< 0.1	< 0.5	< 0.1	< 0.1	< 0.1	40	< 0.05	< 0.05	< 0.1	< 0.05
Method Blank		20	< 0.5	< 0.01	< 0.01	< 0.01	0.01	< 0.01	< 0.1	1	5	1	0.01	< 0.1	< 0.5	< 0.1	< 0.1	< 0.1	20	< 0.05	< 0.05	< 0.1	< 0.05
Method Blank		30	< 0.5	< 0.01	< 0.01	< 0.01	0.01	< 0.01	< 0.1	1	4	7	< 0.01	< 0.1	< 0.5	< 0.1	< 0.1	< 0.1	20	< 0.05	< 0.05	< 0.1	< 0.05
Method Blank		30	< 0.5	< 0.01	< 0.01	< 0.01	0.01	< 0.01	< 0.1	1	4	2	0.01	< 0.1	< 0.5	< 0.1	< 0.1	< 0.1	40	< 0.05	< 0.05	< 0.1	< 0.05
Method Blank		30	< 0.5	< 0.01	< 0.01	< 0.01	0.01	< 0.01	< 0.1	1	6	1	0.01	< 0.1	< 0.5	< 0.1	< 0.1	< 0.1	10	< 0.05	< 0.05	< 0.1	< 0.05
Method Blank		20	< 0.5	< 0.01	< 0.01	< 0.01	0.01	< 0.01	< 0.1	1	5	3	< 0.01	< 0.1	< 0.5	< 0.1	< 0.1	< 0.1	50	< 0.05	< 0.05	< 0.1	< 0.05
Method Blank	< 0.005																						
Method Blank	< 0.005																						
Method Blank	< 0.005																						
Method Blank	< 0.005																						

	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	
SAMPLE	Bi	Se	Zn	Ga	As	Rb	Y	Zr	Nb	Mo	In	Sn	Sb	Te	Ba	La	Ce	Pr	Nd	Sm	Gd	Tb	Dy
DESCRIPTION	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
E885701	0.09	0.3	88.4	20.8	0.5	57.2	12.5	116	0.5	0.19	< 0.1	< 1	< 0.1	< 0.1	556	20.1	47.4	5.3	22.2	4.9	3.6	0.4	2.5
E885702	0.15	0.4	21.6	22.9	3.3	58.9	5.3	77	5.2	1.96	< 0.1	< 1	0.2	< 0.1	895	1.9	7.1	0.8	4.0	1.1	1.4	0.2	1.1
E885703	0.09	0.2	5.4	21.3	1.6	80.5	8.8	20	4.6	0.25	< 0.1	< 1	0.1	< 0.1	418	0.7	1.2	0.1	0.5	0.4	0.6	0.1	1.2
E885751	0.05	0.5	83.7	15.6	0.3	6.5	17.9	17	0.1	0.16	< 0.1	< 1	< 0.1	< 0.1	35	2.4	6.9	1.1	5.7	1.8	2.7	0.5	3.0
E885752	0.05	0.5	99.7	19.6	5.1	0.2	21.1	24	0.3	0.16	< 0.1	< 1	0.1	< 0.1	11	3.7	10.0	1.4	7.4	2.3	3.3	0.5	3.5
E885753	0.05	0.4	97.7	18.8	1.7	24.9	18.1	38	0.2	0.10	< 0.1	< 1	< 0.1	< 0.1	187	2.0	5.9	1.0	4.7	2.0	2.6	0.5	3.0
E885754	0.11	2.8	110	6.0	11.1	3.1	12.5	42	2.2	1.38	< 0.1	< 1	0.3	0.2	12	11.1	21.0	2.3	9.4	1.8	2.0	0.2	1.6
E885755	0.05	0.5	137	16.9	0.3	1.5	21.1	23	0.2	0.14	< 0.1	< 1	< 0.1	< 0.1	23	3.3	9.3	1.4	7.3	2.2	3.2	0.6	3.7
E885756	0.05	0.6	102	16.1	< 0.1	1.2	19.4	24	0.3	0.12	< 0.1	< 1	0.1	< 0.1	19	3.1	8.6	1.3	6.7	2.2	3.0	0.5	3.4
E885757	0.04	0.6	94.7	17.2	0.5	0.8	19.9	19	0.1	0.09	< 0.1	< 1	< 0.1	< 0.1	18	3.0	8.4	1.3	6.7	2.3	2.9	0.5	3.2
E885758	0.08	0.3	43.1	18.5	1.9	30.0	2.4	117	2.8	0.23	< 0.1	< 1	< 0.1	< 0.1	360	21.1	36.8	3.4	10.9	1.4	1.0	0.1	0.4
E885601	0.07	0.5	41.3	20.3	0.5	0.9	37.4	75	0.4	0.08	< 0.1	< 1	< 0.1	< 0.1	39	2.2	6.3	1.0	5.3	2.8	4.9	0.9	6.1
E885602	0.09	0.7	105	12.3	2.3	6.7	13.9	39	1.8	0.36	< 0.1	< 1	1.4	< 0.1	181	5.1	10.4	1.2	5.3	1.5	1.9	0.3	2.4
E885603	0.21	1.1	54.8	19.5	21.9	51.6	20.7	50	0.4	0.21	< 0.1	< 1	0.2	< 0.1	130	4.9	12.3	1.6	8.5	2.7	3.2	0.6	3.5
E885605	0.07	0.6	97.0	20.6	0.1	7.1	21.9	47	0.4	0.13	< 0.1	< 1	< 0.1	< 0.1	71	5.2	13.3	1.9	9.3	2.9	3.4	0.6	3.8
E885606	0.34	0.9	102	16.9	2.1	12.5	17.6	42	1.0	0.16	< 0.1	< 1	< 0.1	< 0.1	55	2.1	5.9	0.9	4.8	1.4	2.3	0.4	3.0

Results

Activation Laboratories Ltd.

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	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS
SAMPLE	Bi	Se	Zn	Ga	As	Rb	Y	Zr	Nb	Mo	In	Sn	Sb	Te	Ba	La	Ce	Pr	Nd	Sm	Gd	Tb	Dy
DESCRIPTION	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
E885607	0.80	0.2	95.4	0.6	111	0.3	4.0	2	< 0.1	0.35	< 0.1	< 1	1.5	< 0.1	2	1.2	2.0	0.2	1.0	0.3	0.4	0.1	0.4
E885608	0.16	0.6	124	14.8	26.7	60.1	18.1	61	2.6	0.47	< 0.1	< 1	0.7	< 0.1	136	4.7	9.7	1.1	4.8	1.3	2.2	0.4	3.1
E885609	0.31	0.5	2920	16.8	25.7	46.0	21.3	82	3.8	1.29	0.1	4	1.3	< 0.1	258	8.7	17.4	2.0	7.9	2.2	3.0	0.5	3.1
E885610	7.90	19.7	6260	14.0	340	39.9	15.5	74	3.8	8.16	3.1	17	31.1	0.1	78	11.4	24.6	3.3	13.2	3.7	2.9	0.5	2.5
E885611	2.50	0.6	> 10000	1.6	169	2.7	2.4	5	0.2	0.52	0.8	< 1	1.4	< 0.1	19	0.5	0.8	0.1	0.5	0.2	0.2	< 0.1	0.2
E885612	0.10	0.3	82.2	13.7	2.5	4.5	14.9	49	2.4	0.50	< 0.1	< 1	0.5	< 0.1	65	3.1	7.3	0.8	4.2	1.5	2.1	0.4	2.6
E885613	0.24	0.3	47.0	19.5	24.9	67.8	3.6	129	4.3	0.74	< 0.1	< 1	2.3	< 0.1	812	24.1	41.7	3.9	13.0	2.0	1.3	0.1	0.6
E885614	5.25	0.9	5200	7.9	219	34.1	7.7	58	3.8	1.48	0.7	3	7.6	< 0.1	67	8.9	16.6	1.7	5.8	1.1	1.1	0.2	1.0
E885615	9.94	0.3	2340	0.7	1390	0.7	5.9	5	0.1	0.39	0.3	2	29.8	0.1	3	1.8	2.5	0.3	1.1	0.2	0.6	0.1	0.7
E885616	0.20	0.7	160	13.7	7.3	36.1	20.3	56	2.3	0.30	< 0.1	< 1	2.6	< 0.1	185	6.9	14.5	1.7	7.6	1.7	2.9	0.5	3.4
E885617	0.09	0.3	315	1.1	1460	2.7	26.9	6	0.2	0.22	< 0.1	< 1	23.3	< 0.1	13	9.4	12.1	1.3	5.6	1.4	1.5	0.2	1.7
E885618	0.13	0.4	80.3	15.3	12.8	5.2	14.1	72	1.8	0.50	< 0.1	< 1	0.9	< 0.1	123	6.4	13.4	1.4	6.0	1.4	1.8	0.3	2.2
E885619	0.08	0.4	248	14.8	1.2	3.1	13.7	55	2.1	0.44	< 0.1	< 1	0.3	< 0.1	69	2.9	7.6	0.9	4.6	1.8	2.2	0.3	2.2
E885620	0.05	0.3	4.2	0.7	1.2	2.1	1.3	22	0.6	0.30	< 0.1	< 1	0.2	< 0.1	19	1.8	3.4	0.4	1.5	0.2	0.2	< 0.1	0.2
E885621	0.41	0.7	130	17.3	27.2	23.8	16.1	55	1.8	0.28	< 0.1	< 1	0.2	< 0.1	163	5.5	11.5	1.4	6.5	1.9	2.3	0.4	2.7
E885622	0.27	0.7	134	18.0	7.9	40.5	16.4	45	0.2	0.15	< 0.1	< 1	< 0.1	< 0.1	107	3.9	10.3	1.4	7.3	2.0	2.9	0.5	3.0
E885623	0.31	0.4	54.6	7.9	132	22.9	4.1	43	1.4	2.44	< 0.1	< 1	1.3	< 0.1	70	5.0	9.8	1.0	3.9	0.9	0.8	0.1	0.7
E885624	0.21	0.3	350	10.4	52.7	35.0	26.5	41	1.5	0.52	< 0.1	< 1	2.7	< 0.1	85	3.7	7.4	0.8	4.0	1.1	2.0	0.4	3.3
E885625	0.06	0.4	22.3	3.0	26.8	5.8	21.1	17	0.7	0.50	< 0.1	< 1	0.4	< 0.1	10	1.0	2.1	0.2	1.6	1.0	1.8	0.4	3.0
E885626	0.07	0.6	181	36.9	< 0.1	103	61.1	709	26.2	1.09	< 0.1	3	0.9	< 0.1	338	90.2	184	19.9	77.0	17.1	14.4	2.0	11.5
E885627	1.03	1.0	234	3.0	11.7	3.6	6.9	13	0.5	0.42	< 0.1	< 1	1.5	0.2	9	1.4	3.1	0.3	1.5	0.4	0.9	0.1	1.1
E885628	0.07	0.5	186	20.2	< 0.1	7.8	23.2	58	0.1	0.10	< 0.1	< 1	< 0.1	< 0.1	141	4.5	12.1	1.7	8.6	2.2	3.5	0.5	3.6
E885629	0.69	0.4	72.9	9.0	2.3	27.7	12.6	200	10.5	0.65	< 0.1	1	1.7	< 0.1	98	15.3	33.2	3.5	13.6	3.2	2.5	0.3	1.7
E885630	7.72	19.0	6190	13.6	330	38.8	15.6	75	3.7	7.93	2.8	17	34.5	0.2	75	11.1	24.2	3.2	13.0	3.3	2.8	0.4	2.4
E885631	0.10	0.5	82.2	19.9	3.6	29.8	9.8	78	8.6	0.53	< 0.1	< 1	0.4	< 0.1	61	33.1	60.3	5.5	19.2	3.3	2.8	0.3	1.8
E885632	0.90	0.6	177	12.2	18.0	13.0	9.6	28	1.2	0.31	< 0.1	< 1	0.8	0.2	61	2.6	5.9	0.7	3.2	0.8	1.2	0.2	1.7
E885633	0.35	0.6	103	10.1	1.4	0.6	10.1	44	1.9	0.15	< 0.1	< 1	0.2	< 0.1	11	1.6	5.1	0.9	4.5	1.5	1.9	0.3	1.8
E885634	0.08	1.9	149	17.9	1.1	30.4	13.1	63	2.1	0.36	0.1	1	< 0.1	< 0.1	249	5.6	14.0	1.8	9.2	2.2	2.6	0.4	2.4
E885635	1.02	5.0	105	21.9	< 0.1	5.4	45.5	147	3.6	0.43	< 0.1	< 1	< 0.1	< 0.1	66	11.2	27.1	2.9	11.1	3.0	5.3	1.0	7.6
E885636	1.40	1.2	32.0	1.6	11.5	4.4	1.7	27	0.4	2.68	< 0.1	< 1	0.8	0.2	18	1.5	3.1	0.3	1.5	0.1	0.3	< 0.1	0.2
E885637	0.14	0.3	26.5	0.6	12.7	0.5	1.4	1	< 0.1	0.21	< 0.1	< 1	4.1	< 0.1	16	0.5	0.9	0.1	0.4	0.1	0.1	< 0.1	0.1
E885638	0.61	1.1	39.1	2.5	6.6	7.0	2.9	29	1.0	2.96	< 0.1	< 1	1.4	0.1	64	1.9	3.7	0.4	1.6	0.4	0.4	0.1	0.4
E885639	0.38	0.9	29.0	14.9	1.6	0.8	10.7	36	0.1	0.15	< 0.1	< 1	< 0.1	< 0.1	2	1.4	3.3	0.4	1.7	0.7	1.2	0.2	1.6
E885640	0.05	0.3	6.4	0.8	1.6	2.9	1.9	21	0.6	0.33	< 0.1	< 1	0.2	< 0.1	19	2.8	5.9	0.7	2.4	0.5	0.3	0.1	0.3
E885641	0.18	1.0	109	19.8	19.7	26.2	17.6	72	3.1	0.44	< 0.1	< 1	0.1	< 0.1	75	4.9	13.1	1.8	9.0	2.4	3.4	0.5	3.8
E885642	1.67	0.8	43.6	2.7	12.9	8.4	2.2	35	0.7	2.37	< 0.1	< 1	0.6	0.1	39	1.8	3.4	0.4	1.5	0.3	0.2	< 0.1	0.4
E885643	0.50	0.6	78.4	7.2	14.4	15.8	4.5	58	2.9	4.38	< 0.1	< 1	0.9	< 0.1	72	3.5	7.4	0.8	3.2	0.7	0.6	0.1	0.7
E885644	0.29	0.7	159	23.2	4.2	61.5	21.8	168	0.6	0.60	< 0.1	< 1	< 0.1	< 0.1	728	20.7	43.4	4.8	20.6	3.5	4.3	0.6	3.9
E885645	0.24	0.3	99.7	15.8	489	28.5	7.6	49	0.1	0.14	< 0.1	< 1	0.9	< 0.1	701	10.7	19.7	2.1	7.6	1.7	1.3	0.2	1.2
E885833	0.26	0.5	154	20.7	0.8	26.2	19.4	96	0.4	0.26	< 0.1	< 1	< 0.1	< 0.1	179	16.7	40.9	5.1	23.0	4.6	4.3	0.6	3.9
E885834	0.06	0.4	6.8	18.0	1.0	55.9	1.2	36	0.8	0.85	< 0.1	< 1	< 0.1	< 0.1	1050	3.0	4.2	0.4	1.3	0.5	0.2	< 0.1	0.1
E885835	0.07	0.3	7.6	17.0	0.8	140	10.7	41	5.3	0.32	< 0.1	< 1	< 0.1	< 0.1	178	2.4	5.3	0.6	2.8	0.8	1.6	0.3	1.9
E881963	0.07	0.6	104	17.9	< 0.1	1.2	20.7	11	1.3	0.17	< 0.1	< 1	< 0.1	< 0.1	26	3.0	8.4	1.3	6.7	2.3	3.1	0.5	3.6

	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS
SAMPLE	Bi	Se	Zn	Ga	As	Rb	Y	Zr	Nb	Mo	In	Sn	Sb	Te	Ba	La	Ce	Pr	Nd	Sm	Gd	Tb	Dy
DESCRIPTION	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
GXR-4 Meas	19.5	6.2	71.3	19.4	102	153	13.2	47	9.4	315	0.3	8	4.4	0.9	237	55.3	108		39.9	6.4	4.8	0.5	2.6
GXR-4 Cert	19.0	5.60	73.0	20.0	98.0	160	14.0	186	10.0	310	0.270	5.60	4.80	0.970	1640	64.5	102		45.0	6.60	5.25	0.360	2.60
GXR-4 Meas	18.1	6.2	69.3	18.1	101	149	12.9	46	9.2	316	0.2	7	4.2	0.9	206	56.5	109		40.6	6.1	4.5	0.5	2.5
GXR-4 Cert	19.0	5.60	73.0	20.0	98.0	160	14.0	186	10.0	310	0.270	5.60	4.80	0.970	1640	64.5	102		45.0	6.60	5.25	0.360	2.60
SDC-1 Meas			105	25.0	< 0.1	60.3		23	0.1			< 1	< 0.1		605	38.1	85.0		38.6	7.1	6.9	1.0	5.6
SDC-1 Cert			103.00	21.00	0.220	127.00		290.00	21.00			3.00	0.54		630	42.00	93.00		40.00	8.20	7.00	1.20	6.70
SDC-1 Meas			112	24.5	< 0.1	78.2		37	0.6			< 1	< 0.1		662	41.0	90.5		40.8	8.7	7.3	1.0	5.8
SDC-1 Cert			103.00	21.00	0.220	127.00		290.00	21.00			3.00	0.54		630	42.00	93.00		40.00	8.20	7.00	1.20	6.70
GXR-6 Meas	0.20	0.8	129	35.1	237	63.6	12.2	71	0.1	0.73	< 0.1	< 1	0.5	< 0.1	1220	12.2	33.0		11.9	2.5	2.3	0.3	2.1
GXR-6 Cert	0.290	0.940	118	35.0	330	90.0	14.0	110	7.50	2.40	0.260	1.70	3.60	0.0180	1300	13.9	36.0		13.0	2.67	2.97	0.415	2.80
OREAS 97 (4 Acid) Meas	41.3	72.8	604									98	6.8										
OREAS 97 (4 Acid) Cert	40.1	71.4	646									95.7	9.23										
OREAS 97 (4 Acid) Meas	41.0	71.2	637									103	6.8										
OREAS 97 (4 Acid) Cert	40.1	71.4	646									95.7	9.23										
OREAS 98 (4 Acid) Meas	97.2	173	1320									> 200	11.3										
OREAS 98 (4 Acid) Cert	97.2	158	1360									206	20.1										
OREAS 98 (4 Acid) Meas	94.5	161	1340									> 200	7.4										
OREAS 98 (4 Acid) Cert	97.2	158	1360									206	20.1										
DNC-1a Meas			70.9	14.9		3.3	15.6	39	1.5				0.8		101	3.4			4.8				
DNC-1a Cert			70	15		5	18.0	38.0	3				0.96		118	3.6			5.20				
DNC-1a Meas			69.7	14.8		3.4	15.3	37	1.4				0.7		101	3.4			4.8				
DNC-1a Cert			70	15		5	18.0	38.0	3				0.96		118	3.6			5.20				
SBC-1 Meas	0.74		199	30.7	25.4	113	30.2	122	13.5	2.19		4	0.9		709	47.5	106	12.0	46.1	9.7	8.4	1.1	6.1
SBC-1 Cert	0.70		186	27.0	25.7	147	36.5	134.0	15.3	2.40		3.3	1.01		788.0	52.5	108.0	12.6	49.2	9.6	8.5	1.20	7.10
SBC-1 Meas	0.69		209	29.6	25.8	125	29.4	119	13.7	2.22		3	0.9		665	46.6	101	11.5	46.4	8.7	7.6	1.0	5.7
SBC-1 Cert	0.70		186	27.0	25.7	147	36.5	134.0	15.3	2.40		3.3	1.01		788.0	52.5	108.0	12.6	49.2	9.6	8.5	1.20	7.10
OREAS 45d (4-Acid) Meas	0.34		44.1	22.2	6.7	41.8	10.9	91	0.3	0.24	< 0.1	< 1	< 0.1		176	15.8	35.2	3.6	13.4	2.9	2.4	0.4	2.3
OREAS 45d (4-Acid) Cert	0.31		45.7	21.20	13.8	42.1	9.53	141	14.50	2.500	0.096	2.78	0.82		183.0	16.9	37.20	3.70	13.4	2.80	2.42	0.400	2.26
OREAS 45d (4-Acid) Meas	0.34		42.8	20.9	8.3	38.5	10.0	88	0.7	0.81	< 0.1	< 1	< 0.1		169	15.0	33.3	3.3	12.7	2.7	2.3	0.3	2.0
OREAS 45d (4-Acid) Cert	0.31		45.7	21.20	13.8	42.1	9.53	141	14.50	2.500	0.096	2.78	0.82		183.0	16.9	37.20	3.70	13.4	2.80	2.42	0.400	2.26
OREAS 220 (Fire Assay) Meas																							
OREAS 220 (Fire Assay) Cert																							

	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS
SAMPLE	Bi	Se	Zn	Ga	As	Rb	Y	Zr	Nb	Mo	In	Sn	Sb	Te	Ba	La	Ce	Pr	Nd	Sm	Gd	Tb	Dy
DESCRIPTION	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
OREAS 220 (Fire Assay) Meas																							
OREAS 220 (Fire Assay) Cert																							
OREAS 220 (Fire Assay) Meas																							
OREAS 220 (Fire Assay) Cert																							
OREAS 96 (4 Acid) Meas	27.5	43.8	439									69	4.9										
OREAS 96 (4 Acid) Cert	26.3	40.7	457									65.6	5.09										
OREAS 96 (4 Acid) Meas	27.6	42.9	465									71	5.0										
OREAS 96 (4 Acid) Cert	26.3	40.7	457									65.6	5.09										
OREAS 209 (Fire Assay) Meas																							
OREAS 209 (Fire Assay) Cert																							
OREAS 209 (Fire Assay) Meas																							
OREAS 209 (Fire Assay) Cert																							
E885701 Orig																							
E885701 Dup																							
E885608 Orig	0.16	0.6	124	14.8	26.7	60.1	18.1	61	2.6	0.47	< 0.1	< 1	0.7	< 0.1	136	4.7	9.7	1.1	4.8	1.3	2.2	0.4	3.1
E885608 Dup	0.16	0.8	120	14.5	26.8	64.8	18.2	61	2.7	0.47	< 0.1	< 1	0.7	< 0.1	138	4.9	9.9	1.1	5.0	1.1	2.3	0.4	3.0
E885611 Orig																							
E885611 Dup																							
E885613 Orig	0.24	0.3	47.0	19.5	24.9	67.8	3.6	129	4.3	0.74	< 0.1	< 1	2.3	< 0.1	812	24.1	41.7	3.9	13.0	2.0	1.3	0.1	0.6
E885613 Dup	0.26	0.4	49.2	20.5	24.3	59.7	3.7	134	4.2	0.73	< 0.1	< 1	2.4	< 0.1	826	24.9	43.1	4.1	13.4	2.1	1.4	0.1	0.7
E885622 Orig																							
E885622 Dup																							
E885631 Orig																							
E885631 Dup																							
E885640 Orig	0.05	0.3	6.4	0.8	1.6	2.9	1.9	21	0.6	0.33	< 0.1	< 1	0.2	< 0.1	19	2.8	5.9	0.7	2.4	0.5	0.3	0.1	0.3
E885640 Dup	0.05	0.3	4.5	0.8	1.0	3.0	1.8	19	0.6	0.29	< 0.1	< 1	0.2	< 0.1	19	2.6	5.4	0.6	2.2	0.5	0.4	0.1	0.3
E885641 Orig	0.18	1.0	108	19.3	19.5	25.3	17.0	70	3.1	0.38	< 0.1	< 1	0.1	< 0.1	71	4.6	12.3	1.8	8.5	2.3	3.2	0.5	3.5
E885641 Split	0.19	1.0	114	20.2	18.9	25.9	17.6	68	2.2	0.31	< 0.1	< 1	0.1	< 0.1	73	4.6	12.2	1.7	8.6	2.6	3.4	0.5	3.3
E885641 Orig	0.18	1.0	109	19.8	19.7	26.2	17.6	72	3.1	0.44	< 0.1	< 1	0.1	< 0.1	75	4.9	13.1	1.8	9.0	2.4	3.4	0.5	3.8
E885641 Dup	0.17	1.0	107	18.9	19.2	24.3	16.5	68	3.1	0.32	< 0.1	< 1	0.1	< 0.1	67	4.2	11.6	1.7	7.9	2.2	3.0	0.5	3.2
E885833 Orig																							
E885833 Dup																							
Method Blank	0.04	0.1	0.6	0.2	0.2	< 0.2	< 0.1	< 1	< 0.1	0.10	< 0.1	< 1	< 0.1	< 0.1	< 1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Method Blank	0.04	0.4	< 0.2	0.2	0.4	< 0.2	< 0.1	< 1	< 0.1	0.31	< 0.1	< 1	< 0.1	< 0.1	< 1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1

	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS
SAMPLE	Bi	Se	Zn	Ga	As	Rb	Y	Zr	Nb	Mo	In	Sn	Sb	Te	Ba	La	Ce	Pr	Nd	Sm	Gd	Tb	Dy
DESCRIPTION	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Method Blank	0.04	0.4	< 0.2	0.2	< 0.1	< 0.2	< 0.1	< 1	< 0.1	0.09	< 0.1	< 1	< 0.1	< 0.1	< 1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Method Blank	0.04	0.1	< 0.2	0.2	0.4	< 0.2	< 0.1	< 1	< 0.1	0.11	< 0.1	< 1	< 0.1	< 0.1	< 1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Method Blank	0.03	< 0.1	< 0.2	0.2	0.4	< 0.2	< 0.1	< 1	< 0.1	0.06	< 0.1	< 1	< 0.1	< 0.1	< 1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Method Blank	0.03	0.1	0.5	0.2	0.4	< 0.2	< 0.1	< 1	< 0.1	0.13	< 0.1	< 1	< 0.1	< 0.1	< 1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Method Blank																							
Method Blank																							
Method Blank																							
Method Blank																							

	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS
SAMPLE	Cu	Ge	Tm	Yb	Lu	Ta	Sr	W	Re	Tl	Pb	Th	U
DESCRIPTION	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
E885701	11.2	0.2	0.2	1.1	0.1	< 0.1	599	0.1	< 0.001	0.40	9.8	5.3	0.6
E885702	10.3	0.1	0.1	0.5	0.1	0.2	271	0.4	< 0.001	0.54	18.7	9.9	3.9
E885703	1.9	0.2	0.2	1.2	0.2	1.0	222	0.6	< 0.001	0.98	34.0	13.5	5.3
E885751	143	0.2	0.3	2.0	0.2	< 0.1	66.0	0.2	0.001	< 0.05	< 0.5	0.2	0.1
E885752	116	0.4	0.3	2.2	0.3	< 0.1	219	0.1	0.001	< 0.05	0.9	0.4	0.1
E885753	64.4	0.2	0.3	2.0	0.3	< 0.1	22.7	0.1	< 0.001	< 0.05	< 0.5	0.3	0.1
E885754	47.1	0.1	0.2	1.2	0.2	0.1	11.2	0.7	< 0.001	< 0.05	2.6	1.7	0.4
E885755	136	0.4	0.3	2.2	0.3	< 0.1	163	0.1	0.001	< 0.05	< 0.5	0.3	0.1
E885756	135	0.6	0.3	2.1	0.3	< 0.1	149	0.1	< 0.001	< 0.05	< 0.5	0.3	0.1
E885757	89.5	0.3	0.3	2.1	0.2	< 0.1	62.7	0.1	< 0.001	< 0.05	< 0.5	0.3	0.1
E885758	28.3	0.1	< 0.1	0.2	< 0.1	0.1	375	0.2	< 0.001	0.09	5.8	4.1	0.4
E885601	4.3	0.5	0.6	4.1	0.6	< 0.1	115	0.1	0.001	< 0.05	0.8	1.2	0.4
E885602	114	0.7	0.2	1.6	0.2	0.1	88.1	0.6	< 0.001	< 0.05	6.4	1.8	0.5
E885603	264	0.5	0.4	2.5	0.3	< 0.1	52.6	0.1	0.002	0.53	29.6	0.6	0.2
E885605	154	0.5	0.4	2.5	0.3	< 0.1	92.3	0.1	< 0.001	< 0.05	< 0.5	0.5	0.2
E885606	262	0.3	0.3	2.2	0.3	< 0.1	110	0.2	< 0.001	< 0.05	3.0	0.6	0.2
E885607	23.5	0.1	< 0.1	0.2	< 0.1	< 0.1	3.2	0.5	< 0.001	< 0.05	129	< 0.1	< 0.1
E885608	75.1	0.6	0.3	2.1	0.3	0.2	7.4	0.8	< 0.001	0.99	92.5	2.4	0.7
E885609	88.0	0.2	0.3	2.1	0.3	0.3	29.6	3.6	< 0.001	0.98	349	3.4	0.8
E885610	1970	0.2	0.3	1.8	0.3	0.1	78.4	2.8	0.012	5.73	> 5000	3.1	2.1
E885611	298	0.1	< 0.1	0.2	< 0.1	< 0.1	1.9	0.8	< 0.001	< 0.05	154	0.1	0.1
E885612	1.8	0.4	0.3	1.7	0.2	0.2	184	0.3	< 0.001	< 0.05	13.0	2.0	0.5
E885613	13.2	0.2	< 0.1	0.3	< 0.1	0.3	80.0	0.7	< 0.001	1.24	109	8.6	1.8
E885614	298	0.1	0.1	0.9	0.1	0.3	21.0	2.5	< 0.001	1.64	488	5.8	1.4
E885615	50.0	0.1	0.1	0.5	0.1	< 0.1	0.5	0.6	< 0.001	< 0.05	613	0.1	0.2
E885616	230	0.2	0.3	2.3	0.3	0.2	39.0	0.5	< 0.001	0.42	33.2	2.0	0.6
E885617	41.4	0.2	0.3	1.8	0.3	< 0.1	1.9	0.7	< 0.001	< 0.05	3.9	0.1	0.7
E885618	30.4	0.7	0.2	1.5	0.2	0.1	95.1	0.3	< 0.001	< 0.05	8.6	2.4	0.9
E885619	35.6	0.8	0.2	1.5	0.2	0.2	91.6	0.3	< 0.001	< 0.05	7.8	2.3	0.6
E885620	1.4	0.2	< 0.1	0.2	< 0.1	< 0.1	2.6	0.3	< 0.001	< 0.05	< 0.5	1.0	0.4
E885621	78.9	0.5	0.3	1.8	0.2	0.1	134	0.8	< 0.001	0.15	11.2	1.6	0.4
E885622	102	0.4	0.3	2.0	0.3	< 0.1	30.1	0.1	< 0.001	0.46	7.5	0.5	0.2

	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS
SAMPLE	Cu	Ge	Tm	Yb	Lu	Ta	Sr	W	Re	Tl	Pb	Th	U
DESCRIPTION	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
E885623	48.9	0.9	0.1	0.4	0.1	< 0.1	43.7	0.4	< 0.001	0.19	10.8	1.8	0.5
E885624	10.2	0.2	0.5	3.8	0.6	0.1	17.7	0.5	< 0.001	0.40	4.1	1.0	0.6
E885625	1.0	0.1	0.3	2.0	0.3	< 0.1	1.1	0.4	< 0.001	< 0.05	< 0.5	0.4	0.2
E885626	< 0.2	1.0	0.9	5.9	0.8	1.4	197	0.3	0.001	1.09	23.6	29.1	8.5
E885627	62.5	0.1	0.1	0.9	0.1	< 0.1	0.9	0.3	< 0.001	< 0.05	< 0.5	0.4	0.1
E885628	182	0.3	0.4	2.6	0.3	< 0.1	120	0.1	< 0.001	< 0.05	3.6	0.5	0.2
E885629	75.3	0.4	0.1	0.8	0.1	0.8	22.7	0.5	< 0.001	0.26	10.8	8.8	2.1
E885630	1940	0.2	0.2	1.8	0.2	0.1	74.9	3.4	0.010	5.48	> 5000	2.9	1.9
E885631	46.9	0.2	0.2	1.0	0.1	0.9	34.2	0.6	< 0.001	0.39	15.7	16.0	3.3
E885632	109	0.1	0.2	1.2	0.1	< 0.1	11.5	24.5	0.005	0.10	0.6	0.9	0.3
E885633	93.9	0.8	0.2	1.0	0.1	0.1	10.9	0.4	< 0.001	< 0.05	< 0.5	0.5	0.1
E885634	195	0.7	0.3	1.7	0.2	< 0.1	44.8	0.3	< 0.001	0.32	2.9	0.4	0.1
E885635	250	0.6	0.8	5.5	0.7	0.1	167	0.2	0.007	< 0.05	3.7	1.6	0.3
E885636	87.3	0.1	< 0.1	0.2	< 0.1	< 0.1	9.6	0.8	< 0.001	0.15	< 0.5	1.3	0.6
E885637	7.7	0.2	< 0.1	0.1	< 0.1	< 0.1	0.9	1.8	< 0.001	< 0.05	< 0.5	< 0.1	< 0.1
E885638	132	0.1	0.1	0.4	0.1	< 0.1	12.7	2.7	< 0.001	0.14	< 0.5	2.1	0.7
E885639	54.1	0.3	0.2	1.3	0.2	< 0.1	57.5	0.1	< 0.001	< 0.05	2.0	0.2	0.2
E885640	2.2	0.1	< 0.1	0.3	< 0.1	< 0.1	3.5	0.2	< 0.001	< 0.05	< 0.5	1.2	0.3
E885641	272	0.8	0.3	2.4	0.3	0.2	49.0	0.4	0.001	0.22	1.7	0.7	0.2
E885642	118	0.1	0.1	0.3	< 0.1	< 0.1	12.8	1.4	< 0.001	0.15	1.0	1.5	0.6
E885643	68.2	0.1	0.1	0.6	0.1	0.2	26.9	4.2	< 0.001	0.35	2.5	3.0	1.1
E885644	85.3	0.3	0.4	2.5	0.3	< 0.1	128	0.1	< 0.001	0.76	16.3	8.2	2.5
E885645	20.6	0.5	0.1	1.0	0.1	< 0.1	37.1	0.1	< 0.001	0.27	15.5	1.6	0.7
E885833	136	0.3	0.3	2.1	0.3	< 0.1	234	0.1	< 0.001	0.09	8.2	2.1	0.9
E885834	6.8	0.4	< 0.1	0.1	< 0.1	< 0.1	237	0.1	< 0.001	0.38	20.8	1.0	0.7
E885835	2.9	0.4	0.2	1.6	0.2	0.4	76.5	0.4	< 0.001	1.32	36.0	43.5	2.3
E881963	115	0.5	0.4	2.4	0.3	< 0.1	124	0.1	< 0.001	< 0.05	< 0.5	0.4	0.1
GXR-4 Meas	6310		0.2	1.0	0.1	0.5	228	37.4		3.50	50.1	19.8	5.8
GXR-4 Cert	6520		0.210	1.60	0.170	0.790	221	30.8		3.20	52.0	22.5	6.20
GXR-4 Meas	6280		0.2	1.0	0.1	0.5	215	33.7		3.40	49.0	19.5	5.7
GXR-4 Cert	6520		0.210	1.60	0.170	0.790	221	30.8		3.20	52.0	22.5	6.20
SDC-1 Meas	27.8		0.5	3.2		< 0.1	165	0.1		0.59	24.0	11.8	2.8
SDC-1 Cert	30.000		0.65	4.00		1.20	180.00	0.80		0.70	25.00	12.00	3.10
SDC-1 Meas	29.8		0.5	3.4		< 0.1	182	0.1		0.62	24.5	12.3	2.9
SDC-1 Cert	30.000		0.65	4.00		1.20	180.00	0.80		0.70	25.00	12.00	3.10
GXR-6 Meas	65.4			1.6	0.2	< 0.1	37.4	0.1		2.30	102	5.2	1.4
GXR-6 Cert	66.0			2.40	0.330	0.485	35.0	1.90		2.20	101	5.30	1.54
OREAS 97 (4 Acid) Meas	> 10000										149		
OREAS 97 (4 Acid) Cert	63100.00										147		
OREAS 97 (4 Acid) Meas	> 10000										150		
OREAS 97 (4 Acid) Cert	63100.00										147		

	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS
SAMPLE	Cu	Ge	Tm	Yb	Lu	Ta	Sr	W	Re	Tl	Pb	Th	U
DESCRIPTION	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Acid) Cert	00												
OREAS 98 (4 Acid) Meas	> 10000										353		
OREAS 98 (4 Acid) Cert	14800 0.0										345		
OREAS 98 (4 Acid) Meas	> 10000										347		
OREAS 98 (4 Acid) Cert	14800 0.0										345		
DNC-1a Meas	99.2			1.9			149				5.5		
DNC-1a Cert	100			2.0			144				6.3		
DNC-1a Meas	97.8			1.9			142				5.2		
DNC-1a Cert	100			2.0			144				6.3		
SBC-1 Meas	30.0		0.5	3.4	0.5	0.8	188	1.6		0.92	37.0	15.5	5.9
SBC-1 Cert	31.0		0.56	3.64	0.54	1.10	178.0	1.60		0.89	35.0	15.8	5.76
SBC-1 Meas	29.0		0.5	3.3	0.5	0.8	177	1.5		0.90	39.4	15.5	5.8
SBC-1 Cert	31.0		0.56	3.64	0.54	1.10	178.0	1.60		0.89	35.0	15.8	5.76
OREAS 45d (4-Acid) Meas	374			1.4	0.2	< 0.1	31.9	0.1		0.18	21.0	14.7	2.9
OREAS 45d (4-Acid) Cert	371			1.33	0.18	1.02	31.30	1.62		0.27	21.8	14.5	2.63
OREAS 45d (4-Acid) Meas	356			1.3	0.2	< 0.1	29.1	0.1		0.15	20.0	13.8	2.7
OREAS 45d (4-Acid) Cert	371			1.33	0.18	1.02	31.30	1.62		0.27	21.8	14.5	2.63
OREAS 220 (Fire Assay) Meas													
OREAS 220 (Fire Assay) Cert													
OREAS 220 (Fire Assay) Meas													
OREAS 220 (Fire Assay) Cert													
OREAS 220 (Fire Assay) Meas													
OREAS 220 (Fire Assay) Cert													
OREAS 96 (4 Acid) Meas	> 10000										101		
OREAS 96 (4 Acid) Cert	39300										101		
OREAS 96 (4 Acid) Meas	> 10000										101		
OREAS 96 (4 Acid) Cert	39300										101		
OREAS 209 (Fire Assay) Meas													

	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS
SAMPLE	Cu	Ge	Tm	Yb	Lu	Ta	Sr	W	Re	Tl	Pb	Th	U
DESCRIPTION	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
OREAS 209 (Fire Assay) Cert													
OREAS 209 (Fire Assay) Meas													
OREAS 209 (Fire Assay) Cert													
E885701 Orig													
E885701 Dup													
E885608 Orig	75.1	0.6	0.3	2.1	0.3	0.2	7.4	0.8	< 0.001	0.99	92.5	2.4	0.7
E885608 Dup	74.5	0.5	0.3	2.1	0.3	0.2	6.9	1.1	< 0.001	1.00	93.7	2.5	0.7
E885611 Orig													
E885611 Dup													
E885613 Orig	13.2	0.2	< 0.1	0.3	< 0.1	0.3	80.0	0.7	< 0.001	1.24	109	8.6	1.8
E885613 Dup	18.3	0.2	< 0.1	0.3	< 0.1	0.3	82.7	0.8	< 0.001	1.26	111	8.8	1.9
E885622 Orig													
E885622 Dup													
E885631 Orig													
E885631 Dup													
E885640 Orig	2.2	0.1	< 0.1	0.3	< 0.1	< 0.1	3.5	0.2	< 0.001	< 0.05	< 0.5	1.2	0.3
E885640 Dup	1.6	0.1	< 0.1	0.2	< 0.1	< 0.1	3.2	0.2	< 0.001	< 0.05	0.7	1.2	0.3
E885641 Orig	269	0.8	0.3	2.3	0.3	0.2	47.5	0.4	< 0.001	0.20	1.6	0.6	0.2
E885641 Split	290	0.8	0.3	2.3	0.3	0.1	49.2	0.1	0.002	0.21	1.6	0.6	0.2
E885641 Orig	272	0.8	0.3	2.4	0.3	0.2	49.0	0.4	0.001	0.22	1.7	0.7	0.2
E885641 Dup	266	0.8	0.3	2.1	0.3	0.2	45.9	0.5	< 0.001	0.18	1.5	0.5	0.2
E885833 Orig													
E885833 Dup													
Method Blank	0.3	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.2	0.1	< 0.001	< 0.05	< 0.5	< 0.1	< 0.1
Method Blank	0.4	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.2	< 0.1	< 0.001	< 0.05	< 0.5	< 0.1	< 0.1
Method Blank	< 0.2	0.1	< 0.1	< 0.1	< 0.1	< 0.1	0.2	0.1	< 0.001	< 0.05	< 0.5	< 0.1	< 0.1
Method Blank	0.7	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.2	0.1	< 0.001	< 0.05	< 0.5	< 0.1	< 0.1
Method Blank	0.5	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.2	< 0.1	< 0.001	< 0.05	< 0.5	< 0.1	< 0.1
Method Blank	0.4	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.2	< 0.1	< 0.001	< 0.05	< 0.5	< 0.1	< 0.1
Method Blank													
Method Blank													
Method Blank													
Method Blank													



Date Submitted: 08-Aug-18
Invoice No.: A18-10521
Invoice Date: 12-Sep-18
Your Reference: Exploration

GOLDCORP Canada Ltd--Musselwhite Mine
P.O. Box 7500
Thunder bay Ontario P7B 6S8
Canada

ATTN: Katie Lucas

CERTIFICATE OF ANALYSIS

124 Core samples were submitted for analysis.

The following analytical package(s) were requested:

Code 1A2-GC Musselwhite Tbay Au - Fire Assay AA

REPORT **A18-10521**

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

Notes:

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

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

CERTIFIED BY:

A handwritten signature in black ink, appearing to be "Emmanuel Esemé". The signature is stylized with a large, looped 'E' and 'M'.

Emmanuel Esemé , Ph.D.
Quality Control

ACTIVATION LABORATORIES LTD.
1201 Walsh Street West, Thunder Bay, Ontario, Canada, P7E 4X6
TELEPHONE +807 622-6707 or +1.888.228.5227 FAX +1.905.648.9613
E-MAIL Tbay@actlabs.com ACTLABS GROUP WEBSITE www.actlabs.com

Date Submitted: 08-Aug-18
Invoice No.: A18-10521
Invoice Date: 12-Sep-18
Your Reference: Exploration

GOLDCORP Canada Ltd--Musselwhite Mine
P.O. Box 7500
Thunder bay Ontario P7B 6S8
Canada

ATTN: Katie Lucas

CERTIFICATE OF ANALYSIS

124 Core samples were submitted for analysis.

The following analytical package(s) were requested: Code UT-4 Total Digestion ICP/MS

REPORT **A18-10521**

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Notes:

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

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

CERTIFIED BY:



Emmanuel Esemé , Ph.D.
Quality Control

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

Results

Activation Laboratories Ltd.

Report: A18-10521

	FA-AA	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS
SAMPLE	Au	B	Li	Na	Mg	Al	K	Ca	Cd	V	Cr	Mn	Fe	Hf	Ni	Er	Be	Ho	Hg	Ag	Cs	Co	Eu
DESCRIPTION	g/mt	ppm	ppm	%	%	%	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm
E885501	< 0.005	< 20	73.2	2.14	2.19	9.07	1.23	1.24	< 0.1	111	262	766	5.13	3.3	176	1.3	1.3	0.3	40	0.10	7.22	28.4	0.60
E885502	0.011	< 20	57.3	1.55	4.09	8.40	0.09	8.45	0.4	278	112	1570	8.29	0.8	118	2.0	0.1	0.6	30	0.16	0.19	44.4	0.50
E885503	0.005	< 20	44.0	> 3.00	1.05	> 10.0	0.86	0.87	< 0.1	80	72	179	1.83	4.2	78.8	1.1	1.3	0.4	10	0.09	1.54	11.2	0.80
E885504	< 0.005	< 20	52.2	1.69	3.67	8.40	0.09	7.45	0.1	310	80	1560	9.34	0.7	76.6	1.9	0.3	0.6	20	0.31	0.09	42.9	0.50
E885505	0.016	< 20	48.1	2.61	2.01	> 10.0	1.12	1.91	< 0.1	103	411	714	4.69	3.3	250	1.4	2.0	0.4	< 10	0.08	0.94	18.3	0.80
E885506	< 0.005	220	1.6	0.03	0.08	0.30	0.02	0.14	< 0.1	11	32	44	0.39	0.1	5.2	< 0.1	< 0.1	< 0.1	30	< 0.05	< 0.05	0.8	< 0.05
E885507	0.050	< 20	16.7	0.45	1.85	5.37	0.65	1.05	0.1	126	473	1340	6.10	1.9	210	1.2	0.5	0.4	< 10	0.08	1.46	37.3	0.40
E885508	2.38	40	11.4	0.10	2.14	5.30	0.32	0.83	0.3	148	669	3060	13.1	0.1	259	1.2	0.4	0.4	< 10	0.18	0.47	39.0	0.50
E885509	0.011	< 20	104	0.28	1.85	9.20	2.37	0.64	1.1	179	213	1400	7.15	3.3	181	1.9	1.3	0.6	30	0.33	11.1	50.6	1.00
E885510	1.07	< 20	24.8	0.29	1.70	4.79	1.29	1.53	43.1	82	49	1800	7.74	2.1	27.3	1.8	0.8	0.6	1680	> 100	1.44	17.8	0.60
E885511	0.007	< 20	48.0	0.52	3.28	8.42	0.69	6.12	0.1	224	91	1210	7.85	2.6	42.6	1.6	1.0	0.6	30	0.07	10.6	47.2	0.70
E885512	< 0.005	< 20	4.9	0.03	1.83	0.78	0.03	0.59	0.1	28	45	1720	18.0	0.3	13.1	0.9	0.3	0.2	20	< 0.05	0.19	7.7	0.30
E885513	< 0.005	< 20	168	0.58	2.68	9.85	0.48	4.11	0.1	199	295	1020	9.11	2.8	65.4	2.1	1.7	0.6	40	0.06	2.87	42.1	0.80
E885514	0.021	< 20	24.4	2.11	4.14	7.98	0.37	6.53	0.1	224	15	1440	8.04	1.7	50.8	1.9	0.6	0.6	10	1.06	0.93	48.6	0.70
E885515	< 0.005	< 20	28.8	1.36	3.84	7.46	0.20	6.15	0.1	267	101	1550	10.0	0.8	113	3.1	0.4	1.0	< 10	< 0.05	0.16	52.2	0.90
E885516	< 0.005	< 20	7.5	1.85	4.78	7.08	0.27	6.89	0.1	223	314	2840	7.17	1.3	106	1.6	0.5	0.5	20	< 0.05	0.25	49.2	0.50
E885517	< 0.005	30	0.6	0.01	0.03	0.06	0.01	0.05	< 0.1	2	44	72	0.56	< 0.1	3.6	< 0.1	< 0.1	< 0.1	30	< 0.05	< 0.05	0.9	< 0.05
E885518	0.006	< 20	15.2	1.37	2.92	7.02	0.21	5.16	< 0.1	373	12	1670	12.3	0.6	23.7	2.1	0.2	0.8	< 10	< 0.05	0.53	53.5	0.50
E885519	< 0.005	< 20	8.2	1.79	5.13	7.60	0.16	7.56	< 0.1	231	308	1880	7.86	0.8	141	1.5	0.3	0.5	30	0.09	0.18	49.8	0.50
E885520	< 0.005	< 20	5.6	0.05	0.02	0.21	0.07	0.02	< 0.1	3	10	61	0.66	0.7	1.2	0.2	0.1	< 0.1	20	< 0.05	0.13	0.7	< 0.05
E885521	< 0.005	< 20	7.7	1.77	3.34	8.02	0.37	6.87	< 0.1	195	77	1420	6.58	1.9	72.1	1.5	0.6	0.5	30	< 0.05	0.38	38.5	0.60
E885522	0.006	< 20	59.4	0.50	3.02	7.79	1.95	2.19	0.2	140	365	1820	8.85	2.7	329	1.6	1.4	0.5	20	0.10	4.97	41.5	0.70
E885523	0.008	< 20	18.2	0.36	5.63	5.20	0.41	5.87	0.2	129	618	3370	11.2	2.1	1070	1.4	0.4	0.4	10	0.07	0.72	78.7	0.60
E885524	0.005	< 20	1.9	< 0.01	1.29	1.17	0.02	0.64	0.4	33	52	1720	30.5	0.1	12.2	3.0	1.1	0.9	20	0.31	0.26	2.6	1.40
E885525	< 0.005	20	79.1	0.43	1.23	9.90	0.79	1.31	2.3	36	32	834	6.95	11.9	25.7	7.1	4.1	2.2	30	0.42	11.0	11.5	2.70
E885526	< 0.005	< 20	18.7	0.42	2.72	7.47	0.57	5.62	0.7	170	167	4140	13.1	2.3	66.9	1.8	1.8	0.6	< 10	0.07	8.35	38.0	0.90
E885527	< 0.005	< 20	< 0.5	< 0.01	0.76	0.15	0.02	0.11	< 0.1	5	31	541	11.6	0.1	4.6	0.3	0.6	0.1	20	< 0.05	0.28	1.7	0.20
E885528	< 0.005	< 20	12.0	0.16	0.13	> 10.0	1.05	0.10	0.9	46	39	83	2.64	6.0	4.3	1.8	2.0	0.6	50	0.66	3.07	4.5	0.70
E885529	< 0.005	< 20	64.3	0.45	2.18	> 10.0	0.76	4.59	0.2	200	238	1540	8.15	2.9	102	1.9	1.6	0.7	10	0.06	6.83	52.7	1.00
E885530	1.00	< 20	23.4	0.27	1.61	4.52	1.28	1.46	42.3	78	47	1740	7.43	2.0	26.2	1.8	0.7	0.5	590	> 100	1.42	16.5	0.50
E885531	< 0.005	< 20	< 0.5	< 0.01	0.90	0.21	0.01	0.43	0.3	12	26	1260	25.3	0.1	9.1	1.4	0.6	0.4	20	< 0.05	0.07	2.6	1.40
E885532	< 0.005	< 20	44.6	0.30	1.84	8.66	0.70	1.97	< 0.1	169	99	1640	10.4	2.7	120	1.7	2.1	0.6	< 10	0.05	3.69	44.6	0.80
E885533	0.396	< 20	0.8	0.05	1.47	0.80	0.04	0.35	0.3	21	32	1320	20.8	0.2	75.4	0.7	0.2	0.2	50	0.41	< 0.05	201	0.40
E885534	< 0.005	< 20	1.2	0.01	3.78	0.23	0.01	2.40	< 0.1	11	28	700	13.5	0.1	21.5	0.7	0.7	0.2	30	< 0.05	0.10	16.9	0.20
E885535	< 0.005	< 20	23.1	1.06	2.06	8.20	1.11	4.24	0.2	195	192	1700	7.94	2.5	65.3	1.6	0.9	0.6	< 10	0.08	6.86	33.9	0.70
E885536	0.005	< 20	79.9	0.82	2.66	9.81	1.19	4.57	0.4	180	357	1470	7.80	2.6	529	1.6	1.1	0.6	< 10	0.34	9.15	54.4	0.90
E885537	0.010	< 20	34.3	0.56	3.70	7.47	1.06	5.81	0.1	256	644	1660	8.41	1.5	353	1.8	0.6	0.5	< 10	0.08	5.52	74.2	0.60
E885538	< 0.005	40	33.7	0.92	1.20	> 10.0	1.40	1.11	< 0.1	111	38	495	3.03	5.3	44.3	1.4	1.0	0.4	20	< 0.05	5.57	13.9	0.80
E885539	< 0.005	< 20	19.3	1.25	2.51	7.76	0.72	5.68	0.2	116	143	1080	6.24	2.6	112	1.8	0.8	0.6	< 10	< 0.05	5.65	36.5	0.70
E885540	< 0.005	30	5.6	0.07	0.02	0.24	0.07	0.05	< 0.1	2	7	46	0.42	0.6	0.9	0.2	0.1	0.1	< 10	< 0.05	0.12	0.5	< 0.05
E885541	< 0.005	< 20	57.3	0.54	5.53	7.55	0.61	6.47	0.1	182	329	1830	8.72	2.1	163	1.7	0.7	0.5	< 10	< 0.05	0.96	45.3	0.70
E885542	< 0.005	< 20	12.5	2.28	3.30	7.83	0.33	5.62	0.1	181	114	1270	6.66	2.2	55.5	1.5	0.5	0.5	< 10	< 0.05	0.85	34.9	0.60
E885543	< 0.005	< 20	32.8	0.80	3.57	9.75	0.59	5.24	0.2	430	53	2490	17.6	1.9	50.3	8.0	0.2	2.6	< 10	0.07	0.45	56.7	1.70

Results

Activation Laboratories Ltd.

