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# **2019 DIAMOND DRILLING REPORT: CROCAN LAKE PROPERTY**

ANTOINE & BUTLER TOWNSHIPS  
SUDBURY MINING DIVISION, ONTARIO, CANADA



**KYANITE**  
MINING CORPORATION



**KYANITE MINING CORP.**  
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April 17<sup>th</sup>, 2020

Prepared By:



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## **EXECUTIVE SUMMARY**

JMK Exploration Consulting was requested by Kyanite Mining Corp. (“KMC”) to complete a technical report covering a Phase 1 diamond drilling program that was completed on the Crocan Lake Property (“Property”).

The Property is located 40 km northeast of North Bay, Ontario (Figure 1) in NTS 31L/10 and 31L/11. The Property is situated in Antoine and Butler Townships within the Sudbury Mining Division. The Property is bounded by UTM coordinates 649590 E to 655150 E, and 5150630 N to 5155015 N (Figure 2).

From June 22<sup>nd</sup> through to July 18<sup>th</sup>, 2019, KMC completed 4 diamond drill holes totalling 822.0 m on the Property. The purpose of the program was to determine if the kyanite mineralization is continuous along the general strike of the Main Zone and depth, in an area where there has been no historical drilling. All four diamond drill holes intersected appreciable thicknesses of kyanite mineralization. Kyanite mineralization was comparable with both the historical results reported on the Main Zone, and with the grab samples that were collected by the author in 2018. In addition to the kyanite mineralization, appreciable amounts of garnet, quartz, biotite, and muscovite were intersected. These later minerals could represent potential by-products aside from kyanite mineralization; however, further metallurgical and economic/marketing studies would be required to verify this.

Based on the successful completion of the Phase 1 diamond drill program, additional diamond drilling is recommended and should be designed with the intent of completing a 43-101 compliant resource on the Property. Further geological mapping could also be considered on another parallel unit of mineralized gneiss located to the immediate west of the Main Zone. Furthermore, other kyanite occurrences located outside of the Property should be evaluated and staked if warranted.

## **1.0 INTRODUCTION**

From June 22<sup>nd</sup> through to July 18<sup>th</sup>, 2019, KMC completed 4 diamond drill holes totalling 822.0 m on the Property. The purpose of the program was to determine if the mineralization is continuous along the general strike of the Main Zone and depth, in an area where there has been no historical drilling. All four diamond drill holes intersected appreciable thicknesses of kyanite mineralization, which was consistent historical results reported on the Main Zone, and with the grab samples that were collected by the author in 2018.

## **2.0 PROPERTY DETAILS**

### **2.1 Location and Access**

The Property is located in Antoine and Butler Townships, approximately 40 km northeast of North Bay, Ontario (Figure 1).

Excellent access to the Property is provided by travelling east of North Bay along Highway 63, then turning south on Highway 533 for 17 km where a rough gravel road provides access to the Property (654500E/5152065N).

A full range of equipment, supplies, services, and skilled labour that would be required for any exploration and mining work are available in the nearby city of North Bay, Ontario.

### **2.2 Topography and Vegetation**

Much of the Property has been logged in the past. The topography of the Property is characterized by rolling hills and valleys. Abundant water resources are present in the lakes, rivers, creeks, and beaver ponds on the Property. The mean elevation of the property is approximately 335 m above sea level. The average total precipitation is 920.0

mm. The average annual temperature is 4.4°C, with July being the warmest month averaging 18.9°C, and January being the coldest and averaging -11.9°C.

### 2.3 Claims

The Property consists of 3 leased claims totalling approximately 823.9 ha, and 29 unpatented mining claim cells totalling approximately 464.7 ha (Figure 2, Table 1 & 2). The Property is bounded by UTM coordinates 649590 E to 655150 E, and 5150630 N to 5155015 N (Figure 2) and is covered by National Topographic System (NTS) map sheets 31L/10 and 31L/11.



Figure 1: General Location of the Crocan Lake Property, Ontario, Canada

**Table 1: Unpatented Claim Details**

Township / Area	Tenure ID	Anniversary Date	Work Required	Work Applied	Total Reserve
BUTLER	549095	2023-05-01	400	800	0
BUTLER	521410	2023-05-17	400	1200	0
BUTLER	521411	2023-05-17	400	1200	0
BUTLER	521412	2023-05-17	400	1200	0
BUTLER	521413	2023-05-17	400	1200	0
BUTLER	521414	2023-05-17	400	1200	0
BUTLER	521415	2023-05-17	400	1200	0
BUTLER	521416	2023-05-17	400	1200	0
BUTLER	521417	2023-05-17	400	1200	0
BUTLER	521418	2023-05-17	400	1200	0
BUTLER	521419	2023-05-17	400	1200	0
BUTLER	521420	2023-05-17	400	1200	0
ANTOINE	101598	2023-10-02	400	1600	0
ANTOINE	121755	2023-10-02	200	800	0
ANTOINE	160885	2023-10-02	200	800	0
ANTOINE	179725	2023-10-02	200	800	0
ANTOINE	179726	2023-10-02	400	1600	0
ANTOINE	195633	2023-10-02	400	1600	0
ANTOINE	195634	2023-10-02	400	1600	0
ANTOINE	195635	2023-10-02	200	800	0
ANTOINE	214820	2023-10-02	400	1600	0
ANTOINE	233584	2023-10-02	400	1600	0
ANTOINE	233585	2023-10-02	400	1600	0
ANTOINE	262287	2023-10-02	200	800	0
ANTOINE	282343	2023-10-02	200	800	0
ANTOINE	289708	2023-10-02	400	1600	0
ANTOINE	329432	2023-10-02	400	1600	0
ANTOINE	341275	2023-10-02	200	800	0
BUTLER	562760	2023-10-25	400	800	0

**Table 2: Leased Mining Claim Details**

Lease	Legal Rights	Township	Area (ha)	Parcel Number	PIN Number
LEA-107334	Mining & Surface Rights	Butler & Antoine	600.84	3737LN	49098-0028 (LT), 49099-0014 (LT)
LEA-107287	Mining & Surface Rights	Butler & Antoine	90.97	3727LN	49098-0027 (LT), 49099-0013 (LT)
LEA-109692	Mining & Surface Rights	Butler & Antoine	155.01	3555LN	49099-0012 (LT)

### **3.0 PREVIOUS WORK**

**1951-1954:** Golwynne Chemical Corp. completed geological mapping, trenching, and 5,695 ft (1735.8 m) of diamond drilling.

**1963:** L.O. Foster completed 5 diamond drill holes totalling 546 ft (166 m).

**1965-1971:** M. MacWilliams completed 4 diamond drill holes totalling 341 ft (103.9 m).

**1972-1973:** Arrowhead Silica Corp. acquired the Property and completed prospecting and 21 diamond drill holes totalling 3,592 ft (1,094.8 m).

**1974:** Kyanite Mining Corp. acquired the Property.

**1975-1976:** Kyanite Mining Corp. completed 15 diamond drill holes totalling 6,004 ft (1,830.0 m).

**1988-1998:** Kyanite Mining Corp. completed environmental, bulk sampling, and a pilot plant test.

**2003-2005:** Kyanite Mining Corp. completed a limited induced polarization survey, prospecting, and trenching.

**2015:** Kyanite Mining Corp. completed line cutting, magnetometer and induced polarization (IP) surveys, and limited geological work that focused on ground truthing the anomalies from the geophysical program.

**2018:** Kyanite Mining Corp. completed geological mapping and prospecting over the Main Zone. A total of 66 samples were submitted for analysis. Kyanite values ranged from 3.7% to 48.6%, with a mean of 11.7% (weight percent).



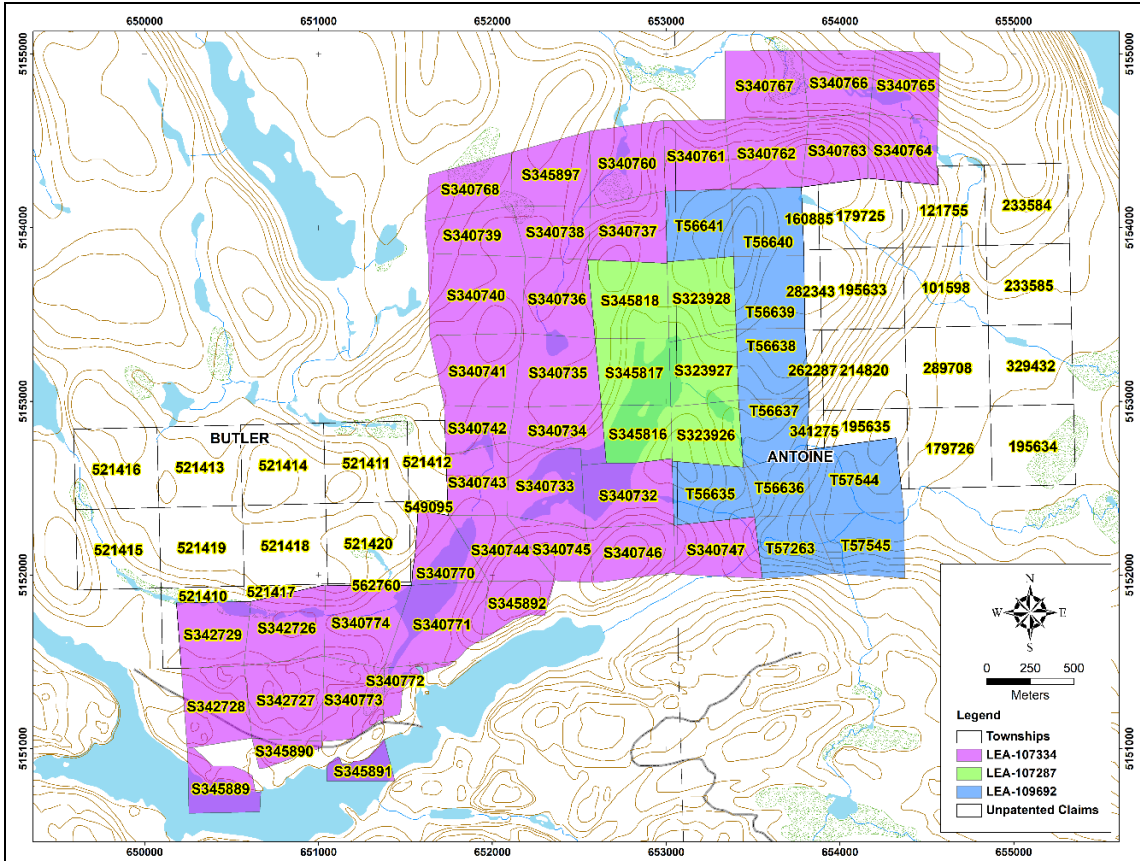


Figure 2: Tenure of the Crocan Lake Property.

## 4.0 GEOLOGY

The following summarized regional and property geology sections have been largely derived from OFR 5554 (Easton, 1998) and from R.M. Blais's 1998 assessment report on the Butler-Antoine Kyanite Project (Blais, 1998).

### 4.1 Regional Geology

The Property is located within the Tomiko terrane, one of several lithotectonic domains that comprise the Central Gneiss Belt of the Grenville Province. The rocks of the Central Gneiss Belt are generally 1800-1600 million-year-old quartzo-feldspathic gneisses of igneous origin with subordinate paragneiss of igneous and sedimentary origin.

## 4.2 Property Geology

The geology on the Property is dominantly comprised of kyanite-bearing muscovite-biotite-quartz-almandine garnet gneisses, non-kyanite-bearing muscovite-biotite-quartz-almandine garnet gneisses, and a sulphide-bearing quartz gneiss. The Property covers the eastern half of a syncline, with rocks on the Property generally having a southwestern strike and dipping 25 to 62 degrees to the northwest.

A northwest trending fault transects the Property and minor vertical displacement is evident in the field.

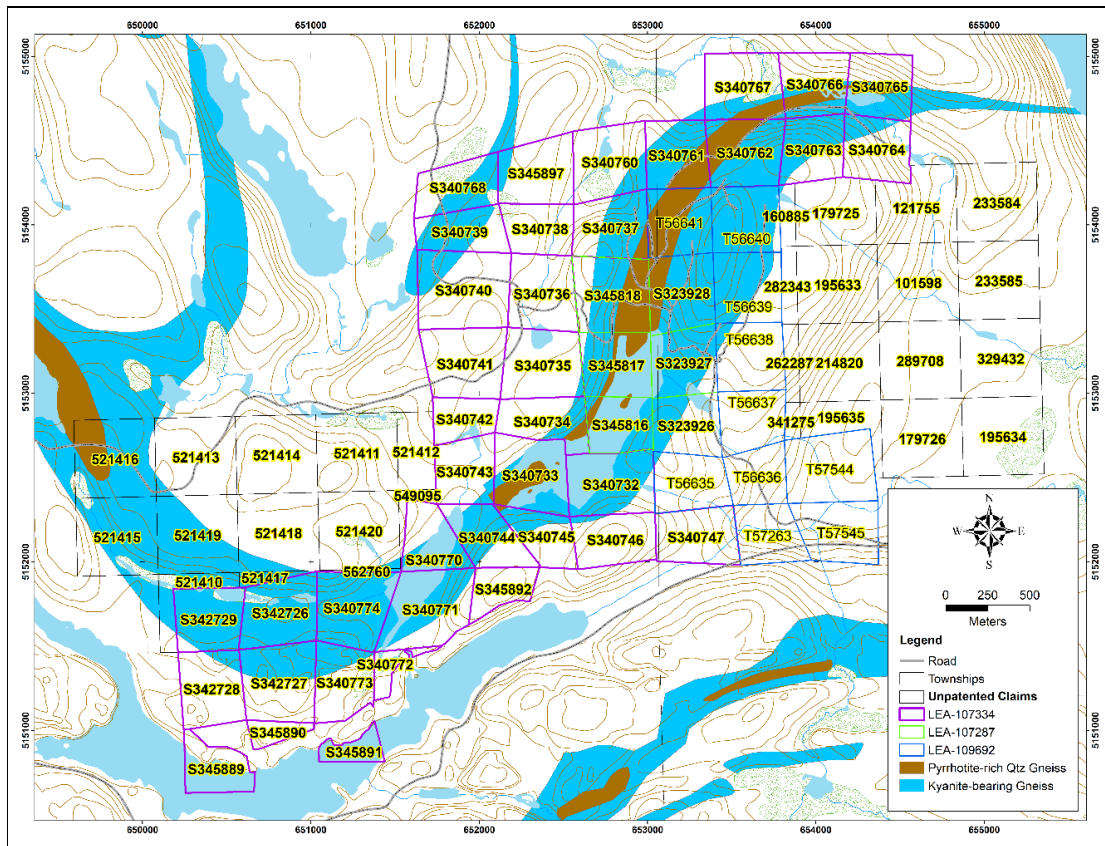


Figure 3: Property Geology (after OGS Map 2847).

## 5.0 2019 DIAMOND DRILLING PROGRAM

### 5.1 Methods

From June 22<sup>nd</sup> through to July 18<sup>th</sup>, 2019, KMC completed 4 diamond drill holes totalling 822.0 m on the Property. The purpose of the program was to determine if the mineralization is continuous along the general strike of the Main Zone and depth, in an area where there has been no historical drilling (Figure 4). All four diamond drill holes intersected appreciable thicknesses of kyanite mineralization with grades being comparable with both the historical results reported on the Main Zone, and with the grab samples that were collected by the author in 2018. In addition to the kyanite mineralization, appreciable amounts of garnet, quartz, biotite, and muscovite were intersected in the drill core. These later minerals could represent potential by-products aside from kyanite mineralization; however, further metallurgical and economic studies would be required to verify this. Diamond drill hole information is provided in Table 3, and significant results are provided in Table 4.

Table 3: Drill Hole Information (NAD83, Zone17N)

DDH	Easting	Northing	Elev (m)	Azimuth	Dip	Length (m)
CL19-01	653399	5154226	343	110	-45	226.50
CL19-02	653476	5154199	373	110	-45	165.00
CL19-03	653442	5154105	391	110	-45	184.50
CL19-04	653351	5154131	345	110	-45	246.00

Note: datum in NAD83, Z17N

Downhole surveying was completed by a TruShot digital survey instrument to measure the spatial relationships of the drill hole ([www.boartlongyear.com/product/trushot](http://www.boartlongyear.com/product/trushot)). The collars were surveyed by handheld GPS.

Drill logs are provided in Appendix II, sections are provided in Appendix III, and assay certificates are provided in Appendix IV. Plans maps are provided in the back pocket of this report.

**Table 4: Highlights from the Phase 1 Diamond Drilling Program**

DDH	From (m)	To (m)	Core length (m)	Ky (%)	Qtz (%)	Gt (Alm) (%)	Biotite (%)	Musc (%)
CL19-01	2.20	211.50	209.30	11.95	53.81	5.16	9.79	8.47
Incl.	37.35	211.50	174.15	13.54	53.22	5.02	10.12	6.68
CL19-02	1.10	155.17	154.07	13.62	55.53	4.98	9.77	6.52
Incl.	1.10	10.50	8.90	16.46	52.15	4.69	13.62	5.82
Incl.	43.00	57.00	14.00	17.49	54.47	6.44	10.63	3.43
Incl.	108.0	111.00	3.00	22.10	46.70	5.25	13.50	5.40
CL19-03	0.75	174.00	173.25	13.88	52.54	4.22	10.62	5.81
CL19-04	10.50	243.00	232.50	12.68	51.82	4.98	9.41	6.98
Incl.	52.50	237.00	184.50	14.58	49.93	4.59	9.34	5.42
Incl.	69.00	79.50	10.50	17.54	51.86	5.09	12.67	4.49
Incl.	114.00	135.00	21.00	16.84	48.14	4.30	8.95	3.59
Incl.	139.50	150.00	10.50	17.27	49.64	4.46	9.50	4.99
Incl.	201.00	216.00	15.00	16.04	45.18	3.84	7.60	3.90

\* Intervals reported in Table 4 represent core lengths and not true widths.

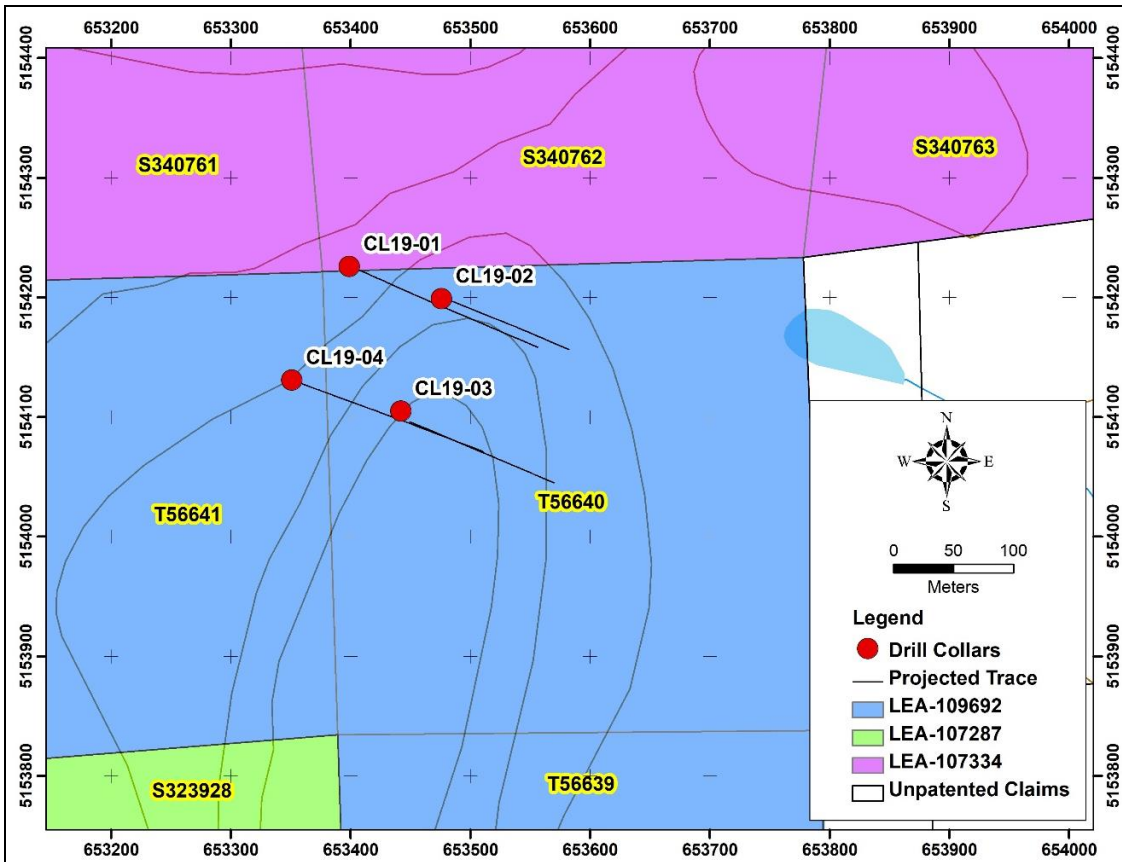


Figure 4: Location of the Phase 1 diamond drill holes.

## 5.2 Sample Preparation, Analyses, and Security

Drill core (BQTK = 40.7 mm diameter) was transported from the drill site by pickup truck to the core shack located at 134 Imperial Rd., North Bay, Ontario. Prior to transportation, the core boxes were fitted with lids and fiber-taped closed. Once at the core shack, the core was unloaded and put into a metal rack for storage prior to logging. Diamond drill core was then logged, and selected sample intervals were sawed in half, with one half placed in a labelled bag, and the remaining half placed back into the core box and stored. Metal tags were attached to the core boxes, inscribed with the hole number, box number, and corresponding interval.

Upon the sample being placed with a sample tag into a corresponding labelled plastic bag and sealed, they were then placed in order into large polypropylene rice bags, labelled with the contents, and sealed. The author then delivered the samples to Activation Laboratories' preparation facility located at 191 Booth Road, North Bay, Ontario. From here, Activation shipped the prepared samples to the company's main laboratory located in Ancaster, Ontario. A chain of custody/request for analysis form accompanied each sample shipment.

Upon receiving the samples, Activation Laboratories dried the samples prior to any preparation. The samples were then crushed to minus 10 mesh (1.7mm), mechanically split (riffle) to obtain a representative sample, then approximately 250 g is pulverized to at least 95% minus 150 mesh (105 microns). Approximately 1 cubic cm of the pulverized material is used where it is pressed into a sample holder. A quantitative X-ray diffraction analysis (XRD) is then completed on the sample where minerals are identified and their amounts determined using the Rietveld method. The Rietveld method is based on the calculation of the full diffraction pattern from the crystal structure information. Corundum is added as an internal standard in order to determine the amount of X-ray amorphous material. For geological material, it is estimated that the minerals present in less than 2% of the sample might not be detected.

Following analysis, the pulps and coarse rejects were returned to the author and stored in a locked sea container at 134 Imperial Rd., North Bay, Ontario. The drill core, also stored

in the sea container, was cross piled on over-sized pallets, and the core boxes were strapped to the pallet using ½” metal strapping for additional security.

### **5.3 Quality Assurance and Quality Control**

During the sampling procedure, a standard and a blank were inserted at every 20<sup>th</sup> sample interval. The standard material, AMSI 0561, sourced from African Mineral Standards, is comprised of kyanite ore derived from a deposit located in central Virginia, USA. The intent of using a standard is to monitor the accuracy of the results. A coarse blank, sourced from drill core of Nipissing gabbro originating from Scholes Township, Ontario, was used to monitor carry-over contamination and mis-sequencing of samples during sample preparation and analysis.

Minor issues with the QA/QC were noted by the author and rectified by re-analyzing samples 855781 through to 855796 from work order A19-11516.

Approximately 5% of the samples were selected for duplicate and check assay analysis. Coarse reject material was used for duplicates to determine the heterogeneity within the drill core, and pulp material was also used as duplicates to determine the precision of the data. Check assays were submitted to a secondary laboratory to increase confidence in the primary laboratory’s accuracy.

At the time of report writing, the results are still outstanding and will be filed as an addendum to this report.

## **6.0 CONCLUSIONS**

The principle conclusions of the Phase 1 diamond drilling program are:

- 1) Extensive kyanite mineralization was observed in all of the drill holes. The drill holes indicate that the zone is orientated north-northwest, and dips approximately 55 degrees west-northwest in the area of the Phase 1 drill hole collars. Further drilling “grid west” is required to comment on the width of the zone, but it would appear to be slightly in excess of 250 m in the area of the Phase 1 drilling.
- 2) In addition to the kyanite mineralization, accessory minerals such as quartz, garnet, muscovite, and biotite may represent commercial by-products and should be included in any future preliminary scoping and marketing studies.

## **7.0 RECOMMENDATIONS**

The following recommendations can be made on the basis of the recently completed geological mapping and prospecting program on the Crocan Lake Property:

- 1) Additional geological mapping and prospecting is recommended on what is known historically as the “B” zone that lies to the west of the main zone. This zone is mapped as a narrow unit of kyanite-bearing gneiss, where higher grade (60%) kyanite mineralization is found in lenses.
- 2) Selected density measurements should be completed on each of the drill holes from the Phase 1 drill program.
- 3) A Phase 2 drill program is recommended to continue to test the Main zone both to the north and south of the drill holes that were completed during the Phase 1 program. A total of 3,000 m would be required for this.
- 4) Historical drill core from the 1970’s that is stored at Willis Mountain, VA, should be inventoried, re-logged, and sampled if possible.
- 5) Furthermore, other kyanite occurrences located outside of the Property should be evaluated and staked if warranted.



## **8.0 REFERENCES**

Blais, R.M. 1998. Assessment and Progress Report: Butler-Antoine Kyanite Project, Antoine Township, District of Nipissing, Ontario, 24 p.

Easton, R.M. 2006. Geology and mineral potential of the eastern Tomiko terrane, Grenville Province; Ontario Geological Survey, Open File Report 5554, 117 p.

Kleinboeck, J.M. 2015. 2015 Geological Report: Crocan Lake Property, Antoine and Butler Townships, Ontario, Sudbury Mining Division, for Kyanite Mining Corp.

Kleinboeck, J.M. 2019. 2018 Geological and Prospecting Report, Antoine and Butler Townships, Ontario, Sudbury Mining Division, for Kyanite Mining Corp.

Meikle, R.J. 2015. Report on an Induced Polarization/Magnetometer Geophysical Survey, Kyanite Property. Antoine and Butler Townships, Sudbury Mining Division, Ontario, for Kyanite Mining Corp.

# **Appendix I**

## **Statement of Qualifications**

## Statement of Qualifications

I, Joerg Martin Kleinboeck of 147 Lakeside Drive, North Bay, Ontario, do hereby certify that:

I am a graduate of Laurentian University, Sudbury, Ontario with a B.Sc. Geology, 2000, and have been practising my profession as a geologist since.

I am a member with the Association of Professional Geoscientists of Ontario (#1411).

I am a member of the Ontario Prospectors Association (OPA).

I hold no interests in the securities of Kyanite Mining Corp.



The image shows a handwritten signature in cursive script, which appears to read 'Joerg Kleinboeck'. To the right of the signature is a circular professional seal. The seal contains a stylized flower or star symbol in the center. The text around the inner border of the seal reads 'PROFESSIONAL GEOSCIENTIST'. The text in the center of the seal reads 'JOERG M. KLEINBOECK', 'PRACTISING MEMBER', and '1411'. The word 'ONTARIO' is written along the bottom inner edge of the seal.

Joerg Martin Kleinboeck  
JMK Exploration Consulting  
April 17<sup>th</sup>, 2020  
North Bay, Ontario

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## **Appendix II**

### **Drill Logs**

# Kyanite Mining Corp.

<b>DDH:</b>	<b>CL19-01</b>	Claims title:	LEA-107334	Section:	
		Township:	Antoine	Level:	Surface
		Range:		Work place:	134 Imperial Rd., North Bay, ON.
Contractor:	Enviro North Exploration	Lot:			
Author:	Joerg Kleinboeck	Start date:	6/22/2019	Description date:	
		End date:	6/28/2019		

Collar

				UTM Coordinates	
Dip:	-45.00°		East		653399.0
Length:	226.50		North		5154226.0
			Elevation		343.0

Number of samples:	142
Number of QAQC samples:	14
Total sampled length:	212.30

Description:

Core size: BQTK

Cemented: No

Stored: Yes

## Kyanite Mining Corp.

Description			Assay - Sample								
			From	To	Sample number	Length	Ky (%)	Qtz (%)	Alm (%)	Bio (%)	Musc (%)
0.00	2.20	OB Overburden Casing driven to 3.66m, left in hole.									
2.20	3.05	Bio Gn	2.20	3.00	855501	0.80	3.90	81.30	0.00	5.10	0.00
		Biotite Gneiss dark grey fine grained biotite gneiss. massive to weakly foliated @ 50 deg TCA. 5% disseminated pyrite+pyrrhotite with rare chalcopyrite throughout. sulphide minerals preferentially concentrated and aligned parallel to foliation. strongly magnetic due to fine grained disseminated magnetite. lower contact broken.	3.00	4.50	855502	1.50	4.20	49.70	9.10	7.60	19.40
3.05	7.00	KyGtBioMuGn	4.50	6.00	855503	1.50	3.50	51.50	8.80	6.90	17.00
		Kyanite-Garnet-Biotite-Muscovite Gneiss grey very coarse grained kyanite-garnet-muscovite-biotite gneiss. foliation very weakly developed with kyanite xtls orientated randomly throughout at various angles TCA. 10-15% garnets up to 13mm in diameter, 8-10% kyanite xtls up to 12mm in length by 2-3mm in width. trace disseminated py throughout, generally unmineralized. lower contact sharp but irregular.	6.00	7.02	855504	1.02	3.90	60.80	2.30	8.90	23.20
7.00	14.19	BioGn	7.02	8.50	855505	1.48	2.30	70.40	0.00	6.80	5.10
		Biotite Gneiss	8.50	10.00	855506	1.50	2.20	70.30	0.00	1.00	0.00
		as from 2.30 to 3.05m.	10.00	11.50	855507	1.50	1.40	77.20	0.00	0.00	0.00
		lower contact sharp @ 60-65 deg TCA.	11.50	13.00	855508	1.50	0.00	88.30	0.00	4.00	0.00

Kyanite Mining Corp.

Description			Assay - Sample								
			From	To	Sample number	Length	Ky (%)	Qtz (%)	Alm (%)	Bio (%)	Musc (%)
14.19	35.40	KyGtBioMuGn	13.00	14.20	855509	1.20	0.00	85.50	0.00	6.30	0.00
		Kyanite-Garnet-Biotite-Muscovite Gneiss	14.20	16.00	855510	1.80	0.00	49.80	8.60	9.60	32.00
		grey very coarse grained	16.00	17.50	855511	1.50	3.00	58.20	7.00	11.70	20.10
		kyanite-garnet-muscovite-biotite gneiss.	17.50	19.00	855512	1.50	2.40	51.20	7.70	12.20	22.20
		foliation very weakly developed @ 55 deg	19.00	20.50	855513	1.50	4.60	48.90	9.50	9.90	14.90
		TCA with kyanite xtls orientated at various	20.50	22.00	855514	1.50	8.10	48.60	9.30	11.80	14.80
		angles TCA (kyanite xtls weakly aligned to	22.00	23.50	855515	1.50	4.20	46.10	10.10	9.80	18.80
		foliation).	23.50	25.00	855516	1.50	6.80	52.80	7.80	10.30	16.70
		15% garnets up to 13mm in diameter, 10%	25.00	26.50	855517	1.50	6.80	48.30	9.10	9.30	20.30
		kyanite xtls up to 12mm in length by	26.50	28.00	855518	1.50	6.70	54.50	9.20	8.70	17.20
		2-3mm in width.	28.00	29.50	855519	1.50	6.40	51.60	11.70	9.40	16.90
		trace disseminated py throughout matrix.,	29.50	31.00	855522	1.50	3.50	60.00	9.60	8.00	17.60
		generally unmineralized.	31.00	32.50	855523	1.50	11.80	50.60	5.40	13.00	12.30
intermittent quartz stringers throughout	32.50	34.00	855524	1.50	7.70	55.30	6.20	9.70	21.10		
interval, generally <6cm in width, locally	34.00	35.40	855525	1.40	5.70	64.90	5.40	6.40	16.80		
containing 5% remobilized											
chalcopyrite+pyrite+pyrrhotite.											
18.22-18.42m - moderately fractured,											
RQD=0%.											
lower transitional but abrupt.											
35.40	37.20	SerGn	35.40	37.35	855526	1.95	0.00	18.10	0.00	6.90	63.60
		Sericite Gneiss									
		light grey-brown sericite gneiss.									
		foliation weakly developed @ 50-55 deg									
		TCA.									
		no visible minerlization.									
		weak spotty epidote towards lower contact.									
		lower contact transitional.									
37.20	212.85	KyGtBioMuGn	37.35	39.00	855527	1.65	10.80	60.10	5.60	9.00	13.50
		Kyanite-Garnet-Biotite-Muscovite Gneiss	39.00	40.50	855528	1.50	13.50	52.80	4.70	12.10	10.80
		grey very coarse grained									

## Kyanite Mining Corp.

Description	Assay - Sample									
	From	To	Sample number	Length	Ky (%)	Qtz (%)	Alm (%)	Bio (%)	Musc (%)	
kyanite-garnet-muscovite-biotite gneiss.	40.50	42.00	855529	1.50	9.30	62.60	5.10	9.10	6.50	
foliation moderately developed between 70	42.00	43.50	855530	1.50	12.40	55.10	5.50	14.00	7.40	
to 75 deg TCA. Kyanite xtls are bladed	43.50	45.00	855531	1.50	15.20	47.80	2.60	12.10	14.80	
and weakly aligned to foliation, but also	45.00	46.50	855532	1.50	13.00	57.40	3.60	9.20	10.70	
randomly orientated at various angles TCA	46.50	48.00	855533	1.50	10.30	63.90	3.20	10.70	7.00	
throughout interval.	48.00	49.50	855534	1.50	7.30	63.70	4.50	10.40	10.60	
occasional rare microfolding over narrow	49.50	51.00	855535	1.50	6.40	47.70	4.50	13.40	8.80	
intervals (<20cm).	51.00	52.50	855536	1.50	0.00	38.70	8.50	8.80	11.30	
37.20-140.00m - 10-12% garnets up to	52.50	54.00	855537	1.50	11.00	41.80	4.70	17.80	9.40	
13mm in diameter, 10-15 % kyanite xtls up	54.00	55.50	855538	1.50	14.00	54.50	6.30	12.80	4.40	
to 3 cm in length by 3-4mm in width,	55.50	57.00	855539	1.50	15.00	47.10	4.50	10.20	7.40	
typically <1cm in length, locally up to	57.00	58.50	855542	1.50	16.00	43.90	3.10	10.20	4.10	
20-25% over narrow intervals usually 10cm	58.50	60.00	855543	1.50	16.60	57.30	3.60	12.90	4.90	
or less in core width.	60.00	61.50	855544	1.50	17.30	46.10	5.00	11.40	3.70	
140.00-180.00m - 10% garnets up to	61.50	63.00	855545	1.50	16.70	56.40	4.90	12.60	3.50	
13mm typically <1cm, >15% kyanite xtls up	63.00	64.50	855546	1.50	16.80	55.40	4.80	10.60	3.90	
to 3 cm in length by 3-4mm in width,	64.50	66.00	855547	1.50	17.70	53.90	6.10	12.10	6.00	
typically +/- 1cm in length, locally up to	66.00	67.50	855548	1.50	15.30	43.00	5.70	13.70	5.30	
20-25% over narrow intervals usually 10cm	67.50	69.00	855549	1.50	13.80	50.80	4.20	10.50	7.50	
or less in core width.	69.00	70.50	855550	1.50	9.40	65.50	2.60	9.30	13.20	
trace disseminated py throughout matrix,	70.50	72.00	855551	1.50	9.40	66.60	3.10	10.20	10.70	
generally unmineralized.	72.00	73.50	855552	1.50	15.10	55.30	3.20	11.60	14.80	
155.69-155.70m - 1cm band of wispy py	73.50	75.00	855553	1.50	13.30	57.20	2.40	14.40	12.70	
orientated ll to foliation (75-80 deg).	75.00	76.50	855554	1.50	16.30	60.00	4.20	10.50	8.00	
159.04m - wispy py along fracture.	76.50	78.00	855555	1.50	13.60	60.60	4.50	12.50	6.70	
179.58-179.78m - 5% disseminated and	78.00	79.50	855556	1.50	11.40	55.20	3.80	7.60	14.00	
fracture controlled py	79.50	81.00	855557	1.50	11.50	57.10	4.00	9.90	10.50	
intermittent white to smokey grey quartz	81.00	82.50	855558	1.50	16.40	52.20	5.70	12.90	4.50	
stringers throughout interval, typically	82.50	84.00	855559	1.50	13.30	60.40	5.70	10.60	4.00	
<5cm in width, locally up to 20cm and	84.00	85.50	855562	1.50	14.30	43.10	6.20	7.20	3.80	
comprises <5% of unit.										
moderate veining from 45.50-55.50m,										



Kyanite Mining Corp.

