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Ministry of Energy, Mines & Petroleum Resources
Mining & Minerals Division
BC Geological Survey

BC Geological Survey
Assessment Report
37402

Assessment Report
Title Page and Summary

TYPE OF REPORT [type of survey(s)]: Geological Mapping and Geochemical (Rock) Sampling **TOTAL COST:** $64,138.26

AUTHOR(S): Patrick Kluczny, B.Sc., P.Geol. **SIGNATURE(S):** Patrick Kluczny

NOTICE OF WORK PERMIT NUMBER(S)/DATE(S): Not required **YEAR OF WORK:** 2017

STATEMENT OF WORK - CASH PAYMENTS EVENT NUMBER(S)/DATE(S): Event Number 5681189 (January 12, 2018)
Event Number 5686727 (February 21, 2018)

PROPERTY NAME: Golden Frac Sand Property

CLAIM NAME(S) (on which the work was done): ZIM FRAC, WIL 1, WIL 2, WIL 3

COMMODITIES SOUGHT: Silica, Frac Sand

MINERAL INVENTORY MINFILE NUMBER(S), IF KNOWN: 082N 099 (Zim/Solar)

MINING DIVISION: Golden **NTS/BCGS:** 82N/07

LATITUDE: 51 ° 19 ' 31 " **LONGITUDE:** 116 ° 52 ' 40 " **(at centre of work)**

OWNER(S):
1) Adrian Lamoureux (92 Resources Corp.) 2)

MAILING ADDRESS:
Suite 1400-1111 W. Georgia Street
Vancouver, British Columbia V6C 4M3

OPERATOR(S) [who paid for the work]:
1) 92 Resources Corp. 2)

MAILING ADDRESS:
Suite 1400-1111 W. Georgia Street
Vancouver, British Columbia V6C 4M3

PROPERTY GEOLOGY KEYWORDS (lithology, age, stratigraphy, structure, alteration, mineralization, size and attitude):
quartzite, quartz-sandstone, Ordovician, Mount Wilson Formation, bedded, silica, frac sand

REFERENCES TO PREVIOUS ASSESSMENT WORK AND ASSESSMENT REPORT NUMBERS: Report number 35271 (Lindinger, 2015)

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TYPE OF WORK IN THIS REPORT	EXTENT OF WORK (IN METRIC UNITS)	ON WHICH CLAIMS	PROJECT COSTS APPORTIONED (incl. support)
GEOLOGICAL (scale, area)			
Ground, mapping	1:50,000 (property-wide)	ZIM FRAC, WIL 1, WIL 2, WIL 3	$26,281.35
Photo interpretation			
GEOPHYSICAL (line-kilometres)			
Ground			
Magnetic			
Electromagnetic			
Induced Polarization			
Radiometric			
Seismic			
Other			
Airborne			
GEOCHEMICAL (number of samples analysed for...)			
Soil			
Silt			
Rock	60 whole rock and trace element, 11 frac sand	ZIM FRAC, WIL 1, WIL 2, WIL 3	$26,281.35
Other			
DRILLING (total metres; number of holes, size)			
Core			
Non-core			
RELATED TECHNICAL			
Sampling/assaying	60 WR + Trace, 11 frac sand	ZIM FRAC, WIL 1, WIL 2, WIL 3	$11,575.57
Petrographic			
Mineralographic			
Metallurgic			
PROSPECTING (scale, area)			
PREPARATORY / PHYSICAL			
Line/grid (kilometres)			
Topographic/Photogrammetric (scale, area)			
Legal surveys (scale, area)			
Road, local access (kilometres)/trail			
Trench (metres)			
Underground dev. (metres)			
Other			
		TOTAL COST:	$64,138.26

92 RESOURCES CORP.

2017 MAPPING AND SAMPLING ON THE GOLDEN FRAC SAND PROPERTY

EAST OF GOLDEN, BRITISH COLUMBIA

Golden Mining Division

ZIM FRAC, WIL 1-4

Geographic Coordinates
51° 19' 31" N
116° 52' 40" W

NTS Sheet 82N/07

Owner & Operator:	92 Resources Corp. Suite 1400-1111 W. Georgia Street Vancouver, British Columbia V6C 4M3
Consultant:	Dahrouge Geological Consulting Ltd. 18, 10509 - 81 Avenue Edmonton, Alberta T6E 1X7
Authors:	P. Kluczny, B.Sc., P.Geol.
Date Submitted:	April 16, 2018
Date Revised:	November 6, 2018

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1. INTRODUCTION

In 2013, the ZIM FRAC tenure was acquired to cover quartzite of the Mount Wilson Formation along Frenchman's Ridge, located a few kilometres east of Golden, B.C. Additional tenures were added in early 2017 and 2018 to cover further outcrop exposures. Given its exceptional purity, the Mount Wilson Formation appears to have potential for both metallurgical silica and frac sand.

In June 2017, Dahrouge Geological Consulting Ltd. (Dahrouge), on behalf of 92 Resources Corp., conducted a program of geologic mapping and sampling of the Mount Wilson Formation on the Golden Frac Sand Property. A total of 60 in-situ quartzite samples were obtained at various locations within the Golden Frac Sand Property. In addition, 53 duplicate samples were collected and retained to provide additional testing material for proppant (frac sand) evaluation should ICP assay return favourable results. One float sample was also collected and sent for fire assay. This report describes the 2017 exploration and provides an interpretation of the results. The 2017 mapping and sampling program was authorized by Adrian Lamoureux of 92 Resources Corp.

Structural measurements were obtained at locations throughout the Property. A magnetic declination of 15° 10' E was used. Attitudes of bedding, jointing and other planar features are given as A°/B° NW, where A° is the azimuth of the dip (given in strike recorded using the Right-Hand-Rule) and B° is the amount of dip in the direction indicated. Where bedding has been obscured by structure, stratigraphic thicknesses were calculated using orientations from adjacent units. Where more than one bedding orientation was measured, the mean orientation was used.

Two statements of work have been filed with respect to the exploration described in this report (Event numbers 5681189 and 5686727).

1.1 GEOGRAPHIC SETTING

1.1.1 Location and Access

The Golden Frac Sand Property is located approximately 5 km east of Golden, British Columbia (Fig. 1.1). It is dissected by both the Trans-Canada Highway (Highway 1) and the Canadian Pacific Rail mainline (Fig. 1.2).

Golden, with a population of about 3,700, is located near the confluence of the Kicking Horse and Columbia rivers and provides a number of facilities and services. The economy is largely based on tourism, and to a lesser extent forestry and mining.

The southern half of the Property can be accessed by travelling about 6 km east on Highway 1 and turning north on the Glenogle Creek logging road (Figure 1.2). The logging road later forks,

with the left fork leading to a ridge with exposures of the Mount Wilson Formation, and the right fork leading to lower parts of the formation. The northern half of the Property is accessed by travelling east on Highway 1 for 1.5 km, then at the interchange taking the north exit on Golden-Donald Upper Road, which is travelled for approximately 3 km. At this point, take a right on Osler Road for 600 m, followed by a right turn onto Barber Road for 800 m, then finally a right turn onto Glenogle Creek Road for 5 km. Access to the northwestern part of the Property is also available via logging roads maintained by Louisiana Pacific. To use this access, take Lafontaine Road at the Highway 1 interchange (as above), which departs from Golden-Donald Upper Road. After travelling for approximately 2 km, take a left turn on to the logging road, which terminates about 200 m west of exposures of the Mount Wilson Formation. Access within much of the Property is by foot, with higher elevations requiring extensive hiking or helicopter support.

1.1.2 Topography, Vegetation and Climate

The Golden Frac Sand Property is located in the Rocky Mountain Trench, and more locally, covers parts of the Beaverfoot Range of the western Rocky Mountains. The topography is rugged and mountainous, with elevations ranging from 900 m along the Kicking Horse River to 2,260 m atop Table Mountain.

The Property is located within the Southern Interior Mountains Ecoprovince and Upper Columbia Valley Eco Section. Vegetation primarily consists of Douglas Fir, with lesser Montane Spruce. Portions of the Property have been logged.

The area has a continental climate with cold winters and warm summers, although extremes are likely due to the mountainous terrain. The average daily temperature in the summer ranges from 24 to 25°C and the average overnight temperature in the winter ranges from -10 to -12°C. Annual precipitation can be quite high, with 325.2 mm of rain and 158.7 cm of snowfall, and higher amounts in the surrounding mountains.

1.2 PROPERTY

The ZIM FRAC tenure was originally staked via B.C.'s mineral titles online system by Luke Schuss in May 2013 to cover exposures of Mount Wilson Formation along Frenchman's Ridge. It was later transferred to Zimtu Capital Corp. in early 2014, and later to 92 Resources Corp. (Adrian Lamoureux) in October 2014. The Property was expanded in February 2017, at which point tenure WIL 1-3 were staked online. The last tenure, WIL 4, was staked in January 2018. All of the tenures are currently 100% owned and operated by 92 Resources Corp. In total, the Golden Frac Sand

Property is currently 3,332.58 ha in size (Fig. 1.2).

TABLE 1.1: LIST OF GOLDEN FRAC SAND TENURES

Tenure Name	Tenure Number	Size (ha)	Record Date	New Good To Date
ZIM FRAC	1019452	807.77	2013/MAY/11	2020/JUN/30
WIL 1	1050286	302.61	2017/FEB/24	2020/MAY/31
WIL 2	1050287	1534.98	2017/FEB/24	2020/JUN/30
WIL 3	1050288	566.16	2017/FEB/24	2020/MAY/31
WIL 4	1057472	121.05	2018/JAN/05	2020/MAY/31

1.3 HISTORY AND PREVIOUS INVESTIGATIONS

Exploration for silica has been documented since the mid 1990's. Prior to that, the earliest recorded exploration and development consisted of quarrying slate located along the Kicking Horse River east of Golden area in the early 1900's. Some quarrying of dolomite also occurred in the area during the 1940's. In the mid 1950's, International Germandites completed some exploration on the southern end of Frenchman's Ridge, although no economic deposits were discovered. Several tufa deposits have also been explored and developed east of Golden (Rodgers, 2003).

Exploration of the Mount Wilson Formation has been documented on the adjacent Moberly Property since the 1970's (Shanks, 1997). The quarry is currently active and has been recently re-tooled to produce frac sand, having previously supplied a number of silica and sand products.

In 1997, the Dart tenures were staked to cover exposures of the Mount Wilson Formation on Frenchman's Ridge. Published records of this work are not readily available, and these tenures expired in 2005.

Exposures of Mount Wilson Formation north and south of Kicking Horse River were staked by Canadian International Minerals Inc. in 2010 as the "Solar" and "Silicon" tenures. They completed a work program in 2010, which consisted of mapping and sampling quartzite exposures on the tenures (Lindinger, 2010a; 2010b). The formation was found to extend further than illustrated in Wallace (1980), and significant exposures of Mount Wilson Formation were mapped and sampled at Frenchman's Ridge. Although the laboratory utilized for the corresponding whole rock analyses couldn't complete an accurate silica assay, it was inferred that all of the samples returned over 98% SiO_2. These tenures expired in 2012.

In late 2013, Luke Schuss staked the ZIM FRAC tenure, which covered exposures of the Mount Wilson Formation on Frenchman's Ridge. The tenure was transferred to Zimtu Capital Corp. in February 2014, and later to 92 Resources Corp. in October of that same year.

In 2014, 92 Resources Corp. completed a short exploration program on the ZIM FRAC tenure, which primarily consisted of collecting frac sand and metallurgical silica samples across the 2 km long "west exposure" (Lindinger, 2015). Frac sand samples were first sent to Renaissance Geoscience Services Inc.'s sample preparation facility in Kamloops, B.C., before a select group was sent for proppant characterization testing at Stim-Lab in Duncan, Oklahoma, USA. The silica samples were analysed by ALS G&T in Kamloops, by both whole-rock assay and 63 multi-element analysis. Additionally, boron analyses were completed at the SRC lab in Saskatoon, Saskatchewan. The chemical results were very encouraging, with SiO_2 values ranging from 98.3% to 99% SiO_2, < 0.3% Fe_2O_3 and < 15 ppm B (Lindinger, 2015). Frac sand results were likewise impressive, with 3 of the 4 samples passing initial friability evaluation. Two of the remaining three samples produced an appropriate mesh size fraction and were submitted for compression testing. Both samples passed a 6000 PSI compressibility test, producing 8.1% fines.

1.4 PURPOSE OF WORK

The work described herein was undertaken to accurately identify the location and extent of the Mount Wilson Formation quartzites throughout the Golden Frac Sand Property. Samples were collected to determine the unit's potential for both frac sand and metallurgical silica.

1.5 SUMMARY OF WORK

In June 2017, Dahrouge, on behalf of 92 Resources Corp., conducted a program of geologic mapping and sampling of the Mount Wilson Formation on the Golden Frac Sand Property. Two known exposures of quartzite were specifically targeted. The first was the eastern flank of Frenchman's Ridge, and the second was the southern ridgeline of Table Mountain to the east.

Personnel were based in a motel in Golden, B.C. Access to and from the Property was by a four-wheel-drive vehicle and helicopter. Access throughout the Property was by extensive hiking.

A total of 8 days was spent in the field examining outcrop exposures and collecting samples. 60 in-situ quartzite samples were obtained at various locations within the Golden Frac Sand Property (Fig.'s 1.3 to 1.6). In addition, 53 duplicate samples were collected and retained to provide additional testing material for proppant (frac sand) evaluation should ICP assay return favourable results. Of these, 11 with the highest SiO_2 values were later tested for proppant (frac

sand) suitability at Loring Laboratory, including mesh sizes, sphericity and roundness. One float sample was also collected and sent for fire assay. Where possible, representative chip samples of outcrops were collected, although the hardness of the unit made this difficult in some locations.

Geological observations were recorded, including lithologic information, measurements of structural elements, and other pertinent details (Appendix 6). Samples were delivered to Loring Laboratory Ltd. in Calgary, Alberta for preparation and analysis by standard ICP techniques. A subset of 11 samples displaying high SiO_2 values was later analysed for proppant (frac sand) potential. Loring's analytical procedures are described in Appendix 2 and original assay sheets are provided in Appendix 3. The resulting boron values were suspiciously high, so in January 2018, pulps from the entire sample batch were sent to Actlabs in Ancaster, Ontario for whole rock and multi-element analysis by Fusion ICP (4LITHO), and boron analysis by Sodium Peroxide Fusion ICPMS (5D). Actlab's analytical procedures are described in Appendix 4 and assay sheets are provided in Appendix 5.

2. REGIONAL GEOLOGY

The Golden Frac Sand Property is located within the Rocky Mountain Physiographic Region of the North American Foreland Belt. The belt primarily consists of weakly metamorphosed late Proterozoic and Paleozoic marine sediments attributed to the North American miogeocline. The Golden area is located in the southern part of the Rocky Mountain Trench, a regional scale NNW-trending extensional fault zone that extends from Montana to near the Yukon border. Mesozoic intrusives and related hydrothermal occurrences are rare east of the Rocky Mountain Trench, and metamorphic grades tend to increase to the west. Regionally, the trench is host to a number of Paleozoic alkaline intrusives, which have been exploited for a number of commodities, including base, precious and rare metals. The area east of the trench typically hosts bedded industrial mineral deposits, including limestone, dolomite, slate, gypsum, magnesite, and silica.

The area east of Golden is underlain by Quaternary glacial deposits in low-lying areas, and Cambrian to Devonian clastic and carbonate sedimentary rocks, primarily including dolomite, limestone, shale, slate, and quartz sandstone/quartzite (Figure 2.1). Structure in the area is dominated by a series of NW-SE trending thrust faults along the edge of the Beaverfoot and Van Horne ranges of the Rocky Mountains. These faults are in turn crosscut by NE-SW trending strike-slip faults, resulting in discontinuous outcrop bands and lenses. A summary of the stratigraphic units in the Golden area is provided in Table 1.2.

TABLE 1.2: STRATIGRAPHY IN THE GOLDEN AREA

Age	Group/Formation	Lithology
Pleistocene and Recent	Quaternary Deposits	till, alluvium, colluvium
Middle Devonian	Harrogate Formation	dolomite
Middle Devonian	Cedared Formation	dolomite
Upper Ordovician and Lower Silurian	Beaverfoot Formation (Upper Part)	dolomite
Upper Ordovician	Beaverfoot Formation (Whiskey Trail Member)	dolomite
Middle and/or Upper Ordovician	**Mount Wilson Formation**	**quartz sandstone, quartzite**
Lower and Middle Ordovician	Glenogle Formation (Upper Part)	siltstone, sandstone, shale
Lower and Middle Ordovician	Glenogle Formation (Lower Part)	shale, argillaceous limestone
Upper Cambrian and Lower Ordovician	McKay Group	limestones, slates
Upper Cambrian	Canyon Creek Formation	slate
Upper Cambrian	Ottertail Formation	limestone
Upper Cambrian	Chancellor Formation (Upper Part)	slate, calcareous slate
Middle and Upper Cambrian	Chancellor Formation (Middle Part)	slate

* Information summarized from Wallace (1980)

3. PROPERTY GEOLOGY

The Golden Frac Sand Property is primarily underlain by Ordovician clastic and carbonate sedimentary rocks (Fig. 1.3). Lower elevations are underlain by Quaternary glacial deposits.

The Mount Wilson Formation is overlain by the upper Ordovician Beaverfoot Formation, which is further subdivided into the “upper part” and the lower Whiskey Trail Member (Wallace, 1980). The upper part of formation consists of dark grey to light brown-grey, finely crystalline, mottled, cherty dolomite. The lower Whiskey Trail Member consists of dark grey to olive-grey, argillaceous, finely crystalline, platy, recessive dolomite.

The unit of interest, the Ordovician Mount Wilson Formation, occurs on much of the Property as NW-SE trending discontinuous outcrop bands and lenses. It consists of welded quartzite and quartz sandstone and is often very hard and resistant. The quartzite tends to weather light- to medium-grey, with a light- to white-grey fresh colour. The quartzites are typically well-sorted and fine to medium-grained with sub-rounded to rounded grains. Although the full thickness has not

yet been determined, the Mount Wilson Formation is estimated to be about 50 m thick in the Property area. To the north, the outcrop bands of Mount Wilson Formation are truncated by a NE-trending thrust fault just north of Moberly Peak. To the south, these discontinuous outcrop bands continue for many kilometres off the Property, on the east side of Highway 95.

The Mount Wilson Formation is underlain by the lower to middle Ordovician Glenogle Formation, which is divided into an upper and lower part by Wallace (1980). The upper part consists of medium to dark brownish grey siltstone, sandstone, and shale. The lower part consists of dark grey to black shale and argillaceous limestone. The Glenogle Formation is underlain by the upper Cambrian and lower Ordovician MacKay Group, which consists of a package of micritic limestone, slate, and calcareous shale.

A series of significant NW-SE trending thrust faults have been mapped along the higher elevations in the eastern part of the Property (Wallace, 1980). A few smaller NE-SW trending strike-slip faults cross-cut these older thrust faults. The structure on the Property has not yet been examined in detail.

4. RESULTS OF 2017 EXPLORATION

In June 2017, Dahrouge, on behalf of 92 Resources Corp., conducted a program of geologic mapping and sampling of the Mount Wilson Formation on the Golden Frac Sand Property. The goal of the program was to accurately identify the location and extent of the Mount Wilson Formation quartzites throughout the Property. Samples were collected to determine the formation's potential for both frac sand and metallurgical silica.

A total of 8 days were spent in the field examining outcrop exposures and collecting samples. 60 in-situ quartzite samples were obtained at various locations within the Golden Frac Sand Property (Fig.'s 1.3 to 1.6). In addition, 53 duplicate samples were collected and retained to provide additional testing material for proppant (frac sand) evaluation should ICP assay return favourable results. Of these, 11 with the highest SiO_2 values were tested for proppant (frac sand) suitability at Loring Laboratory, including mesh sizes, sphericity and roundness. One float sample was also collected and sent for fire assay, although no significant results were obtained. In addition to some adjustment of the geologic contacts of the Mount Wilson Formation (Fig.'s 1.3 to 1.6), a total of 10 bedding measurements were gathered from the Property. Nine of these measurements were collected from quartzite of the Mount Wilson Formation and one was

collected from limestone of the Harrogate Formation. Way-up indicators were not obvious. A compilation of the recorded measurements is provided in Table 4.1 and displayed in Figure 1.3.

Boron, which is an important deleterious element, returned values from Loring Laboratories ranging from 0.005% to 0.033% B_2O_3 (15.5 to 102.5 ppm B). The surprisingly high and variable boron results (compared to historic values consistently less than 15 ppm B) resulted in the decision to have check analyses completed by an additional laboratory. Pulps from the entire 60-sample batch were shipped to Actlabs for whole rock, trace element, and boron analyses. After comparing the two sets of results, it was decided to proceed with the Actlabs results, given the greater consistency of boron results and overall higher Whole Rock totals. All discussion regarding chemical results hereafter will reference Actlabs values only. One float sample of sandstone was taken during the program and sent to Loring Laboratory for fire assay, due to the strong quartz veining and abundant pyrite visible throughout. Results were insignificant, returning <5 ppb Au.

