BRITISH COLUMBIA
The Best Place on Earth

BC Geological Survey Assessment Report 38893

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

Assessment Report
Title Page and Summary

TYPE OF REPORT [type of survey(s)]: Drilling

TOTAL COST: $44,562

AUTHOR(S): Scott Allan **SIGNATURE(S):**

NOTICE OF WORK PERMIT NUMBER(S)/DATE(S): MX-1-134 **YEAR OF WORK:** 2019

STATEMENT OF WORK - CASH PAYMENTS EVENT NUMBER(S)/DATE(S): 5763373

PROPERTY NAME: Fireside Barite Mine - Exploration

CLAIM NAME(S) (on which the work was done): 1068958

COMMODITIES SOUGHT: Barite

MINERAL INVENTORY MINFILE NUMBER(S), IF KNOWN: 0094M003

MINING DIVISION: Liard **NTS/BCGS:** 0094M14E,0094M14/0094M074

LATITUDE: 59 ° 45 ' 50 " **LONGITUDE:** 127 ° 14 ' 40 " **(at centre of work)**

OWNER(S):
1) Fireside Minerals Ltd. 2)

MAILING ADDRESS:
Box 32069 Westbank, BC, Canada, V4T-3G2

OPERATOR(S) [who paid for the work]:
1) Fireside Minerals Ltd. 2)

MAILING ADDRESS:
Box 32069 Westbank, BC, Canada, V4T-3G2

PROPERTY GEOLOGY KEYWORDS (lithology, age, stratigraphy, structure, alteration, mineralization, size and attitude):
Barite, Hydrothermal, Devonian

REFERENCES TO PREVIOUS ASSESSMENT WORK AND ASSESSMENT REPORT NUMBERS: 0767,2880,9052,34620,35100,34000

Next Page

TYPE OF WORK IN THIS REPORT	EXTENT OF WORK (IN METRIC UNITS)	ON WHICH CLAIMS	PROJECT COSTS APPORTIONED (incl. support)
GEOLOGICAL (scale, area)			
Ground, mapping			
Photo interpretation			
GEOPHYSICAL (line-kilometres)			
Ground			
Magnetic			
Electromagnetic			
Induced Polarization			
Radiometric			
Seismic			
Other			
Airborne			
GEOCHEMICAL (number of samples analysed for...)			
Soil			
Silt			
Rock			
Other			
DRILLING (total metres; number of holes, size)			
Core	445 meters, 9 Holes, NQ	1068958	43,078
Non-core			
RELATED TECHNICAL			
Sampling/assaying	25 Samples	1068958	14,84
Petrographic			
Mineralographic			
Metallurgic			
PROSPECTING (scale, area)			
PREPARATORY / PHYSICAL			
Line/grid (kilometres)			
Topographic/Photogrammetric (scale, area)			
Legal surveys (scale, area)			
Road, local access (kilometres)/trail			
Trench (metres)			
Underground dev. (metres)			
Other			
		TOTAL COST:	$44,562

FIRESIDE MINERALS

Nov.2019

Diamond Drill Report Mineral Claim-1068958

Liard Mining Division - N.T.S. 94M/14 – Lat 59° 45’ 30” N Long 127° 14’ 40” W

Report By: Scott Allan (G.I.T)

TABLE OF CONTENTS

1 INTRODUCTION

From September 1st to September 9th 2019, a NQ diamond drill program took place on mineral claim 10685958. This program included the construction of five diamond drill pads, four of which where drilled from, a total of nine holes were completed recovering a total of 445 meters of NQ core. This drill program was designed to delineate an off-lease extension of the barite vein actively exploited on lease #36111 the excavations on this lease are known as the moose pit.

2 LOCATION AND ACCESS

The Moose barite deposit can be accessed by a 5.5-kilometer gravel road located at kilometer 850 on the Alaska Highway. The drill sites located on Mineral claim 1068958 can be accessed by following the open pit workings of the Moose deposit north to the bottom of the hillside. The location is shown on the Location Map in Appendix 1. The deposit is centered at 598558.93 m E, 6626153.51 m N, utm zone 9. The core from this program is stored at the camp 598828.00 m E , 6625852.00 m N , utm zone 9 .

3 CLAIMS

Mineral Claim 1068958 was issued on the 6th of June 2019 and is good to the 6th of June 2020 covering 48.92 hectares. On the 4th of October a lease application was submitted, and at the time of reporting is pending conversion to a mineral lease.

4 HISTORY

• 1963 the four original Fireside claims were staked in October by G.B. Smith of Edmonton, Alberta.

•1964 Magnet Cove Barium Corp. acquired the property through an option agreement and proceeded to carry out a seismic refraction survey on the Bear, Moose and Wolf claims

•1965-1985 Dresser Industries affiliated with Magnet Cove Barium Corp. and carried out multiple exploration drilling programs including reverse circulation and diamond drilling.

•1971-1972 Dresser Minerals Ltd. collected 2000 soil samples with accompanied ground gravity and magnetics surveys on all claims while completing geologic mapping of the Beaver Claims [Carter, 1973]

•1981 a mine plan for the Moose Deposit was prepared for Dresser Minerals Ltd. by Canadian Mine Services with production plans to yield 343,011 tonnes of barite [Mcleish and Baran, 1981]

•1984 Dresser Minerals Ltd. developed the Moose deposit for mining

•In 1985 Magcobar Minerals, a subsidiary of Dresser Industries, carried out a seventeen hole diamond drill program on the Fireside Property with ten holes drilled on the Moose Zone and seven holes drilled on the West Bear

•1988 The moose pit halts production at 70,000 tonnes of barite. Citing low commodity pricing

•1997 Al Matovich acquires the Fireside barite claim group, prepare and mine 15,000 tonnes of barite from the moose deposit

•1998 Owner ship transfers to Doug Allan, with Fireside Minerals becoming the operator of the mine site, production halts in the moose pit and begins in the bear pit.

•2006 ten diamond drill holes were drilled in the West Bear area.

•2011 a fifteen-hole diamond drill program was completed on the south moose and west bear.

•2012 a reverse circulation drilling program completed a 23 holes carried out in the Moose, Beaver and Bear zones

•2013 a 72 hole diamond drill program was completed on the moose and bear pit

•2014 a 38 hole diamond drill program was completed on the moose and bear pit

•2015 the bear pit was exhausted to original mine plan limits, a mine plan was prepared and accepted by the ministry of mines for the moose and an expansion of the bear.

•2016 production of barite restarts in the moose pit

•2017 Resistivity Surveying was completed to the north and south of the moose pit

5 GENERAL SETTING

The Moose barite deposit is in the rolling hills of the Liard Plains roughly 745 meters above sea level (ASL), with local topographic highs reaching 880 meters. The area is covered with spotted lakes interconnected by small creeks and muskeg. A young dense forest of spruce, lodge pole pine and birch dominate the area as re-growth after a forest fire decades ago. This forest is underlain by glacial till which blankets the region varying from 1-15 meters providing very little in the way of outcropping. Bedrock is comprised of sedimentary rocks of the kechika group. Exploration trails in the region have thick regrowth of willow and alder. The Liard River is located 7.3 kilometers south west and is the most striking geographic feature of this region.

5.1 LOCAL GEOLOGY

The moose ore body is hosted by the shales and siltstones of the Kechika Group. The order body consisting of barite is actively mined in the moose pit where barite is confined to steeply dipping veins controlled by a braided fault system. The veins commonly pinch and swell over 840 meters rarely exceeding 3.5 meters in width. The vein system is offset by a multitude of post emplacement faults creating zones of brecciation and resulting in slight displacement. The barite is white to cream-white and is commonly iron stained with a massive crystalline structure. The vein clearly crosscuts local lithology and commonly includes altered wall rock, as lenses or zones of brecciation. The Moose vein is closed to the south as the vein appears to horse tail into several narrow veins. In the northern area structural control becomes much more consistent and outlines a vein ranging from 2.5 - 6.0 meters wide. Gabbroic dykes are spatially associated to barite veins, and are thought to be heat sources to drive barite mineralization. To accompany this description, A map of local geology can be seen in appendix 1.

5.2 MINERALIZATION

Barite sufficiently marketable to the oilfield occurs in four known zones, the bear (past producer), the moose (active producer), beaver (developed prospect), and Denis (prospect). The barite on all localities is white massively crystalline with trace amount of sulphides occurring as galena, and sphalerite. It is suspected by the author that the sulphides mineralization is limited to buffering reactions occurring during the emplacement of barite, where mineralizing fluids may change alkalinity from acidic to basic.

6 RESULTS

Section 36 (DDH19-01/DDH19-02)

Both drill holes intersected the vein optimally, showing a steeply dipping vein widening to the east for an interpreted maximum width of 11.5 meters.

Section 38 (DDH19-03/DDH19-04)

DDH19-03 stop short of intersecting a series of barite veins. To ensure that the main vein was not drill over DDH19-04 was pulled back and drilled along the same azimuth this drill length produced four narrow barite veins.

Section 39 (Trench19-01)

A trench was dug in between the drill pads for DDH19-03/DDH19-04 and DDH19-05/06/07 this trench was located on top of a resistivity anomaly identified in 2017. Overburden depth was 8 meters, with a barite vein approximately 4 meters wide. The trench was not entered due to depth, samples taken from spoil piles produced an SG of 4.28.