Description	Assay - Sample									
	From	To	Sample number	Length	Ky (%)	Qtz (%)	Alm (%)	Bio (%)	Musc (%)	
conformable to foliation. locally trace to	85.50	87.00	855563	1.50	16.90	53.50	5.70	11.20	4.80	
0.5% disseminated py within veinlets.	87.00	88.50	855564	1.50	16.20	61.70	6.50	8.50	3.00	
51.45-52.25m - moderate pervasive	88.50	90.00	855565	1.50	16.10	47.20	4.70	8.90	4.30	
sericite.	90.00	91.50	855566	1.50	17.10	55.10	7.00	10.10	6.70	
70.94-71.46m - heavily fractured about	91.50	93.00	855567	1.50	13.00	56.40	4.30	9.90	7.40	
about quartz veining and low angle fault	93.00	94.50	855568	1.50	13.00	56.10	6.10	9.70	7.20	
with 1cm of indurated gouge @ 10 deg	94.50	96.00	855569	1.50	12.70	40.90	3.10	9.30	4.00	
TCA.	96.00	97.50	855570	1.50	14.10	55.20	5.40	12.90	5.80	
80.54-80.84m - white to smokey grey	97.50	99.00	855571	1.50	13.70	53.90	6.50	9.70	5.40	
quartz vein with irregular contacts (~45 deg	99.00	100.50	855572	1.50	16.00	53.30	4.90	10.10	5.60	
TCA).	100.50	102.00	855573	1.50	16.60	55.50	5.10	9.80	4.50	
85.94-85.95m - yellow coarse translucent	102.00	103.50	855574	1.50	13.30	56.80	6.30	10.90	6.20	
crystal approx. 1cm in width (anhydrite?).	103.50	105.00	855575	1.50	16.90	58.50	4.20	8.50	2.90	
Hardness is approx 3 to 4.	105.00	106.50	855576	1.50	14.30	54.00	6.10	11.60	5.30	
117.01-117.20cm - 10cm white quartz vein	106.50	108.00	855577	1.50	14.40	56.40	7.10	9.10	5.80	
orientated @ 20 deg TCA, heavily	108.00	109.50	855578	1.50	16.10	58.80	4.50	9.30	5.10	
fractured. trace pyrite along fracture	109.50	111.00	855579	1.50	16.00	55.50	3.80	9.90	2.70	
surfaces.	111.00	112.50	855582	1.50	16.80	44.20	2.50	10.50	2.50	
125.07-125.14m - band of garnet and	112.50	114.00	855583	1.50	15.00	58.00	6.10	11.80	2.10	
biotite (approximately 25-30% garnets).	114.00	115.50	855584	1.50	14.60	52.50	6.20	14.10	5.00	
127.02-127.13m - fracture orientated at 5	115.50	117.00	855585	1.50	11.30	56.40	7.30	11.20	9.90	
deg TCA with 5mm of indurated gouge.	117.00	118.50	855586	1.50	9.90	67.90	4.30	8.60	7.90	
144.80-145.65m - heavily fractured.	118.50	120.00	855587	1.50	14.50	55.40	5.40	10.80	6.70	
150.73-150.76m - heavily fractured @ 40	120.00	121.50	855588	1.50	14.70	49.70	6.80	13.00	9.00	
deg TCA.	121.50	123.00	855589	1.50	13.40	60.20	6.90	9.50	3.60	
156.90-156.96m - fault with ground	123.00	124.50	855590	1.50	12.00	57.80	6.80	10.80	7.90	
core/gouge orientated @ II to foliation	124.50	126.00	855591	1.50	14.00	45.80	5.70	12.70	9.20	
(75-80 deg TCA).	126.00	127.50	855592	1.50	13.00	54.70	5.00	9.60	12.60	
144.00-180.00m - local weak white smokey	127.50	129.00	855593	1.50	13.30	45.50	7.30	12.00	6.50	
grey quartz veins accompanied by the	129.00	130.50	855594	1.50	12.80	54.70	6.90	10.00	11.70	
presence of narrow quartz+kspar+chlorite										
veinlets, generally conformable to foliation										

## Kyanite Mining Corp.

Description	Assay - Sample									
	From	To	Sample number	Length	Ky (%)	Qtz (%)	Alm (%)	Bio (%)	Musc (%)	
and cross cut core at high angles TCA.	130.50	132.00	855595	1.50	12.60	54.50	6.20	9.80	9.10	
veins occasionally contains laths/blades of	132.00	133.50	855596	1.50	13.90	56.40	6.50	11.50	9.20	
ky.	133.50	135.00	855597	1.50	11.40	59.00	8.40	8.20	8.20	
151.05-151.30m - heavily fractured and	135.00	136.50	855598	1.50	15.40	54.40	5.80	12.10	10.50	
rehealed with calcite (reacts vigorously	136.50	138.00	855599	1.50	11.60	61.20	6.80	10.10	8.30	
with HCl).	138.00	139.50	855602	1.50	15.10	58.80	6.00	8.80	6.20	
154.85-155.17m - heavily fractured/fault	139.50	141.00	855603	1.50	14.60	54.80	6.70	12.10	8.40	
with indurated gouge.	141.00	142.50	855604	1.50	12.90	57.90	7.60	11.20	7.30	
156.64m - chlorite slickensides with pyrite	142.50	144.00	855605	1.50	9.10	49.40	4.70	5.60	8.10	
along surface.	144.00	145.50	855606	1.50	8.30	60.20	6.40	8.30	10.10	
207.20-207.40m - bleached/altered zone	145.50	147.00	855607	1.50	13.40	66.70	3.30	11.40	3.40	
about light green gouge occupying	147.00	148.50	855608	1.50	11.90	62.50	6.30	9.70	5.40	
fractures orientated @ 50-65 deg TCA.	148.50	150.00	855609	1.50	10.90	67.60	3.80	10.20	5.10	
lower contact possibly broken/or	150.00	151.50	855610	1.50	12.50	62.20	2.30	11.40	4.90	
transitional (grades into a bio gneiss).	151.50	153.00	855611	1.50	8.80	62.80	3.20	12.50	5.90	
212.00-212.60m - 3-4mm thick hem+carb	153.00	154.50	855612	1.50	10.70	65.40	3.90	11.60	5.40	
veinlets orientate at 10 deg TCA.	154.50	156.00	855613	1.50	10.50	50.00	7.00	9.10	7.10	
lower contact sharp @ 70 deg TCA.	156.00	157.50	855614	1.50	10.00	61.00	5.40	12.20	5.40	
	157.50	159.00	855615	1.50	15.90	55.50	5.10	11.00	5.80	
	159.00	160.50	855616	1.50	12.50	60.90	6.30	10.40	3.90	
	160.50	162.00	855617	1.50	13.30	59.40	7.10	9.80	6.10	
	162.00	163.50	855618	1.50	12.70	59.00	7.10	9.80	6.00	
	163.50	165.00	855619	1.50	15.10	48.60	7.30	9.20	2.90	
	165.00	166.50	855622	1.50	14.50	47.20	4.20	8.80	7.50	
	166.50	168.00	855623	1.50	20.20	46.00	5.10	10.40	4.00	
	168.00	169.50	855624	1.50	16.80	37.20	4.20	8.30	2.50	
	169.50	171.00	855625	1.50	14.30	35.70	4.10	7.00	3.40	
	171.00	172.50	855626	1.50	16.30	46.80	5.10	8.90	5.60	
	172.50	174.00	855627	1.50	14.80	39.80	3.50	10.60	7.90	
	174.00	175.50	855628	1.50	16.20	44.20	3.10	10.20	6.10	

Kyanite Mining Corp.

Description			Assay - Sample								
			From	To	Sample number	Length	Ky (%)	Qtz (%)	Alm (%)	Bio (%)	Musc (%)
			175.50	177.00	855629	1.50	15.80	37.40	4.40	8.20	4.90
			177.00	178.50	855630	1.50	17.00	47.60	4.20	9.00	6.60
			178.50	180.00	855631	1.50	16.50	40.90	3.40	10.10	4.50
			180.00	181.50	855632	1.50	14.40	45.50	1.70	10.60	4.40
			181.50	183.00	855633	1.50	15.70	39.70	3.30	8.30	4.70
			183.00	184.50	855634	1.50	12.60	44.90	3.20	6.80	9.20
			184.50	186.00	855635	1.50	15.80	38.90	2.30	9.30	7.30
			186.00	187.50	855636	1.50	14.40	44.00	3.80	8.60	4.60
			187.50	189.00	855637	1.50	10.40	42.30	5.10	8.50	4.90
			189.00	190.50	855638	1.50	17.60	46.10	4.60	7.80	4.50
			190.50	192.00	855639	1.50	15.00	53.70	4.40	9.10	3.20
			192.00	193.50	855642	1.50	13.00	50.60	6.00	8.70	7.40
			193.50	195.00	855643	1.50	14.20	56.10	6.20	8.80	11.00
			195.00	196.50	855644	1.50	14.90	41.20	5.20	6.80	6.80
			196.50	198.00	855645	1.50	13.10	49.30	6.60	6.80	7.10
			198.00	199.50	855646	1.50	13.50	48.30	4.70	5.70	3.50
			199.50	201.00	855647	1.50	12.00	45.00	6.00	5.30	5.00
			201.00	202.50	855648	1.50	10.70	48.90	5.70	6.40	6.60
			202.50	204.00	855649	1.50	13.20	51.00	5.40	8.60	4.80
			204.00	205.50	855650	1.50	13.20	61.60	3.40	11.80	3.20
			205.50	207.00	855651	1.50	13.60	55.20	7.50	9.50	3.60
			207.00	208.50	855652	1.50	12.40	62.30	2.90	9.90	6.90
			208.50	210.00	855653	1.50	11.20	52.70	1.80	7.00	6.00
			210.00	211.50	855654	1.50	10.50	59.60	3.10	8.30	8.00
			211.50	212.85	855655	1.35	4.70	60.40	1.50	13.90	5.00
212.85	226.50	BioGn Biotite Gneiss dark grey biotite gneiss with local siliceous granitic gneiss sections at upper contact. very minor ky-bands up to 1cm in thickness	212.85	214.50	855656	1.65	0.90	98.60	0.00	0.50	0.00

# Kyanite Mining Corp.

Description	Assay - Sample									
	From	To	Sample number	Length	Ky (%)	Qtz (%)	Alm (%)	Bio (%)	Musc (%)	
near upper contact. foliation @ 80 deg TCA. no visible mineralization. non-magnetic.										

## Kyanite Mining Corp.

Assay - QAQC				
From	To	Sample number	Reference	Ky (%)
28.00	29.50	855520	AMIS 0561	24.20
28.00	29.50	855521	Diabase Drill Core	0.00
55.50	57.00	855540	AMIS 0561	26.10
55.50	57.00	855541	Diabase Drill Core	0.00
82.50	84.00	855560	AMIS 0561	25.80
82.50	84.00	855561	Diabase Drill Core	0.00
109.50	111.00	855580	AMIS 0561	25.60
109.50	111.00	855581	Diabase Drill Core	0.00
136.50	138.00	855600	AMIS 0561	25.50
136.50	138.00	855601	Diabase Drill Core	0.00
163.50	165.00	855620	AMIS 0561	25.70
163.50	165.00	855621	Diabase Drill Core	0.00
190.50	192.00	855640	AMIS 0561	24.70
190.50	192.00	855641	Diabase Drill Core	0.00

# Kyanite Mining Corp.

Magnetism		
From	To	Magnetism
0.00	3.00	26.18
3.00	4.00	0.872
4.00	5.00	0.699
5.00	6.00	0.417
6.00	7.00	10.95
7.00	8.00	17.69
8.00	9.00	11.42
9.00	10.00	21.85
10.00	11.00	3.718
11.00	12.00	1.413
12.00	13.00	5.449
13.00	14.00	11.71
14.00	15.00	0.566
15.00	16.00	0.7
16.00	17.00	0.572
17.00	18.00	0.219
18.00	19.00	0.394
19.00	20.00	0.577
20.00	21.00	1.401
21.00	22.00	1.456
22.00	23.00	0.337
23.00	24.00	0.422
24.00	25.00	0.409
25.00	26.00	0.445
26.00	27.00	0.298
27.00	28.00	0.349
28.00	29.00	0.286
29.00	30.00	0.411
30.00	31.00	0.33
31.00	32.00	0.422
32.00	33.00	0.326
33.00	34.00	0.56

## Kyanite Mining Corp.

Magnetism		
From	To	Magnetism
34.00	35.00	0.529
35.00	36.00	0.2
36.00	37.00	0.157
37.00	38.00	0.556
38.00	39.00	0.322
39.00	40.00	0.423
40.00	41.00	0.227
41.00	42.00	0.34
42.00	43.00	0.355
43.00	44.00	0.132
44.00	45.00	0.337
45.00	46.00	0.494
46.00	47.00	0.141
47.00	48.00	0.156
48.00	49.00	0.392
49.00	50.00	0.099
50.00	51.00	0.46
51.00	52.00	0.748
52.00	53.00	0.309
53.00	54.00	0.46
54.00	55.00	0.686
55.00	56.00	0.598
56.00	57.00	0.358
57.00	58.00	0.468
58.00	59.00	0.211
59.00	60.00	0.286
60.00	61.00	0.162
61.00	62.00	0.41
62.00	63.00	0.146
63.00	64.00	0.314
64.00	65.00	0.439
65.00	66.00	0.435

## Kyanite Mining Corp.

Magnetism		
From	To	Magnetism
66.00	67.00	0.579
67.00	68.00	0.556
68.00	69.00	0.404
69.00	70.00	0.337
70.00	71.00	0.271
71.00	72.00	0.366
72.00	73.00	0.345
73.00	74.00	0.768
74.00	75.00	0.357
75.00	76.00	0.488
76.00	77.00	0.165
77.00	78.00	0.256
78.00	79.00	0.365
79.00	80.00	0.239
80.00	81.00	0.21
81.00	82.00	0.23
82.00	83.00	0.428
83.00	84.00	0.227
84.00	85.00	0.346
85.00	86.00	0.351
86.00	87.00	0.29
87.00	88.00	0.304
88.00	89.00	0.207
89.00	90.00	0.532
90.00	91.00	0.151
91.00	92.00	0.33
92.00	93.00	0.449
93.00	94.00	0.312
94.00	95.00	0.475
95.00	96.00	0.262
96.00	97.00	0.301
97.00	98.00	0.34



## Kyanite Mining Corp.

Magnetism		
From	To	Magnetism
98.00	99.00	0.168
99.00	100.00	0.378
100.00	101.00	0.196
101.00	102.00	0.258
102.00	103.00	0.206
103.00	104.00	0.401
104.00	105.00	0.184
105.00	106.00	0.605
106.00	107.00	0.394
107.00	108.00	0.365
108.00	109.00	0.399
109.00	110.00	0.458
110.00	111.00	0.338
111.00	112.00	0.445
112.00	113.00	0.305
113.00	114.00	0.561
114.00	115.00	0.375
115.00	116.00	0.462
116.00	117.00	0.33
117.00	118.00	0.312
118.00	119.00	0.359
119.00	120.00	0.247
120.00	121.00	0.358
121.00	122.00	0.495
122.00	123.00	0.421
123.00	124.00	0.379
124.00	125.00	0.459
125.00	126.00	0.563
126.00	127.00	0.498
127.00	128.00	0.595
128.00	129.00	0.371
129.00	130.00	0.598

## Kyanite Mining Corp.

Magnetism		
From	To	Magnetism
130.00	131.00	0.355
131.00	132.00	0.16
132.00	133.00	0.246
133.00	134.00	0.429
134.00	135.00	0.423
135.00	136.00	0.42
136.00	137.00	0.407
137.00	138.00	0.526
138.00	139.00	0.521
139.00	140.00	0.41
140.00	141.00	0.405
141.00	142.00	0.371
142.00	143.00	0.511
143.00	144.00	0.277
144.00	145.00	0.553
145.00	146.00	0.225
146.00	147.00	0.723
147.00	148.00	0.429
148.00	149.00	0.399
149.00	150.00	0.237
150.00	151.00	0.293
151.00	152.00	0.238
152.00	153.00	0.225
153.00	154.00	0.184
154.00	155.00	0.179
155.00	156.00	4.956
156.00	157.00	0.153
157.00	158.00	0.343
158.00	159.00	0.353
159.00	160.00	0.43
160.00	161.00	0.471
161.00	162.00	0.247

# Kyanite Mining Corp.

Magnetism		
From	To	Magnetism
162.00	163.00	0.518
163.00	164.00	0.218
164.00	165.00	0.444
165.00	166.00	0.182
166.00	167.00	0.215
167.00	168.00	0.451
168.00	169.00	0.263
169.00	170.00	0.464
170.00	171.00	0.54
171.00	172.00	0.398
172.00	173.00	0.411
173.00	174.00	0.321
174.00	175.00	0.254
175.00	176.00	0.287
176.00	177.00	0.475
177.00	178.00	0.449
178.00	179.00	0.631
179.00	180.00	1.312
180.00	181.00	0.721
181.00	182.00	0.497
182.00	183.00	0.307
183.00	184.00	0.368
184.00	185.00	0.154
185.00	186.00	0.452
186.00	187.00	0.128
187.00	188.00	0.684
188.00	189.00	0.543
189.00	190.00	0.78
190.00	191.00	1.708
191.00	192.00	0.354
192.00	193.00	0.393
193.00	194.00	0.409

## Kyanite Mining Corp.

Magnetism		
From	To	Magnetism
194.00	195.00	0.609
195.00	196.00	0.41
196.00	197.00	0.218
197.00	198.00	0.501
198.00	199.00	0.472
199.00	200.00	0.259
200.00	201.00	0.219
201.00	202.00	0.139
202.00	203.00	0.384
203.00	204.00	0.238
204.00	205.00	0.18
205.00	206.00	0.468
206.00	207.00	0.109
207.00	208.00	0.261
208.00	209.00	0.239
209.00	210.00	0.399
210.00	211.00	0.295
211.00	212.00	0.341
212.00	213.00	0.086
213.00	214.00	0.08
214.00	215.00	0.078
215.00	216.00	0.195
216.00	217.00	0.166
217.00	218.00	0.219
218.00	219.00	0.108
219.00	220.00	0.282
220.00	221.00	0.241
221.00	222.00	0.281
222.00	223.00	0.115
223.00	224.00	0.129
224.00	225.00	0.169
225.00	226.00	0.203

## Kyanite Mining Corp.

Down hole survey			
Type	Depth	Azimuth	Dip
Trueshot	16.00	113.70°	-44.20°
Trueshot	19.00	114.10°	-44.10°
Trueshot	22.00	113.80°	-44.00°
Trueshot	25.00	114.10°	-43.80°
Trueshot	28.00	114.20°	-43.60°
Trueshot	31.00	114.20°	-43.60°
Trueshot	34.00	114.30°	-43.40°
Trueshot	37.00	114.20°	-42.90°
Trueshot	40.00	114.10°	-42.80°
Trueshot	43.00	114.10°	-42.70°
Trueshot	46.00	114.10°	-42.60°
Trueshot	49.00	114.00°	-42.50°
Trueshot	52.00	113.90°	-42.40°
Trueshot	55.00	113.90°	-42.30°
Trueshot	58.00	113.80°	-42.20°
Trueshot	61.00	113.90°	-42.10°
Trueshot	64.00	113.80°	-41.90°
Trueshot	67.00	113.80°	-41.80°
Trueshot	70.00	114.00°	-41.80°
Trueshot	73.00	114.20°	-41.70°
Trueshot	76.00	115.80°	-41.60°
Trueshot	79.00	113.60°	-41.50°
Trueshot	82.00	113.40°	-41.40°
Trueshot	85.00	113.40°	-41.40°
Trueshot	88.00	113.40°	-41.30°
Trueshot	91.00	113.20°	-41.20°
Trueshot	97.00	113.10°	-41.00°
Trueshot	100.00	113.20°	-40.90°
Trueshot	103.00	113.20°	-40.80°
Trueshot	106.00	113.10°	-40.70°
Trueshot	109.00	113.10°	-40.60°
Trueshot	112.00	113.10°	-40.50°

Kyanite Mining Corp.

Down hole survey			
Type	Depth	Azimuth	Dip
Trueshot	115.00	112.90°	-40.30°
Trueshot	118.00	112.90°	-40.20°
Trueshot	121.00	113.00°	-40.10°
Trueshot	124.00	113.00°	-40.10°
Trueshot	127.00	113.00°	-39.90°
Trueshot	130.00	112.90°	-39.90°
Trueshot	133.00	112.90°	-39.80°
Trueshot	136.00	112.90°	-39.70°
Trueshot	139.00	112.80°	-39.60°
Trueshot	142.00	112.80°	-39.50°
Trueshot	145.00	112.80°	-39.50°
Trueshot	148.00	113.00°	-39.50°
Trueshot	151.00	113.20°	-39.40°
Trueshot	154.00	113.20°	-39.40°
Trueshot	157.00	113.20°	-39.30°
Trueshot	160.00	113.30°	-39.30°
Trueshot	163.00	113.20°	-39.20°
Trueshot	166.00	113.20°	-39.20°
Trueshot	169.00	113.30°	-39.10°
Trueshot	172.00	113.30°	-39.00°
Trueshot	175.00	113.20°	-39.00°
Trueshot	178.00	113.20°	-38.90°
Trueshot	181.00	113.30°	-38.80°
Trueshot	184.00	113.20°	-38.70°
Trueshot	187.00	113.30°	-38.70°
Trueshot	190.00	113.20°	-38.60°
Trueshot	193.00	113.20°	-38.50°
Trueshot	196.00	113.10°	-38.40°
Trueshot	199.00	113.10°	-38.30°
TrueShot	201.00	110.80°	-43.80°
Trueshot	202.00	113.10°	-38.20°
Trueshot	205.00	113.10°	-38.10°

# Kyanite Mining Corp.

Down hole survey			
Type	Depth	Azimuth	Dip
Trueshot	208.00	113.10°	-38.20°
Trueshot	211.00	113.10°	-38.20°
Trueshot	214.00	113.20°	-38.10°
Trueshot	217.00	113.20°	-38.10°
Trueshot	220.00	113.30°	-38.10°
Trueshot	223.00	113.30°	-38.10°
Trueshot	226.00	113.30°	-38.10°

Kyanite Mining Corp.

RQD						
From	To	Length	Recovered length	RQD length	Recovered (%)	RQD (%)
2.200	3.000	0.800	0.800	0.800	100.000	100.000
3.000	6.000	3.000	2.920	2.650	97.330	88.330
6.000	9.000	3.000	3.000	2.570	100.000	85.670
9.000	12.000	3.000	3.000	2.880	100.000	96.000
12.000	15.000	3.000	2.430	1.930	81.000	64.330
15.000	18.000	3.000	2.950	2.360	98.330	78.670
18.000	21.000	3.000	3.000	2.780	100.000	92.670
21.000	24.000	3.000	3.000	3.000	100.000	100.000
24.000	27.000	3.000	2.990	2.990	99.670	99.670
27.000	30.000	3.000	2.970	2.770	99.000	92.330
30.000	33.000	3.000	3.000	2.830	100.000	94.330
33.000	36.000	3.000	2.980	2.890	99.330	96.330
36.000	39.000	3.000	2.840	1.930	94.670	64.330
39.000	42.000	3.000	2.950	2.800	98.330	93.330
42.000	45.000	3.000	2.980	2.910	99.330	97.000
45.000	48.000	3.000	3.000	3.000	100.000	100.000
48.000	51.000	3.000	3.000	2.870	100.000	95.670
51.000	54.000	3.000	2.980	2.370	99.330	79.000
54.000	57.000	3.000	3.000	3.000	100.000	100.000
57.000	60.000	3.000	3.000	3.000	100.000	100.000
60.000	63.000	3.000	3.000	3.000	100.000	100.000
63.000	66.000	3.000	3.000	2.860	100.000	95.330
66.000	69.000	3.000	3.000	3.000	100.000	100.000
69.000	72.000	3.000	2.950	2.240	98.330	74.670
72.000	75.000	3.000	3.000	3.000	100.000	100.000
75.000	78.000	3.000	3.000	3.000	100.000	100.000
78.000	81.000	3.000	3.000	2.720	100.000	90.670
81.000	84.000	3.000	3.000	3.000	100.000	100.000
84.000	87.000	3.000	3.000	3.000	100.000	100.000
87.000	90.000	3.000	2.960	2.960	98.670	98.670
90.000	93.000	3.000	2.960	2.960	98.670	98.670



Kyanite Mining Corp.

RQD						
From	To	Length	Recovered length	RQD length	Recovered (%)	RQD (%)
93.000	96.000	3.000	2.890	2.890	96.330	96.330
96.000	99.000	3.000	3.000	2.930	100.000	97.670
99.000	102.000	3.000	3.000	2.870	100.000	95.670
102.000	105.000	3.000	2.980	2.920	99.330	97.330
105.000	108.000	3.000	3.020	3.020	100.670	100.670
108.000	111.000	3.000	3.000	3.000	100.000	100.000
111.000	114.000	3.000	3.000	2.910	100.000	97.000
114.000	117.000	3.000	2.990	2.860	99.670	95.330
117.000	120.000	3.000	3.000	2.680	100.000	89.330
120.000	123.000	3.000	2.960	2.890	98.670	96.330
123.000	126.000	3.000	2.990	2.600	99.670	86.670
126.000	129.000	3.000	2.970	2.520	99.000	84.000
129.000	132.000	3.000	3.000	2.730	100.000	91.000
132.000	135.000	3.000	3.000	2.920	100.000	97.330
135.000	138.000	3.000	2.970	2.870	99.000	95.670
138.000	141.000	3.000	2.990	2.950	99.670	98.330
141.000	144.000	3.000	3.000	3.000	100.000	100.000
144.000	147.000	3.000	2.900	2.000	96.670	66.670
147.000	150.000	3.000	3.000	2.480	100.000	82.670
150.000	153.000	3.000	2.930	2.770	97.670	92.330
153.000	156.000	3.000	3.000	2.340	100.000	78.000
156.000	159.000	3.000	2.970	2.840	99.000	94.670
159.000	162.000	3.000	2.980	2.960	99.330	98.670
162.000	165.000	3.000	3.000	3.000	100.000	100.000
165.000	168.000	3.000	2.980	2.860	99.330	95.330
168.000	171.000	3.000	2.990	2.990	99.670	99.670
171.000	174.000	3.000	3.020	2.910	100.670	97.000
174.000	177.000	3.000	3.010	3.010	100.330	100.330
177.000	180.000	3.000	2.990	2.990	99.670	99.670
180.000	183.000	3.000	2.990	2.990	99.670	99.670
183.000	186.000	3.000	2.990	2.900	99.670	96.670

Kyanite Mining Corp.

RQD						
From	To	Length	Recovered length	RQD length	Recovered (%)	RQD (%)
186.000	189.000	3.000	3.010	3.010	100.330	100.330
189.000	192.000	3.000	3.000	2.960	100.000	98.670
192.000	195.000	3.000	3.000	3.000	100.000	100.000
195.000	198.000	3.000	2.980	2.980	99.330	99.330
198.000	201.000	3.000	3.000	3.000	100.000	100.000
201.000	204.000	3.000	3.010	3.010	100.330	100.330
204.000	207.000	3.000	3.000	3.000	100.000	100.000
207.000	210.000	3.000	2.980	2.610	99.330	87.000
210.000	213.000	3.000	3.020	2.450	100.670	81.670
213.000	216.000	3.000	3.000	2.700	100.000	90.000
216.000	219.000	3.000	3.000	2.870	100.000	95.670
219.000	222.000	3.000	3.000	2.690	100.000	89.670
222.000	225.000	3.000	3.000	3.000	100.000	100.000
225.000	226.500	1.500	1.480	1.480	98.670	98.670

# Kyanite Mining Corp.

<b>DDH:</b>	<b>CL19-02</b>	Claims title:	LEA-109692	Section:	
		Township:	Antoine	Level:	Surface
		Range:		Work place:	134 Imperial Rd. North Bay, ON.
Contractor:	Enviro North Exploration	Lot:			
Author:	Joerg Kleinboeck	Start date:	7/2/2019	Description date:	7/3/2019
		End date:	7/5/2019		

Collar

				UTM Coordinates	
Dip:	-45.00°		East	653472.0	
Length:	165.00		North	5154202.0	
			Elevation	372.0	

Number of samples:	105
Number of QAQC samples:	12
Total sampled length:	156.40

Description:

Core size: BQTK

Cemented: No

Stored: Yes

Kyanite Mining Corp.

Description			Assay - Sample								
			From	To	Sample number	Length	Ky (%)	Qtz (%)	Alm (%)	Bio (%)	Musc (%)
0.00	1.10	OB Overburden Casing driven to 5.0 ft (1.52m), left in hole.									
1.10	34.57	KyGtBioMuGn Kyanite-Garnet-Biotite-Muscovite Gneiss grey coarse grained kyanite-garnet-muscovite-biotite gneiss. foliation moderately developed between 70 to 75 deg TCA. Kyanite xtls are bladed and weakly aligned to foliation, but also randomly orientated at various angles TCA throughout interval. 10-12% garnets up to 13mm in diameter, 12-15 % kyanite xtls typically <1cm in length by 1mm in width, locally up to 20-25% over narrow intervals usually 10cm or less in core width. kyanite xtls become very coarse grained towards lower contact. weak intermittent quartz veinlets throughout, generally <10cm in width and comprise approx 5% of interval. 14.20-15.00m - moderate quartz+kspar veining about minor sheared/faults sections with gouge. 33.45-34.00m - quartz flooding with strong alteration (hem? + sericite) adjacent to the veins/flooded sections. non-magnetic. tr diss py, generally unmineralized. lower contact sharp but broken (40 deg?).	1.10	3.00	855657	1.90	15.70	57.40	5.70	10.10	5.10
			3.00	4.50	855658	1.50	14.20	51.50	3.80	14.80	5.50
			4.50	6.00	855659	1.50	19.70	45.00	6.00	16.00	5.30
			6.00	7.50	855662	1.50	18.80	50.30	4.40	14.40	6.60
			7.50	9.00	855663	1.50	13.60	53.80	3.90	13.10	7.20
			9.00	10.50	855664	1.50	17.20	54.20	3.80	14.60	5.20
			10.50	12.00	855665	1.50	13.60	59.40	3.30	11.70	4.90
			12.00	13.50	855666	1.50	17.20	54.50	3.70	13.10	6.50
			13.50	15.00	855667	1.50	7.10	58.00	6.50	7.60	10.30
			15.00	16.50	855668	1.50	13.40	61.50	6.10	7.70	3.00
			16.50	18.00	855669	1.50	13.40	58.30	6.70	9.50	1.70
			18.00	19.50	855670	1.50	16.40	54.90	4.00	12.60	2.10
			19.50	21.00	855671	1.50	14.30	55.20	5.30	10.80	2.50
			21.00	22.50	855672	1.50	15.70	56.00	4.90	10.30	2.00
			22.50	24.00	855673	1.50	11.10	60.60	5.70	10.50	2.80
			24.00	25.50	855674	1.50	16.60	57.00	6.50	12.00	1.10
			25.50	27.00	855675	1.50	13.20	60.10	6.30	9.20	7.10
			27.00	28.50	855676	1.50	12.00	61.70	4.20	9.60	12.50
			28.50	30.00	855677	1.50	9.70	63.10	6.00	10.00	11.20
			30.00	31.50	855678	1.50	12.00	59.80	4.90	9.80	13.50
			31.50	33.00	855679	1.50	9.40	66.30	5.60	8.20	10.50
			33.00	34.57	855682	1.57	14.50	40.30	7.60	13.10	24.50
34.57	36.90	QV Quartz Vein	34.57	36.92	855683	2.35	0.00	99.30	0.00	0.70	0.00

Kyanite Mining Corp.