Mapping and sampling verified that the Frenchman's Ridge deposit is a high-priority target on the Property. The strike length is estimated at approximately 1.2 km with a width of over 400 m, and an interpreted thickness of 50 m. This deposit occurs less than 5 km from existing infrastructure in Golden, B.C. Analytical results confirmed the high-quality silica potential of the Property; values ranged from 38.65% to 99.89% SiO_2, with all but two samples returning greater than 97% SiO_2. Many of these high-silica samples were from the Frenchman's Ridge area. Deleterious element analyses were also promising, with Fe_2O_3 values ranging from 0.03 to 0.49%, excluding an isolated sample (123377) of altered sandstone that returned 5.98% Fe_2O_3. All but five of the samples returned less than 0.1% Fe_2O_3. Boron values were also consistently low, ranging from <2 to 40 ppm B. Of these, all but four samples returned values less than 15 ppm B.

Of the 11 samples submitted for frac sand quality testing, six were identified for additional testing based on their suitable friability. The six samples were then tested for mesh sizes, sphericity and roundness. Results were encouraging, with suitable percentages in the 20 to 100 mesh size, sphericity measurements ranging from 0.7 to 0.9, and roundness measurements ranging from 0.4 to 0.6. The roundness measurements are somewhat low compared to the API standards but could hopefully be upgraded with further work.

TABLE 4.1: STRUCTURAL MEASUREMENTS

Name	Easting	Northing	Strike (°)	Dip (°)	Source	Comment
OCMC17-001	506322	5685422	325	14	Quartzite	Exposure Trend
OCMC17-003	505041	5685714	320	30	Limestone	Not Sent for Analysis
OCMC17-006	505498	5688152	328	70	Quartzite	Sample 123528
OCMC17-015	510820	5684128	340	52	Quartzite	Sample 123535
OCMC17-017	510533	5684042	325	30	Quartzite	Sample 123537
OCMC17-021	506096	5685574	305	15	Quartzite	Sample 123541
OCMC17-027	506250	5685672	332	16	Quartzite	Sample 123547
OCMC17-028	506213	5685776	328	10	Quartzite	Sample 123548
OCPS17-019	510565	5683980	330	32	Quartzite	Sample 123561
OCPS17-028	506079	5685888	300	18	Quartzite	Sample 123570

5. DISCUSSION AND CONCLUSIONS

The 2017 exploration program at the Golden Frac Sand Property focused on evaluating the frac sand and metallurgical silica potential of the Ordovician Mount Wilson Formation. The Frenchman's Ridge deposit was identified as the primary target on the Property. Analytical results from the 2017 program are listed below:

Metallurgical Silica

- 22 of the 60 samples assayed greater than 99.0% SiO_2
- 10 of the samples assayed greater than 99.4% SiO_2
- 55 of the 60 samples returned less than 0.1% Fe_2O_3 (important contaminant)
- 55 of the 59 samples returned boron values less than 15 ppm B (important contaminant)

Frac Sand

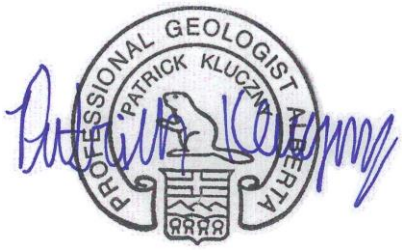
- 6 of the 11 high-silica samples submitted were identified for additional testing based on initial friability testing
- These 6 samples produced a pure quartz sand in the 20 to 100 mesh range
- Sphericity measurements ranged from 0.7 to 0.9
- Roundness measurements ranged from 0.4 to 0.6.

Based on these results, it appears the samples passed API PR19C specifications for frac sand proppant for purity, crush resistance (from 2014 work) and sphericity. The material missed

the minimum roundness requirement of 0.6, although this could be potentially improved by eliminating silica cement still attached to the sand particles. While the SiO_2 values were appropriately high for metallurgical silica requirements (generally around 99.5%), it is expected that SiO_2 values could be improved further by experimenting with different sampling and analytical techniques, in addition to attempting pre-analysis magnetic separation techniques.

Based on the 2017 results, further exploration of the Property is warranted. The next phase of exploration should focus on drilling the deposit at Frenchman's Ridge to delineate a potential resource. Ideally, drilling would be grid-based at roughly 100 m spacing, with holes deep enough to penetrate the lower contact of the Mount Wilson Formation.

In addition to drilling, further rock sampling is recommended, as many areas on the Property have received limited work to date. Further proppant (frac sand) testing is also recommended, possibly utilizing a laboratory capable of doing additional test work including crush resistance and acid solubility.



P. Kluczny, B.Sc., P.Geol.

Edmonton, AB
2018 11 06

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YUKON TERRITORY

NWT

ALBERTA

ALASKA
USA

BRITISH COLUMBIA

PACIFIC OCEAN

United States of America

Atlin

Dease Lake

Fort Nelson

Stewart

Hazelton

Prince Rupert

Chetwynd

Fraser Lake

Prince George

GOLDEN FRAC SAND PROPERTY

McBride

Bella Coola

Williams Lake

Blue River

Rocky Mountains

Port McNeill

Clinton

Golden

Kamloops

Campbell River

Kelowna

Vancouver

Fernie

Victoria

N
W
E
S

Legend

- Claim Location
- Citites/Towns
- Major Roads
- Railway
- Waterbodies

Kilometres
0 100 200 300 400
1:7,000,000
Coordinate System: UTM NAD83, Zone 11

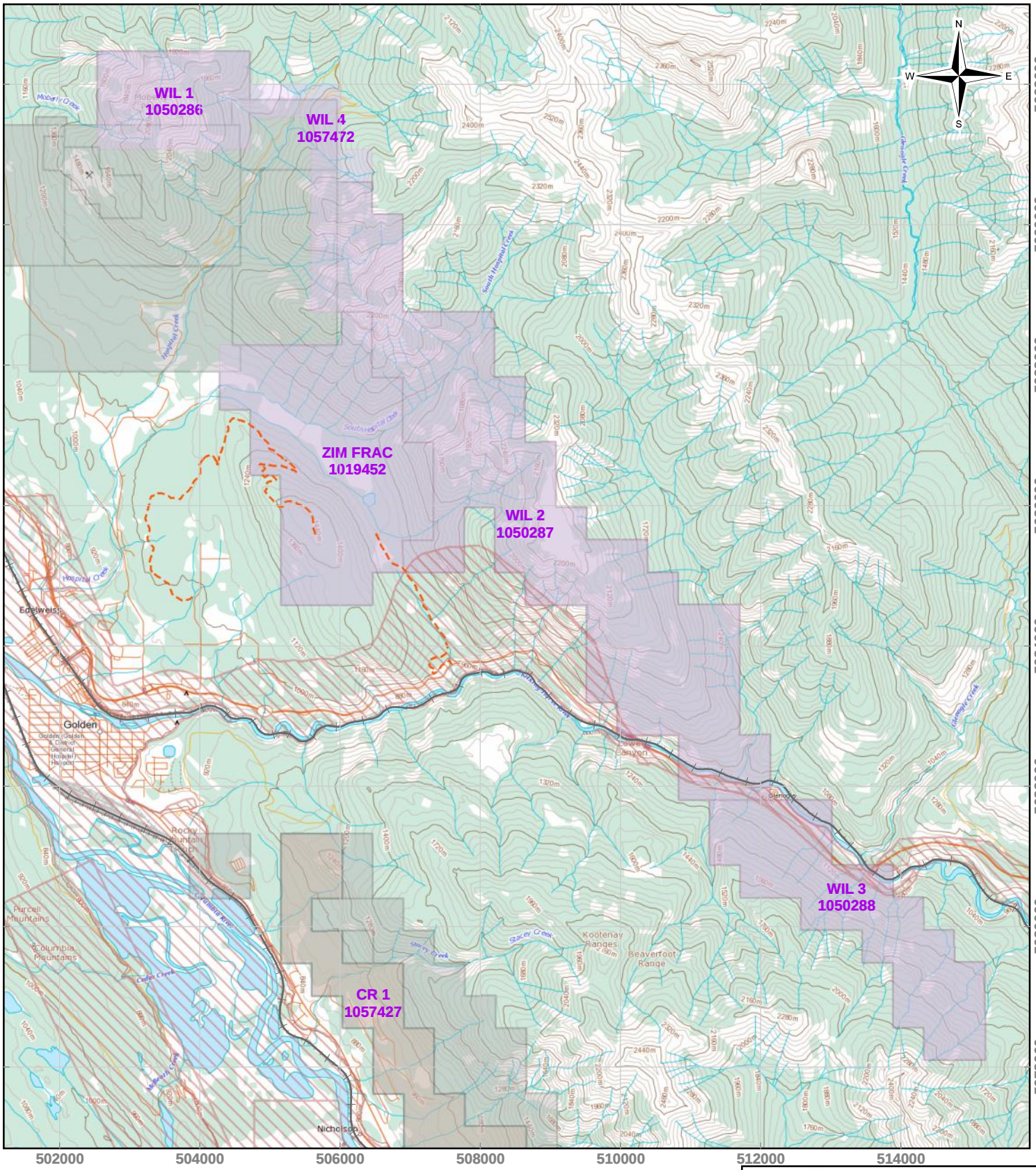
92 RESOURCES

Dahrouge Geological Consulting Ltd.
Edmonton, Alberta

GOLDEN FRAC SAND PROPERTY
SOUTH EASTERN BRITISH COLUMBIA

Fig. 1.1
Location Map

DH 2018.01



Legend

- Access trails
- Mineral Reserve

Land Holdings

- Zim Frac Property
- 92 Resources (other)
- Others

Kilometres

0 1 2 3 4

1:75,000

UTM NAD 83, Zone 11N

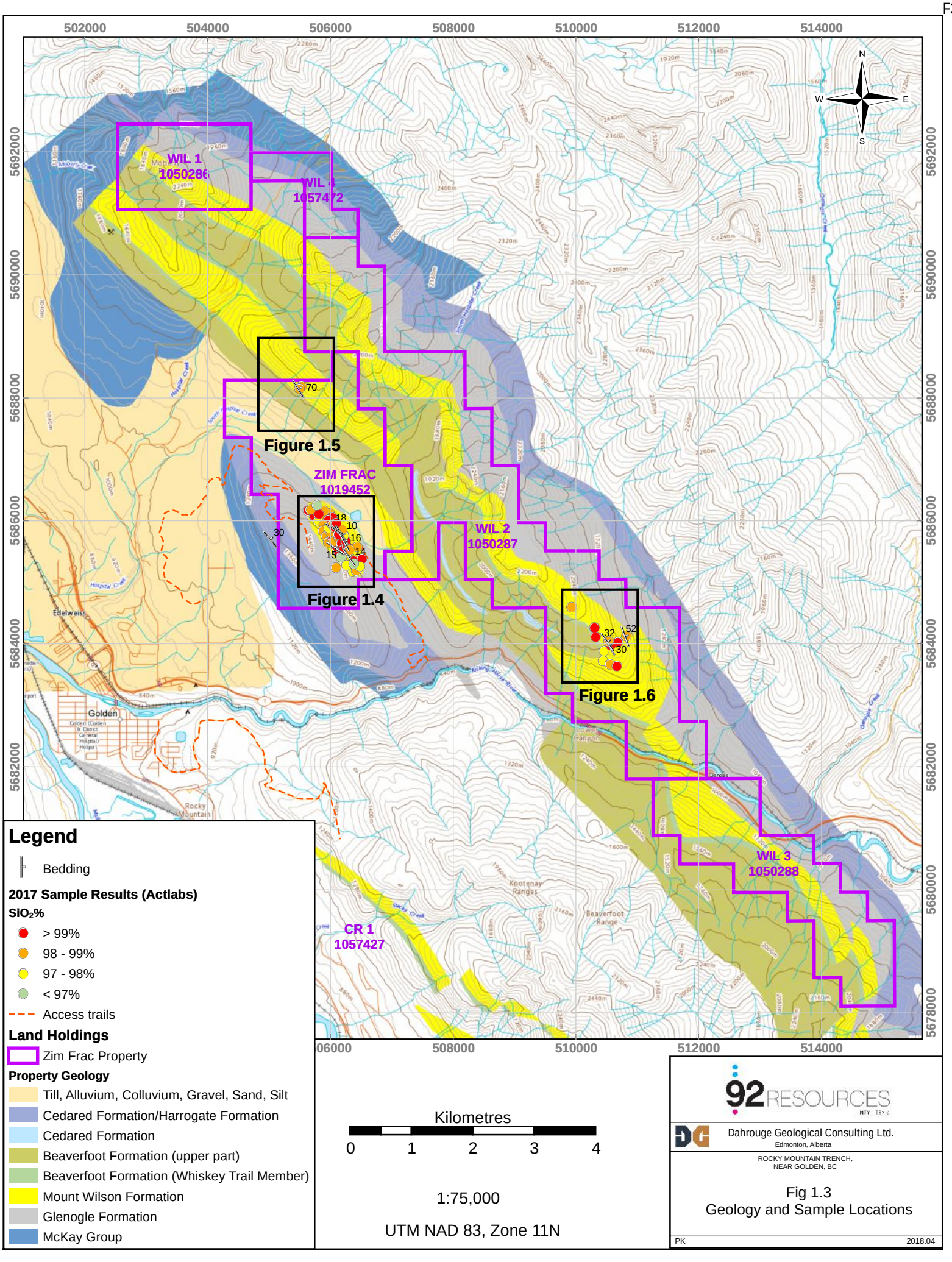
92 RESOURCES NTY

Dahrouge Geological Consulting Ltd.
Edmonton, Alberta

ROCKY MOUNTAIN TRENCH,
NEAR GOLDEN, BC

Fig 1.2
Property Map

PK 2018.04



Legend

Bedding

2017 Sample Results (Actlabs)

SiO_2%

- > 99%
- 98 - 99%
- 97 - 98%
- < 97%

Access trails

Land Holdings

Zim Frac Property

Property Geology

- Till, Alluvium, Colluvium, Gravel, Sand, Silt
- Cedared Formation/Harrogate Formation
- Cedared Formation
- Beaverfoot Formation (upper part)
- Beaverfoot Formation (Whiskey Trail Member)
- Mount Wilson Formation
- Glenogle Formation
- McKay Group