Section 40 (DDH19-05/DDH19-06/DDH19-07)

DDH19-05 drilled immediately out of overburden into barite, the lower hole DDH19-06 encountered varying grades of barite over 38.34 meters when allowing for a few zones of country rock. This interferes a dip change from near vertical to 72 degrees. DDH19-07 was slid back two meters to re-drill hole DDHH19-05 to resolve the location of the vein's footwall. This hole had to be abandoned due poor recovery due to formation fracturing from the previous drill holes.

Section 42 (DDH19-08/09 – DDH19-08)

DDH19-08 drilled 31 meters of overburden, intersecting a very narrow barite vein at the end of the hole. DDH19-09 did not intersect barite.

Coordinates of drilling and trenching.

Hole No	Latitude	Departure	Elevation	Azimuth	Dip	Length	Horizontal	Vertical	Comments
DD19-01	6,626,458.24	598,602.91	736.64	95	-45	43.28	30.60	-30.60	Moose Vein
DD19-02	6,626,458.24	598,602.91	736.64	95	-60	59.13	29.57	-51.21	Moose Vein
DD19-03	6,626,486.90	598,608.24	739.139	90	-45	38.71	27.37	-27.37	Moose Vein
DD19-04	6,626,487.73	598,592.36	737.97	87	-45	78.94	55.82	-55.82	Moose Vein
DD19-05	6,626,515.81	598,616.35	738.83	90	-45	52.43	37.07	-37.07	Moose Vein
DD19-06	6,626,515.81	598,616.35	738.83	90	-60	75.29	37.64	-65.20	Moose Vein
DD19-07	6,626,515.91	598,615.15	738.784	90	-45	20.42	14.44	-14.44	Moose Vein
DD19-08	6,626,546.93	598,618.80	740.587	88	-45	46.94	33.19	-33.19	Moose Vein
DD19-09	6,626,546.79	598,615.81	740.587	88	-50	59.74	38.40	-45.76	Moose Vein
					Total Meters	474.88			

Trench	Latitude	Departure	Elevation	Length	Depth	Comments
Trench19-01 Start	6626506.64	598617.2	737.5	14 m	8	Moose Vein
Trench19-01 End	6626506.64	598631.2	736.7			

6.1 ASSAY RESULTS

Using Le Chatelier Flask method of determining specific gravity (SG) was used to determine the density of the barite was calculated at Fireside Minerals Laboratory by taking samples across the intersection of interest, crushing them into a coarse sand, drying the samples at 400F for 1 hr, placing them in a desiccator to cool for at least 1 hr. Warming the Le Chatelier Flask filled with kerosene in 30 degree water bath, for at least 2 hrs, recording initial volume, weighing out 80 grams of sample, transferring sample into the Le Chatelier Flask, rolling the entire flask at 45 degree angle to allow trapped air to escape. Then placing the Le Chatelier Flask back in the bath for at least 1 hr., finally recording the final volume to determine SG using the following formula. SG = mass / (final volume – initial volume). Barite samples with an SG lower then 4.3 were selected and sent to Loring labs for independent confirmation of SG and silica content.

7 CONCLUSIONS

From the drilling it has been shown that the barite veins extends at least 130 meters off of lease#36111 onto mineral claim 1068958, or 145 meters north of the current pit limits, giving a total known strike length of 840 meters. A strike change has been inferred from trenching; it is likely that this strike change is cause by a local fault that has not been adequality defined. It has been shown through excavations at the moose pit the barite vein pinches and swells along strike, this is reinforced by the swell identified in Section 36 followed by a broken-up vein in section 38. It should be concluded that a vein dissipating into smaller veins is likely to coalesce again down strike. At section 48 drilling has shown that a thick layer of overburden overlies bedrock, but the barite vein is of economic width and grade to warrant mining.

It should also be noted that the resistivity anomaly identified on section 39 did correspond to a barite vein when trenched down too, and that resistivity should be considered a geophysical exploration tool for locating barite on the fireside property.

7.1 RECOMMENDATIONS

- Apply for a lease conversion of mineral claim 1068958
- Drill a -75° hole along section 40, from the drill pad used for DDH19-05/06 then construct a new drill pad to optimally intersect the vein from the east. This data should allow for a better understanding of geology on this section. Once the geology has been adequality defined exploration should commence north drilling from the east, with a due west azimuth with pads built on 30-meter intervals.
- Drill section along 37 38 40 and 41to allow for a tighter resource estimate.
- Apply for authorization to mine the barite vein 1068958

8 STATEMENT OF QUALIFICATIONS

I, Scott Allan, geologist, with business address of box 32069 Kelowna BC, V4T 3G2 and residential address of 331 Silver Valley Rise, NW, Calgary, Alberta, T3B 4B1 certify that,

- Obtained a Bachelor of Science degree from the University of Calgary in 2013
- A registered geologist in training with Alberta Professional Engineers and Geoscientist Association (APEGA, member # 116181)
- From 2010 to present I have been involved in production and exploration for Fireside Minerals Ltd.
- I have personally participated in field acquisition of data and data interpretation.

9 COST STATEMENT

Mineral Claim

Year total $44,562.00

	Budget	9/1/2019	9/2/2019	9/3/2019	9/4/2019	9/5/2019	9/6/2019	9/7/2019	9/8/2019	9/9/2019
Scott Allan -Geo	700 / day x 1	$700.00	$700.00	$700.00	$700.00	$700.00	$700.00	$700.00	$700.00	$700.00
Andrew Allan- President	1000 / day x 1									
Robert Mooney - Diamond Driller	40/hr	$480.00	$480.00	$480.00	$480.00	$480.00	$540.00	$500.00	$480.00	$480.00
Drillers bonus $1 foot										$1,425.00
Zach Kinnunen	28/hr	$392.00	$392.00	$392.00	$392.00	$392.00	$476.00	$420.00	$392.00	$392.00
Diesel Fuel - minesite (L)	1.25 / L	$152.50		$202.50		$160.00			$91.25	
Gasoline - Minesite (L)	1.25 / L									
Fuel- Gas Station	1.25/ L									
Heavy Equipment	$150/hr	$1,500.00	$300.00	$150.00	$150.00	$150.00	$150.00	$150.00	$150.00	$300.00
Diamond Drill	$40/ m	$219.01	$1,536.19	$2,121.41	$1,999.49	$2,828.54	$3,974.59	$1,950.72	$2,487.17	$2,389.63
Helicopter	$1100/ hr									
Loring Labs										
Assaying Rock										
Log in Fee	$0.50									$2.00
Rehomoginize Samples	$1.25									$5.00
Whole Rock ICP - Total Digestion	$60.00									$240.00
30 Element ICP Analyses - Total Digestion	$108.25									$433.00
Specific Gravity Determinations	$32.00									$128.00
Sample Disposal Fee	$1.00									$4.00
Samples Soil										
Log in Fee	$0.50									
Sample Perparation	$4.70									
Barium	$11.00									
Lead & Zinc Geochem	$7.45									
Fireside Labs										
Thin Section Analysis	$200.00									
Specific Gravity Determinations	$25.00									$525.00
Water Solubule Alkaline earthmetals as calcium	$100.00									
Sample Prepartion	$7.00									$147.00
Calgary Rock										
Thin Section preperation	$50.00									
Detailed thin sections analysis	$350.00									
Brief thin sections analysis	$250.00									
Equipment										
Gravity Meter	$175.00									
Base Station	$175.00									
Prep Fee	$55.00									
Survey stakes										
Survey Supplies										
Total Station Survery Equipment (owned By fireside)	$200.00									
Lodging	$ 100 person	$200.00	$200.00	$200.00	$200.00	$200.00	$200.00	$200.00	$200.00	$200.00
Misc.	$ 25 / person									
Food Sub ($50 / person)	$ 50 / person	$100.00	$100.00	$100.00	$100.00	$100.00	$100.00	$100.00	$100.00	$100.00
Report Costs	$1,500									$1,500.00
		$3,743.51	$3,708.19	$4,345.91	$4,021.49	$5,010.54	$6,140.59	$4,020.72	$4,600.42	$8,970.63

