

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)]: Diamond Drilling

TOTAL COST: \$ 57,065

AUTHOR(S): Scott Allan

SIGNATURE(S): 

NOTICE OF WORK PERMIT NUMBER(S)/DATE(S):

YEAR OF WORK: 2014

STATEMENT OF WORK - CASH PAYMENTS EVENT NUMBER(S)/DATE(S): 5522750 , September 9th - 15 th

PROPERTY NAME: Fireside, Moose

CLAIM NAME(S) (on which the work was done): Lynx 1 (386812)

COMMODITIES SOUGHT: Barite

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

MINING DIVISION: Liard

NTS/BCGS: 094M14E,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, West Bank, BC, Canada, V4T- 3G2

OPERATOR(S) [who paid for the work]:

1) Fireside Minerals Ltd.

2)

MAILING ADDRESS:

Box 32069, West Bank, 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

TYPE OF WORK IN THIS REPORT	EXTENT OF WORK (IN METRIC UNITS)	ON WHICH CLAIMS	PROJECT COSTS APPORTIONED (incl. support)
<b>GEOLOGICAL (scale, area)</b>			
Ground, mapping	_____	_____	_____
Photo interpretation	_____	_____	_____
<b>GEOPHYSICAL (line-kilometres)</b>			
<b>Ground</b>			
Magnetic	_____	_____	_____
Electromagnetic	_____	_____	_____
Induced Polarization	_____	_____	_____
Radiometric	_____	_____	_____
Seismic	_____	_____	_____
Other	_____	_____	_____
Airborne	_____	_____	_____
<b>GEOCHEMICAL (number of samples analysed for...)</b>			
Soil	_____	_____	_____
Silt	_____	_____	_____
Rock	_____	_____	_____
Other	_____	_____	_____
<b>DRILLING (total metres; number of holes, size)</b>			
Core 471.5, 8 holes , NQ		386812	57,065
Non-core	_____	_____	_____
<b>RELATED TECHNICAL</b>			
Sampling/assaying	_____	_____	_____
Petrographic	_____	_____	_____
Mineralographic	_____	_____	_____
Metallurgic	_____	_____	_____
<b>PROSPECTING (scale, area)</b>			
<b>PREPARATORY / PHYSICAL</b>			
Line/grid (kilometres)	_____	_____	_____
Topographic/Photogrammetric (scale, area)	_____	_____	_____
Legal surveys (scale, area)	_____	_____	_____
Road, local access (kilometres)/trail	_____	_____	_____
Trench (metres)	_____	_____	_____
Underground dev. (metres)	_____	_____	_____
Other	_____	_____	_____
<b>TOTAL COST:</b>			<b>\$57,065</b>

Report  
On the Diamond Drilling  
Of the  
Lynx 1 Claim  
Moose Barite Project

BC Geological Survey  
Assessment Report  
35100

Fireside Minerals  
Claim 386812 (Lynx 1)

Situated at Kilometer 850 of the Alaska Highway

Liard Mining Division

N.T.S. 94M/14

Latitude 59° 45' 50" N Longitude 127° 14' 40" W

Report by:

Scott Allan

(G.I.T)

Nov 19<sup>th</sup>, 2014

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## **Introduction**

A 500 meter diamond drill program was laid out and executed from September 9<sup>th</sup> – 14<sup>th</sup> 2014. This drilling was designed to test an off lease extension of the Moose Barite vein, encountered in the 2013 drilling program and which indicated a displaced vein. The Moose vein has been drilled along strike for 700 meters with the southern portion of the vein commercially producing barite intermittently from 1986 – 1997. At this time an economic prefeasibility study is being carried out on that portion of the Moose vein that is covered by the Moose production lease (361111).

Eight NQ diamond drill holes were drilled from 2 pads totalling 471.5 meters. This report will detail the findings and make recommendations for further exploration programs to further extended mineralization in this area. The author was on site from August – September to mark up locations of drilling, monitor coring, log core and do final pick-ups. My work was reviewed and oversaw by Ed Craft a mining engineer and Snowden consulting group. Drilling was completed by highly experienced driller with nothing unorthodox to affect the results. Drill core from this program is stored at the fireside mine site.

## **Summary and Conclusions**

The diamond drill program was successful in delineating barite in the Lynx 1 claim (386812). Barite mineralization in the area is a massive homogenous vein with sparse sulphides assays showed an average specific gravity of 4.23. The vein indicated on the Lynx claim appears to be striking 18° N. Muskeg in the region does not allow for trenching and as such the veins are only indicated to 20 meters below surface. This region of the Lynx appears to be widening and will be the target of small exploration programs in subsequent years. Two options for exploration are proposed

### Option A)

A series of diamond drill programs, the first drill program will consist of 5 drill pads totalling 500 m with the potential to prove an additional 150 meters of strike length in the Moose Zone. Depending on the success of this program additional drilling may be recommended.