Kilometres

0 1 2 3 4

1:75,000

UTM NAD 83, Zone 11N

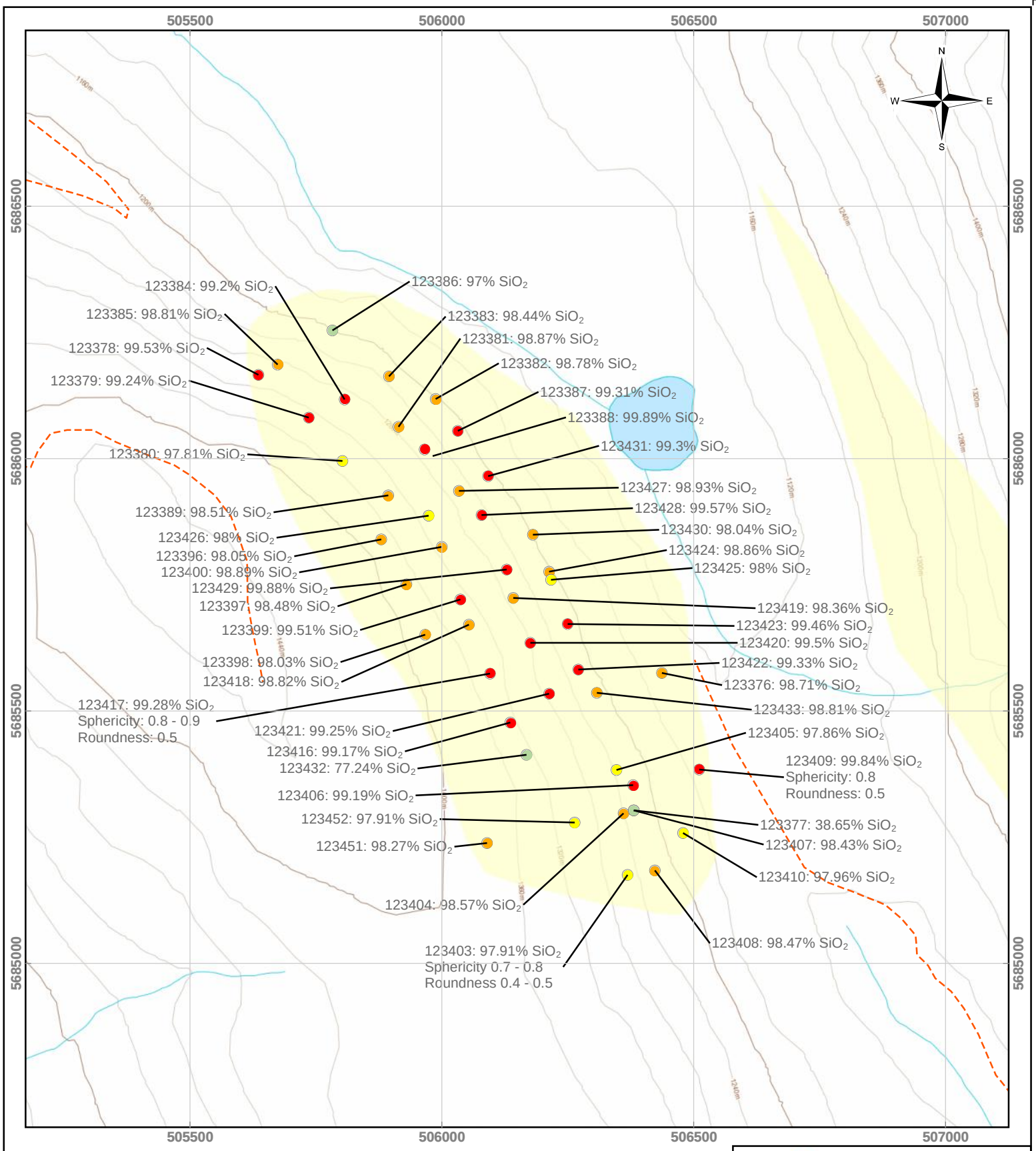
92 RESOURCES NTY

Dahrouge Geological Consulting Ltd.
Edmonton, Alberta

ROCKY MOUNTAIN TRENCH,
NEAR GOLDEN, BC

Fig 1.3
Geology and Sample Locations

PK 2018.04



Legend

2017 Sample Results (Actlabs)

SiO2%

- > 99%
- 98 - 99%
- 97 - 98%
- < 97%
- Access trails
- Mount Wilson Formation

Meters

0 200 400 600

1:10,000

UTM NAD 83, Zone 11N

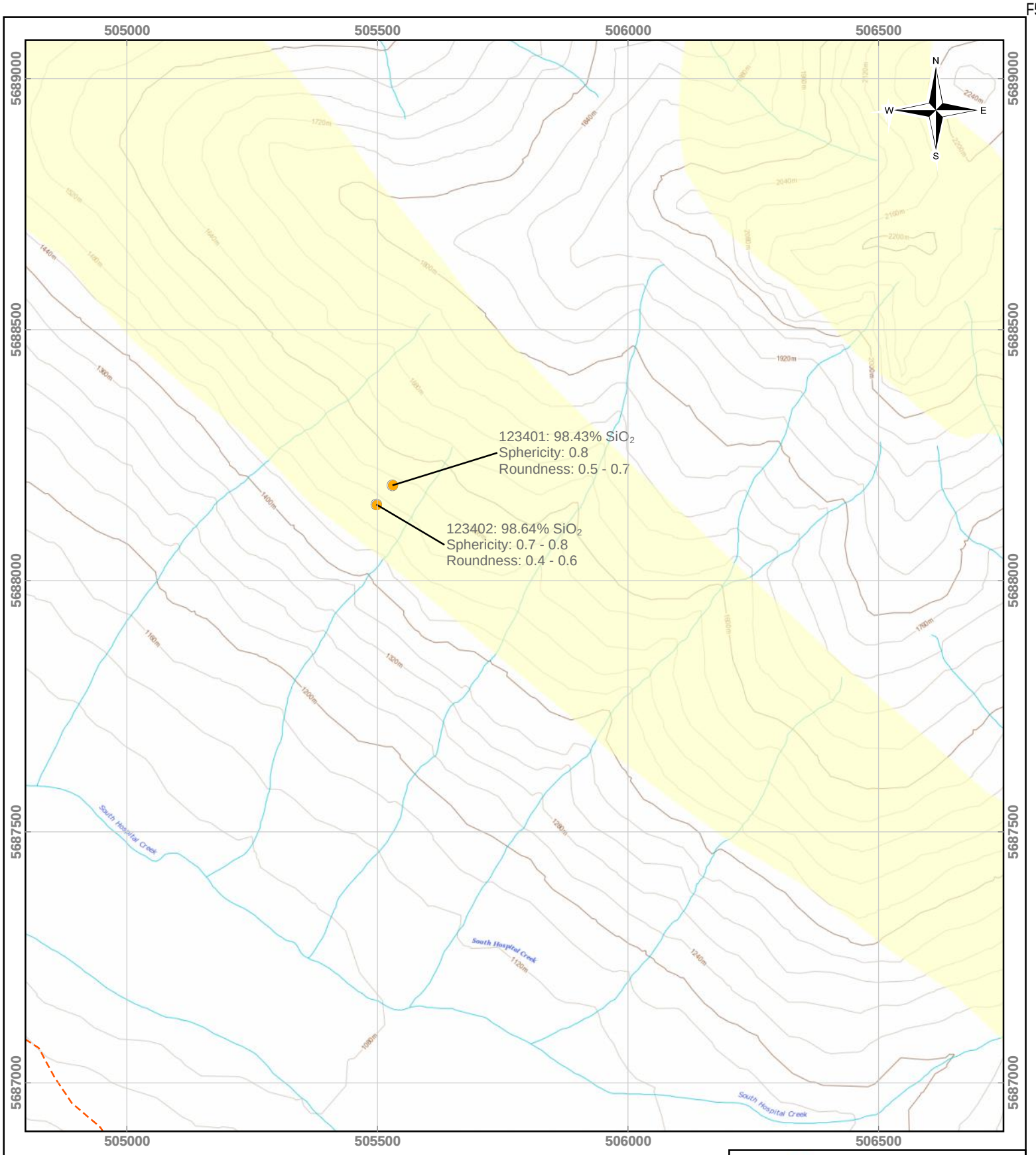
92 RESOURCES NTY

Dahrouge Geological Consulting Ltd.
Edmonton, Alberta

ROCKY MOUNTAIN TRENCH,
NEAR GOLDEN, BC

Fig 1.4
Frenchman's Ridge

PK 2018.04



Legend

2017 Sample Results (Actlabs)

SiO2%

- > 99%
- 98 - 99%
- 97 - 98%
- < 97%
- Access trails
- Mount Wilson Formation

Meters

0 200 400 600

1:10,000

UTM NAD 83, Zone 11N

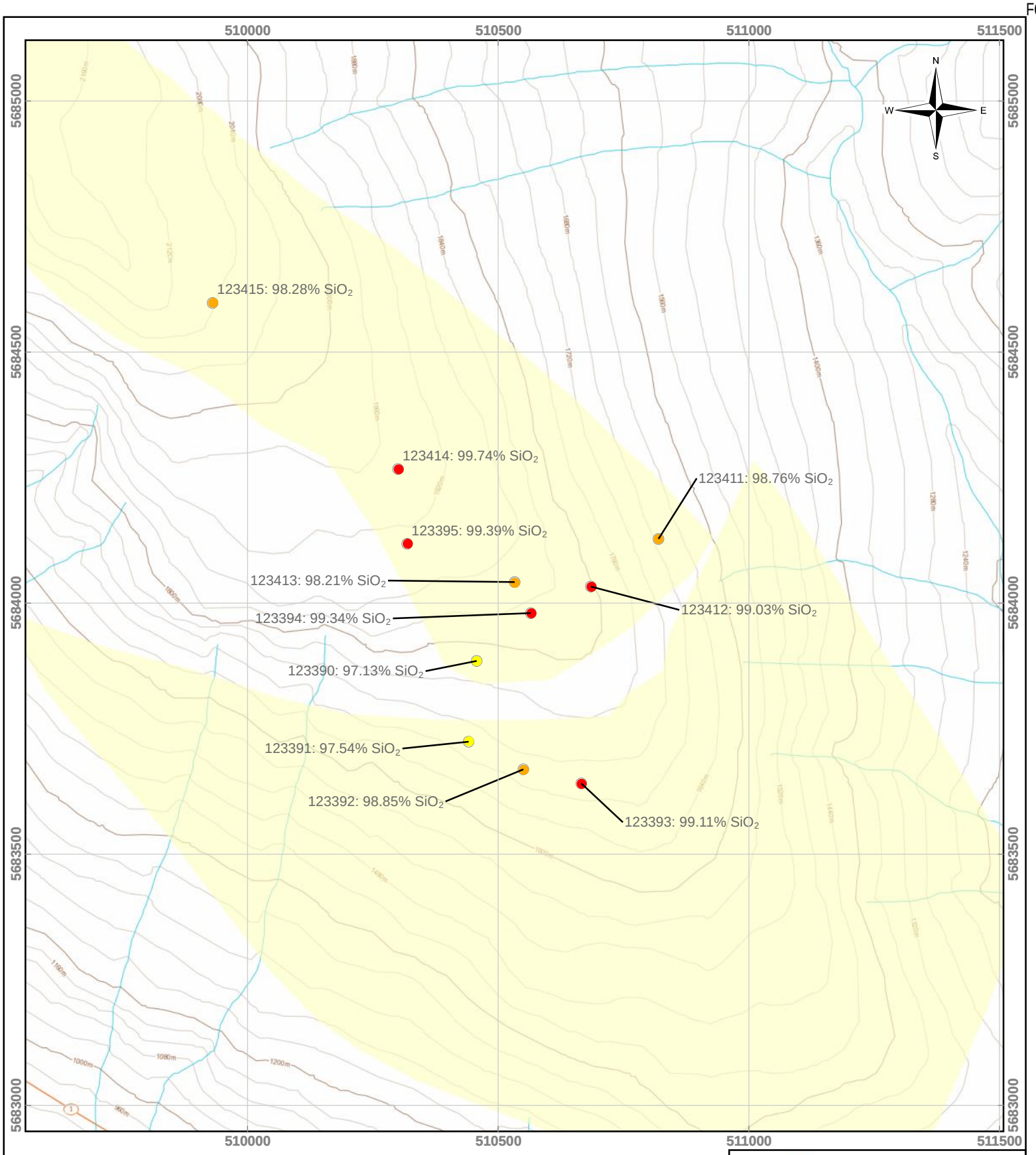
92 RESOURCES NTY

Dahrouge Geological Consulting Ltd.
Edmonton, Alberta

ROCKY MOUNTAIN TRENCH,
NEAR GOLDEN, BC

Fig 1.5
Hospital Creek

PK 2018.04



Legend

2017 Sample Results (Actlabs)

SiO2%

- > 99%
- 98 - 99%
- 97 - 98%
- < 97%
- Access trails
- Mount Wilson Formation

Meters

0 200 400 600

1:10,000

UTM NAD 83, Zone 11N

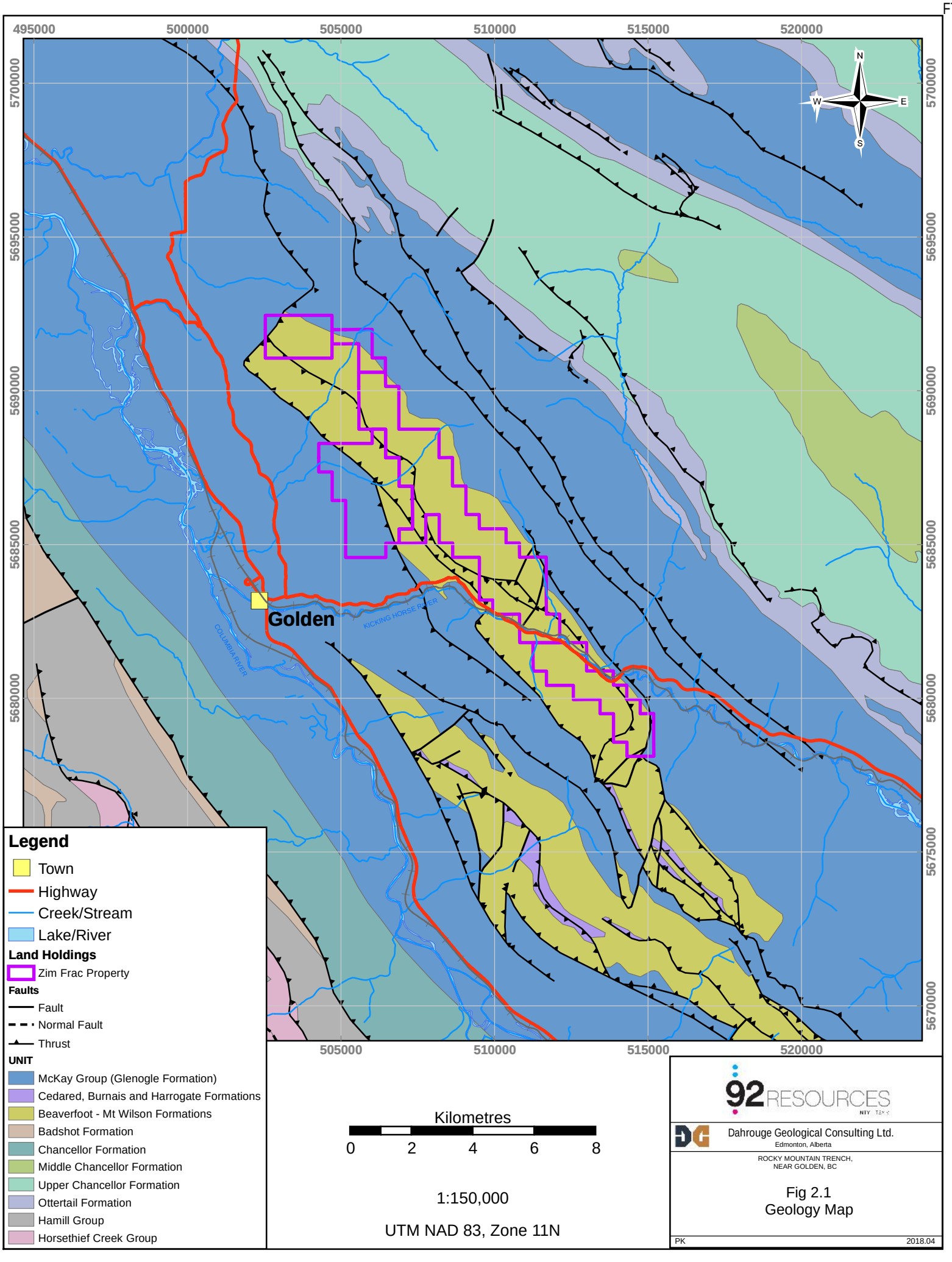
92 RESOURCES NTY

Dahrouge Geological Consulting Ltd.
Edmonton, Alberta

ROCKY MOUNTAIN TRENCH,
NEAR GOLDEN, BC

Fig 1.6
Eastern Exposure

PK 2018.04


495000
500000
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515000
520000
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5690000
5685000
5680000
5675000
5670000
N
W
E
S
Golden
KICKING HORSE RIVER
COLUMBIA RIVER
Legend
Town
Highway
Creek/Stream
Lake/River
Land Holdings
Zim Frac Property
Faults
Fault
Normal Fault
Thrust
UNIT
McKay Group (Glenogle Formation)
Cedared, Burnais and Harrogate Formations
Beaverfoot - Mt Wilson Formations
Badshot Formation
Chancellor Formation
Middle Chancellor Formation
Upper Chancellor Formation
Ottertail Formation
Hamill Group
Horsethief Creek Group
Kilometres
0 2 4 6 8
1:150,000
UTM NAD 83, Zone 11N
92 RESOURCES
Dahrouge Geological Consulting Ltd.
Edmonton, Alberta
ROCKY MOUNTAIN TRENCH,
NEAR GOLDEN, BC
Fig 2.1
Geology Map
PK
2018.04

APPENDIX 1: ITEMIZED COST STATEMENT FOR THE 2017 EXPLORATION

Event Number 5681189 ($49,250.20): Field work, data compilation, Loring Labs analytical

Event Number 5686727 ($11,573.41): Actlabs analytical, final data compilation

a) Personnel

J. Dahrouge, geologist					
0.4	days		project management		
0.40	days	@	$ 1,090.00	$	436.00
P. Kluczny, geologist					
8.8	days		project planning/supervision, data compilation, reporting		
8.76	days	@	$ 885.00	$	7,752.60
L. Lindinger, geologist					
29.5	hours		field work and travel June 7-10		
1.5	hours		project management		
31.00	hours	@	$ 80.00	$	2,480.00
M. Carter, geologist					
8.0	days		field work and travel June 2-9		
4.7	days		project management, data compilation		
12.70	days	@	$ 700.00	$	8,890.00
P. Schmidt, geologist					
8.0	days		field work and travel June 2-9		
0.9	days		project preparation		
8.87	days	@	$ 550.00	$	4,878.50
L. Ewert, geologist					
0.5	days		data compilation		
0.47	days	@	$ 745.00	$	350.15
D. Dicks, technologist					
8.0	days		field work and travel June 2-9		
0.9	days		project preparation		
8.87	days	@	$ 555.00	$	4,922.85
D. Hayes, geologist					
5.8	days		data compilation		
5.84	days	@	$ 505.00	$	2,949.20
S. Dahrouge, student geologist					
8.0	days		field work and travel June 2-9		
3.6	days		project preparation, data compilation, map creation		
11.57	days	@	$ 375.00	$	4,338.75
S. Berke, student geologist					
1.0	days		map creation		
0.97	days	@	$ 375.00	$	363.75
J. Holman, receptionist					
3.0	hrs		logistics		
3.00	hrs	@	$ 42.00	$	126.00
				$	37,487.80

FIELD WORK SUMMARY:

Zim Frac Property Prospecting & Rock/Sediment Sampling, June 2-9, 2017

Claims ZIM FRAC; WIL 1; WIL 2; WIL 3

113 samples collected

Field Personnel: M. Carter, P. Schmidt, D. Dicks, S. Dahrouge

b) Food and Accommodation

24	man-days	@	$	319.25	accommodations & meals	$	7,661.89	
8	man-days	@	$	84.22	meals (travel days)	$	673.75	
								$ 8,335.64

c) Transportation

Vehicles:	L. Lindinger Vehicle	$	1,018.50
	Truck Rental	$	1,201.20
	Helicopter Rental (Alpine Helicopter)	$	2,420.01
	Fuel	$	334.39
			$ 4,974.10

d) Instrument Rental

	Software (ArcGIS)	$	304.50
	GPS (3)	$	100.80
	Laptops (1)	$	84.00
	Radios (2)	$	50.40
			$ 539.70

e) Drilling n/a

f) Analyses

Loring Laboratories Ltd.

(59 wholerock samples, 33 trace element sample analyses, 8 Boron analyses, 8 frac sand analyses)

33	samples	@	$	0.80	Log in fee
60	samples	@	$	0.80	Log in fee
60	samples	@	$	7.80	Sample preparation
60	samples	@	$	1.50	Sample Disposal
8	samples	@	$	1.50	Sample Disposal (Boron)
2	samples	@	$	81.50	Log in fee, sample prep, sample disposal
33	samples	@	$	14.25	sample analysis (trace element)
59	samples	@	$	50.00	Wholerock sample analysis
1	sample	@	$	15.10	Assay-PM-Gold sample analysis
8	samples	@	$	15.25	sample analysis (Boron) + $134 rush
8	samples	@	$	325.00	Frac sand testing

$ 5,868.19

Actlabs

(60 wholerock + element pulp analyses, 8 Boron pulp analyses)

60	samples	@	$	17.75		$	1,065.00
8	samples	@	$	19.45		$	155.60
60	samples	@	$	70.25		$	4,215.00
					gst	$	271.78
							$ 5,707.38

g) Other

Field Supplies	$ 340.92	
Admin Costs and Supplies	$ 884.53	
		$ 1,225.45
Total		$ 64,138.26

P. Kluczny, B.Sc., P. Geol.

Edmonton, Alberta
April 13, 2018

APPENDIX 2: ANALYTICAL LABORATORY INFORMATION AND TECHNIQUES – LORING LABORATORIES

Name and Address of the Lab:

Loring Laboratories Ltd.
629 Beaverdam RD NE
Calgary AB, T2K 4W7

Lab Contact:

Jacob Ha, B.Sc.
Client Services
Loring Laboratories Ltd.
T: +1 (403) 274-2777
C: +1 (403) 604-6668

Sample Preparation, Procedures, Reagents, Equipment, etc.:

For the whole rock analysis sample preparation, a representative portion of the sample is digested with multiple acids, and finished with ICP-OES for various metal oxides. The high silica analysis involves a representative portion of pulped sample being digested fully with hydrofluoric acid. The weight difference is then measured and calculated to determine silica content. Loss on ignition is determined by incinerating a representative portion of pulped sample at 900 degrees Celsius for approximately 60 minutes. Weight difference is measured and used to calculate loss on ignition. ICP 32 Element analysis involves a representative portion of pulped sample being digested with multiple acids, and finished with ICP-OES for common base metals and heavy metals. Boron analysis via ICP is determined by digesting a representative portion of pulped sample with multiple acids, using Teflon™ and Nalgene™ plastic labware only. This is then submitted to ICP-OES for boron trace analysis.

Mesh Size Fraction, Split and Weight of Sample:

Upon receiving the samples, the technician crushes the entire sample with smooth chrome steel alloy plates, hardened to RC60. They then riffle out a representative sub-sample (200.0-300.0g). The sub-sample is then pulverized with the chrome steel alloy ring & puck pulveriser, hardened to RC60. At this point around 95% of the sample should pass 140 U.S standard mesh size. The entire pulverized sub-sample is then rolled and mixed before extracting sub-sub-sample for Analysis.

Quality Control Procedures:

The internal QA and QC protocols ensure a 95% confidence level is maintained. Within every batch of samples, a duplicate, chemical blank, and a standard are emplaced every 20 samples.

APPENDIX 3: ASSAY RESULTS – LORING LABORATORIES LTD.

Loring Laboratories Ltd.