Description		Assay - Sample									
		From	To	Sample number	Length	Ky (%)	Qtz (%)	Alm (%)	Bio (%)	Musc (%)	
36.90	78.89	white quartz vein. heavily fractured. RQD=% no visible mineralization. lower contact broken.									
		KyGtBioMuGn	36.92	38.50	855684	1.58	9.10	69.00	4.60	7.70	9.60
		<b>Kyanite-Garnet-Biotite-Muscovite Gneiss</b>	38.50	40.00	855685	1.50	13.10	60.10	2.80	9.60	14.40
		grey coarse grained	40.00	41.50	855686	1.50	10.80	62.70	5.90	10.20	10.40
		kyanite-garnet-muscovite-biotite gneiss.	41.50	43.00	855687	1.50	14.20	66.50	5.00	8.30	3.50
		foliation moderately developed between 70	43.00	44.50	855688	1.50	18.40	49.70	7.80	11.60	2.90
		to 75 deg TCA. Kyanite xtls are bladed	44.50	46.00	855689	1.50	18.20	57.40	4.70	12.40	2.20
		and weakly aligned to foliation, but also	46.00	47.50	855690	1.50	17.60	57.90	6.00	10.60	1.40
		randomly orientated at various angles TCA	47.50	49.00	855691	1.50	16.20	61.80	5.60	7.00	1.10
		throughout interval.	49.00	50.50	855692	1.50	18.70	56.80	6.70	10.20	1.40
		10-12% garnets up to 12-13mm in	50.50	52.00	855693	1.50	16.50	51.70	6.10	13.30	6.00
		diameter, 15 % kyanite xtls typically <1cm	52.00	53.00	855694	1.00	17.80	46.80	7.70	13.00	3.60
		in length by 1mm in width, locally up to	53.00	54.00	855695	1.00	18.00	52.80	7.90	10.00	5.50
		2cm in length.	54.00	55.50	855696	1.50	17.30	50.30	8.60	10.50	5.50
		Kyanite concentrations locally up to 25%	55.50	57.00	855697	1.50	16.50	56.40	4.20	8.30	5.40
		over narrow intervals.	57.00	58.50	855698	1.50	14.60	55.30	6.80	11.00	5.80
		weak intermittent quartz + felsic	58.50	60.00	855699	1.50	11.40	70.00	5.70	6.20	4.40
		(quartz+kspar) veinlets throughout,	60.00	61.50	855702	1.50	13.10	54.50	5.70	9.90	9.80
		generally <10cm in width and comprise	61.50	63.00	855703	1.50	13.10	58.10	5.30	9.10	10.30
		approx 5% of interval.	63.00	64.50	855704	1.50	18.00	52.40	3.60	9.20	14.70
		increased felsic veinlets from	64.50	66.00	855705	1.50	9.40	58.00	6.20	8.70	16.70
		58.00-60.50m up to 35cm in width.	66.00	67.50	855706	1.50	11.60	58.10	6.20	7.80	10.90
		veinlets tend to be either irregular or	67.50	69.00	855707	1.50	14.40	55.50	4.90	9.90	10.40
		comformable to foliation.	69.00	70.50	855708	1.50	9.30	57.50	6.00	10.30	11.60
		non-magnetic.	70.50	72.00	855709	1.50	12.70	54.70	5.30	10.20	9.90
		trace diss py, generally unmineralized.	72.00	73.50	855710	1.50	6.80	69.90	5.90	6.90	9.00
		lower contact sharp @ 70 deg TCA.									
		lower contact sharp but broken (40 deg?).									

Kyanite Mining Corp.

Description			Assay - Sample								
			From	To	Sample number	Length	Ky (%)	Qtz (%)	Alm (%)	Bio (%)	Musc (%)
78.89	79.00	FT Fault grey brecciated Ky-Gt-Mus-Bio Gn, reahealed with gouge. weak pervasive kspar. no visible mineralization. non-magnetic. lower contact sharp @ 70 deg TCA.	73.50	75.00	855711	1.50	10.50	62.90	4.30	9.10	9.00
			75.00	76.50	855712	1.50	12.30	60.00	6.70	9.10	8.20
			76.50	78.00	855713	1.50	15.50	50.50	10.00	10.30	7.60
			78.00	79.50	855714	1.50	7.60	60.20	6.90	9.50	11.70
79.00	83.37	KyGtBioMuGn Kyanite-Garnet-Biotite-Muscovite Gneiss as from 36.90-78.89m. lower contact sharp @ 80 deg TCA.	79.50	81.00	855715	1.50	11.40	53.50	8.70	10.30	8.90
			81.00	82.50	855716	1.50	11.60	56.70	5.60	10.90	7.70
			82.50	84.00	855717	1.50	1.70	45.50	6.90	5.20	13.40
83.37	83.89	FT Fault grey brecciated Ky-Gt-Mus-Bio Gn, reahealed with gouge. weak pervasive kspar and minor chlorite. no visible mineralization. non-magnetic. lower contact sharp @ 50 deg TCA.	84.00	85.50	855718	1.50	11.50	49.80	6.50	7.40	5.50
			85.50	87.00	855719	1.50	13.80	55.60	6.10	11.60	7.10
			87.00	88.50	855722	1.50	10.50	51.90	6.60	5.00	6.80
			88.50	90.00	855723	1.50	9.90	49.20	5.50	4.70	7.40
			90.00	91.50	855724	1.50	10.50	61.00	3.60	11.10	4.50
			91.50	93.00	855725	1.50	12.10	62.30	4.80	11.10	3.30
			93.00	94.50	855726	1.50	11.10	62.80	3.90	13.20	4.60

Kyanite Mining Corp.

Description	Assay - Sample									
	From	To	Sample number	Length	Ky (%)	Qtz (%)	Alm (%)	Bio (%)	Musc (%)	
Kyanite xtls are bladed and weakly aligned to foliation, but also randomly orientated at various angles TCA throughout interval. 10-12% garnets up to 12-13mm in diameter, 15-20% kyanite xtls typically <1 cm in length by 1mm in width, locally up to 2cm in length. proportion of kyanite xtls >1cm is substantially greater than previous intervals. weak intermittent quartz veinlets throughout, generally <10cm in width and comprise approx 5% of interval. 90.00-90.20m - rehealed brecciated zone with strong carb-silica-chl and 4% disseminated py. 93.00-97.00m - trace to 0.5% disseminated to wispy py. 95.02-95.37m - dark grey quartz vein. upper contact sharp @ 40 deg TCA with minor py along vein margin, lower contact transitional/partially digested. trace diss py, typically associated with late-stage quartz veinlets. generally unmineralized. 99.00-101.00m - 0.25-0.50% wispy py from 99.00 to 101.00m. 117.45m - 1mm wispy of py. 107.44-107.47m - rusty hematite-rich gouge along fault orientated at 70 deg TCA. minor carb (dolomite? veinlets occur within 5cm adjacent to the fault (does not	94.50	96.00	855727	1.50	8.70	71.50	4.40	10.00	1.20	
	96.00	97.50	855728	1.50	12.30	62.50	3.20	11.40	3.90	
	97.50	99.00	855729	1.50	17.80	53.40	3.80	12.40	6.40	
	99.00	100.50	855730	1.50	13.30	51.60	3.20	10.30	7.00	
	100.50	102.00	855731	1.50	14.20	51.50	2.50	9.20	3.00	
	102.00	103.50	855732	1.50	16.90	47.40	6.40	11.50	6.30	
	103.50	105.00	855733	1.50	15.50	40.90	2.80	13.90	7.30	
	105.00	106.50	855734	1.50	13.10	53.00	6.10	2.40	1.80	
	106.50	108.00	855735	1.50	9.70	50.00	6.60	6.60	6.00	
	108.00	109.50	855736	1.50	22.60	45.50	5.40	12.90	5.30	
	109.50	111.00	855737	1.50	21.60	47.90	5.10	14.10	5.50	
	111.00	112.50	855738	1.50	12.20	44.50	2.70	9.50	9.00	
	112.50	114.00	855739	1.50	15.00	39.50	3.10	12.50	9.90	
	114.00	115.50	855742	1.50	14.40	46.40	4.90	10.60	3.70	
	115.50	117.00	855743	1.50	14.70	57.60	3.60	10.80	8.10	
	117.00	118.50	855744	1.50	16.10	41.70	4.20	8.90	4.10	
	118.50	120.00	855745	1.50	17.20	53.00	4.10	13.00	4.60	
	120.00	121.50	855746	1.50	15.00	56.80	4.20	11.60	6.50	
	121.50	123.00	855747	1.50	14.30	43.50	5.30	8.00	4.00	
	123.00	124.50	855748	1.50	14.70	49.20	3.20	10.40	6.70	
124.50	126.00	855749	1.50	15.30	45.10	4.00	9.00	5.60		
126.00	127.50	855750	1.50	16.60	57.40	4.60	10.30	6.40		
127.50	129.00	855751	1.50	15.50	60.00	5.00	8.00	4.00		
129.00	130.50	855752	1.50	16.10	43.80	3.00	11.90	9.80		
130.50	132.00	855753	1.50	16.60	40.20	3.80	8.30	4.80		
132.00	133.50	855754	1.50	16.10	57.80	4.00	11.30	5.00		
133.50	135.00	855755	1.50	14.80	59.00	4.00	11.70	10.50		
135.00	136.50	855756	1.50	7.60	59.50	3.50	10.00	19.40		
136.50	138.00	855757	1.50	10.10	48.60	6.90	5.10	8.60		
138.00	139.50	855758	1.50	12.90	52.80	4.50	6.80	7.70		

Kyanite Mining Corp.

Description			Assay - Sample								
			From	To	Sample number	Length	Ky (%)	Qtz (%)	Alm (%)	Bio (%)	Musc (%)
		react to HCl).	139.50	141.00	855759	1.50	14.40	67.10	4.20	6.10	1.80
		115.40-115.55m - altered zone of	141.00	142.50	855762	1.50	12.60	48.10	5.30	6.80	7.90
		pervasive chlorite and carbonate veinlets	142.50	144.00	855763	1.50	13.40	42.90	4.20	8.40	7.60
		about moderately fractured interval,	144.00	145.50	855764	1.50	13.40	42.20	3.60	5.60	0.80
		contacts sharp @ 50 deg TCA.	145.50	147.00	855765	1.50	15.40	51.70	2.60	6.40	0.00
		135.40-136.00m - strongly foliated/sheared	147.00	148.50	855766	1.50	13.80	53.10	5.00	9.70	1.00
		@ 40-45 deg TCA.	148.50	150.00	855767	1.50	13.40	56.00	3.50	10.30	7.30
		149.35-149.80m - heavily fracture -	150.00	151.50	855768	1.50	16.00	62.20	2.40	10.70	4.50
		RQD=0%. fractures orientated @ 45 & 65	151.50	153.00	855769	1.50	15.70	56.70	1.70	6.60	1.00
		deg TCA.	153.00	154.50	855770	1.50	15.50	57.30	4.30	10.70	1.00
		lower contact sharp @ 70 deg TCA.	154.50	155.17	855771	0.67	12.70	59.20	2.30	8.80	3.60
155.17	159.46	I1B	155.17	156.00	855772	0.83	1.00	98.30	0.00	0.70	0.00
		<b>Granite</b>	156.00	157.50	855773	1.50	0.80	98.60	0.00	0.60	0.00
		pink coarse grained quartz-rich granite									
		gneiss as seen in CL19-01.									
		no visible mineralization.									
		non-magnetic.									
		lower contact sharp @ 75 deg TCA.									
159.46	165.00	BioGn									
		<b>Biotite Gneiss</b>									
		grey to pink medium grained biotite gneiss.									
		minor fine grained blades of ky? at upper									
		contact from 159.46 to 161.30m.									
		no visible mineralization.									
		non-magnetic.									
		folation well developed @ 70 deg TCA.									



## Kyanite Mining Corp.

Assay - QAQC				
From	To	Sample number	Reference	Ky (%)
4.50	6.00	855660	AMIS 0561	24.10
4.50	6.00	855661	Diabase Drill Core	0.00
31.50	33.00	855680	AMIS 0561	25.80
31.50	33.00	855681	Diabase Drill Core	0.00
58.50	60.00	855700	AMIS 0561	24.70
58.50	60.00	855701	Diabase Drill Core	0.00
85.50	87.00	855720	AMIS 0561	24.40
85.50	87.00	855721	Diabase Drill Core	0.00
112.50	114.00	855740	AMIS 0561	26.30
112.50	114.00	855741	Diabase Drill Core	0.00
139.50	141.00	855760	AMIS 0561	24.80
139.50	141.00	855761	Diabase Drill Core	0.00

## Kyanite Mining Corp.

Magnetism		
From	To	Magnetism
1.00	2.00	0.45
2.00	3.00	0.585
3.00	4.00	0.54
4.00	5.00	0.464
5.00	6.00	0.234
6.00	7.00	0.2
7.00	8.00	0.493
8.00	9.00	0.104
9.00	10.00	0.342
10.00	11.00	0.531
11.00	12.00	0.209
12.00	13.00	0.451
13.00	14.00	0.604
14.00	15.00	0.17
15.00	16.00	0.213
16.00	17.00	0.179
17.00	18.00	0.308
18.00	19.00	0.246
19.00	20.00	0.405
20.00	21.00	0.504
21.00	22.00	0.321
22.00	23.00	0.211
23.00	24.00	0.141
24.00	25.00	0.409
25.00	26.00	0.47
26.00	27.00	0.183
27.00	28.00	0.298
28.00	29.00	0.367
29.00	30.00	0.304
30.00	31.00	0.502
31.00	32.00	0.195
32.00	33.00	0.351

# Kyanite Mining Corp.

Magnetism		
From	To	Magnetism
33.00	34.00	0.536
34.00	35.00	0.407
35.00	36.00	0.005
36.00	37.00	0.516
37.00	38.00	0.496
38.00	39.00	0.273
39.00	40.00	0.375
40.00	41.00	0.244
41.00	42.00	0.481
42.00	43.00	0.485
43.00	44.00	0.406
44.00	45.00	0.328
45.00	46.00	0.409
46.00	47.00	0.652
47.00	48.00	0.011
48.00	49.00	0.215
49.00	50.00	0.299
50.00	51.00	0.455
51.00	52.00	0.352
52.00	53.00	0.485
53.00	54.00	0.619
54.00	55.00	0.642
55.00	56.00	0.399
56.00	57.00	0.226
57.00	58.00	0.203
58.00	59.00	0.406
59.00	60.00	0.158
60.00	61.00	0.316
61.00	62.00	0.213
62.00	63.00	0.291
63.00	64.00	0.237
64.00	65.00	0.134

## Kyanite Mining Corp.

Magnetism		
From	To	Magnetism
65.00	66.00	0.147
66.00	67.00	0.354
67.00	68.00	0.236
68.00	69.00	0.234
69.00	70.00	0.312
70.00	71.00	0.604
71.00	72.00	0.396
72.00	73.00	0.305
73.00	74.00	0.392
74.00	75.00	0.388
75.00	76.00	0.384
76.00	77.00	0.478
77.00	78.00	0.504
78.00	79.00	0.382
79.00	80.00	0.476
80.00	81.00	0.319
81.00	82.00	0.22
82.00	83.00	0.351
83.00	84.00	0.296
84.00	85.00	0.468
85.00	86.00	0.377
86.00	87.00	0.534
87.00	88.00	0.157
88.00	89.00	0.274
89.00	90.00	0.322
90.00	91.00	0.264
91.00	92.00	0.31
92.00	93.00	0.235
93.00	94.00	0.517
94.00	95.00	0.282
95.00	96.00	0.153
96.00	97.00	0.354

# Kyanite Mining Corp.

Magnetism		
From	To	Magnetism
97.00	98.00	0.353
98.00	99.00	0.103
99.00	100.00	0.459
100.00	101.00	0.135
101.00	102.00	0.505
102.00	103.00	0.626
103.00	104.00	0.408
104.00	105.00	0.348
105.00	106.00	0.384
106.00	107.00	0.294
107.00	108.00	0.236
108.00	109.00	0.194
109.00	110.00	0.476
110.00	111.00	0.347
111.00	112.00	0.16
112.00	113.00	0.182
113.00	114.00	0.403
114.00	115.00	0.502
115.00	116.00	0.154
116.00	117.00	0.424
117.00	118.00	0.411
118.00	119.00	0.437
119.00	120.00	0.572
120.00	121.00	0.351
121.00	122.00	0.277
122.00	123.00	0.426
123.00	124.00	0.629
124.00	125.00	0.469
125.00	126.00	0.264
126.00	127.00	0.308
127.00	128.00	0.282
128.00	129.00	0.166

## Kyanite Mining Corp.

Magnetism		
From	To	Magnetism
129.00	130.00	0.441
130.00	131.00	0.318
131.00	132.00	0.242
132.00	133.00	0.449
133.00	134.00	0.558
134.00	135.00	0.327
135.00	136.00	0.571
136.00	137.00	0.229
137.00	138.00	0.421
138.00	139.00	0.326
139.00	140.00	0.239
140.00	141.00	0.332
141.00	142.00	0.587
142.00	143.00	0.135
143.00	144.00	0.325
144.00	145.00	0.418
145.00	146.00	0.375
146.00	147.00	0.291
147.00	148.00	0.229
148.00	149.00	0.389
149.00	150.00	0.347
150.00	151.00	0.401
151.00	152.00	0.129
152.00	153.00	0.248
153.00	154.00	0.357
154.00	155.00	0.249
155.00	156.00	0.062
156.00	157.00	0.033
157.00	158.00	0.091
158.00	159.00	0.015
159.00	160.00	0.115
160.00	161.00	0.446

# Kyanite Mining Corp.

			Magnetism
From	To	Magnetism	
161.00	162.00	0.251	
162.00	163.00	0.261	
163.00	164.00	0.29	
164.00	165.00	0.191	

Kyanite Mining Corp.

Down hole survey			
Type	Depth	Azimuth	Dip
Trueshot	6.00	112.40°	-44.80°
TrueShot	9.00	112.50°	-44.80°
TrueShot	12.00	112.50°	-44.80°
TrueShot	15.00	112.60°	-44.80°
TrueShot	18.00	112.40°	-44.70°
TrueShot	21.00	112.30°	-44.60°
TrueShot	24.00	112.20°	-44.50°
TrueShot	27.00	112.10°	-44.50°
TrueShot	30.00	112.10°	-44.50°
TrueShot	33.00	112.10°	-44.40°
TrueShot	36.00	112.00°	-44.40°
TrueShot	39.00	112.00°	-44.30°
TrueShot	42.00	112.10°	-44.10°
TrueShot	45.00	112.10°	-44.00°
TrueShot	48.00	112.00°	-44.00°
TrueShot	51.00	111.90°	-44.00°
TrueShot	54.00	111.90°	-43.90°
TrueShot	57.00	111.90°	-43.80°
TrueShot	60.00	111.90°	-43.80°
TrueShot	63.00	111.80°	-43.70°
TrueShot	66.00	111.80°	-43.70°
TrueShot	69.00	111.80°	-43.60°
TrueShot	72.00	111.80°	-43.50°
TrueShot	75.00	111.70°	-43.40°
TrueShot	78.00	111.70°	-43.40°
TrueShot	81.00	111.70°	-43.40°
TrueShot	84.00	111.80°	-43.30°
TrueShot	87.00	112.00°	-43.30°
TrueShot	90.00	112.20°	-43.20°
TrueShot	93.00	112.20°	-43.20°
TrueShot	96.00	112.40°	-43.10°
TrueShot	99.00	112.40°	-43.10°



## Kyanite Mining Corp.

Down hole survey			
Type	Depth	Azimuth	Dip
TrueShot	102.00	112.75°	-43.00°
TrueShot	105.00	113.10°	-42.90°
TrueShot	108.00	112.50°	-42.90°
TrueShot	111.00	112.70°	-42.90°
TrueShot	114.00	112.80°	-42.80°
TrueShot	117.00	112.90°	-42.80°
TrueShot	120.00	112.90°	-42.70°
TrueShot	123.00	112.90°	-42.70°
TrueShot	126.00	113.10°	-42.60°
TrueShot	129.00	112.90°	-42.60°
TrueShot	132.00	113.50°	-42.60°
TrueShot	135.00	113.30°	-42.50°
TrueShot	138.00	113.50°	-42.40°
TrueShot	141.00	113.50°	-42.50°
TrueShot	144.00	113.50°	-42.50°
TrueShot	147.00	113.50°	-42.40°
TrueShot	150.00	113.50°	-42.30°
TrueShot	153.00	113.50°	-42.30°
TrueShot	156.00	113.40°	-42.30°
TrueShot	159.00	113.30°	-42.20°
TrueShot	162.00	113.20°	-42.20°
TrueShot	165.00	113.10°	-42.10°

Kyanite Mining Corp.

RQD						
From	To	Length	Recovered length	RQD length	Recovered (%)	RQD (%)
1.100	3.000	1.900	1.980	0.890	104.210	46.840
3.000	6.000	3.000	2.980	2.980	99.330	99.330
6.000	9.000	3.000	3.010	2.910	100.330	97.000
9.000	12.000	3.000	3.010	3.010	100.330	100.330
12.000	15.000	3.000	2.950	2.680	98.330	89.330
15.000	18.000	3.000	2.980	2.940	99.330	98.000
18.000	21.000	3.000	3.080	3.060	102.670	102.000
21.000	24.000	3.000	3.010	3.010	100.330	100.330
24.000	27.000	3.000	3.000	3.000	100.000	100.000
27.000	30.000	3.000	2.980	2.980	99.330	99.330
30.000	33.000	3.000	2.980	2.980	99.330	99.330
33.000	36.000	3.000	2.500	1.460	83.330	48.670
36.000	39.000	3.000	2.520	1.980	84.000	66.000
39.000	42.000	3.000	3.000	3.000	100.000	100.000
42.000	45.000	3.000	2.990	2.990	99.670	99.670
45.000	48.000	3.000	3.000	2.960	100.000	98.670
48.000	51.000	3.000	3.000	2.940	100.000	98.000
51.000	54.000	3.000	2.990	2.990	99.670	99.670
54.000	57.000	3.000	2.990	2.990	99.670	99.670
57.000	60.000	3.000	3.020	3.020	100.670	100.670
60.000	63.000	3.000	3.000	2.950	100.000	98.330
63.000	66.000	3.000	2.990	2.990	99.670	99.670
66.000	69.000	3.000	2.980	2.980	99.330	99.330
69.000	72.000	3.000	3.000	3.000	100.000	100.000
72.000	75.000	3.000	2.980	2.530	99.330	84.330
75.000	78.000	3.000	3.000	2.860	100.000	95.330
78.000	81.000	3.000	3.000	2.850	100.000	95.000
81.000	84.000	3.000	3.000	2.360	100.000	78.670
84.000	87.000	3.000	2.950	1.920	98.330	64.000
87.000	90.000	3.000	2.930	2.770	97.670	92.330
90.000	93.000	3.000	3.010	2.610	100.330	87.000

Kyanite Mining Corp.

RQD						
From	To	Length	Recovered length	RQD length	Recovered (%)	RQD (%)
93.000	96.000	3.000	2.990	2.990	99.670	99.670
96.000	99.000	3.000	2.970	2.970	99.000	99.000
99.000	102.000	3.000	2.990	2.990	99.670	99.670
102.000	105.000	3.000	3.000	2.910	100.000	97.000
105.000	108.000	3.000	2.980	2.760	99.330	92.000
108.000	111.000	3.000	3.020	3.020	100.670	100.670
111.000	114.000	3.000	2.920	2.920	97.330	97.330
114.000	117.000	3.000	3.060	2.750	102.000	91.670
117.000	120.000	3.000	3.000	3.000	100.000	100.000
120.000	123.000	3.000	2.990	2.940	99.670	98.000
123.000	126.000	3.000	2.980	2.980	99.330	99.330
126.000	129.000	3.000	2.950	2.820	98.330	94.000
129.000	132.000	3.000	3.000	3.000	100.000	100.000
132.000	135.000	3.000	3.010	3.010	100.330	100.330
135.000	138.000	3.000	3.000	2.830	100.000	94.330
138.000	141.000	3.000	2.990	2.940	99.670	98.000
141.000	144.000	3.000	3.000	2.930	100.000	97.670
144.000	147.000	3.000	2.990	2.990	99.670	99.670
147.000	150.000	3.000	3.000	2.570	100.000	85.670
150.000	153.000	3.000	3.000	3.000	100.000	100.000
153.000	156.000	3.000	3.000	2.850	100.000	95.000
156.000	159.000	3.000	3.000	3.000	100.000	100.000
159.000	162.000	3.000	3.000	3.000	100.000	100.000
162.000	165.000	3.000	3.000	3.000	100.000	100.000

# Kyanite Mining Corp.

<b>DDH:</b>	<b>CL19-03</b>	Claims title:	LEA-109692	Section:	
		Township:	Antoine	Level:	Surface
		Range:		Work place:	134 Imperial Rd. North Bay, ON.
Contractor:	Enviro North Exploration	Lot:			
Author:	Joerg Kleinboeck	Start date:	7/7/2019	Description date:	7/8/2019
		End date:	7/12/2019		

Collar

				UTM Coordinates	
Dip:	-45.00°		East	653449.0	
Length:	184.50		North	5154096.0	
			Elevation	402.0	

Number of samples:	120
Number of QAQC samples:	14
Total sampled length:	179.25

Description:

Core size: BQTK

Cemented: No

Stored: Yes

## Kyanite Mining Corp.

Description			Assay - Sample									
			From	To	Sample number	Length	Ky (%)	Qtz (%)	Alm (%)	Bio (%)	Musc (%)	
0.00	0.75	OB Overburden Casing driven to 5 ft (1.52 m), left in hole.										
0.75	105.10	KyGtBioMuGn Kyanite-Garnet-Biotite-Muscovite Gneiss grey medium to coarse grained kyanite-garnet-muscovite-biotite gneiss. foliation moderately developed between 70 to 75 deg TCA. Kyanite xtls are bladed and weakly aligned to foliation, but also randomly orientated at various angles TCA throughout interval. 10-12% garnets up to 10mm in diameter, 15 % kyanite xtls typically <1cm in length by 1mm in width, locally up to 20-25% over narrow intervals usually 10cm or less in core width. weak intermittent quartz veinlets throughout, generally <10cm in width and comprise approx 5-7% of interval. 36.50-36.57m - heavily fractured, 8cm of core not recovered. 59.00-60.35m - heavily fracture with local narrow sections/fracture coatings of light green gouge. fractures predominantly orientated at 20 deg TCA. 71.60-71.62m - 2cm of gouge orientate @ 70 deg TCA. 76.70-85.10m - strong grey to white quartz veining up to 30cm. contacts sharp/irregular and orientation is variable - no prefferential angle.	0.75	1.50	855774	0.75	20.50	49.20	4.00	11.70	2.40	
			1.50	3.00	855775	1.50	16.80	56.60	4.90	11.00	3.40	
			3.00	4.50	855776	1.50	16.50	54.00	5.40	13.00	3.80	
			4.50	6.00	855777	1.50	18.60	53.40	6.60	11.50	2.80	
			6.00	7.50	855778	1.50	16.70	57.60	5.10	11.30	2.00	
			7.50	9.00	855779	1.50	17.10	52.50	6.10	13.50	3.10	
			9.00	10.50	855782	1.50	13.30	52.20	4.10	18.00	6.50	
			10.50	12.00	855783	1.50	16.30	47.80	4.70	16.60	4.80	
			12.00	13.50	855784	1.50	17.80	46.00	4.10	17.50	5.80	
			13.50	15.00	855785	1.50	16.70	53.20	2.80	16.70	7.40	
			15.00	16.50	855786	1.50	16.50	52.30	2.50	18.00	5.20	
			16.50	18.00	855787	1.50	15.30	52.20	2.30	15.20	4.50	
			18.00	19.50	855788	1.50	16.40	57.20	1.40	14.50	3.20	
			19.50	21.00	855789	1.50	16.00	52.70	2.50	15.90	5.70	
			21.00	22.50	855790	1.50	15.50	54.70	2.90	16.70	6.40	
			22.50	24.00	855791	1.50	14.60	51.30	3.20	14.90	5.40	
			24.00	25.50	855792	1.50	15.30	50.70	2.40	17.20	6.80	
			25.50	27.00	855793	1.50	14.80	51.00	4.00	16.90	5.90	
			27.00	28.50	855794	1.50	12.10	53.90	2.70	15.50	11.00	
			28.50	30.00	855795	1.50	15.50	50.00	3.20	18.60	7.50	
			30.00	31.50	855796	1.50	12.80	52.70	0.80	17.50	8.70	
			31.50	33.00	855797	1.50	13.10	55.50	5.20	11.60	8.90	
			33.00	34.50	855798	1.50	11.80	58.80	6.60	11.40	5.80	
			34.50	36.00	855799	1.50	11.50	63.10	3.40	10.00	4.00	
			36.00	37.50	855802	1.50	10.70	58.90	4.70	11.30	14.40	
			37.50	39.00	855803	1.50	14.50	56.30	7.70	13.30	2.60	
			39.00	40.50	855804	1.50	11.60	63.30	2.80	9.40	7.40	

## Kyanite Mining Corp.

Description	Assay - Sample									
	From	To	Sample number	Length	Ky (%)	Qtz (%)	Alm (%)	Bio (%)	Musc (%)	
104.49-105.10m - sheared/rehealed fault zone. heavily fractured/sheared interval with minor rehealed sections and quartz-flooding. shearing/foliation @ 70-80 deg TCA. trace disseminated/fracture-filled py throughout, generally unmineralized. non-magnetic.	40.50	42.00	855805	1.50	14.40	58.20	4.10	10.20	5.70	
	42.00	43.50	855806	1.50	14.90	53.50	5.20	11.50	5.60	
	43.50	45.00	855807	1.50	12.80	55.90	6.70	11.80	5.80	
	45.00	46.50	855808	1.50	15.10	57.40	5.30	9.70	1.30	
	46.50	48.00	855809	1.50	14.90	55.90	3.20	9.70	4.40	
	48.00	49.50	855810	1.50	9.60	67.10	3.20	8.20	4.50	
	49.50	51.00	855811	1.50	15.40	53.00	4.00	11.40	4.50	
	51.00	52.50	855812	1.50	14.10	58.20	3.40	10.50	3.40	
	52.50	54.00	855813	1.50	13.90	49.00	3.50	10.70	4.60	
	54.00	55.50	855814	1.50	15.50	48.40	3.60	9.80	3.00	
	55.50	57.00	855815	1.50	14.50	46.70	3.60	9.20	1.00	
	57.00	58.50	855816	1.50	12.40	62.60	6.40	9.10	3.50	
	58.50	60.00	855817	1.50	8.80	52.10	5.40	9.70	4.20	
	60.00	61.50	855818	1.50	15.40	53.60	8.50	12.00	5.20	
	61.50	63.00	855819	1.50	15.20	49.40	6.30	10.20	2.00	
	63.00	64.50	855822	1.50	17.10	45.40	4.20	9.70	3.60	
	64.50	66.00	855823	1.50	14.00	64.80	4.80	8.00	2.10	
	66.00	67.50	855824	1.50	16.20	46.50	3.90	9.50	3.00	
	67.50	69.00	855825	1.50	14.50	51.20	2.90	8.80	2.40	
	69.00	70.50	855826	1.50	16.40	50.50	3.00	8.20	2.60	
	70.50	72.00	855827	1.50	13.90	47.00	6.90	7.30	4.30	
	72.00	73.50	855828	1.50	14.20	41.10	4.60	9.90	3.10	
	73.50	75.00	855829	1.50	14.10	61.30	4.30	9.60	7.90	
	75.00	76.50	855830	1.50	11.20	53.00	4.90	11.20	16.90	
76.50	78.00	855831	1.50	11.10	63.50	3.40	10.40	5.30		
78.00	79.50	855832	1.50	14.60	53.30	3.30	12.30	8.50		
79.50	81.00	855833	1.50	15.20	49.80	4.70	14.30	13.90		
81.00	82.50	855834	1.50	9.90	68.90	5.30	6.10	6.00		
82.50	84.00	855835	1.50	13.70	69.00	3.20	7.50	3.80		
84.00	85.50	855836	1.50	10.90	62.30	4.20	6.90	6.00		

Kyanite Mining Corp.