Report: A18-10521

	FA-AA	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	
SAMPLE	Au	B	Li	Na	Mg	Al	K	Ca	Cd	V	Cr	Mn	Fe	Hf	Ni	Er	Be	Ho	Hg	Ag	Cs	Co	Eu
DESCRIPTION	g/mt	ppm	ppm	%	%	%	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm
E885544	< 0.005	< 20	17.1	2.84	4.02	8.12	0.31	6.06	0.2	381	93	1700	11.0	1.5	81.6	2.8	0.4	0.9	20	0.19	0.38	51.8	0.70
E885545	0.017	< 20	19.3	1.45	1.65	6.48	0.90	2.10	0.3	34	55	919	10.9	1.9	24.5	0.7	1.1	0.2	40	0.10	6.05	11.7	0.80
E885546	< 0.005	< 20	13.7	1.01	1.70	7.92	0.34	5.99	0.2	149	68	4670	10.9	2.9	35.4	4.7	1.0	1.5	30	< 0.05	0.37	45.5	1.20
E885547	0.007	< 20	26.9	1.27	2.39	8.17	0.89	4.92	0.2	146	101	3040	9.94	2.8	50.3	3.4	1.0	1.2	< 10	< 0.05	4.48	45.0	1.20
E885548	< 0.005	< 20	16.1	2.52	1.61	7.45	0.17	4.16	< 0.1	82	72	1460	5.31	0.3	44.5	3.6	0.7	1.2	< 10	< 0.05	2.99	33.4	1.10
E885549	< 0.005	< 20	34.8	0.09	0.71	7.74	0.10	1.06	0.1	94	83	579	3.10	3.3	306	1.0	0.8	0.3	20	0.11	0.87	16.3	0.70
E885550	1.23	< 20	25.0	0.29	1.71	4.60	1.30	1.55	43.3	81	50	1830	7.59	2.0	27.1	1.7	0.7	0.5	110	> 100	1.43	17.4	0.60
E885551	< 0.005	< 20	1.9	0.02	16.7	2.95	0.01	0.70	< 0.1	72	3400	845	9.16	0.4	1570	0.3	0.1	0.1	20	< 0.05	0.21	123	0.10
E885552	< 0.005	< 20	6.8	> 3.00	0.03	7.35	1.02	0.35	< 0.1	1	15	367	0.63	3.0	3.7	0.8	1.4	0.4	< 10	0.18	1.53	0.4	< 0.05
E885553	< 0.005	20	39.7	1.11	2.59	9.92	0.63	2.48	0.2	198	295	2360	14.2	2.9	127	1.9	0.9	0.6	20	< 0.05	4.39	53.1	0.70
E885554	< 0.005	< 20	8.3	1.35	3.35	8.37	0.43	6.23	0.1	175	176	1610	7.89	2.3	86.2	1.7	0.7	0.6	10	0.09	0.75	45.6	0.80
E885555	< 0.005	< 20	1.8	0.01	0.83	1.17	0.04	0.26	0.1	30	61	3810	18.1	0.3	15.8	0.6	0.5	0.2	30	0.07	0.71	6.8	0.20
E885556	< 0.005	< 20	76.1	0.13	1.64	> 10.0	0.46	0.47	0.1	258	384	1410	10.9	3.0	128	2.5	1.4	0.7	10	0.11	15.4	53.4	0.70
E885557	< 0.005	< 20	26.3	1.87	2.25	> 10.0	0.92	3.91	< 0.1	216	218	1300	6.90	2.9	91.7	1.7	1.1	0.6	< 10	0.08	5.60	46.5	0.80
E885558	< 0.005	< 20	0.7	0.01	1.98	0.20	0.01	0.38	< 0.1	19	22	5550	23.1	0.1	30.0	0.5	0.4	0.1	20	< 0.05	0.35	3.5	0.20
E885559	< 0.005	< 20	0.9	0.01	3.32	0.23	0.01	1.74	< 0.1	24	13	9360	27.2	0.1	30.1	0.4	0.1	0.1	< 10	< 0.05	0.19	7.4	0.10
E885560	< 0.005	30	5.7	0.06	0.01	0.19	0.06	0.02	< 0.1	2	9	59	0.52	0.7	1.1	0.2	0.1	0.1	20	< 0.05	0.13	0.5	< 0.05
E885561	0.038	< 20	13.6	1.42	5.75	6.00	0.11	6.05	0.2	202	762	2650	10.1	1.0	517	1.5	0.5	0.4	< 10	0.12	0.70	62.0	0.50
E885562	0.015	< 20	< 0.5	< 0.01	0.86	0.16	0.01	0.34	< 0.1	11	34	1590	19.4	0.1	8.4	0.4	0.4	0.1	< 10	< 0.05	0.09	2.8	0.20
E885563	< 0.005	< 20	15.1	1.37	1.35	9.19	1.31	3.46	< 0.1	115	100	1180	6.96	2.9	103	1.6	0.8	0.5	< 10	0.09	4.35	37.5	0.90
E885564	0.058	< 20	< 0.5	0.01	1.94	0.43	0.02	1.12	0.2	22	28	4250	26.6	0.2	20.3	0.5	0.3	0.1	< 10	< 0.05	0.17	5.9	0.10
E885565	0.005	< 20	86.6	0.36	1.56	> 10.0	0.58	0.73	< 0.1	258	273	3900	11.7	4.3	130	2.9	1.4	0.9	20	0.09	3.27	55.7	1.10
E885566	< 0.005	80	1.2	0.02	1.03	0.53	0.05	0.30	0.1	17	31	2860	15.4	0.2	27.2	0.7	0.4	0.2	130	< 0.05	0.27	3.4	0.20
E885567	< 0.005	< 20	14.3	0.49	3.86	> 10.0	0.13	4.93	0.1	242	182	4290	11.2	3.4	160	2.1	0.4	0.6	30	0.12	1.44	51.8	0.80
E885568	0.014	< 20	14.7	0.20	1.85	4.19	0.05	1.11	0.4	35	38	4990	17.9	2.4	41.2	1.1	0.6	0.3	30	0.13	0.39	9.8	0.50
E885569	0.010	< 20	11.4	2.73	2.69	7.51	0.11	3.97	0.1	222	9	2680	11.6	2.9	112	2.7	0.6	0.9	< 10	0.16	0.15	65.3	1.00
E885570	1.08	< 20	24.0	0.28	1.64	4.53	1.24	1.48	41.8	79	50	1800	7.47	2.0	26.9	1.7	0.7	0.5	490	> 100	1.44	17.6	0.50
E885571	0.007	< 20	18.8	2.32	2.51	7.31	0.14	4.72	< 0.1	225	24	2120	10.4	3.4	54.8	3.3	0.4	1.0	< 10	0.07	0.12	46.5	1.10
E885572	< 0.005	< 20	15.6	0.62	5.18	3.90	0.15	7.43	0.2	236	2030	3200	9.61	1.0	635	1.4	0.3	0.4	< 10	0.07	0.45	99.6	0.50
E885573	< 0.005	< 20	15.7	0.66	5.94	4.05	0.15	7.18	0.1	230	2110	2650	10.2	0.8	734	1.4	0.3	0.4	< 10	0.05	0.15	115	0.40
E885574	< 0.005	< 20	12.1	0.13	4.51	2.32	0.04	3.54	< 0.1	120	2710	1450	6.59	0.5	385	0.7	0.1	0.2	30	< 0.05	< 0.05	48.8	0.10
E885575	< 0.005	30	17.0	0.76	6.55	3.57	0.23	7.04	0.2	257	2550	2570	9.53	0.8	422	1.4	0.2	0.5	< 10	< 0.05	0.63	82.4	0.40
E885576	< 0.005	< 20	10.8	0.93	4.47	4.88	0.15	5.88	< 0.1	209	433	2470	11.3	2.0	188	1.9	1.2	0.7	10	< 0.05	0.17	62.5	0.70
E885577	< 0.005	< 20	18.8	0.11	5.87	3.36	0.13	6.71	0.3	206	1220	3650	11.0	1.3	467	1.5	0.4	0.6	< 10	0.11	2.97	85.6	0.60
E885578	< 0.005	< 20	18.0	1.13	5.61	4.06	0.20	4.06	0.1	239	324	4280	12.4	1.5	249	1.4	0.4	0.5	20	< 0.05	1.96	65.7	0.50
E885579	< 0.005	< 20	12.8	0.12	7.38	2.77	0.04	9.12	0.1	142	1590	2160	7.44	1.0	581	1.4	0.3	0.4	10	< 0.05	0.25	82.7	0.50
E885580	< 0.005	< 20	6.1	0.08	0.02	0.28	0.10	0.03	< 0.1	3	11	56	0.52	0.8	3.7	0.3	0.1	0.1	< 10	< 0.05	0.17	0.6	0.10
E885581	0.006	< 20	10.8	0.03	10.1	2.30	0.02	6.53	0.1	146	1340	1680	9.98	0.8	955	0.9	0.3	0.4	10	0.13	0.10	97.3	0.30
E885582	< 0.005	< 20	10.9	2.53	3.97	5.59	0.06	3.98	< 0.1	126	923	1670	6.61	2.4	378	1.6	0.5	0.5	10	< 0.05	0.16	54.7	0.60
E885583	< 0.005	< 20	24.2	2.83	3.49	7.26	0.06	4.46	0.1	115	288	3120	8.30	2.9	156	1.7	0.4	0.6	< 10	0.08	0.26	36.8	0.70
E885584	0.005	< 20	22.4	0.31	6.29	4.85	0.22	6.06	0.3	263	332	4590	14.6	1.6	344	2.2	0.1	0.7	< 10	0.21	2.37	84.6	0.50
E885585	< 0.005	< 20	13.1	0.08	9.83	1.98	0.02	8.23	< 0.1	101	997	1620	8.42	0.6	1410	0.5	0.3	0.2	< 10	< 0.05	0.17	101	0.40
E885586	0.005	< 20	8.0	1.77	4.43	5.12	0.06	5.11	0.2	229	91	2880	10.9	1.9	145	1.9	0.6	0.6	10	0.09	0.25	60.2	0.80

	FA-AA	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	
SAMPLE	Au	B	Li	Na	Mg	Al	K	Ca	Cd	V	Cr	Mn	Fe	Hf	Ni	Er	Be	Ho	Hg	Ag	Cs	Co	Eu
DESCRIPTION	g/mt	ppm	ppm	%	%	%	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm
E885587	0.005	< 20	12.3	1.39	6.44	4.05	0.17	7.72	0.1	177	876	1660	6.39	1.5	311	1.5	0.4	0.5	< 10	0.10	1.41	71.4	0.60
E885588	< 0.005	< 20	13.1	> 3.00	3.00	6.75	0.12	3.40	< 0.1	273	87	1650	8.97	2.9	112	2.4	0.4	0.8	< 10	0.16	0.56	57.8	1.00
E885589	< 0.005	< 20	19.9	1.67	4.80	5.91	0.24	6.07	0.1	281	103	2600	13.0	2.1	128	2.5	0.6	0.8	20	0.06	0.35	67.9	1.20
E885590	1.09	< 20	25.9	0.28	1.67	4.79	1.29	1.50	45.5	79	43	1790	7.71	2.2	28.1	1.8	0.7	0.6	1620	> 100	1.44	17.7	0.60
E885591	< 0.005	< 20	4.1	0.03	12.5	1.48	0.04	4.21	< 0.1	23	3830	842	6.32	0.3	1650	0.3	0.1	0.1	10	< 0.05	0.39	103	0.10
E885592	< 0.005	< 20	9.0	0.73	7.22	3.18	0.07	7.59	0.1	184	1890	2140	9.87	1.1	842	1.4	0.3	0.5	< 10	< 0.05	0.11	134	0.50
E885593	< 0.005	< 20	11.5	0.83	4.92	3.38	0.07	9.12	0.1	208	424	3710	9.70	1.2	390	1.7	0.4	0.5	< 10	< 0.05	0.10	86.9	0.70
E885594	< 0.005	< 20	15.8	2.00	4.06	7.64	0.34	6.51	0.1	232	202	1370	8.99	2.0	65.4	2.5	0.5	0.8	< 10	0.06	0.44	41.9	0.90
E885596	< 0.005	50	25.2	0.54	5.92	5.59	0.58	8.86	0.2	139	106	1450	8.83	1.2	164	1.9	0.3	0.6	< 10	< 0.05	1.97	41.9	0.40
E885597	< 0.005	< 20	2.9	0.01	1.58	0.17	0.01	2.28	0.2	4	42	4690	11.2	< 0.1	7.7	0.3	0.6	0.1	40	< 0.05	0.29	3.1	0.20
E885598	< 0.005	< 20	1.1	0.01	0.70	0.12	0.01	2.29	0.1	7	54	794	4.36	< 0.1	7.3	0.3	0.4	0.1	50	< 0.05	0.16	2.8	0.10
E885599	< 0.005	< 20	13.1	0.43	0.29	3.33	0.83	0.33	1.2	44	92	294	1.98	1.4	79.2	0.6	0.3	0.2	90	0.29	2.20	24.7	0.40
E885600	< 0.005	< 20	5.1	0.05	0.01	0.18	0.05	0.02	< 0.1	2	14	46	0.42	0.6	1.1	0.1	0.1	0.1	20	< 0.05	0.11	0.5	< 0.05
E885646	0.005	< 20	9.1	1.03	4.10	8.26	0.05	9.33	< 0.1	230	190	1310	7.98	0.6	154	1.6	0.1	0.5	< 10	< 0.05	0.05	43.2	0.60
E885647	0.005	< 20	10.7	1.41	3.40	7.17	0.25	6.67	0.1	269	146	1470	8.65	0.8	111	2.4	0.3	0.7	20	< 0.05	0.21	40.9	0.80
E885648	0.006	< 20	19.4	0.40	7.26	4.76	0.08	6.84	< 0.1	236	182	2970	10.3	1.1	188	1.5	0.3	0.6	< 10	< 0.05	< 0.05	60.5	0.60
E885649	< 0.005	< 20	15.2	0.43	1.91	3.87	0.11	3.12	< 0.1	113	20	1700	8.16	1.4	22.2	1.6	0.4	0.5	< 10	< 0.05	0.12	32.1	0.70
E885650	1.15	< 20	24.6	0.28	1.64	4.58	1.25	1.48	45.1	78	42	1730	7.58	2.2	28.1	1.9	0.6	0.6	1870	> 100	1.51	17.8	0.60
E885851	0.005	< 20	48.5	0.09	1.23	3.05	0.39	0.26	0.3	23	38	1450	6.97	0.9	33.7	0.4	0.3	0.1	30	0.18	1.26	10.4	0.20
E885852	0.005	< 20	16.4	0.22	4.01	5.92	0.73	8.50	0.2	267	450	2060	7.56	1.1	227	1.6	0.3	0.5	10	0.06	1.39	55.6	0.60
E885853	0.005	< 20	12.0	0.15	4.62	6.04	0.69	9.36	< 0.1	341	665	3450	9.30	1.4	214	1.8	0.4	0.6	< 10	0.06	1.59	80.8	0.60
E885854	0.005	< 20	15.5	0.27	3.73	4.75	0.59	6.55	0.1	247	596	1940	7.67	1.0	206	1.4	0.3	0.4	< 10	0.06	2.11	58.5	0.50
E885855	< 0.005	< 20	13.6	1.89	3.24	7.75	0.33	7.29	0.2	264	109	1590	9.43	0.6	111	2.9	0.3	1.0	< 10	< 0.05	0.19	51.2	0.90
E885856	0.005	< 20	18.4	1.62	2.34	7.55	0.37	6.63	< 0.1	193	75	2710	9.11	3.0	63.2	3.1	0.6	1.1	< 10	< 0.05	0.33	49.4	1.00
E885857	< 0.005	< 20	15.9	1.64	3.03	7.06	0.83	5.76	< 0.1	179	19	1390	8.20	2.1	37.0	2.4	0.6	0.8	< 10	< 0.05	0.40	47.2	0.80
E885858	< 0.005	< 20	12.4	1.64	3.38	7.09	0.34	6.39	< 0.1	166	25	1410	7.41	2.3	46.1	2.3	0.6	0.8	30	< 0.05	0.23	43.2	0.80
E885859	< 0.005	< 20	19.8	1.14	3.38	6.30	0.39	7.73	< 0.1	193	28	1100	7.73	2.7	46.7	2.9	0.7	0.9	20	0.07	0.12	41.9	0.80
E885860	< 0.005	20	5.1	0.04	0.01	0.14	0.04	0.02	< 0.1	2	7	40	0.37	0.7	0.5	0.1	0.1	0.1	< 10	< 0.05	0.08	0.3	< 0.05
E885870	1.18	< 20	24.4	0.27	1.59	4.41	1.25	1.45	43.7	77	40	1750	7.38	2.0	27.3	1.7	0.7	0.6	1320	> 100	1.49	16.7	0.60
E885871	< 0.005	< 20	9.7	1.53	2.04	5.65	0.32	3.56	< 0.1	91	33	828	6.62	0.7	23.8	2.4	0.6	0.8	< 10	0.06	0.33	26.8	0.50
E885872	0.028	< 20	22.4	0.90	3.29	6.83	1.27	6.56	0.1	267	17	1370	9.36	3.6	45.0	3.4	0.8	1.1	< 10	0.14	2.05	57.4	1.10
E885873	< 0.005	< 20	11.8	1.85	2.30	8.13	0.62	7.19	0.1	160	25	1670	6.15	1.9	44.5	2.4	0.9	0.8	20	0.07	0.49	46.0	0.80
E885874	< 0.005	< 20	1.1	0.02	2.13	0.22	0.01	1.40	0.3	7	37	1450	19.7	0.1	9.8	0.5	0.8	0.2	40	< 0.05	0.15	5.0	0.30
E885875	< 0.005	< 20	1.2	0.02	1.56	0.33	0.02	1.72	< 0.1	22	52	3360	17.1	0.1	14.1	1.0	0.9	0.3	40	< 0.05	0.15	6.1	0.30
E885876	0.030	< 20	52.0	0.43	0.93	5.06	0.92	0.59	1.3	91	237	2860	9.96	1.7	141	1.1	1.4	0.3	70	0.25	1.76	48.1	0.70
E885877	< 0.005	< 20	12.3	1.91	2.62	7.48	0.21	8.68	0.3	196	84	1710	9.08	0.6	117	2.9	0.2	0.8	< 10	< 0.05	0.22	52.5	0.90
E885878	< 0.005	< 20	7.8	1.51	3.98	7.48	0.21	7.03	0.1	213	103	1520	9.94	0.8	101	3.0	0.4	1.0	10	< 0.05	0.12	48.2	0.80
GXR-4 Meas		< 20	11.5	0.53	1.62	7.02	4.42	0.99	0.2	86	40	151	3.04	1.3	39.0			2.0	< 10	3.94	2.49	14.7	1.20
GXR-4 Cert		4.50	11.1	0.564	1.66	7.20	4.01	1.01	0.860	87.0	64.0	155	3.09	6.30	42.0			1.90	110	4.00	2.80	14.6	1.63
GXR-4 Meas		< 20	10.7	0.51	1.58	6.68	4.44	0.92	0.3	86	49	139	2.99	1.3	39.4			2.0	< 10	3.75	2.33	14.7	1.20
GXR-4 Cert		4.50	11.1	0.564	1.66	7.20	4.01	1.01	0.860	87.0	64.0	155	3.09	6.30	42.0			1.90	110	4.00	2.80	14.6	1.63
SDC-1 Meas		< 20	36.3	1.57	0.96	8.40	1.46	0.97		45	43	848	4.68	0.7	34.9	3.5	3.0	1.1	< 10		3.45	17.6	1.40

Results

Activation Laboratories Ltd.

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	FA-AA	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS		
SAMPLE	Au	B	Li	Na	Mg	Al	K	Ca	Cd	V	Cr	Mn	Fe	Hf	Ni	Er	Be	Ho	Hg	Ag	Cs	Co	Eu		
DESCRIPTION	g/mt	ppm	ppm	%	%	%	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm		
SDC-1 Cert		13.00	34.0	1.52	1.02	8.34	2.72	1.00		102.00	64.00	880.00	4.82	8.30	38.0	4.10	3.00	1.50	200.00		4.00	18.0	1.70		
SDC-1 Meas		< 20	36.5	1.63	0.99	8.79	1.84	1.05		53	54	925	4.97	1.1	36.5	3.7	2.9	1.2	30		3.65	18.8	1.50		
SDC-1 Cert		13.00	34.0	1.52	1.02	8.34	2.72	1.00		102.00	64.00	880.00	4.82	8.30	38.0	4.10	3.00	1.50	200.00		4.00	18.0	1.70		
GXR-6 Meas		< 20	33.5	0.09	0.56	> 10.0	1.57	0.15	< 0.1	122	58	1020	5.45	2.0	22.5		1.1		40	0.32	3.60	13.1	0.60		
GXR-6 Cert		9.80	32.0	0.104	0.609	17.7	1.87	0.180	1.00	186	96.0	1010	5.58	4.30	27.0		1.40		68.0	1.30	4.20	13.8	0.760		
OREAS 97 (4 Acid) Meas																					20.3		65.0		
OREAS 97 (4 Acid) Cert																					19.6		62.9		
OREAS 97 (4 Acid) Meas																					21.3		69.0		
OREAS 97 (4 Acid) Cert																					19.6		62.9		
OREAS 98 (4 Acid) Meas																					48.6		124		
OREAS 98 (4 Acid) Cert																					45.1		121		
OREAS 98 (4 Acid) Meas																					47.4		128		
OREAS 98 (4 Acid) Cert																					45.1		121		
DNC-1a Meas			5.2							154	165					275							57.9	0.50	
DNC-1a Cert			5.2							148	270					247								57	0.59
DNC-1a Meas			5.0							153	172					280								59.4	0.50
DNC-1a Cert			5.2							148	270					247								57	0.59
SBC-1 Meas			171						0.3	218	89			3.4	86.5	3.5	3.4	1.1			7.05	22.5	1.70		
SBC-1 Cert			163						0.40	220.0	109			3.7	82.8	3.80	3.20	1.40			8.2	22.7	1.98		
SBC-1 Meas			169						0.4	219	90			3.4	85.3	3.4	3.2	1.1			6.91	22.5	1.70		
SBC-1 Cert			163						0.40	220.0	109			3.7	82.8	3.80	3.20	1.40			8.2	22.7	1.98		
OREAS 45d (4-Acid) Meas			22.5	0.10	0.24	8.09	0.46	0.17		102	543	487	14.6	2.2	239	1.4	0.8	0.4			3.48	30.6	0.50		
OREAS 45d (4-Acid) Cert			21.5	0.101	0.245	8.150	0.412	0.185		235.0	549	490.000	14.5	3.830	231.0	1.38	0.79	0.46			3.910	29.50	0.57		
OREAS 45d (4-Acid) Meas			20.5	0.10	0.22	7.72	0.44	0.17		128	548	464	13.5	2.3	232	1.3	0.8	0.4			3.14	29.2	0.50		
OREAS 45d (4-Acid) Cert			21.5	0.101	0.245	8.150	0.412	0.185		235.0	549	490.000	14.5	3.830	231.0	1.38	0.79	0.46			3.910	29.50	0.57		
OREAS 214 Meas	3.17																								
OREAS 214 Cert	3.03																								
OREAS 214 Meas	3.13																								
OREAS 214 Cert	3.03																								
OREAS 218 Meas	0.564																								
OREAS 218 Cert	0.531																								
OREAS 96 (4 Acid) Meas																					12.0		50.1		
OREAS 96 (4 Acid) Cert																					11.5		49.9		

	FA-AA	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	
SAMPLE	Au	B	Li	Na	Mg	Al	K	Ca	Cd	V	Cr	Mn	Fe	Hf	Ni	Er	Be	Ho	Hg	Ag	Cs	Co	Eu
DESCRIPTION	g/mt	ppm	ppm	%	%	%	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm
Acid) Cert																							
OREAS 96 (4 Acid) Meas																				12.5		53.1	
OREAS 96 (4 Acid) Cert																				11.5		49.9	
OREAS 217 (Fire Assay) Meas	0.330																						
OREAS 217 (Fire Assay) Cert	0.338																						
OREAS 217 (Fire Assay) Meas	0.342																						
OREAS 217 (Fire Assay) Cert	0.338																						
OREAS 217 (Fire Assay) Meas	0.346																						
OREAS 217 (Fire Assay) Cert	0.338																						
OREAS 217 (Fire Assay) Meas	0.330																						
OREAS 217 (Fire Assay) Cert	0.338																						
OREAS 215 (Fire Assay) Meas	3.41																						
OREAS 215 (Fire Assay) Cert	3.54																						
OREAS 215 (Fire Assay) Meas	3.49																						
OREAS 215 (Fire Assay) Cert	3.54																						
OREAS 215 (Fire Assay) Meas	3.50																						
OREAS 215 (Fire Assay) Cert	3.54																						
OREAS 215 (Fire Assay) Meas	3.55																						
OREAS 215 (Fire Assay) Cert	3.54																						
E885511 Orig	0.007																						
E885511 Dup	0.005																						
E885519 Orig	< 20	8.2	1.79	5.13	7.60	0.16	7.56	< 0.1	231	308	1880	7.86	0.8	141	1.5	0.3	0.5	30	0.09	0.18	49.8	0.50	
E885519 Dup	< 20	7.9	1.82	4.95	7.54	0.16	7.55	0.1	224	285	1830	7.50	0.7	140	1.3	0.3	0.4	20	0.09	0.17	47.5	0.40	
E885520 Orig	< 0.005																						
E885520 Dup	< 0.005																						
E885530 Orig	< 20	23.4	0.27	1.61	4.52	1.28	1.46	42.3	78	47	1740	7.43	2.0	26.2	1.8	0.7	0.5	590	> 100	1.42	16.5	0.50	
E885530 Dup	< 20	24.9	0.29	1.68	4.75	1.29	1.45	41.0	80	47	1790	7.37	2.0	26.6	1.6	0.7	0.5	850	> 100	1.42	17.2	0.50	
E885531 Orig	< 0.005																						
E885531 Dup	< 0.005																						

	FA-AA	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	
SAMPLE	Au	B	Li	Na	Mg	Al	K	Ca	Cd	V	Cr	Mn	Fe	Hf	Ni	Er	Be	Ho	Hg	Ag	Cs	Co	Eu
DESCRIPTION	g/mt	ppm	ppm	%	%	%	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm
E885548 Orig	< 0.005	< 20	16.1	2.52	1.61	7.45	0.17	4.16	< 0.1	82	72	1460	5.31	0.3	44.5	3.6	0.7	1.2	< 10	< 0.05	2.99	33.4	1.10
E885548 Dup	< 0.005	< 20	16.6	2.44	1.58	7.27	0.18	4.10	0.1	90	72	1470	5.42	1.6	45.2	3.8	0.8	1.2	< 10	< 0.05	3.13	34.1	1.20
E885549 Orig		< 20	34.8	0.09	0.71	7.74	0.10	1.06	0.1	94	83	579	3.10	3.3	306	1.0	0.8	0.3	20	0.11	0.87	16.3	0.70
E885549 Dup		< 20	33.6	0.09	0.69	7.40	0.10	1.01	< 0.1	90	85	565	2.98	3.2	287	0.9	0.8	0.3	< 10	0.11	0.86	15.8	0.60
E885551 Orig	< 0.005	< 20	1.9	0.02	16.7	2.95	0.01	0.70	< 0.1	72	3400	845	9.16	0.4	1570	0.3	0.1	0.1	20	< 0.05	0.21	123	0.10
E885551 Split	< 0.005	< 20	1.8	0.02	16.5	2.85	0.01	0.71	< 0.1	71	3710	862	9.15	0.4	1610	0.3	0.1	0.1	30	< 0.05	0.24	124	0.10
E885558 Orig	< 0.005																						
E885558 Dup	< 0.005																						
E885568 Orig	0.014																						
E885568 Dup	0.020																						
E885576 Orig		< 20	10.8	0.93	4.47	4.88	0.15	5.88	< 0.1	209	433	2470	11.3	2.0	188	1.9	1.2	0.7	10	< 0.05	0.17	62.5	0.70
E885576 Dup		< 20	10.5	0.91	4.31	4.73	0.14	5.62	0.1	196	398	2470	11.1	2.0	183	1.8	1.2	0.6	< 10	< 0.05	0.18	62.0	0.70
E885580 Orig	< 0.005																						
E885580 Dup	0.007																						
E885581 Orig		< 20	10.8	0.03	10.1	2.30	0.02	6.53	0.1	146	1340	1680	9.98	0.8	955	0.9	0.3	0.4	10	0.13	0.10	97.3	0.30
E885581 Dup		< 20	10.8	0.03	9.92	2.26	0.02	6.43	0.2	145	1420	1640	9.89	0.8	927	0.9	0.2	0.3	20	0.13	0.11	93.1	0.30
E885591 Orig	< 0.005																						
E885591 Dup	< 0.005																						
E885646 Orig	0.005	< 20	9.1	1.03	4.10	8.26	0.05	9.33	< 0.1	230	190	1310	7.98	0.6	154	1.6	0.1	0.5	< 10	< 0.05	0.05	43.2	0.60
E885646 Split	< 0.005	< 20	9.2	1.01	4.19	8.22	0.05	9.55	< 0.1	220	196	1320	7.87	0.6	153	1.6	0.2	0.6	< 10	< 0.05	< 0.05	41.9	0.60
E885647 Orig	0.005																						
E885647 Dup	0.005																						
E885852 Orig		< 20	16.4	0.22	4.01	5.92	0.73	8.50	0.2	267	450	2060	7.56	1.1	227	1.6	0.3	0.5	10	0.06	1.39	55.6	0.60
E885852 Dup		< 20	16.6	0.22	4.00	5.93	0.74	8.53	0.2	289	472	2120	7.79	1.2	229	1.5	0.3	0.5	20	0.05	1.43	57.4	0.60
E885853 Orig		< 20	12.0	0.15	4.62	6.04	0.69	9.36	< 0.1	341	665	3450	9.30	1.4	214	1.8	0.4	0.6	< 10	0.06	1.59	80.8	0.60
E885853 Dup		< 20	11.8	0.15	4.57	5.81	0.66	9.48	0.1	340	667	3490	9.23	1.3	213	1.7	0.5	0.6	< 10	0.05	1.51	80.3	0.60
E885858 Orig	< 0.005																						
E885858 Dup	< 0.005																						
E885872 Orig	0.028																						
E885872 Dup	0.028																						
E885877 Orig	< 0.005																						
E885877 Dup	< 0.005																						
Method Blank		20	< 0.5	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.1	1	4	1	< 0.01	< 0.1	< 0.5	< 0.1	< 0.1	< 0.1	40	< 0.05	< 0.05	< 0.1	< 0.05
Method Blank		20	< 0.5	< 0.01	< 0.01	< 0.01	0.01	< 0.01	< 0.1	1	5	1	0.01	< 0.1	< 0.5	< 0.1	< 0.1	< 0.1	20	< 0.05	< 0.05	< 0.1	< 0.05
Method Blank		30	< 0.5	< 0.01	< 0.01	< 0.01	0.01	< 0.01	< 0.1	1	4	7	< 0.01	< 0.1	< 0.5	< 0.1	0.1	< 0.1	20	< 0.05	< 0.05	< 0.1	< 0.05
Method Blank		30	< 0.5	< 0.01	< 0.01	< 0.01	0.01	< 0.01	< 0.1	1	4	2	0.01	< 0.1	< 0.5	< 0.1	< 0.1	< 0.1	40	< 0.05	< 0.05	< 0.1	< 0.05
Method Blank		30	< 0.5	< 0.01	< 0.01	< 0.01	0.01	< 0.01	< 0.1	1	6	1	0.01	< 0.1	< 0.5	< 0.1	< 0.1	< 0.1	10	< 0.05	< 0.05	< 0.1	< 0.05
Method Blank		20	< 0.5	< 0.01	< 0.01	< 0.01	0.01	< 0.01	< 0.1	1	5	3	< 0.01	< 0.1	< 0.5	< 0.1	< 0.1	< 0.1	50	< 0.05	< 0.05	< 0.1	< 0.05
Method Blank	< 0.005																						
Method Blank	< 0.005																						
Method Blank	< 0.005																						
Method Blank	< 0.005																						
Method Blank	< 0.005																						

Results

Activation Laboratories Ltd.

Report: A18-10521

	FA-AA	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS
SAMPLE	Au	B	Li	Na	Mg	Al	K	Ca	Cd	V	Cr	Mn	Fe	Hf	Ni	Er	Be	Ho	Hg	Ag	Cs	Co	Eu
DESCRIPTION	g/mt	ppm	ppm	%	%	%	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm
Method Blank	< 0.005																						
Method Blank	< 0.005																						
Method Blank	< 0.005																						
Method Blank	< 0.005																						
Method Blank	< 0.005																						
Method Blank	< 0.005																						
Method Blank	< 0.005																						

	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS
SAMPLE	Bi	Se	Zn	Ga	As	Rb	Y	Zr	Nb	Mo	In	Sn	Sb	Te	Ba	La	Ce	Pr	Nd	Sm	Gd	Tb	Dy
DESCRIPTION	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
E885501	0.32	0.5	82.8	23.0	1.5	48.6	9.9	129	1.9	1.20	< 0.1	1	< 0.1	< 0.1	471	10.8	22.4	2.3	9.2	1.2	1.9	0.3	2.0
E885502	0.10	1.0	148	16.3	1.2	1.4	16.5	28	1.3	0.34	< 0.1	< 1	0.7	< 0.1	26	1.7	4.4	0.7	3.5	1.2	2.1	0.4	2.8
E885503	1.07	0.4	31.6	23.8	2.2	34.5	10.4	167	4.4	1.74	< 0.1	1	< 0.1	0.2	377	21.1	42.1	4.5	17.9	3.3	3.0	0.3	1.8
E885504	0.28	1.7	107	17.3	1.0	1.1	16.6	25	1.3	0.27	0.1	4	0.6	< 0.1	17	1.5	4.2	0.6	3.2	1.1	2.1	0.4	2.7
E885505	0.27	0.5	117	22.0	118	35.9	10.2	128	2.9	0.76	< 0.1	< 1	0.4	< 0.1	323	13.0	26.1	2.8	10.9	2.1	1.9	0.3	1.7
E885506	0.05	0.3	9.6	0.9	2.1	0.2	0.3	4	0.2	0.47	< 0.1	< 1	< 0.1	< 0.1	1	0.2	0.3	< 0.1	0.1	< 0.1	< 0.1	< 0.1	0.1
E885507	0.56	0.8	82.1	12.4	64.8	28.8	11.3	70	2.5	3.18	< 0.1	< 1	1.9	< 0.1	121	6.4	12.3	1.3	5.2	1.4	1.7	0.3	1.7
E885508	3.70	4.8	90.0	11.3	> 10000	11.8	10.7	25	< 0.1	1.02	< 0.1	< 1	17.1	2.0	87	5.2	10.2	1.1	5.1	1.4	1.7	0.3	1.8
E885509	0.45	3.8	581	25.1	71.1	93.5	16.6	126	6.6	2.91	0.3	3	6.1	0.6	58	18.9	39.8	4.3	17.0	3.2	3.2	0.5	2.8
E885510	7.85	19.2	6220	13.5	331	38.3	15.8	73	3.6	8.07	2.8	17	26.0	0.2	25	11.1	23.9	3.1	13.9	2.9	3.0	0.4	2.8
E885511	0.12	1.0	82.4	19.6	66.6	26.3	15.5	101	2.9	0.68	< 0.1	< 1	1.5	0.2	179	13.6	27.5	3.0	12.4	2.7	3.0	0.4	2.8
E885512	0.15	0.9	74.9	2.3	20.2	1.0	8.7	11	0.6	0.58	< 0.1	< 1	2.7	0.2	11	2.0	3.9	0.4	1.8	0.5	0.6	0.1	0.9
E885513	0.07	0.5	98.0	21.1	2.1	16.3	15.9	110	2.2	0.43	< 0.1	< 1	0.6	< 0.1	138	14.0	28.8	3.3	12.8	3.4	3.3	0.5	2.9
E885514	0.14	0.5	63.2	16.8	8.8	9.5	15.6	61	2.7	0.40	< 0.1	< 1	0.1	< 0.1	105	5.9	13.3	1.5	7.4	2.0	2.3	0.4	2.6
E885515	0.06	0.6	123	18.9	0.4	2.9	24.2	26	1.2	0.21	< 0.1	< 1	< 0.1	< 0.1	18	2.5	7.5	1.2	7.3	2.8	3.7	0.6	4.1
E885516	0.07	0.7	76.2	14.0	1.2	7.4	13.2	47	1.3	0.24	< 0.1	< 1	< 0.1	< 0.1	114	3.6	8.3	1.0	4.6	1.4	2.2	0.3	2.2
E885517	0.04	0.3	2.8	0.4	1.2	0.2	0.1	1	< 0.1	0.63	< 0.1	< 1	< 0.1	< 0.1	1	0.1	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
E885518	0.15	0.5	109	16.8	0.9	3.4	18.5	24	0.5	0.17	< 0.1	< 1	< 0.1	< 0.1	17	1.2	3.4	0.5	3.0	1.3	2.3	0.4	2.9
E885519	0.07	0.8	73.5	12.8	0.5	2.1	12.1	25	1.8	0.36	< 0.1	< 1	< 0.1	< 0.1	38	2.9	7.3	0.9	4.3	1.3	2.0	0.3	2.1
E885520	0.05	0.2	2.6	0.8	2.2	2.4	1.7	22	0.6	0.30	< 0.1	< 1	0.2	< 0.1	21	1.8	3.3	0.4	1.4	0.3	0.3	< 0.1	0.3
E885521	0.06	0.5	45.6	17.7	1.6	9.8	12.6	68	2.9	0.53	< 0.1	< 1	0.2	< 0.1	96	9.0	19.5	2.1	9.2	2.0	2.2	0.3	2.4
E885522	0.32	0.8	96.5	19.1	18.2	71.8	14.0	98	5.0	1.78	< 0.1	1	6.8	0.1	512	17.1	35.2	3.9	15.4	3.0	2.8	0.4	2.5
E885523	0.18	0.8	136	13.4	81.7	12.4	12.5	79	3.6	1.61	< 0.1	< 1	11.3	< 0.1	95	10.3	22.3	2.3	10.3	2.1	2.3	0.4	2.3
E885524	0.20	1.0	156	3.8	171	1.1	26.9	3	1.0	1.55	0.2	3	18.3	< 0.1	8	5.0	10.7	1.2	5.5	1.3	2.4	0.5	3.3
E885525	1.06	1.4	1260	32.7	15.9	66.9	58.2	497	19.4	2.41	0.9	16	13.5	0.4	469	63.4	133	14.2	57.0	9.5	10.3	1.5	9.6
E885526	0.13	0.5	129	17.2	61.1	52.1	15.1	90	1.3	1.12	< 0.1	< 1	3.0	< 0.1	252	13.0	25.9	3.0	12.4	2.4	2.9	0.4	2.6
E885527	0.11	0.4	19.2	0.7	28.5	2.1	3.0	4	0.1	1.21	< 0.1	< 1	47.8	< 0.1	7	0.9	1.5	0.1	0.7	0.1	0.2	< 0.1	0.3
E885528	0.92	1.4	575	26.4	36.1	64.4	14.1	192	2.6	3.68	0.3	6	19.6	0.1	221	18.2	35.8	3.3	11.8	1.8	2.3	0.4	2.7
E885529	0.09	0.7	113	24.1	50.7	63.6	17.1	110	1.3	0.83	< 0.1	< 1	1.9	< 0.1	304	16.8	34.3	3.6	15.6	3.0	3.3	0.5	3.2
E885530	7.26	17.8	5900	12.9	318	36.7	14.5	68	3.5	7.70	2.7	16	24.8	0.1	25	10.3	22.6	2.9	12.9	2.9	2.7	0.4	2.5
E885531	0.06	0.6	89.0	0.9	22.2	0.2	12.3	5	0.3	1.27	< 0.1	< 1	50.6	< 0.1	1	3.7	8.0	1.0	4.7	0.8	1.7	0.2	1.8
E885532	0.06	0.6	101	21.6	32.1	41.5	15.4	97	0.7	0.56	< 0.1	< 1	1.1	< 0.1	369	16.3	30.2	3.1	11.8	2.2	2.8	0.5	2.7
E885533	3.48	6.8	51.2	2.2	> 10000	3.4	7.0	112	< 0.1	1.76	< 0.1	< 1	106	9.4	12	6.0	10.9	1.2	4.8	0.9	1.0	0.2	0.9

	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS
SAMPLE	Bi	Se	Zn	Ga	As	Rb	Y	Zr	Nb	Mo	In	Sn	Sb	Te	Ba	La	Ce	Pr	Nd	Sm	Gd	Tb	Dy
DESCRIPTION	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
E885534	0.08	0.3	30.9	1.9	153	0.5	7.3	5	0.3	1.27	< 0.1	< 1	4.1	< 0.1	11	2.4	4.3	0.5	2.1	0.3	0.6	0.1	0.8
E885535	0.10	0.6	94.3	19.2	74.7	47.9	14.3	104	3.5	1.10	< 0.1	< 1	1.7	< 0.1	377	12.4	25.4	2.7	11.6	2.7	2.4	0.4	2.5
E885536	0.31	1.0	261	22.5	32.7	51.5	14.5	102	4.5	1.90	< 0.1	2	6.2	0.2	164	12.9	26.4	2.9	12.4	2.5	2.9	0.4	2.6
E885537	0.15	0.6	141	16.5	126	57.5	15.2	54	2.4	0.97	< 0.1	< 1	2.3	< 0.1	266	5.9	12.7	1.5	7.6	2.1	2.5	0.4	2.5
E885538	0.08	0.3	65.1	33.4	9.6	59.1	12.6	194	0.9	0.94	< 0.1	1	0.1	< 0.1	1140	20.9	65.2	4.8	18.3	3.2	2.9	0.4	2.2
E885539	0.12	0.4	89.9	19.2	17.0	43.8	15.5	98	0.2	0.37	< 0.1	< 1	0.3	< 0.1	223	16.9	33.3	3.5	13.4	3.1	2.8	0.4	2.9
E885540	0.05	0.2	2.2	0.9	1.2	2.4	1.9	19	0.5	0.26	< 0.1	< 1	0.2	< 0.1	17	1.7	3.4	0.4	1.6	0.4	0.3	< 0.1	0.4
E885541	0.10	0.6	94.8	17.7	98.7	24.0	12.9	81	3.0	0.61	< 0.1	< 1	0.7	< 0.1	124	9.7	20.0	2.1	9.3	1.8	2.0	0.3	2.3
E885542	0.07	0.4	67.0	16.2	3.2	10.2	13.4	83	1.9	0.48	< 0.1	< 1	0.3	< 0.1	90	11.3	23.1	2.5	11.2	2.5	2.7	0.4	2.4
E885543	0.09	0.9	229	32.5	1.1	12.5	66.3	71	1.5	0.35	0.2	< 1	< 0.1	< 0.1	86	7.9	21.0	2.7	14.8	5.0	8.4	1.5	11.0
E885544	0.25	1.3	119	19.1	0.8	6.6	23.9	54	2.9	0.28	< 0.1	1	0.1	0.1	61	2.7	7.7	1.2	6.5	2.6	3.4	0.6	3.8
E885545	0.28	0.8	153	17.3	0.8	30.3	8.1	63	3.1	0.99	< 0.1	1	0.4	< 0.1	273	12.1	22.5	2.1	7.0	1.3	1.2	0.2	1.1
E885546	0.12	0.6	147	21.0	< 0.1	7.1	38.6	111	0.6	0.23	< 0.1	< 1	0.1	< 0.1	105	16.1	34.9	4.2	18.8	5.3	6.0	0.9	6.5
E885547	0.12	0.5	140	24.9	< 0.1	39.3	31.3	108	0.1	0.12	< 0.1	< 1	< 0.1	< 0.1	696	12.9	28.9	3.4	15.8	3.8	4.8	0.8	5.3
E885548	0.08	0.4	92.2	19.6	< 0.1	16.6	35.9	20	0.1	0.05	< 0.1	< 1	< 0.1	< 0.1	303	13.3	28.0	3.3	14.4	4.3	4.4	0.7	5.0
E885549	0.47	0.7	38.5	17.9	188	4.7	8.6	124	4.4	1.87	< 0.1	< 1	7.4	< 0.1	194	21.9	43.8	4.5	18.1	3.2	2.4	0.3	1.8
E885550	7.76	18.5	6280	13.5	336	37.2	14.7	68	3.7	8.07	2.8	16	30.8	0.2	39	11.0	24.3	3.1	13.7	3.3	3.0	0.4	2.4
E885551	0.05	0.8	87.2	6.0	10.9	0.5	2.3	17	0.6	0.23	< 0.1	< 1	1.4	< 0.1	3	1.9	3.5	0.4	1.3	0.4	0.4	< 0.1	0.4
E885552	0.32	0.6	16.4	24.4	437	58.6	11.8	35	12.6	0.80	< 0.1	5	2.6	< 0.1	29	4.1	8.4	1.0	4.5	1.8	3.0	0.4	2.4
E885553	0.08	0.6	140	21.5	12.8	26.7	15.8	113	0.5	0.48	< 0.1	< 1	1.4	< 0.1	116	13.0	26.7	3.0	11.9	2.9	3.0	0.4	2.7
E885554	0.09	0.6	89.3	18.5	3.8	13.0	15.0	92	0.8	0.63	< 0.1	< 1	1.0	< 0.1	198	12.5	25.9	2.8	12.1	2.2	2.6	0.4	2.6
E885555	0.11	0.9	53.7	3.7	8.8	2.5	6.2	16	0.7	1.13	< 0.1	< 1	4.5	0.1	72	3.3	5.5	0.5	2.3	0.4	0.6	0.1	0.7
E885556	0.12	0.8	227	25.1	16.0	30.0	18.3	117	1.9	0.99	< 0.1	< 1	0.8	< 0.1	283	13.7	27.3	2.9	11.4	2.4	2.5	0.4	3.0
E885557	0.08	0.7	99.4	22.8	49.9	42.7	13.9	110	2.4	0.72	< 0.1	< 1	0.8	< 0.1	273	15.2	30.7	3.3	13.4	3.0	2.8	0.4	2.7
E885558	0.10	0.4	50.7	1.0	67.1	2.4	5.7	4	0.2	0.70	< 0.1	< 1	6.5	< 0.1	13	0.9	1.5	0.1	0.8	0.2	0.3	0.1	0.5
E885559	0.07	0.4	64.8	1.6	8.3	0.9	4.9	4	0.2	0.27	< 0.1	< 1	4.0	< 0.1	17	1.2	2.2	0.2	0.9	0.4	0.4	0.1	0.5
E885560	0.05	0.3	2.1	0.8	2.8	2.1	1.7	23	0.5	0.31	< 0.1	< 1	0.2	< 0.1	14	2.2	4.1	0.4	1.7	0.3	0.3	< 0.1	0.3
E885561	0.40	0.5	97.9	12.1	149	3.3	11.9	36	1.8	1.58	< 0.1	< 1	3.6	< 0.1	77	4.2	8.5	1.0	4.6	1.4	1.6	0.3	2.0
E885562	0.06	0.4	43.7	0.8	135	0.5	5.1	5	0.2	1.31	< 0.1	< 1	6.2	< 0.1	6	0.9	1.5	0.2	0.7	0.2	0.4	0.1	0.5
E885563	0.06	0.5	111	23.7	13.1	54.5	14.7	116	1.1	0.30	< 0.1	< 1	0.3	< 0.1	526	19.6	37.4	3.8	14.6	3.1	3.4	0.5	2.8
E885564	0.07	0.5	52.1	1.6	158	0.9	5.5	7	0.6	1.31	< 0.1	< 1	10.2	< 0.1	13	2.0	3.3	0.4	1.3	0.3	0.4	0.1	0.5
E885565	0.09	0.4	112	30.8	207	22.3	25.3	157	4.4	1.14	< 0.1	< 1	1.5	< 0.1	277	17.9	37.4	4.2	17.4	4.6	4.3	0.6	4.2
E885566	0.07	0.8	162	2.6	32.2	1.8	6.9	6	0.5	1.41	< 0.1	< 1	8.1	0.1	29	1.6	2.5	0.3	1.1	0.4	0.5	0.1	0.8
E885567	0.11	0.7	97.6	21.0	52.1	5.6	17.3	123	4.1	0.93	< 0.1	1	2.3	< 0.1	34	15.5	31.6	3.4	13.9	2.5	3.2	0.5	3.1
E885568	0.25	1.0	135	9.5	73.5	2.1	9.5	91	4.4	1.47	0.1	1	5.5	< 0.1	23	11.5	22.7	2.3	8.8	2.1	1.7	0.2	1.5
E885569	0.10	0.4	93.4	19.7	20.5	1.1	22.3	110	1.0	0.32	0.1	< 1	0.1	< 0.1	58	8.3	19.1	2.5	11.7	2.7	4.1	0.6	4.0
E885570	7.87	18.7	6220	13.4	325	36.9	14.6	67	3.6	7.76	2.7	16	29.2	0.1	61	10.6	22.9	3.1	13.2	3.0	2.7	0.4	2.6
E885571	0.08	0.4	81.4	19.7	0.9	1.5	25.8	123	3.0	0.64	< 0.1	< 1	0.2	< 0.1	38	9.5	22.6	2.9	13.4	4.0	4.5	0.7	4.7
E885572	0.46	0.7	110	12.4	6.5	3.2	12.0	32	1.4	0.35	< 0.1	< 1	0.2	< 0.1	54	1.7	4.2	0.6	3.3	1.7	1.9	0.3	2.3
E885573	0.06	0.9	117	13.2	1.3	2.1	11.3	24	1.2	0.33	< 0.1	< 1	0.5	< 0.1	38	1.1	3.2	0.5	2.8	1.0	1.8	0.3	2.1
E885574	0.10	0.9	88.2	8.4	4.0	0.3	5.4	17	0.7	1.77	< 0.1	< 1	0.4	< 0.1	9	0.3	0.7	0.1	0.7	0.4	0.8	0.1	0.9
E885575	0.08	0.9	127	13.6	1.8	6.3	12.9	27	1.2	0.72	< 0.1	< 1	0.5	< 0.1	116	1.2	3.2	0.5	2.8	1.1	1.9	0.3	2.3
E885576	0.09	0.4	81.7	14.9	0.7	1.4	17.5	76	0.3	0.15	< 0.1	< 1	< 0.1	< 0.1	59	2.8	7.0	1.0	5.1	1.8	2.8	0.5	3.2