10 APPENDIX 1 – LOCATION AND LOCAL GEOLOGY MAPS

Fireside Minerals Location Map

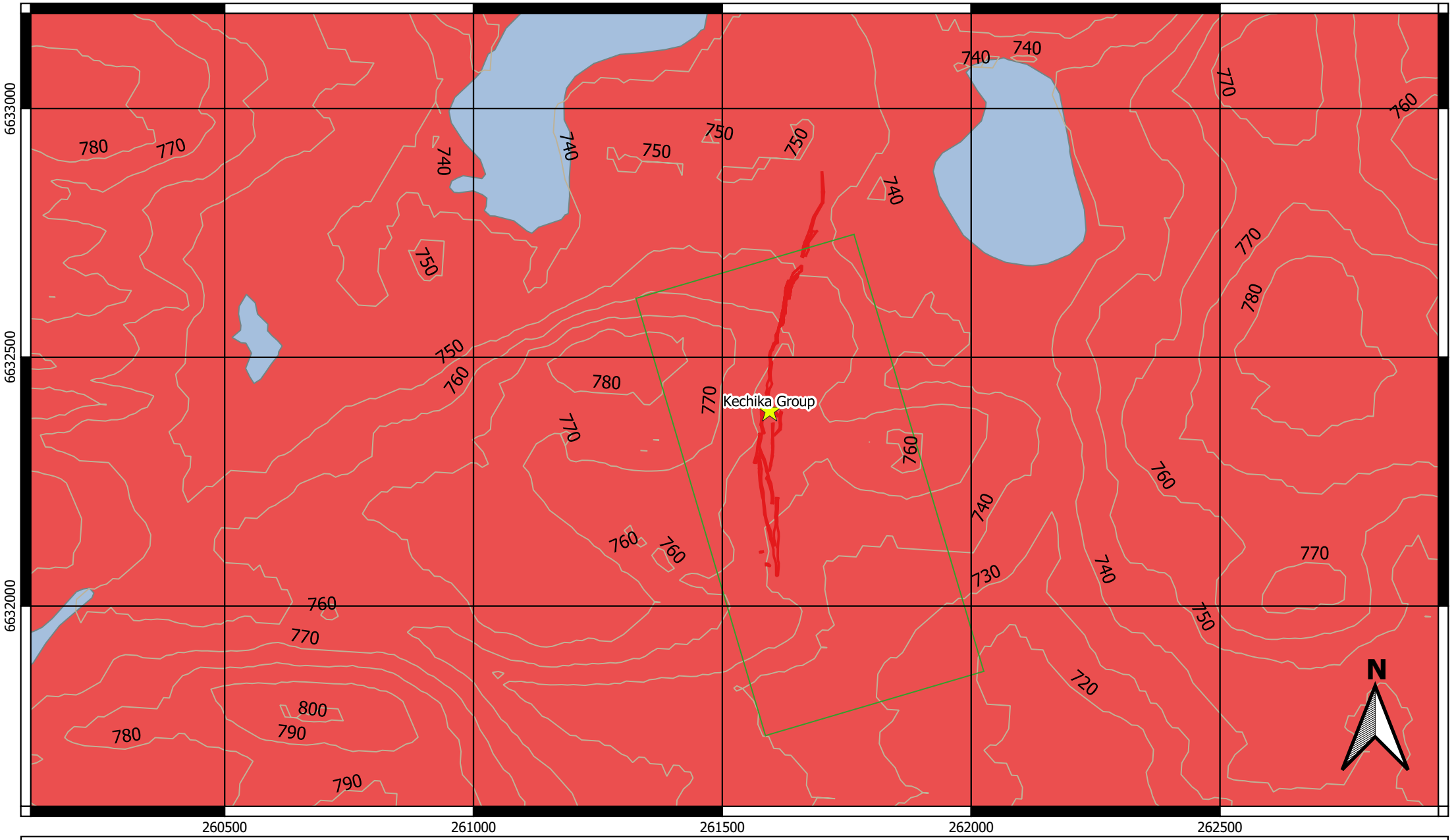
Map Center: 54.4781N 124.7082W

SCALE 1 : 10,000,000

200 0 200 400 600

KILOMETERS

N



Local Geology Map - Moose Barite Deposit
Drawn By: Scott Allan
Date: May 2020
Fireside Minerals Ltd.
Background Geology from BCGS

UTM NAD 83 Zone 9
Scale 1:10000

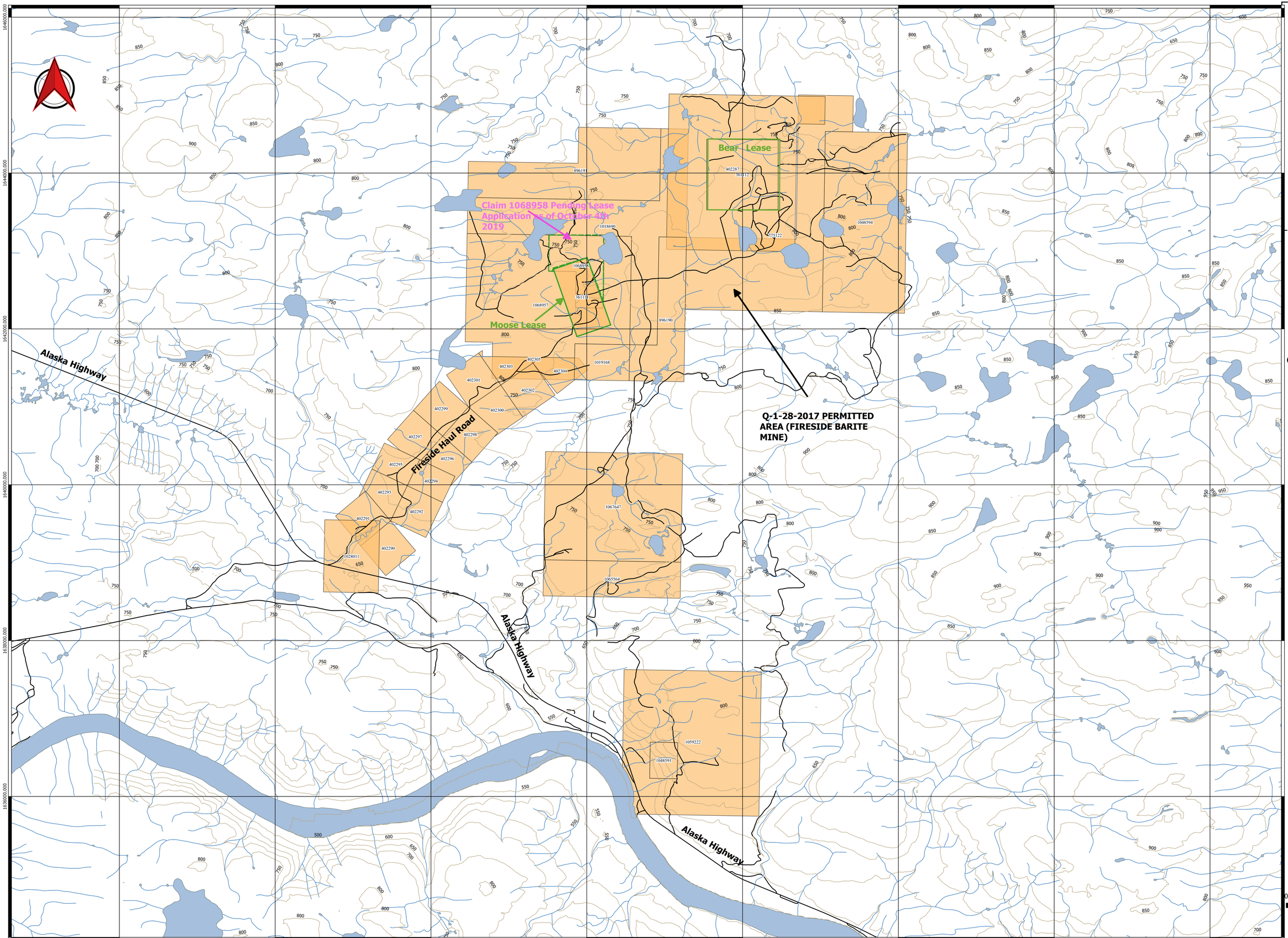
0 250 500 m

Legend

- Moose Barite Deposit Location
- Moose Lease
- Barite Veins
- Contours
- Lakes

Local Geology

- CmOKlc - Kechika Group



Legend

Contour
- 50 m

Claims
- Lease Boundary

Water
- Lakes
- Rivers
- Creeks/Drainages

Roads
- Roads

Total Proposed Disturbance
6.64 ha

Bear Lease 361112
No2. Waste Dump Expansion
2.33 ha

Moose Lease 361111
Haul Road Expansion
0.559 ha
Fines dump Expansion
1.20 ha

Claim 1068957
Coolie Waste Dump 2.547 ha

Recountered Areas
Bear Lease 361112 1.89 ha

Merchanatable Timber Est.
204 m3 (30.802m3/ha)