Description			Assay - Sample								
			From	To	Sample number	Length	Ky (%)	Qtz (%)	Alm (%)	Bio (%)	Musc (%)
105.10	174.78	KyGtBioMuGn Kyanite-Garnet-Biotite-Muscovite Gneiss grey coarse to very coarse grained kyanite-garnet-muscovite-biotite gneiss. foliation moderately developed between 70 to 75 deg TCA. xtls are bladed and weakly aligned to foliation, but also randomly orientated at various angles TCA throughout interval. 10% garnets up to 12mm in diameter, 15-20% kyanite xtls typically 10-12 mm in length by 3mm in width, locally up to 2cm in length (coarser grained than previous interval). locally up to 20-25% over narrow intervals). weak intermittent quartz veinlets throughout, generally <10cm in width and	85.50	87.00	855837	1.50	11.80	48.10	4.50	10.90	8.00
			87.00	88.50	855838	1.50	11.50	59.20	4.70	11.90	8.00
			88.50	90.00	855839	1.50	12.60	56.00	2.00	14.60	9.90
			90.00	91.50	855842	1.50	12.20	43.80	2.80	9.40	7.50
			91.50	93.00	855843	1.50	11.20	47.50	5.00	12.40	11.00
			93.00	94.50	855844	1.50	12.90	51.80	4.80	11.10	8.10
			94.50	96.00	855845	1.50	14.50	57.50	7.80	9.60	6.10
			96.00	97.50	855846	1.50	10.50	42.40	4.50	10.40	10.00
			97.50	99.00	855847	1.50	13.50	58.80	4.70	10.90	7.70
			99.00	100.50	855848	1.50	9.60	57.50	4.10	7.70	5.70
			100.50	102.00	855849	1.50	10.60	53.80	8.70	11.00	11.00
			102.00	103.50	855850	1.50	12.50	46.90	4.00	7.60	6.40
			103.50	105.00	855851	1.50	6.50	62.80	3.50	11.50	7.10
			105.00	106.50	855852	1.50	4.80	65.80	2.10	11.50	9.40
			106.50	108.00	855853	1.50	7.30	69.90	1.60	11.50	6.00
			108.00	109.50	855854	1.50	10.70	60.70	3.00	11.40	4.80
			109.50	111.00	855855	1.50	14.30	62.10	3.90	10.20	5.00
			111.00	112.50	855856	1.50	14.10	54.20	4.00	9.50	6.30
			112.50	114.00	855857	1.50	14.90	49.80	2.20	13.40	5.60
			114.00	115.50	855858	1.50	14.00	48.30	4.30	10.50	6.20
115.50	117.00	855859	1.50	14.90	45.80	3.90	7.80	6.00			
117.00	118.50	855862	1.50	14.90	41.00	4.40	8.30	3.70			
118.50	120.00	855863	1.50	17.10	62.10	4.70	8.50	3.70			
120.00	121.50	855864	1.50	16.00	61.70	4.80	9.60	5.60			
121.50	123.00	855865	1.50	13.50	43.60	5.60	8.50	6.90			
123.00	124.50	855866	1.50	16.30	45.20	4.20	9.10	3.90			
124.50	126.00	855867	1.50	14.40	48.80	5.50	7.40	2.20			
126.00	127.50	855868	1.50	15.50	48.90	4.90	7.30	5.80			
127.50	129.00	855869	1.50	15.40	53.80	6.50	11.00	7.80			
129.00	130.50	855870	1.50	14.10	39.70	4.10	7.90	5.60			

## Kyanite Mining Corp.

Description	Assay - Sample									
	From	To	Sample number	Length	Ky (%)	Qtz (%)	Alm (%)	Bio (%)	Musc (%)	
comprise approx 5-7% of interval. 135.57-136.14m - quartz vein with irregular contacts, contains 5cm xenolith of KyGtBioMuGn. non-magnetic. 164.90-166.00m - strongly foliated @ 25-30 deg TCA, 0.5% diss/ff py trace diss py throughout, generally unmineralized. lower contact sharp @ 65 deg TCA.	130.50	132.00	855871	1.50	14.30	44.70	4.10	7.30	3.90	
	132.00	133.50	855872	1.50	14.10	40.50	4.30	11.30	6.60	
	133.50	135.00	855873	1.50	13.90	39.20	3.80	7.70	4.70	
	135.00	136.50	855874	1.50	12.30	50.60	3.00	7.90	3.00	
	136.50	138.00	855875	1.50	15.80	38.40	2.90	9.30	5.50	
	138.00	139.50	855876	1.50	13.80	44.80	5.10	9.20	7.90	
	139.50	141.00	855877	1.50	15.80	50.20	3.10	10.90	9.90	
	141.00	142.50	855878	1.50	17.40	54.50	2.30	11.70	5.20	
	142.50	144.00	855879	1.50	15.80	40.60	2.90	8.60	6.20	
	144.00	145.50	855882	1.50	17.20	38.30	2.80	7.30	4.10	
	145.50	147.00	855883	1.50	16.00	50.00	4.20	8.50	4.50	
	147.00	148.50	855884	1.50	17.00	46.10	3.70	11.30	3.50	
	148.50	150.00	855885	1.50	17.40	52.40	4.70	14.10	4.50	
	150.00	151.50	855886	1.50	18.20	51.60	6.90	9.90	6.20	
	151.50	153.00	855887	1.50	18.80	56.40	5.00	8.60	4.80	
	153.00	154.50	855888	1.50	16.40	47.60	4.10	8.20	9.00	
	154.50	156.00	855889	1.50	14.00	53.30	3.00	8.70	2.60	
	156.00	157.50	855890	1.50	13.40	47.20	7.70	8.30	9.50	
	157.50	159.00	855891	1.50	12.80	48.40	5.60	9.00	7.30	
	159.00	160.50	855892	1.50	10.80	53.80	7.00	7.30	6.60	
160.50	162.00	855893	1.50	13.30	44.80	3.50	6.30	3.70		
162.00	163.50	855894	1.50	13.60	46.50	4.80	7.20	7.80		
163.50	165.00	855895	1.50	8.80	52.00	5.00	7.20	13.40		
165.00	166.50	855896	1.50	2.50	60.70	3.10	6.90	15.10		
166.50	168.00	855897	1.50	10.30	56.20	7.00	7.90	5.60		
168.00	169.50	855898	1.50	13.50	44.50	2.20	7.30	1.80		
169.50	171.00	855899	1.50	11.90	44.30	1.40	7.70	3.90		
171.00	172.50	855902	1.50	13.90	51.50	1.00	7.20	0.50		
172.50	174.00	855903	1.50	16.00	50.90	2.00	4.90	0.00		
174.00	175.50	855904	1.50	6.90	58.60	1.70	6.30	3.40		



## Kyanite Mining Corp.

Description			Assay - Sample								
			From	To	Sample number	Length	Ky (%)	Qtz (%)	Alm (%)	Bio (%)	Musc (%)
174.78	184.50	BioGn	175.50	177.00	855905	1.50	0.00	37.10	0.00	8.30	3.60
		<b>Biotite Gneiss</b>	177.00	178.50	855906	1.50	0.00	26.70	0.00	4.70	0.00
		pink to grey mg foliated biotite gneiss. foliation moderately to strongly developed at 75-80 deg TCA. no visible mineralization. minor quartz veining throughout, generally <1cm in with and conformable to foliation. non-magnetic.	178.50	180.00	855907	1.50	0.00	25.10	0.00	5.00	0.00

## Kyanite Mining Corp.

Assay - QAQC				
From	To	Sample number	Reference	Ky (%)
7.50	9.00	855780	AMIS 0561	24.00
7.50	9.00	855781	Diabase Drill Core	0.00
34.50	36.00	855800	AMIS 0561	25.40
34.50	36.00	855801	Diabase Drill Core	0.00
61.50	63.00	855820	AMIS 0561	24.10
61.50	63.00	855821	Diabase Drill Core	0.00
88.50	90.00	855840	AMIS 0561	23.90
88.50	90.00	855841	Diabase Drill Core	0.00
115.50	117.00	855860	AMIS 0561	24.50
115.50	117.00	855861	Diabase Drill Core	0.00
142.50	144.00	855880	AMIS 0561	25.70
142.50	144.00	855881	Diabase Drill Core	0.00
169.50	171.00	855900	AMIS 0561	24.60
169.50	171.00	855901	Diabase Drill Core	0.00

# Kyanite Mining Corp.

Magnetism		
From	To	Magnetism
0.00	1.00	0.427
1.00	2.00	0.411
2.00	3.00	0.445
3.00	4.00	0.496
4.00	5.00	0.478
5.00	6.00	0.276
6.00	7.00	0.459
7.00	8.00	0.287
8.00	9.00	0.219
9.00	10.00	0.53
10.00	11.00	0.183
11.00	12.00	0.39
12.00	13.00	0.273
13.00	14.00	0.942
14.00	15.00	0.457
15.00	16.00	0.103
16.00	17.00	0.579
17.00	18.00	0.387
18.00	19.00	0.443
19.00	20.00	0.447
20.00	21.00	0.346
21.00	22.00	0.405
22.00	23.00	0.596
23.00	24.00	0.424
24.00	25.00	0.378
25.00	26.00	0.446
26.00	27.00	0.384
27.00	28.00	0.516
28.00	29.00	0.511
29.00	30.00	0.266
30.00	31.00	0.301
31.00	32.00	0.185

# Kyanite Mining Corp.

Magnetism		
From	To	Magnetism
32.00	33.00	0.137
33.00	34.00	0.302
34.00	35.00	0.295
35.00	36.00	0.226
36.00	37.00	0.357
37.00	38.00	0.138
38.00	39.00	0.246
39.00	40.00	0.39
40.00	41.00	0.123
41.00	42.00	0.38
42.00	43.00	0.547
43.00	44.00	0.482
44.00	45.00	0.187
45.00	46.00	0.189
46.00	47.00	0.309
47.00	48.00	0.299
48.00	49.00	0.429
49.00	50.00	0.143
50.00	51.00	0.182
51.00	52.00	0.453
52.00	53.00	0.446
53.00	54.00	0.279
54.00	55.00	0.31
55.00	56.00	0.262
56.00	57.00	0.23
57.00	58.00	0.421
58.00	59.00	0.224
59.00	60.00	0.201
60.00	61.00	0.597
61.00	62.00	0.345
62.00	63.00	0.169
63.00	64.00	0.421

# Kyanite Mining Corp.

Magnetism		
From	To	Magnetism
64.00	65.00	0.329
65.00	66.00	0.184
66.00	67.00	0.402
67.00	68.00	0.299
68.00	69.00	0.342
69.00	70.00	0.52
70.00	71.00	0.49
71.00	72.00	0.305
72.00	73.00	0.449
73.00	74.00	0.412
74.00	75.00	0.498
75.00	76.00	0.37
76.00	77.00	0.138
77.00	78.00	0.495
78.00	79.00	0.56
79.00	80.00	0.302
80.00	81.00	0.455
81.00	82.00	0.492
82.00	83.00	0.465
83.00	84.00	0.452
84.00	85.00	0.328
85.00	86.00	0.643
86.00	87.00	0.301
87.00	88.00	0.549
88.00	89.00	0.514
89.00	90.00	0.274
90.00	91.00	0.409
91.00	92.00	0.599
92.00	93.00	0.314
93.00	94.00	0.259
94.00	95.00	0.43
95.00	96.00	0.407

## Kyanite Mining Corp.

Magnetism		
From	To	Magnetism
96.00	97.00	0.228
97.00	98.00	0.421
98.00	99.00	0.345
99.00	100.00	0.605
100.00	101.00	0.423
101.00	102.00	0.606
102.00	103.00	0.364
103.00	104.00	0.285
104.00	105.00	0.155
105.00	106.00	0.178
106.00	107.00	0.123
107.00	108.00	0.372
108.00	109.00	0.177
109.00	110.00	0.309
110.00	111.00	0.69
111.00	112.00	1.056
112.00	113.00	1.446
113.00	114.00	0.735
114.00	115.00	0.363
115.00	116.00	0.302
116.00	117.00	0.103
117.00	118.00	0.087
118.00	119.00	0.155
119.00	120.00	0.495
120.00	121.00	0.528
121.00	122.00	0.496
122.00	123.00	0.236
123.00	124.00	0.341
124.00	125.00	0.701
125.00	126.00	0.601
126.00	127.00	0.144
127.00	128.00	0.261

## Kyanite Mining Corp.

Magnetism		
From	To	Magnetism
128.00	129.00	0.148
129.00	130.00	0.14
130.00	131.00	0.31
131.00	132.00	0.263
132.00	133.00	0.592
133.00	134.00	0.561
134.00	135.00	0.374
135.00	136.00	0.011
136.00	137.00	0.361
137.00	138.00	0.263
138.00	139.00	0.402
139.00	140.00	0.473
140.00	141.00	0.148
141.00	142.00	0.431
142.00	143.00	0.497
143.00	144.00	0.487
144.00	145.00	0.577
145.00	146.00	0.453
146.00	147.00	0.455
147.00	148.00	0.361
148.00	149.00	0.37
149.00	150.00	0.358
150.00	151.00	0.368
151.00	152.00	0.339
152.00	153.00	0.153
153.00	154.00	0.425
154.00	155.00	0.212
155.00	156.00	0.382
156.00	157.00	0.505
157.00	158.00	0.403
158.00	159.00	0.496
159.00	160.00	0.804

## Kyanite Mining Corp.

Magnetism		
From	To	Magnetism
160.00	161.00	0.481
161.00	162.00	0.14
162.00	163.00	0.35
163.00	164.00	0.144
164.00	165.00	0.42
165.00	166.00	0.37
166.00	167.00	0.24
167.00	168.00	0.351
168.00	169.00	0.177
169.00	170.00	0.351
170.00	171.00	0.298
171.00	172.00	0.385
172.00	173.00	0.382
173.00	174.00	0.251
174.00	175.00	0.438
175.00	176.00	0.333
176.00	177.00	0.335
177.00	178.00	0.273
178.00	179.00	0.258
179.00	180.00	0.118
180.00	181.00	0.22
181.00	182.00	0.332
182.00	183.00	0.301
183.00	184.00	0.339



## Kyanite Mining Corp.

Down hole survey			
Type	Depth	Azimuth	Dip
TrueShot	0.00	110.00°	-45.00°
TrueShot	7.00	111.50°	-45.70°
TrueShot	10.00	111.50°	-45.70°
TrueShot	13.00	112.20°	-45.70°
TrueShot	16.00	112.50°	-45.60°
TrueShot	19.00	112.60°	-45.60°
TrueShot	22.00	112.60°	-45.50°
TrueShot	25.00	112.60°	-45.40°
TrueShot	28.00	112.60°	-45.40°
TrueShot	31.00	112.70°	-45.40°
TrueShot	34.00	112.70°	-45.30°
TrueShot	37.00	112.70°	-45.30°
TrueShot	40.00	112.80°	-45.30°
TrueShot	43.00	112.90°	-45.30°
TrueShot	46.00	113.10°	-45.30°
TrueShot	49.00	113.10°	-45.30°
TrueShot	52.00	113.10°	-45.20°
TrueShot	55.00	113.10°	-45.20°
TrueShot	58.00	113.20°	-45.10°
TrueShot	61.00	113.30°	-45.10°
TrueShot	64.00	113.20°	-45.10°
TrueShot	67.00	113.20°	-45.10°
TrueShot	70.00	113.20°	-45.00°
TrueShot	73.00	113.20°	-45.00°
TrueShot	76.00	113.20°	-45.00°
TrueShot	79.00	113.20°	-44.90°
TrueShot	82.00	113.20°	-44.90°
TrueShot	85.00	113.20°	-44.90°
TrueShot	88.00	113.20°	-44.80°
TrueShot	91.00	113.10°	-44.80°
TrueShot	94.00	113.10°	-44.70°
TrueShot	97.00	113.00°	-44.70°

## Kyanite Mining Corp.

Down hole survey			
Type	Depth	Azimuth	Dip
TrueShot	100.00	113.00°	-44.60°
TrueShot	103.00	112.90°	-44.60°
TrueShot	106.00	112.80°	-44.50°
TrueShot	109.00	112.80°	-44.50°
TrueShot	112.00	112.90°	-44.40°
TrueShot	115.00	114.10°	-44.30°
TrueShot	118.00	112.90°	-44.20°
TrueShot	121.00	112.80°	-44.20°
TrueShot	124.00	112.80°	-44.10°
TrueShot	127.00	112.80°	-44.10°
TrueShot	130.00	112.70°	-44.00°
TrueShot	133.00	113.00°	-44.00°
TrueShot	136.00	112.80°	-43.90°
TrueShot	139.00	112.80°	-43.90°
TrueShot	142.00	112.90°	-43.80°
TrueShot	145.00	112.90°	-43.80°
TrueShot	148.00	113.10°	-43.70°
TrueShot	151.00	113.00°	-43.70°
TrueShot	154.00	113.00°	-43.60°
TrueShot	157.00	113.10°	-43.40°
TrueShot	160.00	113.10°	-43.20°
TrueShot	163.00	113.10°	-43.00°
TrueShot	166.00	113.20°	-43.00°
TrueShot	169.00	113.20°	-43.10°
TrueShot	172.00	113.30°	-43.10°
TrueShot	175.00	113.30°	-43.10°
TrueShot	178.00	113.40°	-43.10°
TrueShot	181.00	113.30°	-43.20°
TrueShot	184.00	113.40°	-43.20°

Kyanite Mining Corp.

RQD						
From	To	Length	Recovered length	RQD length	Recovered (%)	RQD (%)
0.770	3.000	2.230	2.230	2.000	100.000	89.690
3.000	6.000	3.000	3.000	2.590	100.000	86.330
6.000	9.000	3.000	3.000	3.000	100.000	100.000
9.000	12.000	3.000	3.000	2.720	100.000	90.670
12.000	15.000	3.000	3.000	2.940	100.000	98.000
15.000	18.000	3.000	3.000	2.930	100.000	97.670
18.000	21.000	3.000	3.000	3.000	100.000	100.000
21.000	24.000	3.000	3.000	3.000	100.000	100.000
24.000	27.000	3.000	3.000	2.960	100.000	98.670
27.000	30.000	3.000	3.000	2.980	100.000	99.330
30.000	33.000	3.000	3.000	3.000	100.000	100.000
33.000	36.000	3.000	3.000	3.000	100.000	100.000
36.000	39.000	3.000	2.920	2.850	97.330	95.000
39.000	42.000	3.000	3.000	2.930	100.000	97.670
42.000	45.000	3.000	2.940	2.750	98.000	91.670
45.000	48.000	3.000	3.000	2.900	100.000	96.670
48.000	51.000	3.000	3.000	2.900	100.000	96.670
51.000	54.000	3.000	2.980	2.980	99.330	99.330
54.000	57.000	3.000	3.000	3.000	100.000	100.000
57.000	60.000	3.000	2.800	2.000	93.330	66.670
60.000	63.000	3.000	2.990	1.450	99.670	48.330
63.000	66.000	3.000	3.000	3.000	100.000	100.000
66.000	69.000	3.000	3.000	3.000	100.000	100.000
69.000	72.000	3.000	2.990	2.650	99.670	88.330
72.000	75.000	3.000	3.000	3.000	100.000	100.000
75.000	78.000	3.000	3.000	2.860	100.000	95.330
78.000	81.000	3.000	2.990	2.990	99.670	99.670
81.000	84.000	3.000	3.000	2.900	100.000	96.670
84.000	87.000	3.000	3.000	2.670	100.000	89.000
87.000	90.000	3.000	3.000	2.760	100.000	92.000
90.000	93.000	3.000	3.000	3.000	100.000	100.000

## Kyanite Mining Corp.

RQD						
From	To	Length	Recovered length	RQD length	Recovered (%)	RQD (%)
93.000	96.000	3.000	3.000	3.000	100.000	100.000
96.000	99.000	3.000	3.010	2.530	100.330	84.330
99.000	102.000	3.000	3.000	2.740	100.000	91.330
102.000	105.000	3.000	2.960	2.550	98.670	85.000
105.000	108.000	3.000	2.780	1.500	92.670	50.000
108.000	111.000	3.000	2.900	2.160	96.670	72.000
111.000	114.000	3.000	3.000	2.920	100.000	97.330
114.000	117.000	3.000	3.000	2.910	100.000	97.000
117.000	120.000	3.000	2.990	2.990	99.670	99.670
120.000	123.000	3.000	3.000	3.000	100.000	100.000
123.000	126.000	3.000	3.000	3.000	100.000	100.000
126.000	129.000	3.000	2.990	2.950	99.670	98.330
129.000	132.000	3.000	2.990	2.990	99.670	99.670
132.000	135.000	3.000	3.020	3.020	100.670	100.670
135.000	138.000	3.000	2.950	2.950	98.330	98.330
138.000	141.000	3.000	3.050	2.420	101.670	80.670
141.000	144.000	3.000	2.960	2.960	98.670	98.670
144.000	147.000	3.000	3.040	3.040	101.330	101.330
147.000	150.000	3.000	2.980	2.980	99.330	99.330
150.000	153.000	3.000	3.000	2.930	100.000	97.670
153.000	156.000	3.000	3.000	2.980	100.000	99.330
156.000	159.000	3.000	3.040	2.380	101.330	79.330
159.000	162.000	3.000	2.960	2.290	98.670	76.330
162.000	165.000	3.000	3.000	2.670	100.000	89.000
165.000	168.000	3.000	3.030	2.500	101.000	83.330
168.000	171.000	3.000	3.000	2.800	100.000	93.330
171.000	174.000	3.000	2.980	2.720	99.330	90.670
174.000	177.000	3.000	2.960	2.960	98.670	98.670
177.000	180.000	3.000	3.040	2.960	101.330	98.670
180.000	183.000	3.000	3.000	3.000	100.000	100.000
183.000	184.500	1.500	1.520	1.520	101.330	101.330

# Kyanite Mining Corp.

<b>DDH:</b>	<b>CL19-04</b>	Claims title:	LEA-109692	Section:	
		Township:	Antoine	Level:	Surface
		Range:		Work place:	134 Imperial Rd., North Bay, ON.
Contractor:	Enviro North Exploration	Lot:			
Author:	Joerg Kleinboeck	Start date:	7/14/2019	Description date:	7/16/2019
		End date:			

Collar

				UTM Coordinates	
Dip:	-45.00°		East		653348.0
Length:	246.00		North		5154132.0
			Elevation		360.0

Number of samples:	160
Number of QAQC samples:	18
Total sampled length:	239.60

Description:

Core size: BQTK

Cemented: No

Stored: Yes

## Kyanite Mining Corp.

Description			Assay - Sample								
			From	To	Sample number	Length	Ky (%)	Qtz (%)	Alm (%)	Bio (%)	Musc (%)
0.00	6.40	OB Overburden Casing driven to 20 ft (6.10m), left in hole.									
6.40	18.96	KyGtBioMuGn Kyanite-Garnet-Biotite-Muscovite Gneiss grey coarse to very coarse grained kyanite-garnet-muscovite-biotite gneiss. foliation very weakly developed between 55-60 deg TCA. xtls are bladed and weakly aligned to foliation, but also randomly orientated at various angles TCA throughout interval. 15-20% garnets up to 12mm in diameter, 15-20% kyanite xtls typically 10-12 mm in length by 3mm in width, locally up to 2cm in length locally up to 20-25% over narrow intervals). weak intermittent quartz veinlets throughout, generally <10cm in width and comprise approx 5-7% of interval. non-magnetic. trace diss py throughout, generally unmineralized. lower contact sharp @ 45 deg TCA.	6.40	7.50	855908	1.10	0.90	42.90	7.90	8.10	24.40
			7.50	9.00	855909	1.50	0.00	54.60	11.80	9.10	19.90
			9.00	10.50	855910	1.50	0.60	60.70	6.20	8.20	23.90
			10.50	12.00	855911	1.50	2.10	53.80	10.50	10.70	22.90
			12.00	13.50	855912	1.50	4.90	51.80	6.40	11.70	25.20
			13.50	15.00	855913	1.50	6.30	44.80	8.20	10.10	15.00
			15.00	16.50	855914	1.50	6.10	61.00	8.50	9.20	15.20
			16.50	18.00	855915	1.50	6.30	53.60	4.30	12.90	19.10
			18.00	19.50	855916	1.50	2.00	66.60	4.20	8.10	15.30
18.96	19.70	KyGtBioMuGn Kyanite-Garnet-Biotite-Muscovite Gneiss grey coarse to very coarse grained kyanite-garnet-muscovite-biotite gneiss. heavily fractured with strong muscovite/sericite-rich gouge. 15-20% garnets up to 12mm in diameter, 15-20% kyanite xtls typically 10-12 mm in	19.50	21.00	855917	1.50	8.90	60.00	7.50	9.60	12.20

## Kyanite Mining Corp.

Description		Assay - Sample									
		From	To	Sample number	Length	Ky (%)	Qtz (%)	Alm (%)	Bio (%)	Musc (%)	
19.70	30.55	length by 3mm in width, locally up to 2cm in length locally up to 20-25% over narrow intervals. no visible mineralization. non-magnetic. lower contact sharp @ 40 deg TCA.									
		KyGtBioMuGn	21.00	22.50	855918	1.50	5.20	67.10	5.60	8.30	10.90
		Kyanite-Garnet-Biotite-Muscovite Gneiss	22.50	24.00	855919	1.50	9.00	57.20	5.40	13.90	9.80
		as from 6.70 o 18.96m.	24.00	25.50	855922	1.50	6.40	60.30	7.30	11.20	13.40
		lower contact sharp @ 45 deg TCA.	25.50	27.00	855923	1.50	5.60	60.10	6.50	11.70	13.80
			27.00	28.50	855924	1.50	6.40	63.10	5.30	9.40	7.40
			28.50	30.00	855925	1.50	10.20	55.90	6.10	12.80	2.60
	30.00	31.50	855926	1.50	7.40	62.50	5.30	10.30	10.40		
30.55	30.85	FT Fault 25° heavily fractured and ground core. RQD=0%									
30.85	58.00	KyGtBioMuGn	31.50	33.00	855927	1.50	7.90	60.70	5.60	9.90	11.80
		Kyanite-Garnet-Biotite-Muscovite Gneiss	33.00	34.50	855928	1.50	6.70	61.30	6.30	11.10	9.50
		grey coarse to very coarse grained	34.50	36.00	855929	1.50	2.10	62.00	5.40	11.60	15.10
		kyanite-garnet-muscovite-biotite gneiss.	36.00	37.50	855930	1.50	0.00	67.10	2.90	5.90	15.90
		foliation very weakly to moderately	37.50	39.00	855931	1.50	3.50	52.70	7.10	12.20	24.50
		developed between 55 to 60 deg TCA. xtls	39.00	40.50	855932	1.50	3.70	47.00	9.40	11.50	22.30
		are bladed and weakly aligned to foliation,	40.50	42.00	855933	1.50	4.20	48.50	12.30	7.90	14.70
		but also randomly orientated at various	42.00	43.50	855934	1.50	1.80	54.00	12.00	12.80	19.40
		angles TCA throughout interval.	43.50	45.00	855935	1.50	5.20	61.70	7.50	9.50	16.10
		local micro-folding evident througout.	45.00	46.50	855936	1.50	7.20	56.10	8.30	12.60	12.20
15-20% garnets up to 16mm in diameter,	46.50	48.00	855937	1.50	4.20	61.90	7.10	6.90	8.50		
15-20% kyanite xtls typically 10-12 mm in	48.00	49.50	855938	1.50	6.80	39.00	11.50	14.20	14.60		
length by 3mm in width, locally up to 25	49.50	51.00	855939	1.50	8.00	48.10	6.70	11.70	20.00		
mm in length locally up to 20-25% over	51.00	52.50	855942	1.50	5.20	49.80	9.00	8.00	13.10		

Kyanite Mining Corp.

Description		Assay - Sample									
		From	To	Sample number	Length	Ky (%)	Qtz (%)	Alm (%)	Bio (%)	Musc (%)	
58.00	147.00	narrow intervals.	52.50	54.00	855943	1.50	11.10	49.40	15.20	10.10	6.40
		weak intermittent quartz veinlets	54.00	55.50	855944	1.50	7.50	57.10	10.40	9.70	9.40
		throughout, generally <10cm in width and	55.50	57.00	855945	1.50	8.70	59.70	5.90	11.60	13.60
		comprise approx 5-7% of interval.	57.00	58.50	855946	1.50	11.60	58.40	4.20	11.60	6.00
		36.76-36.80m- graphite/chlorite-rich fault									
		gouge @ 70 deg TCA.									
		47.60-48.05m - quartz vein. contacts									
		irregular ~ 50 deg TCA, contains minor									
		kyanite, garnets, and biotite (partially									
		digested inclusions).									
		non-magnetic.									
		trace diss/ff py throughout, generally									
		unmineralized.									
		lower contact transitional.									
		KyGtBioMuGn	58.50	60.00	855947	1.50	14.60	55.10	4.30	11.80	8.50
		<b>Kyanite-Garnet-Biotite-Muscovite Gneiss</b>	60.00	61.50	855948	1.50	13.60	56.90	5.00	12.50	10.70
		grey medium to coarse grained	61.50	63.00	855949	1.50	11.80	45.30	3.80	12.00	9.90
		kyanite-garnet-muscovite-biotite gneiss.	63.00	64.50	855950	1.50	9.20	56.30	4.00	13.20	12.10
foliation moderately developed between	64.50	66.00	855951	1.50	16.50	56.60	3.90	12.00	5.90		
65-75deg TCA. xtls are bladed and weakly	66.00	67.50	855952	1.50	14.80	59.30	3.00	11.50	6.30		
aligned to foliation, but also randomly	67.50	69.00	855953	1.50	12.50	69.80	3.80	8.70	5.20		
orientated at various angles TCA	69.00	70.50	855954	1.50	18.30	43.90	5.00	12.00	8.90		
throughout interval and locally very coarse	70.50	72.00	855955	1.50	15.70	58.90	4.70	11.40	4.50		
grained (>1cm in length).	72.00	73.50	855956	1.50	17.60	45.70	4.20	14.00	5.60		
local micro-folding evident throughtout.	73.50	75.00	855957	1.50	19.10	53.60	6.60	12.00	2.40		
15-20% garnets up to 16mm in diameter,	75.00	76.50	855958	1.50	19.30	53.50	5.70	10.30	1.40		
~15% kyanite xtls typically 3 to 5mm in	76.50	78.00	855959	1.50	15.30	54.80	5.40	13.10	3.50		
length by 1-2 mm in width, locally up to 15	78.00	79.50	855962	1.50	17.50	52.60	4.00	15.90	5.10		
mm in length. ky locally up to 20-25% over	79.50	81.00	855963	1.50	11.40	54.30	8.40	13.30	7.00		
narrow intervals.	81.00	82.50	855964	1.50	13.90	47.10	7.00	11.90	5.90		
weak intermittent quartz veinlets	82.50	84.00	855965	1.50	15.60	42.50	8.10	10.00	3.50		
throughout, generally <10cm in width and											



## Kyanite Mining Corp.

Description	Assay - Sample									
	From	To	Sample number	Length	Ky (%)	Qtz (%)	Alm (%)	Bio (%)	Musc (%)	
comprise approx 5% of interval.	84.00	85.50	855966	1.50	15.10	44.60	7.60	9.40	6.50	
63.00-63.30m - faulted section, rehealed	85.50	87.00	855967	1.50	14.00	47.70	4.40	9.20	3.50	
with quartz, chlorite @ 45 deg TCA).	87.00	88.50	855968	1.50	16.20	50.80	4.80	8.30	2.60	
89.24-89.58m - quartz vein. upper contact	88.50	90.00	855969	1.50	13.40	55.80	4.10	6.70	3.60	
sharp @ 75-80 deg TCA, lower contact	90.00	91.50	855970	1.50	16.10	54.30	3.20	11.70	7.10	
sharp but irregular. ky xtls very coarse	91.50	93.00	855971	1.50	15.90	42.10	5.70	9.70	4.50	
adjacent to the vein.	93.00	94.50	855972	1.50	13.40	51.00	4.70	9.80	4.40	
103.00-110.00m - moderate quartz veinlets	94.50	96.00	855973	1.50	15.00	57.50	3.20	11.80	5.70	
up to 25cm, irregular but typically	96.00	97.50	855974	1.50	15.80	54.80	4.40	11.70	4.00	
conformable to foliation (70-75 deg TCA).	97.50	99.00	855975	1.50	13.60	54.00	3.80	8.70	2.20	
116.40-119.40m - moderately fractured,	99.00	100.50	855976	1.50	14.40	55.70	6.40	11.70	5.10	
preferentially orientated 75-90 deg TCA.	100.50	102.00	855977	1.50	16.90	49.90	3.60	9.00	4.60	
trace disseminated and ff py throughout,	102.00	103.50	855978	1.50	13.70	42.60	3.40	9.50	4.40	
generally unmineralized.	103.50	105.00	855979	1.50	14.10	59.20	5.00	9.20	3.30	
generally non-magnetic, locally magnetic	105.00	106.50	855982	1.50	17.10	46.90	2.90	8.10	3.70	
@ 98.00m due to fine grained po in narrow	106.50	108.00	855983	1.50	17.90	41.20	6.20	8.80	2.20	
fractured interval.	108.00	109.50	855984	1.50	12.10	67.60	3.90	5.60	2.80	
lower contact transitional over 1m.	109.50	111.00	855985	1.50	14.60	45.20	4.50	7.10	2.90	
	111.00	112.50	855986	1.50	14.80	47.70	3.00	7.20	5.20	
	112.50	114.00	855987	1.50	15.90	48.40	4.80	8.40	2.60	
	114.00	115.50	855988	1.50	17.60	42.30	4.70	10.00	5.30	
	115.50	117.00	855989	1.50	17.30	44.20	4.70	7.60	2.60	
	117.00	118.50	855990	1.50	18.70	46.90	3.80	8.00	5.60	
	118.50	120.00	855991	1.50	17.40	54.80	3.60	10.20	2.20	
	120.00	121.50	855992	1.50	16.60	55.60	5.20	8.80	5.00	
	121.50	123.00	855993	1.50	16.50	49.10	5.90	9.50	3.20	
	123.00	124.50	855994	1.50	13.80	52.00	4.30	8.80	3.00	
	124.50	126.00	855995	1.50	15.90	51.20	3.10	10.20	5.30	
	126.00	127.50	855996	1.50	16.80	55.40	6.40	9.80	3.50	
	127.50	129.00	855997	1.50	14.40	44.00	4.10	8.50	3.90	

Kyanite Mining Corp.