	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS
SAMPLE	Bi	Se	Zn	Ga	As	Rb	Y	Zr	Nb	Mo	In	Sn	Sb	Te	Ba	La	Ce	Pr	Nd	Sm	Gd	Tb	Dy
DESCRIPTION	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
E885577	0.11	0.8	125	11.3	14.4	4.2	12.3	47	0.8	0.31	< 0.1	< 1	0.1	< 0.1	46	3.0	7.4	1.0	5.0	1.8	2.3	0.4	2.4
E885578	0.05	0.4	124	12.0	4.4	4.5	12.1	57	0.5	0.20	< 0.1	< 1	< 0.1	< 0.1	78	2.6	6.5	0.9	4.4	1.8	2.1	0.4	2.1
E885579	0.07	0.6	87.6	8.1	186	0.7	12.6	36	0.3	0.40	< 0.1	< 1	0.1	< 0.1	13	2.9	6.9	0.9	4.7	1.4	2.1	0.3	2.3
E885580	0.06	0.2	4.0	1.1	1.7	3.5	2.1	23	0.7	0.26	< 0.1	< 1	0.2	< 0.1	36	2.3	4.8	0.5	2.1	0.4	0.3	0.1	0.3
E885581	0.10	0.8	94.9	8.3	75.4	0.3	8.9	30	1.2	0.33	< 0.1	< 1	0.3	< 0.1	7	1.4	4.0	0.6	3.3	1.1	1.6	0.3	1.7
E885582	0.10	0.5	102	15.1	12.8	0.6	13.7	89	0.1	0.22	< 0.1	< 1	< 0.1	< 0.1	53	8.4	17.8	2.0	7.9	2.2	2.6	0.4	2.5
E885583	0.04	< 0.1	96.2	16.0	0.2	0.7	14.0	107	0.6	0.49	< 0.1	< 1	< 0.1	< 0.1	41	10.1	21.2	2.4	10.0	2.3	2.9	0.4	2.6
E885584	0.24	1.2	223	15.4	1.6	9.6	17.4	56	2.3	0.22	< 0.1	< 1	0.2	< 0.1	94	4.3	10.5	1.4	7.1	1.7	3.0	0.5	3.3
E885585	0.07	0.3	99.9	6.3	128	0.2	4.7	22	0.1	0.16	< 0.1	< 1	0.3	< 0.1	13	0.9	2.7	0.4	2.3	0.7	1.1	0.2	1.1
E885586	0.07	0.2	143	13.9	4.6	1.1	14.6	66	0.2	0.16	< 0.1	< 1	< 0.1	< 0.1	99	4.4	10.7	1.3	6.8	1.7	2.7	0.4	2.9
E885587	0.14	0.5	97.3	11.9	80.2	4.2	12.2	54	0.9	0.14	< 0.1	< 1	< 0.1	< 0.1	62	3.7	9.7	1.3	6.0	2.0	2.6	0.4	2.5
E885588	0.08	2.1	116	17.6	2.5	2.8	17.8	101	3.3	1.06	< 0.1	< 1	0.1	< 0.1	58	8.3	19.9	2.5	12.2	3.1	4.1	0.6	4.0
E885589	0.11	1.0	209	19.7	< 0.1	1.2	20.2	76	2.4	1.43	< 0.1	< 1	0.3	< 0.1	42	10.8	21.3	2.6	12.0	3.1	4.3	0.6	4.1
E885590	7.87	18.9	6200	13.7	331	37.8	16.5	76	3.7	8.07	3.1	18	33.6	0.1	97	12.1	25.8	3.3	14.3	3.0	3.0	0.4	3.0
E885591	0.10	0.7	68.1	5.8	61.2	1.3	2.3	11	0.4	0.19	< 0.1	< 1	1.1	< 0.1	3	0.2	0.6	0.1	0.6	0.3	0.3	0.1	0.5
E885592	0.05	0.3	137	10.4	2.3	0.6	12.0	40	0.5	0.24	< 0.1	< 1	0.1	< 0.1	14	1.3	4.0	0.7	3.8	1.8	2.3	0.4	2.7
E885593	0.06	0.2	105	10.2	< 0.1	0.4	14.3	44	1.0	0.26	< 0.1	< 1	0.2	< 0.1	17	4.2	10.0	1.3	6.4	1.7	2.8	0.4	2.6
E885594	0.13	0.4	119	18.6	< 0.1	7.3	22.8	73	1.6	0.27	< 0.1	< 1	< 0.1	< 0.1	62	3.4	10.2	1.5	8.4	3.0	3.9	0.6	4.3
E885595	0.11	0.1	90.0	18.2	< 0.1	8.7	18.7	69	1.3	0.25	< 0.1	< 1	< 0.1	< 0.1	67	4.3	11.3	1.7	8.2	2.4	3.1	0.5	3.5
E885596	0.18	< 0.1	178	14.3	< 0.1	22.6	15.8	45	0.1	0.05	< 0.1	< 1	< 0.1	< 0.1	203	3.9	9.0	1.2	5.6	1.8	2.4	0.4	2.9
E885597	0.05	< 0.1	75.0	0.9	4.9	0.7	4.3	3	0.1	1.60	< 0.1	< 1	0.3	< 0.1	17	1.4	2.2	0.2	1.1	0.2	0.5	0.1	0.5
E885598	0.08	0.5	27.6	0.9	1.6	0.4	3.5	3	0.1	2.87	< 0.1	< 1	0.4	< 0.1	3	1.2	2.2	0.3	1.2	0.2	0.4	0.1	0.4
E885599	0.49	2.0	416	12.0	26.4	27.4	5.6	55	1.9	3.21	0.2	3	1.1	0.6	71	8.5	16.7	1.7	6.2	1.0	1.1	0.1	1.0
E885600	0.06	0.1	2.1	0.7	0.7	1.8	1.7	17	0.5	0.21	< 0.1	< 1	0.2	< 0.1	16	1.9	3.8	0.4	1.7	0.3	0.3	< 0.1	0.2
E885646	0.04	0.3	77.7	15.3	1.8	0.5	14.7	19	1.0	0.44	< 0.1	< 1	< 0.1	< 0.1	21	2.1	5.9	0.9	4.8	1.7	2.1	0.3	2.6
E885647	0.05	0.3	96.7	16.0	< 0.1	6.6	18.6	25	1.5	0.32	< 0.1	< 1	< 0.1	< 0.1	44	2.8	7.8	1.2	6.4	2.0	3.1	0.5	3.1
E885648	0.09	0.2	82.2	11.7	2.8	0.7	13.2	40	0.4	0.22	< 0.1	< 1	0.3	< 0.1	12	2.8	7.4	1.1	5.6	1.3	2.4	0.4	2.6
E885649	0.08	< 0.1	75.8	12.8	< 0.1	1.0	14.2	56	0.2	0.28	< 0.1	< 1	0.2	< 0.1	18	3.4	9.0	1.0	5.1	1.7	2.5	0.4	2.5
E885650	7.89	19.2	6190	13.2	332	38.3	15.8	77	3.6	8.06	3.1	18	34.1	0.1	50	11.4	24.5	3.2	13.6	2.7	3.1	0.5	2.8
E885851	0.17	1.1	143	7.3	19.1	12.9	2.7	40	1.4	1.56	< 0.1	< 1	0.6	0.2	50	2.4	4.9	0.5	2.0	0.5	0.5	0.1	0.4
E885852	0.30	0.4	103	15.9	7.0	23.7	13.0	37	0.8	0.57	< 0.1	< 1	< 0.1	< 0.1	86	2.9	7.5	1.1	5.3	1.8	2.4	0.4	2.4
E885853	0.34	0.5	71.2	16.6	17.1	19.3	14.0	47	1.5	0.36	< 0.1	< 1	0.1	< 0.1	36	2.6	6.7	1.0	5.3	1.7	2.3	0.4	2.5
E885854	0.23	0.2	67.0	13.0	0.6	20.5	10.3	35	0.8	0.39	< 0.1	< 1	< 0.1	< 0.1	40	2.3	6.0	0.8	4.3	1.4	1.9	0.3	2.1
E885855	0.08	0.4	114	18.1	< 0.1	3.5	24.9	13	0.5	0.23	< 0.1	< 1	< 0.1	< 0.1	39	2.9	9.1	1.4	7.7	2.5	3.6	0.6	4.1
E885856	0.12	< 0.1	108	18.5	< 0.1	7.1	27.7	114	0.1	0.15	< 0.1	< 1	< 0.1	< 0.1	120	9.1	20.7	2.6	11.4	3.5	4.5	0.7	5.0
E885857	0.06	0.2	101	17.7	< 0.1	18.6	20.3	83	0.1	0.15	< 0.1	< 1	< 0.1	< 0.1	221	9.7	21.3	2.6	11.5	2.4	3.5	0.5	3.5
E885858	0.09	0.3	106	17.0	< 0.1	6.2	21.2	86	0.4	0.33	< 0.1	< 1	< 0.1	< 0.1	76	9.6	20.9	2.5	11.1	3.0	3.6	0.6	3.7
E885859	0.07	0.3	60.3	16.2	1.2	6.4	25.1	103	1.7	0.68	< 0.1	< 1	< 0.1	< 0.1	48	12.8	26.5	3.2	13.8	3.4	4.1	0.6	4.2
E885860	0.04	< 0.1	1.7	0.6	< 0.1	1.4	1.6	20	0.4	0.22	< 0.1	< 1	0.2	< 0.1	13	1.7	3.1	0.4	1.3	0.3	0.2	< 0.1	0.3
E885870	7.60	18.9	5970	12.9	314	37.6	15.5	71	3.6	7.50	2.9	17	31.2	0.1	62	11.1	23.8	3.1	13.5	2.9	3.0	0.4	2.7
E885871	0.09	< 0.1	58.2	13.3	0.1	5.9	19.2	28	< 0.1	0.16	< 0.1	< 1	< 0.1	< 0.1	57	4.4	10.9	1.3	5.9	2.1	2.3	0.4	3.3
E885872	0.16	1.2	92.5	21.6	4780	22.1	28.9	145	4.7	1.22	0.1	2	2.7	0.1	360	15.9	34.1	4.0	16.9	3.7	4.7	0.7	4.9
E885873	0.11	0.3	102	18.6	18.1	23.6	21.6	75	0.4	0.25	< 0.1	< 1	< 0.1	< 0.1	205	10.9	24.7	2.9	12.6	2.5	3.7	0.6	3.7

Results

Activation Laboratories Ltd.

Report: A18-10521

	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS
SAMPLE	Bi	Se	Zn	Ga	As	Rb	Y	Zr	Nb	Mo	In	Sn	Sb	Te	Ba	La	Ce	Pr	Nd	Sm	Gd	Tb	Dy
DESCRIPTION	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
E885874	0.06	0.4	214	1.5	3.4	1.1	7.3	4	0.3	1.23	0.3	< 1	0.4	< 0.1	5	2.4	4.7	0.5	2.2	0.6	0.7	0.1	0.8
E885875	0.08	0.7	44.4	1.4	6.8	1.3	10.3	8	0.3	2.06	< 0.1	< 1	0.8	< 0.1	13	1.6	3.0	0.3	1.6	0.4	0.7	0.1	1.0
E885876	0.46	2.2	2230	15.5	43.9	41.4	10.4	74	4.4	3.37	0.4	7	1.5	0.5	185	14.0	28.3	3.1	11.3	2.5	2.0	0.3	1.6
E885877	0.04	0.4	123	16.7	< 0.1	4.5	24.4	19	0.2	0.14	< 0.1	< 1	< 0.1	< 0.1	50	3.4	9.1	1.3	7.2	2.2	3.5	0.6	3.8
E885878	0.05	0.3	106	18.0	0.1	1.9	24.8	27	0.3	0.14	< 0.1	< 1	< 0.1	< 0.1	17	2.4	7.4	1.1	6.7	2.1	3.7	0.6	4.2
GXR-4 Meas	19.5	6.2	71.3	19.4	102	153	13.2	47	9.4	315	0.3	8	4.4	0.9	237	55.3	108		39.9	6.4	4.8	0.5	2.6
GXR-4 Cert	19.0	5.60	73.0	20.0	98.0	160	14.0	186	10.0	310	0.270	5.60	4.80	0.970	1640	64.5	102		45.0	6.60	5.25	0.360	2.60
GXR-4 Meas	18.1	6.2	69.3	18.1	101	149	12.9	46	9.2	316	0.2	7	4.2	0.9	206	56.5	109		40.6	6.1	4.5	0.5	2.5
GXR-4 Cert	19.0	5.60	73.0	20.0	98.0	160	14.0	186	10.0	310	0.270	5.60	4.80	0.970	1640	64.5	102		45.0	6.60	5.25	0.360	2.60
SDC-1 Meas			105	25.0	< 0.1	60.3		23	0.1			< 1	< 0.1		605	38.1	85.0		38.6	7.1	6.9	1.0	5.6
SDC-1 Cert			103.00	21.00	0.220	127.00		290.00	21.00			3.00	0.54		630	42.00	93.00		40.00	8.20	7.00	1.20	6.70
SDC-1 Meas			112	24.5	< 0.1	78.2		37	0.6			< 1	< 0.1		662	41.0	90.5		40.8	8.7	7.3	1.0	5.8
SDC-1 Cert			103.00	21.00	0.220	127.00		290.00	21.00			3.00	0.54		630	42.00	93.00		40.00	8.20	7.00	1.20	6.70
GXR-6 Meas	0.20	0.8	129	35.1	237	63.6	12.2	71	0.1	0.73	< 0.1	< 1	0.5	< 0.1	1220	12.2	33.0		11.9	2.5	2.3	0.3	2.1
GXR-6 Cert	0.290	0.940	118	35.0	330	90.0	14.0	110	7.50	2.40	0.260	1.70	3.60	0.0180	1300	13.9	36.0		13.0	2.67	2.97	0.415	2.80
OREAS 97 (4 Acid) Meas	41.3	72.8	604									98	6.8										
OREAS 97 (4 Acid) Cert	40.1	71.4	646									95.7	9.23										
OREAS 97 (4 Acid) Meas	41.0	71.2	637									103	6.8										
OREAS 97 (4 Acid) Cert	40.1	71.4	646									95.7	9.23										
OREAS 98 (4 Acid) Meas	97.2	173	1320									> 200	11.3										
OREAS 98 (4 Acid) Cert	97.2	158	1360									206	20.1										
OREAS 98 (4 Acid) Meas	94.5	161	1340									> 200	7.4										
OREAS 98 (4 Acid) Cert	97.2	158	1360									206	20.1										
DNC-1a Meas			70.9	14.9		3.3	15.6	39	1.5				0.8		101	3.4			4.8				
DNC-1a Cert			70	15		5	18.0	38.0	3				0.96		118	3.6			5.20				
DNC-1a Meas			69.7	14.8		3.4	15.3	37	1.4				0.7		101	3.4			4.8				
DNC-1a Cert			70	15		5	18.0	38.0	3				0.96		118	3.6			5.20				
SBC-1 Meas	0.74		199	30.7	25.4	113	30.2	122	13.5	2.19		4	0.9		709	47.5	106	12.0	46.1	9.7	8.4	1.1	6.1
SBC-1 Cert	0.70		186	27.0	25.7	147	36.5	134.0	15.3	2.40		3.3	1.01		788.0	52.5	108.0	12.6	49.2	9.6	8.5	1.20	7.10
SBC-1 Meas	0.69		209	29.6	25.8	125	29.4	119	13.7	2.22		3	0.9		665	46.6	101	11.5	46.4	8.7	7.6	1.0	5.7
SBC-1 Cert	0.70		186	27.0	25.7	147	36.5	134.0	15.3	2.40		3.3	1.01		788.0	52.5	108.0	12.6	49.2	9.6	8.5	1.20	7.10
OREAS 45d (4-Acid) Meas	0.34		44.1	22.2	6.7	41.8	10.9	91	0.3	0.24	< 0.1	< 1	< 0.1		176	15.8	35.2	3.6	13.4	2.9	2.4	0.4	2.3
OREAS 45d (4-Acid) Cert	0.31		45.7	21.20	13.8	42.1	9.53	141	14.50	2.500	0.096	2.78	0.82		183.0	16.9	37.20	3.70	13.4	2.80	2.42	0.400	2.26
OREAS 45d (4-Acid) Meas	0.34		42.8	20.9	8.3	38.5	10.0	88	0.7	0.81	< 0.1	< 1	< 0.1		169	15.0	33.3	3.3	12.7	2.7	2.3	0.3	2.0
OREAS 45d	0.31		45.7	21.20	13.8	42.1	9.53	141	14.50	2.500	0.096	2.78	0.82		183.0	16.9	37.20	3.70	13.4	2.80	2.42	0.400	2.26

	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS
SAMPLE	Bi	Se	Zn	Ga	As	Rb	Y	Zr	Nb	Mo	In	Sn	Sb	Te	Ba	La	Ce	Pr	Nd	Sm	Gd	Tb	Dy
DESCRIPTION	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
(4-Acid) Cert																							
OREAS 214 Meas																							
OREAS 214 Cert																							
OREAS 214 Meas																							
OREAS 214 Cert																							
OREAS 218 Meas																							
OREAS 218 Cert																							
OREAS 96 (4 Acid) Meas	27.5	43.8	439									69	4.9										
OREAS 96 (4 Acid) Cert	26.3	40.7	457									65.6	5.09										
OREAS 96 (4 Acid) Meas	27.6	42.9	465									71	5.0										
OREAS 96 (4 Acid) Cert	26.3	40.7	457									65.6	5.09										
OREAS 217 (Fire Assay) Meas																							
OREAS 217 (Fire Assay) Cert																							
OREAS 217 (Fire Assay) Meas																							
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OREAS 215 (Fire Assay) Meas																							
OREAS 215 (Fire Assay) Cert																							
OREAS 215 (Fire Assay) Meas																							
OREAS 215 (Fire Assay) Cert																							
E885511 Orig																							

	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS
SAMPLE	Bi	Se	Zn	Ga	As	Rb	Y	Zr	Nb	Mo	In	Sn	Sb	Te	Ba	La	Ce	Pr	Nd	Sm	Gd	Tb	Dy
DESCRIPTION	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
E885511 Dup																							
E885519 Orig	0.07	0.8	73.5	12.8	0.5	2.1	12.1	25	1.8	0.36	< 0.1	< 1	< 0.1	< 0.1	38	2.9	7.3	0.9	4.3	1.3	2.0	0.3	2.1
E885519 Dup	0.06	0.7	71.5	12.5	0.4	1.9	11.5	23	1.8	0.33	< 0.1	< 1	< 0.1	< 0.1	34	2.7	7.0	0.9	4.5	1.0	1.9	0.3	2.0
E885520 Orig																							
E885520 Dup																							
E885530 Orig	7.26	17.8	5900	12.9	318	36.7	14.5	68	3.5	7.70	2.7	16	24.8	0.1	25	10.3	22.6	2.9	12.9	2.9	2.7	0.4	2.5
E885530 Dup	7.54	18.0	6070	13.2	323	36.4	14.5	68	3.5	7.64	2.7	16	29.8	0.2	29	10.7	23.4	3.0	13.1	3.0	3.0	0.4	2.5
E885531 Orig																							
E885531 Dup																							
E885548 Orig	0.08	0.4	92.2	19.6	< 0.1	16.6	35.9	20	0.1	0.05	< 0.1	< 1	< 0.1	< 0.1	303	13.3	28.0	3.3	14.4	4.3	4.4	0.7	5.0
E885548 Dup	0.09	0.6	91.1	19.8	< 0.1	16.9	36.2	57	0.1	0.14	< 0.1	< 1	0.2	< 0.1	316	13.7	29.1	3.4	15.3	3.9	4.6	0.8	5.2
E885549 Orig	0.47	0.7	38.5	17.9	188	4.7	8.6	124	4.4	1.87	< 0.1	< 1	7.4	< 0.1	194	21.9	43.8	4.5	18.1	3.2	2.4	0.3	1.8
E885549 Dup	0.45	0.8	36.2	16.8	181	4.5	8.5	119	5.0	1.88	< 0.1	< 1	7.1	< 0.1	188	21.5	43.5	4.4	16.9	3.2	2.4	0.3	1.5
E885551 Orig	0.05	0.8	87.2	6.0	10.9	0.5	2.3	17	0.6	0.23	< 0.1	< 1	1.4	< 0.1	3	1.9	3.5	0.4	1.3	0.4	0.4	< 0.1	0.4
E885551 Split	0.04	0.8	91.8	6.1	9.7	0.5	2.4	18	0.7	0.19	< 0.1	< 1	1.5	< 0.1	3	1.6	3.0	0.3	1.4	0.2	0.2	0.1	0.4
E885558 Orig																							
E885558 Dup																							
E885568 Orig																							
E885568 Dup																							
E885576 Orig	0.09	0.4	81.7	14.9	0.7	1.4	17.5	76	0.3	0.15	< 0.1	< 1	< 0.1	< 0.1	59	2.8	7.0	1.0	5.1	1.8	2.8	0.5	3.2
E885576 Dup	0.08	0.4	80.1	14.6	0.2	1.4	17.0	71	0.3	0.24	< 0.1	< 1	< 0.1	< 0.1	54	2.7	6.8	0.9	4.9	2.2	2.4	0.5	3.0
E885580 Orig																							
E885580 Dup																							
E885581 Orig	0.10	0.8	94.9	8.3	75.4	0.3	8.9	30	1.2	0.33	< 0.1	< 1	0.3	< 0.1	7	1.4	4.0	0.6	3.3	1.1	1.6	0.3	1.7
E885581 Dup	0.08	0.8	90.2	7.8	67.1	0.3	8.3	29	0.9	0.25	< 0.1	< 1	0.3	< 0.1	7	1.5	4.0	0.6	3.3	1.2	1.7	0.3	1.8
E885591 Orig																							
E885591 Dup																							
E885646 Orig	0.04	0.3	77.7	15.3	1.8	0.5	14.7	19	1.0	0.44	< 0.1	< 1	< 0.1	< 0.1	21	2.1	5.9	0.9	4.8	1.7	2.1	0.3	2.6
E885646 Split	0.04	0.2	78.9	15.6	1.9	0.5	14.3	18	0.6	0.40	< 0.1	< 1	< 0.1	< 0.1	20	2.1	5.9	0.9	4.7	1.9	2.1	0.4	2.7
E885647 Orig																							
E885647 Dup																							
E885852 Orig	0.30	0.4	103	15.9	7.0	23.7	13.0	37	0.8	0.57	< 0.1	< 1	< 0.1	< 0.1	86	2.9	7.5	1.1	5.3	1.8	2.4	0.4	2.4
E885852 Dup	0.31	0.5	107	16.0	7.8	24.7	13.3	42	1.2	0.48	< 0.1	< 1	< 0.1	< 0.1	90	2.9	7.6	1.2	5.7	2.0	2.3	0.4	2.5
E885853 Orig	0.34	0.5	71.2	16.6	17.1	19.3	14.0	47	1.5	0.36	< 0.1	< 1	0.1	< 0.1	36	2.6	6.7	1.0	5.3	1.7	2.3	0.4	2.5
E885853 Dup	0.31	0.4	70.2	16.4	19.8	19.1	14.0	47	1.6	0.38	< 0.1	< 1	0.2	< 0.1	36	2.6	6.8	0.9	4.9	1.8	2.2	0.4	2.7
E885858 Orig																							
E885858 Dup																							
E885872 Orig																							
E885872 Dup																							
E885877 Orig																							
E885877 Dup																							
Method Blank	0.04	0.1	0.6	0.2	0.2	< 0.2	< 0.1	< 1	< 0.1	0.10	< 0.1	< 1	< 0.1	< 0.1	< 1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Method Blank	0.04	0.4	< 0.2	0.2	0.4	< 0.2	< 0.1	< 1	< 0.1	0.31	< 0.1	< 1	< 0.1	< 0.1	< 1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1

	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS
SAMPLE	Bi	Se	Zn	Ga	As	Rb	Y	Zr	Nb	Mo	In	Sn	Sb	Te	Ba	La	Ce	Pr	Nd	Sm	Gd	Tb	Dy
DESCRIPTION	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Method Blank	0.04	0.4	< 0.2	0.2	< 0.1	< 0.2	< 0.1	< 1	< 0.1	0.09	< 0.1	< 1	< 0.1	< 0.1	< 1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Method Blank	0.04	0.1	< 0.2	0.2	0.4	< 0.2	< 0.1	< 1	< 0.1	0.11	< 0.1	< 1	< 0.1	< 0.1	< 1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Method Blank	0.03	< 0.1	< 0.2	0.2	0.4	< 0.2	< 0.1	< 1	< 0.1	0.06	< 0.1	< 1	< 0.1	< 0.1	< 1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Method Blank	0.03	0.1	0.5	0.2	0.4	< 0.2	< 0.1	< 1	< 0.1	0.13	< 0.1	< 1	< 0.1	< 0.1	< 1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
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	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS
SAMPLE	Cu	Ge	Tm	Yb	Lu	Ta	Sr	W	Re	Ti	Pb	Th	U
DESCRIPTION	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
E885501	28.7	0.6	0.2	1.2	0.2	< 0.1	140	0.3	< 0.001	0.49	13.3	5.4	1.9
E885502	107	0.5	0.3	2.0	0.3	< 0.1	88.7	0.3	< 0.001	< 0.05	9.1	0.3	0.1
E885503	1.9	0.5	0.2	1.1	0.1	0.2	147	0.4	< 0.001	0.60	8.4	8.4	2.2
E885504	216	0.2	0.3	2.0	0.3	< 0.1	97.6	0.2	< 0.001	< 0.05	2.3	0.3	0.1
E885505	29.3	0.7	0.2	1.3	0.2	0.2	195	0.9	< 0.001	0.18	27.8	6.5	1.5
E885506	2.6	0.1	< 0.1	< 0.1	< 0.1	< 0.1	2.0	0.2	< 0.001	< 0.05	< 0.5	0.1	< 0.1
E885507	41.3	0.4	0.2	1.3	0.2	0.2	57.6	0.4	< 0.001	0.13	12.6	3.7	1.7
E885508	35.0	0.1	0.2	1.2	0.2	< 0.1	27.5	2.0	< 0.001	< 0.05	4.4	1.5	1.1
E885509	180	0.2	0.3	1.9	0.3	0.5	34.0	1.2	0.004	1.57	18.0	7.7	2.2
E885510	1940	0.2	0.3	1.9	0.2	< 0.1	73.3	3.6	0.012	5.69	> 5000	2.9	2.0
E885511	45.3	0.6	0.2	1.8	0.2	0.1	134	0.5	< 0.001	0.38	12.6	4.4	1.3
E885512	40.2	0.2	0.1	0.9	0.1	< 0.1	6.7	0.4	< 0.001	< 0.05	0.5	0.5	0.2
E885513	26.3	0.9	0.3	1.9	0.3	0.1	95.0	0.2	< 0.001	< 0.05	8.3	4.5	1.0
E885514	62.5	0.8	0.3	1.8	0.3	0.2	157	0.4	< 0.001	< 0.05	2.8	2.0	0.4
E885515	22.6	0.5	0.4	2.7	0.3	< 0.1	115	0.1	< 0.001	< 0.05	< 0.5	0.3	0.1
E885516	40.9	0.9	0.2	1.5	0.2	< 0.1	84.0	0.2	< 0.001	< 0.05	2.3	2.0	0.5
E885517	3.5	0.1	< 0.1	< 0.1	< 0.1	< 0.1	0.9	< 0.1	< 0.001	< 0.05	< 0.5	< 0.1	< 0.1
E885518	41.8	0.8	0.3	2.3	0.3	< 0.1	25.6	0.1	< 0.001	< 0.05	0.7	0.2	0.1
E885519	101	0.4	0.2	1.4	0.2	0.1	96.8	0.3	< 0.001	< 0.05	1.5	1.2	0.3
E885520	2.5	0.1	< 0.1	0.2	< 0.1	< 0.1	2.7	0.2	< 0.001	< 0.05	< 0.5	1.1	0.4
E885521	17.4	0.7	0.2	1.4	0.2	0.2	154	0.5	< 0.001	< 0.05	2.0	3.4	0.8
E885522	50.0	0.3	0.2	1.5	0.2	0.4	100	1.5	0.001	0.69	12.9	6.6	1.9
E885523	64.0	0.8	0.2	1.4	0.2	0.3	110	0.5	0.001	0.05	7.1	3.5	1.0
E885524	24.4	0.3	0.4	2.9	0.4	< 0.1	12.2	1.0	< 0.001	< 0.05	10.9	1.0	0.2

	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS
SAMPLE	Cu	Ge	Tm	Yb	Lu	Ta	Sr	W	Re	Tl	Pb	Th	U
DESCRIPTION	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
E885525	114	1.5	1.1	7.8	1.1	1.3	392	1.6	0.001	3.44	63.9	30.8	8.0
E885526	13.9	0.9	0.2	1.6	0.2	< 0.1	109	1.0	< 0.001	1.43	34.1	4.1	1.2
E885527	10.4	0.7	< 0.1	0.4	0.1	< 0.1	2.6	0.2	< 0.001	< 0.05	6.9	0.2	< 0.1
E885528	45.7	0.7	0.3	2.0	0.2	0.1	68.9	0.1	0.001	1.89	110	32.0	6.5
E885529	75.9	0.8	0.3	2.0	0.2	< 0.1	116	0.2	< 0.001	1.17	9.7	5.4	1.6
E885530	1830	0.2	0.2	1.8	0.2	0.1	72.0	3.1	0.010	5.41	> 5000	2.7	1.9
E885531	5.9	0.5	0.2	1.5	0.2	< 0.1	6.6	1.1	< 0.001	< 0.05	< 0.5	0.2	< 0.1
E885532	64.7	0.7	0.2	1.6	0.2	< 0.1	73.6	0.1	< 0.001	1.07	7.4	6.0	1.7
E885533	136	0.2	0.1	0.7	0.1	< 0.1	7.9	0.4	0.001	< 0.05	1.4	0.9	0.2
E885534	1.2	0.2	0.1	0.7	0.1	< 0.1	18.1	0.2	< 0.001	< 0.05	< 0.5	0.2	0.1
E885535	62.2	0.6	0.2	1.7	0.2	0.2	193	0.5	< 0.001	0.38	8.0	4.2	1.2
E885536	83.0	0.4	0.2	1.6	0.2	0.3	61.7	1.5	< 0.001	1.00	23.0	3.9	1.3
E885537	55.2	0.6	0.2	1.7	0.2	0.1	156	1.0	< 0.001	0.54	7.9	1.1	0.3
E885538	< 0.2	0.1	0.2	1.4	0.2	< 0.1	220	0.3	< 0.001	0.72	17.7	18.2	4.6
E885539	20.4	0.4	0.3	1.8	0.2	< 0.1	130	0.1	< 0.001	0.26	10.9	6.8	1.9
E885540	1.6	0.1	< 0.1	0.2	< 0.1	< 0.1	3.9	0.1	< 0.001	< 0.05	0.6	1.0	0.3
E885541	4.0	0.8	0.2	1.5	0.2	0.2	88.5	1.6	< 0.001	0.09	2.8	3.4	1.0
E885542	28.5	0.5	0.2	1.6	0.2	0.1	170	0.2	< 0.001	< 0.05	5.1	3.5	0.9
E885543	98.9	0.4	1.1	7.3	0.9	< 0.1	124	0.2	0.001	< 0.05	1.5	2.0	0.5
E885544	205	0.2	0.4	2.8	0.4	0.2	67.6	1.2	< 0.001	< 0.05	2.1	0.5	0.1
E885545	42.4	0.1	0.1	0.8	0.1	0.3	76.1	0.2	< 0.001	1.26	13.2	12.6	2.9
E885546	36.8	0.3	0.6	4.3	0.6	< 0.1	99.0	0.1	< 0.001	< 0.05	3.8	4.1	1.0
E885547	35.0	0.2	0.5	3.5	0.5	< 0.1	92.1	0.1	< 0.001	0.14	4.3	4.0	1.0
E885548	29.7	0.2	0.5	3.1	0.4	< 0.1	265	0.1	< 0.001	< 0.05	5.9	3.4	1.0
E885549	39.2	0.5	0.1	1.0	0.1	0.3	146	0.7	< 0.001	< 0.05	11.5	9.5	4.4
E885550	1970	0.2	0.2	1.7	0.2	0.1	74.9	2.9	0.011	5.46	> 5000	2.7	1.9
E885551	8.5	0.1	< 0.1	0.3	0.1	< 0.1	3.3	0.2	< 0.001	< 0.05	0.7	0.7	0.2
E885552	1.2	0.1	0.1	0.5	0.1	0.9	26.2	0.8	< 0.001	0.49	28.7	11.8	7.2
E885553	6.4	0.5	0.3	1.9	0.2	< 0.1	87.8	0.1	< 0.001	0.13	9.0	4.7	1.4
E885554	59.1	0.7	0.3	1.7	0.2	< 0.1	270	0.1	< 0.001	< 0.05	5.7	4.1	1.2
E885555	17.3	0.2	0.1	0.6	0.1	< 0.1	3.1	0.3	< 0.001	< 0.05	< 0.5	0.6	0.2
E885556	109	0.7	0.4	2.6	0.3	< 0.1	20.3	0.1	< 0.001	0.37	4.4	5.4	1.5
E885557	34.9	0.6	0.2	1.5	0.2	0.2	170	0.2	< 0.001	0.36	11.4	5.0	1.4
E885558	6.7	0.2	0.1	0.5	0.1	< 0.1	1.7	0.5	< 0.001	< 0.05	< 0.5	0.1	< 0.1
E885559	12.0	0.1	0.1	0.5	0.1	< 0.1	7.7	1.3	< 0.001	< 0.05	< 0.5	0.1	< 0.1
E885560	1.7	0.2	< 0.1	0.2	< 0.1	< 0.1	3.3	0.1	< 0.001	< 0.05	< 0.5	1.0	0.3
E885561	17.9	0.8	0.2	1.3	0.2	0.1	139	2.5	< 0.001	< 0.05	4.9	0.9	0.3
E885562	10.3	0.2	0.1	0.4	0.1	< 0.1	2.2	0.5	< 0.001	< 0.05	< 0.5	0.2	0.1
E885563	70.3	0.3	0.2	1.4	0.2	< 0.1	148	0.1	< 0.001	0.45	12.1	6.7	1.3
E885564	9.5	0.2	0.1	0.5	0.1	< 0.1	6.4	0.3	< 0.001	< 0.05	< 0.5	0.5	0.1
E885565	4.8	0.9	0.4	2.8	0.4	0.2	182	0.8	< 0.001	0.24	7.5	7.4	2.2
E885566	11.5	0.2	0.1	0.6	0.1	< 0.1	17.4	0.3	< 0.001	< 0.05	< 0.5	0.5	0.2
E885567	113	0.7	0.3	1.9	0.2	0.3	74.3	0.5	< 0.001	< 0.05	6.7	5.7	1.5

	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS
SAMPLE	Cu	Ge	Tm	Yb	Lu	Ta	Sr	W	Re	Tl	Pb	Th	U
DESCRIPTION	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
E885568	51.4	0.1	0.2	1.3	0.2	0.3	13.9	0.8	< 0.001	< 0.05	2.5	6.9	1.8
E885569	500	0.3	0.4	2.4	0.3	< 0.1	142	0.1	< 0.001	< 0.05	1.3	2.2	0.7
E885570	1940	0.2	0.2	1.8	0.2	0.1	71.2	3.1	0.010	5.43	> 5000	2.8	1.9
E885571	197	0.4	0.4	2.9	0.4	0.1	230	0.2	< 0.001	< 0.05	1.5	2.9	0.8
E885572	95.0	0.3	0.2	1.3	0.2	< 0.1	44.6	0.4	< 0.001	< 0.05	3.0	0.4	0.2
E885573	143	0.6	0.2	1.3	0.2	< 0.1	26.3	0.3	< 0.001	< 0.05	< 0.5	0.3	0.1
E885574	40.2	0.2	0.1	0.5	0.1	< 0.1	1.8	0.4	< 0.001	< 0.05	< 0.5	0.4	0.1
E885575	36.5	1.0	0.2	1.5	0.2	< 0.1	24.1	0.3	< 0.001	< 0.05	< 0.5	0.4	0.2
E885576	37.8	0.3	0.3	1.7	0.2	< 0.1	70.2	0.1	< 0.001	< 0.05	0.6	1.2	0.4
E885577	105	0.6	0.2	1.3	0.2	< 0.1	34.7	0.3	< 0.001	< 0.05	1.5	0.8	0.2
E885578	49.0	0.3	0.2	1.2	0.1	< 0.1	55.6	< 0.1	< 0.001	< 0.05	1.2	0.6	0.3
E885579	46.0	0.6	0.2	1.1	0.2	< 0.1	62.5	0.2	< 0.001	< 0.05	0.8	0.5	0.2
E885580	1.4	0.4	< 0.1	0.3	< 0.1	< 0.1	4.3	0.1	< 0.001	< 0.05	0.7	1.1	0.3
E885581	192	1.0	0.1	0.9	0.1	< 0.1	38.0	0.5	< 0.001	< 0.05	0.6	0.4	0.1
E885582	43.4	0.4	0.3	1.7	0.2	< 0.1	72.5	0.1	< 0.001	< 0.05	2.2	3.0	1.0
E885583	67.2	0.4	0.2	1.6	0.2	< 0.1	78.2	0.1	< 0.001	< 0.05	3.4	3.6	1.3
E885584	468	0.8	0.3	1.9	0.3	0.1	65.2	0.3	< 0.001	< 0.05	9.7	0.9	0.3
E885585	14.0	0.6	0.1	0.5	0.1	< 0.1	12.2	0.1	< 0.001	< 0.05	1.4	0.3	0.1
E885586	189	0.5	0.3	1.7	0.2	< 0.1	109	< 0.1	< 0.001	< 0.05	2.8	1.1	0.3
E885587	159	0.5	0.2	1.4	0.2	< 0.1	71.5	0.2	< 0.001	< 0.05	2.4	1.0	0.3
E885588	361	0.5	0.3	2.1	0.3	< 0.1	71.4	0.3	< 0.001	< 0.05	4.2	2.3	0.7
E885589	331	0.8	0.3	2.0	0.3	< 0.1	88.0	0.2	< 0.001	< 0.05	1.8	1.5	0.4
E885590	1970	0.2	0.3	1.9	0.2	0.1	80.5	5.1	0.011	5.67	> 5000	3.0	2.0
E885591	20.6	0.4	< 0.1	0.2	< 0.1	< 0.1	4.6	0.6	< 0.001	< 0.05	3.7	0.1	< 0.1
E885592	69.0	0.7	0.2	1.2	0.1	< 0.1	18.9	0.1	< 0.001	< 0.05	2.3	0.4	0.1
E885593	184	0.8	0.2	1.4	0.2	< 0.1	50.7	0.1	< 0.001	< 0.05	0.7	0.8	0.2
E885594	60.4	0.7	0.4	2.6	0.3	< 0.1	120	0.1	< 0.001	< 0.05	2.5	1.2	0.3
E885595	94.3	0.6	0.3	2.2	0.3	< 0.1	128	0.1	< 0.001	< 0.05	3.4	1.1	0.3
E885596	4.1	0.4	0.3	1.7	0.2	< 0.1	57.1	0.1	< 0.001	0.08	1.0	0.7	0.2
E885597	8.6	0.2	0.1	0.3	0.1	< 0.1	4.9	0.2	< 0.001	< 0.05	< 0.5	0.1	< 0.1
E885598	27.5	0.3	< 0.1	0.2	< 0.1	< 0.1	4.0	0.2	< 0.001	< 0.05	1.1	0.1	< 0.1
E885599	91.4	0.3	0.1	0.7	0.1	0.1	18.4	0.4	< 0.001	2.39	93.7	3.0	0.9
E885600	1.5	0.2	< 0.1	0.2	< 0.1	< 0.1	2.8	0.1	< 0.001	< 0.05	0.5	1.0	0.3
E885646	60.2	0.8	0.3	1.7	0.2	< 0.1	143	0.1	< 0.001	< 0.05	1.5	0.2	0.1
E885647	70.9	0.6	0.3	2.2	0.3	< 0.1	92.7	0.1	< 0.001	< 0.05	1.0	0.3	0.1
E885648	80.6	0.4	0.2	1.4	0.2	< 0.1	63.7	< 0.1	< 0.001	< 0.05	< 0.5	0.6	0.2
E885649	113	0.4	0.2	1.6	0.2	< 0.1	59.0	0.1	< 0.001	< 0.05	< 0.5	1.2	0.3
E885650	1940	0.3	0.3	1.9	0.2	< 0.1	73.6	8.0	0.013	5.76	> 5000	2.8	2.0
E885851	36.1	0.2	0.1	0.3	< 0.1	0.1	13.7	0.3	< 0.001	1.15	8.3	1.4	0.4
E885852	119	0.5	0.2	1.3	0.2	< 0.1	52.9	0.1	< 0.001	0.07	8.4	0.6	0.2
E885853	130	0.4	0.2	1.5	0.2	< 0.1	28.9	0.3	< 0.001	< 0.05	10.6	0.5	0.2
E885854	146	0.6	0.2	1.2	0.2	< 0.1	30.6	0.1	< 0.001	< 0.05	5.6	0.4	0.1
E885855	133	0.7	0.4	2.8	0.4	< 0.1	113	0.1	< 0.001	< 0.05	< 0.5	0.3	0.1

	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS
SAMPLE	Cu	Ge	Tm	Yb	Lu	Ta	Sr	W	Re	Tl	Pb	Th	U
DESCRIPTION	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
E885856	72.9	0.3	0.5	3.0	0.4	< 0.1	104	< 0.1	< 0.001	< 0.05	3.1	3.5	1.0
E885857	92.0	0.4	0.3	2.3	0.3	< 0.1	124	< 0.1	< 0.001	< 0.05	3.7	3.3	0.9
E885858	78.4	0.4	0.3	2.4	0.3	< 0.1	123	0.1	< 0.001	< 0.05	4.2	3.4	1.0
E885859	56.3	0.6	0.4	2.6	0.3	< 0.1	19.0	0.1	< 0.001	< 0.05	1.5	3.5	0.9
E885860	1.2	0.2	< 0.1	0.2	< 0.1	< 0.1	2.1	0.1	< 0.001	< 0.05	< 0.5	1.0	0.3
E885870	1900	0.2	0.3	1.7	0.2	0.1	73.8	3.0	0.009	5.59	> 5000	2.8	2.0
E885871	82.1	0.3	0.4	2.3	0.3	< 0.1	106	< 0.1	< 0.001	< 0.05	4.9	2.1	0.4
E885872	253	0.2	0.5	3.2	0.4	0.1	141	5.0	< 0.001	0.11	5.2	4.6	1.3
E885873	119	0.4	0.4	2.3	0.3	< 0.1	127	0.1	< 0.001	< 0.05	6.6	3.9	1.0
E885874	22.0	0.2	0.1	0.7	0.1	< 0.1	2.6	0.5	< 0.001	< 0.05	1.1	0.5	< 0.1
E885875	22.6	0.2	0.1	1.0	0.1	< 0.1	3.1	0.5	< 0.001	< 0.05	1.1	0.2	< 0.1
E885876	54.4	0.3	0.1	1.1	0.2	0.3	25.0	1.7	0.001	2.66	86.1	4.1	1.2
E885877	89.6	0.3	0.4	2.6	0.3	< 0.1	99.2	0.1	< 0.001	< 0.05	< 0.5	0.3	0.1
E885878	76.6	0.3	0.4	2.8	0.4	< 0.1	124	0.1	< 0.001	< 0.05	< 0.5	0.3	0.1
GXR-4 Meas	6310		0.2	1.0	0.1	0.5	228	37.4		3.50	50.1	19.8	5.8
GXR-4 Cert	6520		0.210	1.60	0.170	0.790	221	30.8		3.20	52.0	22.5	6.20
GXR-4 Meas	6280		0.2	1.0	0.1	0.5	215	33.7		3.40	49.0	19.5	5.7
GXR-4 Cert	6520		0.210	1.60	0.170	0.790	221	30.8		3.20	52.0	22.5	6.20
SDC-1 Meas	27.8		0.5	3.2		< 0.1	165	0.1		0.59	24.0	11.8	2.8
SDC-1 Cert	30.000		0.65	4.00		1.20	180.00	0.80		0.70	25.00	12.00	3.10
SDC-1 Meas	29.8		0.5	3.4		< 0.1	182	0.1		0.62	24.5	12.3	2.9
SDC-1 Cert	30.000		0.65	4.00		1.20	180.00	0.80		0.70	25.00	12.00	3.10
GXR-6 Meas	65.4			1.6	0.2	< 0.1	37.4	0.1		2.30	102	5.2	1.4
GXR-6 Cert	66.0			2.40	0.330	0.485	35.0	1.90		2.20	101	5.30	1.54
OREAS 97 (4 Acid) Meas	> 10000										149		
OREAS 97 (4 Acid) Cert	63100.00										147		
OREAS 97 (4 Acid) Meas	> 10000										150		
OREAS 97 (4 Acid) Cert	63100.00										147		
OREAS 98 (4 Acid) Meas	> 10000										353		
OREAS 98 (4 Acid) Cert	14800.0										345		
OREAS 98 (4 Acid) Meas	> 10000										347		
OREAS 98 (4 Acid) Cert	14800.0										345		
DNC-1a Meas	99.2			1.9			149				5.5		
DNC-1a Cert	100			2.0			144				6.3		
DNC-1a Meas	97.8			1.9			142				5.2		
DNC-1a Cert	100			2.0			144				6.3		
SBC-1 Meas	30.0		0.5	3.4	0.5	0.8	188	1.6		0.92	37.0	15.5	5.9

	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS
SAMPLE	Cu	Ge	Tm	Yb	Lu	Ta	Sr	W	Re	Tl	Pb	Th	U
DESCRIPTION	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
SBC-1 Cert	31.0		0.56	3.64	0.54	1.10	178.0	1.60		0.89	35.0	15.8	5.76
SBC-1 Meas	29.0		0.5	3.3	0.5	0.8	177	1.5		0.90	39.4	15.5	5.8
SBC-1 Cert	31.0		0.56	3.64	0.54	1.10	178.0	1.60		0.89	35.0	15.8	5.76
OREAS 45d (4-Acid) Meas	374			1.4	0.2	< 0.1	31.9	0.1		0.18	21.0	14.7	2.9
OREAS 45d (4-Acid) Cert	371			1.33	0.18	1.02	31.30	1.62		0.27	21.8	14.5	2.63
OREAS 45d (4-Acid) Meas	356			1.3	0.2	< 0.1	29.1	0.1		0.15	20.0	13.8	2.7
OREAS 45d (4-Acid) Cert	371			1.33	0.18	1.02	31.30	1.62		0.27	21.8	14.5	2.63
OREAS 214 Meas													
OREAS 214 Cert													
OREAS 214 Meas													
OREAS 214 Cert													
OREAS 218 Meas													
OREAS 218 Cert													
OREAS 96 (4 Acid) Meas	> 10000										101		
OREAS 96 (4 Acid) Cert	39300										101		
OREAS 96 (4 Acid) Meas	> 10000										101		
OREAS 96 (4 Acid) Cert	39300										101		
OREAS 217 (Fire Assay) Meas													
OREAS 217 (Fire Assay) Cert													
OREAS 217 (Fire Assay) Meas													
OREAS 217 (Fire Assay) Cert													
OREAS 217 (Fire Assay) Meas													
OREAS 217 (Fire Assay) Cert													
OREAS 217 (Fire Assay) Meas													
OREAS 217 (Fire Assay) Cert													
OREAS 215 (Fire Assay) Meas													
OREAS 215 (Fire Assay) Cert													
OREAS 215 (Fire Assay) Meas													

	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS
SAMPLE	Cu	Ge	Tm	Yb	Lu	Ta	Sr	W	Re	Tl	Pb	Th	U
DESCRIPTION	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
OREAS 215 (Fire Assay) Cert													
OREAS 215 (Fire Assay) Meas													
OREAS 215 (Fire Assay) Cert													
OREAS 215 (Fire Assay) Meas													
OREAS 215 (Fire Assay) Cert													
E885511 Orig													
E885511 Dup													
E885519 Orig	101	0.4	0.2	1.4	0.2	0.1	96.8	0.3	< 0.001	< 0.05	1.5	1.2	0.3
E885519 Dup	97.6	0.5	0.2	1.3	0.2	0.1	90.9	0.2	< 0.001	< 0.05	1.4	1.2	0.3
E885520 Orig													
E885520 Dup													
E885530 Orig	1830	0.2	0.2	1.8	0.2	0.1	72.0	3.1	0.010	5.41	> 5000	2.7	1.9
E885530 Dup	1890	0.2	0.2	1.7	0.3	< 0.1	67.9	3.0	0.010	5.56	> 5000	2.8	1.9
E885531 Orig													
E885531 Dup													
E885548 Orig	29.7	0.2	0.5	3.1	0.4	< 0.1	265	0.1	< 0.001	< 0.05	5.9	3.4	1.0
E885548 Dup	29.8	0.2	0.5	3.2	0.4	< 0.1	267	0.1	< 0.001	< 0.05	6.0	3.5	1.0
E885549 Orig	39.2	0.5	0.1	1.0	0.1	0.3	146	0.7	< 0.001	< 0.05	11.5	9.5	4.4
E885549 Dup	39.1	0.3	0.1	1.0	0.1	0.4	143	0.8	< 0.001	< 0.05	11.2	9.1	4.2
E885551 Orig	8.5	0.1	< 0.1	0.3	0.1	< 0.1	3.3	0.2	< 0.001	< 0.05	0.7	0.7	0.2
E885551 Split	9.5	0.2	< 0.1	0.3	< 0.1	< 0.1	3.3	0.2	< 0.001	< 0.05	< 0.5	0.6	0.2
E885558 Orig													
E885558 Dup													
E885568 Orig													
E885568 Dup													
E885576 Orig	37.8	0.3	0.3	1.7	0.2	< 0.1	70.2	0.1	< 0.001	< 0.05	0.6	1.2	0.4
E885576 Dup	38.5	0.4	0.3	1.7	0.2	< 0.1	68.1	0.1	< 0.001	< 0.05	< 0.5	1.1	0.3
E885580 Orig													
E885580 Dup													
E885581 Orig	192	1.0	0.1	0.9	0.1	< 0.1	38.0	0.5	< 0.001	< 0.05	0.6	0.4	0.1
E885581 Dup	188	1.1	0.1	0.9	0.1	< 0.1	38.6	0.3	< 0.001	< 0.05	0.5	0.4	0.1
E885591 Orig													
E885591 Dup													
E885646 Orig	60.2	0.8	0.3	1.7	0.2	< 0.1	143	0.1	< 0.001	< 0.05	1.5	0.2	0.1
E885646 Split	59.8	0.6	0.3	1.6	0.2	< 0.1	143	0.1	< 0.001	< 0.05	1.6	0.2	0.1
E885647 Orig													
E885647 Dup													
E885852 Orig	119	0.5	0.2	1.3	0.2	< 0.1	52.9	0.1	< 0.001	0.07	8.4	0.6	0.2
E885852 Dup	121	0.5	0.2	1.3	0.2	< 0.1	53.3	0.2	< 0.001	0.08	8.6	0.6	0.2

	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS
SAMPLE	Cu	Ge	Tm	Yb	Lu	Ta	Sr	W	Re	Tl	Pb	Th	U
DESCRIPTION	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
E885853 Orig	130	0.4	0.2	1.5	0.2	< 0.1	28.9	0.3	< 0.001	< 0.05	10.6	0.5	0.2
E885853 Dup	130	0.4	0.2	1.6	0.2	< 0.1	27.5	0.2	< 0.001	< 0.05	11.1	0.5	0.2
E885858 Orig													
E885858 Dup													
E885872 Orig													
E885872 Dup													
E885877 Orig													
E885877 Dup													
Method Blank	0.3	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.2	0.1	< 0.001	< 0.05	< 0.5	< 0.1	< 0.1
Method Blank	0.4	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.2	< 0.1	< 0.001	< 0.05	< 0.5	< 0.1	< 0.1
Method Blank	< 0.2	0.1	< 0.1	< 0.1	< 0.1	< 0.1	0.2	0.1	< 0.001	< 0.05	< 0.5	< 0.1	< 0.1
Method Blank	0.7	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.2	0.1	< 0.001	< 0.05	< 0.5	< 0.1	< 0.1
Method Blank	0.5	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.2	< 0.1	< 0.001	< 0.05	< 0.5	< 0.1	< 0.1
Method Blank	0.4	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.2	< 0.1	< 0.001	< 0.05	< 0.5	< 0.1	< 0.1
Method Blank													
Method Blank													
Method Blank													
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Method Blank													
Method Blank													



Date Submitted: 16-Aug-18
Invoice No.: A18-11076
Invoice Date: 09-Oct-18
Your Reference: Exploration

GOLDCORP Canada Ltd--Musselwhite Mine
P.O. Box 7500
Thunder bay Ontario P7B 6S8
Canada

ATTN: Katie Lucas

CERTIFICATE OF ANALYSIS

66 Core samples were submitted for analysis.

The following analytical package(s) were requested:

Code 1A2-GC Musselwhite Dryden Au - Fire Assay AA

REPORT **A18-11076**

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

Notes:

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

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

CERTIFIED BY:

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

Emmanuel Esemé , Ph.D.
Quality Control

ACTIVATION LABORATORIES LTD.
264 Government Road, Dryden, Ontario, Canada, P8N 2R3
TELEPHONE +807 223-6168 or +1.888.228.5227 FAX +1.905.648.9613
E-MAIL Dryden@actlabs.com ACTLABS GROUP WEBSITE www.actlabs.com

Date Submitted: 16-Aug-18
Invoice No.: A18-11076
Invoice Date: 09-Oct-18
Your Reference: Exploration

GOLDCORP Canada Ltd--Musselwhite Mine
P.O. Box 7500
Thunder bay Ontario P7B 6S8
Canada

ATTN: Katie Lucas

CERTIFICATE OF ANALYSIS

66 Core samples were submitted for analysis.

The following analytical package(s) were requested: Code UT-4 Total Digestion ICP/MS

REPORT **A18-11076**

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Notes:

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

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

CERTIFIED BY:



Emmanuel Esemé , Ph.D.
Quality Control

ACTIVATION LABORATORIES LTD.
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Results

Activation Laboratories Ltd.