### Option B)

Carry out a gravity survey with a proposed baseline of 570 meters with twenty gravity lines. This program would have the ability to outline the main ore body as well as any additional anomalies, and estimate the potential resource to the north in the moose. After assessing the survey a drill program would be designed to prove the resource.

## **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 Lynx claim vein extension can be accessed by following 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 located at Lat. 59° 45' 30"N and Long. 127° 14' 40"W.

## Claims

The Moose Barite Deposit is located on the Moose Lease and the Lynx 1 Claim. The claims are shown on the Claim Map in Appendix 1.

Name	Tenure #	Sub-type	Size Ha.	Issue Date	Good to Date	Status	Owner	Ownership
	361111	Lease	41.8	1998/jun/02	2015/Jun/02	Good	Fireside Minerals LTD.	100%
Lynx 1	386812	Claim	400	2001/may/22	2015/may/08	Good	Fireside Minerals LTD.	100%

## General Setting

The Moose barite deposit is located in the rolling hills of the Liard Plains roughly 745 meters above sea level, 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, lodgepole pine and birch dominates the area as re-growth after a forest fire decades ago. Exploration trails in the region have thick regrowth of willow and alder. Glacial till blankets the region varying from 1-15 meters providing very little in the way of outcropping. The Liard River is located 7.3 kilometers south west and is the most striking geographic feature of this region.

## Local Geology and Mineralization

The Moose Zone consists of a steeply dipping vein system within a north-trending braided fault zone. The veins commonly pinch and swell over 700 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. Pods of Pb-Zn-Cu sulphides commonly occur in the Moose vein and at this time appear to have no focussing mechanism.

## Drill Program

In 2013, 4 diamond drill holes from two pads intersected continuous barite from 30 meters to 70 meters below surface with a dextral offset from the main vein. The 2014 program was designed to confirm the behaviour of the vein from 20 to 30 meters below surface with fan holes utilized to understand offset from the main. Holes were laid out by a Leica total station and prism using BC Albers NAD 83 azimuth was determined by compass using a declination of 21 degrees west. A total of eight drill holes from 2 pads were completed totalling 471.5 meters. Drill core from this program is stored at the fireside mine site.

Hole No	Latitude	Departure	Elevation	Azimuth	Dip	Length	Horizontal	Vertical	Comments
DD14-28	1,642,916.37	929897.45	736.67	45°	-45.00	45.11	31.90	-31.8976	Moose Vein
DD14-29	1,642,916.60	929897.07	736.57	90°	-45.00	47.24	33.41	-33.4066	Moose Vein
DD14-30	1,642,916.60	929897.07	737.32	90°	-58.00	66.45	35.21	-56.3528	Moose Vein
DD14-31	1,642,893.03	929888.30	737.28	90	-45.00	50.29	35.56	-35.5604	Moose Vein
DD14-32	1,642,893.03	929888.30	737.28	60	-45.00	72.54	51.29	-51.2935	Moose Vein
DD14-33	1,642,893.03	929888.30	737.28	60	-60.00	78.41	39.21	-67.9051	Moose Vein
DD14-34	1,642,893.43	929888.47	737.29	120	-45.00	51.05	36.10	-36.0978	Moose Vein
DD14-35	1,642,893.43	929888.47	737.29	120	-60.00	60.35	30.18	-52.2646	Moose Vein
						<b>471.5</b>			

Figure 1 Drill Hole Collar Location - BC Albers NAD 83

Hole No	Latitude	Departure	Elevation	Azimuth	Dip	Length	Horizontal	Vertical	Comments
DD14-28	6626426.355	598590.32	736.67	45°	-45.00	45.11	31.90	-31.8976	Moose Vein
DD14-29	6626426.569	598589.93	736.57	90°	-45.00	47.24	33.41	-33.4066	Moose Vein
DD14-30	6626426.569	598589.93	737.32	90°	-58.00	66.45	35.21	-56.3528	Moose Vein
DD14-31	6626402.591	598582.23	737.28	90°	-45.00	50.29	35.56	-35.5604	Moose Vein
DD14-32	6626402.591	598582.23	737.28	60°	-45.00	72.54	51.29	-51.2935	Moose Vein
DD14-33	6626402.591	598582.23	737.28	60°	-60.00	78.41	39.21	-67.9051	Moose Vein
DD14-34	6626402.999	598582.38	737.29	120°	-45.00	51.05	36.10	-36.0978	Moose Vein
DD14-35	6626402.999	598582.38	737.29	120°	-60.00	60.35	30.18	-52.2646	Moose Vein
						<b>471.5</b>			

Figure 2 Drill Hole Collar Location - UTM NAD 83

## Drill Results

### Section 1,642,916 N (BC ALBERS)

DDH14-28 was drilled at a 45 degree azimuth to extend the barite mineralization past 1,642,916 N this hole failed to intersect any barite, despite encountering three large fault zones.