FIRESIDE MINERALS

Fireside Minerals Limited

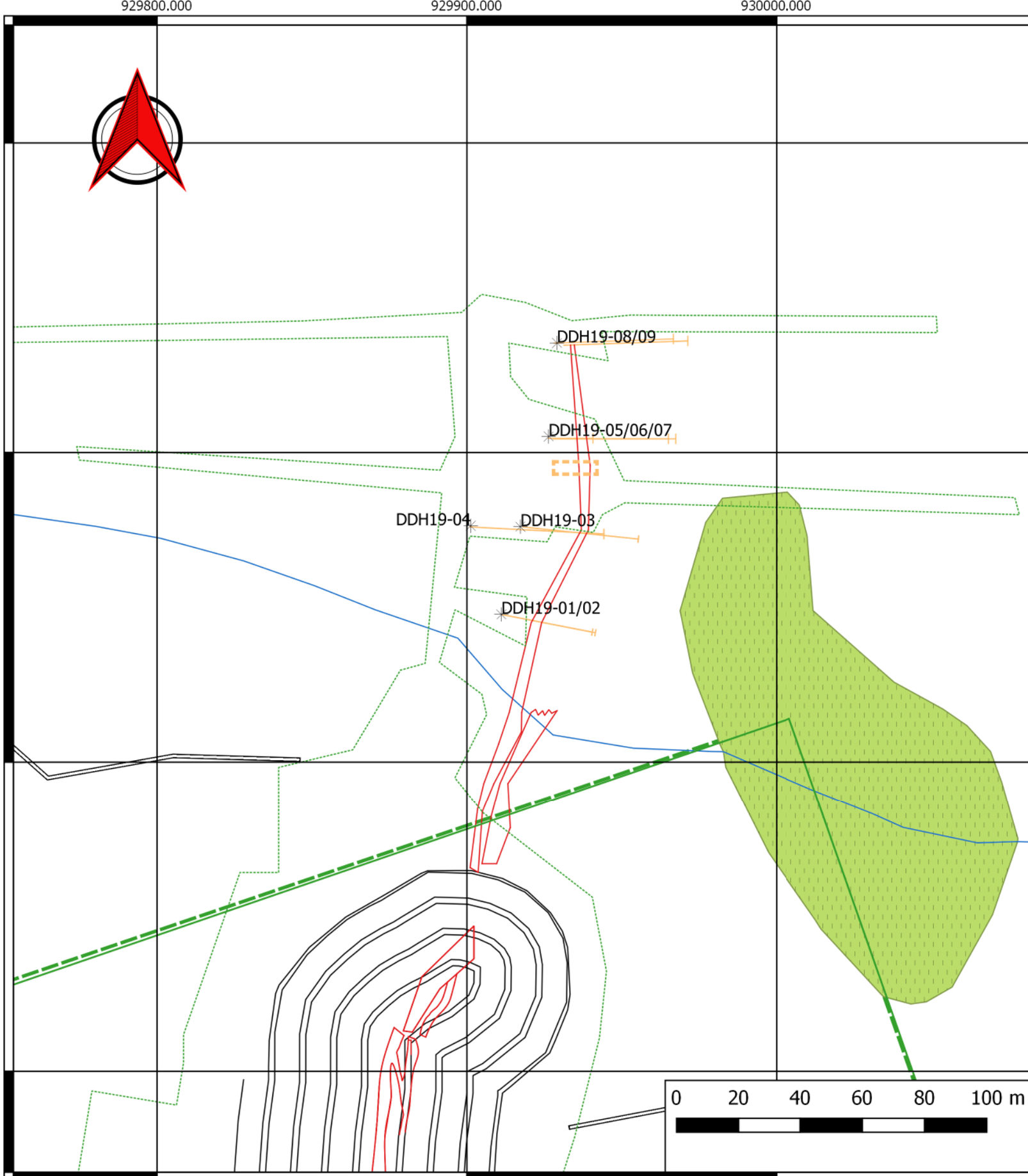
Notice of Work Application

5 year mine plan update

October 2019
Scale: 1:20,000
Mapping By: Scott Allan
Base Mapping provided by DataBC

0 0.5 1 1.5 km

11 APPENDIX 2 - SITE MAPS



Legend

Moose Pit

- Moose Lease 361111
- Drill collars
- 2019 Trenching
- Tree Line
- Barite at Bedrock
- Pending Lease
- Pit Limits
- Roads

Water

- Creeks
- Wetlands

Fireside Minerals Ltd.
2019 Exploraton
Claim 1068957
Drawn by Scott Allan
Base Mapping From
Frount Counter BC
BC Alberts NAD 83
Scale 1:1500

12 APPENDIX 3 – DRILL LOGS AND CROSS SECTIONS

Diamond Drill Log

Dip Test		
	Angle	
Footage	Reading	Corrected

Hole No. DDH19-01	Sheet No. 1/1	Total Depth: 43.28 m
Section: 1,642,945 N	Latitude: 1642947.614	Logged by: Scott Allan
Date Started: Sept 1st .19	Departure: 929911.463	Dip: -45
Date Finished: Sept. 1st .19	Elevation: 736.64	Core Size: NQ
Date Logged: Sept 1st .19	Azimuth: 95˚	

Depth m		Rec	Description	Sample No.	From m	To m	Sample Width	Assay		
From	To							S/G		
0	3.05	--	Casing							
3.05	10.27	5%	Overburden							
10.27	10.97	20%	Fractured barite healed by clay							
10.97	11.34	90%	Tan fault gouge							
11.34	12.80	60%	Black fault gouge							
12.80	13.41	50%	Black siltstone cut by barite veinlets							
13.41	13.72	50%	Bleached silstone cut by barite veinlets							
13.72	14.23	50%	Fault gouge							
14.23	19.66	70%	Siltstone Bleached							
19.66	24.38	60%	Barite	S1 S2 S3	19.96 22.86 24.38	20.11 23.01 24.53	.15 .15 .15	4.29 4.29 4.41		
24.38	31.76	70%	Siltstone cut by barite veins							
31.76	32.19	70%	Barite breccia clasts of siltstone	S4	31.76	32.19	1.03	3.51		
32.19	40.69	80%	Bleached siltstone							
40.69	41.06	80%	Barite quartz breccia							
41.06	43.28	80%	Bleached Siltstone							
			EOH							

Diamond Drill Log

Dip Test		
	Angle	
Footage	Reading	Corrected

Hole No. DDH19-02	Sheet No. 1/2	Total Depth: 59.13 m
Section: 1,642,945N	Latitude: 1642947.614	Logged by: Scott Allan
Date Started: Sept 2.19	Departure: 929911.463	Dip: -60
Date Finished: Sept. 3.19	Elevation: 736.64	Core Size: NQ
Date Logged: Sept 3.19	Azimuth: 95˚	

Depth m		Rec	Description	Sample No.	From m	To m	Sample Width	Assay		
From	To							S/G		
0	6.10		Casing							
6.1	8.38	100%	Porphyritic Diorite Speckled Limonite							
8.38	9.45	20%	Bleached Diorite (1 feet / 4.5')							
9.45	14.63	50%	Banded Siltstone							
14.63	15.48	100%	Quartz Vein Traces of sulphides chalcopyrite + native copper + copper Carbonates							
15.48	17.37	20%	Orange clay "fault gouge"							
17.37	21.79	75%	Orange fault gouge - minor barite grains							
21.79	26.52	100%	Bleached siltstone							
26.52	26.88	100%	Siltstone crosscut by barite veinlets							
26.88	29.72	100%	Barite Trace sulphides	S1	27.28	27.43	0.15	4.37		
29.72	32.77	75%	Barite Very fractured	S2	30.32	30.48	0.17	4.42		

Diamond Drill Log

Dip Test		
	Angle	
Footage	Reading	Corrected

Hole No. DDH19-02	Sheet No. 2/2	Total Depth: 59.13 m
Section: 1,642,945 N	Latitude:	Logged by Scott Allan
Date Started: Sept.2.10	Departure:	Dip: -60
Date Finished: Sept.3.19	Elevation:	Core Size: NQ
Date Logged: Sept.3.19	Azimuth: 95˚	

Depth m		Rec	Description	Sample No.	From m	To m	Sample Width	Assay		
From	To							S/G		
32.77	34.78	100%	Barite very fractured Micro healings with red clay							
34.78	37.80	100%	Barite very fractured Micro healings with red clay							
37.80	40.84	50%	Barite very fractured Micro healings with red clay							
40.84	41.76	100%	Barite	S3	26.88	54.56	27.68	4.38		
41.76	42.98	100%	Fractured barite							
42.98	54.56	100%	Brilliant white barite							
54.56	55.78	20%	Siltstone Cut by barite veinlets							
55.78	57.30	75%	Siltstone							
57.30	59.13	75%	Bleached Siltstone							
			EOH							

Diamond Drill Log

Dip Test		
	Angle	
Footage	Reading	Corrected

Hole No. DDH19-03	Sheet No. 1/2	Total Depth: 38.71 m
Section: 1,642,975 N	Latitude: 1642975.951	Logged by Scott Allan
Date Started: Sept 4.19	Departure: 929918.066	Dip: -45
Date Finished: Sept. 4.19	Elevation: 739.139	Core Size: NQ
Date Logged: Sept 4.19	Azimuth: 90˚	

Depth m		Rec	Description	Sample No.	From m	To m	Sample Width	Assay		
From	To							S.G.		
0	4.57	-	Casing							
4.57	14.48	46%	Glacial Till							
14.48	17.59	100%	Black Fault gouge Black Clay							
17.59	20.12	100%	Tan Fault Gouge Porphyritic diorite host?							
20.12	22.31	65%	Green Fault gouge Barite rich speckled sulphides							
22.31	22.89	100%	Siltstone							
22.89	23.04	100%	Quartz Vein cored with siderite							
23.04	25.45	70%	Siltstone highly fractured by siderite							
25.45	26.73	90%	Siltstone Cut by barite veinlets <50 mm							
26.73	28.62	90%	Barite Siltstone Clasts <100mm	S1	26.73	28.62	1.89	4.33		
28.62	28.77	90%	Tan Siltstone							

Diamond Drill Log

Dip Test		
	Angle	
Footage	Reading	Corrected

Hole No. DDH19-03	Sheet No. 2/2	Total Depth: 38.71 m
Section: 1,642,975 N	Latitude: 1642975.951	Logged by Scott Allan
Date Started: Sept 4.19	Departure: 929918.066	Dip: -45
Date Finished: Sept. 4.19	Elevation: 739.139	Core Size: NQ
Date Logged: Sept 4.19	Azimuth: 90°	