Report: A18-11076

	FA-AA	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	
SAMPLE	Au	B	Li	Na	Mg	Al	K	Ca	Cd	V	Cr	Mn	Fe	Hf	Ni	Er	Be	Ho	Hg	Ag	Cs	Co	Eu
DESCRIPTION	g/mt	ppm	ppm	%	%	%	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm
E885836	0.163	20	3.2	0.18	0.30	0.72	0.01	0.26	1.1	31	27	156	1.76	< 0.1	20.9	0.1	0.1	< 0.1	40	2.88	0.12	9.1	< 0.05
E885837	< 0.005	< 20	25.3	1.57	3.80	7.87	0.34	4.62	0.2	229	165	1190	7.97	0.6	145	2.3	0.4	0.8	30	0.06	3.45	47.1	0.86
E885838	0.014	< 20	1.0	0.02	0.06	0.13	< 0.01	0.18	0.2	7	67	94	0.41	< 0.1	2.9	< 0.1	< 0.1	< 0.1	20	0.09	0.07	1.8	< 0.05
E885839	< 0.005	< 20	1.7	0.05	0.22	0.45	0.02	0.41	0.2	19	13	239	0.87	< 0.1	23.2	< 0.1	0.1	< 0.1	20	0.07	0.11	4.5	< 0.05
E885840	< 0.005	< 20	6.3	0.07	0.02	0.26	0.08	0.03	0.2	6	8	41	0.39	0.4	1.2	0.2	0.2	< 0.1	30	< 0.05	0.19	0.8	0.07
E885841	< 0.005	< 20	9.3	1.62	4.61	7.73	0.12	7.75	0.2	288	160	1580	8.48	1.0	153	2.0	0.2	0.7	20	< 0.05	0.20	48.4	0.67
E885842	< 0.005	< 20	7.8	0.96	4.87	7.09	0.07	8.62	0.1	242	180	1270	7.09	0.5	120	1.5	< 0.1	0.5	10	< 0.05	0.13	41.5	0.44
E885843	< 0.005	< 20	5.6	1.80	4.79	7.61	0.15	7.98	0.1	186	231	1500	6.83	0.5	120	1.5	< 0.1	0.5	< 10	< 0.05	0.12	43.2	0.51
E885844	0.006	< 20	9.0	2.27	4.19	7.70	0.22	7.38	0.2	194	153	1490	8.70	0.6	128	2.2	0.3	0.7	< 10	< 0.05	0.39	40.9	0.70
E885845	0.048	< 20	1.3	0.18	0.08	0.43	0.02	0.21	0.1	12	12	80	0.49	< 0.1	3.5	< 0.1	< 0.1	< 0.1	< 10	< 0.05	0.07	1.5	< 0.05
E885846	< 0.005	< 20	18.3	2.36	3.68	8.09	0.13	5.32	0.1	174	115	1120	7.09	0.4	82.5	1.7	0.3	0.5	< 10	< 0.05	0.11	35.2	0.51
E885847	0.006	< 20	9.2	0.63	1.64	3.56	0.06	2.50	< 0.1	104	80	476	3.00	0.2	42.7	0.5	< 0.1	0.2	< 10	< 0.05	0.06	15.4	0.20
E885848	0.011	< 20	27.1	2.09	4.06	8.51	0.07	4.61	0.2	272	194	1230	8.30	0.4	144	2.1	0.4	0.6	< 10	0.08	0.18	45.1	0.67
E885849	< 0.005	< 20	9.1	2.15	4.14	8.05	0.17	7.99	0.2	267	200	1500	7.86	0.6	112	1.7	0.1	0.6	< 10	0.06	0.37	39.9	0.64
E885850	0.477	< 20	18.9	1.09	2.99	6.36	1.23	3.09	26.2	93	165	1590	6.73	2.1	110	1.9	0.7	0.6	50	63.8	1.35	23.3	0.59
E886101	< 0.005	< 20	9.5	2.33	4.18	7.42	0.10	6.33	0.2	267	125	1390	8.64	1.0	110	2.7	0.4	0.8	< 10	0.07	0.14	36.4	0.85
E886102	< 0.005	< 20	14.1	1.28	3.18	7.69	0.04	7.41	0.3	215	141	1050	6.87	0.2	115	1.9	0.2	0.7	10	0.11	0.18	39.5	0.62
E886103	0.396	< 20	1.0	0.26	0.05	0.50	0.05	0.12	0.1	9	6	64	0.59	< 0.1	2.3	< 0.1	< 0.1	< 0.1	50	0.24	< 0.05	1.8	< 0.05
E886104	2.24	< 20	1.5	0.16	0.09	0.51	0.05	0.12	0.2	16	12	83	2.09	< 0.1	7.6	0.1	< 0.1	< 0.1	< 10	0.11	0.12	8.2	< 0.05
E886105	0.701	< 20	0.7	0.06	0.36	0.27	0.02	0.42	0.1	15	26	263	3.12	< 0.1	10.7	0.2	< 0.1	< 0.1	< 10	0.25	0.06	7.6	0.11
E886106	< 0.005	< 20	5.4	0.67	1.88	4.41	0.06	4.28	0.2	158	74	722	4.77	0.4	37.0	1.2	< 0.1	0.4	< 10	< 0.05	0.08	20.3	0.38
E886107	< 0.005	< 20	13.3	> 3.00	3.17	8.96	0.37	3.04	0.3	249	194	1100	6.77	2.7	125	1.8	0.8	0.6	< 10	0.21	0.72	30.3	0.43
E886108	< 0.005	< 20	3.4	0.36	0.50	1.29	0.03	1.20	0.1	36	33	235	1.46	0.2	12.1	0.3	< 0.1	< 0.1	10	< 0.05	0.20	7.1	0.07
E886109	< 0.005	< 20	8.1	1.74	4.72	8.16	0.10	7.59	0.1	184	165	1390	8.37	0.5	114	2.2	0.2	0.7	< 10	< 0.05	0.19	44.3	0.73
E886110	3.43	< 20	23.0	0.63	1.50	3.63	0.76	2.26	0.2	61	48	577	17.8	1.1	26.3	1.2	1.0	0.3	120	1.06	8.20	9.4	0.53
E886111	0.011	< 20	6.7	1.87	4.44	7.73	0.10	7.94	0.2	257	250	1420	8.12	0.4	158	1.9	0.2	0.7	< 10	0.10	0.12	51.1	0.69
E886112	0.010	< 20	11.3	1.40	4.02	7.10	0.08	7.98	0.2	264	111	1290	8.34	0.9	109	2.2	< 0.1	0.8	< 10	0.09	0.12	44.7	0.76
E886113	< 0.005	< 20	11.5	1.52	4.50	7.59	0.09	6.52	0.1	278	121	1420	8.64	0.3	118	1.9	0.1	0.6	< 10	0.06	0.12	43.3	0.61
E886114	< 0.005	< 20	4.9	0.18	1.08	1.70	0.03	2.28	0.2	65	46	535	2.53	0.1	28.2	0.5	< 0.1	0.1	< 10	< 0.05	0.41	12.9	0.14
E886115	< 0.005	< 20	8.6	0.21	2.01	2.57	0.15	6.12	0.1	92	54	910	3.73	0.1	46.5	0.7	< 0.1	0.2	< 10	< 0.05	0.70	17.3	0.15
E886116	0.010	< 20	11.7	1.84	4.68	8.05	0.18	7.44	0.2	261	241	1340	8.32	0.4	72.8	1.4	0.1	0.4	< 10	< 0.05	0.66	43.6	0.33
E886117	< 0.005	< 20	11.2	2.20	1.06	5.69	0.59	1.14	0.1	122	88	245	5.68	3.0	5.3	1.4	1.4	0.4	< 10	2.20	3.41	3.1	0.65
E886118	0.015	< 20	18.2	2.22	1.36	5.97	1.06	1.17	5.3	118	91	220	10.7	3.3	225	2.2	1.3	0.6	< 10	1.13	11.4	101	1.11
E886119	0.009	< 20	21.1	2.22	1.61	6.31	1.50	1.10	5.5	142	96	250	11.6	3.1	239	1.5	1.5	0.5	< 10	0.85	15.8	108	1.22
E886120	< 0.005	< 20	5.7	0.05	0.01	0.19	0.06	< 0.01	0.1	3	10	52	0.56	1.0	1.7	0.3	< 0.1	< 0.1	< 10	< 0.05	0.21	0.9	0.06
E886121	0.025	< 20	23.0	2.00	1.81	6.20	0.49	1.05	< 0.1	129	124	434	6.84	3.0	123	2.2	0.9	0.7	< 10	0.73	3.72	42.6	1.10
E886122	0.014	470	1.6	0.05	0.37	0.34	< 0.01	0.45	0.1	10	220	192	0.90	< 0.1	47.0	< 0.1	< 0.1	< 0.1	< 10	0.46	< 0.05	5.6	< 0.05
E886123	0.220	160	1.1	0.02	0.19	0.16	< 0.01	0.27	0.1	4	62	118	0.85	< 0.1	27.7	< 0.1	< 0.1	< 0.1	40	3.34	< 0.05	2.3	< 0.05
E886124	0.049	550	8.0	0.07	9.08	1.75	0.08	13.3	0.2	27	2930	1690	5.98	0.2	1180	0.4	0.1	0.1	30	0.50	0.19	71.6	0.42
E886125	0.023	50	4.9	0.02	11.0	0.96	0.03	5.48	0.2	49	701	1800	5.70	0.1	583	0.3	< 0.1	0.1	10	0.59	0.12	41.9	0.34
E886126	0.007	< 20	8.4	0.01	12.3	1.35	< 0.01	5.41	0.1	71	899	1280	5.79	0.2	752	0.3	< 0.1	< 0.1	< 10	0.26	0.09	49.1	0.15
E886127	0.020	< 20	11.2	0.44	1.94	3.11	0.62	0.61	0.1	54	2030	286	2.63	0.6	336	0.6	0.2	0.2	< 10	0.27	0.21	51.1	0.29
E886128	< 0.005	< 20	8.6	< 0.01	12.3	2.41	< 0.01	1.15	< 0.1	103	757	1030	7.04	0.2	1590	0.2	< 0.1	< 0.1	< 10	< 0.05	0.05	90.0	< 0.05

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	FA-AA	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS		
SAMPLE	Au	B	Li	Na	Mg	Al	K	Ca	Cd	V	Cr	Mn	Fe	Hf	Ni	Er	Be	Ho	Hg	Ag	Cs	Co	Eu	
DESCRIPTION	g/mt	ppm	ppm	%	%	%	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	
E886129	< 0.005	< 20	5.3	< 0.01	11.2	1.63	< 0.01	6.39	0.1	79	1210	892	5.59	0.2	1260	0.2	< 0.1	< 0.1	< 10	< 0.05	< 0.05	82.4	0.09	
E886130	1.08	< 20	8.2	2.35	1.50	8.16	1.26	4.03	0.3	161	19	1040	6.50	1.4	15.4	2.1	0.7	0.7	30	1.01	1.21	15.3	0.87	
E886131	< 0.005	< 20	4.5	0.01	14.1	1.63	< 0.01	4.27	0.1	74	847	1010	5.32	0.2	1310	0.1	< 0.1	< 0.1	< 10	< 0.05	0.06	72.3	0.12	
E886132	< 0.005	< 20	1.8	< 0.01	12.7	0.86	< 0.01	3.28	< 0.1	< 1	2870	1480	7.29	< 0.1	998	< 0.1	< 0.1	< 0.1	20	< 0.05	< 0.05	67.9	< 0.05	
E886133	< 0.005	< 20	8.3	< 0.01	9.65	1.33	< 0.01	9.00	< 0.1	70	1770	1320	5.60	0.2	907	0.3	< 0.1	0.1	< 10	< 0.05	0.05	50.0	0.22	
E886134	< 0.005	< 20	8.1	< 0.01	13.2	1.62	< 0.01	5.54	< 0.1	60	471	1400	5.85	0.3	1270	0.4	< 0.1	0.1	< 10	< 0.05	< 0.05	61.2	0.44	
E886135	< 0.005	< 20	5.8	0.01	11.0	1.71	< 0.01	8.74	0.1	74	1200	1160	4.74	0.3	1050	0.4	< 0.1	0.1	< 10	< 0.05	0.08	55.9	1.16	
E886136	< 0.005	< 20	8.4	1.19	6.24	5.21	0.19	8.68	0.2	216	1500	2190	7.67	0.4	515	1.1	< 0.1	0.4	< 10	< 0.05	0.34	73.0	0.30	
E886137	< 0.005	< 20	13.7	1.15	7.15	4.45	0.12	10.5	< 0.1	168	1320	1840	6.83	0.5	403	0.9	< 0.1	0.3	< 10	< 0.05	0.36	56.7	0.30	
E886138	< 0.005	< 20	13.2	0.70	8.88	3.99	0.07	8.34	< 0.1	179	1720	1590	7.33	0.5	523	0.9	< 0.1	0.3	20	< 0.05	0.31	68.9	0.27	
E886139	< 0.005	< 20	7.7	0.73	7.03	4.70	0.10	8.65	0.1	182	1370	1280	7.04	0.3	259	1.0	< 0.1	0.3	10	< 0.05	0.26	50.1	0.29	
E886140	< 0.005	20	5.6	0.06	0.03	0.20	0.06	0.03	< 0.1	2	20	56	0.47	0.9	2.0	0.2	< 0.1	< 0.1	< 10	< 0.05	0.14	0.7	< 0.05	
E886141	< 0.005	< 20	16.0	0.87	3.53	7.83	2.09	7.83	< 0.1	105	126	1120	5.79	1.7	90.3	1.7	0.4	0.5	< 10	0.08	0.64	25.2	0.90	
E886142	< 0.005	< 20	11.2	0.73	4.84	6.60	0.75	10.7	0.1	129	190	1350	5.08	1.9	88.6	1.1	0.4	0.4	< 10	< 0.05	0.70	25.9	0.62	
E886143	< 0.005	< 20	10.1	0.70	4.30	7.63	0.51	11.4	0.1	196	137	1380	6.72	1.9	87.3	1.3	0.8	0.4	< 10	0.06	0.74	28.0	0.74	
E886144	< 0.005	< 20	29.2	0.85	2.96	8.98	1.15	5.88	0.1	186	67	771	5.47	2.4	99.7	1.3	0.6	0.4	< 10	0.13	1.28	30.3	0.72	
E886145	0.053	< 20	3.8	0.07	0.49	2.42	0.46	3.33	< 0.1	81	8	274	1.70	< 0.1	13.2	< 0.1	< 0.1	< 0.1	20	0.54	0.29	4.8	0.09	
E886146	< 0.005	< 20	10.2	> 3.00	1.67	9.12	0.53	9.34	< 0.1	106	150	818	4.42	2.0	170	1.2	0.3	0.4	< 10	0.11	0.12	24.8	0.64	
E886147	< 0.005	< 20	8.2	> 3.00	0.29	6.89	0.67	0.88	0.1	6	11	210	1.70	6.4	2.6	2.8	1.3	0.8	60	0.26	0.71	4.1	0.68	
E886148	< 0.005	< 20	33.5	1.90	3.23	8.59	0.93	5.21	< 0.1	247	26	1620	9.23	1.9	44.8	2.8	0.9	0.9	< 10	< 0.05	3.92	34.3	0.89	
E886149	< 0.005	< 20	3.3	> 3.00	0.09	6.46	0.80	0.44	< 0.1	6	9	105	1.09	4.9	0.6	2.5	0.7	0.8	< 10	0.12	0.95	1.8	0.50	
E886150	1.11	< 20	24.0	0.30	1.82	4.96	1.31	1.58	46.3	77	47	1830	7.80	2.6	27.4	1.9	0.6	0.6	60	> 100	1.58	17.4	0.59	
E886151	< 0.005	< 20	12.6	1.94	2.39	6.64	0.32	4.26	0.2	152	8	2070	13.4	1.4	4.2	4.4	0.5	1.3	< 10	0.06	0.61	50.3	1.19	
GXR-4 Meas		< 20	10.5	0.55	1.71	6.80	4.39	0.99	0.4	81	43	134	2.97	1.6	37.1			1.9		< 10	3.74	2.61	13.8	1.30
GXR-4 Cert		4.50	11.1	0.564	1.66	7.20	4.01	1.01	0.860	87.0	64.0	155	3.09	6.30	42.0			1.90		110	4.00	2.80	14.6	1.63
SDC-1 Meas		< 20	31.8	1.63	1.04	8.56	1.33	1.03		43	47	864	4.73	1.2	34.4	3.6	2.6	1.2	20			3.81	17.5	1.55
SDC-1 Cert		13.00	34.0	1.52	1.02	8.34	2.72	1.00		102.00	64.00	880.00	4.82	8.30	38.0	4.10	3.00	1.50	200.00			4.00	18.0	1.70
GXR-6 Meas		< 20	32.8	0.10	0.62	> 10.0	1.28	0.16	0.2	166	65	1020	5.48	3.3	23.1			1.0		< 10	0.35	3.70	12.9	0.59
GXR-6 Cert		9.80	32.0	0.104	0.609	17.7	1.87	0.180	1.00	186	96.0	1010	5.58	4.30	27.0			1.40		68.0	1.30	4.20	13.8	0.760
OREAS 97 (4 Acid) Meas																								
OREAS 97 (4 Acid) Cert																								
OREAS 98 (4 Acid) Meas																								
OREAS 98 (4 Acid) Cert																								
DNC-1a Meas			4.4	1.46				8.00		140	138		6.76		260									
DNC-1a Cert			5.2	1.40				8.21		148	270		1.25		247									
SBC-1 Meas			156						0.4	213	78			4.1	85.4	3.7	3.2	1.2						
SBC-1 Cert			163						0.40	220.0	109			3.7	82.8	3.80	3.20	1.40						
OREAS 45d (4-Acid) Meas			21.6	0.11	0.24	8.21	0.46	0.18		90	476	465	14.6	1.6	236	1.3	0.7	0.4						
OREAS 45d (4-Acid) Cert			21.5	0.101	0.245	8.150	0.412	0.185		235.0	549	490.000	14.5	3.830	231.0	1.38	0.79	0.46						

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	FA-AA	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	
SAMPLE	Au	B	Li	Na	Mg	Al	K	Ca	Cd	V	Cr	Mn	Fe	Hf	Ni	Er	Be	Ho	Hg	Ag	Cs	Co	Eu
DESCRIPTION	g/mt	ppm	ppm	%	%	%	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm
OREAS 220 (Fire Assay) Meas	0.840																						
OREAS 220 (Fire Assay) Cert	0.866																						
OREAS 96 (4 Acid) Meas																				10.4		50.8	
OREAS 96 (4 Acid) Cert																				11.5		49.9	
OREAS 621 (4 Acid) Meas			13.7	1.44	0.38	6.82	2.10	2.12	288	34	33	541	3.98	5.3	29.1		1.7			71.3	3.17	31.0	
OREAS 621 (4 Acid) Cert			14.2	1.31	0.507	6.40	2.20	1.97	284	31.8	37.1	532	3.70	4.41	26.2		1.69			69.0	3.28	29.3	
OREAS 209 (Fire Assay) Meas	1.53																						
OREAS 209 (Fire Assay) Cert	1.58																						
E885836 Orig	0.163																						
E885836 Dup	0.119																						
E886103 Orig		< 20	1.0	0.26	0.05	0.50	0.05	0.12	0.1	9	6	64	0.59	< 0.1	2.3	< 0.1	< 0.1	< 0.1	50	0.24	< 0.05	1.8	< 0.05
E886103 Dup		< 20	0.9	0.28	0.05	0.50	0.05	0.12	0.2	8	51	57	0.61	< 0.1	2.7	< 0.1	< 0.1	< 0.1	< 10	0.07	0.06	1.8	< 0.05
E886106 Orig	< 0.005																						
E886106 Dup	< 0.005																						
E886117 Orig	< 0.005																						
E886117 Dup	< 0.005																						
E886131 Orig	< 0.005																						
E886131 Dup	< 0.005																						
E886133 Orig		< 20	8.3	< 0.01	9.65	1.33	< 0.01	9.00	< 0.1	70	1770	1320	5.60	0.2	907	0.3	< 0.1	0.1	< 10	< 0.05	0.05	50.0	0.22
E886133 Dup		< 20	8.1	< 0.01	9.68	1.28	< 0.01	9.07	0.2	70	1490	1280	5.50	0.2	891	0.4	< 0.1	0.1	< 10	< 0.05	< 0.05	49.5	0.20
E886134 Orig		< 20	8.1	< 0.01	13.2	1.62	< 0.01	5.54	< 0.1	60	471	1400	5.85	0.3	1270	0.4	< 0.1	0.1	< 10	< 0.05	< 0.05	61.2	0.44
E886134 Dup		< 20	8.3	< 0.01	13.0	1.65	< 0.01	5.77	< 0.1	63	481	1520	6.17	0.3	1330	0.4	< 0.1	0.1	< 10	< 0.05	< 0.05	66.1	0.38
E886135 Orig	< 0.005	< 20	5.8	0.01	11.0	1.71	< 0.01	8.74	0.1	74	1200	1160	4.74	0.3	1050	0.4	< 0.1	0.1	< 10	< 0.05	0.08	55.9	1.16
E886135 Split	< 0.005	< 20	5.7	0.01	10.3	1.73	< 0.01	8.45	0.1	72	1070	1150	4.68	0.3	1040	0.4	< 0.1	0.1	< 10	0.08	0.08	56.5	1.18
E886139 Orig	< 0.005																						
E886139 Dup	< 0.005																						
E886148 Orig	< 0.005																						
E886148 Dup	< 0.005																						
Method Blank	< 0.005																						
Method Blank	< 0.005																						
Method Blank	< 0.005																						
Method Blank	< 0.005																						
Method Blank		< 20	< 0.5	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.1	< 1	14	6	< 0.01	< 0.1	< 0.5	< 0.1	< 0.1	< 0.1	< 10	< 0.05	< 0.05	< 0.1	< 0.05

	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	
SAMPLE	Bi	Se	Zn	Ga	As	Rb	Y	Zr	Nb	Mo	In	Sn	Sb	Te	Ba	La	Ce	Pr	Nd	Sm	Gd	Tb	Dy
DESCRIPTION	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm

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E885836	0.08	2.4	43.7	1.8	2.8	0.6	0.8	3	0.2	0.29	0.6	< 1	0.3	0.4	7	0.2	0.5	< 0.1	0.4	0.1	< 0.1	< 0.1	0.1
E885837	0.04	< 0.1	101	17.7	< 0.1	31.4	17.9	21	0.1	0.20	< 0.1	< 1	< 0.1	< 0.1	107	3.1	7.4	1.2	6.3	1.8	2.7	0.5	3.7
E885838	0.03	0.1	4.8	0.6	1.2	0.5	0.4	< 1	< 0.1	0.19	< 0.1	< 1	0.1	< 0.1	3	0.1	0.3	< 0.1	0.2	< 0.1	< 0.1	< 0.1	< 0.1
E885839	0.05	0.7	11.6	1.3	1.3	1.0	0.8	1	0.2	0.27	< 0.1	< 1	< 0.1	0.2	7	0.3	0.6	< 0.1	0.3	< 0.1	0.1	< 0.1	0.1
E885840	0.06	0.2	2.8	0.8	0.8	3.4	2.0	19	0.7	0.27	< 0.1	< 1	0.2	< 0.1	24	2.3	3.9	0.5	1.9	0.3	0.3	< 0.1	0.4
E885841	0.04	0.4	91.5	14.6	< 0.1	3.5	16.8	29	1.5	0.28	< 0.1	< 1	< 0.1	< 0.1	24	2.0	5.7	1.0	5.4	1.8	2.5	0.5	3.4
E885842	0.05	0.4	63.3	12.4	1.0	1.2	11.7	12	0.8	0.72	< 0.1	< 1	< 0.1	< 0.1	12	1.9	4.9	0.9	4.3	1.1	1.8	0.3	2.3
E885843	0.03	0.3	69.9	12.2	< 0.1	2.7	12.0	12	< 0.1	0.07	< 0.1	< 1	< 0.1	< 0.1	31	1.8	5.1	0.8	4.3	1.2	1.8	0.3	2.5
E885844	< 0.02	0.4	98.0	15.2	0.5	6.9	16.9	12	< 0.1	0.06	< 0.1	< 1	< 0.1	< 0.1	49	3.0	8.0	1.3	6.7	1.9	2.7	0.5	3.2
E885845	0.06	0.7	3.7	1.0	9.4	1.0	0.8	< 1	0.1	0.16	< 0.1	< 1	0.2	< 0.1	6	0.1	0.3	< 0.1	0.2	< 0.1	< 0.1	< 0.1	0.1
E885846	< 0.02	0.4	86.0	11.8	3.4	4.1	13.2	8	0.2	0.10	< 0.1	< 1	0.1	< 0.1	32	2.4	6.5	1.1	5.5	1.7	2.3	0.4	2.7
E885847	< 0.02	0.5	33.5	6.6	3.7	2.1	4.3	4	0.6	0.12	< 0.1	< 1	0.4	< 0.1	12	0.7	1.9	0.3	1.4	0.5	0.7	0.1	0.8
E885848	< 0.02	0.6	90.3	14.6	11.1	2.1	15.1	9	1.7	0.17	< 0.1	< 1	0.5	< 0.1	17	2.6	6.9	1.2	5.8	1.7	2.1	0.4	3.0
E885849	0.03	1.1	73.1	13.5	12.1	4.8	14.1	10	1.9	0.89	< 0.1	< 1	1.1	< 0.1	28	2.4	6.4	1.0	5.5	1.8	2.2	0.4	2.7
E885850	4.55	12.2	4010	13.5	251	41.2	13.7	57	5.1	7.80	1.7	11	20.7	0.1	94	11.9	24.9	3.3	13.8	2.7	2.6	0.4	2.6
E886101	< 0.02	0.6	92.3	15.3	4.0	1.5	20.0	23	1.7	0.64	< 0.1	< 1	0.7	< 0.1	22	3.4	9.1	1.5	7.4	2.2	3.1	0.6	4.1
E886102	0.03	0.6	73.7	12.6	6.8	1.2	15.0	4	< 0.1	0.12	< 0.1	< 1	0.1	< 0.1	13	2.1	6.0	1.0	5.4	1.4	2.3	0.4	2.9
E886103	< 0.02	0.7	6.1	1.0	4.0	1.8	0.5	< 1	< 0.1	0.17	< 0.1	< 1	0.2	< 0.1	23	0.2	0.4	< 0.1	0.3	< 0.1	0.1	< 0.1	< 0.1
E886104	< 0.02	2.0	6.0	1.4	< 0.1	2.4	0.8	3	0.1	0.26	< 0.1	< 1	0.3	0.2	16	0.3	0.6	< 0.1	0.4	< 0.1	0.2	< 0.1	0.1
E886105	< 0.02	2.4	38.0	1.1	< 0.1	0.8	2.5	2	0.1	0.38	< 0.1	< 1	0.1	0.2	8	0.6	1.3	0.2	1.0	0.3	0.5	< 0.1	0.6
E886106	0.02	0.7	48.2	14.1	< 0.1	1.2	9.8	10	0.9	0.46	< 0.1	< 1	0.5	< 0.1	11	1.5	3.9	0.6	3.3	0.9	1.4	0.3	1.8
E886107	0.22	2.9	175	17.2	0.5	10.0	14.1	80	4.6	1.31	< 0.1	2	0.8	1.3	103	7.1	12.8	1.5	6.3	1.7	2.1	0.4	2.7
E886108	< 0.02	0.6	9.2	2.4	< 0.1	0.9	2.3	6	0.3	0.17	< 0.1	< 1	0.2	< 0.1	6	0.5	1.5	0.2	1.1	0.3	0.3	< 0.1	0.4
E886109	0.04	0.6	98.3	14.6	7.0	2.2	16.9	14	< 0.1	0.10	< 0.1	< 1	0.2	< 0.1	22	2.9	7.8	1.3	6.3	1.6	2.5	0.5	3.4
E886110	0.50	0.6	57.7	8.4	218	33.7	9.8	36	2.5	5.33	< 0.1	4	2.9	0.2	167	11.0	22.3	2.8	10.5	2.4	1.8	0.3	1.8
E886111	0.07	0.7	89.6	13.3	11.7	2.2	15.3	16	0.2	0.15	< 0.1	< 1	0.2	< 0.1	25	2.3	6.5	1.0	5.8	1.7	2.3	0.4	3.1
E886112	0.05	0.6	84.4	14.2	5.9	1.4	17.4	27	0.2	0.12	< 0.1	< 1	0.2	< 0.1	9	3.1	8.3	1.3	6.7	2.4	2.6	0.5	3.4
E886113	0.03	0.5	91.3	13.3	1.5	1.0	15.6	5	1.1	0.19	< 0.1	< 1	0.4	< 0.1	17	1.8	5.3	0.9	4.8	1.6	2.3	0.4	3.1
E886114	< 0.02	0.5	27.5	3.5	1.5	3.5	3.7	2	0.4	0.26	< 0.1	< 1	0.2	< 0.1	9	0.6	1.6	0.3	1.3	0.3	0.6	< 0.1	0.7
E886115	0.07	0.7	84.6	6.3	6.0	11.2	5.0	4	0.7	0.20	< 0.1	< 1	0.3	< 0.1	19	1.0	2.4	0.4	1.8	0.6	0.7	0.1	0.8
E886116	0.33	0.6	88.8	10.9	4.6	3.2	9.8	5	0.9	0.19	< 0.1	< 1	0.3	< 0.1	23	0.7	2.1	0.4	2.0	1.0	1.4	0.3	2.1
E886117	6.43	7.8	59.3	13.9	< 0.1	24.3	8.9	104	4.5	6.23	< 0.1	1	0.1	2.7	75	3.7	7.1	0.8	3.5	0.8	1.1	0.2	1.8
E886118	5.74	7.4	1490	15.2	0.1	51.1	13.3	109	3.4	5.08	0.3	1	0.1	2.9	52	14.4	31.6	3.9	15.2	2.9	3.1	0.5	3.4
E886119	5.48	8.0	1730	16.5	0.1	68.6	10.8	108	2.4	5.63	0.3	2	0.1	2.6	63	14.6	32.6	4.1	15.7	3.5	3.0	0.5	2.6
E886120	0.03	0.6	8.1	0.7	0.6	2.7	2.0	24	0.5	0.44	< 0.1	< 1	0.2	< 0.1	16	2.0	3.8	0.5	1.8	0.4	0.3	< 0.1	0.3
E886121	3.84	6.3	157	14.2	5.8	13.7	14.7	105	5.5	4.54	< 0.1	< 1	0.1	3.3	56	21.4	46.2	5.7	23.2	4.3	4.2	0.6	3.6
E886122	0.14	0.4	18.9	0.9	60.8	0.2	0.5	2	< 0.1	0.27	< 0.1	< 1	3.7	< 0.1	7	0.7	2.7	0.2	0.7	0.2	0.1	< 0.1	< 0.1
E886123	0.10	0.4	9.1	0.5	23.5	< 0.2	0.2	< 1	< 0.1	0.32	< 0.1	< 1	17.8	< 0.1	5	0.2	1.2	< 0.1	0.3	< 0.1	< 0.1	< 0.1	< 0.1
E886124	0.53	0.6	161	3.7	1180	2.7	3.3	8	0.2	0.30	< 0.1	< 1	23.5	< 0.1	22	0.9	2.5	0.3	1.7	0.4	0.7	0.1	0.7
E886125	0.13	0.4	70.2	2.0	630	1.2	2.5	5	< 0.1	0.16	< 0.1	< 1	7.1	< 0.1	15	2.9	5.7	0.6	2.7	0.4	0.5	< 0.1	0.5
E886126	0.04	0.6	61.0	2.6	442	0.3	2.2	5	< 0.1	0.15	< 0.1	< 1	7.0	< 0.1	13	0.5	1.4	0.2	1.0	0.3	0.4	< 0.1	0.4
E886127	0.17	0.6	111	6.5	331	15.3	4.6	25	0.3	0.43	< 0.1	< 1	5.4	< 0.1	178	7.0	14.0	1.6	7.1	1.0	1.1	0.2	1.0
E886128	< 0.02	0.5	33.4	4.0	9.0	0.2	1.8	6	0.2	0.16	< 0.1	< 1	3.9	< 0.1	2	0.4	0.9	0.1	0.6	0.2	0.2	< 0.1	0.3
E886129	0.12	0.4	62.7	3.1	418	< 0.2	1.4	6	0.1	0.11	< 0.1	< 1	3.4	< 0.1	1	0.6	1.2	0.2	0.8	< 0.1	0.3	< 0.1	0.3
E886130	0.65	1.0	104	15.0	16.2	33.8	18.3	24	3.6	10.4	0.1	2	7.8	0.2	643	14.4	29.8	4.0	17.4	3.5	3.3	0.5	3.5
E886131	< 0.02	0.6	39.2	2.9	6.0	0.3	1.4	6	0.1	1.04	< 0.1	< 1	3.1	< 0.1	2	0.5	1.3	0.2	0.8	0.3	0.3	< 0.1	0.3

	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS
SAMPLE	Bi	Se	Zn	Ga	As	Rb	Y	Zr	Nb	Mo	In	Sn	Sb	Te	Ba	La	Ce	Pr	Nd	Sm	Gd	Tb	Dy
DESCRIPTION	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
E886132	< 0.02	0.5	73.3	1.9	4.3	< 0.2	0.6	3	< 0.1	0.17	< 0.1	< 1	3.4	0.1	1	0.2	0.5	< 0.1	0.3	0.1	0.1	< 0.1	< 0.1
E886133	0.02	0.3	61.1	2.5	166	0.2	2.6	6	0.1	0.12	< 0.1	< 1	1.9	< 0.1	2	0.8	2.3	0.4	1.7	0.2	0.5	< 0.1	0.6
E886134	0.08	0.3	36.3	3.0	478	< 0.2	2.7	12	0.3	0.15	< 0.1	< 1	2.8	< 0.1	1	1.8	4.1	0.5	2.5	0.4	0.6	< 0.1	0.6
E886135	0.05	0.3	30.4	3.5	76.4	< 0.2	3.1	8	0.2	0.16	< 0.1	< 1	0.9	< 0.1	2	2.6	5.2	0.7	2.8	0.6	0.7	0.1	0.7
E886136	0.09	0.2	75.7	9.1	1.6	3.9	8.4	6	0.9	0.17	< 0.1	< 1	0.1	< 0.1	57	1.2	3.5	0.6	3.2	0.8	1.3	0.2	1.8
E886137	< 0.02	0.3	63.9	7.7	0.8	4.2	6.9	10	0.8	0.11	< 0.1	< 1	< 0.1	< 0.1	56	0.8	2.3	0.4	2.2	1.0	1.2	0.2	1.3
E886138	< 0.02	0.3	70.0	7.0	1.1	1.3	6.4	11	0.7	0.16	< 0.1	< 1	< 0.1	< 0.1	16	0.5	1.8	0.3	2.1	0.6	0.9	0.2	1.4
E886139	< 0.02	0.2	66.0	7.8	0.7	2.1	6.9	4	0.4	0.12	< 0.1	< 1	0.1	< 0.1	21	1.0	2.9	0.4	2.4	0.6	0.9	0.2	1.3
E886140	< 0.02	0.1	29.9	0.7	1.1	2.4	1.5	24	0.4	0.24	< 0.1	< 1	0.2	< 0.1	15	1.6	3.0	0.4	1.3	0.4	0.3	< 0.1	0.3
E886141	0.09	0.3	62.0	18.7	0.3	62.0	12.6	59	< 0.1	0.07	< 0.1	< 1	< 0.1	< 0.1	2880	18.2	32.3	3.7	14.6	2.8	2.6	0.4	2.4
E886142	0.09	0.4	66.5	12.3	1.1	31.7	9.4	65	0.5	0.11	< 0.1	< 1	0.4	< 0.1	316	10.5	22.1	2.7	10.7	1.7	2.0	0.3	2.0
E886143	0.59	0.4	92.5	15.1	3.6	18.7	10.0	63	1.4	0.84	< 0.1	1	0.4	< 0.1	203	15.9	30.0	3.5	14.0	2.5	2.5	0.3	2.2
E886144	0.05	0.2	69.1	20.6	9.2	46.4	9.8	85	1.6	0.36	< 0.1	< 1	0.3	< 0.1	1690	12.1	24.5	3.0	11.6	2.1	2.1	0.3	2.0
E886145	0.72	1.3	17.4	6.4	1.3	18.9	0.7	1	< 0.1	0.42	< 0.1	< 1	0.3	0.1	186	2.4	4.0	0.4	1.7	0.2	0.2	< 0.1	0.1
E886146	0.21	0.2	45.4	18.0	1.0	10.5	9.4	66	0.5	0.43	< 0.1	< 1	0.2	< 0.1	828	12.7	24.7	3.0	10.8	2.3	2.0	0.3	1.9
E886147	0.08	0.4	30.0	15.5	1.0	21.4	21.1	199	6.6	0.72	< 0.1	1	0.6	< 0.1	349	29.6	56.5	6.5	22.4	3.8	3.9	0.6	3.9
E886148	0.18	0.3	162	19.0	< 0.1	42.9	22.2	58	0.3	0.13	< 0.1	< 1	0.2	< 0.1	202	5.8	11.8	1.7	8.6	2.1	3.4	0.6	4.3
E886149	0.06	0.5	17.6	13.4	0.5	25.3	21.8	121	8.8	1.23	< 0.1	< 1	0.2	< 0.1	418	33.0	60.2	6.7	22.3	4.1	3.9	0.6	3.8
E886150	7.83	20.6	6700	12.6	309	43.2	14.2	77	4.1	8.65	3.1	18	45.3	0.2	59	11.8	24.5	3.5	14.3	3.1	2.9	0.4	2.7
E886151	0.03	0.6	147	19.6	< 0.1	10.9	33.1	42	< 0.1	0.15	< 0.1	< 1	0.1	< 0.1	76	5.5	14.4	2.4	12.1	3.6	5.0	0.9	6.4
GXR-4 Meas	19.1	6.4	68.7	16.5	89.4	158	11.5	44	9.2	336	0.2	8	4.4	1.1	244	57.5	108		40.8	6.7	4.7	0.4	2.4
GXR-4 Cert	19.0	5.60	73.0	20.0	98.0	160	14.0	186	10.0	310	0.270	5.60	4.80	0.970	1640	64.5	102		45.0	6.60	5.25	0.360	2.60
SDC-1 Meas			111	20.2	< 0.1	61.1		37	0.3			< 1	< 0.1		656	43.4	93.3		43.6	7.8	6.9	1.0	6.1
SDC-1 Cert			103.00	21.00	0.220	127.00		290.00	21.00			3.00	0.54		630	42.00	93.00		40.00	8.20	7.00	1.20	6.70
GXR-6 Meas	0.17	1.1	127	31.1	282	57.7	10.7	97	4.2	1.89	< 0.1	1	2.5	< 0.1	1160	12.7	32.9		12.0	2.4	2.2	0.3	2.3
GXR-6 Cert	0.290	0.940	118	35.0	330	90.0	14.0	110	7.50	2.40	0.260	1.70	3.60	0.0180	1300	13.9	36.0		13.0	2.67	2.97	0.415	2.80
OREAS 97 (4 Acid) Meas	41.8	70.2	598									87	6.0										
OREAS 97 (4 Acid) Cert	40.1	71.4	646									95.7	9.23										
OREAS 98 (4 Acid) Meas	99.5	190	1430									> 200	13.2										
OREAS 98 (4 Acid) Cert	97.2	158	1360									206	20.1										
DNC-1a Meas			69.0	12.9		3.7	13.9	37	1.5				0.8		95	3.5			4.7				
DNC-1a Cert			70	15		5	18.0	38.0	3				0.96		118	3.6			5.20				
SBC-1 Meas	0.69		196	24.3	23.2	158	28.9	129	14.9	2.36		4	1.0		267	51.3	110	13.3	51.6	9.4	8.0	1.1	6.3
SBC-1 Cert	0.70		186	27.0	25.7	147	36.5	134.0	15.3	2.40		3.3	1.01		788.0	52.5	108.0	12.6	49.2	9.6	8.5	1.20	7.10
OREAS 45d (4-Acid) Meas	0.32		45.3	20.4	5.5	46.3	10.6	52	0.4	0.49	< 0.1	< 1	< 0.1		178	17.3	36.1	4.0	14.2	2.7	2.5	0.4	2.2
OREAS 45d (4-Acid) Cert	0.31		45.7	21.20	13.8	42.1	9.53	141	14.50	2.500	0.096	2.78	0.82		183.0	16.9	37.20	3.70	13.4	2.80	2.42	0.400	2.26
OREAS 220 (Fire Assay) Meas																							
OREAS 220 (Fire																							

	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS
SAMPLE	Bi	Se	Zn	Ga	As	Rb	Y	Zr	Nb	Mo	In	Sn	Sb	Te	Ba	La	Ce	Pr	Nd	Sm	Gd	Tb	Dy
DESCRIPTION	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Assay) Cert																							
OREAS 96 (4 Acid) Meas	29.2	44.1	459									63	4.1										
OREAS 96 (4 Acid) Cert	26.3	40.7	457									65.6	5.09										
OREAS 621 (4 Acid) Meas	4.05	5.4	> 10000	26.5	65.3	86.0	11.3	190	10.3	14.4	1.8	6	47.8			19.9	46.6					0.4	
OREAS 621 (4 Acid) Cert	3.93	5.64	52200	24.6	77.0	84.0	11.1	168	8.61	13.6	1.83	5.25	139			21.6	46.6					0.460	
OREAS 209 (Fire Assay) Meas																							
OREAS 209 (Fire Assay) Cert																							
E885836 Orig																							
E885836 Dup																							
E886103 Orig	< 0.02	0.7	6.1	1.0	4.0	1.8	0.5	< 1	< 0.1	0.17	< 0.1	< 1	0.2	< 0.1	23	0.2	0.4	< 0.1	0.3	< 0.1	0.1	< 0.1	< 0.1
E886103 Dup	< 0.02	0.8	7.5	1.0	0.7	1.9	0.5	< 1	< 0.1	0.15	< 0.1	< 1	0.2	< 0.1	22	0.2	0.4	< 0.1	0.2	0.1	< 0.1	< 0.1	< 0.1
E886106 Orig																							
E886106 Dup																							
E886117 Orig																							
E886117 Dup																							
E886131 Orig																							
E886131 Dup																							
E886133 Orig	0.02	0.3	61.1	2.5	166	0.2	2.6	6	0.1	0.12	< 0.1	< 1	1.9	< 0.1	2	0.8	2.3	0.4	1.7	0.2	0.5	< 0.1	0.6
E886133 Dup	0.02	0.2	91.9	2.5	159	< 0.2	2.5	5	0.1	0.13	< 0.1	< 1	1.8	< 0.1	2	0.8	2.3	0.3	1.7	0.3	0.5	< 0.1	0.6
E886134 Orig	0.08	0.3	36.3	3.0	478	< 0.2	2.7	12	0.3	0.15	< 0.1	< 1	2.8	< 0.1	1	1.8	4.1	0.5	2.5	0.4	0.6	< 0.1	0.6
E886134 Dup	0.08	0.3	38.0	3.2	495	< 0.2	2.8	12	0.3	0.15	< 0.1	< 1	2.3	< 0.1	1	1.7	4.1	0.5	2.6	0.5	0.6	< 0.1	0.7
E886135 Orig	0.05	0.3	30.4	3.5	76.4	< 0.2	3.1	8	0.2	0.16	< 0.1	< 1	0.9	< 0.1	2	2.6	5.2	0.7	2.8	0.6	0.7	0.1	0.7
E886135 Split	0.06	0.4	32.3	3.5	76.9	< 0.2	3.0	9	0.2	0.15	< 0.1	< 1	1.1	< 0.1	2	2.6	5.1	0.7	2.6	0.8	0.7	0.1	0.7
E886139 Orig																							
E886139 Dup																							
E886148 Orig																							
E886148 Dup																							
Method Blank																							
Method Blank																							
Method Blank																							
Method Blank																							
Method Blank	< 0.02	0.2	0.3	0.2	< 0.1	< 0.2	< 0.1	< 1	< 0.1	0.14	< 0.1	< 1	< 0.1	< 0.1	< 1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1

	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	
SAMPLE	Cu	Ge	Tm	Yb	Lu	Ta	Sr	W	Re	Tl	Pb	Th	U
DESCRIPTION	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
E885836	4590	< 0.1	< 0.1	0.1	< 0.1	< 0.1	6.7	2.9	0.002	< 0.05	1.2	< 0.1	< 0.1
E885837	90.1	0.3	0.3	2.2	0.3	< 0.1	90.2	< 0.1	0.002	0.20	2.1	0.3	< 0.1
E885838	89.8	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	1.6	2.2	0.002	< 0.05	1.0	< 0.1	< 0.1