DDH14-29 encountered 1.5 m of core length barite followed by 9.25 m of barite

DDH14-30 intersected 10 meters of core length barite followed by three smaller intersections ranging from 1 to 3.5 meters.

### Section 1,643,893 N (BC ALBERS)

DDH14-31 intersected three zones of barite the first being >1m the second being 2.6 m and the third being 2.0 meters

DDH14-32 intersected one barite vein for 27.8 m.

DDH14-33 this hole intercepted two veins separated by 1.7 meters the first vein encounter measured 14.2 m and the second vein measured 5.64 meters.

DDH14-34 encountered 2 veins the first vein in core length measured 2.35 meters and the second vein measured 9.25 meters.

DDH14-35 encountered 2 veins the first vein measured 2.51 m and the second vein measured 7.64 m.

From these results it is conclusive that the vein is open to the north in the Lynx claim.

**Assaying:**

Since this project deals with an industrial mineral contained within a homogenous vein sampling is much less sensitive than that of a metallic deposit. Assaying of the veins was done over barite intervals by randomly sampling 0.15 m pieces of whole core to check for consistency of specific gravity (SG). This was done on site using a 1000 ml graduated cylinder and a 6000 gram scale accurate to .1 of a gram. The following equation was used to determine specific gravity.

$$\text{Specific Gravity} = \frac{M}{V_f - V_i}$$

$M = \text{Mass (g)}, V_i = \text{Volume initial (ml)}, V_f = \text{Volume final (ml)}$ ,

After testing a simple average was taken of the samples to represent the specific gravity of the intersection. To verify this method broken core was taken over intervals in drill holes 30, 32 and 33, these samples were sent to Loring Laboratories of Calgary, Alberta and assayed for total oxides %BaSO4 and heavy metals. The results of these assays were used in conjunction with on lease assays to estimate %BaSO4 and SiO2 over the intersections, the results of %SiO2 estimates are highlighted in table 2. A small disagreement in SG was determined between data sets, thus the more conservative data set was used for tonnage estimation.

SAMPLE I.D.	BaSO4%	SiO2%	Specific Gravity	Cu (ppm)	Pb (ppm)	Zn (ppm)	Cd (ppm)
DDH14-30-AS1	91.9	7.38	4.28	25	10	737	3
DDH14-32-AS1	94.32	4.33	4.39	26	782	300	1
DDH14-33-AS1	96.38	2.06	4.46	12	23	61	<1

Table 1. Results obtained from Loring Laboratories of Calgary, Alberta

Hole ID#	Fireside Labs S.G.	Loring Labs S.G.	Estimated %SiO2	Actual %SiO2 (Loring Labs)
DD14-29	4.08	-	10.06	-
DD14-30	4.35	-	2.16	-
DD14-30	4.22	-	5.27	-
DD14-30	4.18	-	6.52	-
DD14-30	-	4.28	-	7.38
DD14-31	4.27	-	4.01	-
DD14-31	4.14	-	8.08	-
DD14-32	4.26	4.39	4.14	4.33
DD14-33	4.34	4.46	2.19	2.06
DD14-33	4.18	-	6.69	-
DD14-34	4.33	-	2.47	-
DD14-34	4.23	-	5.05	-
DD14-35	4.22	-	5.42	-
DD14-35	4.27	-	3.88	-

**Avg. 4.23 4.85**

Table 2. Fireside Labs Vs Loring Labs Silica Estimations



**Discussion:**

Drilling has indicated that there is widening barite mineralization extending into the Lynx claim. Plotting the sections with the 2014 drilling its apparent that there are two veins that intermittently coalesce. The first vein to the east swells near surface and pinches at 710 m ASL, A second vein is indicated to the west appears to widen to with depth. These veins have been projected to have an 86 degree dip striking 18 degrees off of north showing a saleable product with an average of SG of 4.23 and silica content between 2.5 – 10 % of the whole rock composition. Muskeg north of section 1642896 N masks bed rock and make drilling difficult. A program should be designed to minimize disturbance in this area. During the summer a traverse in the muskeg region using a hip chain found that the region ends 30 meters north at 164946 N. There is a good indication that the barite veining extends past 1642916 N and as such drilling should continue north in a series of small exploration programs.