629 Beaverdam Road N.E.,
Calgary Alberta T2K 4W7
Tel:403- 274-2777 Fax:403- 275-0541

ISO9001:2008 Certified

TO: Dahrouge Geological
Suite 18, 10509 81 Ave.
Edmonton AB
T6E 1X7

Attn: Matthew carter

FILE: 61201

DATE: July 6th 2017

Sample Type: Rock/Sand

WHOLEROCK ICP ANALYSIS

Sample I.D.	Al_2O_3 %	Ba ppm	CaO %	Cr ppm	Fe_2O_3 %	K_2O %	MgO %	MnO %	Na_2O %	Ni ppm	P_2O_5 %	SO_3 %	SiO_2 %	Sr ppm	TiO_2 %	V ppm	LOI@1000 %	SUM %
123376	0.14	144	0.06	202	0.26	0.09	0.02	<0.01	0.02	4	0.01	0.06	98.91	5	0.01	2	0.19	99.77
123378	0.17	1317	0.11	191	0.28	0.08	0.01	<0.01	0.02	5	0.01	0.08	97.67	54	0.01	5	0.28	98.71
123379	0.16	43	0.06	124	0.16	0.11	0.03	<0.01	0.03	10	<0.01	0.03	99.74	14	0.01	3	0.17	100.49
123380	0.23	91	0.04	161	0.22	0.12	0.03	<0.01	0.03	4	<0.01	0.02	97.27	11	0.02	3	0.23	98.20
123381	0.14	83	0.05	189	0.25	0.11	0.02	<0.01	0.02	4	<0.01	0.03	99.11	7	0.01	1	0.07	99.79
123382	0.16	44	0.06	182	0.23	0.10	0.02	<0.01	0.01	45	0.01	0.02	97.02	10	0.01	1	0.11	97.73
123383	0.24	53	0.07	139	0.17	0.13	0.03	<0.01	0.03	6	0.01	0.02	99.50	14	0.01	1	0.19	100.39
123384	0.08	54	0.06	143	0.19	0.09	0.01	<0.01	0.02	7	0.01	0.04	97.78	7	0.01	<1	0.12	98.40
123385	0.19	70	0.08	141	0.18	0.12	0.03	<0.01	0.02	5	<0.01	0.05	97.47	6	0.01	1	0.12	98.26
123386	0.64	166	0.03	138	0.16	0.25	0.06	<0.01	0.01	11	<0.01	0.02	96.74	10	0.02	1	0.20	98.12
123387	0.14	47	0.03	125	0.15	0.10	0.02	<0.01	0.01	3	<0.01	0.02	98.42	6	0.01	1	0.09	98.98
123388	0.09	48	0.02	137	0.16	0.09	0.01	<0.01	0.02	5	<0.01	0.02	98.95	4	0.01	1	0.01	99.36
123389	0.22	100	0.03	104	0.13	0.13	0.03	<0.01	0.01	5	<0.01	0.02	99.65	5	0.01	2	0.12	100.33
123390	0.39	16	0.05	124	0.23	0.18	0.04	<0.01	0.02	11	0.03	0.03	96.61	7	0.01	8	0.37	97.94
123391	0.08	8	0.61	134	0.25	0.10	0.30	<0.01	0.02	3	0.12	0.04	97.40	13	0.01	1	0.95	99.86
123392	0.13	8	0.03	144	0.21	0.11	0.02	<0.01	0.01	3	<0.01	0.02	99.01	3	0.01	<1	0.25	99.79
123393	0.06	7	0.04	197	0.23	0.09	0.01	<0.01	0.02	4	<0.01	0.02	98.62	3	0.01	<1	0.23	99.32
123394	0.14	7	0.03	123	0.17	0.11	0.02	<0.01	0.01	3	<0.01	0.02	99.64	2	0.01	1	0.20	100.35
123395	0.06	4	0.05	140	0.17	0.09	0.01	<0.01	0.02	3	0.01	0.02	99.20	3	0.01	<1	0.17	99.79
123396	0.12	61	0.02	135	0.17	0.10	0.02	<0.01	0.02	3	<0.01	0.01	99.07	8	0.01	<1	0.19	99.72
123397	0.09	41	0.02	142	0.17	0.09	0.01	<0.01	0.02	30	<0.01	0.02	99.58	5	0.01	1	0.19	100.19
123398	0.10	62	0.02	103	0.15	0.10	0.01	<0.01	0.01	3	<0.01	0.02	97.19	9	0.01	1	0.21	97.80
123399	0.08	27	0.02	132	0.16	0.09	0.01	<0.01	0.01	16	<0.01	0.01	98.85	4	0.01	<1	0.20	99.44
123400	0.14	51	0.03	141	0.18	0.10	0.02	<0.01	0.02	8	<0.01	0.01	98.14	3	0.01	1	0.20	98.83
123401	0.12	15	0.03	165	0.24	0.08	0.01	<0.01	0.02	16	0.01	0.02	99.20	3	0.01	1	0.29	100.02
123402	0.13	6	0.03	139	0.23	0.11	0.02	<0.01	0.01	5	0.01	0.02	99.30	2	0.01	<1	0.14	99.99
123403	0.10	31	0.02	139	0.17	0.08	0.01	<0.01	0.01	11	0.01	0.02	99.42	6	0.01	1	0.17	100.00
123404	0.11	384	0.05	153	0.19	0.07	0.01	<0.01	0.02	5	0.01	0.04	99.78	12	0.01	2	0.15	100.42
123405	0.22	96	0.12	141	0.19	0.11	0.03	<0.01	0.03	10	<0.01	0.02	98.94	7	0.01	1	0.19	99.85
123406	0.19	55	0.09	124	0.15	0.11	0.02	<0.01	0.02	15	<0.01	0.02	99.07	6	0.01	<1	0.17	99.84
123407	0.23	80	0.03	125	0.15	0.12	0.02	<0.01	0.01	10	<0.01	0.01	98.99	4	0.02	1	0.21	99.78
123408	0.14	38	0.02	129	0.16	0.11	0.02	<0.01	<0.01	6	<0.01	0.01	98.88	4	0.02	1	0.19	99.53
123409	0.10	30	0.02	121	0.14	0.09	0.01	<0.01	0.01	2	<0.01	0.01	99.31	4	0.01	<1	0.18	99.88
123410	0.18	87	0.03	145	0.18	0.10	0.02	<0.01	0.02	3	0.01	0.02	98.97	4	0.01	1	0.27	99.80
123411	0.20	11	0.03	143	0.18	0.11	0.02	<0.01	0.01	9	0.01	0.02	98.82	3	0.01	1	0.19	99.59
123412	0.12	13	0.03	173	0.21	0.08	0.01	<0.01	0.02	28	<0.01	0.02	98.81	3	0.01	1	0.26	99.56
123413	0.08	11	0.02	148	0.19	0.08	0.01	<0.01	0.01	4	<0.01	0.02	99.11	2	0.01	<1	0.24	99.75
123414	0.14	6	0.02	121	0.15	0.12	0.02	<0.01	0.01	3	<0.01	0.02	99.33	2	0.01	<1	0.21	100.01
123415	0.08	8	0.03	132	0.18	0.09	0.01	<0.01	0.02	3	<0.01	0.02	98.93	3	0.01	1	0.29	99.65
123416	0.20	168	0.03	160	0.19	0.11	0.03	<0.01	0.01	32	0.01	0.02	98.93	5	0.01	<1	0.32	99.84
123417	0.18	118	0.03	182	0.21	0.10	0.02	<0.01	0.03	6	0.01	0.02	98.62	8	0.01	<1	0.35	99.56
123418	0.19	517	0.04	126	0.16	0.12	0.03	<0.01	0.02	3	<0.01	0.05	98.68	11	0.01	<1	0.27	99.55
123419	0.22	68	0.02	110	0.14	0.12	0.03	<0.01	0.01	22	<0.01	0.01	99.05	2	0.01	<1	0.28	99.89
123420	0.10	324	0.02	155	0.18	0.09	0.01	<0.01	0.02	3	<0.01	0.03	97.03	9	0.01	<1	0.20	97.69
123421	0.12	75	0.03	149	0.18	0.11	0.02	<0.01	0.01	3	<0.01	0.02	97.30	3	0.01	1	0.25	98.03
123422	0.14	58	0.04	145	0.19	0.10	0.02	<0.01	0.02	3	0.01	0.03	97.74	5	0.01	<1	0.36	98.64
123423	0.19	94	0.04	119	0.14	0.13	0.03	<0.01	0.01	3	0.01	0.02	97.41	4	0.01	<1	0.28	98.26
123424	0.12	72	0.04	135	0.16	0.09	0.01	<0.01	0.01	3	<0.01	0.02	97.23	4	0.03	1	0.20	97.89
123425	0.14	191	0.03	148	0.19	0.10	0.02	<0.01	0.02	3	<0.01	0.03	96.99	5	0.01	<1	0.24	97.76
123426	0.18	682	0.02	93	0.13	0.14	0.02	<0.01	0.01	2	<0.01	0.05	97.36	9	0.01	<1	0.38	98.30
123427	0.14	53	0.02	149	0.17	0.10	0.02	<0.01	<0.01	2	<0.01	0.01	96.95	3	0.01	1	0.35	97.77
123428	0.18	228	0.02	161	0.20	0.09	0.02	<0.01	<0.01	3	<0.01	0.03	97.23	4	0.01	2	0.32	98.09
123429	0.14	109	0.02	165	0.19	0.09	0.02	<0.01	<0.01	3	<0.01	0.02	96.93	1	0.02	1	0.29	97.69
123430	1.18	220	0.03	148	0.17	0.47	0.16	<0.01	0.01	2	<0.01	0.01	94.86	3	0.04	2	0.86	97.75
123431	0.23	101	0.02	189	0.22	0.12	0.03	<0.01	0.01	3	<0.01	0.01	99.56	3	0.02	2	0.28	100.48
123432	0.16	33	6.63	169	0.62	0.10	4.69	0.02	0.06	6	0.02	0.06	76.81	31	0.01	3	11.77	100.94
123433	0.28	88	0.03	120	0.15	0.15	0.05	<0.01	0.01	2	<0.01	0.01	96.89	2	0.01	2	0.25	97.82
123551	0.38	12	0.04	178	0.26	0.08	0.02	<0.01	0.02	3	<0.01	0.03	96.61	50	0.02	3	0.49	97.93
123552	0.20	609	0.32	148	0.19	0.10	0.03	<0.01	0.01	3	<0.01	0.02	96.34	54	0.01	1	0.61	97.83

Sample received on June 9th, 2017
0.5 gm sample digested with multi acids and finished by ICP

Certified by: _____

WR

Loring Laboratories Ltd.

629 Beaverdam Road N.E.,
Calgary Alberta T2K 4W7
Tel: 403- 274-2777 Fax: 403-275-0541
info@loringlabs.net

ISO9001:2008 Certified

TO: Dahrouge Geological
Suite 18, 10509 81 Ave.
Edmonton AB
T6E 1X7

File No : 6 1 2 0 1-1
Date : Sep. 08, 2017
Samples : Rock pulp

32 ELEMENT ICP ANALYSIS

Attn: Matthew carter

Sample No.	Ag ppm	Al %	As ppm	B ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cd ppm	Co ppm	Cr ppm	Cu ppm	Fe %	K %	La ppm	Mg %	Mn ppm	Mo ppm	Na %	Ni ppm	P %	Pb ppm	Sb ppm	Se ppm	Sr ppm	Th ppm	Ti %	U ppm	V ppm	W ppm	Zn ppm	Zr ppm
123376	3.9	0.09	1	<1	71	<1	5	0.11	1	1	247	6	0.22	0.06	7	0.04	28	8	0.01	4	<0.01	6	6	<1	8	7	0.01	<1	1	21	12	5
123379	2.1	0.09	<1	<1	52	<1	<1	0.11	<1	<1	148	5	0.13	0.05	6	0.04	15	36	0.01	3	<0.01	4	3	<1	18	<1	0.01	<1	<1	<1	10	3
123381	2.0	0.09	<1	<1	105	<1	3	0.10	<1	<1	236	4	0.21	0.05	4	0.04	21	34	0.01	4	<0.01	2	3	1	10	3	0.01	<1	<1	<1	11	4
123383	<0.5	0.15	<1	<1	160	<1	1	0.10	<1	<1	176	4	0.14	0.08	7	0.04	15	13	0.01	3	<0.01	4	2	2	17	2	0.01	<1	<1	<1	10	4
123388	4.0	0.05	<1	<1	154	<1	6	0.10	<1	<1	165	4	0.14	0.04	5	0.03	14	24	<0.01	4	<0.01	8	<1	<1	10	2	<0.01	<1	<1	<1	8	3
123389	4.0	0.13	<1	<1	222	<1	2	0.09	<1	<1	127	7	0.11	0.07	4	0.04	13	74	0.01	3	<0.01	4	1	<1	10	1	0.01	<1	<1	<1	9	5
123392	<0.5	0.08	1	<1	9	<1	2	0.09	<1	<1	161	4	0.17	0.05	5	0.04	15	31	0.01	3	<0.01	2	1	<1	5	<1	<0.01	<1	<1	<1	8	4
123393	<0.5	0.04	<1	<1	6	<1	<1	0.09	<1	<1	257	3	0.21	0.02	5	0.03	27	19	0.01	4	<0.01	1	2	<1	4	<1	<0.01	<1	<1	<1	8	2
123394	<0.5	0.09	<1	<1	9	<1	3	0.02	<1	<1	138	2	0.13	0.06	2	0.01	13	1	0.01	3	<0.01	6	1	<1	<1	2	<0.01	<1	1	<1	4	2
123395	2.0	0.03	<1	<1	6	<1	<1	0.01	<1	<1	177	2	0.15	0.03	6	0.01	18	3	<0.01	3	<0.01	3	1	<1	2	2	<0.01	<1	<1	<1	4	3
123396	<0.5	0.08	<1	<1	66	<1	<1	0.01	<1	<1	157	3	0.14	0.05	6	0.01	21	8	<0.01	3	<0.01	5	1	<1	10	<1	<0.01	<1	<1	<1	4	3
123397	2.0	0.05	<1	<1	41	<1	<1	0.03	<1	<1	185	4	0.15	0.04	6	0.01	17	1	<0.01	3	<0.01	10	4	<1	6	5	<0.01	<1	<1	<1	9	2
123399	<0.5	0.04	<1	<1	30	<1	5	0.01	<1	<1	139	2	0.13	0.03	5	0.01	13	4	0.01	3	<0.01	1	1	<1	3	3	<0.01	<1	1	<1	2	2
123401	<0.5	0.07	<1	<1	14	<1	<1	0.02	<1	<1	199	3	0.20	0.04	5	0.01	30	6	<0.01	3	<0.01	4	2	<1	2	4	<0.01	<1	1	<1	6	3
123402	<0.5	0.08	<1	<1	8	<1	<1	0.01	<1	<1	137	5	0.19	0.06	7	0.01	18	5	<0.01	3	<0.01	3	2	<1	2	<1	<0.01	<1	1	<1	13	3
123403	4.0	0.06	<1	<1	36	<1	<1	0.02	<1	<1	158	4	0.13	0.04	6	0.01	15	3	<0.01	3	<0.01	4	2	<1	7	<1	0.01	<1	<1	<1	4	4
123404	2.0	0.07	<1	<1	471	<1	<1	0.01	<1	<1	198	3	0.17	0.03	5	<0.01	16	2	<0.01	3	<0.01	3	2	<1	14	<1	0.01	<1	2	<1	2	3
123405	<0.5	0.13	<1	<1	107	<1	<1	0.01	<1	1	168	3	0.15	0.07	6	0.02	16	1	0.01	2	<0.01	2	2	1	4	6	0.01	<1	1	<1	2	3
123406	2.0	0.12	<1	<1	63	<1	<1	0.01	<1	<1	141	1	0.12	0.06	5	0.01	13	3	<0.01	2	<0.01	1	1	<1	2	<1	0.01	<1	1	<1	2	3
123407	<0.5	0.14	<1	<1	95	<1	<1	0.01	<1	<1	152	2	0.13	0.08	4	0.02	14	1	<0.01	3	<0.01	1	2	<1	2	<1	0.01	<1	1	<1	2	5
123408	<0.5	0.09	1	<1	46	<1	<1	0.01	1	1	157	4	0.13	0.05	6	0.01	16	4	<0.01	3	<0.01	2	5	<1	5	<1	0.01	<1	3	36	3	6
123409	2.0	0.06	<1	<1	36	<1	3	0.01	<1	<1	151	2	0.12	0.04	5	0.01	13	3	<0.01	2	<0.01	1	1	<1	4	<1	0.01	<1	1	4	2	3
123410	<0.5	0.11	1	<1	102	<1	5	0.01	<1	<1	175	1	0.15	0.06	4	0.01	15	3	0.01	3	<0.01	1	1	<1	3	<1	0.01	<1	1	<1	2	6
123411	<0.5	0.13	1	<1	11	<1	<1	0.01	<1	<1	174	2	0.15	0.07	5	0.02	15	2	<0.01	3	<0.01	2	1	<1	4	1	0.01	<1	1	<1	2	3
123412	<0.5	0.07	<1	<1	13	<1	6	0.01	<1	<1	213	4	0.18	0.04	7	0.01	19	<1	0.01	3	<0.01	2	<1	<1	2	1	0.01	<1	1	<1	2	3
123413	2.0	0.05	<1	<1	11	<1	9	0.01	<1	<1	168	2	0.14	0.04	4	0.01	21	1	<0.01	3	<0.01	2	1	<1	2	<1	<0.01	<1	1	<1	2	3
123414	6.0	0.09	<1	<1	7	<1	<1	0.01	<1	<1	154	2	0.13	0.06	6	0.01	13	1	<0.01	2	<0.01	1	1	<1	1	3	0.01	<1	<1	<1	2	3
123415	2.0	0.05	<1	<1	21	<1	<1	0.01	<1	<1	176	2	0.16	0.04	5	0.01	15	1	<0.01	3	<0.01	2	2	<1	2	2	<0.01	<1	1	<1	2	2
123416	2.0	0.13	<1	<1	213	<1	<1	0.01	<1	<1	202	3	0.16	0.07	6	0.02	18	2	0.01	3	<0.01	2	4	<1	4	2	0.01	<1	1	<1	3	3
123417	<0.5	0.11	<1	<1	158	<1	<1	0.01	<1	<1	218	2	0.18	0.06	7	0.01	21	2	<0.01	3	<0.01	2	1	<1	9	<1	0.01	<1	1	<1	2	4
123418	2.0	0.12	<1	<1	616	<1	<1	0.01	<1	<1	142	1	0.13	0.07	8	0.02	16	3	<0.01	3	<0.01	2	2	<1	13	1	0.01	<1	<1	<1	2	3
123419	<0.5	0.14	<1	<1	81	<1	<1	0.01	<1	<1	137	1	0.12	0.08	6	0.02	16	2	<0.01	2	<0.01	2	<1	<1	2	6	0.01	<1	1	<1	3	4
123431	2.0	0.14	1	<1	111	<1	<1	0.01	<1	<1	187	1	0.16	0.07	5	0.02	17	<1	<0.01	3	<0.01	2	<1	1	4	<1	0.01	<1	1	<1	2	5
CHK 123393	2.0	0.04	<1	<1	7	<1	<1	0.10	<1	<1	241	4	0.19	0.02	4	0.03	26	2	0.01	4	<0.01	2	<1	<1	5	<1	<0.01	<1	1	<1	9	3
CHK 123403	2.0	0.06	<1	<1	34	<1	<1	0.01	<1	<1	168	3	0.14	0.04	5	0.01	16	<1	<0.01	3	<0.01	<1	<1	<1	8	<1	0.01	<1	1	<1	2	3
CHK 123431	2.0	0.14	1	<1	110	<1	1	0.01	<1	<1	190	5	0.16	0.07	6	0.02	17	2	<0.01	2	<0.01	2	2	<1	3	3	0.01	<1	1	<1	3	5

* Samples were digested for near total digestion.

* These are residue rock pulp samples.

Certified by: Hong Zhou

Loring Laboratories Ltd.

629 Beaverdam Road N.E.,
Calgary Alberta T2K 4W7
Tel:403- 274-2777 Fax:403- 275-0541
info@loringlabs.net

ISO9001:2008 Certified

TO: Dahrouge Geological
Suite 18, 10509 81 Ave.
Edmonton AB
T6E 1X7

Attn: Matthew carter

FILE: 61201

DATE: July 6th 2017

Sample Type: Rock/Sand

Certificate of Assay

Sample No.	Au ppb
Assay Analysis"	
123377	<5
BLANK	<5

Methodology: -Au- Fire Assay with AA / Gravimetric finish.
Received Date: June 12, 2017

I HEREBY CERTIFY that the above results are those assays made by me upon the herein described samples:

Assayer

Rejects and pulps are retained for one month unless specific arrangements are made in advance.

FORM ASYC-015

L O R I N G L A B O R A T O R I E S L T D .

629 Beaverdam Road N.E. Calgary, Alberta T2K 4W7
Tel : (403) 274-2777 Fax : (403) 275-0541
info@loringlabs.net

ISO 9001:2008 Certified

TO: DAHROUGE GEOLOGICAL CONSULTING LTD.
Suite 18, 10509 - 81 Ave
Edmonton, AB
T6E 1X7
Attn: Jody Dahrouge

FILE # : 6 1 2 0 2
DATE : January 19, 2018
REPORT BY : Adrien Banza

Sample Type: Rock-Sand

SIEVE ANALYSIS AFTER HAMMER CRUSH @ 4 MESH

SAMPLE ID		Initial	+ 20 M	-20 M
123527	Weight, g	278.7	108.8	169.9
	Weight,%	100.0	39.03	60.97
123528	Weight, g	202.0	148.2	53.8
	Weight,%	100.0	73.36	26.64
123529	Weight, g	278.4	164.6	113.8
	Weight,%	100.0	59.12	40.88
123532	Weight, g	395.9	293.2	102.8
	Weight,%	100.0	74.05	25.95
123533	Weight, g	948.9	747.8	201.1
	Weight,%	100.0	78.81	21.19
123541	Weight, g	223.3	171.4	52.0
	Weight,%	100.0	76.73	23.27
123553	Weight, g	349.7	219.7	130.0
	Weight,%	100.0	62.82	37.18
123566	Weight, g	246.9	167.9	79.0
	Weight,%	100.0	67.99	32.01

SIEVE ANALYSIS OF FRACTION -20 MESH

SAMPLE ID		Initial Weight in g	20 x 40 M	40 X 70 M	70 X 140 M	-140 M
123527	Weight, g	104.6	35.5	38.3	22.0	8.8
	Weight,%	100.0	33.91	36.65	21.00	8.44
123528	Weight, g	99.7	6.6	52.8	30.4	10.0
	Weight,%	100.0	6.58	52.94	30.46	10.03
123529	Weight, g	98.7	23.3	44.9	17.6	12.8
	Weight,%	100.0	23.61	45.54	17.84	13.01
123532	Weight, g	100.4	9.2	18.2	36.1	36.9
	Weight,%	100.0	9.16	18.12	35.97	36.75
123533	Weight, g	177.5	50.6	68.4	28.5	30.1
	Weight,%	100.0	28.52	38.51	16.03	16.94
123541	Weight, g	115.6	15.7	45.3	34.8	19.8
	Weight,%	100.0	13.59	39.16	30.11	17.14
123553	Weight, g	110.5	24.6	42.1	31.2	12.7
	Weight,%	100.0	22.29	38.07	28.19	11.45
123566	Weight, g	99.0	10.6	40.0	34.0	14.4
	Weight,%	100.0	10.72	40.38	34.33	14.57

Instructions received on: December 07, 2017

ASSAYER

L O R I N G L A B O R A T O R I E S L T D.

629 Beaverdam Road N.E. Calgary, Alberta T2K 4W7
Tel : (403) 274-2777 Fax : (403) 275-0541
info@loringlabs.net

ISO 9001:2008 Certified

TO: DAHROUGE GEOLOGICAL CONSULTING LTD.
Suite 18, 10509 - 81 Ave
Edmonton, AB
T6E 1X7
Attn: Jody Dahrouge

FILE # : 6 1 2 0 2
DATE : February 6, 2018
REPORT BY : Adrien Banza

Sample Type: Sand

WET SIEVE ANALYSIS (wt in grams)

SAMPLE ID	Initial Weight in g	20 x 40 M	40 X 70 M	70 X 140 M	-140 M
123527	103.7	14.0	52.8	27.3	9.6
	% by Weight	13.5	50.9	26.3	9.3

SAMPLE ID	Sphericity	Roundness
123527		
20 x 40 Mesh	0.8	0.7
40 x 70 Mesh	0.8	0.5
70 x 100 Mesh	0.8	0.5

Note: sample was crushed and sieved at 20 mesh. -20 mesh was sieved after two rounds of Rubber Morter & Pestle 20 x 40M, 40 x 70M and 70 x 140M and analyzed for Roundness and Sphericity test.