	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS
SAMPLE	Cu	Ge	Tm	Yb	Lu	Ta	Sr	W	Re	Tl	Pb	Th	U
DESCRIPTION	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
E885839	87.1	< 0.1	< 0.1	0.1	< 0.1	< 0.1	5.5	3.2	0.002	< 0.05	1.1	< 0.1	< 0.1
E885840	2.6	< 0.1	< 0.1	0.3	< 0.1	< 0.1	3.8	2.0	0.002	0.06	1.5	1.1	0.4
E885841	83.7	0.3	0.3	2.0	0.3	< 0.1	90.2	0.3	0.002	0.06	1.8	0.3	< 0.1
E885842	92.4	0.3	0.2	1.5	0.2	< 0.1	101	0.2	0.001	< 0.05	0.9	0.2	< 0.1
E885843	87.9	0.2	0.2	1.5	0.2	< 0.1	98.7	< 0.1	0.002	0.06	0.9	0.2	< 0.1
E885844	56.8	0.2	0.3	2.0	0.3	< 0.1	104	< 0.1	0.001	0.07	1.5	0.3	< 0.1
E885845	108	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	5.1	1.4	< 0.001	< 0.05	< 0.5	< 0.1	< 0.1
E885846	57.2	0.2	0.2	1.4	0.2	< 0.1	101	< 0.1	0.001	0.05	0.9	0.2	< 0.1
E885847	11.2	0.2	< 0.1	0.5	< 0.1	< 0.1	25.1	0.5	0.001	< 0.05	< 0.5	< 0.1	< 0.1
E885848	137	0.4	0.3	1.8	0.2	0.1	98.7	0.3	0.002	< 0.05	1.6	0.2	< 0.1
E885849	83.3	< 0.1	0.3	1.7	0.2	0.1	85.9	0.4	0.040	0.06	1.0	0.2	< 0.1
E885850	1300	< 0.1	0.3	1.8	0.3	0.3	188	2.5	0.010	3.01	> 5000	3.4	1.7
E886101	76.9	0.3	0.4	2.3	0.3	< 0.1	134	0.2	0.007	< 0.05	2.0	0.3	< 0.1
E886102	114	0.2	0.3	1.8	0.2	< 0.1	117	< 0.1	0.002	< 0.05	2.3	0.2	< 0.1
E886103	24.2	0.3	< 0.1	< 0.1	< 0.1	< 0.1	4.9	1.4	0.002	< 0.05	< 0.5	< 0.1	< 0.1
E886104	124	0.1	< 0.1	< 0.1	< 0.1	< 0.1	4.3	32.9	0.002	0.06	0.6	0.1	< 0.1
E886105	226	< 0.1	< 0.1	0.2	< 0.1	< 0.1	1.0	2.4	0.001	< 0.05	< 0.5	< 0.1	< 0.1
E886106	45.2	0.4	0.2	1.1	0.1	< 0.1	49.0	0.6	0.003	< 0.05	0.5	0.1	< 0.1
E886107	224	< 0.1	0.3	1.9	0.3	0.4	66.3	0.8	0.003	0.09	4.9	3.6	1.0
E886108	1.3	0.1	< 0.1	0.3	< 0.1	< 0.1	12.0	0.8	0.002	< 0.05	< 0.5	< 0.1	< 0.1
E886109	111	0.3	0.3	2.1	0.3	< 0.1	118	0.1	0.002	< 0.05	3.2	0.3	< 0.1
E886110	71.4	0.2	0.2	1.1	0.2	0.1	148	30.4	0.002	0.21	12.5	2.6	0.8
E886111	162	0.3	0.3	1.8	0.2	< 0.1	113	0.2	0.002	< 0.05	2.8	0.2	< 0.1
E886112	155	0.3	0.3	2.2	0.3	< 0.1	106	0.1	0.002	< 0.05	1.5	0.3	< 0.1
E886113	51.6	0.4	0.3	1.9	0.2	< 0.1	85.3	0.2	0.001	< 0.05	1.1	0.2	< 0.1
E886114	11.8	0.4	< 0.1	0.4	< 0.1	< 0.1	17.1	0.1	< 0.001	< 0.05	< 0.5	< 0.1	< 0.1
E886115	18.1	0.2	< 0.1	0.7	< 0.1	< 0.1	21.4	0.1	0.001	0.09	0.6	< 0.1	< 0.1
E886116	8.5	0.4	0.2	1.4	0.2	< 0.1	85.2	0.5	0.001	< 0.05	3.5	< 0.1	< 0.1
E886117	775	< 0.1	0.2	1.6	0.2	0.3	46.3	1.7	0.004	0.35	7.8	1.9	1.1
E886118	1600	< 0.1	0.3	2.1	0.3	0.3	38.7	0.8	0.012	0.58	8.3	5.1	1.7
E886119	875	0.2	0.2	1.5	0.2	0.2	38.7	0.7	0.010	0.77	8.8	4.4	1.7
E886120	4.8	0.2	< 0.1	0.3	< 0.1	< 0.1	2.4	0.1	0.001	< 0.05	1.2	1.0	0.3
E886121	267	< 0.1	0.3	2.2	0.3	0.5	56.0	0.6	0.012	0.17	9.0	6.8	2.2
E886122	49.2	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	27.8	< 0.1	0.001	< 0.05	1.1	0.1	< 0.1
E886123	557	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	17.6	0.3	0.001	< 0.05	1.0	< 0.1	< 0.1
E886124	111	< 0.1	< 0.1	0.4	< 0.1	< 0.1	340	2.5	< 0.001	< 0.05	2.0	0.1	< 0.1
E886125	13.0	< 0.1	< 0.1	0.3	< 0.1	< 0.1	231	0.4	0.001	< 0.05	3.8	0.3	< 0.1
E886126	27.1	< 0.1	< 0.1	0.3	< 0.1	< 0.1	146	0.9	< 0.001	< 0.05	2.6	< 0.1	< 0.1
E886127	28.6	< 0.1	< 0.1	0.6	< 0.1	< 0.1	33.1	1.8	< 0.001	0.09	2.4	0.7	0.3
E886128	9.5	< 0.1	< 0.1	0.3	< 0.1	< 0.1	18.9	0.6	0.001	< 0.05	0.5	< 0.1	< 0.1
E886129	2.0	< 0.1	< 0.1	0.2	< 0.1	< 0.1	122	1.3	0.001	< 0.05	0.7	< 0.1	< 0.1
E886130	189	0.4	0.3	2.2	0.3	0.3	466	7.4	0.002	0.29	24.5	3.0	1.8
E886131	17.9	< 0.1	< 0.1	0.2	< 0.1	< 0.1	84.0	1.0	0.003	< 0.05	< 0.5	< 0.1	< 0.1

	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS
SAMPLE	Cu	Ge	Tm	Yb	Lu	Ta	Sr	W	Re	Tl	Pb	Th	U
DESCRIPTION	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
E886132	26.3	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	61.7	2.0	< 0.001	< 0.05	< 0.5	< 0.1	< 0.1
E886133	4.2	< 0.1	< 0.1	0.3	< 0.1	< 0.1	250	1.2	0.002	< 0.05	1.0	< 0.1	< 0.1
E886134	3.0	< 0.1	< 0.1	0.4	< 0.1	< 0.1	138	0.4	< 0.001	< 0.05	< 0.5	0.3	< 0.1
E886135	7.8	< 0.1	< 0.1	0.3	< 0.1	< 0.1	213	0.3	< 0.001	< 0.05	1.3	0.2	< 0.1
E886136	20.0	< 0.1	0.2	1.1	0.1	< 0.1	130	0.3	< 0.001	0.07	2.9	< 0.1	< 0.1
E886137	24.2	< 0.1	0.1	0.9	0.1	< 0.1	97.6	0.1	< 0.001	< 0.05	0.8	< 0.1	< 0.1
E886138	3.1	0.3	0.1	0.8	< 0.1	< 0.1	52.8	0.2	< 0.001	< 0.05	0.5	< 0.1	< 0.1
E886139	40.7	0.7	0.1	0.9	0.1	< 0.1	115	< 0.1	< 0.001	< 0.05	0.5	< 0.1	< 0.1
E886140	2.0	< 0.1	< 0.1	0.2	< 0.1	< 0.1	3.0	0.1	< 0.001	< 0.05	1.1	1.0	0.3
E886141	50.9	0.1	0.2	1.5	0.2	< 0.1	224	< 0.1	< 0.001	0.29	4.3	3.0	0.7
E886142	11.4	0.3	0.2	1.1	0.1	< 0.1	192	< 0.1	< 0.001	0.19	4.0	3.0	0.6
E886143	10.1	0.3	0.2	1.2	0.2	< 0.1	358	0.4	< 0.001	0.10	9.7	2.9	0.7
E886144	66.6	0.3	0.2	1.2	0.2	< 0.1	166	0.2	< 0.001	0.33	5.4	3.6	0.9
E886145	1570	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	71.3	0.2	< 0.001	0.08	3.5	< 0.1	< 0.1
E886146	55.5	0.3	0.2	1.2	0.2	< 0.1	259	0.2	< 0.001	0.06	8.3	4.5	1.1
E886147	153	0.2	0.4	2.7	0.4	0.6	55.8	0.2	< 0.001	0.17	7.8	13.1	3.0
E886148	9.5	0.2	0.4	2.6	0.3	< 0.1	131	0.1	< 0.001	0.51	9.5	0.4	0.1
E886149	16.7	< 0.1	0.4	2.8	0.4	1.1	50.1	0.7	0.001	0.15	10.7	19.7	5.0
E886150	2030	0.1	0.3	1.8	0.3	0.2	81.5	3.3	0.013	5.11	> 5000	2.9	1.9
E886151	62.8	0.2	0.6	4.0	0.6	< 0.1	123	< 0.1	0.006	< 0.05	7.3	0.6	0.1
GXR-4 Meas	6600		0.2	1.0	0.1	0.6	225	35.3		3.03	44.1	17.3	5.4
GXR-4 Cert	6520		0.210	1.60	0.170	0.790	221	30.8		3.20	52.0	22.5	6.20
SDC-1 Meas	27.6		0.5	3.3		< 0.1	187	0.1		0.63	22.8	11.3	2.7
SDC-1 Cert	30.000		0.65	4.00		1.20	180.00	0.80		0.70	25.00	12.00	3.10
GXR-6 Meas	59.7			1.7	0.2	0.2	38.5	0.7		2.15	97.8	5.0	1.4
GXR-6 Cert	66.0			2.40	0.330	0.485	35.0	1.90		2.20	101	5.30	1.54
OREAS 97 (4 Acid) Meas	> 10000										136		
OREAS 97 (4 Acid) Cert	63100.00										147		
OREAS 98 (4 Acid) Meas	> 10000										333		
OREAS 98 (4 Acid) Cert	14800.0										345		
DNC-1a Meas	91.1			1.9			146				5.7		
DNC-1a Cert	100			2.0			144				6.3		
SBC-1 Meas	26.8		0.5	3.4	0.4	1.0	188	1.5		0.92	34.2	15.3	5.7
SBC-1 Cert	31.0		0.56	3.64	0.54	1.10	178.0	1.60		0.89	35.0	15.8	5.76
OREAS 45d (4-Acid) Meas	367			1.5	0.2	< 0.1	34.7	0.2		0.25	20.5	14.4	2.7
OREAS 45d (4-Acid) Cert	371			1.33	0.18	1.02	31.30	1.62		0.27	21.8	14.5	2.63
OREAS 220 (Fire Assay) Meas													
OREAS 220 (Fire													

	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS
SAMPLE	Cu	Ge	Tm	Yb	Lu	Ta	Sr	W	Re	Tl	Pb	Th	U
DESCRIPTION	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Assay) Cert													
OREAS 96 (4 Acid) Meas	> 10000										101		
OREAS 96 (4 Acid) Cert	39300										101		
OREAS 621 (4 Acid) Meas	4020			1.0	0.1		76.1	1.9		2.06	> 5000	5.3	2.8
OREAS 621 (4 Acid) Cert	3630			0.990	0.140		91.0	2.35		1.96	13600	7.48	2.83
OREAS 209 (Fire Assay) Meas													
OREAS 209 (Fire Assay) Cert													
E885836 Orig													
E885836 Dup													
E886103 Orig	24.2	0.3	< 0.1	< 0.1	< 0.1	< 0.1	4.9	1.4	0.002	< 0.05	< 0.5	< 0.1	< 0.1
E886103 Dup	25.0	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	4.3	1.4	0.001	< 0.05	< 0.5	< 0.1	< 0.1
E886106 Orig													
E886106 Dup													
E886117 Orig													
E886117 Dup													
E886131 Orig													
E886131 Dup													
E886133 Orig	4.2	< 0.1	< 0.1	0.3	< 0.1	< 0.1	250	1.2	0.002	< 0.05	1.0	< 0.1	< 0.1
E886133 Dup	4.1	< 0.1	< 0.1	0.3	< 0.1	< 0.1	243	0.9	< 0.001	< 0.05	1.1	< 0.1	< 0.1
E886134 Orig	3.0	< 0.1	< 0.1	0.4	< 0.1	< 0.1	138	0.4	< 0.001	< 0.05	< 0.5	0.3	< 0.1
E886134 Dup	1.4	< 0.1	< 0.1	0.4	< 0.1	< 0.1	138	0.4	< 0.001	< 0.05	0.5	0.3	< 0.1
E886135 Orig	7.8	< 0.1	< 0.1	0.3	< 0.1	< 0.1	213	0.3	< 0.001	< 0.05	1.3	0.2	< 0.1
E886135 Split	6.5	< 0.1	< 0.1	0.3	< 0.1	< 0.1	210	0.4	< 0.001	< 0.05	1.5	0.2	< 0.1
E886139 Orig													
E886139 Dup													
E886148 Orig													
E886148 Dup													
Method Blank													
Method Blank													
Method Blank													
Method Blank													
Method Blank	0.6	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.2	< 0.1	< 0.001	< 0.05	< 0.5	< 0.1	< 0.1



Date Submitted: 04-Sep-18
Invoice No.: A18-12314
Invoice Date: 09-Oct-18
Your Reference: Exploration

GOLDCORP Canada Ltd--Musselwhite Mine
P.O. Box 7500
Thunder bay Ontario P7B 6S8
Canada

ATTN: Katie Lucas

CERTIFICATE OF ANALYSIS

44 Core samples were submitted for analysis.

The following analytical package(s) were requested:

Code UT-4 Total Digestion ICP/MS

REPORT **A18-12314**

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Notes:

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

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

CERTIFIED BY:

A handwritten signature in black ink, appearing to be "Emmanuel Esemé". The signature is written in a cursive style with some loops and is positioned above a horizontal line.

Emmanuel Esemé , Ph.D.
Quality Control

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

Date Submitted: 04-Sep-18
Invoice No.: A18-12314
Invoice Date: 09-Oct-18
Your Reference: Exploration

GOLDCORP Canada Ltd--Musselwhite Mine
P.O. Box 7500
Thunder bay Ontario P7B 6S8
Canada

ATTN: Katie Lucas

CERTIFICATE OF ANALYSIS

44 Core samples were submitted for analysis.

The following analytical package(s) were requested:

Code 1A2-GC Musselwhite Dryden Au - Fire Assay AA

REPORT **A18-12314**

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Notes:

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

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

CERTIFIED BY:



Emmanuel Esemé , Ph.D.
Quality Control

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	FA-AA	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	
SAMPLE	Au	B	Li	Na	Mg	Al	K	Ca	Cd	V	Cr	Mn	Fe	Hf	Ni	Er	Be	Ho	Hg	Ag	Cs	Co	Eu
DESCRIPTION	g/mt	ppm	ppm	%	%	%	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm
E885911	0.015	< 20	12.5	2.21	4.65	8.40	0.07	6.82	0.2	292	135	1730	9.71	1.3	108	2.5	0.2	0.8	< 10	0.20	0.20	49.2	0.83

Results

Activation Laboratories Ltd.

Report: A18-12314

	FA-AA	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS		
SAMPLE	Au	B	Li	Na	Mg	Al	K	Ca	Cd	V	Cr	Mn	Fe	Hf	Ni	Er	Be	Ho	Hg	Ag	Cs	Co	Eu		
DESCRIPTION	g/mt	ppm	ppm	%	%	%	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm		
E885913	< 0.005	< 20	51.2	1.22	5.09	8.74	0.62	0.08	< 0.1	137	541	619	6.17	2.5	475	1.2	0.7	0.3	< 10	< 0.05	1.39	45.3	0.63		
GXR-4 Meas		< 20	10.5	0.55	1.71	6.80	4.39	0.99	0.4	81	43	134	2.97	1.6	37.1		1.9		< 10	3.74	2.61	13.8	1.30		
GXR-4 Cert		4.50	11.1	0.564	1.66	7.20	4.01	1.01	0.860	87.0	64.0	155	3.09	6.30	42.0		1.90		110	4.00	2.80	14.6	1.63		
SDC-1 Meas		< 20	31.8	1.63	1.04	8.56	1.33	1.03		43	47	864	4.73	1.2	34.4		3.6	2.6	1.2			3.81	17.5	1.55	
SDC-1 Cert		13.00	34.0	1.52	1.02	8.34	2.72	1.00		102.00	64.00	880.00	4.82	8.30	38.0		4.10	3.00	1.50			4.00	18.0	1.70	
GXR-6 Meas		< 20	32.8	0.10	0.62	> 10.0	1.28	0.16	0.2	166	65	1020	5.48	3.3	23.1		1.0		< 10	0.35	3.70	12.9	0.59		
GXR-6 Cert		9.80	32.0	0.104	0.609	17.7	1.87	0.180	1.00	186	96.0	1010	5.58	4.30	27.0		1.40		68.0	1.30	4.20	13.8	0.760		
OREAS 97 (4 Acid) Meas																						16.9		60.5	
OREAS 97 (4 Acid) Cert																						19.6		62.9	
OREAS 98 (4 Acid) Meas																						48.2		130	
OREAS 98 (4 Acid) Cert																						45.1		121	
DNC-1a Meas			4.4	1.46				8.00		140	138		6.76		260								55.2	0.55	
DNC-1a Cert			5.2	1.40				8.21		148	270		1.25		247									57	0.59
SBC-1 Meas			156						0.4	213	78			4.1	85.4		3.7	3.2	1.2				7.74	22.2	1.85
SBC-1 Cert			163						0.40	220.0	109			3.7	82.8		3.80	3.20	1.40				8.2	22.7	1.98
OREAS 45d (4-Acid) Meas			21.6	0.11	0.24	8.21	0.46	0.18		90	476	465	14.6	1.6	236		1.3	0.7	0.4				3.68	29.4	0.56
OREAS 45d (4-Acid) Cert			21.5	0.101	0.245	8.150	0.412	0.185		235.0	549	490.000	14.5	3.830	231.0		1.38	0.79	0.46				3.910	29.50	0.57
OREAS 214 Meas																									
OREAS 214 Cert																									
OREAS 216 (Fire Assay) Meas																									
OREAS 216 (Fire Assay) Cert																									
OREAS 220 (Fire Assay) Meas	0.827																								
OREAS 220 (Fire Assay) Cert	0.866																								
OREAS 220 (Fire Assay) Meas	0.833																								
OREAS 220 (Fire Assay) Cert	0.866																								
OREAS 96 (4 Acid) Meas																							10.4		50.8
OREAS 96 (4 Acid) Cert																							11.5		49.9
OREAS 621 (4 Acid) Meas			13.7	1.44	0.38	6.82	2.10	2.12	288	34	33	541	3.98	5.3	29.1		1.7					71.3	3.17	31.0	
OREAS 621 (4 Acid) Cert			14.2	1.31	0.507	6.40	2.20	1.97	284	31.8	37.1	532	3.70	4.41	26.2		1.69					69.0	3.28	29.3	
OREAS 209 (Fire	1.50																								

	FA-AA	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS
SAMPLE	Au	B	Li	Na	Mg	Al	K	Ca	Cd	V	Cr	Mn	Fe	Hf	Ni	Er	Be	Ho	Hg	Ag	Cs	Co	Eu
DESCRIPTION	g/mt	ppm	ppm	%	%	%	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm
Assay) Meas																							
OREAS 209 (Fire Assay) Cert	1.58																						
OREAS 209 (Fire Assay) Meas	1.53																						
OREAS 209 (Fire Assay) Cert	1.58																						
OREAS 209 (Fire Assay) Meas	1.54																						
OREAS 209 (Fire Assay) Cert	1.58																						
E885881 Orig		< 20	2.9	0.06	0.47	1.23	0.16	0.07	0.6	21	37	2800	8.56	0.5	6.2	0.6	0.2	0.1	40	0.13	0.43	2.5	0.27
E885881 Dup		< 20	3.0	0.06	0.46	1.23	0.16	0.07	0.6	21	49	2850	8.62	0.4	5.8	0.4	0.3	0.2	10	0.12	0.47	2.5	0.25
E885884 Orig	< 0.005																						
E885884 Dup	< 0.005																						
E885891 Orig	< 0.005																						
E885891 Dup	< 0.005																						
E885892 Orig		< 20	7.4	0.48	2.06	2.94	0.03	3.44	< 0.1	101	108	639	3.66	0.2	55.6	0.8	< 0.1	0.2	< 10	< 0.05	0.08	19.3	0.20
E885892 Dup		< 20	7.7	0.47	2.08	3.00	0.03	3.47	< 0.1	113	115	660	3.71	0.2	56.9	0.8	< 0.1	0.2	10	< 0.05	0.10	19.8	0.21
E885909 Orig	< 0.005																						
E885909 Dup	< 0.005																						
E885911 Orig		< 20	12.5	2.21	4.65	8.40	0.07	6.82	0.2	292	135	1730	9.71	1.3	108	2.5	0.2	0.8	< 10	0.20	0.20	49.2	0.83
E885911 Dup		< 20	12.3	2.12	4.49	8.07	0.06	6.41	0.2	201	109	1670	9.67	1.0	106	2.6	0.2	0.8	< 10	0.19	0.22	48.8	0.78
E885912 Orig		40	8.7	0.12	0.91	1.84	0.07	0.91	< 0.1	49	29	604	4.92	0.8	46.8	0.9	< 0.1	0.3	< 10	0.09	0.48	30.4	0.21
E885912 Dup		< 20	8.7	0.12	0.93	1.80	0.07	0.94	< 0.1	49	31	604	5.03	0.8	48.2	0.9	< 0.1	0.2	30	0.10	0.50	30.4	0.20
Method Blank	< 0.005																						
Method Blank	< 0.005																						
Method Blank	< 0.005																						
Method Blank		< 20	< 0.5	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.1	< 1	14	6	< 0.01	< 0.1	< 0.5	< 0.1	< 0.1	< 0.1	< 10	< 0.05	< 0.05	< 0.1	< 0.05
Method Blank	< 0.005																						
Method Blank																							

	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS
SAMPLE	Bi	Se	Zn	Ga	As	Rb	Y	Zr	Nb	Mo	In	Sn	Sb	Te	Ba	La	Ce	Pr	Nd	Sm	Gd	Tb	Dy
DESCRIPTION	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
E885861	0.10	0.4	32.8	13.0	2.7	25.7	2.5	21	1.1	0.17	< 0.1	< 1	0.7	< 0.1	473	3.8	7.5	0.9	3.4	0.6	0.7	< 0.1	0.4
E885862	0.02	0.7	138	19.7	2.7	44.6	29.6	41	0.3	0.08	< 0.1	< 1	0.2	< 0.1	243	7.3	17.5	2.7	12.0	3.4	4.3	0.8	5.8
E885863	< 0.02	0.4	12.9	0.4	5.7	0.4	1.1	1	< 0.1	0.20	< 0.1	< 1	0.9	< 0.1	4	1.1	2.0	0.2	0.8	0.1	0.2	< 0.1	0.1
E885864	0.04	0.6	97.1	8.4	76.7	1.2	7.9	29	0.4	0.39	< 0.1	< 1	0.6	< 0.1	29	2.0	4.7	0.7	3.5	1.2	1.4	0.2	1.6
E885865	0.06	0.4	107	8.6	14.8	0.5	8.3	26	1.2	0.18	< 0.1	< 1	1.3	< 0.1	24	2.2	5.5	0.9	4.1	1.4	1.7	0.3	1.8
E885866	0.15	0.4	42.7	16.9	13.9	47.4	4.2	152	4.8	0.33	< 0.1	< 1	0.4	< 0.1	261	11.9	19.7	1.9	5.8	0.9	1.1	0.2	0.9
E885867	2.38	1.1	40.6	15.0	3.4	84.2	9.7	142	6.5	1.39	0.1	19	0.4	0.2	268	21.2	40.9	4.7	16.2	3.6	2.7	0.4	2.0
E885868	0.14	0.4	59.0	15.5	0.7	31.7	5.9	124	4.4	0.95	< 0.1	< 1	0.1	< 0.1	194	19.8	36.0	4.2	14.7	2.2	2.1	0.2	1.3
E885869	0.11	0.4	43.1	13.7	< 0.1	31.9	4.3	93	1.9	0.52	< 0.1	< 1	< 0.1	< 0.1	193	13.9	25.4	2.9	9.8	1.7	1.4	0.1	0.8
E885879	0.08	0.4	129	18.3	61.2	26.2	10.5	80	0.9	0.62	< 0.1	< 1	1.1	< 0.1	252	11.3	22.0	2.8	10.4	2.0	2.4	0.3	2.3

Results

Activation Laboratories Ltd.

Report: A18-12314

	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	
SAMPLE	Bi	Se	Zn	Ga	As	Rb	Y	Zr	Nb	Mo	In	Sn	Sb	Te	Ba	La	Ce	Pr	Nd	Sm	Gd	Tb	Dy
DESCRIPTION	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
E885880	< 0.02	0.2	5.2	1.0	1.8	3.0	1.9	28	0.7	0.30	< 0.1	< 1	0.3	< 0.1	17	2.3	4.2	0.5	1.8	0.4	0.3	< 0.1	0.3
E885881	0.31	1.6	325	4.4	22.2	5.1	4.8	20	1.2	1.10	0.2	1	2.7	0.3	51	5.1	9.2	1.0	3.9	0.5	0.7	< 0.1	0.7
E885882	0.13	0.4	80.0	18.3	15.5	7.6	20.7	86	4.7	0.50	< 0.1	< 1	1.2	< 0.1	859	8.5	19.0	2.6	11.0	2.6	3.8	0.6	4.2
E885883	0.23	0.6	88.9	14.2	1600	20.6	14.6	62	2.7	0.41	< 0.1	< 1	2.8	0.1	85	6.3	13.2	1.8	7.7	1.4	2.4	0.4	2.9
E885884	0.06	0.4	71.8	7.4	14.1	3.0	9.2	35	1.5	0.22	< 0.1	< 1	3.0	< 0.1	13	2.0	5.0	0.7	3.5	0.9	1.4	0.2	1.8
E885885	0.08	0.5	36.3	19.0	3.0	35.3	15.7	247	12.3	2.07	< 0.1	2	0.9	< 0.1	547	35.4	68.3	7.6	26.8	4.6	3.8	0.5	2.9
E885886	0.19	0.4	17.6	12.1	11.1	20.4	2.5	48	0.5	0.36	< 0.1	< 1	0.2	< 0.1	298	18.6	33.6	3.5	12.3	1.7	1.3	0.1	0.6
E885887	< 0.02	0.3	119	19.2	< 0.1	7.0	25.3	91	0.2	0.67	< 0.1	< 1	< 0.1	< 0.1	25	5.0	14.0	2.4	12.4	3.6	4.6	0.8	5.3
E885888	0.06	0.2	94.4	7.1	< 0.1	2.5	8.3	27	< 0.1	0.06	< 0.1	< 1	0.2	< 0.1	13	1.5	4.0	0.7	3.2	0.9	1.4	0.3	1.8
E885889	0.06	0.3	100	8.8	0.7	2.4	8.0	18	< 0.1	0.11	< 0.1	< 1	< 0.1	< 0.1	20	1.2	2.9	0.5	2.5	0.8	1.1	0.2	1.5
E885890	1.14	0.3	49.6	13.7	4.4	267	11.5	9	< 0.1	0.42	< 0.1	< 1	< 0.1	< 0.1	49	3.8	8.8	1.2	6.3	1.8	2.4	0.4	2.6
E885891	0.10	1.0	95.8	17.0	< 0.1	3.1	25.7	25	0.1	0.15	< 0.1	< 1	< 0.1	< 0.1	43	4.3	11.1	1.8	8.7	2.9	3.7	0.7	4.9
E885892	< 0.02	0.1	40.9	5.6	< 0.1	0.6	5.8	5	0.1	0.14	< 0.1	< 1	0.1	< 0.1	5	0.7	1.9	0.3	1.8	0.5	0.8	0.2	1.1
E885893	0.03	1.7	217	6.4	14.4	1.6	5.8	19	0.8	0.46	< 0.1	< 1	0.4	0.2	9	1.8	3.2	0.4	1.8	0.4	0.7	0.1	1.0
E885894	0.07	< 0.1	15.5	3.1	2.5	8.7	2.7	4	1.3	0.23	< 0.1	< 1	0.6	< 0.1	39	2.3	4.8	0.5	2.0	0.4	0.5	< 0.1	0.4
E885895	0.05	0.4	58.1	23.8	< 0.1	16.9	29.3	61	0.1	0.18	< 0.1	< 1	0.1	< 0.1	242	7.1	19.1	2.9	13.0	4.0	4.5	0.8	5.4
E885896 (Missing)																							
E885897	0.14	< 0.1	47.4	17.7	< 0.1	29.1	10.9	131	0.2	0.17	< 0.1	< 1	< 0.1	< 0.1	182	16.5	34.7	4.1	14.5	2.7	2.6	0.4	2.3
E885898	< 0.02	0.5	145	21.3	< 0.1	0.7	26.8	60	1.9	0.15	< 0.1	< 1	< 0.1	< 0.1	21	5.0	13.7	2.3	11.3	3.8	4.7	0.8	5.4
E885899	0.03	0.6	90.2	14.9	< 0.1	1.7	20.3	40	2.4	0.18	< 0.1	< 1	< 0.1	< 0.1	29	2.8	8.1	1.3	6.9	2.2	3.0	0.5	4.0
E885900	< 0.02	0.3	3.6	0.8	1.0	3.3	1.6	27	0.6	0.32	< 0.1	< 1	0.2	< 0.1	28	2.1	4.0	0.5	1.8	0.4	0.3	< 0.1	0.3
E885901	< 0.02	0.5	109	16.1	< 0.1	6.5	21.0	28	0.2	0.07	< 0.1	< 1	< 0.1	< 0.1	24	3.1	8.6	1.5	7.2	2.2	3.1	0.6	4.1
E885902	< 0.02	0.3	55.2	8.5	< 0.1	1.9	10.7	10	0.2	0.14	< 0.1	< 1	< 0.1	< 0.1	15	1.9	5.2	0.8	4.2	1.5	1.5	0.3	2.0
E885903	0.04	0.8	57.6	10.0	1.2	0.4	21.1	28	5.9	0.76	< 0.1	1	0.2	< 0.1	10	7.4	13.6	1.6	5.8	1.5	2.1	0.4	3.1
E885904	0.03	0.5	98.2	14.9	< 0.1	0.7	18.7	24	0.8	0.18	< 0.1	< 1	< 0.1	< 0.1	6	3.7	9.2	1.4	7.1	1.7	2.7	0.5	3.7
E885905	< 0.02	0.6	113	13.6	0.8	0.9	14.3	30	0.8	0.17	< 0.1	< 1	< 0.1	< 0.1	17	2.3	6.0	1.0	5.0	1.7	2.2	0.4	2.9
E885906	0.63	11.1	283	20.0	0.2	0.4	12.5	113	6.4	4.70	0.1	< 1	0.3	3.3	26	8.7	15.9	1.7	5.4	1.2	1.4	0.3	2.3
E885907	0.25	4.7	265	11.0	< 0.1	1.4	16.4	88	4.2	2.47	< 0.1	< 1	0.4	1.0	7	11.0	23.2	2.9	10.8	2.8	2.7	0.4	3.2
E885908	< 0.02	0.6	1.2	0.3	0.3	0.2	< 0.1	< 1	< 0.1	0.32	< 0.1	< 1	0.2	< 0.1	< 1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
E885909	< 0.02	0.3	69.5	3.5	2.0	2.9	2.4	3	0.4	0.18	< 0.1	< 1	0.1	< 0.1	16	0.2	0.5	< 0.1	0.5	< 0.1	0.2	< 0.1	0.3
E885910	7.99	21.4	7210	13.0	330	44.7	14.2	84	4.0	8.60	3.1	20	43.7	0.2	39	12.0	25.3	3.5	14.5	2.7	3.1	0.6	2.8
E885911	0.04	0.8	122	16.4	< 0.1	0.8	19.2	43	0.9	0.16	< 0.1	< 1	0.1	< 0.1	19	2.6	6.9	1.1	6.4	1.6	3.0	0.5	3.8
E885912	0.14	2.6	47.1	4.4	26.7	2.0	6.5	31	1.2	0.64	< 0.1	< 1	0.2	0.8	9	1.6	3.5	0.5	2.0	0.5	0.7	0.1	1.0
E885913	0.11	0.3	127	18.1	< 0.1	24.1	9.5	85	0.3	0.25	< 0.1	< 1	< 0.1	< 0.1	216	13.3	28.4	3.2	12.2	2.8	2.2	0.3	2.0
GXR-4 Meas	19.1	6.4	68.7	16.5	89.4	158	11.5	44	9.2	336	0.2	8	4.4	1.1	244	57.5	108		40.8	6.7	4.7	0.4	2.4
GXR-4 Cert	19.0	5.60	73.0	20.0	98.0	160	14.0	186	10.0	310	0.270	5.60	4.80	0.970	1640	64.5	102		45.0	6.60	5.25	0.360	2.60
SDC-1 Meas			111	20.2	< 0.1	61.1		37	0.3			< 1	< 0.1		656	43.4	93.3		43.6	7.8	6.9	1.0	6.1
SDC-1 Cert			103.00	21.00	0.220	127.00		290.00	21.00			3.00	0.54		630	42.00	93.00		40.00	8.20	7.00	1.20	6.70
GXR-6 Meas	0.17	1.1	127	31.1	282	57.7	10.7	97	4.2	1.89	< 0.1	1	2.5	< 0.1	1160	12.7	32.9		12.0	2.4	2.2	0.3	2.3
GXR-6 Cert	0.290	0.940	118	35.0	330	90.0	14.0	110	7.50	2.40	0.260	1.70	3.60	0.0180	1300	13.9	36.0		13.0	2.67	2.97	0.415	2.80
OREAS 97 (4 Acid) Meas	41.8	70.2	598									87	6.0										
OREAS 97 (4	40.1	71.4	646									95.7	9.23										

	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS
SAMPLE	Bi	Se	Zn	Ga	As	Rb	Y	Zr	Nb	Mo	In	Sn	Sb	Te	Ba	La	Ce	Pr	Nd	Sm	Gd	Tb	Dy
DESCRIPTION	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Acid) Cert																							
OREAS 98 (4 Acid) Meas	99.5	190	1430									> 200	13.2										
OREAS 98 (4 Acid) Cert	97.2	158	1360									206	20.1										
DNC-1a Meas			69.0	12.9		3.7	13.9	37	1.5				0.8	95	3.5			4.7					
DNC-1a Cert			70	15		5	18.0	38.0	3				0.96	118	3.6			5.20					
SBC-1 Meas	0.69		196	24.3	23.2	158	28.9	129	14.9	2.36		4	1.0	267	51.3	110	13.3	51.6	9.4	8.0	1.1	6.3	
SBC-1 Cert	0.70		186	27.0	25.7	147	36.5	134.0	15.3	2.40		3.3	1.01	788.0	52.5	108.0	12.6	49.2	9.6	8.5	1.20	7.10	
OREAS 45d (4-Acid) Meas	0.32		45.3	20.4	5.5	46.3	10.6	52	0.4	0.49	< 0.1	< 1	< 0.1	178	17.3	36.1	4.0	14.2	2.7	2.5	0.4	2.2	
OREAS 45d (4-Acid) Cert	0.31		45.7	21.20	13.8	42.1	9.53	141	14.50	2.500	0.096	2.78	0.82	183.0	16.9	37.20	3.70	13.4	2.80	2.42	0.400	2.26	
OREAS 214 Meas																							
OREAS 214 Cert																							
OREAS 216 (Fire Assay) Meas																							
OREAS 216 (Fire Assay) Cert																							
OREAS 220 (Fire Assay) Meas																							
OREAS 220 (Fire Assay) Cert																							
OREAS 220 (Fire Assay) Meas																							
OREAS 220 (Fire Assay) Cert																							
OREAS 96 (4 Acid) Meas	29.2	44.1	459									63	4.1										
OREAS 96 (4 Acid) Cert	26.3	40.7	457									65.6	5.09										
OREAS 621 (4 Acid) Meas	4.05	5.4	> 10000	26.5	65.3	86.0	11.3	190	10.3	14.4	1.8	6	47.8		19.9	46.6						0.4	
OREAS 621 (4 Acid) Cert	3.93	5.64	52200	24.6	77.0	84.0	11.1	168	8.61	13.6	1.83	5.25	139		21.6	46.6						0.460	
OREAS 209 (Fire Assay) Meas																							
OREAS 209 (Fire Assay) Cert																							
OREAS 209 (Fire Assay) Meas																							
OREAS 209 (Fire Assay) Cert																							
OREAS 209 (Fire Assay) Meas																							
OREAS 209 (Fire Assay) Cert																							
E885881 Orig	0.31	1.6	325	4.4	22.2	5.1	4.8	20	1.2	1.10	0.2	1	2.7	0.3	51	5.1	9.2	1.0	3.9	0.5	0.7	< 0.1	0.7

	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS
SAMPLE	Bi	Se	Zn	Ga	As	Rb	Y	Zr	Nb	Mo	In	Sn	Sb	Te	Ba	La	Ce	Pr	Nd	Sm	Gd	Tb	Dy
DESCRIPTION	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
E885881 Dup	0.31	1.4	333	4.2	22.4	4.9	4.5	14	1.2	1.05	0.2	1	2.7	0.2	53	5.1	9.2	1.0	3.8	0.6	0.7	< 0.1	0.7
E885884 Orig																							
E885884 Dup																							
E885891 Orig																							
E885891 Dup																							
E885892 Orig	< 0.02	0.1	40.9	5.6	< 0.1	0.6	5.8	5	0.1	0.14	< 0.1	< 1	0.1	< 0.1	5	0.7	1.9	0.3	1.8	0.5	0.8	0.2	1.1
E885892 Dup	< 0.02	0.2	39.3	5.8	0.3	0.6	6.0	5	0.6	0.20	< 0.1	< 1	0.3	< 0.1	5	0.8	2.0	0.4	1.8	0.4	0.9	0.1	1.2
E885909 Orig																							
E885909 Dup																							
E885911 Orig	0.04	0.8	122	16.4	< 0.1	0.8	19.2	43	0.9	0.16	< 0.1	< 1	0.1	< 0.1	19	2.6	6.9	1.1	6.4	1.6	3.0	0.5	3.8
E885911 Dup	0.04	0.3	120	16.0	< 0.1	0.9	19.0	34	< 0.1	< 0.05	< 0.1	< 1	< 0.1	< 0.1	19	2.5	6.9	1.2	5.9	2.2	3.0	0.5	3.7
E885912 Orig	0.14	2.6	47.1	4.4	26.7	2.0	6.5	31	1.2	0.64	< 0.1	< 1	0.2	0.8	9	1.6	3.5	0.5	2.0	0.5	0.7	0.1	1.0
E885912 Dup	0.15	2.7	48.5	4.4	25.5	2.0	6.5	32	1.2	1.96	< 0.1	< 1	0.2	0.7	10	1.6	3.7	0.5	2.1	0.7	0.7	0.1	1.1
Method Blank																							
Method Blank																							
Method Blank																							
Method Blank	< 0.02	0.2	0.3	0.2	< 0.1	< 0.2	< 0.1	< 1	< 0.1	0.14	< 0.1	< 1	< 0.1	< 0.1	< 1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Method Blank																							
Method Blank																							

	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	FA- GRA
SAMPLE	Cu	Ge	Tm	Yb	Lu	Ta	Sr	W	Re	Ti	Pb	Th	U	Au
DESCRIPTION	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	g/tonne
E885861	0.6	< 0.1	< 0.1	0.2	< 0.1	< 0.1	88.7	3.6	0.001	0.40	6.3	1.5	0.7	20.4
E885862	70.1	0.2	0.6	3.6	0.5	< 0.1	77.4	0.2	0.001	1.13	4.1	1.4	0.3	
E885863	1.0	< 0.1	< 0.1	0.2	< 0.1	< 0.1	0.7	1.6	< 0.001	< 0.05	0.7	< 0.1	< 0.1	
E885864	34.1	0.6	0.1	0.9	0.1	< 0.1	45.5	1.3	< 0.001	< 0.05	2.0	0.3	< 0.1	
E885865	83.8	0.6	0.1	0.9	0.1	< 0.1	15.5	0.5	< 0.001	< 0.05	0.9	0.3	< 0.1	
E885866	4.3	< 0.1	< 0.1	0.5	< 0.1	0.4	34.9	3.3	< 0.001	0.66	16.9	6.2	1.7	
E885867	156	< 0.1	0.2	1.3	0.2	0.5	7.2	2.9	< 0.001	0.48	6.2	4.6	1.1	
E885868	29.1	< 0.1	< 0.1	0.7	< 0.1	0.4	226	0.5	< 0.001	0.19	10.1	6.0	1.7	
E885869	15.7	0.3	< 0.1	0.5	< 0.1	0.1	188	1.5	< 0.001	0.29	9.9	4.6	1.1	
E885879	36.5	0.2	0.2	1.3	0.2	< 0.1	125	0.4	< 0.001	0.42	20.0	3.6	1.2	
E885880	1.9	< 0.1	< 0.1	0.3	< 0.1	< 0.1	7.3	0.2	< 0.001	< 0.05	1.7	1.2	0.3	
E885881	23.4	< 0.1	< 0.1	0.5	< 0.1	< 0.1	19.5	0.8	< 0.001	0.16	10.4	1.3	0.3	
E885882	83.8	0.3	0.4	2.4	0.3	0.4	188	0.4	0.001	< 0.05	2.7	2.5	0.7	
E885883	89.8	0.2	0.3	1.8	0.3	0.2	109	89.8	0.002	0.27	2.4	1.8	0.4	
E885884	153	0.2	0.2	1.2	0.2	0.1	52.9	0.7	< 0.001	< 0.05	1.7	0.9	0.2	
E885885	4.9	< 0.1	0.3	1.8	0.2	1.1	320	1.4	0.001	0.30	17.6	12.5	3.8	
E885886	6.2	0.3	< 0.1	0.3	< 0.1	< 0.1	36.0	0.2	< 0.001	0.23	6.9	5.8	1.0	
E885887	273	0.1	0.5	2.8	0.4	< 0.1	152	0.1	0.002	0.17	1.1	0.5	0.1	
E885888	57.8	0.2	0.2	0.9	0.1	< 0.1	36.6	< 0.1	< 0.001	< 0.05	2.5	0.4	< 0.1	
E885889	28.6	0.2	0.2	1.0	0.1	< 0.1	28.9	0.1	< 0.001	< 0.05	2.4	0.1	< 0.1	

	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	FA- GRA
SAMPLE	Cu	Ge	Tm	Yb	Lu	Ta	Sr	W	Re	Ti	Pb	Th	U	Au
DESCRIPTION	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	g/tonne
E885890	30.4	0.1	0.2	1.2	0.2	< 0.1	99.7	< 0.1	< 0.001	5.65	8.4	0.6	0.2	
E885891	160	0.3	0.5	3.1	0.4	< 0.1	54.7	< 0.1	0.002	< 0.05	3.7	0.4	< 0.1	
E885892	11.7	0.3	< 0.1	0.7	< 0.1	< 0.1	28.6	< 0.1	< 0.001	< 0.05	1.2	< 0.1	< 0.1	
E885893	44.6	0.4	0.1	0.7	< 0.1	< 0.1	8.2	0.2	< 0.001	< 0.05	9.5	0.3	< 0.1	
E885894	41.6	< 0.1	< 0.1	0.3	< 0.1	< 0.1	17.4	0.2	< 0.001	< 0.05	7.8	0.8	0.2	
E885895	46.4	0.2	0.5	3.5	0.5	< 0.1	139	0.2	0.001	0.79	6.4	0.4	0.2	
E885896 (Missing)														
E885897	29.8	0.3	0.2	1.4	0.2	< 0.1	106	< 0.1	< 0.001	0.26	8.9	7.7	2.0	
E885898	69.0	0.3	0.5	2.9	0.4	< 0.1	112	0.1	< 0.001	< 0.05	0.8	0.4	< 0.1	
E885899	80.8	0.5	0.3	2.4	0.3	0.1	92.0	0.2	< 0.001	< 0.05	0.7	0.2	< 0.1	
E885900	3.2	< 0.1	< 0.1	0.2	< 0.1	< 0.1	4.0	0.2	< 0.001	< 0.05	1.6	1.0	0.5	
E885901	27.5	0.2	0.4	2.4	0.3	< 0.1	126	< 0.1	0.001	< 0.05	0.7	0.2	< 0.1	
E885902	52.5	0.1	0.2	1.2	0.2	< 0.1	59.9	< 0.1	0.001	< 0.05	< 0.5	0.1	< 0.1	
E885903	97.4	0.1	0.4	2.7	0.4	< 0.1	22.0	0.1	< 0.001	< 0.05	2.8	5.4	1.3	
E885904	21.2	0.4	0.3	2.2	0.3	< 0.1	73.2	< 0.1	0.002	< 0.05	3.0	0.2	< 0.1	
E885905	143	0.4	0.3	1.8	0.2	< 0.1	70.2	0.1	< 0.001	< 0.05	2.5	0.2	< 0.1	
E885906	1460	0.3	0.3	2.3	0.3	0.6	125	0.3	0.010	< 0.05	6.5	7.0	1.5	
E885907	532	0.1	0.3	2.3	0.3	0.4	17.0	0.2	0.003	< 0.05	2.1	3.9	0.9	
E885908	10.5	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.2	< 0.1	< 0.001	< 0.05	< 0.5	< 0.1	< 0.1	
E885909	16.0	0.5	< 0.1	0.3	< 0.1	< 0.1	14.1	< 0.1	< 0.001	< 0.05	2.1	< 0.1	< 0.1	
E885910	2190	0.1	0.3	1.8	0.2	< 0.1	84.1	5.4	0.013	5.36	> 5000	2.8	2.0	
E885911	204	0.5	0.3	2.3	0.3	< 0.1	112	0.1	0.001	< 0.05	3.4	0.2	< 0.1	
E885912	199	< 0.1	0.1	0.9	0.1	< 0.1	2.4	< 0.1	0.002	< 0.05	0.7	1.0	0.2	
E885913	29.2	0.3	0.2	1.2	0.1	< 0.1	54.4	< 0.1	< 0.001	0.40	5.3	3.5	0.9	
GXR-4 Meas	6600		0.2	1.0	0.1	0.6	225	35.3		3.03	44.1	17.3	5.4	
GXR-4 Cert	6520		0.210	1.60	0.170	0.790	221	30.8		3.20	52.0	22.5	6.20	
SDC-1 Meas	27.6		0.5	3.3		< 0.1	187	0.1		0.63	22.8	11.3	2.7	
SDC-1 Cert	30.000		0.65	4.00		1.20	180.00	0.80		0.70	25.00	12.00	3.10	
GXR-6 Meas	59.7			1.7	0.2	0.2	38.5	0.7		2.15	97.8	5.0	1.4	
GXR-6 Cert	66.0			2.40	0.330	0.485	35.0	1.90		2.20	101	5.30	1.54	
OREAS 97 (4 Acid) Meas	> 10000										136			
OREAS 97 (4 Acid) Cert	63100.00										147			
OREAS 98 (4 Acid) Meas	> 10000										333			
OREAS 98 (4 Acid) Cert	14800.0										345			
DNC-1a Meas	91.1			1.9			146				5.7			
DNC-1a Cert	100			2.0			144				6.3			
SBC-1 Meas	26.8		0.5	3.4	0.4	1.0	188	1.5		0.92	34.2	15.3	5.7	
SBC-1 Cert	31.0		0.56	3.64	0.54	1.10	178.0	1.60		0.89	35.0	15.8	5.76	
OREAS 45d	367			1.5	0.2	< 0.1	34.7	0.2		0.25	20.5	14.4	2.7	

	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	FA- GRA
SAMPLE	Cu	Ge	Tm	Yb	Lu	Ta	Sr	W	Re	Ti	Pb	Th	U	Au
DESCRIPTION	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	g/tonne
(4-Acid) Meas														
OREAS 45d (4-Acid) Cert	371			1.33	0.18	1.02	31.30	1.62		0.27	21.8	14.5	2.63	
OREAS 214 Meas														3.02
OREAS 214 Cert														3.03
OREAS 216 (Fire Assay) Meas														6.82
OREAS 216 (Fire Assay) Cert														6.66
OREAS 220 (Fire Assay) Meas														
OREAS 220 (Fire Assay) Cert														
OREAS 220 (Fire Assay) Meas														
OREAS 220 (Fire Assay) Cert														
OREAS 96 (4 Acid) Meas	> 10000										101			
OREAS 96 (4 Acid) Cert	39300										101			
OREAS 621 (4 Acid) Meas	4020			1.0	0.1		76.1	1.9		2.06	> 5000	5.3	2.8	
OREAS 621 (4 Acid) Cert	3630			0.990	0.140		91.0	2.35		1.96	13600	7.48	2.83	
OREAS 209 (Fire Assay) Meas														
OREAS 209 (Fire Assay) Cert														
OREAS 209 (Fire Assay) Meas														
OREAS 209 (Fire Assay) Cert														
OREAS 209 (Fire Assay) Meas														
OREAS 209 (Fire Assay) Cert														
E885881 Orig	23.4	< 0.1	< 0.1	0.5	< 0.1	< 0.1	19.5	0.8	< 0.001	0.16	10.4	1.3	0.3	
E885881 Dup	23.6	< 0.1	< 0.1	0.5	< 0.1	< 0.1	19.6	0.8	0.001	0.17	10.7	1.3	0.3	
E885884 Orig														
E885884 Dup														
E885891 Orig														
E885891 Dup														
E885892 Orig	11.7	0.3	< 0.1	0.7	< 0.1	< 0.1	28.6	< 0.1	< 0.001	< 0.05	1.2	< 0.1	< 0.1	
E885892 Dup	7.0	0.3	0.1	0.7	< 0.1	< 0.1	28.7	0.1	< 0.001	< 0.05	1.3	< 0.1	< 0.1	
E885909 Orig														

Results

Activation Laboratories Ltd.