A drilling program consisting of 500 meters to prove up an additional 150 meters of strike north of Latitude 1,642,946 N. has been proposed starting at 1642946 N. Alternatively a gravity profile could be obtained from 1642916N 500 m north using a local drainage as a boundary. A gravity profile would allow for the extent of mineralization to be shown with tonnage estimations and potentially outline secondary targets. A baseline would have to be established with twenty gravity line branching off. An extension of the overgrown dresser baseline is proposed running 15° degrees off north for 570 meters. Twenty lines running east west would be spaced out every thirty meters. These lines range in length from 350 to 550 meters totalling 9500 meters. Line spacing is designed to comply with section design over the moose lease. Either or both methods are recommended for future exploration endeavours.

Estimated Costs of Proposals

Option A) Diamond Drilling

Drilling	500 m @ \$115/m
Equipment hours (skidding, pad building)	35 hrs @ \$150/hr
Geologist- \$40/hour	\$480 per day X 8 days= \$2880
Contingency (10%)	\$6600
<u>Total</u>	<u>\$72,200</u>

Option B) Gravity Surveying

Line Cutting	\$1000/km x 10 Km
CG-5 Gravity Meter Rental	\$10,000/Month
Geologist - \$40/hour	\$480 per day x 10 days
Field Assistant - \$30/hour	\$360 per day x 10 days
Interpretation – 40\$/hr	\$480 per day x 2 days
Contingency (10%)	\$2940
<u>Total</u>	<u>\$33,000</u>

Option C) Diamond Drilling and Gravity Surveying

Diamond Drilling Total	\$72,200
Gravity Surveying Total	\$33,000
<u>Total Cost</u>	<u>\$105,200</u>

**Costs of Exploration and Development Work on Lynx 1(386812)**

Drilling	471.5m @ \$100/m
Equipment hours (skidding, pad building)	13.5 hrs @ \$150/hr
Geologist- \$40/hour	\$480 per day X 6 days= \$2880
Driller- \$40/hour	\$480 per day X 6 days= \$2880
Drillers Helper- \$30/hour	\$360 per day X 6 days= \$2180
<b>Total</b>	<b>\$57,065</b>

## **Certificates**

Allan, Scott Clayton


B.Sc. Geology – U. of C., 2013

Registered G.I.T with APEGA



Production and Exploration -- Fireside Minerals Ltd. -- since 2010.