Instructions received on: December 07, 2017

ASSAYER

L O R I N G L A B O R A T O R I E S L T D.

629 Beaverdam Road N.E. Calgary, Alberta T2K 4W7
Tel : (403) 274-2777 Fax : (403) 275-0541
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ISO 9001:2008 Certified

TO: DAHROUGE GEOLOGICAL CONSULTING LTD.
Suite 18, 10509 - 81 Ave
Edmonton, AB
T6E 1X7
Attn: Jody Dahrouge

FILE # : 6 1 2 0 2
DATE : February 6, 2018
REPORT BY : Adrien Banza

Sample Type: Sand

WET SIEVE ANALYSIS (wt in grams)

SAMPLE ID	Initial Weight in g	20 x 40 M	40 X 70 M	70 X 140 M	-140 M
123528	98.4	3.5	48.9	35.3	10.7
	% by Weight	3.6	49.7	35.8	10.9

SAMPLE ID	Sphericity	Roundness
123528		
20 x 40 Mesh	0.8	0.6
40 x 70 Mesh	0.8	0.4
70 x 100 Mesh	0.7	0.5

Note: sample was crushed and sieved at 20 mesh. -20 mesh was sieved after two rounds of Rubber Morter & Pestle 20 x 40M, 40 x 70M and 70 x 140M and analyzed for Roundness and Sphericity test.

Instructions received on: December 07, 2017

ASSAYER

L O R I N G L A B O R A T O R I E S L T D.

629 Beaverdam Road N.E. Calgary, Alberta T2K 4W7
Tel : (403) 274-2777 Fax : (403) 275-0541
info@loringlabs.net

ISO 9001:2008 Certified

TO: DAHROUGE GEOLOGICAL CONSULTING LTD.
Suite 18, 10509 - 81 Ave
Edmonton, AB
T6E 1X7
Attn: Jody Dahrouge

FILE # : 6 1 2 0 2
DATE : February 6, 2018
REPORT BY : Adrien Banza

Sample Type: Sand

WET SIEVE ANALYSIS (wt in grams)

SAMPLE ID	Initial Weight in g	20 x 40 M	40 X 70 M	70 X 140 M	-140 M
123529	98.0	22.0	45.6	17.3	13.1
	% by Weight	22.4	46.5	17.6	13.4

SAMPLE ID	Sphericity	Roundness
123529		
20 x 40 Mesh	0.8	0.5
40 x 70 Mesh	0.8	0.5
70 x 100 Mesh	0.7	0.4

Note: sample was crushed and sieved at 20 mesh. -20 mesh was sieved after two rounds of Rubber Morter & Pestle 20 x 40M, 40 x 70M and 70 x 140M and analyzed for Roundness and Sphericity test.

Instructions received on: December 07, 2017

ASSAYER

L O R I N G L A B O R A T O R I E S L T D.

629 Beaverdam Road N.E. Calgary, Alberta T2K 4W7
Tel : (403) 274-2777 Fax : (403) 275-0541
info@loringlabs.net

ISO 9001:2008 Certified

TO: DAHROUGE GEOLOGICAL CONSULTING LTD.
Suite 18, 10509 - 81 Ave
Edmonton, AB
T6E 1X7
Attn: Jody Dahrouge

FILE # : 6 1 2 0 2
DATE : February 6, 2018
REPORT BY : Adrien Banza

Sample Type: Sand

WET SIEVE ANALYSIS (wt in grams)

SAMPLE ID	Initial Weight in g	20 x 40 M	40 X 70 M	70 X 140 M	-140 M
123533	176.3	14.8	102.5	29.0	30.1
	% by Weight	8.4	58.1	16.4	17.0

SAMPLE ID	Sphericity	Roundness
123533		
20 x 40 Mesh	0.8	0.5
40 x 70 Mesh	0.8	0.5
70 x 100 Mesh	0.8	0.5

Note: sample was crushed and sieved at 20 mesh. -20 mesh was sieved after two rounds of Rubber Morter & Pestle 20 x 40M, 40 x 70M and 70 x 140M and analyzed for Roundness and Sphericity test.

Instructions received on: December 07, 2017

ASSAYER

L O R I N G L A B O R A T O R I E S L T D.

629 Beaverdam Road N.E. Calgary, Alberta T2K 4W7
Tel : (403) 274-2777 Fax : (403) 275-0541
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ISO 9001:2008 Certified

TO: DAHROUGE GEOLOGICAL CONSULTING LTD.
Suite 18, 10509 - 81 Ave
Edmonton, AB
T6E 1X7
Attn: Jody Dahrouge

FILE # : 6 1 2 0 2
DATE : February 6, 2018
REPORT BY : Adrien Banza

Sample Type: Sand

WET SIEVE ANALYSIS (wt in grams)

SAMPLE ID	Initial Weight in g	20 x 40 M	40 X 70 M	70 X 140 M	-140 M
123541	114.9	8.9	49.7	36.1	20.1
	% by Weight	7.8	43.3	31.4	17.5

SAMPLE ID	Sphericity	Roundness
123541		
20 x 40 Mesh	0.8	0.5
40 x 70 Mesh	0.9	0.5
70 x 100 Mesh	0.8	0.5

Note: sample was crushed and sieved at 20 mesh. -20 mesh was sieved after two rounds of Rubber Morter & Pestle 20 x 40M, 40 x 70M and 70 x 140M and analyzed for Roundness and Sphericity test.

Instructions received on: December 07, 2017

ASSAYER

LORING LABORATORIES LTD.

629 Beaverdam Road N.E. Calgary, Alberta T2K 4W7
Tel : (403) 274-2777 Fax : (403) 275-0541
Email: info@loringlabs.net

ISO 9001:2008 Certified

TO: Dahrouge Geological
Suite 18, 10509 81 Ave.
Edmonton AB
T6E 1X7

Attn: Jody Dahrouge

FILE: 6 1 7 5 8
DATE: December 14, 2017
Sample Type: Rock/Sand

Certificate of Assay

Sample No.	B2O3 %
"Assay Analysis"	
123381	0.033
123401	0.013
123402	0.016
123403	0.014
123404	0.008
123406	0.010
123409	0.007
123414	0.005
CHK#123414	0.004
B2O3 STD (SY-3): 0.035 %	0.034
Blank	<0.001

Analysis request received: December 11, 2017

I HEREBY CERTIFY that the above results are those assays made by Loring Labs upon the herein described samples:

Certified by: _____

Rejects and pulps are retained for one month unless specific arrangements are made in advance.

FORM ASYC-015

APPENDIX 4: ANALYTICAL PROCEDURES – ACTLABS

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Close This Window

4B - Lithium Metaborate/Tetraborate Fusion - ICP

Samples are prepared and analyzed in a batch system. Each batch contains a method reagent blank, certified reference material and 17% replicates. Samples are mixed with a flux of lithium metaborate and lithium tetraborate and fused in an induction furnace. The molten melt is immediately poured into a solution of 5% nitric acid containing an internal standard, and mixed continuously until completely dissolved (~30 minutes). The samples are run for major oxides and selected trace elements (Code 4B) on a combination simultaneous/sequential Thermo Jarrell-Ash ENVIRO II ICP or a Varian Vista 735 ICP. Calibration is performed using 7 prepared USGS and CANMET certified reference materials. One of the 7 standards is used during the analysis for every group of ten samples.

Totals should be between 98.5% and 101%. If results come out lower, samples are scanned for base metals. Low reported totals may indicate sulphate being present or other elements like Li which won't normally be scanned for. Samples with low totals however are automatically re-fused and reanalyzed.

Fusion ICP

Oxide	Detection Limit (%)
Al_2O_3	0.01
CaO	0.01
Fe_2O_3	0.01
K_2O_3	0.01
MgO	0.01
MnO	0.001
Na_2O	0.01
P_2O_5	0.01
SiO_2	0.01
TiO_2	0.001
Loss on Ignition	0.01

Trace Elements

Element	Detection Limit (ppm)
Ba	2
Be	1
Sc	1
Sr	1
V	5
Y	1
Zr	2

Code 4B options:

Code 4B1 : recommended f or accurate levels of base metals (Cu, Pb, Zn, Ni and Ag) .

Code 4B-INAA : recommended for As, Sb, high W >100 ppm and Cr > 1,000 ppm.

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Close This Window

4B2 - Research - Lithium Metaborate/Tetraborate Fusion - ICP/MS

Samples fused under code 4B2 are diluted and analyzed by Perkin Elmer Sciex ELAN 6000, 6100 or 9000 ICP/MS. Three blanks and five controls (three before the sample group and two after) are analyzed per group of samples. Duplicates are fused and analyzed every 15 samples. Instrument is recalibrated every 40 samples.

Code 4B2-Research Elements and Detection Limits (ppm)

Element	Detection Limit	Upper Limit
Ag	0.5	100
As	5	2,000
Ba	3	300,000
Bi	0.1	2,000
Ce	0.05	3,000
Co	1	1,000
Cr	20	10,000
Cs	0.1	1,000
Cu	10	10,000
Dy	0.01	1,000
Er	0.01	1,000
Eu	0.005	1,000
Ga	1	500
Gd	0.01	1,000
Ge	0.5	500

Element	Detection Limit	Upper Limit
Hf	0.1	1,000
Ho	0.01	1,000
In	0.1	200
La	0.05	2,000
Lu	0.002	1,000
Mo	2	100
Nb	0.2	1,000
Nd	0.05	2,000
Ni	20	10,000
Pb	5	10,000
Pr	0.01	1,000
Rb	1	1,000
Sb	0.2	200
Sm	0.01	1,000

Element	Detection Limit	Upper Limit
Sn	1	1,000
Sr	2	10,000
Ta	0.01	500
Tb	0.01	1,000
Th	0.05	2,000
Tl	0.05	1,000
Tm	0.005	1,000
U	0.01	1,000
V	5	5,000
W	0.5	5,000
Y	0.5	1,000
Yb	0.01	1,000
Zn	30	10,000
Zr	1	10,000

Typical ICP/MS Standards Analysis (119 measurements)

Element	W2	Cert.
V	256	**262**
Cr	90	**93**
Co	44	**44**
Ni	67	**70**
Cu	105	**103**
Zn	72	**77**
Ga	18	**20**
Ge	2	**1**
As	<5	**1.24**
Rb	20	**20**
Sr	193	**194**

Element	W2	Cert.
Y	21	**24**
Zr	99	**94**
Nb	7.5	**7.9**
Mo	0.7	**0.6**
Ag	<0.5	**0.05**
In	<0.2	-
Sn	<0.5	-
Sb	0.78	**0.79**
Cs	0.95	**0.99**
Ba	164	**182**
La	11.3	**11.4**

Element	W2	Cert.
Ce	24	**24**
Pr	2.5	**5.9?**
Nd	14	**14**
Sm	3.38	**3.25**
Eu	1.1	**1.1**
Gd	3.5	**3.6**
Tb	0.62	**0.63**
Dy	3.8	**3.8**
Ho	0.76	**0.76**
Er	2.3	**2.5**
Tm	0.32	**0.38**

Element	W2	Cert.
Yb	2.06	**20.5**
Lu	0.33	**0.33**
Hf	2.64	**2.56**
Ta	0.5	**0.5**
W	<0.2	**0.3**
Tl	0.1	**0.2**
Pb	8	**9.3**
Bi	<0.05	**0.03**
Th	2.3	**2.5**
U	0.49	**0.53**

Code 4B2-Research options:

4B2-ResearchQuant: Although intended primarily for unmineralized samples, mineralized samples can be analyzed. However data may be semiquantitative for chalcophile elements (Ag, As, Bi, Co, Cu, Mo, Ni, Pb, Sb, Sn, W and Zn).

A 1 g sample is digested with aqua regia and diluted to 250 ml volumetrically. Appropriate international reference materials for the metals of interest are digested at the same time. The samples and standards are analyzed on a Varian Vista 735 or a Thermo ICAP 6500 ICP.

Code 4B1**:** Recommended for accurate levels of base metals (Cu, Pb, Zn, Ni and Ag).

Code 4B-INAA**:** is recommended for As, Bs, high W >100 ppm and Cr > 1,000 ppm.

Code 5D : recommended for Sn >50 ppm.

A19

Close This Window

Ultratrace 7 - Peroxide Fusion - ICP and ICP/MS

Ultratrace 7 combines a Sodium Peroxide Fusion with ICP and ICP/MS. All metals are solubilized.

ICP/MS
Fused samples are diluted and analyzed by Perkin Elmer Sciex ELAN 6000, 6100 or 9000 ICP/MS. Fused blank is run in triplicate for every 22 samples. Controls and standards fused with samples are run after the 22 samples. Fused duplicates are run every 10 samples. Instrument is recalibrated every 44 samples.

ICP/OES
Samples are analyzed with a minimum of 10 certified reference materials for the required analytes, all prepared by sodium peroxide fusion. Every 10^{th} sample is prepared and analyzed in duplicate; a blank is prepared every 30 samples and analyzed. Samples are analyzed using a Varian 735ES ICP and internal standards are used as part of the standard operating procedure.

Code Ultratrace-7 Elements and Detection Limits (ppm)

Element	Detection Limit	Upper Limit	Reported By
Al	0.01%	25%	ICP
As	5	10,000	ICP/MS
B	10	10,000	ICP/MS
Ba	3	10,000	ICP/MS
Be	3	5,000	ICP/MS
Bi	2	5,000	ICP/MS
Ca	0.01%	40%	ICP
Cd	2	5,000	ICP/MS
Ce	0.8	5,000	ICP/MS
Co	0.2	5,000	ICP/MS
Cr	30	10,000	ICP/MS
Cs	0.1	5,000	ICP/MS
Cu	2	10,000	ICP/MS
Dy	0.3	5,000	ICP/MS
Er	0.1	5,000	ICP/MS
Eu	0.1	1,000	ICP/MS
Fe	0.05%	30%	ICP
Ga	0.2	5,000	ICP/MS
Ge	0.7	5,000	ICP/MS
Gd	0.1	5,000	ICP/MS
Hf	10	5,000	ICP/MS
Ho	0.2	1,000	ICP/MS
In	0.2	1,000	ICP/MS
K	0.1%	25%	ICP
La	0.4	10,000	ICP/MS
Li	3	10,000	ICP/MS
Mg	0.01%	30%	ICP
Mn	3	10,000	ICP/MS

Element	Detection Limit	Upper Limit	Reported By
Mo	1	10,000	ICP/MS
Nb	2.4	5,000	ICP/MS
Nd	0.4	5,000	ICP/MS
Ni	10	10,000	ICP/MS
Pb	0.8	5,000	ICP/MS
Pr	0.1	1,000	ICP/MS
Rb	0.4	5,000	ICP/MS
S	0.01%	25%	ICP
Sb	2	5,000	ICP/MS
Se	0.8	5,000	ICP/MS
Si	0.01%	30%	ICP
Sm	0.1	1,000	ICP/MS
Sn	0.5	10,000	ICP/MS
Sr	3	10,000	ICP/MS
Ta	0.2	10,000	ICP/MS
Tb	0.1	1,000	ICP/MS
Te	6	10,000	ICP/MS
Th	0.1	1,000	ICP/MS
Ti	0.01%	25%	ICP
Tl	0.1	1,000	ICP/MS
Tm	0.1	1,000	ICP/MS
U	0.1	10,000	ICP/MS
V	5	10,000	ICP/MS
W	0.7	5,000	ICP/MS
Y	0.1	1,000	ICP/MS
Yb	0.1	1,000	ICP/MS
Zn	25	10,000	ICP/MS

APPENDIX 5: ASSAY RESULTS – ACTLABS

Quality Analysis ... *Innovative Technologies*

Date Submitted: 27-Dec-17
Invoice No.: A17-14653 (i)
Invoice Date: 07-Mar-18
Your Reference: ZIM2017-01

Dahrouge Geological Consulting Ltd.
10509-81 Ave.
Suite 18
Edmonton AB T6E 1X7
Canada

ATTN: Jody Dahrouge

CERTIFICATE OF ANALYSIS

60 Rock samples were submitted for analysis.

The following analytical package(s) were requested: Code 4LITHO (11+) Major Elements Fusion ICP(WRA)/Trace Elements Fusion ICP/MS(WRA4B2)

Code 5D-Peroxide Boron-MS Sodium Peroxide Fusion ICPMS

REPORT **A17-14653 (i)**

Notes:

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

CERTIFIED BY:

Emmanuel Eseme , Ph.D.
Quality Control

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Results **Activation Laboratories Ltd.** **Report: A17-14653**

Analyte Symbol	SiO2	Al2O3	Fe2O3(T)	MnO	MgO	CaO	Na2O	K2O	TiO2	P2O5	LOI	Total	Sc	Be	V	Ba	Sr	Y	Zr	Cr	Co	Ni	Cu
Unit Symbol	%	%	%	%	%	%	%	%	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	0.01	0.01	0.01	0.001	0.01	0.01	0.01	0.01	0.001	0.01		0.01	1	1	5	2	2	1	2	20	1	20	10
Method Code	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS
123376	98.71	0.41	0.09	0.004	0.11	0.12	< 0.01	0.04	0.028	< 0.01	0.41	99.92	< 1	< 1	< 5	61	5	4	42	20	< 1	< 20	< 10
123378	99.53	0.33	0.08	0.002	0.03	0.05	< 0.01	< 0.01	0.012	< 0.01	0.40	100.4	< 1	< 1	< 5	1557	64	1	14	< 20	< 1	< 20	< 10
123379	99.24	0.24	0.05	0.002	0.02	0.03	0.01	0.04	0.016	< 0.01	0.33	99.97	< 1	< 1	< 5	43	15	< 1	25	30	< 1	< 20	< 10
123380	97.81	0.29	0.06	0.004	0.05	0.03	0.01	0.06	0.026	< 0.01	0.34	98.67	< 1	< 1	< 5	98	13	2	163	30	< 1	< 20	< 10
123381	98.87	0.24	0.06	0.002	0.03	0.02	0.02	0.04	0.011	< 0.01	0.40	99.69	< 1	< 1	< 5	92	7	2	18	30	< 1	< 20	< 10
123382	98.78	0.23	0.05	0.002	0.03	0.02	0.01	0.04	0.013	< 0.01	0.33	99.50	< 1	< 1	< 5	41	10	< 1	44	30	< 1	< 20	< 10
123383	98.44	0.34	0.05	0.002	0.04	0.02	0.01	0.08	0.016	< 0.01	0.35	99.33	< 1	< 1	< 5	56	14	1	15	30	< 1	< 20	< 10
123384	99.20	0.14	0.06	0.002	0.02	0.02	< 0.01	0.02	0.013	< 0.01	0.32	99.80	< 1	< 1	< 5	52	5	< 1	18	30	< 1	< 20	< 10
123385	98.81	0.26	0.07	0.002	0.03	0.07	< 0.01	0.05	0.012	< 0.01	0.30	99.62	< 1	< 1	< 5	77	7	1	13	30	< 1	< 20	< 10
123386	97.00	0.74	0.07	0.004	0.08	0.03	0.01	0.20	0.026	< 0.01	0.37	98.53	< 1	< 1	< 5	174	12	< 1	39	30	< 1	< 20	< 10
123387	99.31	0.23	0.06	0.002	0.03	0.01	< 0.01	0.04	0.012	< 0.01	0.24	99.95	< 1	< 1	< 5	53	5	< 1	16	30	< 1	< 20	< 10
123388	99.89	0.17	0.04	0.002	0.02	0.01	0.01	0.02	0.009	< 0.01	0.21	100.4	< 1	< 1	< 5	49	4	< 1	18	20	< 1	< 20	< 10
123389	98.51	0.29	0.05	0.002	0.03	0.01	0.01	0.06	0.019	< 0.01	0.24	99.25	< 1	< 1	< 5	110	6	< 1	32	30	< 1	< 20	< 10
123390	97.13	0.56	0.16	0.003	0.05	0.05	0.02	0.13	0.025	0.03	0.44	98.59	< 1	< 1	7	17	7	< 1	18	30	< 1	< 20	< 10
123391	97.54	0.20	0.16	0.004	0.35	0.69	0.02	0.02	0.011	0.11	1.03	100.1	< 1	< 1	< 5	6	14	3	18	40	< 1	< 20	< 10
123392	98.85	0.26	0.09	0.002	0.02	0.02	0.01	0.04	0.011	< 0.01	0.35	99.66	< 1	< 1	< 5	6	2	< 1	13	30	< 1	< 20	< 10
123393	99.11	0.15	0.07	0.004	0.02	0.02	0.01	0.02	0.010	< 0.01	0.29	99.70	< 1	< 1	< 5	5	3	1	19	40	< 1	< 20	< 10
123394	99.34	0.22	0.05	0.002	0.03	0.01	< 0.01	0.05	0.011	< 0.01	0.25	99.97	< 1	< 1	< 5	4	< 2	< 1	15	30	< 1	< 20	< 10
123395	99.39	0.14	0.06	0.004	0.02	0.02	< 0.01	0.01	0.008	< 0.01	0.26	99.93	< 1	< 1	< 5	3	2	3	14	30	< 1	< 20	< 10
123396	98.05	0.27	0.04	0.003	0.03	0.01	0.01	0.04	0.010	< 0.01	0.21	98.68	< 1	< 1	< 5	63	11	< 1	15	20	< 1	< 20	< 10
123397	98.48	0.19	0.03	0.002	0.02	0.01	0.01	0.03	0.010	< 0.01	0.26	99.04	< 1	< 1	< 5	35	5	< 1	18	< 20	< 1	< 20	< 10
123398	98.03	0.21	0.04	0.002	0.02	0.02	0.01	0.03	0.010	< 0.01	0.23	98.60	< 1	< 1	< 5	71	11	< 1	13	30	< 1	< 20	< 10
123399	99.51	0.15	0.05	0.002	0.03	0.02	< 0.01	0.02	0.010	< 0.01	0.16	99.96	< 1	< 1	< 5	26	4	< 1	17	30	< 1	< 20	< 10
123400	98.89	0.26	0.05	0.002	0.03	0.01	0.01	0.04	0.013	< 0.01	0.20	99.52	< 1	< 1	< 5	55	3	< 1	28	30	< 1	< 20	< 10
123401	98.43	0.22	0.09	0.004	0.02	0.02	0.02	0.03	0.010	< 0.01	0.32	99.15	< 1	< 1	< 5	11	3	< 1	16	30	< 1	< 20	< 10
123402	98.64	0.21	0.12	0.003	0.03	0.02	0.01	0.04	0.011	< 0.01	0.25	99.33	< 1	< 1	< 5	5	2	2	19	30	< 1	< 20	< 10
123403	97.91	0.22	0.04	0.002	0.02	0.01	0.01	0.02	0.024	< 0.01	0.23	98.50	< 1	< 1	< 5	30	7	< 1	97	20	< 1	< 20	< 10
123404	98.57	0.25	0.07	0.002	0.03	0.01	0.01	0.02	0.016	< 0.01	0.27	99.25	< 1	< 1	< 5	438	14	2	42	50	< 1	< 20	< 10
123405	97.86	0.32	0.06	0.002	0.03	0.01	0.01	0.07	0.019	< 0.01	0.24	98.63	< 1	< 1	< 5	103	3	< 1	16	30	< 1	< 20	< 10
123406	99.19	0.27	0.05	0.002	0.04	0.01	0.01	0.05	0.020	< 0.01	0.21	99.87	< 1	< 1	< 5	57	3	< 1	95	30	< 1	< 20	< 10
123407	98.43	0.34	0.05	0.002	0.03	0.01	0.01	0.07	0.034	< 0.01	0.24	99.23	< 1	< 1	< 5	93	3	2	305	30	< 1	< 20	< 10
123408	98.47	0.22	0.07	0.004	0.04	0.02	< 0.01	0.04	0.027	< 0.01	0.19	99.07	< 1	< 1	< 5	40	4	2	82	40	< 1	< 20	< 10
123409	99.84	0.20	0.05	0.002	0.03	0.01	0.01	0.03	0.026	< 0.01	0.18	100.4	< 1	< 1	< 5	33	5	1	87	30	< 1	< 20	< 10
123410	97.96	0.29	0.05	0.002	0.03	0.01	0.02	0.04	0.022	< 0.01	0.27	98.68	< 1	< 1	< 5	82	3	< 1	44	30	< 1	< 20	< 10
123411	98.76	0.31	0.06	0.002	0.03	0.01	0.01	0.06	0.022	< 0.01	0.21	99.47	< 1	< 1	< 5	8	4	< 1	40	40	< 1	< 20	< 10
123412	99.03	0.22	0.08	0.004	0.04	0.02	< 0.01	0.03	0.013	< 0.01	0.21	99.65	< 1	< 1	< 5	11	3	< 1	18	40	< 1	< 20	< 10
123413	98.21	0.22	0.06	0.003	0.02	0.01	0.01	0.02	0.010	< 0.01	0.27	98.84	< 1	< 1	< 5	8	2	< 1	22	30	< 1	< 20	< 10
123414	99.74	0.24	0.06	0.002	0.03	0.01	0.01	0.05	0.013	< 0.01	0.22	100.4	< 1	< 1	< 5	5	< 2	< 1	20	40	< 1	< 20	< 10
123415	98.28	0.21	0.09	0.002	0.03	0.02	< 0.01	0.03	0.009	< 0.01	0.23	98.90	< 1	< 1	< 5	10	< 2	< 1	13	40	< 1	< 20	< 10
123416	99.17	0.33	0.05	0.002	0.03	0.01	0.01	0.06	0.013	< 0.01	0.32	100.0	< 1	< 1	< 5	169	4	< 1	14	30	< 1	< 20	< 10
123417	99.28	0.37	0.06	0.002	0.03	0.02	0.02	0.05	0.021	< 0.01	0.37	100.2	< 1	< 1	< 5	151	10	1	53	40	< 1	< 20	< 10