Depth m		Rec	Description	Sample No.	From m	To m	Sample Width	Assay		
From	To							S.G.		
28.77	29.93	90%	Barite Siltstone clasts <30mm	S2	28.77	29.93	1.16m	4.0		
29.93	31.70	40%	Orange fault gouge							
31.70	32.77	70%	Bleached siltstone cut by barite veinlets							
32.77	34.75	100%	Bleached Siltstone							
34.75	38.71	60%	Bleached Siltstone							
			EOH							

Diamond Drill Log

Dip Test		
	Angle	
Footage	Reading	Corrected

Hole No. DDH19-04	Sheet No. 1/4	Total Depth: 78.94 m
Section: 1,642,975 N	Latitude: 1642977.482	Logged by Scott Allan
Date Started: Sept 5.19	Departure: 929902.202	Dip: -45
Date Finished: Sept 5.19	Elevation: 737.97	Core Size: NQ
Date Logged: Sept 5.19	Azimuth: 90˚	

Depth M		Rec	Description	Sample No.	From m	To m	Sample Width	Assay		
From	To							S/G		
0	9.14		Casing							
9.14	9.51		Overburden							
9.51	29.87		Black Siltstone quartz and siderite veins >10 mm average, micro fault at 28.19 100mm displacement							
29.87	32.67		Black fault gouge							
32.67	33.31	70%	Tan diorite cut by barite							
33.31	34.75	50%	Black fault gouge							
34.75	35.14		Quartz breccia Siderite mineralization and siltstone clasts							
35.14	35.94		Barite breccia Clasts of diorite trace sulphides							
35.94	36.58		Diorite with disseminated silica and barite							
36.58	37.49		Bleached diorite							
37.49	38.07		Diorite with disseminated silica and barite							

Diamond Drill Log

Dip Test		
	Angle	
Footage	Reading	Corrected

Hole No. DDH19-04	Sheet No. 2/4	Total Depth: 78.94 m
Section: 1,642,975 N	Latitude: 1642977.482	Logged by Scott Allan
Date Started: Sept 5.19	Departure: 929902.202	Dip: -45
Date Finished: Sept 5.19	Elevation: 737.97	Core Size: NQ
Date Logged: Sept 5.19	Azimuth: 90˚	

Depth M		Rec	Description	Sample No.	From m	To m	Sample Width	Assay		
From	To							S/G		
38.07	39.53		Bleached diorite							
39.53	39.99	30%	Orange fault gouge							
39.99	40.11		Barite Breccia w/silica + sulphides							
40.11	41.39		Bleached diorite							
41.39	42.49		Fault gouge							
42.49	44.01		Black siltstone silica disseminations							
44.01	44.68		Quartz breccia iron rich Siltstone clasts minor chalcopyrite pyrite, sphalerite, and native Sulphur							
44.68	44.99		Dark grey quartz vein							
44.99	46.21		Diorite Cross cut by barite and silica veinlets <50mm							
46.21	48.92		Black fault gouge baritic at 48.62 – 48.92 minor galena							
48.92	49.23		Bleached siltstone							
49.23	49.53		Barite							

Diamond Drill Log

Dip Test		
	Angle	
Footage	Reading	Corrected

Hole No. DDH19-04	Sheet No. 3 / 4	Total Depth: 78.94 m
Section: 1,642,975 N	Latitude: 1642977.482	Logged by Scott Allan
Date Started: Sept 5.19	Departure: 929902.202	Dip: -45
Date Finished: Sept 5.19	Elevation: 737.97	Core Size: NQ
Date Logged: Sept 5.19	Azimuth: 90˚	

Depth M		Rec	Description	Sample No.	From m	To m	Sample Width	Assay		
From	To							S/G		
49.53	55.60		Bleached siltstone Cut by barite veinlets 50.29 -50.60							
55.60	56.94		Barite Minor clasts of diorite	S1	55.60	56.94	1.34	4.23		
56.94	60.11		Grey siltstone Commonly fractured by barite veins <10mm							
60.11	60.84		Barite w/siltstone clasts							
60.84	64.31		Barite	S2	60.84	64.31	3.47	4.35		
64.31	64.71		Orange siltstone Cut by barite veins < 40 mm							
64.71	64.77		Barite							
64.77	66.11		Orange siltstone							
66.11	69.83		Barite	S3	66.11	69.83	3.72	4.29		
69.83	70.87		Fault gouge							
70.87	71.48		Vuggy barite breccia Common sphalerite and galena slasts of Siltstone							

Diamond Drill Log

Dip Test		
	Angle	
Footage	Reading	Corrected

Hole No. DDH19-04	Sheet No. 4 / 4	Total Depth: 78.94 m
Section: 1,642,975 N	Latitude: 1642977.482	Logged by Scott Allan
Date Started: Sept 5.19	Departure: 929902.202	Dip: -45
Date Finished: Sept 5.19	Elevation: 737.97	Core Size: NQ
Date Logged: Sept 5.19	Azimuth: 90˚	

Depth M		Rec	Description	Sample No.	From m	To m	Sample Width	Assay		
From	To							S/G		
71.48	74.07		Diorite Cut by veins of barite							
74.07	74.22		Barite							
74.22	77.27		Bleached siltstone							
77.27	77.36		Barite							
77.36	78.94		Bleached siltstone							
			EOH							

Diamond Drill Log

Dip Test		
	Angle	
Footage	Reading	Corrected

Hole No. DDH19-05	Sheet No. 1 / 2	Total Depth: 52.43 m
Section: 1,643,005 N	Latitude: 1642977.482	Logged by Scott Allan
Date Started: Sept 6.19	Departure: 929902.202	Dip: -45
Date Finished: Sept 6.19	Elevation: 737.97	Core Size: NQ
Date Logged: Sept 6.19	Azimuth: 90˚	

Depth m		Rec	Description	Sample No.	From m	To m	Sample Width	Assay		
From	To							S/G		
0	10.67	--	Casing							
10.67	12.19	10%	Barite + siltstone rubble							
12.19	13.41	50%	Barite + siltstone breccia							
13.41	17.53	40%	Barite	S1	13.41	17.53	4.12	4.35		
17.53	18.01	100%	Fault gouge							
18.01	19.45	100%	Siltstone bleached							
19.45	22.49	100%	Fault gouge							
22.49	24.11	60%	Quartz breccia							
24.11	24.51	100%	Fault gouge							
24.51	24.69	80%	Tan siltstone Cut by barite veinlets <10mm							
24.69	25.05	80%	Barite quartz breccia clasts of siltstone <10mm							

Diamond Drill Log

Dip Test		
	Angle	
Footage	Reading	Corrected

Hole No. DDH19-05	Sheet No. 2/2	Total Depth: 52.43 m
Section: 1,643,005 N	Latitude: 1643004.421	Logged by Scott Allan
Date Started: Sept 6.19	Departure: 929927.462	Dip: -45
Date Finished: Sept 6.19	Elevation: 738.83	Core Size: NQ
Date Logged: Sept 6.19	Azimuth: 90˚	

Depth m		Rec	Description	Sample No.	From m	To m	Sample Width	Assay		
From	To							S/G		
25.05	27.28	80%	Siltstone disseminations of barite quartz iron oxides							
27.28	32.98	90%	Vuggy barite quartz breccia siltstone clasts							
32.98	34.08	100%	Barite	S2	32.98	34.08	1.10	4.21		
34.08	37.64	100%	Tan Siltstone cut by barite veins <10mm							
37.64	39.56	100%	Bleached siltstone							
39.56	43.28	100%	Bleached diorite							
43.28	52.43	100%	Bleached siltstone							
			EOH							

Diamond Drill Log

Dip Test		
	Angle	
Footage	Reading	Corrected

Hole No. DDH19-06	Sheet No. 1/3	Total Depth: 75.29 m
Section: 1,643,005 N	Latitude: 1643004.421	Logged by Scott Allan
Date Started: Sept 7.19	Departure: 929926.271	Dip: -60
Date Finished: Sept. 7.19	Elevation: 738.784	Core Size: NQ
Date Logged: Sept 7.19	Azimuth: 90˚	

Depth M		Rec	Description	Sample No.	From m	To m	Sample Width	Assay		
From	To							S/G		
0.00	6.10		Casing							
6.10	8.38		Overburden							
8.38	18.62		Siltstone bleached							
18.62	19.11		Barite breccia							
19.11	21.82		Fault gouge bleached							
21.82	22.13		Barite breccia clast of siltstone							
22.13	24.05		Siltstone bleached							
24.05	27.89		Barite breccia siltstone clasts (10mmx100m) appx 60% barite							
27.89	29.93		Barite	S1	27.89	32.31	4.42	4.23		
29.93	30.21		Barite breccia							
30.21	32.31		Barite							

Diamond Drill Log

Dip Test		
	Angle	
Footage	Reading	Corrected

Hole No. DDH19-06	Sheet No. 2/3	Total Depth: 75.29 m
Section: 1,643,005 N	Latitude: 1643004.421	Logged by Scott Allan
Date Started: Sept 7.19	Departure: 929926.271	Dip: -60
Date Finished: Sept. 7.19	Elevation: 738.784	Core Size: NQ
Date Logged: Sept 7.19	Azimuth: 90˚	