Report: A18-12314

	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	FA- GRA
SAMPLE	Cu	Ge	Tm	Yb	Lu	Ta	Sr	W	Re	Tl	Pb	Th	U	Au
DESCRIPTION	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	g/tonne
E885909 Dup														
E885911 Orig	204	0.5	0.3	2.3	0.3	< 0.1	112	0.1	0.001	< 0.05	3.4	0.2	< 0.1	
E885911 Dup	202	0.2	0.4	2.3	0.3	< 0.1	110	< 0.1	0.001	< 0.05	3.3	0.2	< 0.1	
E885912 Orig	199	< 0.1	0.1	0.9	0.1	< 0.1	2.4	< 0.1	0.002	< 0.05	0.7	1.0	0.2	
E885912 Dup	205	< 0.1	0.1	1.0	0.1	< 0.1	2.3	0.1	0.002	0.05	0.6	1.0	0.2	
Method Blank														
Method Blank														
Method Blank														
Method Blank	0.6	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.2	< 0.1	< 0.001	< 0.05	< 0.5	< 0.1	< 0.1	
Method Blank														
Method Blank														< 0.03



Date Submitted: 01-Oct-18
Invoice No.: A18-14186
Invoice Date: 18-Oct-18
Your Reference: Exploration

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

ATTN: Katie McCormack

CERTIFICATE OF ANALYSIS

3 Core samples were submitted for analysis.

The following analytical package(s) were requested:

Code 1A2-GC Musselwhite Tbay Au - Fire Assay AA

REPORT **A18-14186**

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Notes:

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

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

CERTIFIED BY:

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

Emmanuel Esemé , Ph.D.
Quality Control

ACTIVATION LABORATORIES LTD.
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Date Submitted: 01-Oct-18
Invoice No.: A18-14186
Invoice Date: 18-Oct-18
Your Reference: Exploration

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

ATTN: Katie McCormack

CERTIFICATE OF ANALYSIS

3 Core samples were submitted for analysis.

The following analytical package(s) were requested:

Code UT-4 Total Digestion ICP/MS

REPORT **A18-14186**

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

Notes:

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

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

CERTIFIED BY:



Emmanuel Esemé, Ph.D.
Quality Control

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

	FA-AA	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	
SAMPLE	Au	B	Li	Na	Mg	Al	K	Ca	Cd	V	Cr	Mn	Fe	Hf	Ni	Er	Be	Ho	Hg	Ag	Cs	Co	Eu	
DESCRIPTION	g/mt	ppm	ppm	%	%	%	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	
E885914	0.005	< 20	55.9	2.02	1.84	8.18	1.40	4.42	< 0.1	102	20	1130	8.35	1.7	33.3	2.0	0.6	0.7	100	< 0.05	5.86	40.3	1.16	
E885915	0.008	20	7.1	0.25	0.15	0.59	0.08	0.24	< 0.1	6	79	170	1.38	0.2	6.9	< 0.1	< 0.1	< 0.1	80	< 0.05	0.27	4.8	0.08	
E886083	0.423	< 20	32.5	0.23	1.64	6.04	0.20	0.41	0.2	124	165	5050	21.2	2.1	19.8	1.5	1.5	0.4	130	< 0.05	9.24	6.2	0.66	
GXR-4 Meas		< 20	16.0	0.61	1.66	7.89	4.29	0.87	0.2	83	39	174	3.64	1.3	42.0		2.5		< 10	3.99	2.74	16.3	1.75	
GXR-4 Cert	4.50	11.1	0.564	1.66	7.20	4.01	1.01	0.860		87.0	64.0	155	3.09	6.30	42.0		1.90		110	4.00	2.80	14.6	1.63	
SDC-1 Meas		< 20	45.3	1.76	0.91	9.01	2.86	0.94		30	43	994	5.45	0.8	38.6	4.0	3.6	1.3	20		4.03	19.6	1.77	
SDC-1 Cert		13.00	34.0	1.52	1.02	8.34	2.72	1.00		102.00	64.00	880.00	4.82	8.30	38.0	4.10	3.00	1.50	200.00		4.00	18.0	1.70	
GXR-6 Meas		< 20	45.6	0.11	0.74	> 10.0	2.08	0.15	< 0.1	139	66	1230	6.58	2.3	27.0		1.4		80	0.35	4.34	16.0	0.73	
GXR-6 Cert		9.80	32.0	0.104	0.609	17.7	1.87	0.180	1.00	186	96.0	1010	5.58	4.30	27.0		1.40		68.0	1.30	4.20	13.8	0.760	
OREAS 97 (4 Acid) Meas																						21.3	67.7	
OREAS 97 (4 Acid) Cert																						19.6	62.9	
OREAS 98 (4 Acid) Meas																						48.5	130	
OREAS 98 (4 Acid) Cert																						45.1	121	
DNC-1a Meas			5.7	1.54				7.53		142	160		7.44		289							61.3	0.61	
DNC-1a Cert			5.2	1.40				8.21		148	270		6.97		247							57	0.59	
SBC-1 Meas			214						0.3	214	80			3.2	92.0	3.5	4.1	1.3				8.66	25.7	2.09
SBC-1 Cert			163						0.40	220.0	109			3.7	82.8	3.80	3.20	1.40				8.2	22.7	1.98
OREAS 45d (4-Acid) Meas			29.7	0.12	0.30	9.36	0.44	0.19		95	534	589	16.4	1.5	270	1.8	1.0	0.5				4.46	33.3	0.69
OREAS 45d (4-Acid) Cert			21.5	0.101	0.245	8.150	0.412	0.185		235.0	549	490.000	14.5	3.830	231.0	1.38	0.79	0.46				3.910	29.50	0.57
OREAS 254 Meas	2.49																							
OREAS 254 Cert	2.55																							
OREAS 96 (4 Acid) Meas																						12.9	55.3	
OREAS 96 (4 Acid) Cert																						11.5	49.9	
OREAS 217 (Fire Assay) Meas	0.329																							
OREAS 217 (Fire Assay) Cert	0.338																							
E885915 Orig	0.008																							
E885915 Dup	0.006																							
Method Blank		20	< 0.5	< 0.01	< 0.01	0.02	< 0.01	< 0.01	< 0.1	< 1	3	6	< 0.01	< 0.1	< 0.5	< 0.1	< 0.1	< 0.1	60	< 0.05	< 0.05	< 0.1	< 0.05	
Method Blank		20	< 0.5	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.1	< 1	5	7	< 0.01	< 0.1	< 0.5	< 0.1	< 0.1	< 0.1	30	< 0.05	< 0.05	< 0.1	< 0.05	
Method Blank	< 0.005																							
Method Blank		20	< 0.5	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.1	< 1	4	5	< 0.01	< 0.1	< 0.5	< 0.1	< 0.1	< 0.1	30	< 0.05	< 0.05	< 0.1	< 0.05	

	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS
SAMPLE	Bi	Se	Zn	Ga	As	Rb	Y	Zr	Nb	Mo	In	Sn	Sb	Te	Ba	La	Ce	Pr	Nd	Sm	Gd	Tb	Dy
DESCRIPTION	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
E885914	0.15	< 0.1	113	25.0	2.9	55.6	18.0	60	< 0.1	0.07	< 0.1	< 1	0.1	< 0.1	408	12.2	25.4	2.9	10.4	3.8	3.7	0.5	3.4

	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS
SAMPLE	Bi	Se	Zn	Ga	As	Rb	Y	Zr	Nb	Mo	In	Sn	Sb	Te	Ba	La	Ce	Pr	Nd	Sm	Gd	Tb	Dy
DESCRIPTION	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
E885915	< 0.02	0.6	9.1	1.4	3.0	3.3	1.0	7	0.4	3.51	< 0.1	< 1	0.3	< 0.1	30	1.0	2.0	0.3	0.7	0.3	0.2	< 0.1	0.3
E886083	0.06	0.4	112	14.2	2140	22.5	13.2	69	0.7	7.08	0.1	< 1	5.7	< 0.1	143	10.9	18.3	2.2	6.3	1.1	1.6	0.3	2.1
GXR-4 Meas	22.6	5.3	89.1	18.9	100	164	13.0	41	8.1	300	0.3	7	4.9	0.7	94	63.8	114		38.8	9.0	5.1	0.6	2.8
GXR-4 Cert	19.0	5.60	73.0	20.0	98.0	160	14.0	186	10.0	310	0.270	5.60	4.80	0.970	1640	64.5	102		45.0	6.60	5.25	0.360	2.60
SDC-1 Meas			124	21.3	< 0.1	131		26	< 0.1			< 1	< 0.1		645	43.4	90.9		36.7	8.6	7.7	1.1	6.6
SDC-1 Cert			103.00	21.00	0.220	127.00		290.00	21.00			3.00	0.54		630	42.00	93.00		40.00	8.20	7.00	1.20	6.70
GXR-6 Meas	0.21	0.7	166	28.5	284	91.5	12.2	73	0.8	1.07	< 0.1	1	1.8	< 0.1	1270	13.9	35.7		11.8	3.4	2.8	0.4	2.5
GXR-6 Cert	0.290	0.940	118	35.0	330	90.0	14.0	110	7.50	2.40	0.260	1.70	3.60	0.0180	1300	13.9	36.0		13.0	2.67	2.97	0.415	2.80
OREAS 97 (4 Acid) Meas	49.3	60.8	697									93	7.5										
OREAS 97 (4 Acid) Cert	40.1	71.4	646									95.7	9.23										
OREAS 98 (4 Acid) Meas	113	138	1480									197	6.2										
OREAS 98 (4 Acid) Cert	97.2	158	1360									206	20.1										
DNC-1a Meas			71.6	13.4		3.6	14.9	34	1.3				0.8		99	3.7			4.3				
DNC-1a Cert			70	15		5	18.0	38.0	3				0.96		118	3.6			5.20				
SBC-1 Meas	0.83		225	26.9	22.5	156	30.4	115	11.5	2.01		3	1.1		643	53.9	109	13.6	44.5	10.5	8.8	1.2	6.5
SBC-1 Cert	0.70		186	27.0	25.7	147	36.5	134.0	15.3	2.40		3.3	1.01		788.0	52.5	108.0	12.6	49.2	9.6	8.5	1.20	7.10
OREAS 45d (4-Acid) Meas	0.41		54.9	22.5	5.1	46.2	11.0	58	< 0.1	0.29	< 0.1	< 1	< 0.1		197	19.1	38.0	4.4	13.3	3.6	3.1	0.5	2.4
OREAS 45d (4-Acid) Cert	0.31		45.7	21.20	13.8	42.1	9.53	141	14.50	2.500	0.096	2.78	0.82		183.0	16.9	37.20	3.70	13.4	2.80	2.42	0.400	2.26
OREAS 254 Meas																							
OREAS 254 Cert																							
OREAS 96 (4 Acid) Meas	33.2	34.7	511									64	5.0										
OREAS 96 (4 Acid) Cert	26.3	40.7	457									65.6	5.09										
OREAS 217 (Fire Assay) Meas																							
OREAS 217 (Fire Assay) Cert																							
E885915 Orig																							
E885915 Dup																							
Method Blank	< 0.02	0.3	7.8	< 0.1	< 0.1	< 0.2	< 0.1	< 1	< 0.1	0.08	< 0.1	< 1	0.1	< 0.1	< 1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Method Blank	< 0.02	0.5	0.3	< 0.1	1.1	< 0.2	< 0.1	< 1	< 0.1	0.13	< 0.1	< 1	< 0.1	< 0.1	< 1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Method Blank																							
Method Blank	< 0.02	0.4	< 0.2	< 0.1	< 0.1	< 0.2	< 0.1	< 1	< 0.1	0.77	< 0.1	< 1	< 0.1	< 0.1	< 1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1

	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS
SAMPLE	Cu	Ge	Tm	Yb	Lu	Ta	Sr	W	Re	Ti	Pb	Th	U
DESCRIPTION	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
E885914	57.6	0.2	0.2	1.7	0.3	< 0.1	277	0.1	0.003	0.40	12.0	5.2	1.6
E885915	57.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	26.7	0.1	0.004	0.05	1.2	0.4	0.1

	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS
SAMPLE	Cu	Ge	Tm	Yb	Lu	Ta	Sr	W	Re	Tl	Pb	Th	U
DESCRIPTION	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
E886083	18.7	0.7	0.2	1.5	0.2	< 0.1	33.9	0.6	0.004	0.45	8.1	4.5	1.1
GXR-4 Meas	7130		0.2	1.0	0.1	0.6	255	32.5		3.43	54.5	21.5	6.1
GXR-4 Cert	6520		0.210	1.60	0.170	0.790	221	30.8		3.20	52.0	22.5	6.20
SDC-1 Meas	35.6		0.5	3.1		< 0.1	191	< 0.1		0.67	26.0	12.0	2.9
SDC-1 Cert	30.000		0.65	4.00		1.20	180.00	0.80		0.70	25.00	12.00	3.10
GXR-6 Meas	79.9			1.6	0.3	< 0.1	43.6	0.2		2.43	115	5.4	1.5
GXR-6 Cert	66.0			2.40	0.330	0.485	35.0	1.90		2.20	101	5.30	1.54
OREAS 97 (4 Acid) Meas	> 10000										154		
OREAS 97 (4 Acid) Cert	63100.00										147		
OREAS 98 (4 Acid) Meas	> 10000										349		
OREAS 98 (4 Acid) Cert	14800.0										345		
DNC-1a Meas	109			1.8			162				6.1		
DNC-1a Cert	100			2.0			144				6.3		
SBC-1 Meas	34.0		0.6	3.3	0.5	0.7	200	1.5		0.92	38.7	15.9	5.9
SBC-1 Cert	31.0		0.56	3.64	0.54	1.10	178.0	1.60		0.89	35.0	15.8	5.76
OREAS 45d (4-Acid) Meas	446			1.4	0.2	< 0.1	36.7	0.2		0.29	28.6	15.6	3.0
OREAS 45d (4-Acid) Cert	371			1.33	0.18	1.02	31.30	1.62		0.27	21.8	14.5	2.63
OREAS 254 Meas													
OREAS 254 Cert													
OREAS 96 (4 Acid) Meas	> 10000										106		
OREAS 96 (4 Acid) Cert	39300										101		
OREAS 217 (Fire Assay) Meas													
OREAS 217 (Fire Assay) Cert													
E885915 Orig													
E885915 Dup													
Method Blank	< 0.2	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.2	< 0.1	0.002	< 0.05	< 0.5	< 0.1	< 0.1
Method Blank	< 0.2	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.2	< 0.1	0.004	< 0.05	< 0.5	< 0.1	< 0.1
Method Blank													
Method Blank	< 0.2	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.2	< 0.1	0.005	< 0.05	< 0.5	< 0.1	< 0.1



Date Submitted: 03-Oct-18
Invoice No.: A18-14383
Invoice Date: 09-Nov-18
Your Reference: Exploration

GOLDCORP Canada Ltd--Musselwhite Mine
P.O. Box 7500
Thunder bay Ontario P7B 6S8
Canada

ATTN: Katie Lucas

CERTIFICATE OF ANALYSIS

11 Core samples were submitted for analysis.

The following analytical package(s) were requested:

Code 1A2-GC Musselwhite Dryden Au - Fire Assay AA

REPORT **A18-14383**

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

Notes:

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

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

CERTIFIED BY:

A handwritten signature in black ink, appearing to be "Emmanuel Esemé". The signature is written in a cursive style with some loops and is positioned above a horizontal line.

Emmanuel Esemé , Ph.D.
Quality Control

ACTIVATION LABORATORIES LTD.
264 Government Road, Dryden, Ontario, Canada, P8N 2R3
TELEPHONE +807 223-6168 or +1.888.228.5227 FAX +1.905.648.9613
E-MAIL Dryden@actlabs.com ACTLABS GROUP WEBSITE www.actlabs.com

Date Submitted: 03-Oct-18
Invoice No.: A18-14383
Invoice Date: 09-Nov-18
Your Reference: Exploration

GOLDCORP Canada Ltd--Musselwhite Mine
P.O. Box 7500
Thunder bay Ontario P7B 6S8
Canada

ATTN: Katie Lucas

CERTIFICATE OF ANALYSIS

11 Core samples were submitted for analysis.

The following analytical package(s) were requested: Code UT-4 Total Digestion ICP/MS

REPORT **A18-14383**

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

Notes:

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

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

CERTIFIED BY:



Emmanuel Esemé , Ph.D.
Quality Control

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	FA-AA	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS		
SAMPLE	Au	B	Li	Na	Mg	Al	K	Ca	Cd	V	Cr	Mn	Fe	Hf	Ni	Er	Be	Ho	Hg	Ag	Cs	Co	Eu	
DESCRIPTION	g/mt	ppm	ppm	%	%	%	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	
E886152	0.005	< 20	3.9	0.01	13.9	1.03	0.01	6.01	< 0.1	45	384	1260	4.62	0.1	905	0.2	< 0.1	< 0.1	30	< 0.05	0.08	47.1	0.17	
E886153	0.006	130	3.8	0.04	8.59	0.62	< 0.01	3.91	< 0.1	18	778	940	3.89	< 0.1	563	0.2	< 0.1	< 0.1	20	0.10	0.12	41.5	0.09	
E886154	< 0.005	220	4.8	0.20	3.50	2.48	< 0.01	3.44	< 0.1	62	748	503	2.38	0.2	208	0.4	0.2	0.1	< 10	< 0.05	0.09	14.3	0.30	
E886155	< 0.005	140	1.8	0.08	3.37	0.79	0.01	5.29	< 0.1	29	218	626	1.68	0.2	122	0.3	0.2	0.2	30	< 0.05	< 0.05	4.5	0.37	
E886156	0.013	< 20	5.7	0.03	9.82	1.00	< 0.01	10.4	0.3	35	497	1830	4.94	0.1	528	0.5	0.1	0.2	30	< 0.05	< 0.05	46.9	0.57	
██████████	██████████	██████████	██████████	██████████	██████████	██████████	██████████	██████████	██████████	██████████	██████████	██████████	██████████	██████████	██████████	██████████	██████████	██████████	██████████	██████████	██████████	██████████	██████████	
E886158	< 0.005	30	2.6	0.02	6.00	< 0.01	< 0.01	1.89	0.1	17	287	639	2.72	< 0.1	216	0.2	< 0.1	< 0.1	20	0.19	0.05	15.8	0.06	
E886159	0.034	< 20	9.7	0.01	11.6	1.84	< 0.01	5.67	0.2	55	1440	1330	5.90	0.2	975	0.3	< 0.1	0.2	10	4.21	0.10	61.3	0.27	
E886160	< 0.005	< 20	5.6	0.04	0.03	0.23	0.08	0.02	< 0.1	3	11	57	0.50	0.5	2.6	0.2	< 0.1	< 0.1	50	< 0.05	0.20	0.6	< 0.05	
E886161	0.008	< 20	0.9	0.02	3.16	0.01	< 0.01	0.91	< 0.1	10	143	400	1.87	< 0.1	105	< 0.1	< 0.1	< 0.1	50	0.18	< 0.05	8.3	< 0.05	
E886162	0.015	< 20	11.9	0.01	14.4	1.79	< 0.01	6.70	0.1	50	1600	1390	5.64	0.2	1430	0.3	0.2	< 0.1	30	0.05	0.10	81.9	0.15	
GXR-4 Meas		< 20	11.4	0.56	1.81	6.79	4.34	1.01	0.3	93	56	160	3.31	1.3	40.6			2.0	< 10	3.73	2.39	15.0	1.39	
GXR-4 Cert		4.50	11.1	0.564	1.66	7.20	4.01	1.01	0.860	87.0	64.0	155	3.09	6.30	42.0			1.90	110	4.00	2.80	14.6	1.63	
SDC-1 Meas		< 20	38.2	1.56	1.01	8.79	2.06	1.06		35	56	884	4.98	1.0	35.4	3.6	3.0	1.3	20		3.58	18.0	1.47	
SDC-1 Cert		13.00	34.0	1.52	1.02	8.34	2.72	1.00		102.00	64.00	880.00	4.82	8.30	38.0	4.10	3.00	1.50	200.00		4.00	18.0	1.70	
GXR-6 Meas		< 20	35.9	0.10	0.57	> 10.0	1.91	0.16	0.1	192	79	1060	5.58	2.9	23.1			0.9	< 10	0.35	3.77	13.3	0.61	
GXR-6 Cert		9.80	32.0	0.104	0.609	17.7	1.87	0.180	1.00	186	96.0	1010	5.58	4.30	27.0			1.40	68.0	1.30	4.20	13.8	0.760	
OREAS 97 (4 Acid) Meas																						20.5	67.9	
OREAS 97 (4 Acid) Cert																							19.6	62.9
OREAS 98 (4 Acid) Meas																							46.8	124
OREAS 98 (4 Acid) Cert																							45.1	121
DNC-1a Meas			5.0	1.45				7.92		149	148		6.68		252								54.7	0.55
DNC-1a Cert			5.2	1.40				8.21		148	270		6.97		247								57	0.59
DNC-1a Meas			5.1	1.45				8.56		159	150		7.21		266								56.9	0.52
DNC-1a Cert			5.2	1.40				8.21		148	270		6.97		247								57	0.59
SBC-1 Meas			173						0.4	215	98			3.4	78.6	3.4	3.3	1.2				7.26	21.0	1.79
SBC-1 Cert			163						0.40	220.0	109			3.7	82.8	3.80	3.20	1.40				8.2	22.7	1.98
SBC-1 Meas			181						0.4	224	105			3.4	84.0	3.4	3.3	1.2				7.02	22.5	1.77
SBC-1 Cert			163						0.40	220.0	109			3.7	82.8	3.80	3.20	1.40				8.2	22.7	1.98
OREAS 45d (4-Acid) Meas			22.6	0.10	0.24	8.64	0.44	0.19		154	548	511	15.0	2.7	231	1.4	0.7	0.4				3.37	30.6	0.62
OREAS 45d (4-Acid) Cert			21.5	0.101	0.245	8.150	0.412	0.185		235.0	549		14.5	3.830	231.0	1.38	0.79	0.46				3.910	29.50	0.57
OREAS 220 (Fire Assay) Meas	0.841																							
OREAS 220 (Fire Assay) Cert	0.866																							
OREAS 96 (4 Acid) Meas																							11.3	51.0
OREAS 96 (4 Acid) Cert																							11.5	49.9

	FA-AA	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS
SAMPLE	Au	B	Li	Na	Mg	Al	K	Ca	Cd	V	Cr	Mn	Fe	Hf	Ni	Er	Be	Ho	Hg	Ag	Cs	Co	Eu
DESCRIPTION	g/mt	ppm	ppm	%	%	%	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm
OREAS 621 (4 Acid) Meas			15.4	1.39	0.39	7.21	2.27	2.06	311	35	38	544	3.92	4.6	28.6		2.0			68.1	3.01	30.1	
OREAS 621 (4 Acid) Cert			14.2	1.31	0.507	6.40	2.20	1.97	284	31.8	37.1	532	3.70	4.41	26.2		1.69			69.0	3.28	29.3	
OREAS 209 (Fire Assay) Meas	1.58																						
OREAS 209 (Fire Assay) Cert	1.58																						
E886152 Orig	0.005																						
E886152 Dup	< 0.005																						
E886157 Orig		< 20	< 0.5	< 0.01	1.16	0.21	0.01	0.19	26.6	11	20	> 10000	12.1	< 0.1	72.4	0.8	0.2	0.2	20	64.4	0.06	11.9	0.24
E886157 Dup		< 20	< 0.5	< 0.01	1.07	0.19	0.01	0.15	26.1	10	15	> 10000	11.4	< 0.1	68.9	0.7	0.2	0.2	< 10	60.5	0.06	11.3	0.28
Method Blank		< 20	< 0.5	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.1	1	3	2	< 0.01	< 0.1	< 0.5	< 0.1	< 0.1	< 0.1	20	< 0.05	< 0.05	< 0.1	< 0.05
Method Blank		< 20	< 0.5	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.1	1	4	1	< 0.01	< 0.1	< 0.5	< 0.1	< 0.1	< 0.1	< 10	< 0.05	< 0.05	< 0.1	< 0.05
Method Blank		< 20	< 0.5	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.1	1	2	1	< 0.01	< 0.1	< 0.5	< 0.1	< 0.1	< 0.1	20	< 0.05	< 0.05	< 0.1	< 0.05
Method Blank	< 0.005																						
Method Blank	< 0.005																						

	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS
SAMPLE	Bi	Se	Zn	Ga	As	Rb	Y	Zr	Nb	Mo	In	Sn	Sb	Te	Ba	La	Ce	Pr	Nd	Sm	Gd	Tb	Dy
DESCRIPTION	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
E886152	< 0.02	< 0.1	33.8	1.9	16.1	0.5	2.2	4	< 0.1	0.26	< 0.1	< 1	1.5	< 0.1	8	0.7	1.7	0.2	1.1	0.2	0.3	< 0.1	0.4
E886153	< 0.02	0.3	31.5	1.3	346	0.4	1.7	2	< 0.1	0.29	< 0.1	< 1	2.1	< 0.1	9	0.4	0.9	0.1	0.6	0.1	0.2	< 0.1	0.3
E886154	0.03	< 0.1	30.8	4.9	41.8	0.4	3.2	10	< 0.1	0.43	< 0.1	< 1	1.7	< 0.1	3	1.5	3.7	0.5	2.3	1.0	0.9	0.1	0.8
E886155	0.03	< 0.1	11.7	1.7	9.5	0.5	3.2	7	< 0.1	0.24	< 0.1	< 1	1.5	< 0.1	9	0.9	2.7	0.4	1.9	0.9	0.6	< 0.1	0.7
E886156	0.08	0.2	34.2	2.1	343	0.3	3.8	5	< 0.1	0.31	< 0.1	< 1	2.7	< 0.1	4	1.3	3.2	0.4	2.1	0.6	0.8	0.1	0.7
E886157	40.3	0.2	3580	1.0	489	0.6	9.6	4	< 0.1	0.24	0.3	2	56.5	0.1	7	1.0	1.4	0.1	0.7	0.2	0.5	0.1	0.9
E886158	0.08	< 0.1	19.5	0.5	124	< 0.2	1.1	< 1	< 0.1	0.33	< 0.1	< 1	1.2	< 0.1	3	0.2	0.6	< 0.1	0.4	0.1	0.3	< 0.1	0.2
E886159	0.08	0.2	59.2	3.2	255	0.3	3.4	7	< 0.1	0.19	< 0.1	< 1	14.8	< 0.1	11	1.4	2.7	0.4	2.2	0.3	0.6	0.1	0.6
E886160	0.03	< 0.1	3.8	0.8	0.4	3.0	1.7	17	< 0.1	0.36	< 0.1	< 1	0.2	< 0.1	31	2.0	3.7	0.4	1.7	0.3	0.3	< 0.1	0.2
E886161	< 0.02	< 0.1	11.7	0.3	37.0	0.2	0.7	< 1	< 0.1	0.19	< 0.1	< 1	0.5	< 0.1	7	0.2	0.5	< 0.1	0.3	< 0.1	< 0.1	< 0.1	0.1
E886162	0.05	0.4	82.8	3.2	490	0.4	2.5	7	< 0.1	0.47	< 0.1	< 1	4.1	< 0.1	8	0.8	1.6	0.2	1.1	0.3	0.4	< 0.1	0.4
GXR-4 Meas	18.5	6.8	76.5	18.7	101	139	13.3	41	9.6	331	0.2	8	4.7	1.0	238	54.4	105		41.3	6.4	4.9	0.5	2.8
GXR-4 Cert	19.0	5.60	73.0	20.0	98.0	160	14.0	186	10.0	310	0.270	5.60	4.80	0.970	1640	64.5	102		45.0	6.60	5.25	0.360	2.60
SDC-1 Meas			105	23.5	< 0.1	82.3		37	0.1			< 1	< 0.1		613	37.5	83.8		39.7	6.5	6.7	1.0	6.4
SDC-1 Cert			103.00	21.00	0.220	127.00		290.00	21.00			3.00	0.54		630	42.00	93.00		40.00	8.20	7.00	1.20	6.70
GXR-6 Meas	0.18	1.3	121	32.0	305	66.4	11.3	93	4.9	1.98	< 0.1	1	2.4	< 0.1	1170	11.5	30.6		12.1	2.0	2.3	0.4	2.4
GXR-6 Cert	0.290	0.940	118	35.0	330	90.0	14.0	110	7.50	2.40	0.260	1.70	3.60	0.0180	1300	13.9	36.0		13.0	2.67	2.97	0.415	2.80
OREAS 97 (4 Acid) Meas	40.3	80.9	630									101	8.1										
OREAS 97 (4 Acid) Cert	40.1	71.4	646									95.7	9.23										
OREAS 98 (4 Acid) Meas	94.5	192	1320									> 200	9.9										
OREAS 98 (4 Acid) Cert	97.2	158	1360									206	20.1										

	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS
SAMPLE	Bi	Se	Zn	Ga	As	Rb	Y	Zr	Nb	Mo	In	Sn	Sb	Te	Ba	La	Ce	Pr	Nd	Sm	Gd	Tb	Dy
DESCRIPTION	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Acid) Cert																							
DNC-1a Meas			61.6	12.8		2.7	14.1	34	1.4				1.4		96	3.2			4.7				
DNC-1a Cert			70	15		5	18.0	38.0	3				0.96		118	3.6			5.20				
DNC-1a Meas			66.5	13.8		2.9	14.6	35	1.4				0.8		96	3.3			4.6				
DNC-1a Cert			70	15		5	18.0	38.0	3				0.96		118	3.6			5.20				
SBC-1 Meas	0.67		175	25.7	21.3	118	28.6	114	14.3	2.00		3	1.0		692	45.4	95.9	11.7	46.1	8.8	8.1	1.1	6.3
SBC-1 Cert	0.70		186	27.0	25.7	147	36.5	134.0	15.3	2.40		3.3	1.01		788.0	52.5	108.0	12.6	49.2	9.6	8.5	1.20	7.10
SBC-1 Meas	0.64		197	28.1	23.3	114	29.3	113	14.4	2.50		3	1.0		727	46.1	96.5	11.4	45.7	7.8	8.0	1.1	6.4
SBC-1 Cert	0.70		186	27.0	25.7	147	36.5	134.0	15.3	2.40		3.3	1.01		788.0	52.5	108.0	12.6	49.2	9.6	8.5	1.20	7.10
OREAS 45d (4-Acid) Meas	0.31		43.2	22.1	8.3	36.8	10.5	99	0.7	0.51	0.1	< 1	< 0.1		172	15.4	33.0	3.5	13.6	2.6	2.6	0.4	2.4
OREAS 45d (4-Acid) Cert	0.31		45.7	21.20	13.8	42.1	9.53	141	14.50	2.500	0.096	2.78	0.82		183.0	16.9	37.20	3.70	13.4	2.80	2.42	0.400	2.26
OREAS 220 (Fire Assay) Meas																							
OREAS 220 (Fire Assay) Cert																							
OREAS 96 (4 Acid) Meas	26.4	48.7	424									64	5.3										
OREAS 96 (4 Acid) Cert	26.3	40.7	457									65.6	5.09										
OREAS 621 (4 Acid) Meas	3.89	4.5	> 10000	25.2	64.9	72.0	12.4	171	9.4	13.1	2.0	5	23.9			17.8	43.2					0.5	
OREAS 621 (4 Acid) Cert	3.93	5.64	52200	24.6	77.0	84.0	11.1	168	8.61	13.6	1.83	5.25	139			21.6	46.6					0.460	
OREAS 209 (Fire Assay) Meas																							
OREAS 209 (Fire Assay) Cert																							
E886152 Orig																							
E886152 Dup																							
E886157 Orig	40.3	0.2	3580	1.0	489	0.6	9.6	4	< 0.1	0.24	0.3	2	56.5	0.1	7	1.0	1.4	0.1	0.7	0.2	0.5	0.1	0.9
E886157 Dup	38.4	0.3	3360	0.9	474	0.6	8.7	4	< 0.1	0.23	0.2	2	54.1	< 0.1	8	0.9	1.4	0.1	0.6	0.2	0.6	0.1	0.8
Method Blank	< 0.02	0.1	0.9	0.2	< 0.1	< 0.2	< 0.1	< 1	< 0.1	< 0.05	< 0.1	< 1	< 0.1	< 0.1	< 1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Method Blank	< 0.02	0.2	< 0.2	0.2	< 0.1	< 0.2	< 0.1	< 1	< 0.1	0.05	< 0.1	< 1	< 0.1	< 0.1	< 1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Method Blank	< 0.02	0.2	0.2	0.2	< 0.1	< 0.2	< 0.1	< 1	< 0.1	0.07	< 0.1	< 1	< 0.1	< 0.1	< 1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Method Blank																							
Method Blank																							

	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS
SAMPLE	Cu	Ge	Tm	Yb	Lu	Ta	Sr	W	Re	Ti	Pb	Th	U
DESCRIPTION	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
E886152	64.5	< 0.1	< 0.1	0.2	< 0.1	< 0.1	127	0.2	< 0.001	< 0.05	2.6	0.1	< 0.1
E886153	15.5	< 0.1	< 0.1	0.2	< 0.1	< 0.1	89.2	0.2	< 0.001	< 0.05	6.3	< 0.1	< 0.1
E886154	4.1	< 0.1	< 0.1	0.4	< 0.1	< 0.1	159	6.8	< 0.001	0.07	1.8	0.4	0.2
E886155	3.4	0.2	< 0.1	0.3	< 0.1	< 0.1	201	1.2	< 0.001	< 0.05	1.9	0.2	0.1

	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS
SAMPLE	Cu	Ge	Tm	Yb	Lu	Ta	Sr	W	Re	Tl	Pb	Th	U
DESCRIPTION	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
E886156	7.1	< 0.1	< 0.1	0.4	< 0.1	< 0.1	375	1.7	< 0.001	< 0.05	2.4	0.1	< 0.1
E886157	150	< 0.1	0.1	0.8	0.1	< 0.1	1.3	0.6	< 0.001	< 0.05	1330	0.1	0.1
E886158	8.8	< 0.1	< 0.1	0.2	< 0.1	< 0.1	65.7	0.2	< 0.001	< 0.05	6.7	< 0.1	< 0.1
E886159	110	< 0.1	< 0.1	0.4	< 0.1	< 0.1	163	0.3	< 0.001	< 0.05	3.0	0.2	< 0.1
E886160	5.6	< 0.1	< 0.1	0.2	< 0.1	< 0.1	3.5	< 0.1	< 0.001	0.15	2.1	1.0	0.4
E886161	16.6	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	32.3	< 0.1	< 0.001	< 0.05	3.7	< 0.1	< 0.1
E886162	16.0	< 0.1	< 0.1	0.3	< 0.1	< 0.1	142	0.5	< 0.001	< 0.05	3.1	0.1	< 0.1
GXR-4 Meas	6800		0.2	1.1	0.2	0.6	226	36.0		3.49	45.4	21.2	5.6
GXR-4 Cert	6520		0.210	1.60	0.170	0.790	221	30.8		3.20	52.0	22.5	6.20
SDC-1 Meas	27.3		0.5	3.4		< 0.1	181	< 0.1		0.68	21.8	11.9	2.7
SDC-1 Cert	30.000		0.65	4.00		1.20	180.00	0.80		0.70	25.00	12.00	3.10
GXR-6 Meas	60.6			1.7	0.3	0.3	34.0	1.1		2.30	90.1	4.9	1.4
GXR-6 Cert	66.0			2.40	0.330	0.485	35.0	1.90		2.20	101	5.30	1.54
OREAS 97 (4 Acid) Meas	> 10000										130		
OREAS 97 (4 Acid) Cert	63100.00										147		
OREAS 98 (4 Acid) Meas	> 10000										307		
OREAS 98 (4 Acid) Cert	14800.0										345		
DNC-1a Meas	84.8			1.8			139				5.3		
DNC-1a Cert	100			2.0			144				6.3		
DNC-1a Meas	90.9			1.9			139				5.2		
DNC-1a Cert	100			2.0			144				6.3		
SBC-1 Meas	25.4		0.5	3.4	0.5	1.1	174	1.8		0.94	31.0	15.1	5.5
SBC-1 Cert	31.0		0.56	3.64	0.54	1.10	178.0	1.60		0.89	35.0	15.8	5.76
SBC-1 Meas	25.4		0.5	3.4	0.5	1.0	178	1.5		0.93	30.8	15.8	5.4
SBC-1 Cert	31.0		0.56	3.64	0.54	1.10	178.0	1.60		0.89	35.0	15.8	5.76
OREAS 45d (4-Acid) Meas	367			1.5	0.2	< 0.1	31.8	< 0.1		0.26	18.6	14.8	2.6
OREAS 45d (4-Acid) Cert	371			1.33	0.18	1.02	31.30	1.62		0.27	21.8	14.5	2.63
OREAS 220 (Fire Assay) Meas													
OREAS 220 (Fire Assay) Cert													
OREAS 96 (4 Acid) Meas	> 10000										88.1		
OREAS 96 (4 Acid) Cert	39300										101		
OREAS 621 (4 Acid) Meas	3700			1.1	0.2		67.6	2.3		2.24	> 5000	5.2	2.8
OREAS 621 (4 Acid) Cert	3630			0.990	0.140		91.0	2.35		1.96	13600	7.48	2.83
OREAS 209 (Fire													

	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS
SAMPLE	Cu	Ge	Tm	Yb	Lu	Ta	Sr	W	Re	Tl	Pb	Th	U
DESCRIPTION	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Assay) Meas													
OREAS 209 (Fire Assay) Cert													
E886152 Orig													
E886152 Dup													
E886157 Orig	150	< 0.1	0.1	0.8	0.1	< 0.1	1.3	0.6	< 0.001	< 0.05	1330	0.1	0.1
E886157 Dup	139	< 0.1	0.1	0.7	0.1	< 0.1	1.2	1.1	< 0.001	0.05	1280	0.1	0.1
Method Blank	< 0.2	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.2	< 0.1	< 0.001	< 0.05	< 0.5	< 0.1	< 0.1
Method Blank	1.0	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.2	< 0.1	< 0.001	< 0.05	< 0.5	< 0.1	< 0.1
Method Blank	0.3	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.2	< 0.1	0.001	< 0.05	< 0.5	< 0.1	< 0.1
Method Blank													
Method Blank													



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Page: 1
 Total # Pages: 3 (A - D)
 Plus Appendix Pages
 Finalized Date: 25- SEP- 2018
 Account: OPB

CERTIFICATE VA18178522

Project: Vegetation Sampling

This report is for 54 Vegetation samples submitted to our lab in Vancouver, BC, Canada on 23- JUL- 2018.

The following have access to data associated with this certificate:

THOMAS BISSIG STEPHEN MILLER	COLIN DUNN DAVID MURRAY	NIC GUEST MATT ZAGO
---------------------------------	----------------------------	------------------------

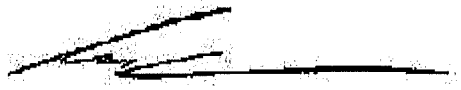
SAMPLE PREPARATION	
ALS CODE	DESCRIPTION
LOG- 24	Pulp Login - Rcd w/o Barcode
BAG- 01	Bulk Master for Storage
DRY- 22	Drying - Maximum Temp 60C
LOG- 22	Sample login - Rcd w/o BarCode
VEG- ASH01	Controlled Ignition - Veg Samp. @ 475C

ANALYTICAL PROCEDURES	
ALS CODE	DESCRIPTION
ME- VEG41a	Super Trace - Ashed Vegetation Samples

This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.

***** See Appendix Page for comments regarding this certificate *****

Comments: **Corrected certificate for VEG- ASH01 on samples E885651L to E885675T**

Signature: 
 Colin Ramshaw, Vancouver Laboratory Manager



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Page: 2 - A
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 Finalized Date: 25- SEP- 2018
 Account: OPB

Project: Vegetation Sampling

CERTIFICATE OF ANALYSIS VA18178522

Sample Description	Method Analyte Units LOD	VEG- ASH01	VEG- ASH01	ME- VEG41a	ME- VEG41a	ME- VEG41a	ME- VEG41a	ME- VEG41a	ME- VEG41a	ME- VEG41a	ME- VEG41a	ME- VEG41a	ME- VEG41a	ME- VEG41a	ME- VEG41a	
		WT. SAMP g 0.01	WT. ASH g 0.01	Au ppm 0.0002	Ag ppm 0.001	Al % 0.01	As ppm 0.01	B ppm 1	Ba ppm 0.1	Be ppm 0.01	Bi ppm 0.001	Ca % 0.01	Cd ppm 0.001	Ce ppm 0.003	Co ppm 0.002	Cr ppm 0.01
E885651L		26.9	0.76	0.0185	0.080	0.20	1.93	698	1005	0.05	0.064	19.30	0.334	1.795	1.225	4.15
E885651C- L				0.0074	0.042	3.02	4.60	355	107.0	0.54	0.116	18.30	0.261	31.5	18.75	165.5
E885652L		36.0	0.89	0.0117	0.071	0.19	1.92	810	484	0.04	0.066	18.35	0.296	1.805	1.675	3.54
E885653L		32.8	0.97	0.0083	0.131	0.26	2.14	594	260	0.05	0.064	20.8	0.380	2.35	1.105	4.29
E885654L		19.20	0.72	0.0156	0.121	0.25	2.80	398	317	0.06	0.081	18.20	0.587	3.53	2.42	5.52
E885655L		24.8	0.80	0.0043	0.081	0.25	3.77	578	405	0.03	0.060	19.25	0.409	2.06	1.285	3.33
E885656L		14.80	0.59	0.0170	0.106	0.20	2.71	506	262	0.06	0.072	16.30	0.450	1.945	1.195	4.06
E885657L		18.05	0.70	0.0047	0.070	0.24	1.04	557	301	0.03	0.048	20.1	0.267	1.545	0.971	3.31
E885658L		21.5	0.65	0.0114	0.090	0.23	2.28	560	255	0.05	0.070	18.95	0.430	2.77	1.645	3.53
E885659L		14.55	0.50	0.0125	0.092	0.29	3.05	538	304	0.06	0.092	19.60	0.417	2.98	3.27	4.10
E885660L		11.55	0.34	0.0098	0.119	0.17	2.31	537	275	0.05	0.102	19.95	1.570	2.66	2.16	5.74
E885661L		9.05	0.31	0.0100	0.081	0.16	1.66	588	258	0.03	0.061	17.10	0.789	1.885	1.500	3.07
E885662L		12.10	0.37	0.0049	0.054	0.12	1.33	786	260	0.03	0.055	16.15	0.847	1.805	1.010	2.81
E885663L		13.65	0.50	0.0311	0.049	0.14	1.48	798	252	0.05	0.057	16.05	1.705	1.950	1.725	4.90
E885664L		17.45	0.58	0.0047	0.061	0.17	2.04	675	350	0.05	0.056	19.05	0.634	2.34	1.595	3.36
E885665L		19.80	0.64	0.0065	0.097	0.22	2.60	569	290	0.04	0.068	18.55	0.430	2.12	1.150	3.14
E885666L		19.80	0.62	0.0032	0.043	0.17	1.23	515	331	0.03	0.048	19.25	0.183	1.595	1.235	2.92
E885667L		21.0	0.67	0.0095	0.086	0.24	1.70	585	299	0.06	0.069	17.60	0.497	2.38	1.440	2.84
E885668L		20.3	0.56	0.0042	0.052	0.20	1.18	481	332	0.03	0.050	18.35	0.217	1.520	0.745	2.62
E885669L		20.0	0.57	0.0085	0.064	0.21	1.08	465	286	0.02	0.059	16.70	0.251	1.575	0.726	3.52
E885670L		24.7	0.81	0.0040	0.051	0.28	1.19	506	333	0.04	0.046	19.90	0.227	1.640	0.972	3.39
E885670C- L				0.0046	0.038	2.95	4.44	359	109.5	0.48	0.107	18.00	0.281	29.9	18.05	150.0
E885671L		20.6	0.77	0.0050	0.022	0.18	0.69	475	399	0.02	0.026	18.85	0.138	0.909	0.735	1.39
E885672L		27.1	0.89	0.0017	0.043	0.25	0.92	399	447	0.03	0.039	17.75	0.314	1.660	1.175	1.87
E885673L		18.75	0.68	0.0133	0.041	0.20	0.94	376	343	0.03	0.035	18.70	0.203	1.020	0.779	1.55
E885674L		20.0	0.55	0.0043	0.032	0.18	0.86	550	281	0.02	0.029	16.80	0.132	0.917	0.681	1.42
E885675L		17.75	0.62	0.0021	0.046	0.25	1.11	585	802	0.03	0.044	19.75	0.315	1.605	0.892	3.20
E885651T		25.1	0.30	0.0154	0.155	0.26	3.40	621	418	0.07	0.116	19.30	0.477	4.09	2.36	5.65
E885651C- T				0.0041	0.039	2.95	4.32	350	108.0	0.53	0.106	17.65	0.268	29.3	17.55	157.5
E885652T		29.6	0.41	0.0127	0.131	0.22	1.86	682	368	0.06	0.083	18.60	0.499	3.07	2.65	3.57
E885653T		24.6	0.36	0.0089	0.162	0.29	2.14	610	377	0.08	0.099	22.7	0.568	4.11	1.875	5.62
E885654T		32.5	0.42	0.0137	0.194	0.28	2.80	593	293	0.10	0.105	16.70	1.460	9.46	6.59	5.97
E885655T		28.6	0.28	0.0072	0.148	0.26	1.68	540	341	0.07	0.073	17.15	0.617	3.37	1.940	3.46
E885656T		28.1	0.37	0.0184	0.139	0.26	1.42	547	335	0.07	0.069	15.25	0.917	3.09	2.17	3.74
E885657T		27.4	0.41	0.0046	0.138	0.31	1.71	450	282	0.05	0.065	17.50	0.843	3.21	2.06	5.20
E885658T		26.9	0.36	0.0101	0.215	0.31	1.83	497	320	0.08	0.091	19.40	0.671	4.14	2.08	4.12
E885659T		28.7	0.35	0.0048	0.257	0.30	1.58	589	423	0.07	0.084	18.65	1.270	5.42	2.73	4.28
E885660T		34.0	0.42	0.0064	0.109	0.34	3.45	687	357	0.10	0.099	20.2	0.929	4.73	8.49	3.84
E885661T		31.5	0.31	0.0063	0.154	0.28	2.43	718	252	0.09	0.135	20.3	3.29	5.09	5.16	4.82
E885662T		33.6	0.46	0.0058	0.164	0.23	1.38	619	237	0.07	0.069	16.70	1.435	3.65	2.90	3.55

Comments: **Corrected certificate for VEG- ASH01 on samples E885651L to E885675T**

***** See Appendix Page for comments regarding this certificate *****



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To: **GOLDCORP INC - MUSSELWHITE**
MUSSELWHITE MINE
PO BOX 7500
THUNDER BAY ON P7B 6S8

Page: 2 - B
 Total # Pages: 3 (A - D)
 Plus Appendix Pages
 Finalized Date: 25- SEP- 2018
 Account: OPB

Project: Vegetation Sampling

CERTIFICATE OF ANALYSIS VA18178522

Sample Description	Method Analyte Units LOD	ME-VEG41a	ME-VEG41a	ME-VEG41a	ME-VEG41a	ME-VEG41a	ME-VEG41a	ME-VEG41a	ME-VEG41a	ME-VEG41a	ME-VEG41a	ME-VEG41a	ME-VEG41a	ME-VEG41a	ME-VEG41a	
		Cs	Cu	Fe	Ga	Ge	Hf	Hg	In	K	La	Li	Mg	Mn	Mo	Na
		ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%
E885651L		3.35	161.0	1900	0.304	0.005	0.008	0.002	0.008	>10.0	0.992	0.9	3.60	18250	1.14	0.101
E885651C- L		1.225	77.8	28000	6.96	0.070	0.283	0.003	0.026	1.28	15.00	12.3	1.990	1115	0.89	0.596
E885652L		8.26	195.5	2200	0.327	<0.005	0.009	0.003	0.011	>10.0	0.952	1.4	3.72	23200	1.63	0.114
E885653L		8.68	147.0	2300	0.406	0.010	0.006	0.001	0.010	>10.0	1.265	1.5	3.96	18200	2.21	0.082
E885654L		6.66	159.0	2600	0.443	0.009	0.007	0.005	<0.005	>10.0	2.41	1.5	4.59	19750	1.97	0.130
E885655L		4.81	128.5	2100	0.371	0.006	0.005	0.002	<0.005	>10.0	1.105	1.1	4.07	24500	2.20	0.067
E885656L		7.49	165.5	2600	0.361	0.006	0.004	0.004	<0.005	>10.0	1.030	1.3	3.60	33500	2.29	0.113
E885657L		3.45	131.5	1900	0.375	0.008	0.011	0.001	0.013	>10.0	0.801	0.5	2.61	26800	3.36	0.064
E885658L		1.585	147.0	2400	0.439	0.008	0.008	<0.001	0.006	>10.0	1.430	0.9	3.78	23600	1.32	0.063
E885659L		3.61	205	2900	0.464	0.006	0.006	0.003	0.009	>10.0	1.580	1.2	3.68	12050	1.84	0.085
E885660L		3.40	245	2900	0.432	0.008	0.006	0.001	0.005	>10.0	1.355	1.0	4.57	14000	5.24	0.108
E885661L		1.840	208	2100	0.291	0.006	0.012	0.002	<0.005	>10.0	0.949	0.7	3.60	24200	4.79	0.114
E885662L		1.725	174.0	1900	0.272	<0.005	0.017	0.003	0.006	>10.0	0.881	0.7	3.91	9210	2.52	0.072
E885663L		2.36	181.0	2100	0.311	<0.005	0.017	<0.001	0.009	>10.0	0.996	0.8	3.40	11500	5.78	0.083
E885664L		4.39	177.5	2200	0.337	<0.005	0.010	0.002	0.010	>10.0	1.220	0.8	3.74	9330	5.21	0.063
E885665L		12.95	141.5	2100	0.383	0.007	0.013	0.002	0.006	>10.0	1.185	0.8	3.52	31500	3.70	0.042
E885666L		4.98	149.5	1800	0.262	0.005	0.019	0.003	0.005	>10.0	0.861	0.7	4.07	15850	1.05	0.057
E885667L		3.78	173.0	2300	0.368	0.007	0.015	0.002	0.009	>10.0	1.320	0.9	4.00	25500	1.77	0.055
E885668L		5.39	198.0	1800	0.256	<0.005	0.021	0.003	0.007	>10.0	0.803	0.6	2.99	21700	3.63	0.040
E885669L		2.94	157.5	2000	0.293	<0.005	0.020	0.002	0.011	>10.0	0.847	0.6	3.33	29400	3.09	0.041
E885670L		1.465	111.5	1900	0.316	0.009	0.030	0.002	0.014	>10.0	0.879	0.7	3.14	40200	1.47	0.031
E885670C- L		1.205	81.1	23900	6.87	0.057	0.238	<0.001	0.032	1.27	14.45	10.3	1.950	1170	0.94	0.587
E885671L		1.910	98.2	1300	0.191	0.009	0.021	<0.001	0.009	>10.0	0.494	0.4	3.04	32100	1.50	0.025
E885672L		9.75	147.5	1800	0.265	<0.005	0.020	0.003	0.006	>10.0	1.005	0.7	4.25	19300	2.67	0.024
E885673L		8.58	118.0	1500	0.200	0.005	0.022	0.001	<0.005	>10.0	0.535	0.5	3.82	12600	2.69	0.029
E885674L		7.01	133.0	1400	0.190	0.007	0.012	0.003	<0.005	>10.0	0.497	0.5	3.27	17600	1.86	0.028
E885675L		9.05	117.0	1900	0.292	<0.005	0.026	0.001	0.005	>10.0	0.890	0.8	4.40	15150	1.21	0.028
E885651T		3.62	340	3000	0.523	<0.005	0.009	<0.001	0.021	>10.0	2.13	1.4	3.62	47000	1.14	0.169
E885651C- T		1.275	78.4	26300	6.91	0.048	0.240	0.001	0.031	1.28	14.00	11.0	1.930	1160	0.98	0.582
E885652T		6.57	344	2800	0.501	0.007	0.015	0.002	0.008	>10.0	1.575	1.4	4.05	>50000	1.18	0.146
E885653T		9.33	233	3300	0.627	0.007	0.019	0.003	0.009	>10.0	2.09	1.8	3.76	>50000	1.52	0.104
E885654T		7.39	351	3200	0.546	0.007	0.005	0.001	0.006	>10.0	7.36	1.9	4.19	46000	4.65	0.202
E885655T		3.41	266	2600	0.514	0.007	0.008	0.002	0.019	>10.0	1.775	1.4	3.81	45800	1.76	0.126
E885656T		6.56	265	2500	0.490	0.008	0.008	0.003	0.008	>10.0	1.540	1.8	3.25	>50000	2.73	0.119
E885657T		3.11	248	2900	0.693	0.014	0.011	0.003	0.016	>10.0	1.690	1.7	2.37	>50000	3.55	0.139
E885658T		11.50	227	2900	0.669	0.016	0.006	0.001	<0.005	>10.0	2.23	1.9	3.23	>50000	3.54	0.103
E885659T		1.665	302	3400	0.671	0.012	0.008	0.003	0.007	>10.0	2.63	1.9	4.03	31800	2.55	0.077
E885660T		3.13	313	3800	0.694	0.011	0.011	0.001	0.005	>10.0	2.42	2.2	4.19	35700	2.71	0.106
E885661T		3.29	410	4100	0.742	0.012	0.011	0.001	0.011	>10.0	2.23	2.2	4.11	32700	21.5	0.154
E885662T		1.840	280	2800	0.515	0.010	0.009	0.001	<0.005	>10.0	1.580	2.0	3.32	41100	14.55	0.093

Comments: **Corrected certificate for VEG- ASH01 on samples E885651L to E885675T**

***** See Appendix Page for comments regarding this certificate *****



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To: **GOLDCORP INC - MUSSELWHITE**
MUSSELWHITE MINE
PO BOX 7500
THUNDER BAY ON P7B 6S8

Page: 2 - C
 Total # Pages: 3 (A - D)
 Plus Appendix Pages
 Finalized Date: 25- SEP- 2018
 Account: OPB