Results **Activation Laboratories Ltd.** **Report: A17-14653**

Analyte Symbol	SiO2	Al2O3	Fe2O3(T)	MnO	MgO	CaO	Na2O	K2O	TiO2	P2O5	LOI	Total	Sc	Be	V	Ba	Sr	Y	Zr	Cr	Co	Ni	Cu
Unit Symbol	%	%	%	%	%	%	%	%	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	0.01	0.01	0.01	0.001	0.01	0.01	0.01	0.01	0.001	0.01		0.01	1	1	5	2	2	1	2	20	1	20	10
Method Code	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS
123418	98.82	0.32	0.09	0.003	0.05	0.03	0.02	0.06	0.018	< 0.01	0.26	99.66	< 1	< 1	< 5	701	15	< 1	20	30	< 1	< 20	< 10
123419	98.36	0.33	0.05	0.003	0.03	0.02	0.01	0.07	0.015	< 0.01	0.20	99.09	< 1	< 1	< 5	71	3	< 1	20	30	< 1	< 20	< 10
123420	99.50	0.21	0.06	0.002	0.02	0.01	0.01	0.03	0.011	< 0.01	0.18	100.0	< 1	< 1	< 5	289	10	< 1	16	50	< 1	< 20	< 10
123421	99.25	0.21	0.05	0.002	0.04	0.02	< 0.01	0.03	0.011	< 0.01	0.16	99.77	< 1	< 1	< 5	76	3	< 1	20	40	< 1	< 20	< 10
123422	99.33	0.22	0.06	0.002	0.03	0.01	< 0.01	0.04	0.011	< 0.01	0.19	99.91	< 1	< 1	< 5	51	4	2	15	40	< 1	< 20	< 10
123423	99.46	0.29	0.05	0.002	0.03	0.02	< 0.01	0.06	0.016	< 0.01	0.18	100.1	< 1	< 1	< 5	99	3	< 1	16	40	< 1	< 20	< 10
123424	98.86	0.23	0.07	0.003	0.03	0.03	0.02	0.02	0.050	< 0.01	0.18	99.49	< 1	< 1	< 5	63	4	3	441	50	< 1	< 20	< 10
123425	98.00	0.24	0.06	0.003	0.03	0.03	< 0.01	0.04	0.014	< 0.01	0.19	98.62	< 1	< 1	< 5	172	4	5	33	50	< 1	< 20	< 10
123426	98.00	0.28	0.05	0.002	0.03	0.01	< 0.01	0.07	0.014	< 0.01	0.26	98.73	< 1	< 1	< 5	678	8	2	20	40	< 1	< 20	< 10
123427	98.93	0.21	0.05	0.002	0.02	0.01	< 0.01	0.04	0.010	< 0.01	0.16	99.43	< 1	< 1	< 5	52	3	2	17	40	< 1	< 20	< 10
123428	99.57	0.25	0.07	0.003	0.02	0.01	< 0.01	0.03	0.011	< 0.01	0.22	100.2	< 1	< 1	< 5	206	3	1	20	40	< 1	< 20	< 10
123429	99.88	0.22	0.05	0.002	0.02	0.01	< 0.01	0.03	0.022	< 0.01	0.22	100.5	< 1	< 1	< 5	99	< 2	1	80	40	< 1	< 20	< 10
123430	98.04	1.19	0.06	0.002	0.15	0.02	< 0.01	0.38	0.045	< 0.01	0.42	100.3	< 1	< 1	< 5	219	4	2	131	40	< 1	< 20	< 10
123431	99.30	0.25	0.05	0.002	0.02	0.01	< 0.01	0.05	0.015	< 0.01	0.18	99.88	< 1	< 1	< 5	85	2	1	51	40	< 1	< 20	< 10
123432	77.24	0.19	0.49	0.021	4.30	6.70	< 0.01	0.05	0.015	0.02	10.37	99.40	< 1	< 1	< 5	35	30	2	40	30	< 1	< 20	< 10
123433	98.81	0.34	0.06	0.002	0.09	0.10	< 0.01	0.09	0.017	< 0.01	0.31	99.83	< 1	< 1	< 5	89	3	3	47	50	< 1	< 20	< 10
123451	98.27	0.54	0.09	0.002	0.02	0.03	< 0.01	0.03	0.033	< 0.01	0.32	99.32	< 1	< 1	< 5	14	48	< 1	46	50	< 1	< 20	< 10
123452	97.91	0.33	0.05	0.005	0.04	0.35	< 0.01	0.05	0.018	< 0.01	0.52	99.26	< 1	< 1	< 5	675	61	2	127	40	< 1	< 20	< 10
123377	38.65	0.67	5.98	0.095	1.05	28.26	0.14	0.13	0.016	0.03	18.81	93.85	1	< 1	< 5	169	1101	7	4	< 20	2	< 20	< 10

Results **Activation Laboratories Ltd.** **Report: A17-14653**

Analyte Symbol	Zn	Ga	Ge	As	Rb	Nb	Mo	Ag	In	Sn	Sb	Cs	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	30	1	1	5	2	1	2	0.5	0.2	1	0.5	0.5	0.1	0.1	0.05	0.1	0.1	0.05	0.1	0.1	0.1	0.1	0.1
Method Code	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
123376	< 30	< 1	< 1	< 5	< 2	< 1	< 2	< 0.5	< 0.2	< 1	< 0.5	< 0.5	3.6	7.4	0.77	2.6	0.4	0.07	0.2	< 0.1	0.2	< 0.1	0.1
123378	< 30	< 1	< 1	< 5	< 2	< 1	< 2	< 0.5	< 0.2	< 1	< 0.5	< 0.5	1.8	3.2	0.33	1.1	0.2	< 0.05	0.2	< 0.1	0.1	< 0.1	< 0.1
123379	< 30	< 1	< 1	< 5	< 2	< 1	< 2	< 0.5	< 0.2	< 1	< 0.5	< 0.5	3.8	6.7	0.74	2.5	0.2	< 0.05	< 0.1	< 0.1	0.1	< 0.1	< 0.1
123380	< 30	< 1	< 1	< 5	< 2	< 1	< 2	< 0.5	< 0.2	< 1	< 0.5	< 0.5	4.0	7.6	0.86	2.8	0.4	0.05	0.2	< 0.1	0.2	< 0.1	0.1
123381	30	< 1	< 1	< 5	< 2	< 1	< 2	< 0.5	< 0.2	< 1	< 0.5	< 0.5	2.6	4.9	0.55	1.9	0.3	< 0.05	0.1	< 0.1	0.1	< 0.1	< 0.1
123382	60	< 1	< 1	< 5	< 2	< 1	< 2	< 0.5	< 0.2	< 1	< 0.5	< 0.5	3.4	6.4	0.69	2.4	0.3	< 0.05	0.1	< 0.1	0.1	< 0.1	< 0.1
123383	< 30	< 1	< 1	< 5	< 2	< 1	< 2	< 0.5	< 0.2	< 1	< 0.5	< 0.5	4.1	7.8	0.90	3.1	0.5	0.08	0.2	< 0.1	0.1	< 0.1	< 0.1
123384	< 30	< 1	< 1	< 5	< 2	< 1	< 2	< 0.5	< 0.2	< 1	< 0.5	< 0.5	1.8	3.3	0.39	1.5	0.2	< 0.05	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
123385	< 30	< 1	< 1	< 5	< 2	< 1	< 2	< 0.5	< 0.2	< 1	< 0.5	< 0.5	3.5	7.1	0.82	2.6	0.4	0.07	0.2	< 0.1	0.2	< 0.1	< 0.1
123386	< 30	< 1	< 1	< 5	< 2	< 1	< 2	< 0.5	< 0.2	< 1	< 0.5	< 0.5	4.7	8.9	0.94	2.9	0.4	0.05	0.2	< 0.1	0.2	< 0.1	0.1
123387	< 30	< 1	< 1	< 5	< 2	< 1	< 2	< 0.5	< 0.2	< 1	< 0.5	< 0.5	4.2	8.3	0.96	3.1	0.5	0.06	0.2	< 0.1	0.1	< 0.1	< 0.1
123388	< 30	< 1	< 1	< 5	< 2	< 1	< 2	< 0.5	< 0.2	< 1	< 0.5	< 0.5	2.3	4.5	0.56	1.7	0.2	< 0.05	0.1	< 0.1	< 0.1	< 0.1	< 0.1
123389	< 30	< 1	< 1	< 5	< 2	< 1	< 2	< 0.5	< 0.2	< 1	< 0.5	< 0.5	4.5	8.5	0.99	3.4	0.4	< 0.05	0.2	< 0.1	0.2	< 0.1	< 0.1
123390	< 30	< 1	< 1	< 5	2	< 1	< 2	< 0.5	< 0.2	< 1	< 0.5	< 0.5	5.3	9.6	1.15	4.4	0.6	0.09	0.3	< 0.1	0.1	< 0.1	< 0.1
123391	< 30	< 1	< 1	< 5	< 2	< 1	< 2	< 0.5	< 0.2	< 1	< 0.5	< 0.5	3.2	5.8	0.65	2.7	0.6	0.13	0.5	< 0.1	0.3	< 0.1	0.2
123392	< 30	< 1	< 1	< 5	< 2	< 1	< 2	< 0.5	< 0.2	< 1	< 0.5	< 0.5	2.4	4.1	0.40	1.2	0.2	< 0.05	< 0.1	< 0.1	0.1	< 0.1	< 0.1
123393	< 30	< 1	< 1	< 5	< 2	< 1	< 2	< 0.5	< 0.2	< 1	< 0.5	< 0.5	2.4	4.0	0.44	1.4	0.2	< 0.05	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
123394	< 30	< 1	< 1	< 5	< 2	< 1	< 2	< 0.5	< 0.2	< 1	< 0.5	< 0.5	1.0	1.8	0.19	0.6	0.1	< 0.05	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
123395	< 30	< 1	< 1	< 5	< 2	< 1	< 2	< 0.5	< 0.2	< 1	< 0.5	< 0.5	1.7	3.0	0.35	1.1	0.2	< 0.05	0.1	< 0.1	0.1	< 0.1	< 0.1
123396	< 30	< 1	< 1	< 5	< 2	< 1	< 2	< 0.5	< 0.2	< 1	< 0.5	< 0.5	3.4	6.1	0.65	2.1	0.3	< 0.05	0.1	< 0.1	0.1	< 0.1	< 0.1
123397	< 30	< 1	< 1	< 5	< 2	< 1	< 2	< 0.5	< 0.2	< 1	< 0.5	< 0.5	3.0	4.7	0.52	1.5	0.2	< 0.05	0.1	< 0.1	< 0.1	< 0.1	< 0.1
123398	< 30	< 1	< 1	< 5	< 2	< 1	< 2	< 0.5	< 0.2	< 1	< 0.5	< 0.5	3.4	6.4	0.71	2.5	0.3	< 0.05	0.2	< 0.1	0.1	< 0.1	< 0.1
123399	< 30	< 1	< 1	< 5	< 2	< 1	< 2	< 0.5	< 0.2	< 1	< 0.5	< 0.5	1.9	3.6	0.42	1.4	0.2	< 0.05	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
123400	30	< 1	< 1	< 5	< 2	< 1	< 2	< 0.5	< 0.2	< 1	< 0.5	< 0.5	4.0	7.2	0.83	2.7	0.4	0.06	0.2	< 0.1	0.2	< 0.1	< 0.1
123401	< 30	< 1	< 1	< 5	< 2	< 1	< 2	< 0.5	< 0.2	< 1	< 0.5	< 0.5	2.4	4.6	0.48	1.7	0.2	< 0.05	0.1	< 0.1	0.1	< 0.1	< 0.1
123402	< 30	< 1	< 1	< 5	< 2	< 1	< 2	< 0.5	< 0.2	< 1	< 0.5	< 0.5	3.8	7.3	0.88	2.9	0.4	0.07	0.2	< 0.1	0.2	< 0.1	< 0.1
123403	< 30	< 1	< 1	< 5	< 2	< 1	< 2	< 0.5	< 0.2	< 1	< 0.5	< 0.5	2.3	4.3	0.46	1.6	0.2	< 0.05	0.1	< 0.1	0.2	< 0.1	0.1
123404	< 30	< 1	< 1	< 5	< 2	< 1	< 2	< 0.5	< 0.2	< 1	< 0.5	< 0.5	4.0	7.5	0.88	3.1	0.4	0.06	0.2	< 0.1	0.2	< 0.1	0.1
123405	< 30	< 1	< 1	< 5	< 2	< 1	< 2	< 0.5	< 0.2	< 1	< 0.5	< 0.5	3.9	7.4	0.84	3.0	0.5	0.07	0.2	< 0.1	0.2	< 0.1	< 0.1
123406	< 30	< 1	< 1	< 5	< 2	< 1	< 2	< 0.5	< 0.2	< 1	< 0.5	< 0.5	4.0	7.5	0.86	2.8	0.4	0.05	0.2	< 0.1	0.1	< 0.1	0.1
123407	< 30	< 1	< 1	< 5	< 2	< 1	< 2	0.8	< 0.2	< 1	< 0.5	< 0.5	4.0	7.4	0.82	2.7	0.5	0.07	0.3	< 0.1	0.3	< 0.1	0.2
123408	< 30	< 1	< 1	< 5	< 2	< 1	< 2	< 0.5	< 0.2	< 1	< 0.5	< 0.5	3.2	6.1	0.66	2.2	0.3	< 0.05	0.2	< 0.1	0.2	< 0.1	0.1
123409	< 30	< 1	< 1	< 5	< 2	< 1	< 2	< 0.5	< 0.2	< 1	0.8	< 0.5	2.9	5.6	0.58	2.0	0.3	< 0.05	0.2	< 0.1	0.1	< 0.1	0.1
123410	< 30	< 1	< 1	< 5	< 2	< 1	< 2	< 0.5	< 0.2	< 1	< 0.5	< 0.5	2.1	3.9	0.42	1.4	0.2	< 0.05	0.1	< 0.1	0.2	< 0.1	0.1
123411	< 30	< 1	< 1	< 5	< 2	< 1	< 2	< 0.5	< 0.2	< 1	< 0.5	< 0.5	2.3	4.0	0.40	1.2	0.1	< 0.05	< 0.1	< 0.1	0.1	< 0.1	< 0.1
123412	< 30	< 1	< 1	< 5	< 2	< 1	< 2	< 0.5	< 0.2	< 1	< 0.5	< 0.5	3.6	5.7	0.64	1.9	0.3	< 0.05	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
123413	280	< 1	< 1	< 5	< 2	< 1	< 2	< 0.5	< 0.2	< 1	< 0.5	< 0.5	1.7	3.0	0.33	1.1	0.2	< 0.05	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
123414	< 30	< 1	< 1	< 5	< 2	< 1	< 2	< 0.5	< 0.2	< 1	< 0.5	< 0.5	3.9	6.9	0.74	2.4	0.4	0.06	0.2	< 0.1	0.1	< 0.1	< 0.1
123415	< 30	< 1	< 1	< 5	< 2	< 1	< 2	< 0.5	< 0.2	< 1	< 0.5	< 0.5	1.4	2.4	0.25	0.8	0.1	< 0.05	0.1	< 0.1	< 0.1	< 0.1	< 0.1
123416	< 30	< 1	< 1	< 5	< 2	< 1	< 2	< 0.5	< 0.2	< 1	< 0.5	< 0.5	3.4	6.3	0.73	2.7	0.3	< 0.05	0.1	< 0.1	0.1	< 0.1	< 0.1
123417	< 30	< 1	< 1	< 5	< 2	< 1	< 2	< 0.5	< 0.2	< 1	< 0.5	< 0.5	3.0	5.4	0.59	1.9	0.3	< 0.05	0.2	< 0.1	0.1	< 0.1	< 0.1