Depth M		Rec	Description	Sample No.	From m	To m	Sample Width	Assay		
From	To							S/G		
32.31	32.74		Barite breccia							
32.74	41.91		Barite Increasing siltstone clasts at 35.81m cleans up at 39.47 m clay seam at 41.51 m	S2	32.31	41.91	9.6	4.27		
41.91	44.20		Fault gouge bleached							
44.20	47.30		Barite	S3	44.20	56.81	12.61	4.18		
47.30	48.28		Barite breccia low grade							
48.28	54.68		Barite							
54.68	55.35		Barite Breccia Low grade							
55.35	56.81		Barite							
56.81	62.33		Dissmenated barite							
62.33	63.25		Barite	S4	62.33	63.25	0.92	4.01		

Diamond Drill Log

Dip Test		
	Angle	
Footage	Reading	Corrected

Hole No. DDH19-06	Sheet No. 3/3	Total Depth: 75.29 m
Section: 1,643,005 N	Latitude: 1643004.421	Logged by Scott Allan
Date Started: Sept 7.19	Departure: 929926.271	Dip: -60
Date Finished: Sept. 7.19	Elevation: 738.784	Core Size: NQ
Date Logged: Sept 7.19	Azimuth: 90˚	

Depth M		Rec	Description	Sample No.	From m	To m	Sample Width	Assay		
From	To							S/G		
63.25	63.67		Bleached Siltstone dissmenated quartz and barite							
63.67	66.23		Barite minor clay fragments of siltstone	S5	63.67	66.23	2.56	4.26		
66.23	67.70		Grey Siltstone							
67.70	67.81		Barite w/fragments of grey siltstone							
67.82	68.88		Grey Siltstone							
68.88	71.26		Barite brilliant white	S6	68.88	71.26	2.38	4.34		
71.26	72.24		Siltstone w/disseminated barite							
72.24	73.76		Barite	S7	72.24	73.76	1.52	4.28		
73.76	75.44		Siltstone Bleached							
			EOH							

Diamond Drill Log

Dip Test		
	Angle	
Footage	Reading	Corrected

Hole No. DDH19-07	Sheet No. 1/1	Total Depth: 20.42 m
Section: 1,643,005 N	Latitude: 1643004.421	Logged by: Scott Allan
Date Started: Sept 7.19	Departure: 929926.271	Dip: -45
Date Finished: Sept. 7.19	Elevation: 738.784	Core Size: NQ
Date Logged: Sept 7.19	Azimuth: 90˚	

Depth M		Rec	Description	Sample No.	From m	To m	Sample Width	Assay		
From	To							S/G		
0	9.14		Casing							
9.14	10.52	50%	Overburden							
10.52	15.55	20%	Fault Gouge							
15.55	19.51	5%	Barite Breccia							
19.51	20.42	5%	Fault Gouge							
			EOH							

Diamond Drill Log

Dip Test		
	Angle	
Footage	Reading	Corrected

Hole No. DDH19-08	Sheet No. 1/1	Total Depth: 46.94 m
Section: 1,643,035 N	Latitude: 1643035.342	Logged by: Scott Allan
Date Started: Sept 8.19	Departure: 929931.291	Dip: -45
Date Finished: Sept. 8.19	Elevation: 740.587	Core Size: NQ
Date Logged: Sept 8.19	Azimuth: 88°	

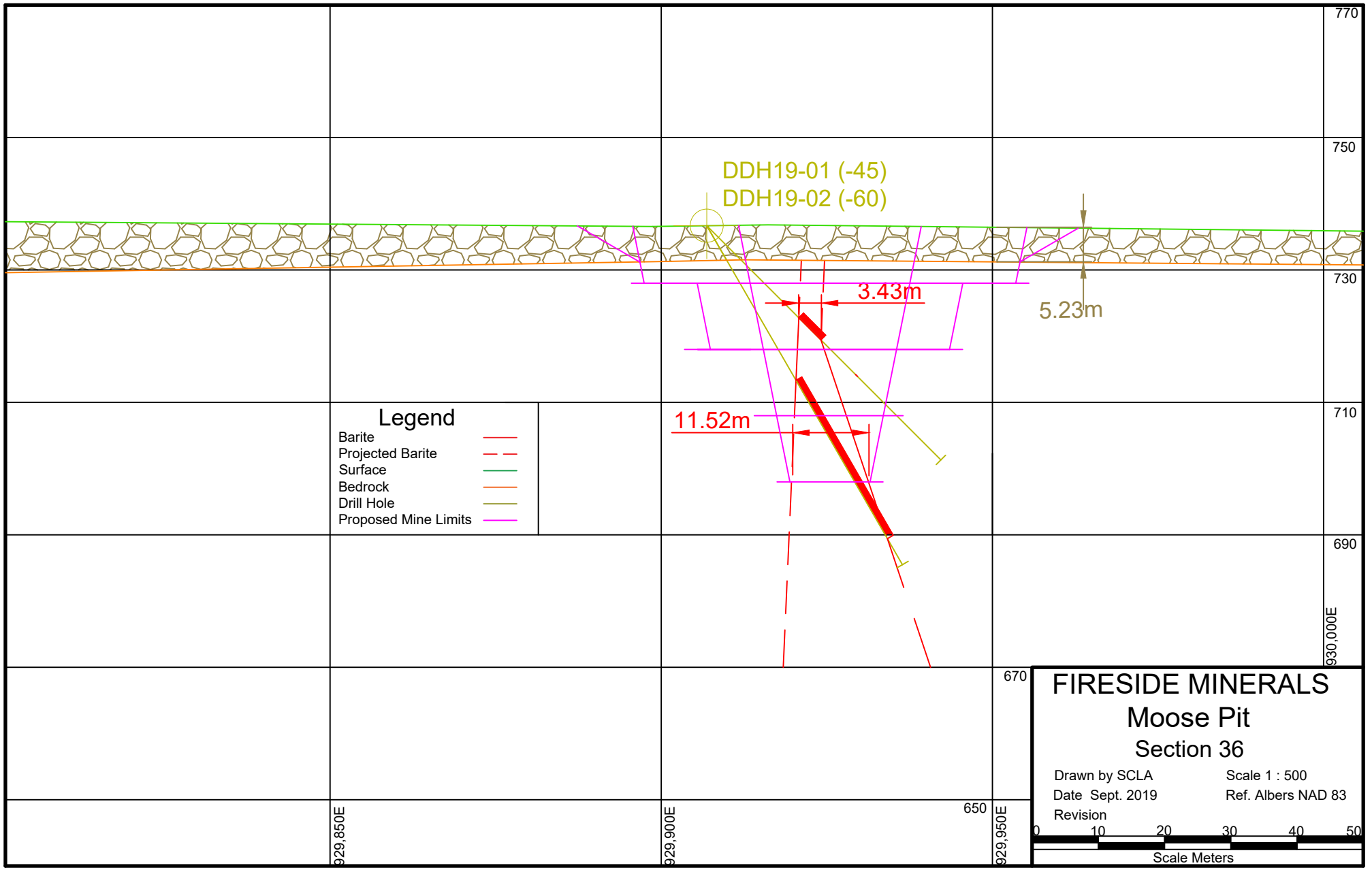
Depth M		Rec	Description	Sample No.	From m	To m	Sample Width	Assay		
From	To							S/G		
0	7.62		Casing							
7.62	30.94		Overburden							
30.94	39.93		Fault gouge – orange							
39.93	43.74	50%	Tan siltstone Commonly fractured by barite veins and clay seams 1cm width							
43.74	44.20	40%	Bleached diorite							
44.20	45.05		Green diorite							
45.05	45.54		Barite							
45.54	46.94		Bleached siltstone							
			EOH							