Project: Vegetation Sampling

CERTIFICATE OF ANALYSIS VA18178522

Sample Description	Method Analyte Units LOD	ME- VEG41a	ME- VEG41a	ME- VEG41a	ME- VEG41a	ME- VEG41a	ME- VEG41a	ME- VEG41a	ME- VEG41a	ME- VEG41a	ME- VEG41a	ME- VEG41a	ME- VEG41a	ME- VEG41a	ME- VEG41a	ME- VEG41a
		Nb ppm	Ni ppm	P %	Pb ppm	Pd ppm	Pt ppm	Rb ppm	Re ppm	S %	Sb ppm	Sc ppm	Se ppm	Sn ppm	Sr ppm	Ta ppm
E885651L		0.117	40.1	4.41	8.56	<0.001	<0.002	750	0.004	1.35	1.03	0.86	0.290	0.54	224	<0.001
E885651C- L		0.062	144.0	0.253	8.36	0.002	0.003	20.0	0.001	0.46	0.23	10.90	0.458	0.85	1060	<0.001
E885652L		0.124	35.2	>5.0	6.67	0.002	<0.002	860	0.004	1.48	1.25	1.02	0.276	0.46	224	<0.001
E885653L		0.168	37.3	4.41	5.25	0.001	<0.002	680	0.006	1.66	1.02	1.15	0.447	0.39	330	0.005
E885654L		0.162	37.0	4.94	6.00	0.002	<0.002	1430	0.008	1.63	2.12	1.20	0.495	0.58	544	0.005
E885655L		0.158	34.7	3.79	4.94	0.001	<0.002	1210	0.004	1.20	1.45	1.12	0.701	0.41	506	<0.001
E885656L		0.178	17.25	>5.0	4.69	0.001	<0.002	1440	<0.001	1.72	2.12	1.21	0.650	0.55	350	<0.001
E885657L		0.156	26.8	3.82	4.61	<0.001	<0.002	920	0.002	1.62	1.46	0.93	0.618	0.24	310	<0.001
E885658L		0.177	25.1	4.17	7.71	0.001	<0.002	730	0.002	2.01	1.34	1.08	0.673	0.47	330	0.005
E885659L		0.205	50.0	4.57	8.41	0.001	<0.002	940	0.004	1.94	2.40	1.09	0.595	0.69	362	0.005
E885660L		0.196	12.45	>5.0	9.31	<0.001	<0.002	660	0.002	2.35	1.95	1.04	0.606	0.51	288	<0.001
E885661L		0.159	11.35	>5.0	5.93	0.001	<0.002	800	0.002	2.27	2.17	0.89	0.573	0.31	177.0	0.005
E885662L		0.169	6.92	4.40	5.10	0.001	0.002	378	0.003	2.45	1.93	0.86	0.461	0.34	232	<0.001
E885663L		0.160	9.64	4.10	6.27	0.001	<0.002	560	0.003	2.42	1.42	0.82	0.363	0.30	253	<0.001
E885664L		0.144	14.00	4.32	6.17	0.002	<0.002	680	0.001	1.61	1.81	0.81	0.296	0.35	299	<0.001
E885665L		0.150	15.60	4.27	5.38	<0.001	<0.002	1370	0.003	1.71	1.45	0.91	0.473	0.47	304	<0.001
E885666L		0.131	30.9	4.22	5.97	<0.001	<0.002	920	0.003	1.58	0.95	0.71	0.412	0.23	193.0	<0.001
E885667L		0.145	31.9	4.76	6.89	<0.001	<0.002	1070	0.002	1.85	1.20	0.99	0.577	0.38	437	<0.001
E885668L		0.101	20.8	4.65	4.87	<0.001	0.002	1640	0.002	1.60	1.16	0.89	0.436	0.32	246	<0.001
E885669L		0.152	15.25	4.77	4.68	0.001	<0.002	1210	0.002	2.08	1.13	0.67	0.456	0.32	230	<0.001
E885670L		0.120	41.9	3.80	3.29	<0.001	<0.002	890	0.003	1.75	0.67	0.85	0.937	0.23	490	<0.001
E885670C- L		0.071	139.5	0.261	8.18	0.001	0.005	20.3	0.002	0.49	0.21	11.40	0.447	0.73	1130	<0.001
E885671L		0.064	47.6	3.30	2.20	<0.001	<0.002	1090	0.002	1.49	0.53	0.55	1.045	0.16	460	<0.001
E885672L		0.102	32.6	4.11	4.06	<0.001	<0.002	1700	0.004	1.58	0.74	0.77	0.396	0.22	366	<0.001
E885673L		0.085	40.0	4.24	3.44	<0.001	<0.002	1740	0.002	1.66	0.67	0.66	0.344	0.20	496	<0.001
E885674L		0.081	33.9	4.36	2.53	<0.001	<0.002	1340	0.002	2.01	0.67	0.78	0.733	0.14	439	<0.001
E885675L		0.138	20.7	3.52	4.93	<0.001	<0.002	1370	0.005	1.49	0.91	0.90	0.385	0.20	345	<0.001
E885651T		0.174	41.1	4.42	16.25	0.002	<0.002	530	0.001	1.29	1.92	0.75	0.410	0.87	414	<0.001
E885651C- T		0.067	140.5	0.255	8.37	<0.001	0.003	19.35	<0.001	0.48	0.24	11.30	0.478	0.80	1100	<0.001
E885652T		0.144	34.9	4.79	9.22	<0.001	<0.002	530	0.001	1.48	1.02	0.60	0.333	0.49	419	<0.001
E885653T		0.187	41.4	4.06	10.90	<0.001	0.002	440	0.001	1.38	1.03	0.78	0.491	0.54	594	<0.001
E885654T		0.151	60.2	>5.0	13.85	<0.001	<0.002	1230	0.001	1.62	1.87	0.65	0.510	0.61	914	<0.001
E885655T		0.145	40.0	4.38	12.05	<0.001	<0.002	960	0.001	1.72	1.34	0.77	1.155	0.31	773	<0.001
E885656T		0.139	27.2	>5.0	8.25	0.001	<0.002	1020	<0.001	1.70	1.21	0.79	0.874	0.40	561	<0.001
E885657T		0.176	40.5	4.73	8.02	<0.001	<0.002	780	<0.001	1.65	1.55	0.79	0.926	0.32	441	<0.001
E885658T		0.150	20.1	4.11	12.70	<0.001	<0.002	920	<0.001	1.58	1.28	0.88	0.880	0.68	527	<0.001
E885659T		0.199	27.4	>5.0	14.85	<0.001	<0.002	670	<0.001	1.58	0.84	0.93	0.954	0.47	527	<0.001
E885660T		0.197	57.3	4.46	14.35	0.002	<0.002	680	0.002	1.66	1.16	0.95	0.756	0.57	540	<0.001
E885661T		0.192	17.80	>5.0	20.7	<0.001	<0.002	480	<0.001	2.25	1.88	0.92	0.998	0.61	504	<0.001
E885662T		0.158	13.80	4.97	12.60	<0.001	<0.002	740	0.001	2.18	0.97	0.74	0.722	0.34	299	<0.001

Comments: **Corrected certificate for VEG- ASH01 on samples E885651L to E885675T**

***** See Appendix Page for comments regarding this certificate *****



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To: **GOLDCORP INC - MUSSELWHITE**
MUSSELWHITE MINE
PO BOX 7500
THUNDER BAY ON P7B 6S8

Page: 2 - D
 Total # Pages: 3 (A - D)
 Plus Appendix Pages
 Finalized Date: 25- SEP- 2018
 Account: OPB

Project: Vegetation Sampling

CERTIFICATE OF ANALYSIS VA18178522

Sample Description	Method Analyte Units LOD	ME- VEG41a	ME- VEG41a	ME- VEG41a	ME- VEG41a	ME- VEG41a	ME- VEG41a	ME- VEG41a	ME- VEG41a	ME- VEG41a	
		Te	Th	Ti	Tl	U	V	W	Y	Zn	Zr
		ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm
		0.02	0.002	0.001	0.002	0.005	0.05	0.01	0.003	0.1	0.02
E885651L		0.11	0.181	0.006	0.031	0.062	3.27	0.37	0.495	754	0.41
E885651C- L		<0.02	4.15	0.028	0.140	0.644	62.1	0.08	11.35	199.5	9.32
E885652L		<0.02	0.193	0.006	0.040	0.065	3.11	0.33	0.629	853	0.36
E885653L		<0.02	0.232	0.007	0.067	0.084	4.10	0.62	0.744	780	0.16
E885654L		<0.02	0.244	0.010	0.017	0.096	4.33	0.49	1.370	896	0.22
E885655L		<0.02	0.221	0.008	0.040	0.075	3.71	0.24	0.854	805	0.19
E885656L		<0.02	0.192	0.010	0.014	0.353	3.68	0.42	0.880	1070	0.18
E885657L		0.07	0.200	0.008	0.019	0.069	3.47	0.31	1.600	744	0.52
E885658L		<0.02	0.276	0.009	0.022	0.115	4.31	0.36	1.040	1055	0.41
E885659L		0.13	0.378	0.009	0.014	0.144	4.75	0.29	1.285	909	0.31
E885660L		<0.02	0.308	0.008	0.023	0.109	4.73	0.24	1.015	713	0.44
E885661L		0.06	0.180	0.008	0.009	0.078	2.81	0.18	0.642	1000	0.55
E885662L		<0.02	0.202	0.007	0.015	0.077	3.07	0.18	0.693	1585	0.75
E885663L		<0.02	0.216	0.006	0.025	0.081	3.45	0.17	0.754	636	0.72
E885664L		<0.02	0.256	0.006	0.018	0.098	3.72	0.27	0.859	966	0.47
E885665L		0.06	0.249	0.009	0.028	0.091	3.45	0.31	0.809	843	0.62
E885666L		<0.02	0.186	0.004	0.020	0.065	2.58	0.14	0.583	817	0.79
E885667L		<0.02	0.212	0.006	0.039	0.083	3.65	0.16	0.759	1075	0.65
E885668L		<0.02	0.155	0.004	0.087	0.060	2.39	0.18	0.626	962	0.78
E885669L		<0.02	0.159	0.007	0.045	0.066	2.68	0.19	0.523	907	0.83
E885670L		<0.02	0.182	0.005	0.046	0.061	2.98	0.10	0.577	744	0.95
E885670C- L		<0.02	4.07	0.023	0.140	0.634	53.7	0.10	11.60	207	10.20
E885671L		<0.02	0.119	0.002	0.029	0.033	1.43	0.10	0.317	754	0.92
E885672L		<0.02	0.176	0.004	0.041	0.050	2.41	0.10	0.575	719	1.03
E885673L		<0.02	0.138	0.003	0.052	0.043	1.82	0.09	0.324	685	0.97
E885674L		<0.02	0.122	0.003	0.023	0.040	1.73	0.09	0.377	654	0.92
E885675L		<0.02	0.212	0.005	0.121	0.065	2.86	0.13	0.748	719	1.20
E885651T		<0.02	0.350	0.006	0.357	0.138	5.25	0.44	1.285	1395	0.32
E885651C- T		<0.02	4.07	0.024	0.145	0.629	53.4	0.11	11.30	210	9.43
E885652T		<0.02	0.298	0.005	0.256	0.114	4.18	0.30	1.115	1550	0.58
E885653T		<0.02	0.364	0.007	0.412	0.138	5.88	0.52	1.520	1605	0.70
E885654T		<0.02	0.256	0.006	1.570	0.124	5.01	0.55	1.985	1470	0.20
E885655T		<0.02	0.260	0.006	0.041	0.118	4.78	0.21	1.285	1140	0.44
E885656T		<0.02	0.246	0.007	0.016	0.345	4.22	0.29	1.260	1525	0.35
E885657T		<0.02	0.352	0.009	0.045	0.108	5.83	0.31	1.360	1070	0.36
E885658T		<0.02	0.349	0.008	0.057	0.144	5.43	0.25	1.350	1590	0.32
E885659T		<0.02	0.401	0.007	0.024	0.159	5.88	0.22	1.735	1655	0.36
E885660T		<0.02	0.428	0.008	0.033	0.182	6.25	0.29	1.770	1075	0.49
E885661T		<0.02	0.401	0.007	0.055	0.193	7.19	0.34	2.08	1085	0.42
E885662T		<0.02	0.217	0.006	0.023	0.135	4.51	0.22	1.325	1295	0.38

Comments: **Corrected certificate for VEG- ASH01 on samples E885651L to E885675T**

***** See Appendix Page for comments regarding this certificate *****



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To: **GOLDCORP INC - MUSSELWHITE
 MUSSELWHITE MINE
 PO BOX 7500
 THUNDER BAY ON P7B 6S8**

Page: 3 - A
 Total # Pages: 3 (A - D)
 Plus Appendix Pages
 Finalized Date: 25- SEP- 2018
 Account: OPB

Project: Vegetation Sampling

CERTIFICATE OF ANALYSIS VA18178522

Sample Description	Method Analyte Units LOD	VEG- ASH01	VEG- ASH01	ME- VEG41a	ME- VEG41a	ME- VEG41a	ME- VEG41a	ME- VEG41a	ME- VEG41a	ME- VEG41a	ME- VEG41a	ME- VEG41a	ME- VEG41a	ME- VEG41a	ME- VEG41a	ME- VEG41a
		WT. SAMP g	WT. ASH g	Au ppm	Ag ppm	Al %	As ppm	B ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cd ppm	Ce ppm	Co ppm	Cr ppm
		0.01	0.01	0.0002	0.001	0.01	0.01	1	0.1	0.01	0.001	0.01	0.001	0.003	0.002	0.01
E885663T		38.9	0.45	0.0232	0.092	0.25	1.41	751	294	0.09	0.091	20.7	1.560	4.15	2.82	3.31
E885664T		29.9	0.34	0.0101	0.082	0.19	1.56	746	264	0.09	0.076	19.60	2.48	3.37	2.11	2.93
E885665T		29.0	0.33	0.0113	0.149	0.28	4.78	694	250	0.09	0.118	20.9	6.09	4.83	4.12	5.47
E885666T		26.0	0.38	0.0037	0.104	0.22	1.32	538	298	0.06	0.066	18.65	0.661	2.82	2.31	4.20
E885667T		35.9	0.43	0.0035	0.178	0.29	1.66	652	296	0.07	0.075	16.80	1.035	3.03	2.84	3.66
E885668T		35.0	0.42	0.0093	0.193	0.28	1.56	566	401	0.07	0.077	19.45	0.726	3.28	1.720	3.61
E885669T		32.1	0.35	0.0052	0.185	0.28	1.43	546	346	0.04	0.066	15.90	0.797	2.54	1.520	3.88
E885670T		28.7	0.29	0.0081	0.271	0.47	2.43	635	346	0.16	0.135	17.35	1.515	6.85	3.40	5.89
E885670C- T				0.0062	0.039	3.02	4.35	354	108.0	0.54	0.107	17.85	0.267	28.0	18.85	164.5
E885671T		28.7	0.33	0.0119	0.130	0.28	1.93	508	447	0.09	0.076	18.95	0.873	3.96	2.43	4.22
E885672T		30.6	0.40	0.0041	0.100	0.23	1.30	529	458	0.06	0.060	17.70	0.696	2.85	2.47	3.15
E885673T		32.7	0.39	0.0026	0.128	0.21	1.03	508	605	0.07	0.054	17.70	0.656	2.13	1.710	2.29
E885674T		31.2	0.34	0.0036	0.106	0.17	1.21	511	570	0.05	0.045	14.75	0.569	1.655	1.475	2.74
E885675T		30.5	0.40	0.0039	0.102	0.24	1.02	561	389	0.07	0.062	17.85	0.805	2.46	1.735	2.92

Comments: **Corrected certificate for VEG- ASH01 on samples E885651L to E885675T**

***** See Appendix Page for comments regarding this certificate *****



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To: **GOLDCORP INC - MUSSELWHITE**
MUSSELWHITE MINE
PO BOX 7500
THUNDER BAY ON P7B 6S8

Page: 3 - B
 Total # Pages: 3 (A - D)
 Plus Appendix Pages
 Finalized Date: 25- SEP- 2018
 Account: OPB

Project: Vegetation Sampling

CERTIFICATE OF ANALYSIS VA18178522

Sample Description	Method Analyte Units LOD	ME- VEG41a	ME- VEG41a	ME- VEG41a	ME- VEG41a	ME- VEG41a	ME- VEG41a	ME- VEG41a	ME- VEG41a	ME- VEG41a	ME- VEG41a	ME- VEG41a	ME- VEG41a	ME- VEG41a	ME- VEG41a	ME- VEG41a
		Cs	Cu	Fe	Ga	Ge	Hf	Hg	In	K	La	Li	Mg	Mn	Mo	Na
		ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%
		0.005	0.01	1	0.004	0.005	0.002	0.001	0.005	0.01	0.002	0.1	0.001	0.1	0.01	0.001
E885663T		5.94	285	2800	0.556	0.011	0.010	0.001	0.008	>10.0	1.970	1.4	4.52	21900	12.35	0.091
E885664T		1.125	296	2400	0.468	0.009	0.012	0.003	0.012	>10.0	1.570	1.4	3.85	29300	5.09	0.100
E885665T		1.875	309	3400	0.666	0.012	0.012	0.003	0.009	>10.0	2.35	1.9	3.70	28000	16.65	0.130
E885666T		4.49	281	2300	0.462	0.010	0.011	0.002	0.007	>10.0	1.410	1.0	4.08	44000	1.33	0.082
E885667T		2.67	317	2700	0.511	0.007	0.008	<0.001	0.006	>10.0	1.485	1.5	3.77	>50000	2.63	0.091
E885668T		4.91	438	2500	0.492	0.007	0.006	0.003	0.013	>10.0	1.695	1.2	2.99	44800	4.07	0.087
E885669T		2.65	257	2500	0.417	0.007	0.007	0.001	0.008	>10.0	1.295	1.0	2.92	>50000	3.23	0.074
E885670T		2.02	208	4300	0.890	0.011	0.012	<0.001	0.016	>10.0	3.66	2.4	3.98	>50000	1.16	0.113
E885670C- T		1.145	80.8	25900	6.34	0.054	0.257	<0.001	0.020	1.28	14.15	12.7	1.950	1150	0.88	0.588
E885671T		2.23	216	2500	0.531	0.013	0.012	0.002	0.010	>10.0	2.15	1.8	3.83	>50000	0.98	0.087
E885672T		10.25	273	2700	0.386	0.005	0.014	<0.001	<0.005	>10.0	1.580	1.4	3.62	39400	1.93	0.076
E885673T		7.25	231	1900	0.337	<0.005	0.020	<0.001	0.014	>10.0	1.210	0.9	3.57	34800	2.80	0.054
E885674T		4.05	250	1700	0.270	0.005	0.018	<0.001	<0.005	>10.0	0.945	0.8	3.84	35500	1.29	0.053
E885675T		6.71	264	2100	0.374	0.006	0.010	0.003	0.007	>10.0	1.270	1.1	3.77	48900	1.79	0.090

Comments: **Corrected certificate for VEG- ASH01 on samples E885651L to E885675T**

***** See Appendix Page for comments regarding this certificate *****



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To: **GOLDCORP INC - MUSSELWHITE
 MUSSELWHITE MINE
 PO BOX 7500
 THUNDER BAY ON P7B 6S8**

Page: 3 - C
 Total # Pages: 3 (A - D)
 Plus Appendix Pages
 Finalized Date: 25- SEP- 2018
 Account: OPB

Project: Vegetation Sampling

CERTIFICATE OF ANALYSIS VA18178522

Sample Description	Method Analyte Units LOD	ME- VEG41a	ME- VEG41a	ME- VEG41a	ME- VEG41a	ME- VEG41a	ME- VEG41a	ME- VEG41a	ME- VEG41a	ME- VEG41a	ME- VEG41a	ME- VEG41a	ME- VEG41a	ME- VEG41a	ME- VEG41a	ME- VEG41a	
		Nb ppm	Ni ppm	P %	Pb ppm	Pd ppm	Pt ppm	Rb ppm	Re ppm	S %	Sb ppm	Sc ppm	Se ppm	Sn ppm	Sr ppm	Ta ppm	
		0.002	0.04	0.001	0.01	0.001	0.002	0.01	0.001	0.01	0.01	0.01	0.01	0.005	0.01	0.02	0.001
E885663T		0.174	19.45	4.82	14.60	0.001	<0.002	560	0.001	1.88	1.13	0.78	0.795	0.39	504	<0.001	
E885664T		0.146	10.45	4.73	12.55	<0.001	<0.002	240	<0.001	2.04	1.31	0.67	0.987	0.37	465	<0.001	
E885665T		0.181	14.50	3.93	33.1	0.001	<0.002	333	<0.001	2.09	1.61	0.84	0.894	0.62	491	<0.001	
E885666T		0.126	42.8	4.66	9.68	<0.001	<0.002	700	<0.001	1.55	0.67	0.66	0.833	0.37	299	<0.001	
E885667T		0.175	54.4	>5.0	12.90	<0.001	<0.002	880	<0.001	1.91	1.09	0.89	0.740	0.36	591	<0.001	
E885668T		0.151	30.6	4.90	13.30	<0.001	<0.002	1140	0.001	1.20	0.92	0.90	0.719	0.46	371	<0.001	
E885669T		0.129	25.4	>5.0	11.55	<0.001	<0.002	950	<0.001	1.43	0.83	0.75	0.543	0.36	364	<0.001	
E885670T		0.224	63.4	4.67	24.2	<0.001	<0.002	650	<0.001	1.57	1.37	1.33	1.435	0.54	724	<0.001	
E885670C- T		0.056	144.0	0.264	8.07	0.001	0.004	19.85	0.001	0.46	0.19	11.00	0.432	0.82	1060	<0.001	
E885671T		0.141	49.4	4.51	13.00	<0.001	0.002	870	<0.001	1.20	0.90	0.81	0.995	0.34	722	<0.001	
E885672T		0.127	37.3	>5.0	7.04	<0.001	<0.002	1660	<0.001	1.10	0.82	0.68	0.399	0.35	560	<0.001	
E885673T		0.113	53.4	>5.0	8.79	<0.001	<0.002	1580	<0.001	0.91	0.45	0.62	0.311	0.29	756	<0.001	
E885674T		0.077	33.5	4.75	7.55	<0.001	<0.002	850	<0.001	0.87	0.57	0.53	0.436	0.19	589	<0.001	
E885675T		0.107	32.9	>5.0	7.42	<0.001	<0.002	1150	<0.001	1.45	1.50	0.70	0.595	0.28	510	<0.001	

Comments: **Corrected certificate for VEG- ASH01 on samples E885651L to E885675T**

***** See Appendix Page for comments regarding this certificate *****



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To: **GOLDCORP INC - MUSSELWHITE
 MUSSELWHITE MINE
 PO BOX 7500
 THUNDER BAY ON P7B 6S8**

Page: 3 - D
 Total # Pages: 3 (A - D)
 Plus Appendix Pages
 Finalized Date: 25- SEP- 2018
 Account: OPB

Project: Vegetation Sampling

CERTIFICATE OF ANALYSIS VA18178522

Sample Description	Method Analyte Units LOD	ME- VEG41a	ME- VEG41a	ME- VEG41a	ME- VEG41a	ME- VEG41a	ME- VEG41a	ME- VEG41a	ME- VEG41a	ME- VEG41a	
		Te	Th	Tl	Tl	U	V	W	Y	Zn	Zr
		ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm
		0.02	0.002	0.001	0.002	0.005	0.05	0.01	0.003	0.1	0.02
E885663T		<0.02	0.337	0.006	0.038	0.145	5.57	0.22	1.735	1490	0.36
E885664T		<0.02	0.270	0.005	0.040	0.126	4.56	0.14	1.410	3080	0.52
E885665T		<0.02	0.404	0.006	0.112	0.202	5.92	0.55	1.790	1700	0.48
E885666T		<0.02	0.276	0.005	0.017	0.110	4.74	0.17	1.390	1345	0.31
E885667T		<0.02	0.234	0.006	0.018	0.143	5.78	0.19	1.320	1460	0.37
E885668T		<0.02	0.257	0.005	0.062	0.115	5.67	0.25	1.345	1465	0.32
E885669T		<0.02	0.198	0.005	0.040	0.096	4.33	0.19	0.954	1300	0.38
E885670T		<0.02	0.447	0.010	0.042	0.210	9.75	0.24	2.49	1565	0.40
E885670C- T		<0.02	3.99	0.026	0.133	0.643	63.3	0.11	11.70	202	9.49
E885671T		<0.02	0.298	0.005	0.070	0.123	5.20	0.20	1.515	984	0.42
E885672T		<0.02	0.218	0.005	0.040	0.102	4.31	0.13	0.963	1030	0.35
E885673T		<0.02	0.178	0.004	0.051	0.082	3.76	0.13	0.818	1120	0.69
E885674T		<0.02	0.158	0.003	0.055	0.054	2.83	0.09	0.700	978	0.66
E885675T		<0.02	0.201	0.004	0.061	0.102	4.23	0.13	1.165	1170	0.48

Comments: **Corrected certificate for VEG- ASH01 on samples E885651L to E885675T**

***** See Appendix Page for comments regarding this certificate *****



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To: **GOLDCORP INC - MUSSELWHITE
MUSSELWHITE MINE
PO BOX 7500
THUNDER BAY ON P7B 6S8**

Page: Appendix 1
Total # Appendix Pages: 1
Finalized Date: 25- SEP- 2018
Account: OPB

Project: Vegetation Sampling

CERTIFICATE OF ANALYSIS VA18178522

CERTIFICATE COMMENTS									
Applies to Method:	<p style="text-align: center;">LABORATORY ADDRESSES</p> <p>Processed at ALS Vancouver located at 2103 Dollarton Hwy, North Vancouver, BC, Canada.</p> <table><tr><td>BAG- 01</td><td>DRY- 22</td><td>LOG- 22</td><td>LOG- 24</td></tr><tr><td>ME- VEG41a</td><td>VEG- ASH01</td><td></td><td></td></tr></table>	BAG- 01	DRY- 22	LOG- 22	LOG- 24	ME- VEG41a	VEG- ASH01		
BAG- 01	DRY- 22	LOG- 22	LOG- 24						
ME- VEG41a	VEG- ASH01								



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Page: 1
Total # Pages: 4 (A - D)
Plus Appendix Pages
Finalized Date: 24- SEP- 2018
Account: OPB

CERTIFICATE VA18200592

Project: Vegetation sampling

This report is for 110 Vegetation samples submitted to our lab in Vancouver, BC, Canada on 23- JUL- 2018.

The following have access to data associated with this certificate:

THOMAS BISSIG
 STEPHEN MILLER

COLIN DUNN
 DAVID MURRAY

NIC GUEST
 MATT ZAGO

SAMPLE PREPARATION

ALS CODE	DESCRIPTION
WEI- 21	Received Sample Weight
LOG- 24	Pulp Login - Rcd w/o Barcode
VEG- ASH01	Controlled Ignition - Veg Samp. @ 475C
DRY- 22	Drying - Maximum Temp 60C
LOG- 22	Sample login - Rcd w/o BarCode
BAG- 01	Bulk Master for Storage

ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION
ME- VEG41 a	Super Trace - Ashed Vegetation Samples

This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.

***** See Appendix Page for comments regarding this certificate *****

Comments: **Corrected certificate for VEG- ASH01 on samples E885718 to E885729**

Signature:

Colin Ramshaw, Vancouver Laboratory Manager



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Page: 2 - A
 Total # Pages: 4 (A - D)
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 Finalized Date: 24- SEP- 2018
 Account: OPB

Project: Vegetation sampling

CERTIFICATE OF ANALYSIS VA18200592

Sample Description	Method Analyte Units LOD	VEG- ASH01	VEG- ASH01	WEI- 21	ME- VEG41a	ME- VEG41a	ME- VEG41a	ME- VEG41a	ME- VEG41a	ME- VEG41a	ME- VEG41a	ME- VEG41a	ME- VEG41a	ME- VEG41a	ME- VEG41a	ME- VEG41a
		WT. SAMP g 0.01	WT. ASH g 0.01	Recvd Wt. kg 0.02	Au ppm 0.0002	Ag ppm 0.001	Al % 0.01	As ppm 0.01	B ppm 1	Ba ppm 0.1	Be ppm 0.01	Bi ppm 0.001	Ca % 0.01	Cd ppm 0.001	Ce ppm 0.003	Co ppm 0.002
E885676		31.3	0.39		0.0064	0.113	0.28	1.64	500	507	0.07	0.074	19.70	1.155	4.29	5.42
E885677		19.75	0.27		0.0057	0.168	0.24	1.71	544	359	0.07	0.068	19.70	0.703	2.73	4.05
E885678		25.6	0.27		0.0175	0.147	0.39	1.77	708	361	0.09	0.107	22.1	0.780	4.58	8.97
E885679		23.9	0.32		0.0067	0.139	0.29	2.02	642	318	0.08	0.079	22.7	1.100	3.60	9.30
E885680		19.65	0.35		0.0060	0.103	0.16	1.87	508	313	0.05	0.078	21.0	0.778	1.925	1.365
E885681		30.8	0.40		0.0079	0.107	0.28	1.71	664	324	0.08	0.081	21.7	0.700	3.45	19.15
E885682		39.9	0.51		0.0046	0.126	0.20	1.76	536	366	0.04	0.056	20.6	0.632	2.48	7.27
E885683		30.5	0.35		0.0038	0.133	0.23	1.56	637	244	0.07	0.082	19.55	8.12	3.55	11.65
E885684		31.4	0.49		0.0034	0.065	0.10	1.48	558	380	0.02	0.036	21.2	0.404	1.745	0.705
E885685		35.3	0.55		0.0030	0.058	0.19	1.11	690	533	0.08	0.068	21.9	0.624	3.23	1.130
E885686		44.7	0.56		0.0029	0.110	0.31	1.45	654	407	0.08	0.107	19.05	0.589	4.33	1.630
E885687		21.0	0.29		0.0068	0.075	0.17	1.04	565	382	0.07	0.061	20.6	0.666	2.81	1.230
E885688		26.5	0.39		0.0022	0.071	0.12	1.01	552	354	0.03	0.048	19.05	0.494	1.940	0.721
E885689		31.6	0.34		0.0074	0.097	0.17	2.25	719	281	0.07	0.135	20.6	6.77	3.49	2.99
E885689C					0.0052	0.039	2.90	3.74	338	104.0	0.52	0.106	17.45	0.283	28.4	17.50
E885690		54.3	0.59		0.0062	0.116	0.17	1.68	703	264	0.05	0.083	19.55	2.49	3.45	2.31
E885691		32.8	0.33		0.0073	0.133	0.25	1.56	643	288	0.04	0.185	19.05	1.260	3.50	5.37
E885692		28.7	0.40		0.0062	0.143	0.27	2.15	528	409	0.06	0.090	15.65	0.982	3.42	3.01
E885693		37.7	0.56		0.0040	0.178	0.14	1.26	564	233	0.06	0.114	24.8	10.80	2.54	2.05
E885694		32.2	0.31		0.0089	0.108	0.23	1.84	700	302	0.05	0.095	20.9	1.535	3.33	1.895
E885695		58.6	0.50		0.0112	0.142	0.30	2.36	764	392	0.06	0.094	20.4	0.717	3.92	6.70
E885696		29.7	0.39		0.0038	0.146	0.26	1.37	597	295	0.06	0.117	20.5	1.240	3.27	5.36
E885697		34.5	0.39		0.0087	0.074	0.36	1.43	626	323	0.11	0.094	18.40	0.981	3.94	8.41
E885698		20.7	0.32		0.0098	0.201	0.47	1.54	463	335	0.08	0.091	20.0	1.895	3.99	2.37
E885699		26.6	0.38		0.0065	0.116	0.24	1.35	498	390	0.04	0.091	15.90	0.614	2.96	1.895
E885700		35.8	0.47		0.0381	0.123	0.27	1.80	492	511	0.05	0.108	19.65	0.751	3.14	1.610
E885704		25.4	0.27		0.0254	0.150	0.14	3.43	607	272	0.05	0.073	19.20	2.40	2.15	3.26
E885705		27.7	0.46		0.0058	0.139	0.14	1.76	555	311	0.04	0.062	23.0	11.45	2.27	7.32
E885706		20.3	0.28		0.0230	0.143	0.27	2.71	540	359	0.09	0.111	21.8	1.040	3.84	7.79
E885707		26.2	0.32		0.0208	0.128	0.15	3.09	561	337	0.06	0.106	20.8	2.89	2.68	3.71
E885708		38.4	0.46		0.0062	0.122	0.21	1.96	642	370	0.06	0.070	18.80	1.675	3.29	1.735
E885709		32.1	0.36		0.0073	0.065	0.26	2.53	698	317	0.06	0.092	19.20	1.230	3.81	1.995
E885710		31.5	0.33		0.0130	0.086	0.16	2.50	631	299	0.05	0.060	17.60	0.915	2.54	1.825
E885711		27.5	0.25		0.0086	0.099	0.28	2.59	667	259	0.08	0.095	19.55	2.04	4.71	2.91
E885712		28.9	0.56		0.0106	0.517	0.10	2.06	415	593	0.04	0.051	27.4	4.61	2.08	2.15
E885712C					0.0047	0.035	2.95	4.75	367	108.5	0.51	0.106	17.95	0.271	29.0	17.95
E885713		31.0	0.45		0.0044	0.142	0.19	3.91	541	288	0.08	0.182	24.9	8.63	4.33	3.28
E885714		34.7	0.43		0.0163	0.089	0.16	3.11	598	344	0.05	0.084	16.70	1.380	2.83	4.10
E885715		31.5	0.42		0.0188	0.099	0.21	1.81	599	344	0.05	0.077	20.7	1.600	2.61	1.830
E885716		29.1	0.41		0.0102	0.106	0.22	2.99	733	386	0.07	0.098	21.0	1.050	3.90	1.485

Comments: **Corrected certificate for VEG- ASH01 on samples E885718 to E885729**

***** See Appendix Page for comments regarding this certificate *****



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To: **GOLDCORP INC - MUSSELWHITE**
MUSSELWHITE MINE
PO BOX 7500
THUNDER BAY ON P7B 6S8

Page: 2 - B
 Total # Pages: 4 (A - D)
 Plus Appendix Pages
 Finalized Date: 24- SEP- 2018
 Account: OPB

Project: Vegetation sampling

CERTIFICATE OF ANALYSIS VA18200592

Sample Description	Method Analyte Units LOD	ME-VEG41a	ME-VEG41a	ME-VEG41a	ME-VEG41a	ME-VEG41a	ME-VEG41a	ME-VEG41a	ME-VEG41a	ME-VEG41a	ME-VEG41a	ME-VEG41a	ME-VEG41a	ME-VEG41a	ME-VEG41a	ME-VEG41a
		Cr	Cs	Cu	Fe	Ga	Ge	Hf	Hg	In	K	La	Li	Mg	Mn	Mo
		ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm
E885676		4.47	1.560	296	3600	0.624	0.009	0.009	<0.001	<0.005	>10.0	2.45	1.6	2.40	47500	2.96
E885677		4.56	4.28	275	2500	0.437	0.008	0.014	<0.001	0.005	>10.0	1.420	1.1	3.59	26700	2.33
E885678		6.46	10.90	376	3700	0.608	0.009	0.012	0.003	<0.005	>10.0	2.40	2.2	5.13	29000	1.55
E885679		9.27	7.09	327	2900	0.488	0.009	0.017	<0.001	<0.005	>10.0	1.900	2.0	3.43	33500	1.43
E885680		3.99	9.70	284	1800	0.317	<0.005	0.025	<0.001	0.011	>10.0	1.010	0.9	3.38	19550	0.53
E885681		6.00	9.51	334	2900	0.504	0.008	0.008	0.002	<0.005	>10.0	1.800	1.7	4.40	21600	2.13
E885682		3.38	6.82	397	2400	0.355	0.006	0.015	<0.001	<0.005	>10.0	1.350	1.0	4.17	26800	2.05
E885683		5.47	8.69	336	2700	0.512	0.012	0.012	<0.001	0.009	>10.0	1.700	1.7	3.87	31600	1.97
E885684		2.58	1.380	192.0	1500	0.247	<0.005	0.016	<0.001	0.006	>10.0	0.907	1.1	3.67	21600	5.72
E885685		3.85	1.375	275	2500	0.464	<0.005	0.016	0.002	0.005	>10.0	1.690	1.3	3.25	30100	6.85
E885686		4.12	4.85	385	3100	0.644	<0.005	0.009	<0.001	0.007	>10.0	2.23	1.5	3.87	>50000	1.19
E885687		2.94	3.22	269	2300	0.406	0.005	0.012	0.001	<0.005	>10.0	1.450	1.5	3.57	30800	7.66
E885688		2.74	2.25	267	1700	0.297	<0.005	0.016	<0.001	<0.005	>10.0	1.015	0.8	3.02	>50000	2.15
E885689		147.0	2.30	326	2400	0.436	0.005	0.021	<0.001	<0.005	>10.0	1.745	2.1	3.59	30200	6.78
E885689C		148.5	1.075	78.7	24000	6.21	0.050	0.271	0.001	0.028	1.23	14.35	12.2	1.870	1090	0.85
E885690		3.69	1.435	288	2600	0.404	0.007	0.023	0.001	<0.005	>10.0	1.665	1.8	3.38	>50000	3.32
E885691		134.5	6.39	319	2700	0.408	<0.005	0.014	0.001	<0.005	>10.0	1.770	1.5	4.35	23900	4.36
E885692		4.97	1.755	283	2500	0.472	0.009	0.008	<0.001	<0.005	>10.0	1.835	1.8	3.71	>50000	6.15
E885693		3.79	3.99	276	2200	0.343	0.006	0.030	0.001	0.010	8.09	1.240	3.0	3.33	13000	27.6
E885694		4.26	2.61	264	2800	0.481	0.009	0.021	0.002	0.007	>10.0	1.610	1.2	4.36	37600	8.24
E885695		3.84	11.50	286	3700	0.544	<0.005	0.008	<0.001	0.011	>10.0	1.985	3.1	4.60	38800	4.73
E885696		4.51	11.40	337	2800	0.444	0.010	0.016	<0.001	0.007	>10.0	1.630	1.9	4.22	39000	1.98
E885697		3.62	9.69	348	3400	0.584	0.008	0.014	0.001	0.006	>10.0	2.01	1.8	4.67	36600	2.01
E885698		3.50	4.49	277	3000	0.508	0.013	0.007	0.001	0.006	>10.0	2.29	1.5	2.68	>50000	1.97
E885699		2.99	7.25	253	2200	0.419	0.006	0.010	0.001	0.005	>10.0	1.680	1.4	3.57	45500	2.14
E885700		169.0	11.05	239	2400	0.429	0.008	0.018	0.003	<0.005	>10.0	1.675	1.8	3.77	39200	1.42
E885704		5.69	2.61	291	2700	0.370	0.008	0.014	0.001	<0.005	>10.0	1.125	1.6	2.84	21200	9.99
E885705		4.29	4.24	293	2300	0.322	0.006	0.033	0.003	<0.005	>10.0	1.195	0.9	3.05	20100	1.36
E885706		6.95	20.9	351	3000	0.530	0.012	0.016	0.004	0.005	>10.0	2.03	1.7	4.14	43200	1.88
E885707		5.92	3.44	315	2500	0.376	0.006	0.021	<0.001	0.011	>10.0	1.420	1.2	2.80	21400	1.74
E885708		4.15	4.74	354	2600	0.515	0.009	0.021	<0.001	<0.005	>10.0	1.740	1.3	3.43	44700	1.21
E885709		4.44	7.30	291	3200	0.552	0.012	0.035	0.002	0.008	>10.0	1.910	1.5	3.30	42200	1.08
E885710		4.06	14.70	358	2300	0.348	0.005	0.030	<0.001	0.012	>10.0	1.250	1.9	3.03	30100	4.80
E885711		4.17	16.95	365	3600	0.648	0.009	0.026	0.002	0.007	>10.0	2.34	2.2	3.47	32700	3.08
E885712		2.26	3.38	221	1500	0.258	0.007	0.040	0.002	<0.005	8.28	1.225	1.0	1.920	10050	3.76
E885712C		154.0	1.145	79.5	24700	6.75	0.053	0.319	0.001	0.026	1.27	14.55	10.8	1.940	1150	0.93
E885713		3.31	6.86	249	2800	0.503	0.008	0.053	0.002	0.009	7.59	2.28	1.4	2.25	18550	3.91
E885714		3.77	9.11	303	2500	0.401	<0.005	0.018	0.003	<0.005	>10.0	1.455	1.7	3.74	36200	18.80
E885715		5.15	2.55	292	2200	0.447	0.006	0.032	0.002	0.007	>10.0	1.360	1.8	3.70	24100	3.51
E885716		3.33	2.27	294	2900	0.585	0.006	0.038	0.001	0.009	>10.0	1.990	1.6	3.47	34500	4.57

Comments: **Corrected certificate for VEG- ASH01 on samples E885718 to E885729**

***** See Appendix Page for comments regarding this certificate *****



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To: **GOLDCORP INC - MUSSELWHITE**
MUSSELWHITE MINE
PO BOX 7500
THUNDER BAY ON P7B 6S8

Page: 2 - C
 Total # Pages: 4 (A - D)
 Plus Appendix Pages
 Finalized Date: 24- SEP- 2018
 Account: OPB

Project: Vegetation sampling

CERTIFICATE OF ANALYSIS VA18200592

Sample Description	Method Analyte Units LOD	ME- VEG41a	ME- VEG41a	ME- VEG41a	ME- VEG41a	ME- VEG41a	ME- VEG41a	ME- VEG41a	ME- VEG41a	ME- VEG41a	ME- VEG41a	ME- VEG41a	ME- VEG41a	ME- VEG41a	ME- VEG41a	ME- VEG41a
		Na %	Nb ppm	Ni ppm	P %	Pb ppm	Pd ppm	Pt ppm	Rb ppm	Re ppm	S %	Sb ppm	Sc ppm	Se ppm	Sn ppm	Sr ppm
		0.001	0.002	0.04	0.001	0.01	0.001	0.002	0.01	0.001	0.01	0.01	0.01	0.005	0.01	0.02
E885676		0.064	0.165	84.6	4.17	9.51	<0.001	<0.002	770	<0.001	1.13	0.61	0.87	1.010	0.35	627
E885677		0.060	0.138	57.4	>5.0	8.20	<0.001	<0.002	790	<0.001	1.40	1.05	0.69	0.523	0.35	409
E885678		0.078	0.166	57.5	4.27	13.95	<0.001	<0.002	510	<0.001	1.36	1.56	0.94	0.632	0.48	476
E885679		0.093	0.152	133.5	4.71	9.99	<0.001	<0.002	404	<0.001	1.58	1.63	0.76	1.275	0.41	365
E885680		0.071	0.107	17.10	4.52	7.11	<0.001	<0.002	550	<0.001	1.68	0.97	0.59	0.544	0.26	267
E885681		0.072	0.149	73.4	4.95	10.10	<0.001	<0.002	550	<0.001	1.51	1.52	0.86	0.503	0.46	655
E885682		0.057	0.109	24.9	4.48	6.30	<0.001	<0.002	690	<0.001	1.20	1.23	0.69	0.353	0.35	221
E885683		0.081	0.133	35.1	4.71	10.75	<0.001	<0.002	439	<0.001	2.27	1.12	0.90	0.786	0.41	331
E885684		0.055	0.083	3.15	3.37	4.63	<0.001	<0.002	298	<0.001	1.08	0.70	0.58	0.369	0.19	762
E885685		0.046	0.152	4.44	3.80	9.04	<0.001	<0.002	279	<0.001	1.00	0.65	0.85	0.279	0.34	767
E885686		0.066	0.156	19.65	4.51	11.05	<0.001	<0.002	421	<0.001	1.15	0.89	0.95	0.307	0.43	298
E885687		0.053	0.112	7.45	3.85	10.65	<0.001	<0.002	280	<0.001	1.11	0.62	0.71	0.338	0.34	567
E885688		0.059	0.082	5.16	4.32	5.59	<0.001	<0.002	276	<0.001	1.26	0.56	0.59	0.405	0.19	279
E885689		0.088	0.156	10.65	4.53	10.55	<0.001	<0.002	323	<0.001	1.73	1.13	0.80	0.482	0.41	484
E885689C		0.565	0.058	134.5	0.258	7.77	<0.001	0.003	19.55	<0.001	0.45	0.19	10.70	0.398	0.80	1040
E885690		0.069	0.122	8.45	4.19	11.70	0.001	0.002	244	<0.001	1.92	1.23	0.68	0.291	0.48	312
E885691		0.073	0.137	44.2	5.00	13.25	<0.001	<0.002	840	<0.001	1.78	1.25	0.71	0.377	0.54	446
E885692		0.069	0.134	48.7	>5.0	12.15	<0.001	<0.002	700	<0.001	1.37	1.08	0.76	0.665	0.45	300
E885693		0.122	0.108	8.39	3.90	10.15	<0.001	<0.002	403	<0.001	1.80	1.69	0.61	0.494	0.32	466
E885694		0.097	0.165	13.35	4.63	11.80	<0.001	<0.002	421	<0.001	1.71	2.32	0.67	0.444	0.44	297
E885695		0.119	0.150	24.3	4.91	13.55	<0.001	0.002	680	<0.001	1.31	1.49	0.81	0.372	0.82	483
E885696		0.062	0.125	44.4	>5.0	9.20	<0.001	0.002	940	0.002	1.79	1.10	0.73	0.684	0.39	372
E885697		0.073	0.178	66.3	4.92	13.85	<0.001	<0.002	1120	<0.001	1.74	1.33	0.80	0.605	0.46	651
E885698		0.084	0.156	39.2	4.53	10.05	<0.001	<0.002	660	<0.001	1.23	1.96	0.72	0.846	0.41	502
E885699		0.052	0.131	31.9	>5.0	6.99	<0.001	<0.002	1470	<0.001	1.21	0.85	0.63	0.516	0.33	571
E885700		0.050	0.120	24.1	4.39	10.15	<0.001	<0.002	1210	<0.001	0.99	0.87	0.62	0.388	0.35	540
E885704		0.129	0.127	10.95	>5.0	7.17	0.001	0.002	421	<0.001	1.97	1.56	0.58	0.447	0.80	394
E885705		0.058	0.107	23.5	3.65	7.39	<0.001	0.003	437	<0.001	1.72	0.80	0.55	0.510	0.36	386
E885706		0.074	0.148	87.5	3.97	12.90	0.001	0.002	500	<0.001	1.36	0.98	0.75	0.833	0.49	508
E885707		0.105	0.120	14.40	>5.0	9.51	<0.001	<0.002	377	<0.001	1.71	1.78	0.58	0.400	0.64	251
E885708		0.083	0.156	10.70	4.02	10.00	0.002	0.003	530	<0.001	1.52	1.05	0.71	0.426	0.42	191.5
E885709		0.098	0.157	13.60	4.47	11.90	0.001	<0.002	460	<0.001	1.87	1.60	0.74	0.615	0.41	284
E885710		0.116	0.105	10.00	4.87	8.86	0.001	0.003	600	<0.001	1.95	1.49	0.62	0.447	0.36	330
E885711		0.118	0.183	14.45	4.82	14.10	<0.001	<0.002	470	<0.001	2.08	1.50	0.82	0.709	0.52	417
E885712		0.075	0.086	6.12	2.71	7.25	<0.001	0.004	385	<0.001	1.36	1.01	0.52	0.418	0.33	340
E885712C		0.582	0.062	139.5	0.255	8.37	0.002	0.003	19.80	<0.001	0.48	0.23	11.20	0.495	0.79	1120
E885713		0.115	0.158	11.95	4.12	14.05	<0.001	0.002	355	<0.001	1.66	2.49	0.65	0.656	0.49	373
E885714		0.115	0.117	17.15	4.86	9.62	<0.001	<0.002	900	<0.001	1.53	2.06	0.60	0.454	0.42	381
E885715		0.047	0.113	4.92	3.61	9.23	<0.001	<0.002	377	<0.001	1.52	0.92	0.58	0.286	0.37	526
E885716		0.081	0.172	9.10	4.57	13.80	<0.001	0.002	385	<0.001	1.53	1.33	0.72	0.572	0.43	395

Comments: **Corrected certificate for VEG- ASH01 on samples E885718 to E885729**

***** See Appendix Page for comments regarding this certificate *****



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To: **GOLDCORP INC - MUSSELWHITE**
MUSSELWHITE MINE
PO BOX 7500
THUNDER BAY ON P7B 6S8

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Project: Vegetation sampling

CERTIFICATE OF ANALYSIS VA18200592

Sample Description	Method Analyte Units LOD	ME-VEG41a	ME-VEG41a	ME-VEG41a	ME-VEG41a	ME-VEG41a	ME-VEG41a	ME-VEG41a	ME-VEG41a	ME-VEG41a	ME-VEG41a	
		Ta	Te	Th	Ti	Tl	U	V	W	Y	Zn	Zr
		ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm
		0.001	0.02	0.002	0.001	0.002	0.005	0.05	0.01	0.003	0.1	0.02
E885676		<0.001	<0.02	0.370	0.006	0.038	0.148	6.66	0.36	1.635	1220	0.43
E885677		<0.001	<0.02	0.251	0.005	0.012	0.108	4.77	0.41	1.100	882	0.50
E885678		<0.001	<0.02	0.394	0.007	0.039	0.171	7.12	0.39	1.935	1235	0.48
E885679		<0.001	<0.02	0.273	0.005	0.043	0.119	6.01	0.36	1.520	1470	0.62
E885680		<0.001	<0.02	0.189	0.004	0.007	0.073	3.72	0.22	0.726	1465	0.90
E885681		<0.001	<0.02	0.311	0.006	0.027	0.122	6.05	0.42	1.465	1005	0.43
E885682		<0.001	<0.02	0.192	0.005	0.016	0.085	4.51	0.45	0.968	1025	0.60
E885683		<0.001	<0.02	0.277	0.006	0.031	0.135	5.81	0.37	1.655	1315	0.58
E885684		<0.001	<0.02	0.181	0.003	0.007	0.061	2.63	0.14	0.708	2070	0.83
E885685		<0.001	<0.02	0.312	0.005	0.030	0.119	5.32	0.22	1.240	2080	0.56
E885686		<0.001	<0.02	0.344	0.007	0.125	0.145	6.64	0.24	1.520	1630	0.23
E885687		<0.001	<0.02	0.290	0.004	0.026	0.108	4.48	0.18	1.085	1425	0.52
E885688		<0.001	<0.02	0.178	0.004	0.011	0.074	3.18	0.13	0.799	1235	0.62
E885689		<0.001	0.06	0.288	0.005	0.052	0.122	5.21	0.30	1.475	830	0.64
E885689C		<0.001	<0.02	3.82	0.024	0.134	0.623	57.4	0.12	11.20	195.0	8.86
E885690		<0.001	<0.02	0.236	0.004	0.300	0.109	4.45	0.34	1.470	1365	0.81
E885691		<0.001	<0.02	0.294	0.005	0.146	0.123	4.85	0.32	1.280	1220	0.60
E885692		<0.001	<0.02	0.283	0.005	0.123	0.118	5.01	0.30	1.180	1045	0.32
E885693		<0.001	<0.02	0.215	0.004	0.189	0.102	4.48	0.22	1.070	1675	1.27
E885694		<0.001	<0.02	0.252	0.005	0.181	0.111	5.22	0.43	1.430	1690	0.44
E885695		<0.001	<0.02	0.304	0.006	0.165	0.145	5.74	0.31	1.395	1005	0.29
E885696		<0.001	<0.02	0.272	0.005	0.076	0.113	5.01	0.21	1.345	1265	0.61
E885697		<0.001	0.07	0.305	0.006	0.230	0.149	6.42	0.24	1.490	721	0.53
E885698		<0.001	<0.02	0.286	0.005	0.528	0.125	5.26	0.23	1.300	1325	0.30
E885699		<0.001	<0.02	0.258	0.005	0.190	0.098	4.14	0.21	0.987	1185	0.26
E885700		<0.001	<0.02	0.269	0.005	0.567	0.115	4.56	0.16	1.140	1075	0.54
E885704		<0.001	<0.02	0.239	0.005	0.057	0.098	4.36	0.88	0.941	1690	0.38
E885705		<0.001	<0.02	0.202	0.004	0.063	0.098	3.75	0.47	0.975	2550	1.28
E885706		<0.001	0.08	0.288	0.005	0.370	0.128	5.82	0.52	1.575	1280	0.71
E885707		<0.001	<0.02	0.287	0.004	0.258	0.099	4.30	0.39	1.175	1805	0.60
E885708		<0.001	<0.02	0.323	0.005	0.209	0.122	5.24	0.36	1.335	1245	0.90
E885709		<0.001	0.09	0.299	0.005	0.720	0.147	5.78	0.29	1.525	1705	1.17
E885710		<0.001	<0.02	0.226	0.004	0.674	0.097	3.64	0.27	1.140	1335	0.80
E885711		<0.001	<0.02	0.399	0.006	0.837	0.175	6.62	0.39	1.995	1205	1.09
E885712		<0.001	<0.02	0.197	0.003	0.101	0.085	3.32	0.25	0.877	1725	1.61
E885712C		<0.001	<0.02	3.93	0.024	0.134	0.626	57.6	0.10	11.35	208	10.15
E885713		<0.001	<0.02	0.334	0.005	0.385	0.160	5.52	0.27	1.695	1790	2.15
E885714		<0.001	0.09	0.270	0.004	0.282	0.116	4.71	0.34	1.210	1130	0.64
E885715		<0.001	<0.02	0.261	0.004	0.113	0.101	4.30	0.46	1.105	1140	1.21
E885716		<0.001	<0.02	0.360	0.006	0.198	0.123	5.52	0.22	1.560	1555	1.57