Results **Activation Laboratories Ltd.** **Report: A17-14653**

Analyte Symbol	Zn	Ga	Ge	As	Rb	Nb	Mo	Ag	In	Sn	Sb	Cs	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	30	1	1	5	2	1	2	0.5	0.2	1	0.5	0.5	0.1	0.1	0.05	0.1	0.1	0.05	0.1	0.1	0.1	0.1	0.1
Method Code	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
123418	< 30	< 1	< 1	< 5	< 2	< 1	< 2	< 0.5	< 0.2	< 1	< 0.5	< 0.5	3.9	7.3	0.85	2.8	0.5	0.06	0.2	< 0.1	0.1	< 0.1	< 0.1
123419	< 30	< 1	< 1	< 5	< 2	< 1	< 2	< 0.5	< 0.2	< 1	< 0.5	< 0.5	5.0	9.6	1.11	3.6	0.5	0.06	0.2	< 0.1	0.2	< 0.1	< 0.1
123420	< 30	< 1	< 1	< 5	< 2	< 1	< 2	< 0.5	< 0.2	< 1	< 0.5	< 0.5	3.2	6.3	0.73	2.6	0.3	< 0.05	0.2	< 0.1	0.1	< 0.1	< 0.1
123421	1520	< 1	< 1	< 5	< 2	< 1	< 2	< 0.5	< 0.2	1	< 0.5	< 0.5	3.6	6.7	0.79	2.9	0.5	0.06	0.3	< 0.1	0.3	< 0.1	0.1
123422	< 30	< 1	< 1	< 5	< 2	< 1	< 2	< 0.5	< 0.2	< 1	< 0.5	< 0.5	3.0	5.6	0.63	2.1	0.3	< 0.05	0.2	< 0.1	0.1	< 0.1	< 0.1
123423	< 30	< 1	< 1	< 5	< 2	< 1	< 2	< 0.5	< 0.2	< 1	< 0.5	< 0.5	4.0	7.7	0.91	3.1	0.5	0.07	0.2	< 0.1	0.1	< 0.1	< 0.1
123424	< 30	< 1	< 1	< 5	< 2	< 1	< 2	1.0	< 0.2	< 1	< 0.5	< 0.5	4.0	8.3	0.99	3.5	0.7	0.12	0.4	< 0.1	0.3	< 0.1	0.2
123425	< 30	< 1	< 1	< 5	< 2	< 1	< 2	< 0.5	< 0.2	< 1	< 0.5	< 0.5	4.1	7.8	0.91	3.0	0.5	0.09	0.3	< 0.1	0.2	< 0.1	0.1
123426	< 30	< 1	< 1	< 5	< 2	< 1	< 2	< 0.5	< 0.2	< 1	< 0.5	< 0.5	5.4	9.8	1.11	3.0	0.3	0.06	0.1	< 0.1	0.2	< 0.1	< 0.1
123427	< 30	< 1	< 1	< 5	< 2	< 1	< 2	< 0.5	< 0.2	< 1	< 0.5	< 0.5	3.3	6.4	0.72	2.3	0.3	< 0.05	0.2	< 0.1	0.1	< 0.1	< 0.1
123428	< 30	< 1	< 1	< 5	< 2	< 1	< 2	< 0.5	< 0.2	< 1	< 0.5	< 0.5	3.3	6.0	0.66	2.3	0.4	< 0.05	0.2	< 0.1	0.1	< 0.1	< 0.1
123429	< 30	< 1	< 1	< 5	< 2	< 1	< 2	< 0.5	< 0.2	< 1	< 0.5	< 0.5	3.0	5.6	0.68	2.5	0.4	< 0.05	0.2	< 0.1	0.1	< 0.1	< 0.1
123430	< 30	1	< 1	< 5	4	< 1	< 2	< 0.5	< 0.2	< 1	< 0.5	< 0.5	7.0	12.8	1.44	4.8	0.7	0.12	0.4	< 0.1	0.3	< 0.1	0.2
123431	< 30	< 1	< 1	< 5	< 2	< 1	< 2	< 0.5	< 0.2	< 1	< 0.5	< 0.5	3.3	6.4	0.69	2.2	0.3	< 0.05	0.2	< 0.1	0.1	< 0.1	< 0.1
123432	< 30	< 1	< 1	< 5	< 2	< 1	< 2	< 0.5	< 0.2	< 1	< 0.5	< 0.5	2.0	3.9	0.46	1.8	0.5	0.10	0.4	< 0.1	0.3	< 0.1	0.2
123433	< 30	< 1	< 1	< 5	< 2	< 1	< 2	< 0.5	< 0.2	< 1	< 0.5	< 0.5	4.5	8.6	0.98	3.1	0.4	0.06	0.2	< 0.1	0.2	< 0.1	0.1
123451	< 30	< 1	< 1	< 5	< 2	1	< 2	< 0.5	< 0.2	< 1	< 0.5	< 0.5	1.5	2.6	0.26	0.9	0.1	< 0.05	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
123452	< 30	< 1	< 1	< 5	< 2	< 1	< 2	< 0.5	< 0.2	< 1	< 0.5	< 0.5	3.9	7.9	0.95	3.1	0.5	0.10	0.3	< 0.1	0.2	< 0.1	0.1
123377	< 30	< 1	< 1	< 5	5	< 1	< 2	< 0.5	< 0.2	< 1	< 0.5	< 0.5	5.9	15.1	2.25	9.5	2.4	2.32	2.0	0.3	1.4	0.2	0.5

Analyte Symbol	Tm	Yb	Lu	Hf	Ta	W	Tl	Pb	Bi	Th	U	B
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	0.05	0.1	0.01	0.2	0.1	1	0.1	5	0.4	0.1	0.1	2
Method Code	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS-Na2O2
123376	< 0.05	0.1	< 0.01	0.8	< 0.1	< 1	0.2	< 5	< 0.4	0.7	0.2	< 2
123378	< 0.05	< 0.1	< 0.01	0.3	< 0.1	2	< 0.1	< 5	< 0.4	0.6	0.2	< 2
123379	< 0.05	< 0.1	< 0.01	0.6	< 0.1	< 1	< 0.1	< 5	< 0.4	0.6	0.2	4
123380	< 0.05	0.2	< 0.01	3.2	< 0.1	< 1	< 0.1	< 5	< 0.4	0.7	0.2	8
123381	< 0.05	< 0.1	< 0.01	0.5	< 0.1	2	< 0.1	< 5	< 0.4	0.6	0.2	4
123382	< 0.05	< 0.1	< 0.01	1.0	< 0.1	< 1	< 0.1	< 5	< 0.4	0.6	0.2	3
123383	< 0.05	< 0.1	< 0.01	0.4	< 0.1	< 1	< 0.1	< 5	< 0.4	0.6	0.2	6
123384	< 0.05	< 0.1	< 0.01	0.4	< 0.1	< 1	< 0.1	< 5	< 0.4	0.5	0.2	2
123385	< 0.05	< 0.1	< 0.01	0.3	< 0.1	< 1	< 0.1	< 5	< 0.4	0.7	0.2	< 2
123386	< 0.05	< 0.1	< 0.01	0.7	< 0.1	< 1	< 0.1	< 5	< 0.4	0.9	0.3	18
123387	< 0.05	< 0.1	< 0.01	0.3	< 0.1	2	< 0.1	< 5	< 0.4	0.7	0.2	2
123388	< 0.05	< 0.1	< 0.01	0.4	< 0.1	< 1	< 0.1	< 5	< 0.4	0.7	0.2	< 2
123389	< 0.05	0.1	< 0.01	0.7	< 0.1	< 1	< 0.1	< 5	< 0.4	0.8	0.2	7
123390	< 0.05	< 0.1	< 0.01	0.4	< 0.1	< 1	< 0.1	< 5	< 0.4	0.7	0.3	6
123391	< 0.05	0.1	< 0.01	0.4	< 0.1	< 1	< 0.1	< 5	< 0.4	0.5	0.2	< 2
123392	< 0.05	< 0.1	< 0.01	0.3	< 0.1	< 1	< 0.1	< 5	< 0.4	0.6	0.2	4
123393	< 0.05	< 0.1	< 0.01	0.3	< 0.1	< 1	< 0.1	< 5	< 0.4	0.4	0.1	< 2
123394	< 0.05	< 0.1	< 0.01	0.3	< 0.1	< 1	< 0.1	< 5	< 0.4	0.5	0.2	3
123395	< 0.05	< 0.1	< 0.01	0.3	< 0.1	< 1	< 0.1	< 5	< 0.4	0.6	0.2	2
123396	< 0.05	< 0.1	< 0.01	0.3	< 0.1	< 1	< 0.1	< 5	< 0.4	0.6	0.2	5
123397	< 0.05	< 0.1	< 0.01	0.4	< 0.1	< 1	< 0.1	< 5	< 0.4	0.5	0.1	3
123398	< 0.05	< 0.1	< 0.01	0.3	< 0.1	< 1	< 0.1	< 5	< 0.4	0.6	0.2	2
123399	< 0.05	< 0.1	< 0.01	0.4	< 0.1	5	< 0.1	< 5	< 0.4	0.5	0.1	< 2
123400	< 0.05	< 0.1	< 0.01	0.7	< 0.1	< 1	< 0.1	< 5	< 0.4	0.8	0.2	5
123401	< 0.05	< 0.1	< 0.01	0.4	< 0.1	< 1	< 0.1	< 5	< 0.4	0.5	0.1	3
123402	< 0.05	0.1	< 0.01	0.5	< 0.1	2	< 0.1	< 5	< 0.4	0.9	0.2	3
123403	< 0.05	0.1	< 0.01	1.9	< 0.1	< 1	< 0.1	< 5	< 0.4	0.7	0.3	3
123404	< 0.05	< 0.1	< 0.01	0.8	< 0.1	< 1	< 0.1	< 5	< 0.4	0.7	0.2	5
123405	< 0.05	0.1	< 0.01	0.4	< 0.1	2	< 0.1	< 5	< 0.4	0.6	0.2	8
123406	< 0.05	0.1	< 0.01	1.8	< 0.1	< 1	< 0.1	< 5	< 0.4	0.7	0.2	11
123407	< 0.05	0.2	0.05	6.0	< 0.1	< 1	< 0.1	< 5	< 0.4	0.8	0.3	13
123408	< 0.05	0.1	< 0.01	2.0	< 0.1	< 1	< 0.1	< 5	< 0.4	0.6	0.2	15
123409	< 0.05	0.1	< 0.01	1.7	< 0.1	4	< 0.1	< 5	< 0.4	0.6	0.2	13
123410	< 0.05	0.1	< 0.01	1.0	< 0.1	< 1	< 0.1	< 5	< 0.4	0.7	0.3	9
123411	< 0.05	0.1	< 0.01	0.9	< 0.1	< 1	< 0.1	< 5	< 0.4	0.4	0.2	18
123412	< 0.05	< 0.1	< 0.01	0.5	< 0.1	< 1	< 0.1	< 5	< 0.4	0.4	0.2	8
123413	< 0.05	< 0.1	< 0.01	0.5	< 0.1	< 1	< 0.1	6	< 0.4	0.5	0.2	7
123414	< 0.05	< 0.1	< 0.01	0.5	< 0.1	< 1	< 0.1	< 5	< 0.4	0.7	0.2	6
123415	< 0.05	< 0.1	< 0.01	0.3	< 0.1	< 1	< 0.1	< 5	< 0.4	0.5	0.1	8
123416	< 0.05	< 0.1	< 0.01	0.4	< 0.1	< 1	< 0.1	< 5	< 0.4	0.6	0.2	11
123417	< 0.05	0.1	< 0.01	1.1	< 0.1	< 1	< 0.1	< 5	< 0.4	0.7	0.3	10

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Analyte Symbol	Tm	Yb	Lu	Hf	Ta	W	Tl	Pb	Bi	Th	U	B
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	0.05	0.1	0.01	0.2	0.1	1	0.1	5	0.4	0.1	0.1	2
Method Code	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS-Na2O2
123418	< 0.05	< 0.1	< 0.01	0.5	< 0.1	< 1	< 0.1	< 5	< 0.4	0.7	0.2	11
123419	< 0.05	< 0.1	< 0.01	0.5	< 0.1	< 1	< 0.1	< 5	< 0.4	0.8	0.2	11
123420	< 0.05	< 0.1	< 0.01	0.4	< 0.1	< 1	< 0.1	< 5	< 0.4	0.7	0.2	8
123421	< 0.05	0.1	< 0.01	0.6	< 0.1	< 1	< 0.1	19	< 0.4	0.7	0.3	10
123422	< 0.05	< 0.1	< 0.01	0.3	< 0.1	1	< 0.1	< 5	< 0.4	0.7	0.2	10
123423	< 0.05	< 0.1	< 0.01	0.4	< 0.1	< 1	< 0.1	< 5	< 0.4	0.7	0.2	10
123424	< 0.05	0.3	0.06	8.0	0.2	< 1	< 0.1	< 5	< 0.4	1.0	0.5	14
123425	< 0.05	0.1	< 0.01	0.6	< 0.1	< 1	< 0.1	< 5	< 0.4	0.9	0.2	9
123426	< 0.05	< 0.1	< 0.01	0.4	< 0.1	< 1	< 0.1	< 5	< 0.4	0.7	0.2	14
123427	< 0.05	< 0.1	< 0.01	0.4	< 0.1	< 1	< 0.1	< 5	< 0.4	0.7	0.2	13
123428	< 0.05	< 0.1	< 0.01	0.4	< 0.1	< 1	< 0.1	< 5	< 0.4	0.8	0.2	9
123429	< 0.05	< 0.1	< 0.01	1.6	< 0.1	< 1	< 0.1	< 5	< 0.4	0.6	0.2	9
123430	< 0.05	0.2	< 0.01	2.5	< 0.1	< 1	< 0.1	< 5	< 0.4	1.3	0.3	40
123431	< 0.05	< 0.1	< 0.01	1.1	< 0.1	< 1	< 0.1	< 5	< 0.4	0.8	0.3	8
123432	< 0.05	0.1	< 0.01	0.7	< 0.1	< 1	< 0.1	6	< 0.4	0.6	0.3	7
123433	< 0.05	0.1	< 0.01	1.0	< 0.1	< 1	< 0.1	< 5	< 0.4	0.8	0.2	11
123451	< 0.05	< 0.1	< 0.01	0.9	< 0.1	< 1	< 0.1	< 5	< 0.4	0.3	0.2	6
123452	< 0.05	0.1	< 0.01	2.5	< 0.1	< 1	< 0.1	< 5	< 0.4	0.8	0.3	8
123377	0.07	0.4	0.05	< 0.2	< 0.1	< 1	< 0.1	6	< 0.4	0.5	< 0.1	

Analyte Symbol	SiO2	Al2O3	Fe2O3(T)	MnO	MgO	CaO	Na2O	K2O	TiO2	P2O5	LOI	Total	Sc	Be	V	Ba	Sr	Y	Zr	Cr	Co	Ni	Cu
Unit Symbol	%	%	%	%	%	%	%	%	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	0.01	0.01	0.01	0.001	0.01	0.01	0.01	0.01	0.001	0.01		0.01	1	1	5	2	2	1	2	20	1	20	10
Method Code	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS
GXR-1 Meas																							
GXR-1 Cert																							
GXR-1 Meas																							
GXR-1 Cert																							
GXR-1 Meas																							
GXR-1 Cert																							
NIST 694 Meas	11.06	1.82	0.76	0.012	0.33	42.60	0.87	0.54	0.115	30.19					1659								
NIST 694 Cert	11.2	1.80	0.790	0.0116	0.330	43.6	0.860	0.510	0.110	30.2					1740								
DNC-1 Meas	47.45	18.12	9.79	0.143	9.81	11.53	1.91	0.22	0.478	0.07			31		155	104	143	16	39	280	53	250	100
DNC-1 Cert	47.15	18.34	9.97	0.150	10.13	11.49	1.890	0.234	0.480	0.070			31		148	118	144.0	18.0	38	270	57	247	100
GXR-6 Meas																							
GXR-6 Cert																							
LKSD-3 Meas																				90		50	
LKSD-3 Cert																				87.0		47.0	
TDB-1 Meas																				240		90	330
TDB-1 Cert																				251		92	323
SY-3 Meas																							
SY-3 Cert																							
SY-3 Meas																							
SY-3 Cert																							
SY-3 Meas																							
SY-3 Cert																							
W-2a Meas	52.90	15.53	10.95	0.168	6.22	11.18	2.25	0.63	1.103	0.14			36	< 1	282	175	199	20	97	90	43	70	110
W-2a Cert	52.4	15.4	10.7	0.163	6.37	10.9	2.14	0.626	1.06	0.130			36.0	1.30	262	182	190	24.0	94.0	92.0	43.0	70.0	110
SY-4 Meas	49.29	20.18	6.11	0.106	0.49	8.04	6.80	1.64	0.281	0.12			1	3	6	338	1193	116	536				
SY-4 Cert	49.9	20.69	6.21	0.108	0.54	8.05	7.10	1.66	0.287	0.131			1.1	2.6	8.0	340	1191	119	517				
CTA-AC-1 Meas																							50
CTA-AC-1 Cert																							54.0
BIR-1a Meas	47.65	15.42	11.04	0.174	9.55	13.58	1.82	0.02	0.948	0.02			44	< 1	338	6	109	15	14	370		160	120
BIR-1a Cert	47.96	15.50	11.30	0.175	9.700	13.30	1.82	0.030	0.96	0.021			44	0.58	310	6	110	16	18	370		170	125
NCS DC86312 Meas																							
NCS DC86312 Cert																							
NCS DC70009 (GBW07241) Meas																				30			920
NCS DC70009 (GBW07241) Cert																				30			960
OREAS 100a (Fusion) Meas																					17		170
OREAS 100a																					18.1		169

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Analyte Symbol	SiO2	Al2O3	Fe2O3(T)	MnO	MgO	CaO	Na2O	K2O	TiO2	P2O5	LOI	Total	Sc	Be	V	Ba	Sr	Y	Zr	Cr	Co	Ni	Cu
Unit Symbol	%	%	%	%	%	%	%	%	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	0.01	0.01	0.01	0.001	0.01	0.01	0.01	0.01	0.001	0.01		0.01	1	1	5	2	2	1	2	20	1	20	10
Method Code	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS
(Fusion) Cert																							
OREAS 101a (Fusion) Meas																					45		420
OREAS 101a (Fusion) Cert																					48.8		430
OREAS 101b (Fusion) Meas																					46		420
OREAS 101b (Fusion) Cert																					47		420
JR-1 Meas																						< 20	
JR-1 Cert																						1.67	
NCS DC73372 Meas																							
NCS DC73372 Cert																							
NCS DC73372 Meas																							
NCS DC73372 Cert																							
123385 Orig																							
123385 Dup																							
123391 Orig	97.85	0.20	0.17	0.004	0.35	0.68	0.01	0.02	0.011	0.11	1.03	100.4	< 1	< 1	< 5	6	14	2	17	40	< 1	< 20	< 10
123391 Dup	97.22	0.20	0.16	0.004	0.35	0.69	0.02	0.02	0.011	0.11	1.03	99.82	< 1	< 1	< 5	6	14	3	18	40	< 1	< 20	< 10
123393 Orig																							
123393 Dup																							
123406 Orig																							
123406 Dup																							
123408 Orig	97.97	0.22	0.07	0.004	0.05	0.02	< 0.01	0.04	0.027	< 0.01	0.19	98.58	< 1	< 1	< 5	40	4	2	83	40	< 1	< 20	< 10
123408 Dup	98.96	0.22	0.07	0.004	0.04	0.02	< 0.01	0.04	0.027	< 0.01	0.19	99.56	< 1	< 1	< 5	40	4	2	81	40	< 1	< 20	< 10
123415 Orig																							
123415 Dup																							
123423 Orig																							
123423 Dup																							
123452 Orig																							
123452 Dup																							
123377 Orig	38.70	0.67	5.84	0.095	1.05	28.08	0.14	0.13	0.016	0.02	18.81	93.56	1	< 1	< 5	167	1100	7	4	< 20	2	< 20	< 10
123377 Dup	38.60	0.68	6.11	0.096	1.06	28.45	0.14	0.14	0.016	0.04	18.81	94.14	1	< 1	< 5	171	1102	7	5	20	2	< 20	< 10
Method Blank	< 0.01	< 0.01	< 0.01	0.002	< 0.01	< 0.01	< 0.01	< 0.01	< 0.001	< 0.01			< 1	< 1	< 5	< 2	< 2	< 1	< 2	< 20	< 1	< 20	< 10
Method Blank	< 0.01	< 0.01	< 0.01	0.002	< 0.01	< 0.01	< 0.01	< 0.01	< 0.001	0.01			< 1	< 1	< 5	< 2	< 2	2	< 2				
Method Blank																							
Method Blank																				< 20	< 1	< 20	< 10
Method Blank																							

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Analyte Symbol	SiO2	Al2O3	Fe2O3(T)	MnO	MgO	CaO	Na2O	K2O	TiO2	P2O5	LOI	Total	Sc	Be	V	Ba	Sr	Y	Zr	Cr	Co	Ni	Cu
Unit Symbol	%	%	%	%	%	%	%	%	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	0.01	0.01	0.01	0.001	0.01	0.01	0.01	0.01	0.001	0.01		0.01	1	1	5	2	2	1	2	20	1	20	10
Method Code	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS
Method Blank																							
Method Blank																							