Description			Assay - Sample								
			From	To	Sample number	Length	Ky (%)	Qtz (%)	Alm (%)	Bio (%)	Musc (%)
147.00	238.50	KyGtBioMuGn Kyanite-Garnet-Biotite-Muscovite Gneiss grey coarse to very coarse grained kyanite-garnet-muscovite-biotite gneiss (as previous besides becoming coarser grained towards lower contact). foliation moderately developed at 75 deg TCA. xtls are bladed and weakly aligned to foliation, but also randomly orientated at various angles TCA throughout interval and locally very coarse grained (>1cm in length). 15% garnets up to 12-13mm in diameter, 15-20% kyanite xtls typically 8-12mm in length by 2-3 mm in width, locally up to 25 mm. ky locally up to 20-25% over narrow intervals. weak intermittent quartz veinlets throughout, generally <10cm in width and	129.00	130.50	855998	1.50	16.80	44.20	3.50	8.70	2.50
			130.50	132.00	855999	1.50	20.20	54.20	3.70	8.90	2.80
			132.00	133.50	856002	1.50	15.10	42.60	4.00	7.30	4.50
			133.50	135.00	856003	1.50	18.60	37.50	3.20	9.00	0.80
			135.00	136.50	856004	1.50	14.50	48.20	5.30	10.90	2.70
			136.50	138.00	856005	1.50	11.90	69.30	3.30	7.20	5.80
			138.00	139.50	856006	1.50	13.10	53.10	3.60	6.90	3.00
			139.50	141.00	856007	1.50	16.40	42.70	4.40	10.40	2.80
			141.00	142.50	856008	1.50	18.00	56.30	6.70	8.60	1.50
			142.50	144.00	856009	1.50	18.80	43.80	3.60	8.80	5.50
			144.00	145.50	856010	1.50	16.60	59.90	5.20	9.60	3.90
			145.50	147.00	856011	1.50	16.70	53.10	5.10	9.20	3.70
			147.00	148.50	856012	1.50	16.70	46.90	2.20	8.40	9.70
			148.50	150.00	856013	1.50	17.70	44.80	4.00	11.50	7.80
			150.00	151.50	856014	1.50	13.30	62.50	4.80	8.70	6.80
			151.50	153.00	856015	1.50	13.60	41.50	4.20	9.80	7.00
			153.00	154.50	856016	1.50	14.30	51.60	5.00	11.20	13.30
			154.50	156.00	856017	1.50	10.80	47.70	6.20	9.60	13.20
			156.00	157.50	856018	1.50	2.30	49.70	6.10	6.00	18.20
			157.50	159.00	856019	1.50	13.30	46.00	4.90	9.60	12.00
			159.00	160.50	856022	1.50	13.00	42.50	5.50	11.30	9.30
			160.50	162.00	856023	1.50	14.30	53.70	4.50	10.90	10.80
			162.00	163.50	856024	1.50	14.30	36.60	3.80	10.70	6.50
			163.50	165.00	856025	1.50	11.60	39.30	3.90	10.60	9.10
			165.00	166.50	856026	1.50	12.40	39.60	5.60	7.20	5.20
			166.50	168.00	856027	1.50	18.20	41.70	7.30	10.60	7.40
			168.00	169.50	856028	1.50	10.80	62.70	5.10	10.20	8.30
			169.50	171.00	856029	1.50	21.30	51.30	7.60	10.60	3.70
			171.00	172.50	856030	1.50	11.80	61.80	2.90	10.60	8.90
			172.50	174.00	856031	1.50	13.90	57.90	3.50	11.00	11.20

## Kyanite Mining Corp.

Description	Assay - Sample									
	From	To	Sample number	Length	Ky (%)	Qtz (%)	Alm (%)	Bio (%)	Musc (%)	
comprise approx 5% of interval. strongly foliated/sheared from 156.80-157.40m (greyish-green sericite schist). 166.03-166.04cm - 0.5cm irregular calcite vein orientated at 40 deg TCA. 171.37-171.50m - fault @ 80 deg TCA. ground core w gouge. 175.65-176.20m - strong quartz flooding. 178.14-178.54m - heavily fractured and faulted with gouge, approximately orientated at 80 deg TCA. 207.88-207.95m - heavily fractured. 228.00-228.75m - strong pervasive chlorite+sericite. trace ff and diss py +/-po throughout, generally unmineralized. lower contact sharp @ 40 deg TCA.	174.00	175.50	856032	1.50	7.10	57.00	2.30	12.90	6.60	
	175.50	177.00	856033	1.50	5.30	66.50	2.90	12.00	5.20	
	177.00	178.50	856034	1.50	5.30	70.40	2.20	9.10	5.60	
	178.50	180.00	856035	1.50	12.50	47.30	4.80	11.00	9.70	
	180.00	181.50	856036	1.50	12.90	52.40	2.50	8.80	7.10	
	181.50	183.00	856037	1.50	15.70	52.20	2.40	9.60	6.80	
	183.00	184.50	856038	1.50	14.80	47.70	2.70	10.20	6.20	
	184.50	186.00	856039	1.50	14.50	47.50	4.10	9.30	4.70	
	186.00	187.50	856042	1.50	16.30	55.00	4.40	12.40	5.80	
	187.50	189.00	856043	1.50	15.70	48.10	4.60	10.50	3.20	
	189.00	190.50	856044	1.50	16.20	39.40	4.10	12.00	6.20	
	190.50	192.00	856045	1.50	17.10	48.10	4.20	11.90	4.70	
	192.00	193.50	856046	1.50	15.60	40.70	5.50	7.10	3.90	
	193.50	195.00	856047	1.50	16.40	36.60	4.50	6.70	4.30	
	195.00	196.50	856048	1.50	14.80	37.20	4.00	7.30	8.60	
	196.50	198.00	856049	1.50	14.00	39.20	3.60	8.20	5.80	
	198.00	199.50	856050	1.50	15.90	48.40	5.40	8.10	5.50	
	199.50	201.00	856051	1.50	15.20	47.90	4.30	7.00	5.20	
	201.00	202.50	856052	1.50	16.90	44.80	3.00	6.60	3.20	
	202.50	204.00	856053	1.50	16.50	45.40	3.50	9.80	4.30	
204.00	205.50	856054	1.50	19.40	55.80	2.70	6.80	4.60		
205.50	207.00	856055	1.50	13.20	55.50	5.50	5.70	4.50		
207.00	208.50	856056	1.50	16.30	45.10	6.30	9.80	4.90		
208.50	210.00	856057	1.50	16.60	44.20	3.10	7.70	3.40		
210.00	211.50	856058	1.50	15.40	42.60	4.20	6.10	2.40		
211.50	213.00	856059	1.50	15.60	38.10	3.10	7.70	4.20		
213.00	214.50	856062	1.50	14.90	44.00	2.30	5.60	2.80		
214.50	216.00	856063	1.50	15.60	36.30	4.70	10.20	4.70		
216.00	217.50	856064	1.50	14.50	63.20	6.00	8.10	5.10		
217.50	219.00	856065	1.50	13.60	43.50	5.30	7.10	4.00		

Kyanite Mining Corp.

Description			Assay - Sample								
			From	To	Sample number	Length	Ky (%)	Qtz (%)	Alm (%)	Bio (%)	Musc (%)
238.50	246.00	BioGn Biotite Gneiss dark grey biotite gneiss with local siliceous granitic gneiss sections at upper contact. very minor ky-bands up to 1cm in thickness near upper contact. foliation @ 80 deg TCA. no visible mineralization. non-magnetic.	219.00	220.50	856066	1.50	12.70	47.80	5.80	7.20	4.50
			220.50	222.00	856067	1.50	12.20	46.40	5.80	5.20	6.20
			222.00	223.50	856068	1.50	14.30	49.00	3.70	6.90	3.30
			223.50	225.00	856069	1.50	14.30	42.00	4.20	7.10	3.30
			225.00	226.50	856070	1.50	12.60	46.90	4.50	6.70	4.80
			226.50	228.00	856071	1.50	13.80	49.50	4.50	5.60	7.40
			228.00	229.50	856072	1.50	7.60	48.80	5.00	6.10	7.50
			229.50	231.00	856073	1.50	14.70	48.40	4.00	5.90	1.00
			231.00	232.50	856074	1.50	14.80	44.30	5.30	6.30	2.30
			232.50	234.00	856075	1.50	14.40	50.30	3.00	6.60	0.70
			234.00	235.50	856076	1.50	14.20	50.00	2.20	6.50	1.00
			235.50	237.00	856077	1.50	13.50	51.70	2.20	7.80	0.80
			237.00	238.50	856078	1.50	8.80	54.50	2.60	6.70	1.00
			238.50	240.00	856079	1.50	0.70	97.80	0.40	1.10	0.00
			240.00	241.50	856082	1.50	1.90	95.50	0.80	1.30	0.50
241.50	243.00	856083	1.50	6.60	55.20	0.80	5.50	3.30			
243.00	244.50	856084	1.50	1.00	32.70	0.00	6.90	0.00			
244.50	246.00	856085	1.50	1.00	27.80	0.00	5.10	0.00			

## Kyanite Mining Corp.

Assay - QAQC				
From	To	Sample number	Reference	Ky (%)
22.50	24.00	855920	AMIS 0561	24.20
22.50	24.00	855921	Diabase Drill Core	0.00
49.50	51.00	855940	AMIS 0561	24.20
49.50	51.00	855941	Diabase Drill Core	0.00
76.50	78.00	855960	AMIS 0561	24.50
76.50	78.00	855961	Diabase Drill Core	0.00
103.50	105.00	855980	AMIS 0561	25.00
103.50	105.00	855981	Diabase Drill Core	0.00
130.50	132.00	856000	AMIS 0561	25.20
130.50	132.00	856001	Diabase Drill Core	0.00
159.00	160.50	856020	AMIS 0561	24.50
159.00	160.50	856021	Diabase Drill Core	0.00
184.50	186.00	856040	AMIS 0561	24.80
184.50	186.00	856041	Diabase Drill Core	0.00
211.50	213.00	856060	AMIS 0561	24.90
211.50	213.00	856061	Diabase Drill Core	0.00
238.50	240.00	856080	AMIS 0561	25.50
238.50	240.00	856081	Diabase Drill Core	0.00

# Kyanite Mining Corp.

Magnetism		
From	To	Magnetism
6.00	7.00	0.68
7.00	8.00	0.459
8.00	9.00	0.284
9.00	10.00	0.661
10.00	11.00	0.491
11.00	12.00	0.475
12.00	13.00	0.281
13.00	14.00	0.266
14.00	15.00	0.553
15.00	16.00	0.418
16.00	17.00	0.234
17.00	18.00	0.431
18.00	19.00	0.353
19.00	20.00	0.364
20.00	21.00	0.315
21.00	22.00	0.37
22.00	23.00	0.434
23.00	24.00	0.37
24.00	25.00	0.589
25.00	26.00	0.457
26.00	27.00	0.316
27.00	28.00	0.373
28.00	29.00	0.579
29.00	30.00	0.407
30.00	31.00	0.254
31.00	32.00	0.281
32.00	33.00	0.399
33.00	34.00	0.39
34.00	35.00	0.435
35.00	36.00	0.935
36.00	37.00	0.568
37.00	38.00	0.308

## Kyanite Mining Corp.

Magnetism		
From	To	Magnetism
38.00	39.00	0.563
39.00	40.00	0.349
40.00	41.00	0.452
41.00	42.00	0.408
42.00	43.00	0.591
43.00	44.00	0.244
44.00	45.00	0.324
45.00	46.00	0.263
46.00	47.00	0.685
47.00	48.00	0.591
48.00	49.00	0.706
49.00	50.00	0.477
50.00	51.00	0.306
51.00	52.00	0.478
52.00	53.00	0.224
53.00	54.00	0.265
54.00	55.00	0.513
55.00	56.00	0.478
56.00	57.00	0.322
57.00	58.00	0.279
58.00	59.00	0.443
59.00	60.00	0.347
60.00	61.00	0.488
61.00	62.00	0.387
62.00	63.00	0.411
63.00	64.00	0.37
64.00	65.00	0.449
65.00	66.00	0.371
66.00	67.00	0.546
67.00	68.00	0.429
68.00	69.00	0.437
69.00	70.00	0.489

# Kyanite Mining Corp.

Magnetism		
From	To	Magnetism
70.00	71.00	0.39
71.00	72.00	0.487
72.00	73.00	0.491
73.00	74.00	0.64
74.00	75.00	0.539
75.00	76.00	0.568
76.00	77.00	0.546
77.00	78.00	0.376
78.00	79.00	0.382
79.00	80.00	0.498
80.00	81.00	0.223
81.00	82.00	0.648
82.00	83.00	0.243
83.00	84.00	0.353
84.00	85.00	0.487
85.00	86.00	0.415
86.00	87.00	0.402
87.00	88.00	0.319
88.00	89.00	0.127
89.00	90.00	0.295
90.00	91.00	0.213
91.00	92.00	0.353
92.00	93.00	0.306
93.00	94.00	0.606
94.00	95.00	0.411
95.00	96.00	0.45
96.00	97.00	0.249
97.00	98.00	1.099
98.00	99.00	1.678
99.00	100.00	0.473
100.00	101.00	0.37
101.00	102.00	0.387



## Kyanite Mining Corp.

Magnetism		
From	To	Magnetism
102.00	103.00	0.27
103.00	104.00	0.206
104.00	105.00	0.338
105.00	106.00	0.521
106.00	107.00	0.22
107.00	108.00	0.411
108.00	109.00	0.368
109.00	110.00	0.315
110.00	111.00	0.107
111.00	112.00	0.112
112.00	113.00	0.196
113.00	114.00	0.367
114.00	115.00	0.608
115.00	116.00	0.207
116.00	117.00	0.136
117.00	118.00	0.305
118.00	119.00	0.532
119.00	120.00	0.093
120.00	121.00	0.129
121.00	122.00	0.172
122.00	123.00	0.181
123.00	124.00	0.296
124.00	125.00	0.518
125.00	126.00	0.624
126.00	127.00	0.437
127.00	128.00	0.543
128.00	129.00	0.5
129.00	130.00	0.413
130.00	131.00	0.24
131.00	132.00	0.367
132.00	133.00	0.212
133.00	134.00	0.23

## Kyanite Mining Corp.

Magnetism		
From	To	Magnetism
134.00	135.00	0.305
135.00	136.00	0.424
136.00	137.00	0.114
137.00	138.00	0.398
138.00	139.00	0.431
139.00	140.00	0.439
140.00	141.00	0.5
141.00	142.00	0.31
142.00	143.00	0.398
143.00	144.00	0.432
144.00	145.00	0.481
145.00	146.00	0.216
146.00	147.00	0.465
147.00	148.00	0.192
148.00	149.00	0.369
149.00	150.00	0.323
150.00	151.00	0.18
151.00	152.00	0.402
152.00	153.00	0.294
153.00	154.00	0.469
154.00	155.00	0.4
155.00	156.00	0.254
156.00	157.00	0.413
157.00	158.00	0.228
158.00	159.00	0.519
159.00	160.00	0.461
160.00	161.00	0.505
161.00	162.00	0.382
162.00	163.00	0.285
163.00	164.00	0.268
164.00	165.00	0.522
165.00	166.00	0.554

## Kyanite Mining Corp.

Magnetism		
From	To	Magnetism
166.00	167.00	0.371
167.00	168.00	0.391
168.00	169.00	0.258
169.00	170.00	0.175
170.00	171.00	0.253
171.00	172.00	0.232
172.00	173.00	0.237
173.00	174.00	0.188
174.00	175.00	0.462
175.00	176.00	0.352
176.00	177.00	0.424
177.00	178.00	0.266
178.00	179.00	0.336
179.00	180.00	0.462
180.00	181.00	0.472
181.00	182.00	0.437
182.00	183.00	0.184
183.00	184.00	0.151
184.00	185.00	0.19
185.00	186.00	0.178
186.00	187.00	0.568
187.00	188.00	0.323
188.00	189.00	0.406
189.00	190.00	0.428
190.00	191.00	0.459
191.00	192.00	0.308
192.00	193.00	0.422
193.00	194.00	0.458
194.00	195.00	0.162
195.00	196.00	0.417
196.00	197.00	0.388
197.00	198.00	0.598

## Kyanite Mining Corp.

Magnetism		
From	To	Magnetism
198.00	199.00	0.789
199.00	200.00	0.449
200.00	201.00	0.413
201.00	202.00	0.468
202.00	203.00	0.323
203.00	204.00	0.209
204.00	205.00	0.346
205.00	206.00	0.407
206.00	207.00	0.245
207.00	208.00	0.598
208.00	209.00	0.326
209.00	210.00	0.386
210.00	211.00	0.46
211.00	212.00	0.362
212.00	213.00	0.453
213.00	214.00	0.17
214.00	215.00	0.173
215.00	216.00	0.287
216.00	217.00	1.822
217.00	218.00	0.194
218.00	219.00	0.176
219.00	220.00	0.456
220.00	221.00	0.43
221.00	222.00	0.246
222.00	223.00	0.467
223.00	224.00	0.318
224.00	225.00	0.387
225.00	226.00	0.305
226.00	227.00	0.214
227.00	228.00	0.242
228.00	229.00	0.442
229.00	230.00	0.512

## Kyanite Mining Corp.

Magnetism		
From	To	Magnetism
230.00	231.00	0.571
231.00	232.00	0.515
232.00	233.00	0.543
233.00	234.00	0.347
234.00	235.00	0.286
235.00	236.00	0.379
236.00	237.00	0.278
237.00	238.00	0.29
238.00	239.00	0.034
239.00	240.00	0.183
240.00	241.00	0.063
241.00	242.00	0.116
242.00	243.00	0.193
243.00	244.00	0.219
244.00	245.00	0.091
245.00	246.00	0.247

## Kyanite Mining Corp.

Down hole survey			
Type	Depth	Azimuth	Dip
TrueShot	12.00	110.10°	-46.70°
TrueShot	12.00	110.10°	-46.70°
TrueShot	12.00	110.10°	-46.70°
TrueShot	15.00	109.80°	-46.60°
TrueShot	18.00	110.30°	-46.60°
TrueShot	21.00	110.30°	-46.60°
TrueShot	24.00	110.40°	-46.50°
TrueShot	27.00	110.40°	-46.50°
TrueShot	30.00	110.40°	-46.40°
TrueShot	33.00	110.30°	-46.30°
TrueShot	36.00	110.50°	-46.30°
TrueShot	39.00	110.60°	-46.30°
TrueShot	42.00	110.10°	-46.20°
TrueShot	45.00	110.30°	-46.10°
TrueShot	48.00	110.20°	-46.10°
TrueShot	51.00	110.20°	-46.10°
TrueShot	54.00	110.20°	-46.00°
TrueShot	57.00	110.10°	-46.00°
TrueShot	60.00	110.00°	-45.90°
TrueShot	63.00	110.00°	-45.90°
TrueShot	66.00	110.00°	-45.80°
TrueShot	69.00	109.90°	-45.80°
TrueShot	72.00	109.90°	-45.80°
TrueShot	75.00	110.00°	-45.70°
TrueShot	78.00	109.90°	-45.70°
TrueShot	81.00	109.90°	-45.70°
TrueShot	84.00	109.90°	-45.60°
TrueShot	87.00	109.90°	-45.60°
TrueShot	90.00	110.00°	-45.60°
TrueShot	93.00	110.00°	-45.50°
TrueShot	96.00	110.00°	-45.50°
TrueShot	99.00	110.00°	-45.50°

## Kyanite Mining Corp.

Down hole survey			
Type	Depth	Azimuth	Dip
TrueShot	102.00	110.00°	-45.40°
TrueShot	105.00	110.00°	-45.40°
TrueShot	108.00	110.00°	-45.30°
TrueShot	111.00	110.10°	-45.30°
TrueShot	114.00	110.30°	-45.20°
TrueShot	117.00	110.40°	-45.20°
TrueShot	120.00	110.50°	-45.10°
TrueShot	123.00	110.50°	-45.10°
TrueShot	126.00	110.60°	-45.00°
TrueShot	129.00	110.60°	-44.90°
TrueShot	132.00	110.70°	-44.80°
TrueShot	135.00	110.80°	-44.80°
TrueShot	138.00	110.70°	-44.70°
TrueShot	141.00	110.90°	-44.70°
TrueShot	144.00	110.80°	-44.60°
TrueShot	147.00	110.80°	-44.60°
TrueShot	150.00	110.80°	-44.60°
TrueShot	153.00	110.70°	-44.50°
TrueShot	156.00	110.80°	-44.40°
TrueShot	159.00	110.80°	-44.40°
TrueShot	162.00	111.00°	-44.30°
TrueShot	165.00	110.80°	-44.20°
TrueShot	168.00	110.80°	-44.20°
TrueShot	171.00	110.80°	-44.20°
TrueShot	174.00	110.90°	-44.10°
TrueShot	177.00	111.10°	-44.10°
TrueShot	180.00	110.80°	-44.00°
TrueShot	183.00	111.20°	-44.00°
TrueShot	186.00	110.80°	-43.90°
TrueShot	189.00	110.80°	-43.90°
TrueShot	192.00	110.70°	-43.90°
TrueShot	195.00	110.70°	-43.80°

## Kyanite Mining Corp.

Down hole survey			
Type	Depth	Azimuth	Dip
TrueShot	198.00	110.80°	-43.80°
TrueShot	201.00	110.80°	-43.80°
TrueShot	204.00	110.80°	-43.70°
TrueShot	207.00	110.80°	-43.70°
TrueShot	210.00	110.80°	-43.70°
TrueShot	213.00	110.80°	-43.60°
TrueShot	216.00	110.90°	-43.50°
TrueShot	219.00	110.90°	-43.50°
TrueShot	222.00	110.90°	-43.40°
TrueShot	225.00	110.90°	-43.40°
TrueShot	228.00	111.00°	-43.40°
TrueShot	231.00	110.90°	-43.40°
TrueShot	234.00	111.00°	-43.30°
TrueShot	237.00	111.00°	-43.30°
TrueShot	240.00	111.00°	-43.20°
TrueShot	243.00	111.20°	-43.20°
TrueShot	246.00	111.10°	-43.20°



Kyanite Mining Corp.

RQD						
From	To	Length	Recovered length	RQD length	Recovered (%)	RQD (%)
6.800	9.000	2.200	2.200	0.220	100.000	10.000
9.000	12.000	3.000	2.980	2.640	99.330	88.000
12.000	15.000	3.000	3.000	2.710	100.000	90.330
15.000	18.000	3.000	3.000	2.350	100.000	78.330
18.000	21.000	3.000	3.000	1.630	100.000	54.330
21.000	24.000	3.000	2.970	2.650	99.000	88.330
24.000	27.000	3.000	2.950	2.910	98.330	97.000
27.000	30.000	3.000	3.000	2.830	100.000	94.330
30.000	33.000	3.000	2.750	2.000	91.670	66.670
33.000	36.000	3.000	2.930	2.180	97.670	72.670
36.000	39.000	3.000	2.980	2.200	99.330	73.330
39.000	42.000	3.000	3.000	3.000	100.000	100.000
42.000	45.000	3.000	3.000	3.000	100.000	100.000
45.000	48.000	3.000	3.010	3.010	100.330	100.330
48.000	51.000	3.000	3.000	2.950	100.000	98.330
51.000	54.000	3.000	2.990	2.990	99.670	99.670
54.000	57.000	3.000	3.000	3.000	100.000	100.000
57.000	60.000	3.000	3.000	2.940	100.000	98.000
60.000	63.000	3.000	2.980	2.900	99.330	96.670
63.000	66.000	3.000	3.020	2.850	100.670	95.000
66.000	69.000	3.000	2.990	2.750	99.670	91.670
69.000	72.000	3.000	3.000	3.000	100.000	100.000
72.000	75.000	3.000	3.000	2.920	100.000	97.330
75.000	78.000	3.000	3.000	2.940	100.000	98.000
78.000	81.000	3.000	2.960	2.860	98.670	95.330
81.000	84.000	3.000	2.970	2.910	99.000	97.000
84.000	87.000	3.000	3.000	2.940	100.000	98.000
87.000	90.000	3.000	3.010	2.950	100.330	98.330
90.000	93.000	3.000	3.000	2.930	100.000	97.670
93.000	96.000	3.000	3.000	2.890	100.000	96.330
96.000	99.000	3.000	3.000	2.850	100.000	95.000

Kyanite Mining Corp.

RQD						
From	To	Length	Recovered length	RQD length	Recovered (%)	RQD (%)
99.000	102.000	3.000	3.000	2.900	100.000	96.670
102.000	105.000	3.000	2.990	2.900	99.670	96.670
105.000	108.000	3.000	3.000	2.850	100.000	95.000
108.000	111.000	3.000	3.000	2.700	100.000	90.000
111.000	114.000	3.000	2.990	2.940	99.670	98.000
114.000	117.000	3.000	2.920	2.190	97.330	73.000
117.000	120.000	3.000	3.040	0.930	101.330	31.000
120.000	123.000	3.000	3.020	2.980	100.670	99.330
123.000	126.000	3.000	2.990	2.990	99.670	99.670
126.000	129.000	3.000	2.970	2.930	99.000	97.670
129.000	132.000	3.000	3.040	2.890	101.330	96.330
132.000	135.000	3.000	2.990	2.580	99.670	86.000
135.000	138.000	3.000	3.050	2.910	101.670	97.000
138.000	141.000	3.000	3.010	2.970	100.330	99.000
141.000	144.000	3.000	3.000	2.800	100.000	93.330
144.000	147.000	3.000	3.000	2.560	100.000	85.330
147.000	150.000	3.000	3.030	2.870	101.000	95.670
150.000	153.000	3.000	2.980	2.920	99.330	97.330
153.000	156.000	3.000	2.990	2.740	99.670	91.330
156.000	159.000	3.000	2.980	2.220	99.330	74.000
159.000	162.000	3.000	3.020	2.710	100.670	90.330
162.000	165.000	3.000	2.940	2.880	98.000	96.000
165.000	168.000	3.000	3.090	2.880	103.000	96.000
168.000	171.000	3.000	3.000	2.820	100.000	94.000
171.000	174.000	3.000	2.920	2.410	97.330	80.330
174.000	177.000	3.000	2.950	2.800	98.330	93.330
177.000	180.000	3.000	3.000	2.250	100.000	75.000
180.000	183.000	3.000	2.990	2.800	99.670	93.330
183.000	186.000	3.000	3.020	2.920	100.670	97.330
186.000	189.000	3.000	3.010	2.960	100.330	98.670
189.000	192.000	3.000	2.990	2.640	99.670	88.000

Kyanite Mining Corp.

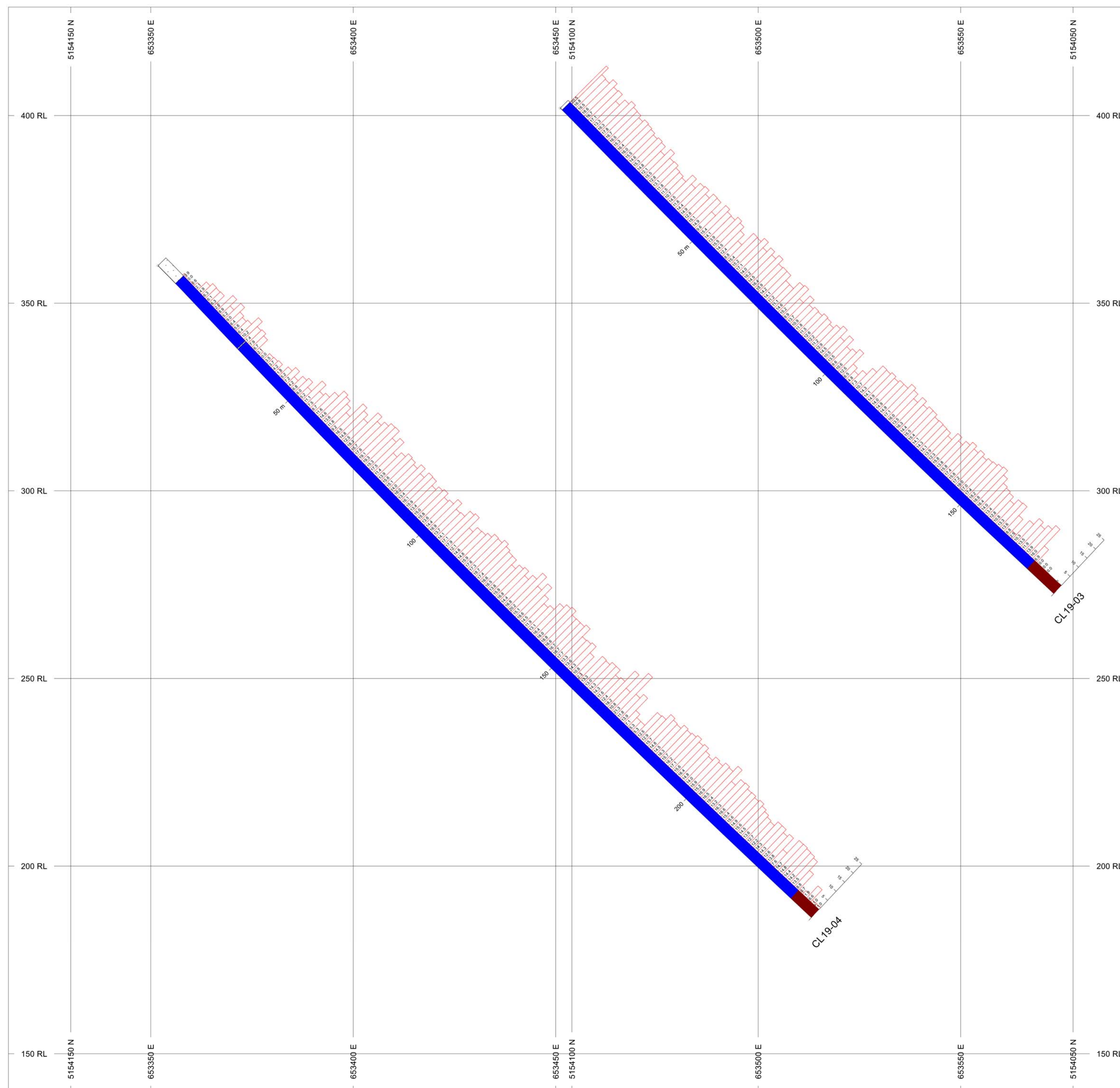
RQD						
From	To	Length	Recovered length	RQD length	Recovered (%)	RQD (%)
192.000	195.000	3.000	2.970	2.780	99.000	92.670
195.000	198.000	3.000	3.010	2.680	100.330	89.330
198.000	201.000	3.000	3.010	2.680	100.330	89.330
201.000	204.000	3.000	2.970	2.760	99.000	92.000
204.000	207.000	3.000	3.050	2.440	101.670	81.330
207.000	210.000	3.000	2.970	2.640	99.000	88.000
210.000	213.000	3.000	2.980	2.660	99.330	88.670
213.000	216.000	3.000	3.030	2.890	101.000	96.330
216.000	219.000	3.000	2.970	2.670	99.000	89.000
219.000	222.000	3.000	3.030	2.880	101.000	96.000
222.000	225.000	3.000	2.990	2.990	99.670	99.670
225.000	228.000	3.000	3.000	2.720	100.000	90.670
228.000	231.000	3.000	3.000	3.000	100.000	100.000
231.000	234.000	3.000	3.040	2.960	101.330	98.670
234.000	237.000	3.000	2.970	2.920	99.000	97.330
237.000	240.000	3.000	3.030	3.030	101.000	101.000
240.000	243.000	3.000	2.970	2.810	99.000	93.670
243.000	246.000	3.000	2.950	2.920	98.330	97.330

## **Appendix III**

### **Sections**



**KYANITE**  
MINING CORPORATION



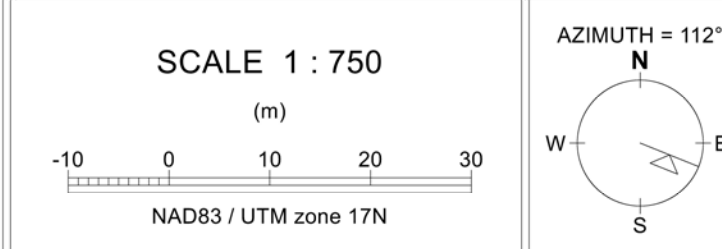
BAR GRAPHS	L/R	COL
Ky_per	R	

ROCK CODES	PAT	LABEL	DESCRIPTION
litho		OB	Overburden
		BIO_GN	Biotite Gneiss
		FLT	Fault
		KY-GT-BIO-MU_G	Ky-Gt-Bio-Mu Gneiss