# APPENDIX 1


# Lynx Claim Location Map

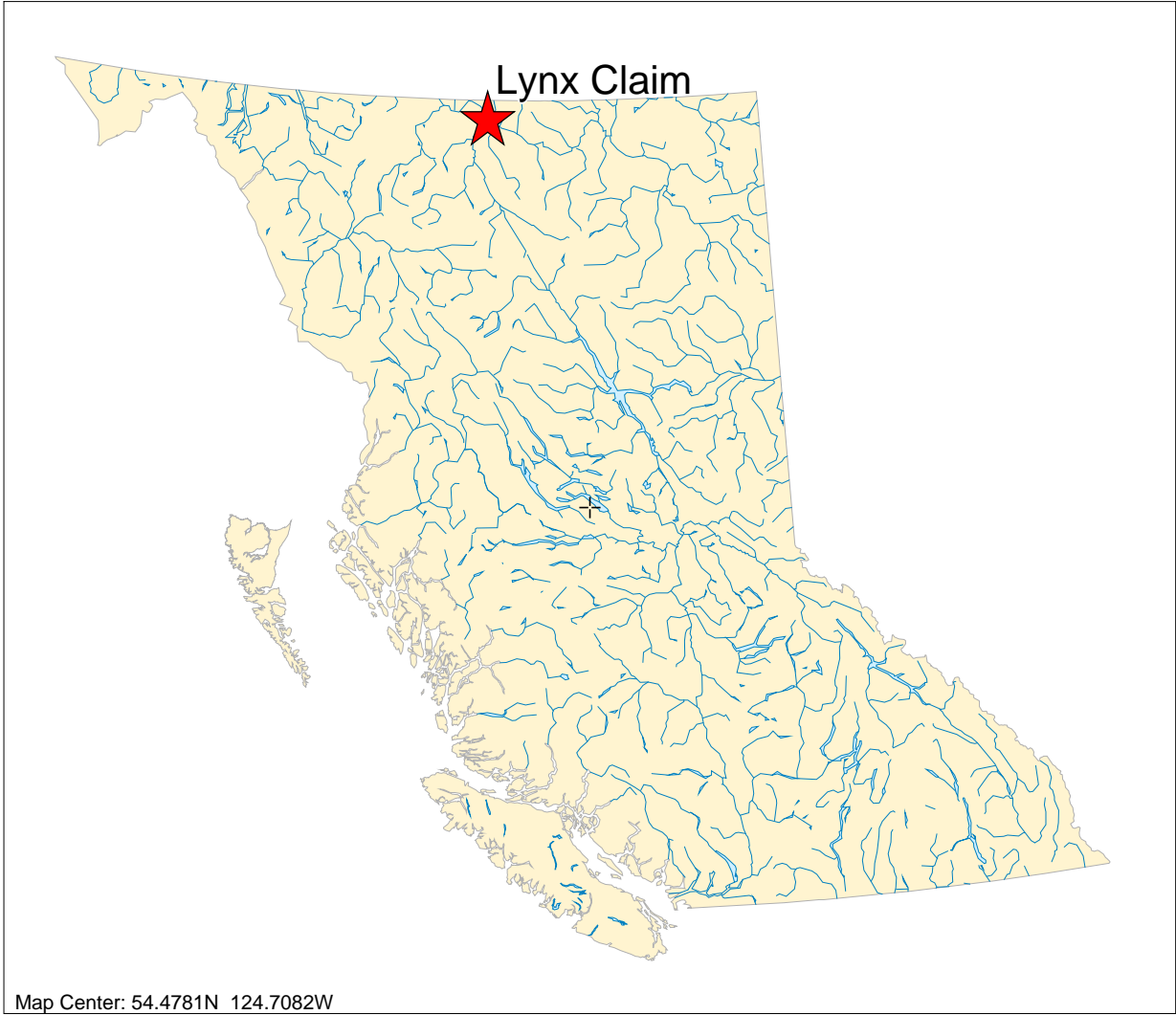
 **Lynx Claim Location**

**Topographic Layers**

-  Lakes 1:6M
-  Rivers 1:6M

**BC Border Layers**

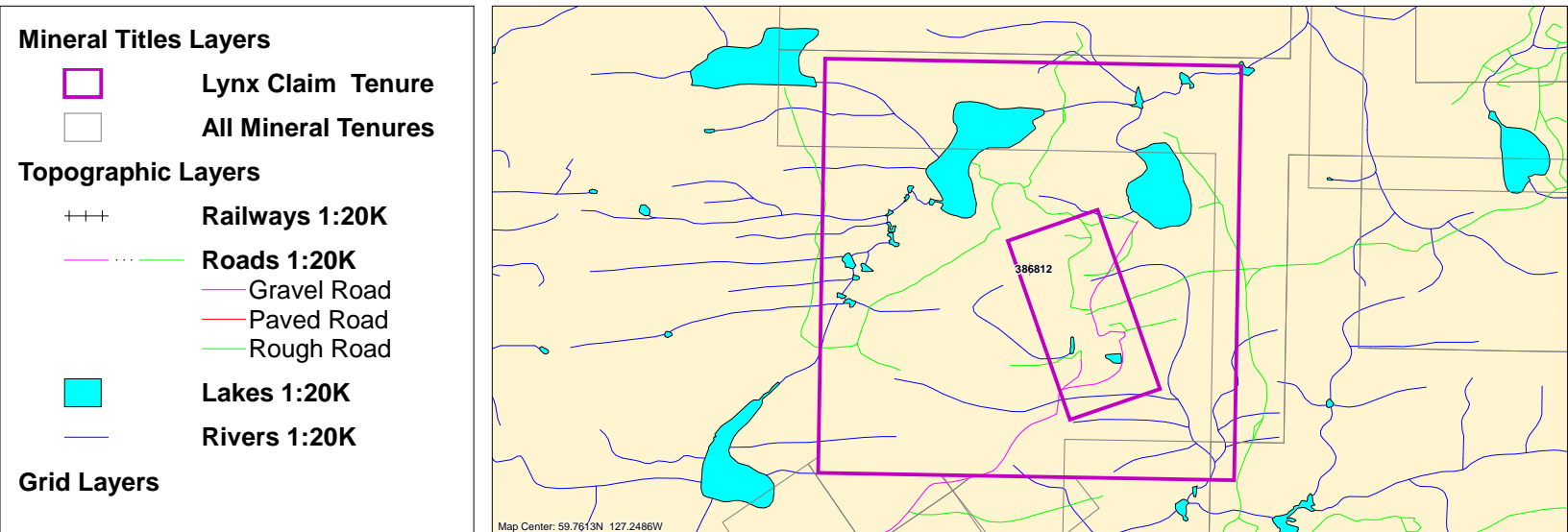
-  BC Border 1:6M



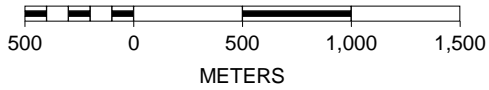
SCALE 1 : 10,933,834

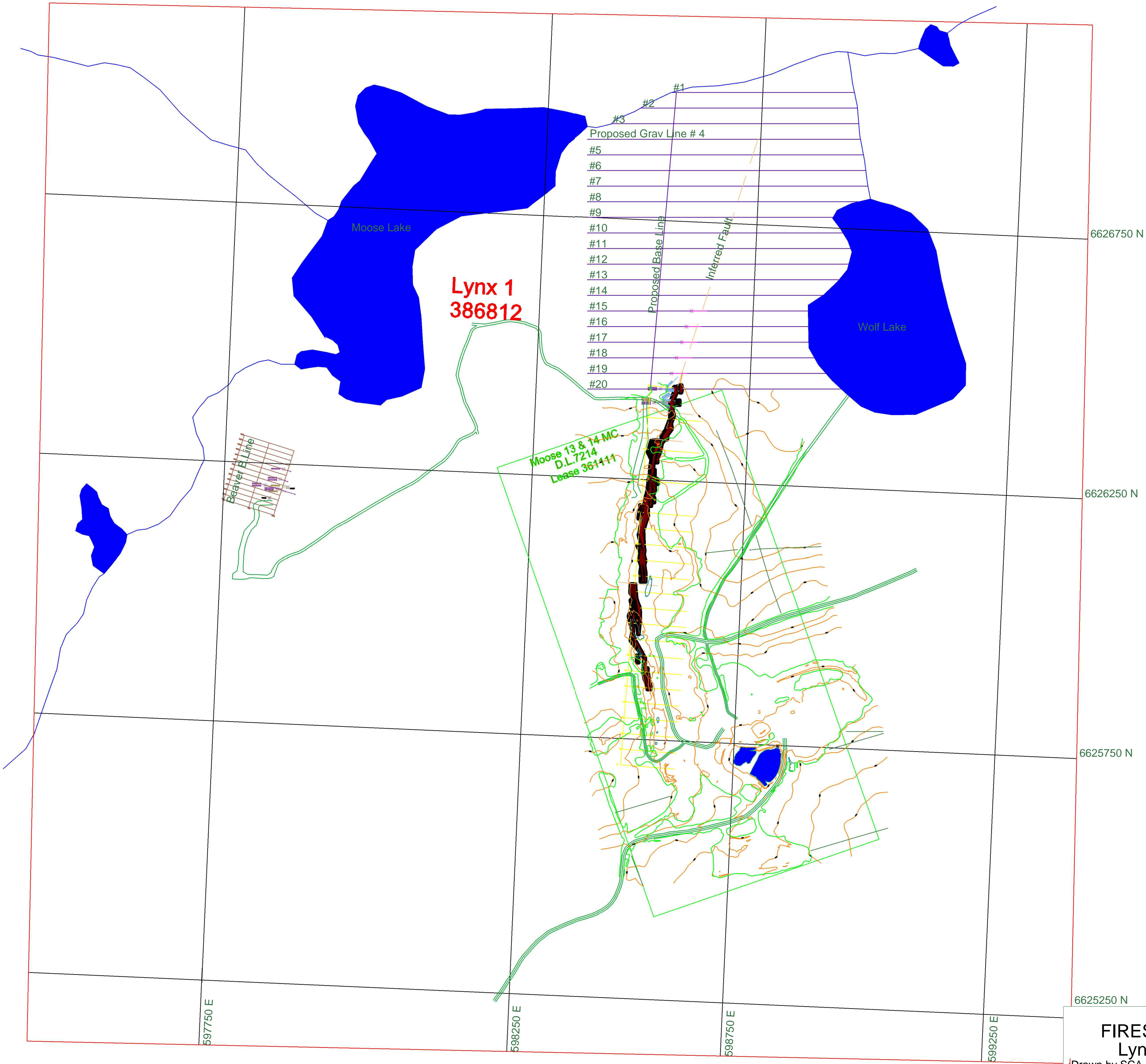


# Lynx Claim Map



SCALE 1 : 34,985





**FIRESIDE MINERALS**  
**Lynx Claim Plan**  
 Drawn by SCA      Scale 1 : 5000  
 Date Nov 2014      Ref: UTM NAD 83  
 Revised

Scale Meters



Moose Lake

Wolf Lake

6626750 N

598250 E

598750 E

#1

#2

Proposed Grav. Line #3

#4

#5

#6

#7

#8

#9

#10

#11

#12

#13

#14

#15

#16

#17

#18

#19

#20

Proposed Base Line

Inferred Fault - 18°

Proposed Diamond Drilling

**Lynx 1**  
**386812**

⊗ Drill Collars  
See Sections  
for Detail  
Appendix 3

**FIRESIDE MINERALS**  
**Lynx Claim Plan**  
Drawn by SCA      Scale 1 : 1250  
Date Nov 2014      Ref: UTM NAD 83  
Revised