Analyte Symbol	Zn	Ga	Ge	As	Rb	Nb	Mo	Ag	In	Sn	Sb	Cs	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	30	1	1	5	2	1	2	0.5	0.2	1	0.5	0.5	0.1	0.1	0.05	0.1	0.1	0.05	0.1	0.1	0.1	0.1	0.1
Method Code	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
GXR-1 Meas																							
GXR-1 Cert																							
GXR-1 Meas																							
GXR-1 Cert																							
GXR-1 Meas																							
GXR-1 Cert																							
NIST 694 Meas																							
NIST 694 Cert																							
DNC-1 Meas	70				4								3.5			5.0		0.55					
DNC-1 Cert	70				5								3.6			5.20		0.59					
GXR-6 Meas																							
GXR-6 Cert																							
LKSD-3 Meas	160			29	79		< 2			3		2.1	54.8	83.4		40.8		1.40			4.6		
LKSD-3 Cert	152			27.0	78.0		2.00			3.00		2.30	52.0	90.0		44.0		1.50			4.90		
TDB-1 Meas	150				22								17.1	40.2		24.4		2.10					
TDB-1 Cert	155				23								17	41		23		2.1					
SY-3 Meas																							
SY-3 Cert																							
SY-3 Meas																							
SY-3 Cert																							
SY-3 Meas																							
SY-3 Cert																							
W-2a Meas	80	18	2	< 5	20	8	< 2							24.4		13.3	3.4			0.6		0.8	2.3
W-2a Cert	80.0	17.0	1.00	1.20	21.0	7.90	0.600							23.0		13.0	3.30			0.630		0.760	2.50
SY-4 Meas																							
SY-4 Cert																							
CTA-AC-1 Meas	40												> 2000	> 3000		1070	151	42.4	118	12.6			
CTA-AC-1 Cert	38.0												2176	3326		1087	162	46.7	124	13.9			
BIR-1a Meas	60										0.6		0.6	1.8		2.4			1.9				
BIR-1a Cert	70										0.58		0.63	1.9		2.5			2.0				
NCS DC86312 Meas													> 2000	186		1460			219	36.7	175	32.4	91.3
NCS DC86312 Cert													2360	190		1600			225.0	34.6	183	36	96.2
NCS DC70009 (GBW07241) Meas	100	15	11	69	511			1.8	1.0	> 1000	3.3	38.7	22.7	56.1	7.30	30.6	11.7	0.15	14.0	3.2	19.7		12.3
NCS DC70009 (GBW07241) Cert	100	16.5	11.2	69.9	500			1.8	1.3	1700	3.1	41	23.7	60.3	7.9	32.9	12.5	0.16	14.8	3.3	20.7		13.4
OREAS 100a (Fusion) Meas							25						263	464	45.6	148	23.2	3.56	23.3	3.7	22.7	4.6	14.6
OREAS 100a (Fusion) Cert							24.1						260	463	47.1	152	23.6	3.71	23.6	3.80	23.2	4.81	14.9

Analyte Symbol	Zn	Ga	Ge	As	Rb	Nb	Mo	Ag	In	Sn	Sb	Cs	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	30	1	1	5	2	1	2	0.5	0.2	1	0.5	0.5	0.1	0.1	0.05	0.1	0.1	0.05	0.1	0.1	0.1	0.1	0.1
Method Code	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
OREAS 101a (Fusion) Meas							21						816	1450	128	388	48.3	7.94	45.2	5.9	31.8	6.2	19.4
OREAS 101a (Fusion) Cert							21.9						816	1396	134	403	48.8	8.06	43.4	5.92	33.3	6.46	19.5
OREAS 101b (Fusion) Meas							21						840		132	397	51.0	8.47		5.3	32.8	6.5	19.7
OREAS 101b (Fusion) Cert							21						789		127	378	48	7.77		5.37	32.1	6.34	18.7
JR-1 Meas	< 30	16	2	16	262	14	3		< 0.2	3	1.2	19.7	19.8	46.6	5.70	22.7	5.9	0.28	5.6	0.9	5.5	1.2	3.8
JR-1 Cert	30.6	16.1	1.88	16.3	257	15.2	3.25		0.028	2.86	1.19	20.8	19.7	47.2	5.58	23.3	6.03	0.30	5.06	1.01	5.69	1.11	3.61
NCS DC73372 Meas																							
NCS DC73372 Cert																							
NCS DC73372 Meas																							
NCS DC73372 Cert																							
123385 Orig																							
123385 Dup																							
123391 Orig	< 30	< 1	< 1	< 5	< 2	< 1	< 2	< 0.5	< 0.2	< 1	< 0.5	< 0.5	3.1	5.7	0.64	2.6	0.6	0.13	0.5	< 0.1	0.3	< 0.1	0.2
123391 Dup	< 30	< 1	< 1	< 5	< 2	< 1	< 2	< 0.5	< 0.2	< 1	< 0.5	< 0.5	3.2	5.8	0.66	2.7	0.6	0.12	0.5	< 0.1	0.3	< 0.1	0.1
123393 Orig																							
123393 Dup																							
123406 Orig																							
123406 Dup																							
123408 Orig	< 30	< 1	< 1	< 5	< 2	< 1	< 2	< 0.5	< 0.2	< 1	< 0.5	< 0.5	3.2	6.0	0.63	2.1	0.3	0.06	0.1	< 0.1	0.2	< 0.1	0.1
123408 Dup	< 30	< 1	< 1	< 5	< 2	< 1	< 2	< 0.5	< 0.2	< 1	< 0.5	< 0.5	3.2	6.2	0.69	2.3	0.3	< 0.05	0.2	< 0.1	0.1	< 0.1	0.1
123415 Orig																							
123415 Dup																							
123423 Orig																							
123423 Dup																							
123452 Orig																							
123452 Dup																							
123377 Orig	< 30	< 1	< 1	< 5	4	< 1	< 2	< 0.5	< 0.2	< 1	< 0.5	< 0.5	5.9	14.9	2.26	9.6	2.4	2.35	2.0	0.3	1.4	0.2	0.5
123377 Dup	< 30	< 1	< 1	< 5	5	< 1	< 2	< 0.5	< 0.2	< 1	< 0.5	< 0.5	5.9	15.4	2.24	9.3	2.4	2.30	2.0	0.3	1.4	0.2	0.5
Method Blank	< 30	< 1	< 1	< 5	< 2	< 1	< 2	< 0.5	< 0.2	< 1	< 0.5	< 0.5	< 0.1	< 0.1	< 0.05	< 0.1	< 0.1	< 0.05	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Method Blank																							
Method Blank																							
Method Blank	< 30	< 1	< 1	< 5	< 2	< 1	< 2	< 0.5	< 0.2	< 1	< 0.5	< 0.5	< 0.1	< 0.1	< 0.05	< 0.1	< 0.1	< 0.05	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Method Blank																							
Method Blank																							
Method Blank																							

Analyte Symbol	Tm	Yb	Lu	Hf	Ta	W	Tl	Pb	Bi	Th	U	B
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	0.05	0.1	0.01	0.2	0.1	1	0.1	5	0.4	0.1	0.1	2
Method Code	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS-Na2O2
GXR-1 Meas												15
GXR-1 Cert												15.0
GXR-1 Meas												12
GXR-1 Cert												15.0
GXR-1 Meas												15
GXR-1 Cert												15.0
NIST 694 Meas												
NIST 694 Cert												
DNC-1 Meas												
DNC-1 Cert												
GXR-6 Meas												11
GXR-6 Cert												9.80
LKSD-3 Meas		2.4	0.37	4.7	0.8							
LKSD-3 Cert		2.70	0.400	4.80	0.700							
TDB-1 Meas		3.3								2.6		
TDB-1 Cert		3.4								2.7		
SY-3 Meas												96
SY-3 Cert												107
SY-3 Meas												105
SY-3 Cert												107
SY-3 Meas												111
SY-3 Cert												107
W-2a Meas		2.1	0.31	2.4		< 1	< 0.1		< 0.4	2.3	0.5	
W-2a Cert		2.10	0.330	2.60		0.300	0.200		0.0300	2.40	0.530	
SY-4 Meas												
SY-4 Cert												
CTA-AC-1 Meas		10.8	1.03		2.6					21.1		
CTA-AC-1 Cert		11.4	1.08		2.65					21.8		
BIR-1a Meas		1.6		0.6								
BIR-1a Cert		1.7		0.60								
NCS DC86312 Meas		88.8	11.1							22.8		
NCS DC86312 Cert		87.79	11.96							23.6		
NCS DC70009 (GBW07241) Meas	2.00	14.6				2110	1.8			27.7		
NCS DC70009 (GBW07241) Cert	2.2	14.9				2200	1.8			28.3		
OREAS 100a (Fusion) Meas	2.14	14.3	2.09							49.6	133	
OREAS 100a	2.31	14.9	2.26							51.6	135	

Analyte Symbol	Tm	Yb	Lu	Hf	Ta	W	Tl	Pb	Bi	Th	U	B
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	0.05	0.1	0.01	0.2	0.1	1	0.1	5	0.4	0.1	0.1	2
Method Code	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS-Na2O2
(Fusion) Cert												
OREAS 101a (Fusion) Meas	2.70	17.7	2.46							34.1	408	
OREAS 101a (Fusion) Cert	2.90	17.5	2.66							36.6	422	
OREAS 101b (Fusion) Meas	2.81	18.4	2.66							38.3	425	
OREAS 101b (Fusion) Cert	2.66	17.6	2.58							37.1	396	
JR-1 Meas	0.64	4.6	0.68	4.5	2.0		1.5	21	0.5	25.4	8.7	
JR-1 Cert	0.67	4.55	0.71	4.51	1.86		1.56	19.3	0.56	26.7	8.88	
NCS DC73372 Meas												54
NCS DC73372 Cert												52
NCS DC73372 Meas												52
NCS DC73372 Cert												52
123385 Orig												< 2
123385 Dup												2
123391 Orig	< 0.05	0.1	< 0.01	0.4	< 0.1	< 1	< 0.1	< 5	< 0.4	0.5	0.2	
123391 Dup	< 0.05	0.1	< 0.01	0.3	< 0.1	< 1	< 0.1	< 5	< 0.4	0.5	0.2	
123393 Orig												< 2
123393 Dup												< 2
123406 Orig												13
123406 Dup												9
123408 Orig	< 0.05	0.1	< 0.01	2.0	< 0.1	< 1	< 0.1	< 5	< 0.4	0.6	0.2	
123408 Dup	< 0.05	0.1	< 0.01	1.9	< 0.1	< 1	< 0.1	< 5	< 0.4	0.6	0.2	
123415 Orig												8
123415 Dup												8
123423 Orig												10
123423 Dup												10
123452 Orig												9
123452 Dup												8
123377 Orig	0.07	0.4	0.05	< 0.2	< 0.1	2	< 0.1	6	< 0.4	0.5	< 0.1	
123377 Dup	0.07	0.4	0.05	< 0.2	< 0.1	< 1	< 0.1	6	< 0.4	0.5	< 0.1	
Method Blank	< 0.05	< 0.1	< 0.01	< 0.2	< 0.1	< 1	< 0.1	< 5	< 0.4	< 0.1	< 0.1	
Method Blank												
Method Blank												< 2
Method Blank	< 0.05	< 0.1	< 0.01	< 0.2	< 0.1	< 1	< 0.1	< 5	< 0.4	< 0.1	< 0.1	
Method Blank												< 2

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Analyte Symbol	Tm	Yb	Lu	Hf	Ta	W	Tl	Pb	Bi	Th	U	B
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	0.05	0.1	0.01	0.2	0.1	1	0.1	5	0.4	0.1	0.1	2
Method Code	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS-Na2O2
Method Blank												3
Method Blank												3

APPENDIX 6: 2017 SAMPLE DESCRIPTIONS AND ASSAY RESULTS

Assay Sample ID	Frac ID	Easting	Northing	Rock Type	Description	Comments	SiO_2	Fe_2O_3	Boron	Au	Sieve Analysis				Sphericity	Roundness
							%	%	ppm	ppb	20x40	40x70	70x140	-140		
123376	123526	506437	5685575	Quartzite	gy-w, m.g., well sorted, well rnd	gy weathering	98.71	0.09	< 2							
123377	N/A	502103	5692459	Sandstone	red-brown	boulder grab, qtz veins brecciating siliceous host rock, abundant pyrite with thin oxidized crust	38.65	5.98		< 5						
123378	123551	505636	5686166	Quartzite	f.g. to m.g.rnd	y-br weathering	99.53	0.08	< 2							
123379	N/A	505736	5686081	Quartzite	f.g to m.g.	rnd OC, no alteration, very clean, spherical grains	99.24	0.05	4.00							
123380	123552	505803	5685995	Quartzite	bl-gy to w, f.g. to m.g.sub rnd	rnd OC exposure	97.81	0.06	8.00							
123381	123553	505914	5686063	Quartzite	w, f.g.	minor br weathering crust	98.87	0.06	4.00		22.29	38.07	28.19	11.45		
123382	123554	505988	5686118	Quartzite	bl-gy, v.f.g.	very hard, dk gy stringers	98.78	0.05	3.00							
123383	N/A	505895	5686163	Quartzite	bl-gy, f.g.	very hard	98.44	0.05	6.00							
123384	N/A	505807	5686117	Quartzite	w, f.g. to m.g.	OC scale cross-bedding texture	99.2	0.06	2.00							
123385	123555	505674	5686186	Quartzite	w gy, m.g.rnd	well rnd OC	98.81	0.07	< 2							
123386	123556	505783	5686254	Quartzite	w gy, f.g. to m.g.	blocky weathering	97	0.07	18.00							
123387	N/A	506032	5686055	Quartzite	bl-gy, v.f.g.	blocky weathering, very hard	99.31	0.06	2.00							
123388	N/A	505966	5686018	Quartzite	w gy, m.g.	blocky weathering	99.89	0.04	< 2							
123389	N/A	505894	5685927	Quartzite	w to bl-gy, m.g.	hard	98.51	0.05	7.00							
123390	123557	510457	5683885	Quartzite	y w, m.g.	dirty quartzite, altered and decemented in parts	97.13	0.16	6.00							
123391	123558	510441	5683724	Quartzite	br, f.g.	blocky weathering causing cavities, hard	97.54	0.16	< 2							
123392	123559	510550	5683669	Quartzite	gy, v.f.g.	semi rnd weathering surface	98.85	0.09	4.00							
123393	123560	510666	5683641	Quartzite	w, m.g.	blocky weathering	99.11	0.07	< 2							
123394	123561	510565	5683980	Quartzite	m.g. to c.g.	w weathering, decemented in parts, some free sand	99.34	0.05	3.00							
123395	123562	510318	5684118	Quartzite	w-gy, m.g.sub rnd	hard	99.39	0.06	2.00							

Assay Sample ID	Frac ID	Easting	Northing	Rock Type	Description	Comments	SiO_2	Fe_2O_3	Boron	Au	Sieve Analysis				Sphericity	Roundness
							%	%	ppm	ppb	20x40	40x70	70x140	-140		
123396	123563	505880	5685840	Quartzite	w, m.g.rnd	semi rnd to rnd OC, w weathering	98.05	0.04	5.00							
123397	123564	505930	5685751	Quartzite	w, f.g. to m.g.	OC semi rnd	98.48	0.03	3.00							
123398	123565	505967	5685651	Quartzite	w, f.g. to m.g.	red weathering	98.03	0.04	2.00							
123399	123566	506037	5685721	Quartzite	w, m.g.	rnd OC	99.51	0.05	< 2		10.72	40.38	34.33	14.57		
123400	123567	506000	5685825	Quartzite	w, m.g.sub rnd		98.89	0.05	5.00							
123401	123527	505530	5688190	Quartzite	gy-w to lt tan, m.g., well sorted,	gy to bg weathering surface	98.43	0.09	3.00		13.5	50.9	26.3	9.30	0.8	0.5 - 0.7
123402	123528	505498	5688152	Quartzite	w, m.g., well sorted, sub-rnd	gy weathering	98.64	0.12	3.00		3.6	49.7	35.8	10.90	0.7 - 0.8	0.4 - 0.6
123403	123529	506369	5685175	Quartzite	gy-w, m.g., well sorted, sub-rnd	gy weathering	97.91	0.04	3.00		22.4	46.5	17.6	13.40	0.7 - 0.8	0.4 - 0.5
123404	123575	506361	5685297	Quartzite	w, m.g.	well rnd weathering surface	98.57	0.07	5.00							
123405	123530	506347	5685383	Quartzite	gy-w, m.g., well sorted, sub-rnd	gy weathering	97.86	0.06	8.00							
123406	123531	506380	5685353	Quartzite	gy-w, m.g., well sorted, sub-rnd	gy weathering	99.19	0.05	11.00							
123407	123477	506381	5685303	Quartzite	gy-w, m.g., well sorted, sub-rnd	gy weathering	98.43	0.05	13.00							
123408	123532	506423	5685184	Quartzite	lt gy, m.g., well sorted, sub-rnd	gy weathering	98.47	0.07	15.00		9.16	18.12	35.97	36.75		
123409	123533	506511	5685384	Quartzite	w, m.g., well sorted, sub-rnd	lt gy weathering	99.84	0.05	13.00		8.4	58.1	16.4	17.00	0.8	0.5
123410	123534	506479	5685258	Quartzite	w, m.g., well sorted, sub-rnd	lt gy weathering	97.96	0.05	9.00							
123411	123535	510820	5684128	Quartzite	lt gy, m.g., well sorted, sub-rnd	gy weathering	98.76	0.06	18.00							
123412	123536	510685	5684033	Quartzite	lt gy, m.g., well sorted, sub-rnd	gy weathering	99.03	0.08	8.00							
123413	123537	510533	5684042	Quartzite	w, m.g., well sorted, sub-rnd	lt gy weathering	98.21	0.06	7.00							
123414	123538	510300	5684267	Quartzite	w, m.g., well sorted, sub-rnd to rnd	lt gy weathering	99.74	0.06	6.00							
123415	123539	509930	5684598	Quartzite	w, m.g., well sorted, sub-rnd to rnd	lt gy weathering	98.28	0.09	8.00							
123416	123540	506136	5685477	Quartzite	lt gy to w, f.g. to m.g., well sorted, sub rnd	lt gy weathering	99.17	0.05	11.00							

Assay Sample ID	Frac ID	Easting	Northing	Rock Type	Description	Comments	SiO_2	Fe_2O_3	Boron	Au	Sieve Analysis				Sphericity	Roundness
							%	%	ppm	ppb	20x40	40x70	70x140	-140		
123417	123541	506096	5685574	Quartzite	lt gy, m.g., well sorted, sub rnd	gy weathering	99.28	0.06	10.00		7.8	43.3	31.4	17.50	0.8 - 0.9	0.5
123418	123542	506054	5685671	Quartzite	lt gy to w, m.g., well sorted, sub rnd	lt gy weathering	98.82	0.09	11.00							
123419	123543	506142	5685724	Quartzite	w, f.g to m.g., well sorted, sub rnd	lt gy weathering	98.36	0.05	11.00							
123420	123544	506176	5685635	Quartzite	w, m.g., well sorted, sub rnd	lt gy to w weathering	99.5	0.06	8.00							
123421	123545	506213	5685534	Quartzite	w, m.g., well sorted, sub rnd	lt weathering	99.25	0.05	10.00							
123422	123546	506271	5685582	Quartzite	w, m.g., well sorted, sub rnd	lt gy weathering	99.33	0.06	10.00							
123423	123547	506250	5685672	Quartzite	w, m.g., well sorted, sub rnd	lt gy weathering	99.46	0.05	10.00							
123424	123548	506213	5685776	Quartzite	lt gy, f.g. to m.g., well sorted, sub rnd	lt gy weathering	98.86	0.07	14.00							
123425	123549	506217	5685760	Quartzite	lt gy, m.g., well sorted, sub rnd	gy weathering, suspected fault zone, brittle jointed	98	0.06	9.00							
123426	123568	505974	5685887	Quartzite	w, f.g. to m.g.	rnd OC	98	0.05	14.00							
123427	123569	506034	5685936	Quartzite	w-y, m.g.	rnd OC	98.93	0.05	13.00							
123428	123570	506079	5685888	Quartzite	w, m.g.	weathering deep and y-br, blocky to semi rnd OC	99.57	0.07	9.00							
123429	123571	506129	5685780	Quartzite	w, m.g.	gy weathering, rn OC	99.88	0.05	9.00							
123430	123572	506181	5685849	Quartzite	gy, m.g.		98.04	0.06	40.00							
123431	123573	506092	5685965	Quartzite	gy, m.g.	w stringers	99.3	0.05	8.00							
123432	123574	506168	5685413	Quartzite	gy, m.g.	dirty quartzite, blocky weathering	77.24	0.49	7.00							
123433	123476	506308	5685536	Quartzite	w-gy, f.g., well sorted, sub rnd to rnd	semi-rounded weathering surface	98.81	0.06	11.00							
123451	123550	506090	5685238	Quartzite	gy to bl gy, f.g. to m.g., well sorted, sub rnd	dk gy weathering	98.27	0.09	6							
123452	123501	506264	5685279	Quartzite	gy, m.g., well sorted, sub-rnd	lt gy weathering	97.91	0.05	8							

APPENDIX 7: STATEMENT OF QUALIFICATIONS

P. Kluczny is a geological consultant with Dahrouge Geological Consulting Ltd. based in Edmonton, Alberta. He obtained a B.Sc. with Specialization in Geology from the University of Alberta, Edmonton in 2006 and has since been employed in the mineral exploration industry continuously. He is currently registered as a P.Geol. with the Association of Professional Engineers and Geoscientists of Alberta.