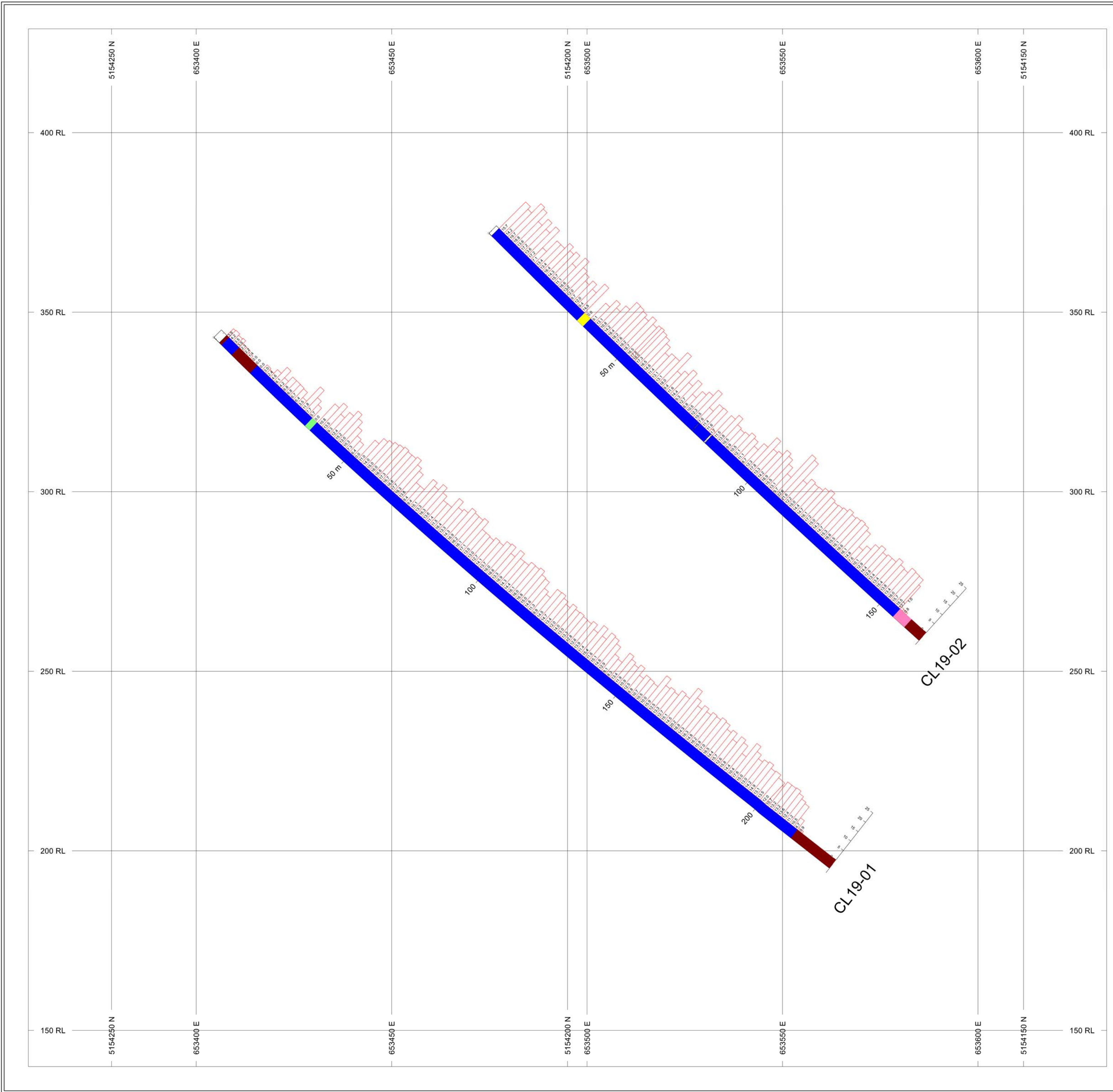
ASSAYS	L/R	TEXT
Ky_per	R	-----

**SECTION SPECS:**  
 REF. PT. E, N 653454 m 5154100 m  
 EXTENTS 300.2 m 289 m  
 SECTION TOP, BOT 428.9 m 139.9 m  
 TOLERANCE +/- 19.95 m



Kyanite Mining Corp.  
Crocac Lake Property  
CL19-03, CL19-04 Section





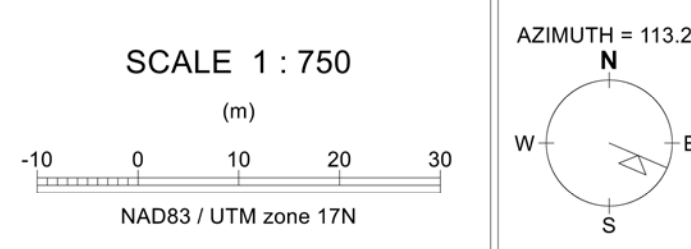
BAR GRAPHS	L/R	COL	
Ky_per	R		

ROCK CODES	PAT	LABEL	DESCRIPTION
litho	OB	BIO_GN	Overburden
	FLT	FLT	Biotite Gneiss
	OV	SER_GN	Fault
	GR	GR	Quartz Vein
		KY-GT-BIO-MU_G	Sericite Gneiss
			Granite
			Ky-Gt-Bio-Mu Gneiss

ASSAYS	L/R	TEXT
Ky_per	R	



Kyanite Mining Corp.  
Crocán Lake Property  
CL19-01, CL19-02 Section

## **Appendix IV**

### **Certificates**



## **X-ray Diffraction Analysis of One Hundred and Fifty Six Samples**

W.O. # A19-10389  
Invoice # A19-10389

Client: JMK Exploration

Attn: Joerg Kleinboeck

Date Reported: November 1, 2019



## **Method**

One hundred and fifty six samples were submitted for quantitative X-ray diffraction analysis. A portion of each pulverized sample was mixed with corundum and loaded into a standard holder. Corundum was added as an internal standard. The X-ray diffraction analysis was performed on a Panalytical X'Pert Pro diffractometer equipped with Cu X-ray source and an X'Celerator detector and operating at the following conditions: 40 kV and 40 mA; range 5 - 70 deg 2 $\theta$ ; step size 0.017 deg 2 $\theta$ ; time per step 30 sec; fixed divergence slit, angle 0.25<sup>0</sup>; sample rotation 1 rev/sec. The X'Pert HighScore plus software along with the PDF4/Minerals ICDD database were used for mineral identification. The quantities of the crystalline mineral phases were determined using Rietveld method. The Rietveld method is based on the calculation of the full diffraction pattern from crystal structure data. The amounts of the crystalline minerals were recalculated based on a know percent of corundum and the remainder to 100 % was considered X-ray amorphous material.

## **Results**

The minerals identified in the samples and their abundances are in Table 1 and the diffraction patterns are in Appendix 1.

Activation Laboratories Ltd. A19-10389

**Table 1.** Mineral abundances (wt %)

Actlabs ID	A19-10389-1	A19-10389-2	A19-10389-3	A19-10389-4	A19-10389-5	A19-10389-6	A19-10389-7	A19-10389-8	A19-10389-9	A19-10389-10	A19-10389-11	A19-10389-12
Client ID	855501	855502	855503	855504	855505	855506	855507	855508	855509	855510	855511	855512
Quartz	81.3	49.7	51.5	60.8	70.4	70.3	77.2	88.3	85.5	49.8	58.2	51.2
Kyanite	3.9	4.2	3.5	3.9	2.3	2.2	1.4	n.d.	n.d.	n.d.	3.0	2.4
K feldspar	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	4.3
Plagioclase	1.0	n.d.	n.d.	n.d.	2.2	4.5	2.5	n.d.	n.d.	n.d.	n.d.	n.d.
Almandine	n.d.	9.1	8.8	2.3	n.d.	n.d.	n.d.	n.d.	n.d.	8.6	7.0	7.7
Amphibole	2.6	n.d.	n.d.	n.d.	8.3	13.9	12.5	n.d.	n.d.	n.d.	n.d.	n.d.
Augite	2.1	n.d.	n.d.	n.d.	n.d.	5.6	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Enstatite	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Biotite	5.1	7.6	6.9	8.9	6.8	1.0	n.d.	4.0	6.3	9.6	11.7	12.2
Muscovite	n.d.	19.4	17.0	23.2	5.1	n.d.	n.d.	n.d.	n.d.	32	20.1	22.2
Chlorite	n.d.	n.d.	n.d.	n.d.	0.6	n.d.	1.0	1.7	2.6	n.d.	n.d.	n.d.
Kaolinite	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Pyrite	1.4	n.d.	n.d.	n.d.	3.2	1.6	4.5	5.2	4.9	n.d.	n.d.	n.d.
Pyrrhotite	2.6	n.d.	n.d.	0.9	1.1	0.9	0.9	0.8	0.7	n.d.	n.d.	n.d.
Calcite	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Amorphous	n.d.	10.0	12.3	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.

Activation Laboratories Ltd. A19-10389

Actlabs ID	A19-10389-13	A19-10389-14	A19-10389-15	A19-10389-16	A19-10389-17	A19-10389-18	A19-10389-19	A19-10389-20	A19-10389-21	A19-10389-22	A19-10389-23	A19-10389-24
Client ID	855513	855514	855515	855516	855517	855518	855519	855520	855521	855522	855523	855524
Quartz	48.9	48.6	46.1	52.8	48.3	54.5	51.6	70.9	7.6	60.0	50.6	55.3
Kyanite	4.6	8.1	4.2	6.8	6.8	6.7	6.4	24.2	n.d.	3.5	11.8	7.7
K feldspar	3.0	7.4	11.0	5.6	6.2	3.7	4.0	n.d.	n.d.	1.3	6.9	n.d.
Plagioclase	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	61.9	n.d.	n.d.	n.d.
Almandine	9.5	9.3	10.1	7.8	9.1	9.2	11.7	n.d.	n.d.	9.6	5.4	6.2
Amphibole	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	5.5	n.d.	n.d.	n.d.
Augite	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	13.7	n.d.	n.d.	n.d.
Enstatite	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	10.3	n.d.	n.d.	n.d.
Biotite	9.9	11.8	9.8	10.3	9.3	8.7	9.4	n.d.	1.0	8.0	13.0	9.7
Muscovite	14.9	14.8	18.8	16.7	20.3	17.2	16.9	2.1	n.d.	17.6	12.3	21.1
Chlorite	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Kaolinite	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	1.3	n.d.	n.d.	n.d.	n.d.
Pyrite	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	1.5	n.d.	n.d.	n.d.	n.d.
Pyrrhotite	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Calcite	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Amorphous	9.2	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.

Activation Laboratories Ltd. A19-10389

Actlabs ID	A19-10389-25	A19-10389-26	A19-10389-27	A19-10389-28	A19-10389-29	A19-10389-30	A19-10389-31	A19-10389-32	A19-10389-33	A19-10389-34	A19-10389-35	A19-10389-36
Client ID	855525	855526	855527	855528	855529	855530	855531	855532	855533	855534	855535	855536
Quartz	64.9	18.1	60.1	52.8	62.6	55.1	47.8	57.4	63.9	63.7	47.7	38.7
Kyanite	5.7	n.d.	10.8	13.5	9.3	12.4	15.2	13.0	10.3	7.3	6.4	n.d.
K feldspar	n.d.	n.d.	n.d.	6.1	7.4	5.6	7.5	6.1	4.9	3.5	4.5	3.5
Plagioclase	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Almandine	5.4	n.d.	5.6	4.7	5.1	5.5	2.6	3.6	3.2	4.5	4.5	8.5
Amphibole	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Augite	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Enstatite	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Biotite	6.4	6.9	9.0	12.1	9.1	14.0	12.1	9.2	10.7	10.4	13.4	8.8
Muscovite	16.8	63.6	13.5	10.8	6.5	7.4	14.8	10.7	7.0	10.6	8.8	11.3
Chlorite	0.8	3.2	1.0	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	6.0
Kaolinite	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	3.2	4.2
Pyrite	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Pyrrhotite	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Calcite	n.d.	8.2	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Amorphous	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	11.5	19.0

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Actlabs ID	A19-10389-37	A19-10389-38	A19-10389-39	A19-10389-40	A19-10389-41	A19-10389-42	A19-10389-43	A19-10389-44	A19-10389-45	A19-10389-46	A19-10389-47	A19-10389-48
Client ID	855537	855538	855539	855540	855541	855542	855543	855544	855545	855546	855547	855548
Quartz	41.8	54.5	47.1	68.7	11.6	43.9	57.3	46.1	56.4	55.4	53.9	43.0
Kyanite	11.0	14.0	15.0	26.1	n.d.	16.0	16.6	17.3	16.7	16.8	17.7	15.3
K feldspar	4.9	8.0	5.8	n.d.	n.d.	5.7	4.7	4.2	5.9	8.5	4.2	6.2
Plagioclase	n.d.	n.d.	n.d.	n.d.	60.5	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Almandine	4.7	6.3	4.5	n.d.	n.d.	3.1	3.6	5.0	4.9	4.8	6.1	5.7
Amphibole	n.d.	n.d.	n.d.	n.d.	5.8	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Augite	n.d.	n.d.	n.d.	n.d.	12.7	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Enstatite	n.d.	n.d.	n.d.	n.d.	9	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Biotite	17.8	12.8	10.2	n.d.	0.4	10.2	12.9	11.4	12.6	10.6	12.1	13.7
Muscovite	9.4	4.4	7.4	2.0	n.d.	4.1	4.9	3.7	3.5	3.9	6.0	5.3
Chlorite	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Kaolinite	1.0	n.d.	n.d.	1.5	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Pyrite	n.d.	n.d.	n.d.	1.7	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Pyrrhotite	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Calcite	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Amorphous	9.4	n.d.	10.0	n.d.	n.d.	17.0	n.d.	12.3	n.d.	n.d.	n.d.	10.8

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Actlabs ID	A19-10389-49	A19-10389-50	A19-10389-51	A19-10389-52	A19-10389-53	A19-10389-54	A19-10389-55	A19-10389-56	A19-10389-57	A19-10389-58	A19-10389-59	A19-10389-60
Client ID	855549	855550	855551	855552	855553	855554	855555	855556	855557	855558	855559	855560
Quartz	50.8	65.5	66.6	55.3	57.2	60	60.6	55.2	57.1	52.2	60.4	69.2
Kyanite	13.8	9.4	9.4	15.1	13.3	16.3	13.6	11.4	11.5	16.4	13.3	25.8
K feldspar	n.d.	n.d.	n.d.	n.d.	n.d.	1.0	2.1	6.4	5.7	8.3	6.0	n.d.
Plagioclase	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Almandine	4.2	2.6	3.1	3.2	2.4	4.2	4.5	3.8	4.0	5.7	5.7	n.d.
Amphibole	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Augite	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Enstatite	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Biotite	10.5	9.3	10.2	11.6	14.4	10.5	12.5	7.6	9.9	12.9	10.6	n.d.
Muscovite	7.5	13.2	10.7	14.8	12.7	8.0	6.7	14	10.5	4.5	4.0	2.0
Chlorite	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	0.6	0.8	n.d.	n.d.	n.d.
Kaolinite	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	1.0	0.5	n.d.	n.d.	1.6
Pyrite	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	1.4
Pyrrhotite	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Calcite	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Amorphous	13.2	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.

Activation Laboratories Ltd. A19-10389

Actlabs ID	A19-10389-61	A19-10389-62	A19-10389-63	A19-10389-64	A19-10389-65	A19-10389-66	A19-10389-67	A19-10389-68	A19-10389-69	A19-10389-70	A19-10389-71	A19-10389-72
Client ID	855561	855562	855563	855564	855565	855566	855567	855568	855569	855570	855571	855572
Quartz	8.4	43.1	53.5	61.7	47.2	55.1	56.4	56.1	40.9	55.2	53.9	53.3
Kyanite	n.d.	14.3	16.9	16.2	16.1	17.1	13.0	13.0	12.7	14.1	13.7	16.0
K feldspar	n.d.	7.0	7.9	4.1	5.7	4.0	9.0	7.9	10.5	6.6	10.8	10.1
Plagioclase	50.1	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Almandine	n.d.	6.2	5.7	6.5	4.7	7.0	4.3	6.1	3.1	5.4	6.5	4.9
Amphibole	20.4	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Augite	10.7	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Enstatite	9.4	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Biotite	1.0	7.2	11.2	8.5	8.9	10.1	9.9	9.7	9.3	12.9	9.7	10.1
Muscovite	n.d.	3.8	4.8	3.0	4.3	6.7	7.4	7.2	4.0	5.8	5.4	5.6
Chlorite	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Kaolinite	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Pyrite	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Pyrrhotite	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Calcite	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Amorphous	n.d.	18.4	n.d.	n.d.	13.1	n.d.	n.d.	n.d.	19.5	n.d.	n.d.	n.d.

Activation Laboratories Ltd. A19-10389

Actlabs ID	A19-10389-73	A19-10389-74	A19-10389-75	A19-10389-76	A19-10389-77	A19-10389-78	A19-10389-79	A19-10389-80	A19-10389-81	A19-10389-82	A19-10389-83	A19-10389-84
Client ID	855573	855574	855575	855576	855577	855578	855579	855580	855581	855582	855583	855584
Quartz	55.5	56.8	58.5	54.0	56.4	58.8	55.5	69.0	5.8	44.2	58.0	52.5
Kyanite	16.6	13.3	16.9	14.3	14.4	16.1	16.0	25.6	n.d.	16.8	15.0	14.6
K feldspar	8.5	6.5	9.0	8.7	7.2	6.2	12.1	n.d.	n.d.	8.6	7.0	7.6
Plagioclase	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	54.6	n.d.	n.d.	n.d.
Almandine	5.1	6.3	4.2	6.1	7.1	4.5	3.8	n.d.	n.d.	2.5	6.1	6.2
Amphibole	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	12.3	n.d.	n.d.	n.d.
Augite	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	16.4	n.d.	n.d.	n.d.
Enstatite	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	9.9	n.d.	n.d.	n.d.
Biotite	9.8	10.9	8.5	11.6	9.1	9.3	9.9	n.d.	1.0	10.5	11.8	14.1
Muscovite	4.5	6.2	2.9	5.3	5.8	5.1	2.7	2.2	n.d.	2.5	2.1	5.0
Chlorite	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Kaolinite	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	1.4	n.d.	n.d.	n.d.	n.d.
Pyrite	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	1.8	n.d.	n.d.	n.d.	n.d.
Pyrrhotite	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Calcite	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Amorphous	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	14.9	n.d.	n.d.



Activation Laboratories Ltd. A19-10389

Actlabs ID	A19-10389-85	A19-10389-86	A19-10389-87	A19-10389-88	A19-10389-89	A19-10389-90	A19-10389-91	A19-10389-92	A19-10389-93	A19-10389-94	A19-10389-95	A19-10389-96
Client ID	855585	855586	855587	855588	855589	855590	855591	855592	855593	855594	855595	855596
Quartz	56.4	67.9	55.4	49.7	60.2	57.8	45.8	54.7	45.5	54.7	54.5	56.4
Kyanite	11.3	9.9	14.5	14.7	13.4	12.0	14.0	13.0	13.3	12.8	12.6	13.9
K feldspar	2.9	0.7	7.2	6.8	6.4	3.7	2.6	5.1	6.0	3.9	7.8	2.5
Plagioclase	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Almandine	7.3	4.3	5.4	6.8	6.9	6.8	5.7	5.0	7.3	6.9	6.2	6.5
Amphibole	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Augite	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Enstatite	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Biotite	11.2	8.6	10.8	13.0	9.5	10.8	12.7	9.6	12.0	10.0	9.8	11.5
Muscovite	9.9	7.9	6.7	9.0	3.6	7.9	9.2	12.6	6.5	11.7	9.1	9.2
Chlorite	1.0	0.7	n.d.	n.d.	n.d.	1.0	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Kaolinite	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Pyrite	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Pyrrhotite	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Calcite	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Amorphous	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	10.0	n.d.	9.4	n.d.	n.d.	n.d.

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Actlabs ID	A19-10389-97	A19-10389-98	A19-10389-99	A19-10389-100	A19-10389-101	A19-10389-102	A19-10389-103	A19-10389-104	A19-10389-105	A19-10389-106	A19-10389-107	A19-10389-108
Client ID	855597	855598	855599	855600	855601	855602	855603	855604	855605	855606	855607	855608
Quartz	59.0	54.4	61.2	69.8	7.0	58.8	54.8	57.9	49.4	60.2	66.7	62.5
Kyanite	11.4	15.4	11.6	25.5	n.d.	15.1	14.6	12.9	9.1	8.3	13.4	11.9
K feldspar	4.8	1.8	2.0	n.d.	n.d.	5.1	3.4	3.1	2.6	5.1	1.8	4.2
Plagioclase	n.d.	n.d.	n.d.	n.d.	56.3	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Almandine	8.4	5.8	6.8	n.d.	n.d.	6.0	6.7	7.6	4.7	6.4	3.3	6.3
Amphibole	n.d.	n.d.	n.d.	n.d.	9.7	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Augite	n.d.	n.d.	n.d.	n.d.	15.4	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Enstatite	n.d.	n.d.	n.d.	n.d.	11.1	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Biotite	8.2	12.1	10.1	n.d.	0.5	8.8	12.1	11.2	5.6	8.3	11.4	9.7
Muscovite	8.2	10.5	8.3	2.1	n.d.	6.2	8.4	7.3	8.1	10.1	3.4	5.4
Chlorite	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	1.6	n.d.	n.d.
Kaolinite	n.d.	n.d.	n.d.	1.3	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Pyrite	n.d.	n.d.	n.d.	1.3	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Pyrrhotite	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Calcite	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Amorphous	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	20.5	n.d.	n.d.	n.d.

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Actlabs ID	A19-10389-109	A19-10389-110	A19-10389-111	A19-10389-112	A19-10389-113	A19-10389-114	A19-10389-115	A19-10389-116	A19-10389-117	A19-10389-118	A19-10389-119	A19-10389-120
Client ID	855609	855610	855611	855612	855613	855614	855615	855616	855617	855618	855619	855620
Quartz	67.6	62.2	62.8	65.4	50.0	61.0	55.5	60.9	59.4	59	48.6	69.5
Kyanite	10.9	12.5	8.8	10.7	10.5	10.0	15.9	12.5	13.3	12.7	15.1	25.7
K feldspar	2.4	5.4	5.6	2.5	3.6	4.5	6.7	6.0	4.3	5.4	3.8	n.d.
Plagioclase	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Almandine	3.8	2.3	3.2	3.9	7.0	5.4	5.1	6.3	7.1	7.1	7.3	n.d.
Amphibole	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Augite	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Enstatite	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Biotite	10.2	11.4	12.5	11.6	9.1	12.2	11.0	10.4	9.8	9.8	9.2	n.d.
Muscovite	5.1	4.9	5.9	5.4	7.1	5.4	5.8	3.9	6.1	6.0	2.9	1.7
Chlorite	n.d.	1.3	1.2	0.5	1.0	0.7	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Kaolinite	n.d.	n.d.	n.d.	n.d.	n.d.	0.8	n.d.	n.d.	n.d.	n.d.	n.d.	1.5
Pyrite	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	1.6
Pyrrhotite	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Calcite	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Amorphous	n.d.	n.d.	n.d.	n.d.	11.7	n.d.	n.d.	n.d.	n.d.	n.d.	13.1	n.d.

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Actlabs ID	A19-10389-121	A19-10389-122	A19-10389-123	A19-10389-124	A19-10389-125	A19-10389-126	A19-10389-127	A19-10389-128	A19-10389-129	A19-10389-130	A19-10389-131	A19-10389-132
Client ID	855621	855622	855623	855624	855625	855626	855627	855628	855629	855630	855631	855632
Quartz	6.1	47.2	46.0	37.2	35.7	46.8	39.8	44.2	37.4	47.6	40.9	45.5
Kyanite	n.d.	14.5	20.2	16.8	14.3	16.3	14.8	16.2	15.8	17.0	16.5	14.4
K feldspar	n.d.	4.1	3.9	7.1	6.5	4.0	5.4	5.9	7.7	4.3	3.7	6.8
Plagioclase	59.2	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Almandine	n.d.	4.2	5.1	4.2	4.1	5.1	3.5	3.1	4.4	4.2	3.4	1.7
Amphibole	7.3	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Augite	17.2	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Enstatite	9.2	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Biotite	1.0	8.8	10.4	8.3	7.0	8.9	10.6	10.2	8.2	9.0	10.1	10.6
Muscovite	n.d.	7.5	4.0	2.5	3.4	5.6	7.9	6.1	4.9	6.6	4.5	4.4
Chlorite	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Kaolinite	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Pyrite	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Pyrrhotite	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Calcite	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Amorphous	n.d.	13.7	10.4	23.9	29.0	13.3	18.0	14.3	21.6	11.3	20.9	16.6

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Actlabs ID	A19-10389-133	A19-10389-134	A19-10389-135	A19-10389-136	A19-10389-137	A19-10389-138	A19-10389-139	A19-10389-140	A19-10389-141	A19-10389-142	A19-10389-143	A19-10389-144
Client ID	855633	855634	855635	855636	855637	855638	855639	855640	855641	855642	855643	855644
Quartz	39.7	44.9	38.9	44.0	42.3	46.1	53.7	70.3	6.8	50.6	56.1	41.2
Kyanite	15.7	12.6	15.8	14.4	10.4	17.6	15.0	24.7	n.d.	13.0	14.2	14.9
K feldspar	5.5	n.d.	6.3	6.2	4.4	8.4	4.6	n.d.	n.d.	3.0	3.7	7.1
Plagioclase	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	58.1	n.d.	n.d.	n.d.
Almandine	3.3	3.2	2.3	3.8	5.1	4.6	4.4	n.d.	n.d.	6.0	6.2	5.2
Amphibole	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	8.2	n.d.	n.d.	n.d.
Augite	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	16.6	n.d.	n.d.	n.d.
Enstatite	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	9.3	n.d.	n.d.	n.d.
Biotite	8.3	6.8	9.3	8.6	8.5	7.8	9.1	n.d.	1.0	8.7	8.8	6.8
Muscovite	4.7	9.2	7.3	4.6	4.9	4.5	3.2	2.2	n.d.	7.4	11.0	6.8
Chlorite	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Kaolinite	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	1.4	n.d.	n.d.	n.d.	n.d.
Pyrite	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	1.4	n.d.	n.d.	n.d.	n.d.
Pyrrhotite	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Calcite	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Amorphous	22.8	23.3	20.1	18.4	24.4	11.0	10.0	n.d.	n.d.	11.3	n.d.	18.0

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Actlabs ID	A19-10389-145	A19-10389-146	A19-10389-147	A19-10389-148	A19-10389-149	A19-10389-150	A19-10389-151	A19-10389-152	A19-10389-153	A19-10389-154	A19-10389-155	A19-10389-156
Client ID	855645	855646	855647	855648	855649	855650	855651	855652	855653	855654	855655	855656
Quartz	49.3	48.3	45.0	48.9	51.0	61.6	55.2	62.3	52.7	59.6	60.4	98.6
Kyanite	13.1	13.5	12.0	10.7	13.2	13.2	13.6	12.4	11.2	10.5	4.7	0.9
K feldspar	5.5	3.2	4.4	5.7	7.0	6.8	10.6	4.6	n.d.	n.d.	n.d.	n.d.
Plagioclase	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	3.8	n.d.
Almandine	6.6	4.7	6.0	5.7	5.4	3.4	7.5	2.9	1.8	3.1	1.5	n.d.
Amphibole	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Augite	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Enstatite	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Biotite	6.8	5.7	5.3	6.4	8.6	11.8	9.5	9.9	7.0	8.3	13.9	0.5
Muscovite	7.1	3.5	5.0	6.6	4.8	3.2	3.6	6.9	6.0	8.0	5.0	n.d.
Chlorite	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	1.0	n.d.	n.d.	n.d.	n.d.
Kaolinite	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Pyrite	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Pyrrhotite	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Calcite	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Amorphous	11.6	21.1	22.3	16.0	10.0	n.d.	n.d.	n.d.	21.3	10.5	10.7	n.d.

Note: n.d. = not detected; muscovite includes illite and augite includes diopside.

Reported by:  
 Elitsa Hrischeva, PhD  
 Activation Laboratories Ltd.



## **X-ray Diffraction Analysis of One Hundred and Seventeen Samples**

W.O. # A19-10392  
Invoice # A19-10392

Client: JMK Exploration

Attn: Joerg Kleinboeck

Date Reported: November 12, 2019

## **Method**

One hundred and seventeen samples were submitted for quantitative X-ray diffraction analysis. A portion of each pulverized sample was mixed with corundum and loaded into a standard holder. Corundum was added as an internal standard. The X-ray diffraction analysis was performed on a Panalytical X'Pert Pro diffractometer equipped with Cu X-ray source and an X'Celerator detector and operating at the following conditions: 40 kV and 40 mA; range 5 - 70 deg 2 $\theta$ ; step size 0.017 deg 2 $\theta$ ; time per step 30 sec; fixed divergence slit, angle 0.25<sup>0</sup>; sample rotation 1 rev/sec. The X'Pert HighScore plus software along with the PDF4/Minerals ICDD database were used for mineral identification. The quantities of the crystalline mineral phases were determined using Rietveld method. The Rietveld method is based on the calculation of the full diffraction pattern from crystal structure data. The amounts of the crystalline minerals were recalculated based on a known percent of corundum and the remainder to 100 % was considered X-ray amorphous material.

## **Results**

The minerals identified in the samples and their abundances are in Table 1 and the diffraction patterns are in Appendix 1.



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**Table 1.** Mineral abundances (wt %)

Actlabs ID	A19-10392-1	A19-10392-2	A19-10392-3	A19-10392-4	A19-10392-5	A19-10392-6	A19-10392-7	A19-10392-8	A19-10392-9	A19-10392-10	A19-10392-11	A19-10392-12
Client ID	855657	855658	855659	855660	855661	855662	855663	855664	855665	855666	855667	855668
Quartz	57.4	51.5	45.0	70.9	8.3	50.3	53.8	54.2	59.4	54.5	58.0	61.5
Kyanite	15.7	14.2	19.7	24.1	n.d.	18.8	13.6	17.2	13.6	17.2	7.1	13.4
K feldspar	6.0	10.2	8.0	n.d.	n.d.	5.5	8.4	5.0	7.1	5.0	6.7	8.3
Plagioclase	n.d.	n.d.	n.d.	n.d.	57.9	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Almandine	5.7	3.8	6.0	n.d.	n.d.	4.4	3.9	3.8	3.3	3.7	6.5	6.1
Amphibole	n.d.	n.d.	n.d.	n.d.	12.1	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Augite	n.d.	n.d.	n.d.	n.d.	14.5	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Enstatite	n.d.	n.d.	n.d.	n.d.	6.2	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Biotite	10.1	14.8	16.0	n.d.	1.0	14.4	13.1	14.6	11.7	13.1	7.6	7.7
Muscovite	5.1	5.5	5.3	1.8	n.d.	6.6	7.2	5.2	4.9	6.5	10.3	3.0
Chlorite	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	3.8	n.d.
Kaolinite	n.d.	n.d.	n.d.	1.5	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Pyrite	n.d.	n.d.	n.d.	1.7	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Amorphous	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.

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Actlabs ID	A19-10392-13	A19-10392-14	A19-10392-15	A19-10392-16	A19-10392-17	A19-10392-18	A19-10392-19	A19-10392-20	A19-10392-21	A19-10392-22	A19-10392-23	A19-10392-24
Client ID	855669	855670	855671	855672	855673	855674	855675	855676	855677	855678	855679	855680
Quartz	58.3	54.9	55.2	56.0	60.6	57.0	60.1	61.7	63.1	59.8	66.3	69.4
Kyanite	13.4	16.4	14.3	15.7	11.1	16.6	13.2	12.0	9.7	12.0	9.4	25.8
K feldspar	10.4	10.0	11.9	11.1	9.3	6.8	4.1	n.d.	n.d.	n.d.	n.d.	n.d.
Plagioclase	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Almandine	6.7	4.0	5.3	4.9	5.7	6.5	6.3	4.2	6.0	4.9	5.6	n.d.
Amphibole	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Augite	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Enstatite	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Biotite	9.5	12.6	10.8	10.3	10.5	12.0	9.2	9.6	10.0	9.8	8.2	n.d.
Muscovite	1.7	2.1	2.5	2.0	2.8	1.1	7.1	12.5	11.2	13.5	10.5	1.7
Chlorite	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Kaolinite	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	1.5
Pyrite	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	1.6
Amorphous	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.

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Actlabs ID	A19-10392-25	A19-10392-26	A19-10392-27	A19-10392-28	A19-10392-29	A19-10392-30	A19-10392-31	A19-10392-32	A19-10392-33	A19-10392-34	A19-10392-35	A19-10392-36
Client ID	855681	855682	855683	855684	855685	855686	855687	855688	855689	855690	855691	855692
Quartz	10.9	40.3	99.3	69.0	60.1	62.7	66.5	49.7	57.4	57.9	61.8	56.8
Kyanite	n.d.	14.5	n.d.	9.1	13.1	10.8	14.2	18.4	18.2	17.6	16.2	18.7
K feldspar	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	2.5	9.6	5.1	6.5	8.3	6.2
Plagioclase	59.4	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Almandine	n.d.	7.6	n.d.	4.6	2.8	5.9	5.0	7.8	4.7	6.0	5.6	6.7
Amphibole	7.0	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Augite	14.7	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Enstatite	7.0	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Biotite	1.0	13.1	0.7	7.7	9.6	10.2	8.3	11.6	12.4	10.6	7.0	10.2
Muscovite	n.d.	24.5	n.d.	9.6	14.4	10.4	3.5	2.9	2.2	1.4	1.1	1.4
Chlorite	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Kaolinite	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Pyrite	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Amorphous	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.