Scale Meters





Proposed Grav. Line #15

#16

#17

#18

#19

#20



6626493 N

Proposed BaseLine

Proposed Diamond Drilling

Inferred Fault 18°

⊗ Drill Collars  
See Sections  
for Detail  
Appendix 3

14 MC  
14

U  
DD13-69(-45)  
DD13-70(-60)

DD14-28(45)  
DD14-29(-45)  
DD14-30(-58)

RC 12-19(-45)  
RC 12-20(-64)  
DD13-67(-45)  
DD13-68(-60)

DD14-32(-45)  
DD13-33(-60)

DD14-33(-45)  
DD14-34(-45)  
DD14-35(-60)

Fault

Fault

S

598750 E

**FIRESIDE MINERALS**  
Lynx Claim Plan

Drawn by SCA  
Date Nov 2014  
Revised

Scale 1 : 500  
Ref: UTM NAD 83

Scale Meters

# APPENDIX 2

## Diamond Drill Log

Dip Test		
Angle		
Footage	Reading	Corrected

Hole No. DDH14-28	Sheet No. 1	Total Depth: 44.81 m
Section: 1,642,916 N	Latitude: 1642916.37	Logged by: Scott Allan
Date Started: Sept 10 <sup>th</sup>	Departure: 929897.45	Dip: -45 <sup>o</sup>
Date Finished: Sept 10 <sup>th</sup>	Elevation: 736.67	Core Size: NQ
Date Logged: September 10 <sup>th</sup>	Azimuth: 45 <sup>o</sup>	

Depth M		Rec	Description	Sample No.	From m	To m	Sample Width	Assay		
From	To							S/G		
0.00	4.57		Casing							
4.57	20.57		Banded siltstone Siderite + limonite veins 15.7 m Barite veins 18.6-19.2 m							
20.57	22.95		Bleached porphyritic Diorite							
22.95	23.77		Fault gouge							
23.77	27.22		Disseminated Vuggy silica fracturing black banded siltstone Water @ 26.82 m							
27.22	35.97		Fault gouge							
35.97	39.55		Black banded siltstone Cut by siderite + silica Veinlets							
39.55	45.11		Fault gouge Bleached Rare barite fragments							
			EOH							

## Diamond Drill Log

Dip Test		
Angle		
Footage	Reading	Corrected

Hole No. DDH14-29	Sheet No. 1	Total Depth: 44.81 m
Section: 1642916N	Latitude: 1642916.602	Logged by: Scott Allan
Date Started: Sept 10 <sup>th</sup>	Departure: 929897.068	Dip: -45 <sup>0</sup>
Date Finished: Sept 10 <sup>th</sup>	Elevation: 737.317	Core Size: NQ
Date Logged: September 10 <sup>th</sup>	Azimuth: 90 <sup>0</sup>	

Depth M		Rec	Description	Sample No.	From m	To m	Sample Width	Assay		
From	To							S/G		
0.00	4.57		Casing							
4.57	14.78		Banded Siltstone Fractured by siderite and limonite veins							
14.78	17.07		Fault gouge Bleached							
17.07	20.88		Bleached Diorite							
20.88	21.11		Fault gouge							
21.11	26.06		Banded siltstone Variable bleaching cut by barite							
26.06	27.37		Barite							
27.37	33.15		Disseminated barite Fracturing bleached siltstone							
33.15	42.37		Barite Minor Silica Trace Galena Low grade at 41.76 m	S1 S2 S3	33.22 40.61 42.14	33.38 40.77 42.21	0.15 0.15 0.08	4.06 3.98 4.21		
42.37	42.67		Quartz Breccia							
42.67	46.18		Bleached Siltstone Cut by disseminated silica							
46.18	47.24		Bleached porphyritic diorite							
			EOH							

## Diamond Drill Log

Dip Test		
Angle		
Footage	Reading	Corrected

Hole No. DDH14-30	Sheet No. 1	Total Depth: 66.45m
Section: 1642916N	Latitude: 1642916.602	Logged by: Scott Allan
Date Started: Sept 10 <sup>th</sup>	Departure: 929897.068	Dip: -58 <sup>o</sup>
Date Finished: Sept 11 <sup>th</sup>	Elevation: 737.317	Core Size: NQ
Date Logged: September 11 <sup>th</sup>	Azimuth: 90 <sup>o</sup>	