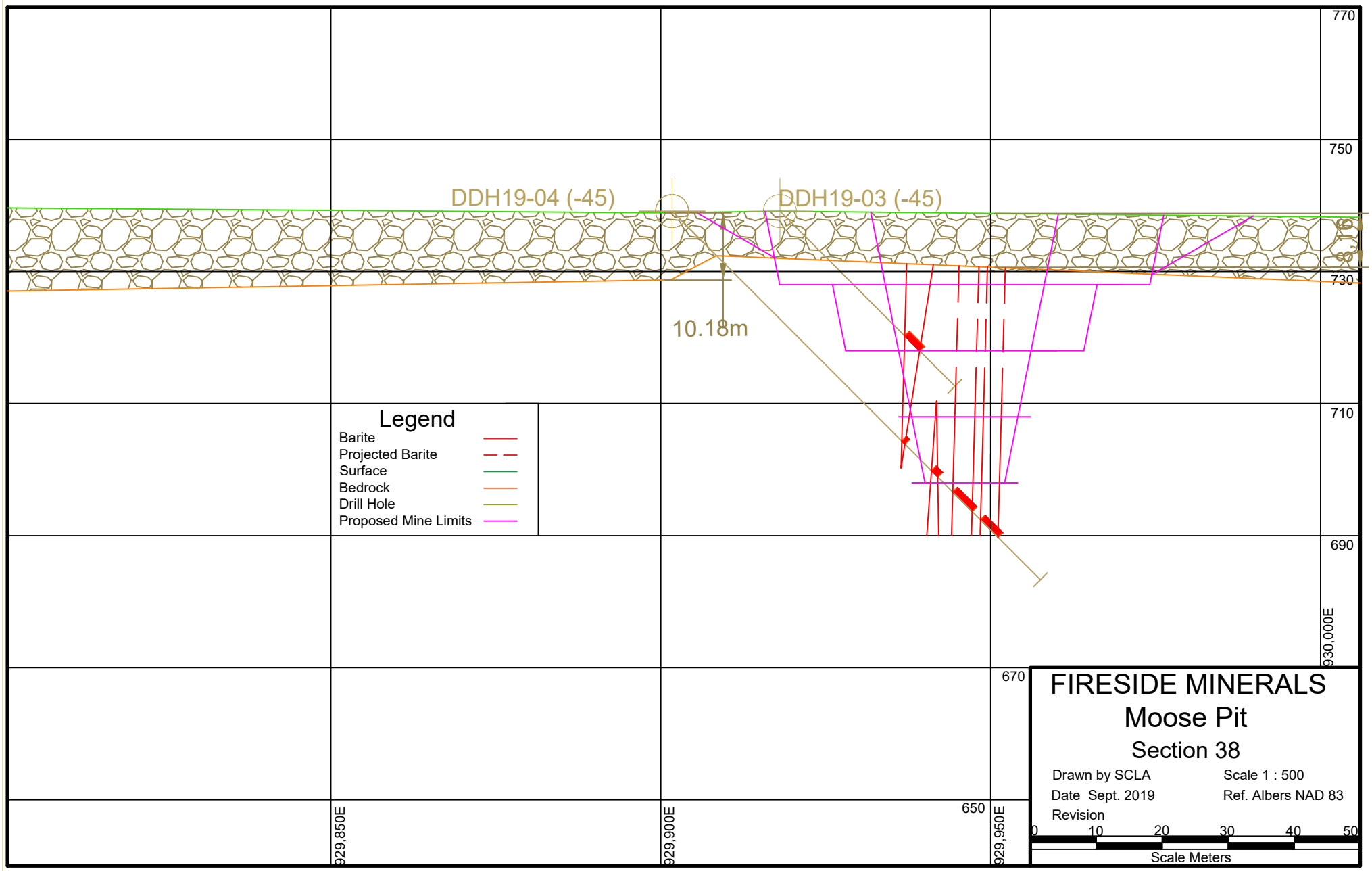
Diamond Drill Log

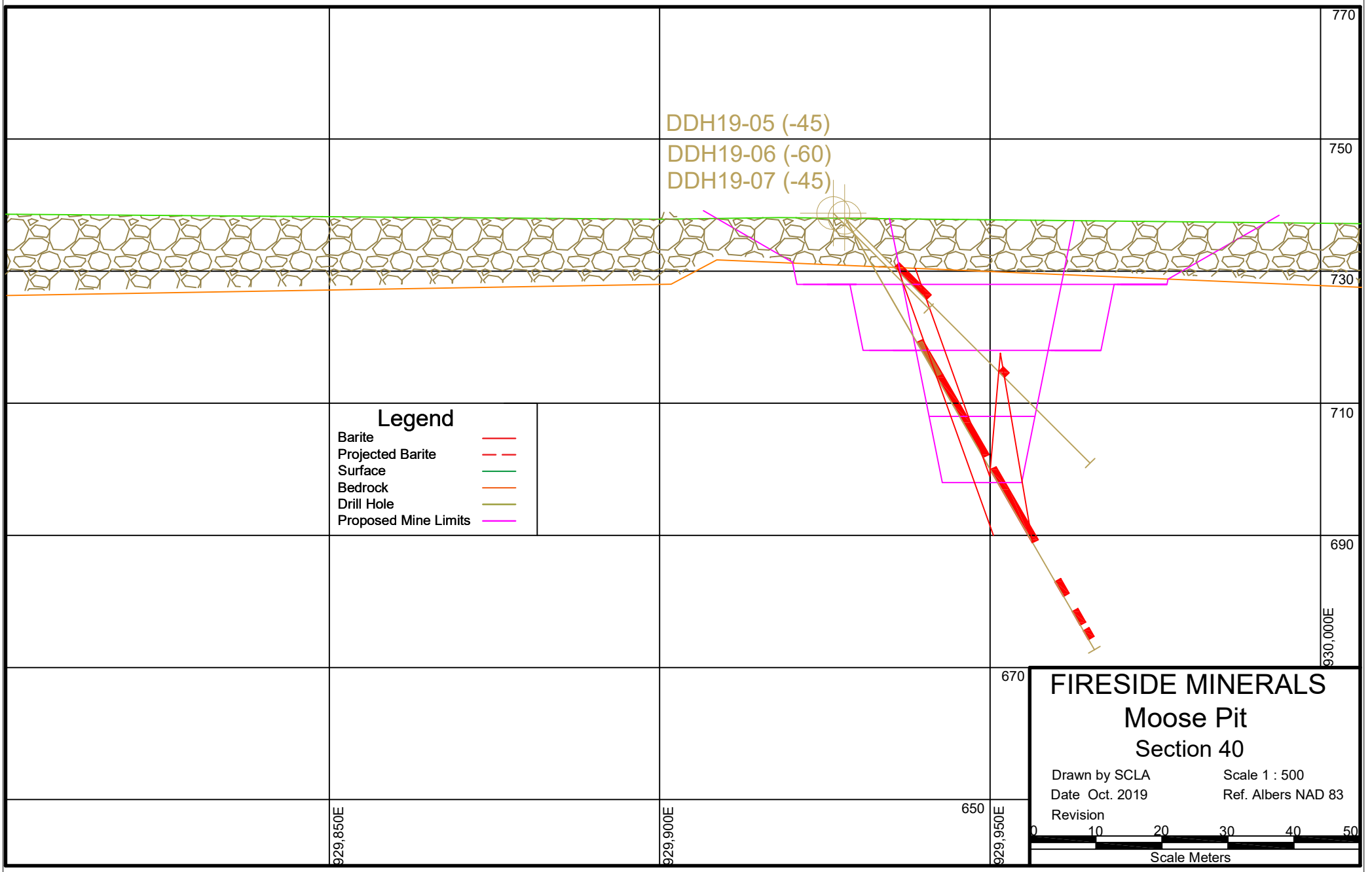
Dip Test		
	Angle	
Footage	Reading	Corrected

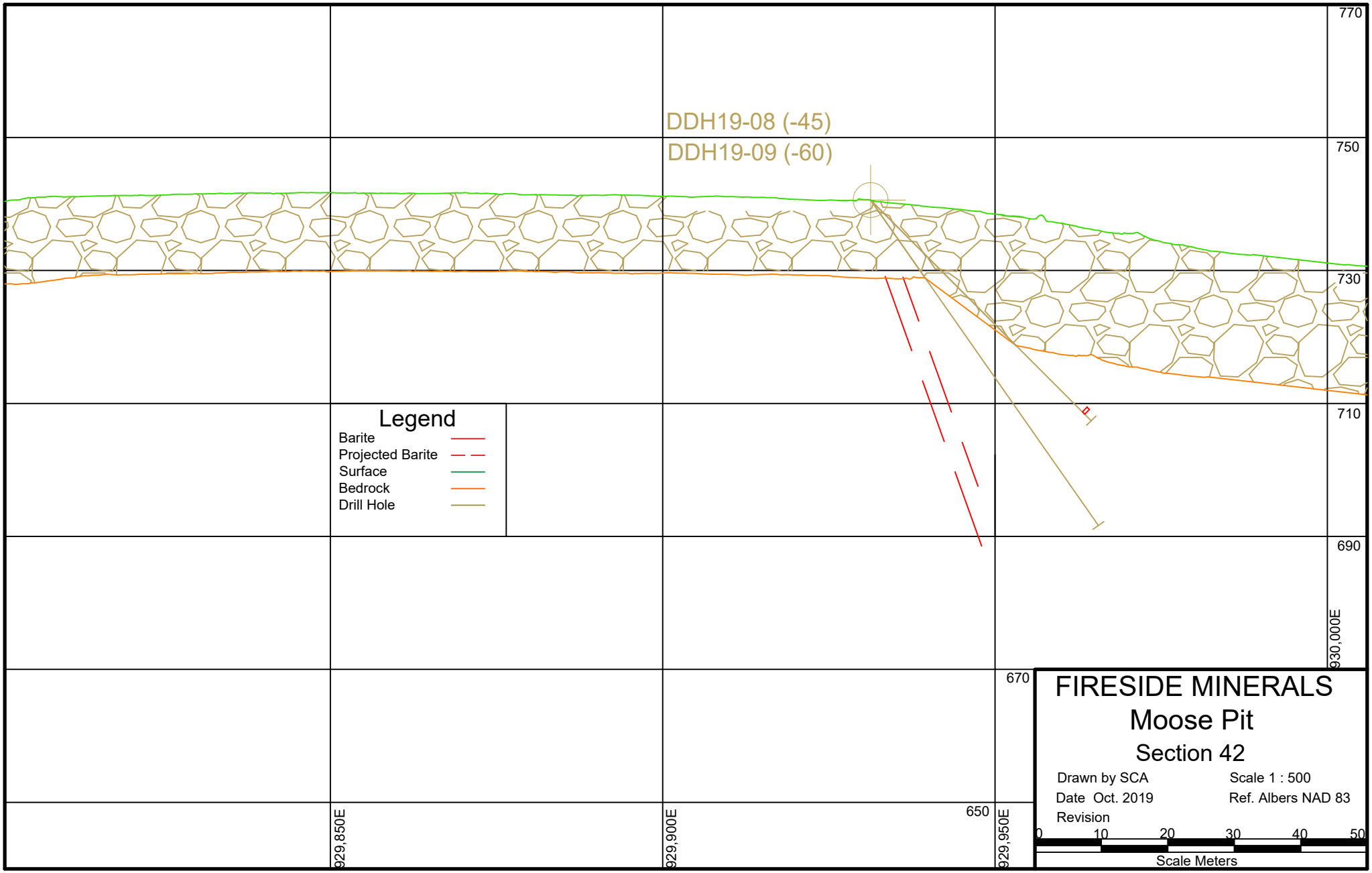
Hole No. DDH19-09	Sheet No. 1/1	Total Depth: 59.74 m
Section: 1,643,035 N	Latitude: 1643035.342	Logged by: Scott Allan
Date Started: Sept 9th .19	Departure: 929928.291	Dip: -50
Date Finished: Sept. 9th .19	Elevation: 738.784	Core Size: NQ
Date Logged: Sept 9th .19	Azimuth: 88°	