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Actlabs ID	A19-10392-37	A19-10392-38	A19-10392-39	A19-10392-40	A19-10392-41	A19-10392-42	A19-10392-43	A19-10392-44	A19-10392-45	A19-10392-46	A19-10392-47	A19-10392-48
Client ID	855693	855694	855695	855696	855697	855698	855699	855700	855701	855702	855703	855704
Quartz	51.7	46.8	52.8	50.3	56.4	55.3	70.0	70.4	3.6	54.5	58.1	52.4
Kyanite	16.5	17.8	18.0	17.3	16.5	14.6	11.4	24.7	n.d.	13.1	13.1	18.0
K feldspar	6.4	11.1	5.8	7.8	9.2	6.5	2.3	n.d.	n.d.	7.0	4.1	2.1
Plagioclase	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	57.1	n.d.	n.d.	n.d.
Almandine	6.1	7.7	7.9	8.6	4.2	6.8	5.7	n.d.	n.d.	5.7	5.3	3.6
Amphibole	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	2.8	n.d.	n.d.	n.d.
Augite	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	17.3	n.d.	n.d.	n.d.
Enstatite	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	18.7	n.d.	n.d.	n.d.
Biotite	13.3	13.0	10.0	10.5	8.3	11.0	6.2	n.d.	0.5	9.9	9.1	9.2
Muscovite	6.0	3.6	5.5	5.5	5.4	5.8	4.4	2.0	n.d.	9.8	10.3	14.7
Chlorite	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Kaolinite	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	1.5	n.d.	n.d.	n.d.	n.d.
Pyrite	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	1.4	n.d.	n.d.	n.d.	n.d.
Amorphous	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.

Activation Laboratories Ltd. A19-10392

Actlabs ID	A19-10392-49	A19-10392-50	A19-10392-51	A19-10392-52	A19-10392-53	A19-10392-54	A19-10392-55	A19-10392-56	A19-10392-57	A19-10392-58	A19-10392-59	A19-10392-60
Client ID	855705	855706	855707	855708	855709	855710	855711	855712	855713	855714	855715	855716
Quartz	58	58.1	55.5	57.5	54.7	69.9	62.9	60.0	50.5	60.2	53.5	56.7
Kyanite	9.4	11.6	14.4	9.3	12.7	6.8	10.5	12.3	15.5	7.6	11.4	11.6
K feldspar	1.0	5.4	4.9	5.3	7.2	1.5	4.2	3.7	6.1	2.2	7.2	7.5
Plagioclase	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Almandine	6.2	6.2	4.9	6.0	5.3	5.9	4.3	6.7	10.0	6.9	8.7	5.6
Amphibole	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Augite	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Enstatite	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Biotite	8.7	7.8	9.9	10.3	10.2	6.9	9.1	9.1	10.3	9.5	10.3	10.9
Muscovite	16.7	10.9	10.4	11.6	9.9	9.0	9.0	8.2	7.6	11.7	8.9	7.7
Chlorite	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	1.9	n.d.	n.d.
Kaolinite	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Pyrite	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Amorphous	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.

Activation Laboratories Ltd. A19-10392

Actlabs ID	A19-10392-61	A19-10392-62	A19-10392-63	A19-10392-64	A19-10392-65	A19-10392-66	A19-10392-67	A19-10392-68	A19-10392-69	A19-10392-70	A19-10392-71	A19-10392-72
Client ID	855717	855718	855719	855720	855721	855722	855723	855724	855725	855726	855727	855728
Quartz	45.5	49.8	55.6	71.1	4.1	51.9	49.2	61.0	62.3	62.8	71.5	62.5
Kyanite	1.7	11.5	13.8	24.4	n.d.	10.5	9.9	10.5	12.1	11.1	8.7	12.3
K feldspar	7.3	5.6	5.8	n.d.	n.d.	6.8	5.6	8.8	6.4	4.4	1.0	6.2
Plagioclase	n.d.	n.d.	n.d.	n.d.	59.6	n.d.	n.d.	n.d.	n.d.	n.d.	3.2	n.d.
Almandine	6.9	6.5	6.1	n.d.	n.d.	6.6	5.5	3.6	4.8	3.9	4.4	3.2
Amphibole	n.d.	n.d.	n.d.	n.d.	3.0	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Augite	n.d.	n.d.	n.d.	n.d.	13.4	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Enstatite	n.d.	n.d.	n.d.	n.d.	18.9	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Biotite	5.2	7.4	11.6	n.d.	1.0	5.0	4.7	11.1	11.1	13.2	10.0	11.4
Muscovite	13.4	5.5	7.1	1.8	n.d.	6.8	7.4	4.5	3.3	4.6	1.2	3.9
Chlorite	2.3	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	0.5	n.d.	n.d.	n.d.	0.5
Kaolinite	n.d.	n.d.	n.d.	1.4	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Pyrite	n.d.	n.d.	n.d.	1.3	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Amorphous	17.7	13.7	n.d.	n.d.	n.d.	12.4	17.7	n.d.	n.d.	n.d.	n.d.	n.d.

Activation Laboratories Ltd. A19-10392

Actlabs ID	A19-10392-73	A19-10392-74	A19-10392-75	A19-10392-76	A19-10392-77	A19-10392-78	A19-10392-79	A19-10392-80	A19-10392-81	A19-10392-82	A19-10392-83	A19-10392-84
Client ID	855729	855730	855731	855732	855733	855734	855735	855736	855737	855738	855739	855740
Quartz	53.4	51.6	51.5	47.4	40.9	53.0	50.0	45.5	47.9	44.5	39.5	69.4
Kyanite	17.8	13.3	14.2	16.9	15.5	13.1	9.7	22.6	21.6	12.2	15.0	26.3
K feldspar	6.2	4.3	2.9	11.5	7.2	4.0	5.0	8.3	5.8	2.6	3.9	n.d.
Plagioclase	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Almandine	3.8	3.2	2.5	6.4	2.8	6.1	6.6	5.4	5.1	2.7	3.1	n.d.
Amphibole	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Augite	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Enstatite	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Biotite	12.4	10.3	9.2	11.5	13.9	2.4	6.6	12.9	14.1	9.5	12.5	n.d.
Muscovite	6.4	7.0	3.0	6.3	7.3	1.8	6.0	5.3	5.5	9.0	9.9	1.7
Chlorite	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Kaolinite	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	1.2
Pyrite	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	1.4
Amorphous	n.d.	10.3	16.7	n.d.	12.4	19.6	16.1	n.d.	n.d.	19.5	16.1	n.d.

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Actlabs ID	A19-10392-85	A19-10392-86	A19-10392-87	A19-10392-88	A19-10392-89	A19-10392-90	A19-10392-91	A19-10392-92	A19-10392-93	A19-10392-94	A19-10392-95	A19-10392-96
Client ID	855741	855742	855743	855744	855745	855746	855747	855748	855749	855750	855751	855752
Quartz	1.3	46.4	57.6	41.7	53.0	56.8	43.5	49.2	45.1	57.4	60.0	43.8
Kyanite	n.d.	14.4	14.7	16.1	17.2	15.0	14.3	14.7	15.3	16.6	15.5	16.1
K feldspar	n.d.	8.4	5.2	6.6	8.1	5.9	4.2	5.4	6.0	4.7	7.5	2.2
Plagioclase	64.6	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Almandine	n.d.	4.9	3.6	4.2	4.1	4.2	5.3	3.2	4.0	4.6	5.0	3.0
Amphibole	2.0	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Augite	16.9	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Enstatite	14.7	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Biotite	0.5	10.6	10.8	8.9	13.0	11.6	8.0	10.4	9.0	10.3	8.0	11.9
Muscovite	n.d.	3.7	8.1	4.1	4.6	6.5	4.0	6.7	5.6	6.4	4.0	9.8
Chlorite	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Kaolinite	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Pyrite	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Amorphous	n.d.	11.6	n.d.	18.4	n.d.	n.d.	20.7	10.4	15.0	n.d.	n.d.	13.2



Activation Laboratories Ltd. A19-10392

Actlabs ID	A19-10392-97	A19-10392-98	A19-10392-99	A19-10392-100	A19-10392-101	A19-10392-102	A19-10392-103	A19-10392-104	A19-10392-105	A19-10392-106	A19-10392-107	A19-10392-108
Client ID	855753	855754	855755	855756	855757	855758	855759	855760	855761	855762	855763	855764
Quartz	40.2	57.8	59.0	59.5	48.6	52.8	67.1	70.3	4.4	48.1	42.9	42.2
Kyanite	16.6	16.1	14.8	7.6	10.1	12.9	14.4	24.8	n.d.	12.6	13.4	13.4
K feldspar	5.9	5.8	n.d.	n.d.	n.d.	2.5	6.4	n.d.	n.d.	5.6	8.2	8.6
Plagioclase	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	57.5	n.d.	n.d.	n.d.
Almandine	3.8	4.0	4.0	3.5	6.9	4.5	4.2	n.d.	n.d.	5.3	4.2	3.6
Amphibole	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	14.3	n.d.	n.d.	n.d.
Augite	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	15.0	n.d.	n.d.	n.d.
Enstatite	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	8.3	n.d.	n.d.	n.d.
Biotite	8.3	11.3	11.7	10.0	5.1	6.8	6.1	n.d.	0.5	6.8	8.4	5.6
Muscovite	4.8	5.0	10.5	19.4	8.6	7.7	1.8	1.9	n.d.	7.9	7.6	0.8
Chlorite	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Kaolinite	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	1.5	n.d.	n.d.	n.d.	n.d.
Pyrite	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	1.5	n.d.	n.d.	n.d.	n.d.
Amorphous	20.4	n.d.	n.d.	n.d.	20.7	12.8	n.d.	n.d.	n.d.	13.7	15.3	25.8

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Actlabs ID	A19-10392-109	A19-10392-110	A19-10392-111	A19-10392-112	A19-10392-113	A19-10392-114	A19-10392-115	A19-10392-116	A19-10392-117
Client ID	855765	855766	855767	855768	855769	855770	855771	855772	855773
Quartz	51.7	53.1	56.0	62.2	56.7	57.3	59.2	98.3	98.6
Kyanite	15.4	13.8	13.4	16.0	15.7	15.5	12.7	1.0	0.8
K feldspar	5.5	7.4	8.7	4.2	6.5	11.2	1.4	n.d.	n.d.
Plagioclase	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Almandine	2.6	5.0	3.5	2.4	1.7	4.3	2.3	n.d.	n.d.
Amphibole	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Augite	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Enstatite	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Biotite	6.4	9.7	10.3	10.7	6.6	10.7	8.8	0.7	0.6
Muscovite	n.d.	1.0	7.3	4.5	1.0	1.0	3.6	n.d.	n.d.
Chlorite	n.d.	n.d.	0.8	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Kaolinite	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Pyrite	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Amorphous	18.4	10.0	n.d.	n.d.	11.8	n.d.	12.0	n.d.	n.d.

Note: n.d. = not detected; muscovite includes illite and augite includes diopside.

Reported by:  
 Elitsa Hrischeva, PhD  
 Activation Laboratories Ltd.



## **X-ray Diffraction Analysis of One Hundred and Thirty Four Samples**

W.O. # A19-11516  
Invoice # A19-11516

Client: JMK Exploration

Attn: Joerg Kleinboeck

Date Reported: April 1, 2020

## **Method**

One hundred and thirty four samples were submitted for quantitative X-ray diffraction analysis. A portion of each pulverized sample was mixed with corundum and loaded into a standard holder. Corundum was added as an internal standard. The X-ray diffraction analysis was performed on a Panalytical X'Pert Pro diffractometer equipped with Cu X-ray source and an X'Celerator detector and operating at the following conditions: 40 kV and 40 mA; range 5 - 70 deg 2 $\theta$ ; step size 0.017 deg 2 $\theta$ ; time per step 30 sec; fixed divergence slit, angle 0.25<sup>0</sup>; sample rotation 1 rev/sec. The X'Pert HighScore plus software along with the PDF4/Minerals ICDD database were used for mineral identification. The quantities of the crystalline mineral phases were determined using Rietveld method. The Rietveld method is based on the calculation of the full diffraction pattern from crystal structure data. The amounts of the crystalline minerals were recalculated based on a know percent of corundum and the remainder to 100 % was considered X-ray amorphous material.

## **Results**

The minerals identified in the samples and their abundances are in Table 1 and the diffraction patterns are in Appendix 1.

Activation Laboratories Ltd. A19-11516

**Table 1.** Mineral abundances (wt %)

Actlabs ID	A19-11516-1	A19-11516-2	A19-11516-3	A19-11516-4	A19-11516-5	A19-11516-6	A19-11516-7	A19-11516-8	A19-11516-9	A19-11516-10	A19-11516-11	A19-11516-12
Client ID	855774	855775	855776	855777	855778	855779	855780	855781	855782	855783	855784	855785
Quartz	49.2	56.6	54.0	53.4	57.6	52.5	71.5	3.5	52.2	47.8	46.0	53.2
Kyanite	20.5	16.8	16.5	18.6	16.7	17.1	24.0	n.d.	13.3	16.3	17.8	16.7
K feldspar	12.2	7.3	7.3	7.1	7.3	7.7	n.d.	n.d.	4.8	9.0	8.1	2.2
Plagioclase	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	54.9	n.d.	n.d.	n.d.	n.d.
Almandine	4.0	4.9	5.4	6.6	5.1	6.1	n.d.	n.d.	4.1	4.7	4.1	2.8
Amphibole	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	8.4	n.d.	n.d.	n.d.	n.d.
Augite	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	18.7	n.d.	n.d.	n.d.	n.d.
Enstatite	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	11.4	n.d.	n.d.	n.d.	n.d.
Biotite	11.7	11.0	13.0	11.5	11.3	13.5	n.d.	2.1	18	16.6	17.5	16.7
Muscovite	2.4	3.4	3.8	2.8	2.0	3.1	2.0	n.d.	6.5	4.8	5.8	7.4
Chlorite	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	1	n.d.	n.d.	n.d.	n.d.
Kaolinite	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	1.3	n.d.	1.1	0.8	0.7	1
Pyrite	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	1.2	n.d.	n.d.	n.d.	n.d.	n.d.
Amorphous	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.

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Actlabs ID	A19-11516-13	A19-11516-14	A19-11516-15	A19-11516-16	A19-11516-17	A19-11516-18	A19-11516-19	A19-11516-20	A19-11516-21	A19-11516-22	A19-11516-23	A19-11516-24	A19-11516-25
Client ID	855786	855787	855788	855789	855790	855791	855792	855793	855794	855795	855796	855797	855798
Quartz	52.3	52.2	57.2	52.7	54.7	51.3	50.7	51.0	53.9	50.0	52.7	55.5	58.8
Kyanite	16.5	15.3	16.4	16.0	15.5	14.6	15.3	14.8	12.1	15.5	12.8	13.1	11.8
K feldspar	4.5	9.4	6.7	6.4	2.8	9.5	6.3	6.4	3.8	4.3	6.5	5.7	5.6
Plagioclase	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Almandine	2.5	2.3	1.4	2.5	2.9	3.2	2.4	4.0	2.7	3.2	0.8	5.2	6.6
Amphibole	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Augite	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Enstatite	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Biotite	18.0	15.2	14.5	15.9	16.7	14.9	17.2	16.9	15.5	18.6	17.5	11.6	11.4
Muscovite	5.2	4.5	3.2	5.7	6.4	5.4	6.8	5.9	11.0	7.5	8.7	8.9	5.8
Chlorite	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Kaolinite	1.0	1.1	0.7	0.9	1.1	1.1	1.2	1.0	1.0	0.9	1.0	n.d.	n.d.
Pyrite	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Amorphous	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.

Activation Laboratories Ltd. A19-11516

Actlabs ID	A19-11516-26	A19-11516-27	A19-11516-28	A19-11516-29	A19-11516-30	A19-11516-31	A19-11516-32	A19-11516-33	A19-11516-34	A19-11516-35	A19-11516-36	A19-11516-37
Client ID	855799	855800	855801	855802	855803	855804	855805	855806	855807	855808	855809	855810
Quartz	63.1	70.3	6.0	58.9	56.3	63.3	58.2	53.5	55.9	57.4	55.9	67.1
Kyanite	11.5	25.4	n.d.	10.7	14.5	11.6	14.4	14.9	12.8	15.1	14.9	9.6
K feldspar	8.0	n.d.	n.d.	n.d.	5.6	5.5	7.4	9.3	7.0	11.2	10.8	7.4
Plagioclase	n.d.	n.d.	61.4	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Almandine	3.4	n.d.	n.d.	4.7	7.7	2.8	4.1	5.2	6.7	5.3	3.2	3.2
Amphibole	n.d.	n.d.	6.2	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Augite	n.d.	n.d.	14.6	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Enstatite	n.d.	n.d.	10.7	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Biotite	10.0	n.d.	1.1	11.3	13.3	9.4	10.2	11.5	11.8	9.7	9.7	8.2
Muscovite	4.0	1.7	n.d.	14.4	2.6	7.4	5.7	5.6	5.8	1.3	4.4	4.5
Chlorite	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	1.1	n.d.
Kaolinite	n.d.	1.2	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Pyrite	n.d.	1.4	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Amorphous	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.

Activation Laboratories Ltd. A19-11516

Actlabs ID	A19-11516-38	A19-11516-39	A19-11516-40	A19-11516-41	A19-11516-42	A19-11516-43	A19-11516-44	A19-11516-45	A19-11516-46	A19-11516-47	A19-11516-48	A19-11516-49
Client ID	855811	855812	855813	855814	855815	855816	855817	855818	855819	855820	855821	855822
Quartz	53.0	58.2	49.0	48.4	46.7	62.6	52.1	53.6	49.4	71.8	4.5	45.4
Kyanite	15.4	14.1	13.9	15.5	14.5	12.4	8.8	15.4	15.2	24.1	n.d.	17.1
K feldspar	11.7	10.4	7.1	10.0	6.9	6.0	8.9	5.3	8.5	n.d.	n.d.	6.8
Plagioclase	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	51.0	n.d.
Almandine	4.0	3.4	3.5	3.6	3.6	6.4	5.4	8.5	6.3	n.d.	n.d.	4.2
Amphibole	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	8.1	n.d.
Augite	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	27.2	n.d.
Enstatite	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	8.2	n.d.
Biotite	11.4	10.5	10.7	9.8	9.2	9.1	9.7	12.0	10.2	n.d.	1.0	9.7
Muscovite	4.5	3.4	4.6	3.0	1.0	3.5	4.2	5.2	2.0	1.6	n.d.	3.6
Chlorite	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	1.4	n.d.	n.d.	n.d.	n.d.	n.d.
Kaolinite	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	1.1	n.d.	n.d.
Pyrite	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	1.4	n.d.	n.d.
Amorphous	n.d.	n.d.	11.2	9.7	18.1	n.d.	9.5	n.d.	8.4	n.d.	n.d.	13.2



Activation Laboratories Ltd. A19-11516

Actlabs ID	A19-11516-50	A19-11516-51	A19-11516-52	A19-11516-53	A19-11516-54	A19-11516-55	A19-11516-56	A19-11516-57	A19-11516-58	A19-11516-59	A19-11516-60	A19-11516-61
Client ID	855823	855824	855825	855826	855827	855828	855829	855830	855831	855832	855833	855834
Quartz	64.8	46.5	51.2	50.5	47.0	41.1	61.3	53.0	63.5	53.3	49.8	68.9
Kyanite	14.0	16.2	14.5	16.4	13.9	14.2	14.1	11.2	11.1	14.6	15.2	9.9
K feldspar	6.3	7.7	8.4	9.2	10.0	9.0	2.8	2.8	6.3	8.0	2.1	3.8
Plagioclase	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Almandine	4.8	3.9	2.9	3.0	6.9	4.6	4.3	4.9	3.4	3.3	4.7	5.3
Amphibole	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Augite	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Enstatite	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Biotite	8.0	9.5	8.8	8.2	7.3	9.9	9.6	11.2	10.4	12.3	14.3	6.1
Muscovite	2.1	3.0	2.4	2.6	4.3	3.1	7.9	16.9	5.3	8.5	13.9	6.0
Chlorite	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Kaolinite	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Pyrite	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Amorphous	n.d.	13.2	11.8	10.1	10.6	18.1	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.

Activation Laboratories Ltd. A19-11516

Actlabs ID	A19-11516-62	A19-11516-63	A19-11516-64	A19-11516-65	A19-11516-66	A19-11516-67	A19-11516-68	A19-11516-69	A19-11516-70	A19-11516-71	A19-11516-72	A19-11516-73
Client ID	855835	855836	855837	855838	855839	855840	855841	855842	855843	855844	855845	855846
Quartz	69.0	62.3	48.1	59.2	56.0	71.5	6.2	43.8	47.5	51.8	57.5	42.4
Kyanite	13.7	10.9	11.8	11.5	12.6	23.9	n.d.	12.2	11.2	12.9	14.5	10.5
K feldspar	2.8	9.7	5.1	4.7	4.9	n.d.	n.d.	3.4	5.0	3.3	4.5	3.2
Plagioclase	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	59.0	n.d.	n.d.	n.d.	n.d.	n.d.
Almandine	3.2	4.2	4.5	4.7	2.0	n.d.	n.d.	2.8	5.0	4.8	7.8	4.5
Amphibole	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	7.3	n.d.	n.d.	n.d.	n.d.	n.d.
Augite	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	16.4	n.d.	n.d.	n.d.	n.d.	n.d.
Enstatite	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	9.9	n.d.	n.d.	n.d.	n.d.	n.d.
Biotite	7.5	6.9	10.9	11.9	14.6	n.d.	1.2	9.4	12.4	11.1	9.6	10.4
Muscovite	3.8	6.0	8.0	8.0	9.9	1.7	n.d.	7.5	11.0	8.1	6.1	10.0
Chlorite	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Kaolinite	n.d.	n.d.	n.d.	n.d.	n.d.	1.6	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Pyrite	n.d.	n.d.	n.d.	n.d.	n.d.	1.3	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Amorphous	n.d.	n.d.	11.6	n.d.	n.d.	n.d.	n.d.	20.9	7.9	8.0	n.d.	19.0

Activation Laboratories Ltd. A19-11516

Actlabs ID	A19-11516-74	A19-11516-75	A19-11516-76	A19-11516-77	A19-11516-78	A19-11516-79	A19-11516-80	A19-11516-81	A19-11516-82	A19-11516-83	A19-11516-84	A19-11516-85
Client ID	855847	855848	855849	855850	855851	855852	855853	855854	855855	855856	855857	855858
Quartz	58.8	57.5	53.8	46.9	62.8	65.8	69.9	60.7	62.1	54.2	49.8	48.3
Kyanite	13.5	9.6	10.6	12.5	6.5	4.8	7.3	10.7	14.3	14.1	14.9	14.0
K feldspar	4.4	3.2	4.9	3.5	4.2	3.7	2.3	8.0	4.5	3.1	5.7	6.4
Plagioclase	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Almandine	4.7	4.1	8.7	4.0	3.5	2.1	1.6	3.0	3.9	4.0	2.2	4.3
Amphibole	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Augite	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Enstatite	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Biotite	10.9	7.7	11.0	7.6	11.5	11.5	11.5	11.4	10.2	9.5	13.4	10.5
Muscovite	7.7	5.7	11.0	6.4	7.1	9.4	6.0	4.8	5.0	6.3	5.6	6.2
Chlorite	n.d.	n.d.	n.d.	n.d.	4.4	2.7	1.4	1.4	n.d.	n.d.	n.d.	n.d.
Kaolinite	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Pyrite	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Amorphous	n.d.	12.2	n.d.	19.1	n.d.	n.d.	n.d.	n.d.	n.d.	8.8	8.4	10.3

Activation Laboratories Ltd. A19-11516

Actlabs ID	A19-11516-86	A19-11516-87	A19-11516-88	A19-11516-89	A19-11516-90	A19-11516-91	A19-11516-92	A19-11516-93	A19-11516-94	A19-11516-95	A19-11516-96	A19-11516-97
Client ID	855859	855860	855861	855862	855863	855864	855865	855866	855867	855868	855869	855870
Quartz	45.8	71.0	5.4	41.0	62.1	61.7	43.6	45.2	48.8	48.9	53.8	39.7
Kyanite	14.9	24.5	n.d.	14.9	17.1	16.0	13.5	16.3	14.4	15.5	15.4	14.1
K feldspar	5.0	n.d.	n.d.	5.3	3.9	2.3	3.8	5.9	8.7	6.9	5.5	6.4
Plagioclase	n.d.	n.d.	59.1	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Almandine	3.9	n.d.	n.d.	4.4	4.7	4.8	5.6	4.2	5.5	4.9	6.5	4.1
Amphibole	n.d.	n.d.	6.2	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Augite	n.d.	n.d.	18.2	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Enstatite	n.d.	n.d.	10.6	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Biotite	7.8	n.d.	0.5	8.3	8.5	9.6	8.5	9.1	7.4	7.3	11.0	7.9
Muscovite	6.0	1.7	n.d.	3.7	3.7	5.6	6.9	3.9	2.2	5.8	7.8	5.6
Chlorite	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Kaolinite	n.d.	1.4	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Pyrite	n.d.	1.4	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Amorphous	16.6	n.d.	n.d.	22.4	n.d.	n.d.	18.1	15.4	13.0	10.7	n.d.	22.2

Activation Laboratories Ltd. A19-11516

Actlabs ID	A19-11516-98	A19-11516-99	A19-11516-100	A19-11516-101	A19-11516-102	A19-11516-103	A19-11516-104	A19-11516-105	A19-11516-106	A19-11516-107	A19-11516-108	A19-11516-109
Client ID	855871	855872	855873	855874	855875	855876	855877	855878	855879	855880	855881	855882
Quartz	44.7	40.5	39.2	50.6	38.4	44.8	50.2	54.5	40.6	70.2	5.0	38.3
Kyanite	14.3	14.1	13.9	12.3	15.8	13.8	15.8	17.4	15.8	25.7	n.d.	17.2
K feldspar	7.1	7.8	8.6	5.0	8.7	5.2	2.8	8.9	8.3	n.d.	n.d.	7.0
Plagioclase	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	56.9	n.d.
Almandine	4.1	4.3	3.8	3.0	2.9	5.1	3.1	2.3	2.9	n.d.	n.d.	2.8
Amphibole	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	9.6	n.d.
Augite	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	15.7	n.d.
Enstatite	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	11.6	n.d.
Biotite	7.3	11.3	7.7	7.9	9.3	9.2	10.9	11.7	8.6	n.d.	1.0	7.3
Muscovite	3.9	6.6	4.7	3.0	5.5	7.9	9.9	5.2	6.2	1.6	n.d.	4.1
Chlorite	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Kaolinite	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	1.4	n.d.	n.d.
Pyrite	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	1.2	n.d.	n.d.
Amorphous	18.6	15.4	22.1	18.2	19.4	14.0	7.3	n.d.	17.6	n.d.	n.d.	23.3

Activation Laboratories Ltd. A19-11516

Actlabs ID	A19-11516-110	A19-11516-111	A19-11516-112	A19-11516-113	A19-11516-114	A19-11516-115	A19-11516-116	A19-11516-117	A19-11516-118	A19-11516-119	A19-11516-120	A19-11516-121
Client ID	855883	855884	855885	855886	855887	855888	855889	855890	855891	855892	855893	855894
Quartz	50.0	46.1	52.4	51.6	56.4	47.6	53.3	47.2	48.4	53.8	44.8	46.5
Kyanite	16.0	17.0	17.4	18.2	18.8	16.4	14.0	13.4	12.8	10.8	13.3	13.6
K feldspar	9.1	9.2	6.9	7.2	6.4	2.0	6.2	5.3	8.2	4.3	6.4	n.d.
Plagioclase	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Almandine	4.2	3.7	4.7	6.9	5.0	4.1	3.0	7.7	5.6	7.0	3.5	4.8
Amphibole	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Augite	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Enstatite	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Biotite	8.5	11.3	14.1	9.9	8.6	8.2	8.7	8.3	9.0	7.3	6.3	7.2
Muscovite	4.5	3.5	4.5	6.2	4.8	9.0	2.6	9.5	7.3	6.6	3.7	7.8
Chlorite	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Kaolinite	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Pyrite	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Amorphous	7.7	9.2	n.d.	n.d.	n.d.	12.7	12.2	8.6	8.7	10.2	22.0	20.1

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Actlabs ID	A19-11516-122	A19-11516-123	A19-11516-124	A19-11516-125	A19-11516-126	A19-11516-127	A19-11516-128	A19-11516-129	A19-11516-130	A19-11516-131	A19-11516-132	A19-11516-133
Client ID	855895	855896	855897	855898	855899	855900	855901	855902	855903	855904	855905	855906
Quartz	52.0	60.7	56.2	44.5	44.3	70.7	5.4	51.5	50.9	58.6	37.1	26.7
Kyanite	8.8	2.5	10.3	13.5	11.9	24.6	n.d.	13.9	16	6.9	n.d.	n.d.
K feldspar	n.d.	n.d.	3.5	9.2	7.9	n.d.	n.d.	13.7	6.3	2.0	2.8	10.7
Plagioclase	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	55.5	n.d.	n.d.	n.d.	36.1	42.0
Almandine	5.0	3.1	7.0	2.2	1.4	n.d.	n.d.	1.0	2.0	1.7	n.d.	n.d.
Amphibole	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	10.6	n.d.	n.d.	n.d.	n.d.	n.d.
Augite	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	16.1	n.d.	n.d.	n.d.	n.d.	n.d.
Enstatite	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	11.9	n.d.	n.d.	n.d.	n.d.	n.d.
Biotite	7.2	6.9	7.9	7.3	7.7	n.d.	0.5	7.2	4.9	6.3	8.3	4.7
Muscovite	13.4	15.1	5.6	1.8	3.9	1.8	n.d.	0.5	n.d.	3.4	3.6	n.d.
Chlorite	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Kaolinite	n.d.	n.d.	n.d.	n.d.	n.d.	1.5	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Pyrite	n.d.	n.d.	n.d.	n.d.	n.d.	1.4	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Amorphous	13.6	11.7	9.5	21.5	22.9	n.d.	n.d.	12.2	19.9	21.1	12.1	15.9

Activation Laboratories Ltd. A19-11516

Actlabs ID	A19-11516-134
Client ID	855907
Quartz	25.1
Kyanite	n.d.
K feldspar	12.4
Plagioclase	43.5
Almandine	n.d.
Amphibole	n.d.
Augite	n.d.
Enstatite	n.d.
Biotite	5.0
Muscovite	n.d.
Chlorite	n.d.
Kaolinite	n.d.
Pyrite	n.d.
Amorphous	14.0

Note: n.d. = not detected; muscovite includes illite and augite includes diopside.

Reported by:  
Elitsa Hrischeva, PhD  
Activation Laboratories Ltd.





## **X-ray Diffraction Analysis of One Hundred and Seventy Eight Samples**

W.O. # A19-11681  
Invoice # A19-11681

Client: JMK Exploration

Attn: Joerg Kleinboeck

Date Reported: December 16, 2019

## **Method**

One hundred and seventy eight samples were submitted for quantitative X-ray diffraction analysis. A portion of each pulverized sample was mixed with corundum and loaded into a standard holder. Corundum was added as an internal standard. The X-ray diffraction analysis was performed on a Panalytical X'Pert Pro diffractometer equipped with Cu X-ray source and an X'Celerator detector and operating at the following conditions: 40 kV and 40 mA; range 5 - 70 deg 2 $\theta$ ; step size 0.017 deg 2 $\theta$ ; time per step 30 sec; fixed divergence slit, angle 0.25<sup>0</sup>; sample rotation 1 rev/sec. The X'Pert HighScore plus software along with the PDF4/Minerals ICDD database were used for mineral identification. The quantities of the crystalline mineral phases were determined using Rietveld method. The Rietveld method is based on the calculation of the full diffraction pattern from crystal structure data. The amounts of the crystalline minerals were recalculated based on a know percent of corundum and the remainder to 100 % was considered X-ray amorphous material.

## **Results**

The minerals identified in the samples and their abundances are in Table 1 and the diffraction patterns are in Appendix 1.

Activation Laboratories Ltd. A19-11681

**Table 1.** Mineral abundances (wt %)

Actlabs ID	A19-11681-1	A19-11681-2	A19-11681-3	A19-11681-4	A19-11681-5	A19-11681-6	A19-11681-7	A19-11681-8	A19-11681-9	A19-11681-10	A19-11681-11	A19-11681-12
Client ID	855908	855909	855910	855911	855912	855913	855914	855915	855916	855917	855918	855919
Quartz	42.9	54.6	60.7	53.8	51.8	44.8	61.0	53.6	66.6	60.0	67.1	57.2
Kyanite	0.9	n.d.	0.6	2.1	4.9	6.3	6.1	6.3	2.0	8.9	5.2	9.0
K feldspar	n.d.	n.d.	n.d.	n.d.	n.d.	3.8	n.d.	2.0	n.d.	0.8	2.4	3.5
Plagioclase	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Almandine	7.9	11.8	6.2	10.5	6.4	8.2	8.5	4.3	4.2	7.5	5.6	5.4
Amphibole	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Augite	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Enstatite	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Biotite	8.1	9.1	8.2	10.7	11.7	10.1	9.2	12.9	8.1	9.6	8.3	13.9
Muscovite	24.4	19.9	23.9	22.9	25.2	15.0	15.2	19.1	15.3	12.2	10.9	9.8
Chlorite	3.1	4.1	0.4	n.d.	n.d.	n.d.	n.d.	0.8	2.1	1.0	n.d.	n.d.
Kaolinite	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	1.0	1.7	n.d.	0.5	1.2
Pyrite	1.7	0.5	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Amorphous	11.0	n.d.	n.d.	n.d.	n.d.	11.8	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.