Comments: **Corrected certificate for VEG- ASH01 on samples E885718 to E885729**

***** See Appendix Page for comments regarding this certificate *****



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To: **GOLDCORP INC - MUSSELWHITE**
MUSSELWHITE MINE
PO BOX 7500
THUNDER BAY ON P7B 6S8

Page: 3 - A
 Total # Pages: 4 (A - D)
 Plus Appendix Pages
 Finalized Date: 24- SEP- 2018
 Account: OPB

Project: Vegetation sampling

CERTIFICATE OF ANALYSIS VA18200592

Sample Description	Method Analyte Units LOD	VEG- ASH01	VEG- ASH01	WEI- 21	ME- VEG41a	ME- VEG41a	ME- VEG41a	ME- VEG41a	ME- VEG41a	ME- VEG41a	ME- VEG41a	ME- VEG41a	ME- VEG41a	ME- VEG41a	ME- VEG41a	ME- VEG41a
		WT. SAMP g 0.01	WT. ASH g 0.01	Recvd Wt. kg 0.02	Au ppm 0.0002	Ag ppm 0.001	Al % 0.01	As ppm 0.01	B ppm 1	Ba ppm 0.1	Be ppm 0.01	Bi ppm 0.001	Ca % 0.01	Cd ppm 0.001	Ce ppm 0.003	Co ppm 0.002
E885717		31.0	0.34		0.0052	0.089	0.20	1.77	639	229	0.07	0.062	15.10	1.615	3.02	6.68
E885718		19.80	0.18		0.0072	0.174	0.26	2.36	573	263	0.07	0.078	14.65	1.620	3.42	6.75
E885719		23.6	0.26		0.0048	0.200	0.39	1.68	613	282	0.07	0.091	17.55	1.145	4.43	1.305
E885720		24.1	0.17		0.0041	0.138	0.26	1.84	612	344	0.05	0.072	18.30	0.904	3.59	1.195
E885721		23.4	0.19		0.0075	0.130	0.31	1.80	646	287	0.07	0.092	20.3	0.752	4.70	1.885
E885722		31.9	0.31		0.0072	0.081	0.33	2.12	638	359	0.06	0.088	19.00	0.642	3.97	1.155
E885723		24.7	0.23		0.0517	0.286	0.51	2.29	613	422	0.08	0.132	17.80	1.200	4.88	1.360
E885724		32.0	0.38		0.0075	0.151	0.31	2.01	592	432	0.09	0.085	20.7	0.834	4.38	1.965
E885725		29.5	0.37		0.0033	0.231	0.22	1.56	563	380	0.09	0.083	19.95	1.145	4.08	1.205
E885726		31.6	0.38		0.0078	0.146	0.20	1.70	622	330	0.07	0.067	17.75	1.090	2.76	3.12
E885727		30.2	0.28		0.0050	0.158	0.30	2.11	611	456	0.09	0.101	18.00	0.794	4.94	1.165
E885728		20.9	0.26		0.0066	0.119	0.18	0.90	452	424	0.03	0.049	16.50	0.594	1.860	1.075
E885729		25.7	0.34		0.0041	0.136	0.21	2.91	516	292	0.06	0.069	16.10	1.280	2.71	4.87
E885730		28.2	0.36		0.0071	0.263	0.29	1.80	600	276	0.10	0.078	18.65	1.525	3.70	4.23
E885731		32.9	0.41		0.0037	0.133	0.29	1.90	675	352	0.06	0.085	21.6	1.115	3.93	1.255
E885731C					0.0047	0.037	2.86	3.63	350	105.0	0.57	0.095	17.10	0.252	28.6	16.60
E885732		32.8	0.40		0.0040	0.106	0.20	1.47	707	449	0.06	0.073	19.35	0.656	3.47	1.180
E885733		34.0	0.56		0.0027	0.118	0.14	1.63	587	345	0.04	0.050	16.95	0.616	1.975	0.794
E885734		34.8	0.43		0.0046	0.148	0.26	1.67	624	359	0.08	0.087	18.00	0.687	4.06	1.460
E885735		24.9	0.39		0.0034	0.065	0.22	1.29	547	500	0.06	0.062	18.80	0.446	2.99	0.913
E885736		33.3	0.40		0.0040	0.092	0.26	1.85	582	488	0.08	0.082	19.00	0.530	3.72	1.065
E885737		31.5	0.52		0.0140	0.096	0.26	1.48	607	467	0.06	0.098	19.60	0.531	3.63	1.235
E885738		37.6	0.55		0.0025	0.077	0.29	1.60	619	365	0.05	0.081	20.4	0.526	3.43	1.880
E885739		23.7	0.38		0.0076	0.106	0.23	1.51	518	403	0.08	0.090	20.5	0.466	3.30	1.640
E885740		34.6	0.33		0.0043	0.150	0.36	2.25	735	257	0.11	0.112	20.2	1.170	4.85	24.9
E885741		38.3	0.35		0.0085	0.144	0.30	2.35	769	273	0.11	0.119	19.80	2.08	5.45	4.17
E885742		27.7	0.36		0.0039	0.107	0.16	1.92	577	433	0.05	0.080	18.95	0.503	2.71	1.105
E885743		43.0	0.54		0.0022	0.081	0.15	1.62	578	322	0.05	0.072	22.5	2.02	2.93	1.750
E885744		30.6	0.36		0.0035	0.110	0.20	3.89	678	295	0.08	0.252	20.2	1.020	4.06	3.23
E885745		34.8	0.44		0.0023	0.101	0.20	1.37	632	350	0.07	0.084	22.4	0.841	3.40	1.510
E885746				Listed, NR												
E885747				Listed, NR												
E885748		54.9	0.85		0.0083	0.266	0.20	1.16	528	512	0.04	0.061	18.75	0.575	3.34	2.14
E885749		43.9	0.50		0.0189	0.188	0.24	2.09	604	304	0.07	0.077	21.0	0.652	3.98	4.47
E885750		35.3	0.47		0.0075	0.291	0.20	3.33	579	339	0.08	0.087	24.9	2.99	4.01	5.34
E885750C					0.0049	0.042	2.96	4.70	351	103.0	0.52	0.111	17.45	0.241	29.0	17.75
E885801		38.9	0.52		0.0087	0.137	0.23	1.76	507	580	0.03	0.066	18.00	0.672	2.55	1.660
E885802		44.3	0.42		0.0038	0.108	0.31	1.71	636	502	0.04	0.096	17.20	0.876	2.86	2.90
E885803		47.0	0.51		0.0080	0.104	0.27	1.68	530	323	0.07	0.077	17.55	1.015	5.82	5.21
E885804		44.7	0.45		0.0044	0.188	0.34	1.83	690	344	0.09	0.086	20.8	0.859	4.05	6.41

Comments: **Corrected certificate for VEG- ASH01 on samples E885718 to E885729**

***** See Appendix Page for comments regarding this certificate *****



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To: **GOLDCORP INC - MUSSELWHITE**
MUSSELWHITE MINE
PO BOX 7500
THUNDER BAY ON P7B 6S8

Page: 3 - B
 Total # Pages: 4 (A - D)
 Plus Appendix Pages
 Finalized Date: 24- SEP- 2018
 Account: OPB

Project: Vegetation sampling

CERTIFICATE OF ANALYSIS VA18200592

Sample Description	Method Analyte Units LOD	ME-VEG41a	ME-VEG41a	ME-VEG41a	ME-VEG41a	ME-VEG41a	ME-VEG41a	ME-VEG41a	ME-VEG41a	ME-VEG41a	ME-VEG41a	ME-VEG41a	ME-VEG41a	ME-VEG41a	ME-VEG41a	ME-VEG41a
		Cr	Cs	Cu	Fe	Ga	Ge	Hf	Hg	In	K	La	Li	Mg	Mn	Mo
		ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm
E885717		3.01	1.880	304	2900	0.438	0.008	0.033	0.001	0.005	>10.0	1.315	1.5	3.46	27100	11.65
E885718		3.59	11.60	332	2800	0.554	0.010	0.021	0.001	0.022	>10.0	1.680	2.5	4.00	48600	2.78
E885719		3.40	5.17	317	3000	0.666	0.015	0.012	0.001	<0.005	>10.0	2.25	1.8	4.31	>50000	0.74
E885720		2.84	9.89	264	2400	0.524	0.011	0.029	0.002	0.006	>10.0	1.870	2.1	3.78	>50000	0.73
E885721		3.29	9.72	237	3300	0.658	0.012	0.022	0.003	0.010	>10.0	2.35	1.6	4.03	>50000	0.64
E885722		2.97	7.32	206	2800	0.540	0.009	0.017	0.001	0.016	>10.0	2.08	1.4	4.47	>50000	0.72
E885723		4.86	5.07	318	3500	0.741	0.010	0.018	0.001	0.011	>10.0	2.56	3.7	3.87	>50000	1.18
E885724		3.23	5.52	361	3100	0.579	0.009	0.021	0.002	0.014	>10.0	2.33	1.8	3.64	41800	1.02
E885725		2.88	1.935	235	2700	0.520	0.008	0.031	0.002	0.027	>10.0	2.11	1.8	3.52	>50000	3.94
E885726		2.79	4.26	309	2300	0.425	0.005	0.014	0.002	0.017	>10.0	1.420	1.3	3.67	46100	1.29
E885727		3.57	2.77	297	3300	0.686	0.012	0.012	0.001	0.010	>10.0	2.52	2.0	3.90	>50000	1.12
E885728		1.97	5.06	234	1600	0.321	0.008	0.029	0.003	0.009	>10.0	1.000	1.0	3.25	>50000	3.10
E885729		2.49	4.33	274	2300	0.353	0.011	0.011	0.001	<0.005	>10.0	1.380	1.5	3.92	26100	5.49
E885730		3.29	5.32	318	3300	0.557	0.011	0.019	0.001	<0.005	>10.0	1.840	1.7	3.14	31200	11.20
E885731		3.50	1.515	276	3100	0.616	0.008	0.016	0.003	0.007	>10.0	2.07	1.5	3.69	25700	1.30
E885731C		150.5	1.145	73.6	23500	6.34	0.053	0.300	0.001	0.033	1.21	14.05	12.1	1.880	1100	0.88
E885732		2.85	1.475	224	2700	0.506	0.011	0.016	0.002	<0.005	>10.0	1.870	1.3	3.82	42300	2.02
E885733		1.90	4.26	261	1900	0.324	<0.005	0.022	<0.001	0.007	>10.0	1.050	0.9	3.88	>50000	4.70
E885734		3.33	5.56	251	3000	0.611	0.008	0.015	0.002	0.007	>10.0	2.10	1.8	4.13	>50000	3.83
E885735		2.57	6.88	246	2300	0.460	0.006	0.028	0.001	0.013	>10.0	1.650	1.4	3.40	>50000	0.64
E885736		2.61	6.86	233	2500	0.491	0.009	0.015	0.001	0.015	>10.0	2.03	1.9	3.40	>50000	0.65
E885737		3.36	7.18	206	2700	0.575	0.009	0.015	<0.001	0.017	>10.0	1.835	1.2	4.03	46500	0.85
E885738		4.17	7.80	263	2900	0.549	0.007	0.018	0.001	0.013	>10.0	1.710	1.2	4.20	47100	0.72
E885739		3.04	10.50	328	2400	0.491	0.011	0.014	0.002	0.007	>10.0	1.730	1.3	3.93	43400	1.42
E885740		4.62	2.66	439	4300	0.724	0.010	0.013	0.005	<0.005	>10.0	2.24	1.9	3.52	31300	5.44
E885741		5.07	3.81	358	3800	0.779	0.014	0.007	<0.001	0.005	>10.0	2.50	2.4	3.56	25200	40.5
E885742		3.30	1.215	254	2200	0.365	<0.005	0.007	<0.001	<0.005	>10.0	1.340	1.0	3.48	16450	13.05
E885743		3.30	3.14	269	2100	0.364	0.006	0.022	<0.001	0.013	>10.0	1.450	2.5	3.60	28900	10.35
E885744		4.07	3.05	250	3000	0.533	0.014	0.015	0.001	<0.005	>10.0	1.930	2.5	3.90	23700	18.00
E885745		3.44	3.10	274	2500	0.472	<0.005	0.005	0.002	0.011	>10.0	1.625	1.3	3.45	37300	2.35
E885746																
E885747																
E885748		3.82	1.425	259	3100	0.460	0.008	0.008	0.003	0.005	>10.0	1.855	1.5	3.81	35800	4.00
E885749		3.64	0.610	385	3600	0.421	0.008	0.015	0.002	0.015	>10.0	2.19	1.5	3.73	31200	6.28
E885750		4.70	3.07	209	2600	0.515	0.007	0.008	0.001	<0.005	>10.0	2.11	3.7	3.35	9600	13.70
E885750C		169.5	1.220	76.0	26000	6.69	0.063	0.281	0.002	0.040	1.23	14.00	11.5	1.940	1070	0.92
E885801		2.40	5.69	255	1900	0.348	0.006	0.021	0.001	0.006	>10.0	1.405	1.4	3.87	>50000	0.87
E885802		2.53	5.86	256	2800	0.422	0.008	0.008	<0.001	0.012	>10.0	1.445	0.9	4.61	>50000	2.56
E885803		2.46	5.56	252	2100	0.417	0.005	0.006	<0.001	0.005	>10.0	4.05	1.1	4.14	39800	1.20
E885804		3.17	4.28	316	2900	0.525	0.008	0.015	0.002	0.008	>10.0	2.12	1.4	4.70	40100	5.13

Comments: **Corrected certificate for VEG- ASH01 on samples E885718 to E885729**

***** See Appendix Page for comments regarding this certificate *****



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To: **GOLDCORP INC - MUSSELWHITE**
MUSSELWHITE MINE
PO BOX 7500
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Page: 3 - C
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Project: Vegetation sampling

CERTIFICATE OF ANALYSIS VA18200592

Sample Description	Method Analyte Units LOD	ME- VEG41a	ME- VEG41a	ME- VEG41a	ME- VEG41a	ME- VEG41a	ME- VEG41a	ME- VEG41a	ME- VEG41a	ME- VEG41a	ME- VEG41a	ME- VEG41a	ME- VEG41a	ME- VEG41a	ME- VEG41a	ME- VEG41a
		Na %	Nb ppm	Ni ppm	P %	Pb ppm	Pd ppm	Pt ppm	Rb ppm	Re ppm	S %	Sb ppm	Sc ppm	Se ppm	Sn ppm	Sr ppm
E885717		0.056	0.151	40.1	>5.0	9.98	0.002	<0.002	860	<0.001	2.57	0.89	0.61	0.521	0.35	453
E885718		0.080	0.167	35.6	>5.0	12.15	<0.001	0.003	1250	<0.001	2.73	1.24	0.79	1.270	0.42	426
E885719		0.066	0.131	16.20	4.10	16.20	0.001	0.002	480	<0.001	1.85	0.91	0.86	1.010	0.34	255
E885720		0.070	0.113	12.75	3.48	13.00	<0.001	0.002	431	<0.001	1.60	0.96	0.71	1.000	0.32	293
E885721		0.072	0.145	11.50	3.34	18.35	<0.001	0.002	393	<0.001	1.81	0.77	0.84	1.145	0.41	282
E885722		0.073	0.119	16.25	3.54	11.15	0.001	<0.002	500	<0.001	1.48	0.72	0.73	0.777	0.34	363
E885723		0.074	0.160	20.9	3.98	17.30	<0.001	0.002	322	0.001	1.42	1.56	0.97	1.025	0.46	243
E885724		0.064	0.139	17.90	3.81	15.10	<0.001	0.002	411	0.001	1.35	1.01	0.80	0.762	0.36	294
E885725		0.080	0.142	8.95	3.48	14.35	<0.001	<0.002	315	<0.001	1.57	0.95	0.76	0.904	0.32	604
E885726		0.064	0.116	22.1	4.95	9.97	<0.001	<0.002	470	<0.001	1.59	0.61	0.60	0.768	0.29	329
E885727		0.067	0.161	14.15	3.58	16.35	0.001	0.002	300	<0.001	1.19	0.85	0.87	0.967	0.52	320
E885728		0.050	0.085	15.45	4.07	7.19	<0.001	<0.002	700	<0.001	1.35	0.47	0.46	0.771	0.27	364
E885729		0.129	0.110	58.8	>5.0	12.55	<0.001	0.002	690	<0.001	1.92	1.61	0.59	1.050	0.30	455
E885730		0.076	0.149	25.1	4.43	10.30	0.001	<0.002	850	<0.001	1.97	0.75	0.85	0.952	0.39	441
E885731		0.075	0.164	8.05	3.77	13.10	<0.001	<0.002	220	<0.001	1.41	0.97	0.87	0.574	0.43	327
E885731C		0.559	0.055	132.0	0.246	8.02	<0.001	0.003	17.55	0.001	0.47	0.21	9.56	0.471	0.78	1070
E885732		0.071	0.134	5.89	3.74	12.80	<0.001	<0.002	206	<0.001	1.13	1.02	0.72	0.523	0.38	575
E885733		0.081	0.113	4.81	4.42	10.10	<0.001	<0.002	450	<0.001	1.48	1.02	0.55	0.583	0.25	258
E885734		0.067	0.146	9.88	3.95	14.25	<0.001	0.002	440	<0.001	1.50	0.71	0.80	0.654	0.36	266
E885735		0.055	0.111	7.99	3.49	11.00	<0.001	<0.002	540	<0.001	1.18	0.68	0.64	0.450	0.28	245
E885736		0.066	0.119	7.72	3.43	12.05	<0.001	<0.002	460	<0.001	1.07	1.09	0.70	0.396	0.30	284
E885737		0.058	0.154	12.80	3.84	13.30	0.002	<0.002	480	0.002	1.16	0.82	0.88	0.404	0.37	265
E885738		0.068	0.130	15.00	4.11	11.95	<0.001	<0.002	690	<0.001	1.42	0.75	0.81	0.555	0.32	290
E885739		0.065	0.147	41.0	4.22	9.06	0.001	<0.002	740	0.001	1.32	1.09	0.76	0.850	0.34	420
E885740		0.077	0.191	116.0	>5.0	13.00	0.001	<0.002	810	0.001	2.23	0.96	1.03	0.718	0.50	617
E885741		0.070	0.213	12.40	>5.0	16.50	0.001	<0.002	520	<0.001	1.76	0.84	1.06	0.702	0.59	446
E885742		0.061	0.150	7.80	>5.0	12.50	0.002	<0.002	395	<0.001	1.18	0.64	0.65	0.705	0.31	224
E885743		0.066	0.120	7.11	3.93	9.92	0.002	<0.002	376	<0.001	1.52	0.56	0.65	0.455	0.28	534
E885744		0.074	0.156	5.32	4.28	10.85	0.003	<0.002	430	0.001	1.78	1.39	0.94	0.595	0.43	457
E885745		0.063	0.133	14.20	4.71	9.55	<0.001	0.002	403	<0.001	1.34	0.56	0.74	0.456	0.33	582
E885746																
E885747																
E885748		0.059	0.135	39.1	4.66	7.42	<0.001	0.002	550	<0.001	1.07	0.59	0.83	0.386	0.34	601
E885749		0.077	0.125	182.5	>5.0	8.34	0.004	0.003	376	<0.001	1.67	1.00	0.73	0.537	0.32	597
E885750		0.105	0.144	8.02	4.56	11.95	0.001	<0.002	490	<0.001	1.45	1.15	0.90	0.433	0.48	424
E885750C		0.571	0.060	138.5	0.243	8.21	0.002	0.004	19.55	0.001	0.44	0.23	10.90	0.462	0.80	1010
E885801		0.051	0.097	18.65	4.78	11.80	0.001	<0.002	1470	<0.001	0.95	0.54	0.51	0.360	0.43	681
E885802		0.077	0.136	40.5	>5.0	14.55	0.002	<0.002	1040	0.001	1.05	1.03	0.63	0.317	0.38	927
E885803		0.064	0.129	34.5	>5.0	8.87	<0.001	<0.002	1060	<0.001	1.48	0.75	0.65	0.417	0.30	1015
E885804		0.068	0.147	73.8	4.10	14.55	0.002	<0.002	790	0.005	1.44	1.04	0.77	0.480	0.36	1015

Comments: **Corrected certificate for VEG- ASH01 on samples E885718 to E885729**

***** See Appendix Page for comments regarding this certificate *****



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To: **GOLDCORP INC - MUSSELWHITE**
MUSSELWHITE MINE
PO BOX 7500
THUNDER BAY ON P7B 6S8

Page: 3 - D
 Total # Pages: 4 (A - D)
 Plus Appendix Pages
 Finalized Date: 24- SEP- 2018
 Account: OPB

Project: Vegetation sampling

CERTIFICATE OF ANALYSIS VA18200592

Sample Description	Method Analyte Units LOD	ME-VEG41a	ME-VEG41a	ME-VEG41a	ME-VEG41a	ME-VEG41a	ME-VEG41a	ME-VEG41a	ME-VEG41a	ME-VEG41a	ME-VEG41a	
		Ta	Te	Th	TI	TI	U	V	W	Y	Zn	Zr
		ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm
E885717		<0.001	<0.02	0.199	0.004	0.945	0.121	4.81	0.37	1.320	1410	1.44
E885718		<0.001	<0.02	0.253	0.006	0.014	0.144	5.89	0.27	1.335	1340	0.77
E885719		<0.001	<0.02	0.355	0.006	0.016	0.128	6.13	0.20	1.645	1205	0.61
E885720		<0.001	<0.02	0.298	0.005	0.009	0.110	4.58	0.23	1.380	1350	1.14
E885721		<0.001	<0.02	0.376	0.006	0.018	0.137	6.22	0.29	1.795	1245	0.60
E885722		<0.001	0.10	0.322	0.005	0.032	0.123	5.02	0.22	1.565	1495	0.70
E885723		<0.001	0.11	0.400	0.007	0.026	0.154	6.71	0.28	2.73	1250	0.58
E885724		<0.001	<0.02	0.330	0.006	0.032	0.125	5.62	0.20	1.690	1295	0.69
E885725		<0.001	<0.02	0.286	0.005	0.016	0.132	5.09	0.17	1.460	1290	1.48
E885726		<0.001	<0.02	0.241	0.004	0.045	0.096	4.04	0.16	1.025	1280	0.53
E885727		<0.001	<0.02	0.373	0.007	0.043	0.141	6.32	0.26	1.690	1285	0.38
E885728		<0.001	<0.02	0.159	0.003	0.028	0.064	2.84	0.51	1.075	1300	0.88
E885729		<0.001	<0.02	0.210	0.004	0.076	0.108	5.34	0.45	3.29	1050	0.55
E885730		<0.001	<0.02	0.261	0.006	0.013	0.142	6.22	0.42	1.790	1285	0.48
E885731		<0.001	<0.02	0.341	0.006	0.015	0.133	6.14	0.26	1.690	2050	0.52
E885731C		<0.001	0.09	3.79	0.022	0.136	0.603	49.8	0.09	10.60	195.5	9.34
E885732		<0.001	<0.02	0.305	0.006	0.041	0.115	4.83	0.32	1.350	1840	0.52
E885733		<0.001	<0.02	0.180	0.004	0.013	0.073	2.84	0.21	0.765	1200	0.71
E885734		<0.001	<0.02	0.365	0.006	0.045	0.140	5.43	0.36	1.595	1235	0.61
E885735		<0.001	<0.02	0.262	0.005	0.035	0.094	3.89	0.24	1.050	851	0.79
E885736		<0.001	<0.02	0.307	0.005	0.032	0.110	4.57	0.26	1.460	1065	0.62
E885737		<0.001	<0.02	0.321	0.006	0.044	0.113	5.77	0.26	1.365	973	0.52
E885738		<0.001	<0.02	0.275	0.005	0.025	0.108	5.64	0.24	1.280	1095	0.56
E885739		<0.001	<0.02	0.287	0.005	0.022	0.106	5.45	0.18	1.335	1200	0.65
E885740		<0.001	<0.02	0.318	0.007	0.060	0.168	7.99	0.29	2.28	436	0.41
E885741		<0.001	<0.02	0.420	0.008	0.025	0.198	9.22	0.35	2.53	887	0.29
E885742		<0.001	<0.02	0.225	0.004	0.014	0.098	4.35	0.29	1.150	1325	0.32
E885743		<0.001	<0.02	0.239	0.004	0.024	0.108	4.21	0.24	1.445	2080	0.77
E885744		<0.001	<0.02	0.329	0.005	0.023	0.149	6.65	0.35	2.09	1425	0.41
E885745		<0.001	<0.02	0.253	0.005	0.047	0.108	5.33	0.19	1.615	1380	0.24
E885746												
E885747												
E885748		<0.001	<0.02	0.252	0.005	0.019	0.107	5.04	0.61	1.155	1635	0.37
E885749		<0.001	<0.02	0.263	0.005	0.027	0.108	4.47	0.70	1.260	872	0.53
E885750		<0.001	<0.02	0.384	0.005	0.061	0.149	6.71	0.63	1.635	1350	0.53
E885750C		<0.001	<0.02	3.95	0.024	0.143	0.624	60.9	0.11	11.15	192.5	9.61
E885801		<0.001	<0.02	0.196	0.003	0.254	0.081	3.65	0.14	0.815	1165	0.69
E885802		<0.001	<0.02	0.207	0.004	0.709	0.106	4.69	0.19	1.095	1230	0.26
E885803		<0.001	<0.02	0.212	0.004	0.091	0.109	4.73	0.16	1.765	1035	0.25
E885804		<0.001	<0.02	0.258	0.005	0.302	0.128	5.51	0.40	1.600	855	0.50

Comments: **Corrected certificate for VEG-ASH01 on samples E885718 to E885729**

***** See Appendix Page for comments regarding this certificate *****



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To: **GOLDCORP INC - MUSSELWHITE**
MUSSELWHITE MINE
PO BOX 7500
THUNDER BAY ON P7B 6S8

Page: 4 - A
 Total # Pages: 4 (A - D)
 Plus Appendix Pages
 Finalized Date: 24- SEP- 2018
 Account: OPB

Project: Vegetation sampling

CERTIFICATE OF ANALYSIS VA18200592

Sample Description	Method Analyte Units LOD	VEG- ASH01	VEG- ASH01	WEI- 21	ME- VEG41a	ME- VEG41a	ME- VEG41a	ME- VEG41a	ME- VEG41a	ME- VEG41a	ME- VEG41a	ME- VEG41a	ME- VEG41a	ME- VEG41a	ME- VEG41a	ME- VEG41a
		WT. SAMP g 0.01	WT. ASH g 0.01	Recvd Wt. kg 0.02	Au ppm 0.0002	Ag ppm 0.001	Al % 0.01	As ppm 0.01	B ppm 1	Ba ppm 0.1	Be ppm 0.01	Bi ppm 0.001	Ca % 0.01	Cd ppm 0.001	Ce ppm 0.003	Co ppm 0.002
E885805		31.4	0.45		0.0017	0.154	0.17	1.50	459	456	0.03	0.049	18.80	1.175	1.815	1.970
E885806		30.0	0.35		0.0043	0.135	0.27	2.09	529	640	0.07	0.081	16.75	0.880	3.58	1.655
E885807		32.3	0.34		0.0031	0.228	0.29	2.56	496	429	0.10	0.093	17.20	0.867	4.00	2.79
E885808		31.3	0.32		0.0051	0.251	0.41	2.69	624	284	0.13	0.120	18.15	2.52	4.19	8.48
E885809		30.1	0.32		0.0030	0.115	0.31	2.05	641	368	0.11	0.116	19.45	0.858	4.82	5.77
E885810		42.7	0.40		0.0038	0.287	0.31	1.08	653	331	0.08	0.120	16.95	1.120	4.86	3.10
E885811		20.1	0.29		0.0102	0.147	0.20	1.71	549	339	0.09	0.090	20.4	5.31	3.70	5.44
E885812		35.4	0.37		0.0032	0.189	0.22	1.71	698	374	0.07	0.088	21.5	4.09	3.80	3.34
E885813		34.0	0.42		0.0017	0.117	0.30	1.33	542	372	0.08	0.096	19.10	1.200	3.57	6.43
E885814		27.9	0.32		0.0073	0.084	0.24	1.97	499	414	0.06	0.091	19.05	0.448	3.35	4.11
E885815		29.1	0.34		0.0088	0.171	0.27	2.69	556	445	0.11	0.111	19.20	0.578	4.76	2.26
E885816		30.5	0.32		0.0086	0.214	0.33	2.56	598	427	0.11	0.129	20.3	0.602	5.27	2.03
E885817		33.2	0.36		0.0093	0.182	0.24	1.99	614	346	0.07	0.082	18.50	0.425	3.41	2.40
E885818		35.7	0.42		0.0060	0.179	0.19	2.01	576	403	0.07	0.078	20.9	0.440	3.15	2.21
E885819		30.6	0.32		0.0049	0.153	0.30	2.63	642	386	0.07	0.119	19.05	1.365	4.25	8.17
E885819C					0.0068	0.041	2.95	4.19	354	104.5	0.49	0.123	18.10	0.239	29.9	17.05
E885820		32.0	0.37		0.0047	0.146	0.26	2.18	547	493	0.07	0.105	23.7	0.599	4.30	3.38
E885821		44.1	0.51		0.0037	0.188	0.20	1.56	656	361	0.06	0.079	20.6	0.362	3.03	2.44
E885822		39.7	0.43		0.0029	0.147	0.22	1.36	656	447	0.06	0.084	18.50	0.519	3.61	2.41
E885823		32.5	0.35		0.0166	0.096	0.25	1.96	534	409	0.06	0.100	15.80	0.602	3.52	4.03
E885824		36.6	0.38		0.0169	0.094	0.20	1.52	513	484	0.09	0.070	19.50	0.692	2.83	3.27
E885825		26.7	0.37		0.0101	0.103	0.18	1.84	467	436	0.10	0.058	22.3	5.41	2.59	24.3
E885826		28.9	0.41		0.0037	0.105	0.20	2.01	506	414	0.05	0.078	20.0	0.724	3.19	22.3
E885827		28.1	0.37		0.0034	0.107	0.22	1.51	568	334	0.07	0.064	15.35	0.468	2.49	4.15
E885828		28.5	0.32		0.0053	0.241	0.24	2.12	505	395	0.08	0.089	18.90	0.755	3.68	5.55
E885829		30.7	0.29		0.0081	0.162	0.29	2.48	575	262	0.08	0.101	16.00	1.065	3.47	4.85
E885830		34.9	0.39		0.0039	0.150	0.40	1.35	632	305	0.13	0.103	18.35	0.786	5.14	18.20
E885831		27.4	0.38		0.0031	0.123	0.28	1.68	476	290	0.05	0.077	16.75	0.608	3.51	2.57
E885832		34.5	0.40		0.0041	0.086	0.21	1.69	520	347	0.09	0.082	21.9	0.580	3.00	3.62
E885832C					0.0056	0.029	2.99	3.95	344	105.0	0.52	0.117	17.70	0.268	30.0	18.35

Comments: **Corrected certificate for VEG- ASH01 on samples E885718 to E885729**

***** See Appendix Page for comments regarding this certificate *****



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To: **GOLDCORP INC - MUSSELWHITE**
MUSSELWHITE MINE
PO BOX 7500
THUNDER BAY ON P7B 6S8

Page: 4 - B
 Total # Pages: 4 (A - D)
 Plus Appendix Pages
 Finalized Date: 24- SEP- 2018
 Account: OPB

Project: Vegetation sampling

CERTIFICATE OF ANALYSIS VA18200592

Sample Description	Method Analyte Units LOD	ME- VEG41a	ME- VEG41a	ME- VEG41a	ME- VEG41a	ME- VEG41a	ME- VEG41a	ME- VEG41a	ME- VEG41a	ME- VEG41a	ME- VEG41a	ME- VEG41a	ME- VEG41a	ME- VEG41a	ME- VEG41a	ME- VEG41a
		Cr	Cs	Cu	Fe	Ga	Ge	Hf	Hg	In	K	La	Li	Mg	Mn	Mo
		ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm
E885805		2.22	2.94	367	1500	0.259	<0.005	0.016	<0.001	<0.005	>10.0	0.963	0.7	3.78	41700	1.17
E885806		3.53	5.85	283	2500	0.499	0.007	0.010	0.002	<0.005	>10.0	1.810	1.4	3.11	>50000	0.88
E885807		3.46	10.05	252	2400	0.420	0.006	0.007	0.003	0.009	>10.0	2.09	1.4	3.72	42100	1.19
E885808		4.82	18.30	308	3300	0.598	0.010	0.008	<0.001	0.006	>10.0	1.955	3.0	3.69	38500	1.39
E885809		4.06	5.61	303	3200	0.556	0.007	0.004	0.005	<0.005	>10.0	2.48	1.9	4.59	22300	2.12
E885810		3.35	5.65	276	3300	0.553	0.009	0.006	0.001	0.013	>10.0	2.31	2.1	3.97	>50000	1.39
E885811		3.28	5.25	267	2500	0.463	0.009	0.005	<0.001	0.007	>10.0	1.860	1.7	4.22	34600	16.65
E885812		3.43	3.36	246	2900	0.500	0.008	0.016	0.002	0.010	>10.0	1.890	1.7	4.21	35700	47.4
E885813		3.48	8.50	320	2900	0.483	0.008	0.010	0.003	<0.005	>10.0	1.805	2.3	4.30	>50000	0.86
E885814		4.04	13.00	239	2600	0.456	0.005	0.011	0.002	<0.005	>10.0	1.670	1.6	3.72	47300	1.59
E885815		4.33	14.65	270	3100	0.592	0.007	0.002	<0.001	0.005	>10.0	2.43	2.3	4.04	>50000	0.75
E885816		5.23	11.80	314	3600	0.702	0.012	0.010	<0.001	<0.005	>10.0	2.60	2.2	3.94	>50000	0.97
E885817		3.57	9.35	308	2700	0.442	0.007	0.004	0.002	<0.005	>10.0	1.720	1.5	4.27	>50000	0.97
E885818		3.69	7.48	270	2700	0.435	0.009	0.010	0.001	0.006	>10.0	1.645	1.5	4.28	>50000	2.15
E885819		3.89	7.89	304	3200	0.552	0.009	0.002	0.003	<0.005	>10.0	2.08	2.1	5.33	48300	0.91
E885819C		156.5	1.150	75.9	24800	6.80	0.044	0.301	0.001	0.026	1.24	14.35	11.7	1.940	1110	0.91
E885820		3.86	11.10	352	3000	0.553	0.009	0.025	<0.001	0.006	9.31	2.17	1.4	4.96	42600	0.98
E885821		3.30	6.74	267	2900	0.432	0.009	0.010	0.001	0.008	>10.0	1.490	1.5	4.62	>50000	2.06
E885822		3.01	7.66	268	3300	0.471	<0.005	0.019	<0.001	0.013	>10.0	1.775	1.7	3.98	>50000	6.44
E885823		4.35	23.5	358	3000	0.556	0.011	0.014	0.002	0.005	>10.0	1.635	2.2	3.57	>50000	1.42
E885824		3.23	5.40	363	2200	0.384	0.006	0.039	<0.001	<0.005	>10.0	1.435	1.6	3.50	34800	0.74
E885825		3.18	14.70	423	2400	0.381	<0.005	0.050	0.001	0.007	9.61	1.320	4.1	3.40	44400	0.82
E885826		3.31	8.94	459	2400	0.409	0.006	0.020	<0.001	0.009	>10.0	1.595	2.4	3.57	46000	0.72
E885827		3.31	2.59	401	2600	0.366	0.009	0.020	<0.001	<0.005	>10.0	1.135	1.2	3.90	48000	1.39
E885828		5.51	10.60	239	3200	0.507	0.010	0.028	0.001	0.010	>10.0	1.705	1.6	3.89	47300	1.26
E885829		5.90	2.55	252	3800	0.445	0.015	0.023	<0.001	<0.005	>10.0	1.450	1.8	3.07	>50000	3.80
E885830		5.02	3.39	270	3700	0.686	0.015	0.012	<0.001	0.010	>10.0	2.41	3.0	4.04	>50000	0.87
E885831		3.47	18.45	272	2500	0.478	<0.005	0.013	<0.001	0.014	>10.0	1.550	2.1	4.73	>50000	1.01
E885832		2.87	9.91	393	2200	0.376	<0.005	0.038	<0.001	<0.005	>10.0	1.425	1.8	3.05	49600	0.97
E885832C		171.5	1.215	78.4	25300	6.21	0.039	0.315	<0.001	0.020	1.24	13.70	13.3	1.910	1100	0.84

Comments: **Corrected certificate for VEG- ASH01 on samples E885718 to E885729**

***** See Appendix Page for comments regarding this certificate *****



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 www.alsglobal.com/geochemistry

To: **GOLDCORP INC - MUSSELWHITE**
MUSSELWHITE MINE
PO BOX 7500
THUNDER BAY ON P7B 6S8

Page: 4 - C
 Total # Pages: 4 (A - D)
 Plus Appendix Pages
 Finalized Date: 24- SEP- 2018
 Account: OPB

Project: Vegetation sampling

CERTIFICATE OF ANALYSIS VA18200592

Sample Description	Method Analyte Units LOD	ME-VEG41a	ME-VEG41a	ME-VEG41a	ME-VEG41a	ME-VEG41a	ME-VEG41a	ME-VEG41a	ME-VEG41a	ME-VEG41a	ME-VEG41a	ME-VEG41a	ME-VEG41a	ME-VEG41a	ME-VEG41a	ME-VEG41a
		Na %	Nb ppm	Ni ppm	P %	Pb ppm	Pd ppm	Pt ppm	Rb ppm	Re ppm	S %	Sb ppm	Sc ppm	Se ppm	Sn ppm	Sr ppm
E885805		0.083	0.083	23.4	4.75	5.90	0.003	<0.002	840	<0.001	1.06	1.04	0.45	0.382	0.24	508
E885806		0.079	0.122	66.6	4.37	11.20	0.003	<0.002	1260	0.001	0.95	1.00	0.69	0.541	0.36	557
E885807		0.063	0.111	85.8	>5.0	16.30	0.002	<0.002	1670	<0.001	1.10	0.80	0.64	0.491	0.38	828
E885808		0.141	0.147	163.5	>5.0	22.0	0.002	<0.002	1640	<0.001	1.75	1.14	0.78	1.010	0.45	1100
E885809		0.074	0.159	67.6	4.78	16.55	0.003	<0.002	1290	0.001	1.38	0.98	0.79	0.639	0.48	1330
E885810		0.074	0.129	30.3	>5.0	18.20	0.001	<0.002	1090	<0.001	1.47	0.78	0.75	0.510	0.46	753
E885811		0.343	0.157	12.00	4.08	15.95	0.001	<0.002	610	0.001	1.53	1.38	0.73	0.709	0.42	465
E885812		0.173	0.143	14.40	3.90	12.45	<0.001	<0.002	500	<0.001	1.53	1.53	0.71	0.530	0.42	430
E885813		0.095	0.113	138.0	>5.0	12.80	0.002	<0.002	730	<0.001	1.38	0.63	0.70	0.633	0.39	270
E885814		0.122	0.124	43.8	4.44	9.94	<0.001	<0.002	780	<0.001	1.12	0.87	0.68	0.271	0.42	280
E885815		0.092	0.142	39.2	4.31	12.70	0.001	<0.002	750	0.001	1.09	1.28	0.82	0.437	0.55	251
E885816		0.096	0.148	36.6	4.13	18.00	0.001	<0.002	500	0.001	1.17	1.40	0.96	0.621	0.56	216
E885817		0.053	0.140	33.5	4.74	11.15	0.002	<0.002	650	0.001	1.34	0.92	0.68	0.345	0.44	296
E885818		0.054	0.111	13.45	4.05	10.35	0.001	<0.002	540	<0.001	1.03	0.76	0.68	0.271	0.54	328
E885819		0.080	0.149	85.3	4.25	12.90	0.001	<0.002	590	0.001	1.15	0.73	0.76	0.458	0.43	304
E885819C		0.578	0.063	134.0	0.250	8.07	0.004	0.004	19.00	0.001	0.45	0.19	10.25	0.467	0.89	1040
E885820		0.077	0.131	76.1	3.54	13.65	<0.001	<0.002	490	0.001	1.09	1.47	0.71	0.548	0.39	417
E885821		0.068	0.105	19.95	4.21	8.41	0.001	<0.002	470	0.001	1.23	1.22	0.62	0.376	0.35	365
E885822		0.047	0.131	16.55	3.64	10.85	0.003	<0.002	490	<0.001	1.13	0.79	0.62	0.359	0.41	308
E885823		0.072	0.117	46.5	>5.0	11.90	<0.001	<0.002	950	<0.001	1.51	1.44	0.85	0.539	0.32	300
E885824		0.057	0.085	85.0	4.71	9.24	<0.001	<0.002	540	<0.001	1.29	0.74	0.69	0.717	0.32	439
E885825		0.140	0.090	93.7	3.91	7.95	<0.001	<0.002	680	<0.001	1.44	1.18	0.65	0.685	0.28	344
E885826		0.066	0.110	148.5	4.68	9.91	<0.001	<0.002	680	<0.001	1.32	0.96	0.69	0.525	0.34	302
E885827		0.049	0.073	62.0	>5.0	8.42	<0.001	<0.002	720	0.001	1.87	0.68	0.65	0.635	0.29	329
E885828		0.048	0.125	100.5	4.28	10.85	<0.001	<0.002	960	<0.001	1.41	0.63	0.74	0.693	0.36	398
E885829		0.086	0.131	126.5	>5.0	10.35	<0.001	<0.002	890	<0.001	1.95	0.93	0.72	1.330	0.40	298
E885830		0.069	0.172	344	4.90	18.15	<0.001	<0.002	1000	0.001	1.78	0.69	1.20	1.585	0.57	459
E885831		0.062	0.110	44.9	4.52	10.65	<0.001	<0.002	950	<0.001	1.60	0.70	0.84	0.967	0.37	254
E885832		0.056	0.101	56.2	3.89	10.20	<0.001	<0.002	590	<0.001	1.61	0.55	0.66	0.661	0.35	312
E885832C		0.570	0.050	139.5	0.252	8.27	<0.001	<0.002	21.1	<0.001	0.45	0.12	12.25	0.299	0.75	1050

Comments: **Corrected certificate for VEG- ASH01 on samples E885718 to E885729**

***** See Appendix Page for comments regarding this certificate *****



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To: **GOLDCORP INC - MUSSELWHITE**
MUSSELWHITE MINE
PO BOX 7500
THUNDER BAY ON P7B 6S8

Page: 4 - D
 Total # Pages: 4 (A - D)
 Plus Appendix Pages
 Finalized Date: 24- SEP- 2018
 Account: OPB

Project: Vegetation sampling

CERTIFICATE OF ANALYSIS VA18200592

Sample Description	Method Analyte Units LOD	ME-VEG41a	ME-VEG41a	ME-VEG41a	ME-VEG41a	ME-VEG41a	ME-VEG41a	ME-VEG41a	ME-VEG41a	ME-VEG41a	ME-VEG41a	ME-VEG41a
		Ta ppm 0.001	Te ppm 0.02	Th ppm 0.002	Ti % 0.001	Ti ppm 0.002	U ppm 0.005	V ppm 0.05	W ppm 0.01	Y ppm 0.003	Zn ppm 0.1	Zr ppm 0.02
E885805		<0.001	<0.02	0.155	0.003	0.261	0.066	2.80	0.14	0.745	1310	0.56
E885806		<0.001	<0.02	0.265	0.005	0.453	0.109	4.73	0.16	1.330	1170	0.47
E885807		<0.001	<0.02	0.228	0.004	0.098	0.111	4.44	0.21	1.315	900	0.16
E885808		<0.001	<0.02	0.290	0.005	0.304	0.166	7.09	0.21	1.630	1385	0.27
E885809		<0.001	<0.02	0.322	0.005	0.090	0.147	6.06	0.31	1.785	829	0.17
E885810		<0.001	<0.02	0.294	0.005	0.889	0.156	5.64	0.20	1.630	1285	0.26
E885811		<0.001	<0.02	0.293	0.005	0.038	0.120	5.73	0.44	1.485	1520	0.33
E885812		<0.001	<0.02	0.309	0.005	0.240	0.123	5.65	0.40	1.415	2120	0.39
E885813		<0.001	<0.02	0.259	0.005	0.304	0.112	5.13	0.14	1.260	1390	0.35
E885814		<0.001	<0.02	0.263	0.006	0.274	0.093	5.26	0.26	1.245	1475	0.29
E885815		<0.001	<0.02	0.367	0.006	0.122	0.143	6.26	0.40	1.740	1565	0.15
E885816		<0.001	<0.02	0.417	0.008	0.138	0.150	7.20	0.32	1.620	1800	0.22
E885817		<0.001	<0.02	0.260	0.005	0.244	0.112	4.85	0.39	1.145	1665	0.17
E885818		<0.001	<0.02	0.246	0.005	0.471	0.105	4.56	0.21	1.190	1240	0.43
E885819		<0.001	<0.02	0.290	0.006	0.306	0.140	6.37	0.25	1.655	1230	0.27
E885819C		<0.001	0.12	3.89	0.024	0.134	0.619	56.0	0.09	10.55	193.5	9.43
E885820		<0.001	<0.02	0.323	0.005	0.227	0.112	5.11	0.20	1.415	1240	0.75
E885821		<0.001	<0.02	0.227	0.004	0.537	0.088	3.99	0.16	1.145	1460	0.30
E885822		<0.001	<0.02	0.246	0.005	1.755	0.103	4.97	0.28	1.200	1735	0.81
E885823		<0.001	<0.02	0.287	0.005	1.040	0.106	5.36	0.22	1.645	1285	0.39
E885824		<0.001	<0.02	0.223	0.004	0.378	0.088	3.83	0.23	1.055	1035	0.97
E885825		<0.001	<0.02	0.247	0.004	0.459	0.082	4.74	0.23	1.050	1095	1.41
E885826		<0.001	<0.02	0.269	0.004	0.359	0.093	5.55	0.28	1.180	977	0.98
E885827		<0.001	<0.02	0.180	0.004	0.386	0.077	3.46	0.28	0.869	1015	0.68
E885828		<0.001	<0.02	0.259	0.006	0.124	0.093	4.86	0.19	1.380	889	0.88
E885829		<0.001	<0.02	0.200	0.005	0.183	0.114	4.77	0.23	1.520	1055	0.64
E885830		<0.001	<0.02	0.294	0.007	0.041	0.146	7.87	0.19	1.775	978	0.48
E885831		<0.001	<0.02	0.263	0.005	0.132	0.115	4.51	0.21	1.195	1290	0.37
E885832		<0.001	<0.02	0.230	0.004	0.027	0.096	3.85	0.12	1.205	1265	0.93
E885832C		<0.001	0.21	3.90	0.024	0.136	0.602	58.3	0.09	11.05	199.5	9.79

Comments: **Corrected certificate for VEG- ASH01 on samples E885718 to E885729**

***** See Appendix Page for comments regarding this certificate *****

Appendix XI – Invoices and Receipts

Activation Laboratories Ltd.

ALS Canada Ltd.

InReach Inc.

Wisk Air Helicopters

Colin Dunn Consulting

Canadian Tire

Deakin Industries

Services Exploratoir

Appendix XII – Full table claims in the North Caribou Greenstone Belt group

510415	Single Cell Mining Claim	Active	2018-04-10	2020-04-10	GOLDCORP CANADA LTD.
510416	Single Cell Mining Claim	Active	2018-04-10	2020-04-10	GOLDCORP CANADA LTD.
510417	Single Cell Mining Claim	Active	2018-04-10	2020-04-10	GOLDCORP CANADA LTD.
510418	Single Cell Mining Claim	Active	2018-04-10	2020-04-10	GOLDCORP CANADA LTD.
510419	Single Cell Mining Claim	Active	2018-04-10	2020-04-10	GOLDCORP CANADA LTD.
510420	Single Cell Mining Claim	Active	2018-04-10	2020-04-10	GOLDCORP CANADA LTD.
510421	Single Cell Mining Claim	Active	2018-04-10	2020-04-10	GOLDCORP CANADA LTD.
510422	Single Cell Mining Claim	Active	2018-04-10	2020-04-10	GOLDCORP CANADA LTD.
510423	Single Cell Mining Claim	Active	2018-04-10	2020-04-10	GOLDCORP CANADA LTD.
510424	Single Cell Mining Claim	Active	2018-04-10	2020-04-10	GOLDCORP CANADA LTD.
510425	Single Cell Mining Claim	Active	2018-04-10	2020-04-10	GOLDCORP CANADA LTD.
510426	Single Cell Mining Claim	Active	2018-04-10	2020-04-10	GOLDCORP CANADA LTD.
510427	Single Cell Mining Claim	Active	2018-04-10	2020-04-10	GOLDCORP CANADA LTD.
510444	Single Cell Mining Claim	Active	2018-04-10	2020-04-10	GOLDCORP CANADA LTD.
510445	Single Cell Mining Claim	Active	2018-04-10	2020-04-10	GOLDCORP CANADA LTD.
510446	Single Cell Mining Claim	Active	2018-04-10	2020-04-10	GOLDCORP CANADA LTD.
510447	Single Cell Mining Claim	Active	2018-04-10	2020-04-10	GOLDCORP CANADA LTD.
510448	Single Cell Mining Claim	Active	2018-04-10	2020-04-10	GOLDCORP CANADA LTD.