Depth M		Rec	Description	Sample No.	From m	To m	Sample Width	Assay		
From	To							S/G		
0	11.28		Casing							
11.28	14.33		Overburden							
14.33	21.64		Bleached siltstone							
21.64	25.45		Black silstone							
25.45	31.70		Bleached silstone							
31.70	32.77		Black Siltstone							
32.77	35.97		Bleached siltstone trace barite veinlets <5mm							
35.97	39.38		Fault gouge Trace barite							
39.38	40.23		Bleached silstone							
40.23	43.43		Black siltstone							
43.43	55.47		Bleached siltstone							
55.47	59.74		Siltstone commonly cut by barite veinlets							
			EOH							


770
750
730
710
690
670
650
DDH19-01 (-45)
DDH19-02 (-60)
3.43m
11.52m
5.23m
Legend
Barite
Projected Barite
Surface
Bedrock
Drill Hole
Proposed Mine Limits
929,850E
929,900E
929,950E
930,000E
FIRESIDE MINERALS
Moose Pit
Section 36
Drawn by SCLA
Scale 1 : 500
Date Sept. 2019
Ref. Albers NAD 83
Revision
0 10 20 30 40 50
Scale Meters


DDH19-04 (-45)
DDH19-03 (-45)
10.18m
Legend
Barite
Projected Barite
Surface
Bedrock
Drill Hole
Proposed Mine Limits
770
750
730
710
690
670
650
929,850E
929,900E
929,950E
930,000E
FIRESIDE MINERALS
Moose Pit
Section 38
Drawn by SCLA
Date Sept. 2019
Revision
Scale 1 : 500
Ref. Albers NAD 83
0 10 20 30 40 50
Scale Meters


DDH19-05 (-45)
DDH19-06 (-60)
DDH19-07 (-45)
770
750
730
710
690
670
650
930,000E
929,850E
929,900E
929,950E
Legend
Barite
Projected Barite
Surface
Bedrock
Drill Hole
Proposed Mine Limits
FIRESIDE MINERALS
Moose Pit
Section 40
Drawn by SCLA
Scale 1 : 500
Date Oct. 2019
Ref. Albers NAD 83
Revision
0 10 20 30 40 50
Scale Meters


DDH19-08 (-45)
DDH19-09 (-60)
770
750
730
710
690
670
650
929,850E
929,900E
929,950E
930,000E
Legend
Barite
Projected Barite
Surface
Bedrock
Drill Hole
FIRESIDE MINERALS
Moose Pit
Section 42
Drawn by SCA
Scale 1 : 500
Date Oct. 2019
Ref. Albers NAD 83
Revision
0 10 20 30 40 50
Scale Meters

13 APPENDIX 4 - ASSAY RESULTS

Loring Laboratories Ltd.

6835 8 st. N.E.,
Calgary Alberta T2E 7H7
Tel: 274-2777 Fax: 275-0541
info@loringlabs.net

ISO9001:2015 Certified

TO: Fireside Minerals
Box 32069 West Bank BC
V4T 3G2

File No : RC19-0125
Date : Nov. 14, 2019

Certificate of Assay

Attn: Scott Allan

Sample No.	$BaSO_4$ %	S.G.
"Assay Analysis"		
DDH19-03 S1	94.67	4.42
DDH19-04 S1	92.29	4.32
DDH19-06 S1	89.63	4.25
DDH19-06 S3	88.78	4.22
STD (51.03)	51.87	
Blank	0.00	

Methodology: BaSO4 by wet chemistry gravimetric method.

Received Date: Oct 24, 2019

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

Assayer

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

ISO9001:2015 Certified

Loring Laboratories Ltd.

6835 8 St N.E.,
Calgary Alberta T2E 7H7
Tel: 403- 274-2777 Fax: 403-275-0541
loringlabs@telus.net

TO: Fireside Minerals
Box 32069 West Bank BC
V4T 3G2

Attn: Scott Allan

File No : RC19-0125
Date : Nov. 14, 2019

30 ELEMENT ICP ANALYSIS

Sample No.	Ag ppm	Al %	As ppm	Ba ppm	Bi ppm	Ca %	Cd ppm	Co ppm	Cr ppm	Cu ppm	Fe %	K %	La ppm	Mg %	Mn ppm	Mo ppm	Na %	Ni ppm	P %	Pb ppm	Sb ppm	Sc ppm	Sr ppm	Th ppm	Ti %	U ppm	V ppm	W ppm	Zn ppm	Zr ppm
DDH19-03 S1	2.0	0.04	1	>10000	<1	0.02	<1	1	4	30	0.09	0.06	1	0.01	13	<1	<0.01	1	<0.01	14	<1	<1	319	<1	<0.01	<1	1	<1	49	1
DDH19-04 S1	2.0	0.10	2	>10000	<1	0.03	<1	1	<1	33	0.11	0.07	1	0.01	85	<1	0.01	1	<0.01	43	<1	<1	252	<1	<0.01	<1	1	2	93	1
DDH19-06 S1	2.0	0.21	1	>10000	<1	0.02	<1	2	4	33	0.14	0.12	1	0.02	5	1	0.01	4	<0.01	22	2	<1	430	<1	0.01	<1	3	1	70	3
DDH19-06 S3	2.0	0.29	1	>10000	<1	0.02	1	3	6	43	0.22	0.16	2	0.03	97	1	0.01	5	<0.01	45	<1	<1	347	<1	0.01	<1	3	2	173	5
Blank	<0.5	<0.01	<1	<1	<1	<0.01	<1	<1	<1	<1	<0.01	<0.01	<1	<0.01	<1	<1	<0.01	<1	<0.01	<1	<1	<1	<1	<1	<0.01	<1	<1	<1	<1	<1

* 0.5 gram sample is near total digested with multi acid and ICP finish, Ag by AA.

* Samples received on Oct 24, 2019

Certified by:

ISO9001:2015 Certified

Loring Laboratories Ltd.

6835 8 st. N.E.,
Calgary Alberta T2E 7H7
Tel: 403- 274-2777 Fax: 403-275-0541
info@loringlabs.net

File No : RC19-0125
Date : Nov. 14, 2019

TO: Fireside Minerals
Box 32069 West Bank BC
V4T 3G2

Attn: Scott Allan

Whole Rock ICP ANALYSIS

Sample I.D.	Al_2O_3 %	$BaSO_4$ %	CaO %	Cr ppm	Fe_2O_3 %	K_2O %	MgO %	MnO %	Na_2O %	Ni ppm	P_2O_5 %	SO_3 %	SiO_2 %	Sr ppm	TiO_2 %	V ppm	LOI@1000˚C %	SUM %
DDH19-03 S1	0.08	94.67	0.03	1	0.12	0.07	0.01	0.00	0.01	1	0.00	0.39	3.82	324	0.00	<1	0.24	99.44
DDH19-04 S1	0.17	92.29	0.04	1	0.14	0.09	0.02	0.01	0.02	1	0.01	0.42	5.69	254	0.00	1	0.32	99.22
DDH19-06 S1	0.37	89.63	0.04	0	0.19	0.15	0.03	0.00	0.02	3	0.01	0.41	8.09	439	0.01	2	0.38	99.33
DDH19-06 S3	0.53	88.78	0.03	2	0.30	0.19	0.04	0.01	0.02	4	0.01	0.42	8.50	346	0.02	4	0.45	99.30

* Samples received on Oct 24, 2019
* 0.5 gm sample is near total digested with multi acid and ICP finish.
* $BaSO_4$ and SiO_2 values by wet chemistry gravimetric assay method.

Certified by: _____