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Actlabs ID	A19-11681-13	A19-11681-14	A19-11681-15	A19-11681-16	A19-11681-17	A19-11681-18	A19-11681-19	A19-11681-20	A19-11681-21	A19-11681-22	A19-11681-23	A19-11681-24
Client ID	855920	855921	855922	855923	855924	855925	855926	855927	855928	855929	855930	855931
Quartz	71.2	5.9	60.3	60.1	63.1	55.9	62.5	60.7	61.3	62.0	67.1	52.7
Kyanite	24.2	n.d.	6.4	5.6	6.4	10.2	7.4	7.9	6.7	2.1	n.d.	3.5
K feldspar	n.d.	n.d.	n.d.	1.3	7.4	11.6	3.1	3.6	4.6	2.4	n.d.	n.d.
Plagioclase	n.d.	57.4	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Almandine	n.d.	n.d.	7.3	6.5	5.3	6.1	5.3	5.6	6.3	5.4	2.9	7.1
Amphibole	n.d.	7.2	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Augite	n.d.	14.7	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Enstatite	n.d.	14.3	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Biotite	n.d.	0.5	11.2	11.7	9.4	12.8	10.3	9.9	11.1	11.6	5.9	12.2
Muscovite	1.8	n.d.	13.4	13.8	7.4	2.6	10.4	11.8	9.5	15.1	15.9	24.5
Chlorite	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	4.6	n.d.
Kaolinite	1.4	n.d.	1.4	1.0	1.0	0.8	1.0	0.5	0.5	1.4	1.6	n.d.
Pyrite	1.4	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	2.0	n.d.
Amorphous	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.

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Actlabs ID	A19-11681-25	A19-11681-26	A19-11681-27	A19-11681-28	A19-11681-29	A19-11681-30	A19-11681-31	A19-11681-32	A19-11681-33	A19-11681-34	A19-11681-35	A19-11681-36
Client ID	855932	855933	855934	855935	855936	855937	855938	855939	855940	855941	855942	855943
Quartz	47.0	48.5	54.0	61.7	56.1	61.9	39.0	48.1	71.0	4.9	49.8	49.4
Kyanite	3.7	4.2	1.8	5.2	7.2	4.2	6.8	8.0	24.2	n.d.	5.2	11.1
K feldspar	6.1	2.6	n.d.	n.d.	3.6	1.1	3.8	5.5	n.d.	n.d.	0.5	7.8
Plagioclase	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	55.9	n.d.	n.d.
Almandine	9.4	12.3	12.0	7.5	8.3	7.1	11.5	6.7	n.d.	n.d.	9.0	15.2
Amphibole	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	4.1	n.d.	n.d.
Augite	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	16.5	n.d.	n.d.
Enstatite	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	18.1	n.d.	n.d.
Biotite	11.5	7.9	12.8	9.5	12.6	6.9	14.2	11.7	n.d.	0.5	8.0	10.1
Muscovite	22.3	14.7	19.4	16.1	12.2	8.5	14.6	20.0	1.7	n.d.	13.1	6.4
Chlorite	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Kaolinite	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	1.7	n.d.	n.d.	n.d.
Pyrite	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	1.4	n.d.	n.d.	n.d.
Amorphous	n.d.	9.8	n.d.	n.d.	n.d.	10.3	10.1	n.d.	n.d.	n.d.	14.4	n.d.

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Actlabs ID	A19-11681-37	A19-11681-38	A19-11681-39	A19-11681-40	A19-11681-41	A19-11681-42	A19-11681-43	A19-11681-44	A19-11681-45	A19-11681-46	A19-11681-47	A19-11681-48
Client ID	855944	855945	855946	855947	855948	855949	855950	855951	855952	855953	855954	855955
Quartz	57.1	59.7	58.4	55.1	56.9	45.3	56.3	56.6	59.3	69.8	43.9	58.9
Kyanite	7.5	8.7	11.6	14.6	13.6	11.8	9.2	16.5	14.8	12.5	18.3	15.7
K feldspar	5.9	0.5	8.2	5.7	1.3	4.5	3.4	5.1	5.1	n.d.	11.9	4.8
Plagioclase	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Almandine	10.4	5.9	4.2	4.3	5.0	3.8	4.0	3.9	3.0	3.8	5.0	4.7
Amphibole	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Augite	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Enstatite	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Biotite	9.7	11.6	11.6	11.8	12.5	12.0	13.2	12.0	11.5	8.7	12	11.4
Muscovite	9.4	13.6	6.0	8.5	10.7	9.9	12.1	5.9	6.3	5.2	8.9	4.5
Chlorite	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Kaolinite	n.d.	n.d.	n.d.	n.d.	n.d.	1.4	1.8	n.d.	n.d.	n.d.	n.d.	n.d.
Pyrite	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Amorphous	n.d.	n.d.	n.d.	n.d.	n.d.	11.3	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.

Activation Laboratories Ltd. A19-11681

Actlabs ID	A19-11681-49	A19-11681-50	A19-11681-51	A19-11681-52	A19-11681-53	A19-11681-54	A19-11681-55	A19-11681-56	A19-11681-57	A19-11681-58	A19-11681-59	A19-11681-60
Client ID	855956	855957	855958	855959	855960	855961	855962	855963	855964	855965	855966	855967
Quartz	45.7	53.6	53.5	54.8	70.4	4.8	52.6	54.3	47.1	42.5	44.6	47.7
Kyanite	17.6	19.1	19.3	15.3	24.5	n.d.	17.5	11.4	13.9	15.6	15.1	14.0
K feldspar	4.0	6.3	9.8	7.9	n.d.	n.d.	4.9	4.6	3.6	6.5	7.2	8.2
Plagioclase	n.d.	n.d.	n.d.	n.d.	n.d.	59.3	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Almandine	4.2	6.6	5.7	5.4	n.d.	n.d.	4.0	8.4	7.0	8.1	7.6	4.4
Amphibole	n.d.	n.d.	n.d.	n.d.	n.d.	7.2	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Augite	n.d.	n.d.	n.d.	n.d.	n.d.	17.4	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Enstatite	n.d.	n.d.	n.d.	n.d.	n.d.	10.7	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Biotite	14.0	12.0	10.3	13.1	n.d.	0.6	15.9	13.3	11.9	10.0	9.4	9.2
Muscovite	5.6	2.4	1.4	3.5	2.0	n.d.	5.1	7.0	5.9	3.5	6.5	3.5
Chlorite	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Kaolinite	n.d.	n.d.	n.d.	n.d.	1.5	n.d.	n.d.	1.0	n.d.	n.d.	n.d.	n.d.
Pyrite	n.d.	n.d.	n.d.	n.d.	1.6	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Amorphous	8.9	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	10.6	13.8	9.6	13.0

Activation Laboratories Ltd. A19-11681

Actlabs ID	A19-11681-61	A19-11681-62	A19-11681-63	A19-11681-64	A19-11681-65	A19-11681-66	A19-11681-67	A19-11681-68	A19-11681-69	A19-11681-70	A19-11681-71	A19-11681-72
Client ID	855968	855969	855970	855971	855972	855973	855974	855975	855976	855977	855978	855979
Quartz	50.8	55.8	54.3	42.1	51.0	57.5	54.8	54.0	55.7	49.9	42.6	59.2
Kyanite	16.2	13.4	16.1	15.9	13.4	15.0	15.8	13.6	14.4	16.9	13.7	14.1
K feldspar	7.1	5.9	7.6	8.0	5.5	6.8	9.3	7.8	6.7	6.1	5.9	9.2
Plagioclase	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Almandine	4.8	4.1	3.2	5.7	4.7	3.2	4.4	3.8	6.4	3.6	3.4	5.0
Amphibole	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Augite	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Enstatite	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Biotite	8.3	6.7	11.7	9.7	9.8	11.8	11.7	8.7	11.7	9.0	9.5	9.2
Muscovite	2.6	3.6	7.1	4.5	4.4	5.7	4.0	2.2	5.1	4.6	4.4	3.3
Chlorite	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Kaolinite	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Pyrite	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Amorphous	10.2	10.5	n.d.	14.1	11.2	n.d.	n.d.	9.9	n.d.	9.9	20.5	n.d.



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Actlabs ID	A19-11681-73	A19-11681-74	A19-11681-75	A19-11681-76	A19-11681-77	A19-11681-78	A19-11681-79	A19-11681-80	A19-11681-81	A19-11681-82	A19-11681-83	A19-11681-84
Client ID	855980	855981	855982	855983	855984	855985	855986	855987	855988	855989	855990	855991
Quartz	70.5	5.8	46.9	41.2	67.6	45.2	47.7	48.4	42.3	44.2	46.9	54.8
Kyanite	25.0	n.d.	17.1	17.9	12.1	14.6	14.8	15.9	17.6	17.3	18.7	17.4
K feldspar	n.d.	n.d.	7.7	9.7	8.0	9.2	6.1	8.4	8.9	7.5	6.1	11.8
Plagioclase	n.d.	56.1	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Almandine	n.d.	n.d.	2.9	6.2	3.9	4.5	3.0	4.8	4.7	4.7	3.8	3.6
Amphibole	n.d.	5.3	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Augite	n.d.	23	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Enstatite	n.d.	9.3	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Biotite	n.d.	0.5	8.1	8.8	5.6	7.1	7.2	8.4	10.0	7.6	8.0	10.2
Muscovite	1.6	n.d.	3.7	2.2	2.8	2.9	5.2	2.6	5.3	2.6	5.6	2.2
Chlorite	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Kaolinite	1.3	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Pyrite	1.6	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Amorphous	n.d.	n.d.	13.6	14.0	n.d.	16.5	16.0	11.5	11.2	16.1	10.9	n.d.

Activation Laboratories Ltd. A19-11681

Actlabs ID	A19-11681-85	A19-11681-86	A19-11681-87	A19-11681-88	A19-11681-89	A19-11681-90	A19-11681-91	A19-11681-92	A19-11681-93	A19-11681-94	A19-11681-95	A19-11681-96
Client ID	855992	855993	855994	855995	855996	855997	855998	855999	856000	856001	856002	856003
Quartz	55.6	49.1	52.0	51.2	55.4	44.0	44.2	54.2	70.5	8.6	42.6	37.5
Kyanite	16.6	16.5	13.8	15.9	16.8	14.4	16.8	20.2	25.2	n.d.	15.1	18.6
K feldspar	8.8	7.4	8.1	6.2	8.1	11.7	6.8	10.2	n.d.	n.d.	7.2	11.6
Plagioclase	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	62.8	n.d.	n.d.
Almandine	5.2	5.9	4.3	3.1	6.4	4.1	3.5	3.7	n.d.	n.d.	4.0	3.2
Amphibole	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	4.2	n.d.	n.d.
Augite	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	12.5	n.d.	n.d.
Enstatite	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	10.7	n.d.	n.d.
Biotite	8.8	9.5	8.8	10.2	9.8	8.5	8.7	8.9	n.d.	1.2	7.3	9.0
Muscovite	5.0	3.2	3.0	5.3	3.5	3.9	2.5	2.8	1.5	n.d.	4.5	0.8
Chlorite	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Kaolinite	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	1.4	n.d.	n.d.	n.d.
Pyrite	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	1.4	n.d.	n.d.	n.d.
Amorphous	n.d.	8.4	10.0	8.1	n.d.	13.4	17.5	n.d.	n.d.	n.d.	19.3	19.3

Activation Laboratories Ltd. A19-11681

Actlabs ID	A19-11681-97	A19-11681-98	A19-11681-99	A19-11681-100	A19-11681-101	A19-11681-102	A19-11681-103	A19-11681-104	A19-11681-105	A19-11681-106	A19-11681-107	A19-11681-108
Client ID	856004	856005	856006	856007	856008	856009	856010	856011	856012	856013	856014	856015
Quartz	48.2	69.3	53.1	42.7	56.3	43.8	59.9	53.1	46.9	44.8	62.5	41.5
Kyanite	14.5	11.9	13.1	16.4	18.0	18.8	16.6	16.7	16.7	17.7	13.3	13.6
K feldspar	7.9	2.5	4.0	9.6	8.9	9.5	4.8	4.7	6.9	5.6	3.9	6.3
Plagioclase	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Almandine	5.3	3.3	3.6	4.4	6.7	3.6	5.2	5.1	2.2	4.0	4.8	4.2
Amphibole	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Augite	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Enstatite	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Biotite	10.9	7.2	6.9	10.4	8.6	8.8	9.6	9.2	8.4	11.5	8.7	9.8
Muscovite	2.7	5.8	3.0	2.8	1.5	5.5	3.9	3.7	9.7	7.8	6.8	7.0
Chlorite	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Kaolinite	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Pyrite	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Amorphous	10.5	n.d.	16.3	13.7	n.d.	10.0	n.d.	7.5	9.2	8.6	n.d.	17.6

Activation Laboratories Ltd. A19-11681

Actlabs ID	A19-11681-109	A19-11681-110	A19-11681-111	A19-11681-112	A19-11681-113	A19-11681-114	A19-11681-115	A19-11681-116	A19-11681-117	A19-11681-118	A19-11681-119	A19-11681-120
Client ID	856016	856017	856018	856019	856020	856021	856022	856023	856024	856025	856026	856027
Quartz	51.6	47.7	49.7	46.0	70.8	6.4	42.5	53.7	36.6	39.3	39.6	41.7
Kyanite	14.3	10.8	2.3	13.3	24.5	n.d.	13.0	14.3	14.3	11.6	12.4	18.2
K feldspar	4.6	4.4	n.d.	3.2	n.d.	n.d.	5.7	5.8	8.3	7.3	8.5	5.4
Plagioclase	n.d.	n.d.	n.d.	n.d.	n.d.	57.8	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Almandine	5.0	6.2	6.1	4.9	n.d.	n.d.	5.5	4.5	3.8	3.9	5.6	7.3
Amphibole	n.d.	n.d.	n.d.	n.d.	n.d.	18.4	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Augite	n.d.	n.d.	n.d.	n.d.	n.d.	10.7	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Enstatite	n.d.	n.d.	n.d.	n.d.	n.d.	5.9	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Biotite	11.2	9.6	6.0	9.6	n.d.	0.8	11.3	10.9	10.7	10.6	7.2	10.6
Muscovite	13.3	13.2	18.2	12.0	1.6	n.d.	9.3	10.8	6.5	9.1	5.2	7.4
Chlorite	n.d.	n.d.	2.9	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Kaolinite	n.d.	n.d.	1.7	n.d.	1.7	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Pyrite	n.d.	n.d.	n.d.	n.d.	1.4	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Amorphous	n.d.	8.1	13.1	11.0	n.d.	n.d.	12.7	n.d.	19.8	18.2	21.5	9.4

Activation Laboratories Ltd. A19-11681

Actlabs ID	A19-11681-121	A19-11681-122	A19-11681-123	A19-11681-124	A19-11681-125	A19-11681-126	A19-11681-127	A19-11681-128	A19-11681-129	A19-11681-130	A19-11681-131	A19-11681-132
Client ID	856028	856029	856030	856031	856032	856033	856034	856035	856036	856037	856038	856039
Quartz	62.7	51.3	61.8	57.9	57.0	66.5	70.4	47.3	52.4	52.2	47.7	47.5
Kyanite	10.8	21.3	11.8	13.9	7.1	5.3	5.3	12.5	12.9	15.7	14.8	14.5
K feldspar	2.9	5.5	2.7	2.5	1.5	3.0	3.1	3.5	5.8	4.9	4.9	7.0
Plagioclase	n.d.	n.d.	n.d.	n.d.	12.6	4.5	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Almandine	5.1	7.6	2.9	3.5	2.3	2.9	2.2	4.8	2.5	2.4	2.7	4.1
Amphibole	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Augite	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Enstatite	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Biotite	10.2	10.6	10.6	11.0	12.9	12.0	9.1	11.0	8.8	9.6	10.2	9.3
Muscovite	8.3	3.7	8.9	11.2	6.6	5.2	5.6	9.7	7.1	6.8	6.2	4.7
Chlorite	n.d.	n.d.	1.3	n.d.	n.d.	0.6	2.7	1.2	n.d.	n.d.	n.d.	n.d.
Kaolinite	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	1.6	0.7	n.d.	n.d.	n.d.	n.d.
Pyrite	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Amorphous	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	9.3	10.5	8.4	13.5	12.9

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Actlabs ID	A19-11681-133	A19-11681-134	A19-11681-135	A19-11681-136	A19-11681-137	A19-11681-138	A19-11681-139	A19-11681-140	A19-11681-141	A19-11681-142	A19-11681-143	A19-11681-144
Client ID	856040	856041	856042	856043	856044	856045	856046	856047	856048	856049	856050	856051
Quartz	70.3	4.4	55.0	48.1	39.4	48.1	40.7	36.6	37.2	39.2	48.4	47.9
Kyanite	24.8	n.d.	16.3	15.7	16.2	17.1	15.6	16.4	14.8	14.0	15.9	15.2
K feldspar	n.d.	n.d.	6.1	8.8	6.1	6.4	7.4	3.5	3.4	5.0	6.1	6.4
Plagioclase	n.d.	58.0	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Almandine	n.d.	n.d.	4.4	4.6	4.1	4.2	5.5	4.5	4.0	3.6	5.4	4.3
Amphibole	n.d.	21.0	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Augite	n.d.	9.0	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Enstatite	n.d.	6.2	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Biotite	n.d.	1.4	12.4	10.5	12.0	11.9	7.1	6.7	7.3	8.2	8.1	7.0
Muscovite	2.0	n.d.	5.8	3.2	6.2	4.7	3.9	4.3	8.6	5.8	5.5	5.2
Chlorite	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Kaolinite	1.5	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Pyrite	1.4	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Amorphous	n.d.	n.d.	n.d.	9.1	16.0	7.6	19.8	28.0	24.7	24.2	10.6	14.0

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Actlabs ID	A19-11681-145	A19-11681-146	A19-11681-147	A19-11681-148	A19-11681-149	A19-11681-150	A19-11681-151	A19-11681-152	A19-11681-153	A19-11681-154	A19-11681-155	A19-11681-156
Client ID	856052	856053	856054	856055	856056	856057	856058	856059	856060	856061	856062	856063
Quartz	44.8	45.4	55.8	55.5	45.1	44.2	42.6	38.1	70.1	4.5	44.0	36.3
Kyanite	16.9	16.5	19.4	13.2	16.3	16.6	15.4	15.6	24.9	n.d.	14.9	15.6
K feldspar	6.3	5.6	10.7	3.7	8.8	8.4	5.5	8.3	n.d.	n.d.	7.3	5.9
Plagioclase	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	64.1	n.d.	n.d.
Almandine	3.0	3.5	2.7	5.5	6.3	3.1	4.2	3.1	n.d.	n.d.	2.3	4.7
Amphibole	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	5.2	n.d.	n.d.
Augite	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	15.0	n.d.	n.d.
Enstatite	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	10.2	n.d.	n.d.
Biotite	6.6	9.8	6.8	5.7	9.8	7.7	6.1	7.7	n.d.	1.0	5.6	10.2
Muscovite	3.2	4.3	4.6	4.5	4.9	3.4	2.4	4.2	1.7	n.d.	2.8	4.7
Chlorite	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Kaolinite	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	1.8	n.d.	n.d.	n.d.
Pyrite	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	1.5	n.d.	n.d.	n.d.
Amorphous	19.2	14.9	n.d.	11.9	8.8	16.6	23.8	23.0	n.d.	n.d.	23.1	22.6

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Actlabs ID	A19-11681-157	A19-11681-158	A19-11681-159	A19-11681-160	A19-11681-161	A19-11681-162	A19-11681-163	A19-11681-164	A19-11681-165	A19-11681-166	A19-11681-167	A19-11681-168
Client ID	856064	856065	856066	856067	856068	856069	856070	856071	856072	856073	856074	856075
Quartz	63.2	43.5	47.8	46.4	49.0	42.0	46.9	49.5	48.8	48.4	44.3	50.3
Kyanite	14.5	13.6	12.7	12.2	14.3	14.3	12.6	13.8	7.6	14.7	14.8	14.4
K feldspar	3.1	9.4	3.2	5.3	6.7	6.1	5.8	7.9	8.3	5.6	8.2	5.6
Plagioclase	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Almandine	6.0	5.3	5.8	5.8	3.7	4.2	4.5	4.5	5.0	4.0	5.3	3.0
Amphibole	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Augite	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Enstatite	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Biotite	8.1	7.1	7.2	5.2	6.9	7.1	6.7	5.6	6.1	5.9	6.3	6.6
Muscovite	5.1	4.0	4.5	6.2	3.3	3.3	4.8	7.4	7.5	1.0	2.3	0.7
Chlorite	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Kaolinite	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	0.5	n.d.	n.d.	n.d.
Pyrite	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Amorphous	n.d.	17.1	18.8	18.9	16.1	23.0	18.7	11.3	16.2	20.4	18.8	19.4



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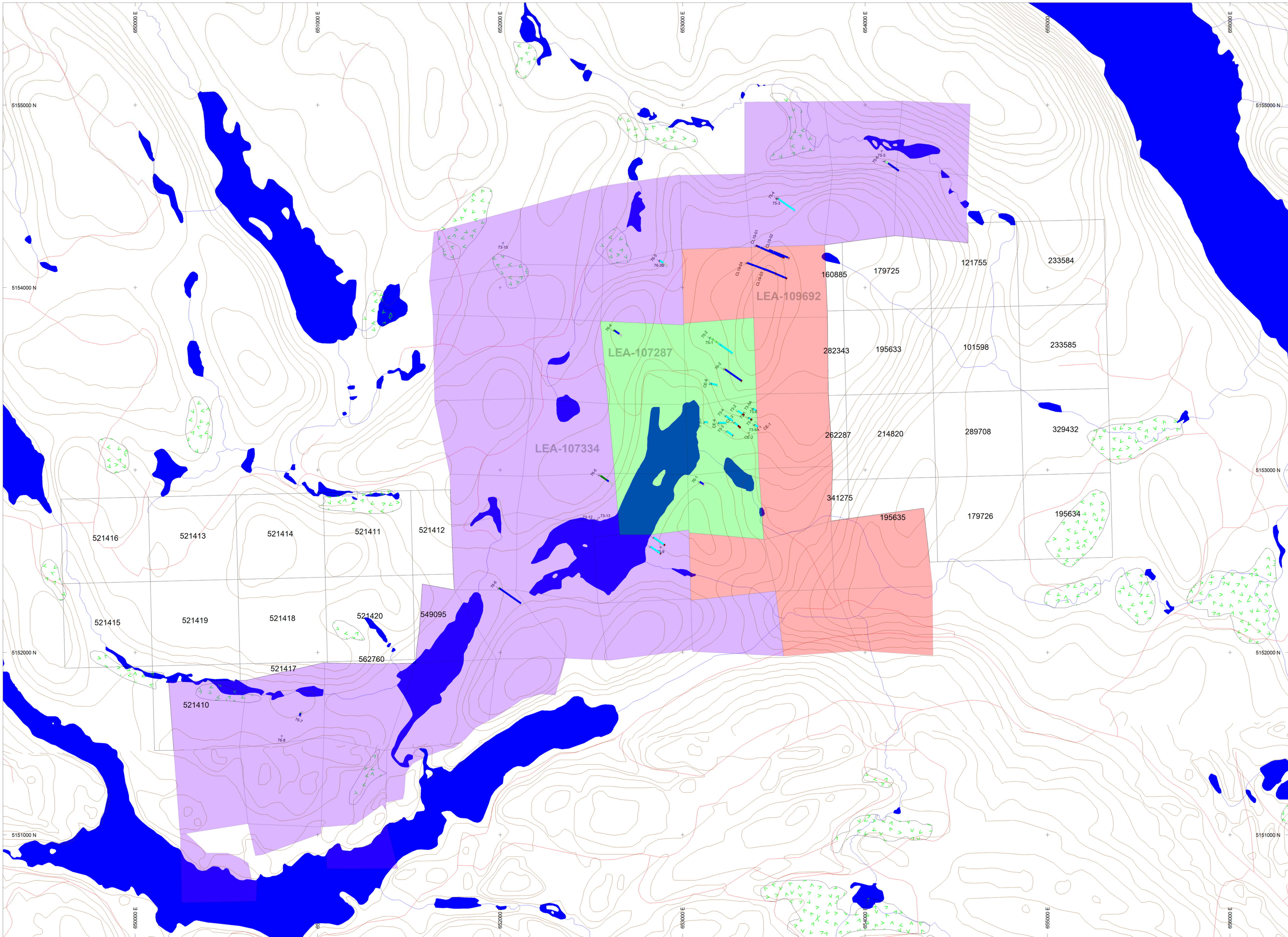
Actlabs ID	A19-11681-169	A19-11681-170	A19-11681-171	A19-11681-172	A19-11681-173	A19-11681-174	A19-11681-175	A19-11681-176	A19-11681-177	A19-11681-178
Client ID	856076	856077	856078	856079	856080	856081	856082	856083	856084	856085
Quartz	50.0	51.7	54.5	97.8	70.0	6.3	95.5	55.2	32.7	27.8
Kyanite	14.2	13.5	8.8	0.7	25.5	n.d.	1.9	6.6	1.0	1.0
K feldspar	10.3	11.8	2.8	n.d.	n.d.	n.d.	n.d.	2.8	3.4	9.6
Plagioclase	n.d.	n.d.	5.7	n.d.	n.d.	63.5	n.d.	8.3	40.7	44.5
Almandine	2.2	2.2	2.6	0.4	n.d.	n.d.	0.8	0.8	n.d.	n.d.
Amphibole	n.d.	n.d.	n.d.	n.d.	n.d.	5.4	n.d.	n.d.	n.d.	n.d.
Augite	n.d.	n.d.	n.d.	n.d.	n.d.	16.1	n.d.	n.d.	n.d.	n.d.
Enstatite	n.d.	n.d.	n.d.	n.d.	n.d.	8.2	n.d.	n.d.	n.d.	n.d.
Biotite	6.5	7.8	6.7	1.1	n.d.	0.5	1.3	5.5	6.9	5.1
Muscovite	1.0	0.8	1.0	n.d.	1.5	n.d.	0.5	3.3	n.d.	n.d.
Chlorite	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Kaolinite	n.d.	n.d.	n.d.	n.d.	1.4	n.d.	n.d.	n.d.	n.d.	n.d.
Pyrite	n.d.	n.d.	n.d.	n.d.	1.6	n.d.	n.d.	n.d.	n.d.	n.d.
Amorphous	15.8	12.2	17.9	n.d.	n.d.	n.d.	n.d.	17.5	15.3	12.0

Note: n.d. = not detected; muscovite includes illite and augite includes diopside.

Reported by:  
Elitsa Hrischeva, PhD  
Activation Laboratories Ltd.

## Maps



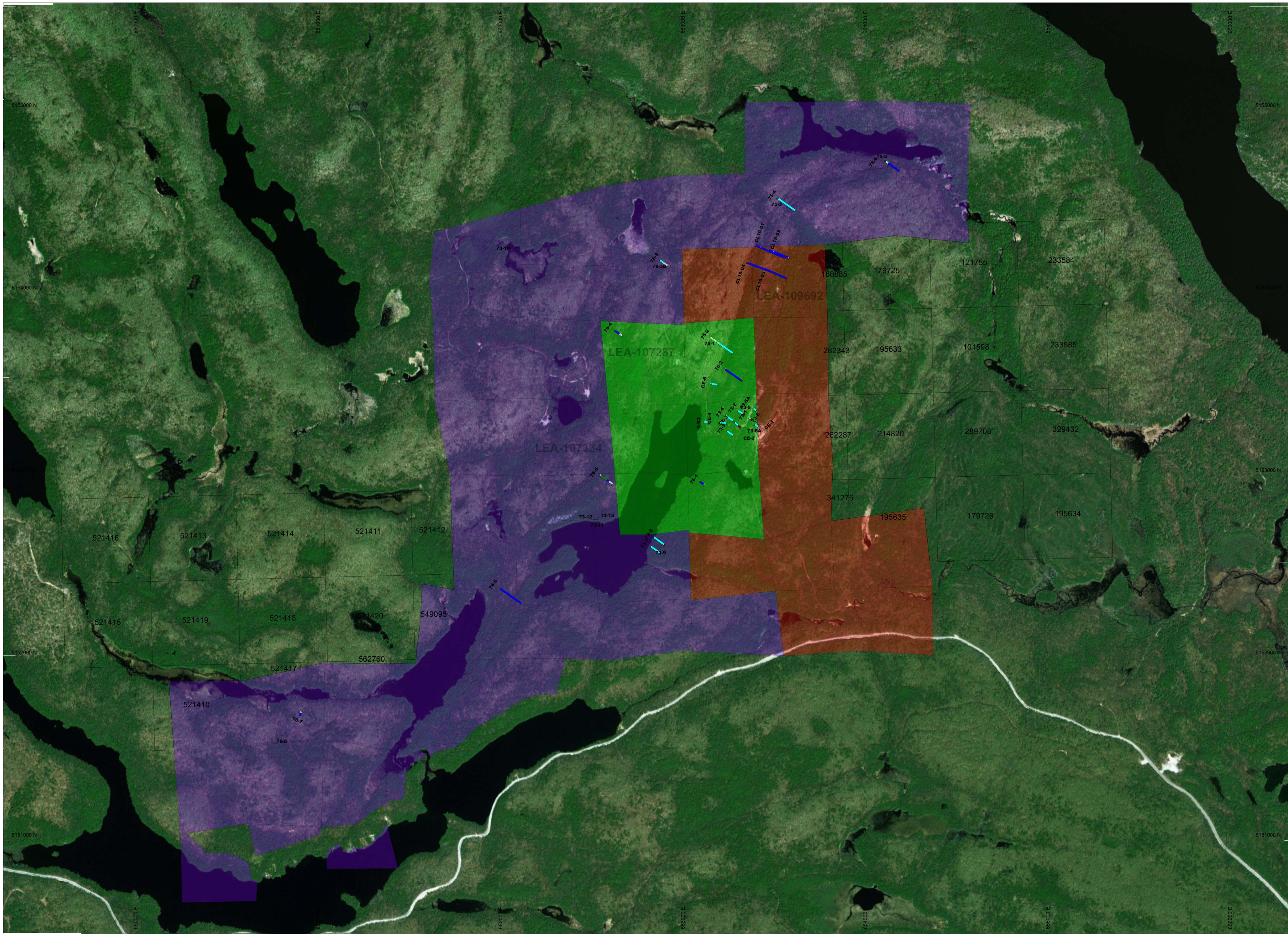


ROCK CODES	PAT	LABEL	DESCRIPTION
MD		Mafic Dyke	Mafic Dyke
MV		Mafic Volcanic	Mafic Volcanic
OB		Overburden	Overburden
MSED		Metasediments	Metasediments
BIO-KY_GN		Biotope-Kyanite Gneiss	Biotope-Kyanite Gneiss
BIO_GN		Biotope Gneiss	Biotope Gneiss
FLT		Fault	Fault
GT-BIO-KY_GN		Garnet-Biotope-Kyanite Gneiss	Garnet-Biotope-Kyanite Gneiss
GT-BIO_GN		Garnet-Biotope Gneiss	Garnet-Biotope Gneiss
GT-KY_GN		Garnet-Kyanite Gneiss	Garnet-Kyanite Gneiss
GT_BIO_GN		Garnet-Biotope Gneiss	Garnet-Biotope Gneiss
KY_GN		Kyanite Gneiss	Kyanite Gneiss
PY-BIO_GN		Pyrite-Biotope Gneiss	Pyrite-Biotope Gneiss
QZ-SER_GN		Quartz-Sericite Gneiss	Quartz-Sericite Gneiss
QV		Quartz Vein	Quartz Vein
SER-BIO_GN		Sericite-Biotope Gneiss	Sericite-Biotope Gneiss
SER-PY_GN		Sericite-Pyrite Gneiss	Sericite-Pyrite Gneiss
SER_GN		Sericite Gneiss	Sericite Gneiss
SIL_BX		Silified Breccia	Silified Breccia
SIL_GN		Silified Gneiss	Silified Gneiss
UMD_L		Ultramafic Dyke	Ultramafic Dyke
GR		Granite	Granite
KY-GT-BIO-MU_G		Ky-Gt-Bio-Mu Gneiss	Ky-Gt-Bio-Mu Gneiss

**PLAN SPECS:**  
 REF. PT. E, N 652800 m 5153000 m  
 EXTENTS 70500 m 5123 m  
 SCALE 1 : 10000  
 (m)  
 -100 0 100 200 300 400  
 NAD83 / UTM zone 17N

Kyanite Mining Corp.  
 Crocan Lake Property  
 Full Plan - Traces





ROCK CODES	PAT	LABEL	DESCRIPTION
MV			Mafic Dyke
OB			Overburden
MSED			Metasediments
BIO-KY_GN			Biotite-Kyanite Gneiss
BIO_GN			Biotite Gneiss
FLT			Fault
GT-BIO-KY_GN			Garnet-Biotite-Kyanite Gneiss
GT-BIO_GN			Garnet-Biotite Gneiss
GT-KY_GN			Garnet-Kyanite Gneiss
GT_BIO_GN			Garnet-Biotite Gneiss
KY_GN			Kyanite Gneiss
PY-BIO_GN			Pyrite-Biotite Gneiss
QTZ-SER_GN			Quartz-Sericite Gneiss
QV			Quartz Vein
SER-BIO_GN			Sericite-Biotite Gneiss
SER-PY_GN			Sericite-Pyrite Gneiss
SER_GN			Sericite Gneiss
SIL_BV			Silified Breccia
SIL_GN			Silified Gneiss
UMD_L			Ultramafic Dyke
GR			Granite
KY-GT-BIO-MU_G			Ky-Gt-Bio-Mu Gneiss

**PLAN SPECS:**  
 REF. PT. E, N 652800 m 5153000 m  
 EXTENTS 7050 m 5123 m  
 SCALE 1 : 10000  
 (m)  
 -100 0 100 200 300 400  
 NAD83 / UTM zone 17N

Kyanite Mining Corp.  
 Crocan Lake Property  
 Full Plan - Traces