Depth M		Rec	Description	Sample No.	From m	To m	Sample Width	Assay		
From	To							S/G	Pb (ppm)	Zn (ppm)
0.00	4.57		Casing							
4.57	18.14		Black Banded siltstone, Cut by siderite + silica veins, Bleached laminations							
18.14	20.57		Bleached banded siltstone Commonly fractured							
20.57	26.11		Fault Gouge							
26.11	30.33		Bleached banded siltstone Cut by limonite + barite veinlets							
30.33	40.23		Barite Trace sulphides	S1 S2 S3 S4	30.48 32.77 35.81 39.01	30.63 32.84 36.00 39.17	0.15 0.08 0.18 0.15	4.34 4.39 4.31 4.34		
40.23	44.99		Bleached siltstone Pervasive fractures							
44.99	47.85		Barite	S5 S6	45.19 47.17	45.34 47.32	0.15 0.15	4.14 4.30		
47.85	51.36		Bleached banded siltstone Pervasive fractures Commonly cut by barite veinlets							
51.36	52.35		Barite	S7	51.64	51.76	0.12	4.18		
52.35	56.08		Bleached siltstone cut by barite							
56.08	59.44		Barite	AS1	56.08	59.44	3.35	4.28	10	737

			Broken sample						
59.44	61.72		Disseminated Silica Fracturing siltstone Fault gouge 59.44-60.66 m						
61.72	66.45		Bleached siltstone Broken ground						
			EOH						

## Diamond Drill Log

Dip Test		
Angle		
Footage	Reading	Corrected

Hole No. DDH14-31	Sheet No. 1	Total Depth: 50.29 m
Section: 1642893N	Latitude: 1642893.03	Logged by: Scott Allan
Date Started: Sept 11 <sup>th</sup>	Departure: 929888.297	Dip: -45 <sup>o</sup>
Date Finished: Sept 11 <sup>th</sup>	Elevation: 737.281	Core Size: NQ
Date Logged: September 11 <sup>th</sup>	Azimuth: 90 <sup>o</sup>	

Depth M		Rec	Description	Sample No.	From m	To m	Sample Width	Assay		
From	To							S/G		
0.00	3.66		Casing							
3.66	8.23		Porphyritic Diorite							
8.23	9.30		Bleached banded siltstone							
9.30	9.98		Bleached porphyritic diorite							
9.98	10.13		Quartz vein							
10.13	17.15		Black banded siltstone Cut by siderite silica and barite veins							
17.15	23.85		Fault gouge Bleached loose ground							
23.85	25.91		Bleached banded siltstone							
25.91	26.52		Barite							
26.52	27.97		Barite Inclusion rich							
27.97	31.82		Bleached banded siltstone							
31.82	32.13		Barite quartz breccia							
32.13	34.75		Barite	S1	32.84	32.92	0.08	4.16		
				S2	34.52	34.67	0.15	4.37		
34.75	35.43		Disseminated barite Fracturing siltstone							
35.43	37.43		Barite	S3	35.89	36.12	0.23	4.27		

			Major Specular Galena	S4	37.08	37.19	0.10	4.00		
37.43	45.72		Bleached Siltstone Fractured commonly Cut by barite to Loose broken ground							
45.72	50.29		Banded Siltstone							
			EOH							



## Diamond Drill Log

Dip Test		
Angle		
Footage	Reading	Corrected

Hole No. DDH14-32	Sheet No. 1	Total Depth: 72.54 m
Section: 1642893N	Latitude: 1642893.03	Logged by: Scott Allan
Date Started: Sept 11 <sup>th</sup>	Departure: 929888.297	Dip: -45 <sup>o</sup>
Date Finished: Sept 12 <sup>th</sup>	Elevation: 737.281	Core Size: NQ
Date Logged: September 12 <sup>th</sup>	Azimuth: 60 <sup>o</sup>	

Depth M		Rec	Description	Sample No.	From m	To m	Sample Width	Assay		
From	To							S/G	Pb (ppm)	Zn (ppm)
0.00	4.57		Casing							
4.57	13.87		Banded Siltstone Broken sample							
13.87	18.21		Porphyritic diorite Cut by sparse barite							
18.21	19.05		Fault gouge							
19.05	20.73		Bleached Porphyritic diorite							
20.73	23.82		Black banded siltstone							
23.82	29.87		Fault gouge ,Bleached after 24.69							
29.87	36.42		Bleached banded siltstone Cut by silica veinlet's vuggy disseminated barite							
36.42	64.25		Barite	S1	37.19	37.34	0.15	4.36		
			Trace sulphides over intersection	S2	42.06	42.21	0.15	4.19		
			Minor Lead	S3	45.31	45.46	0.15	4.31		
			42.06-42.37 m	S4	48.16	48.26	0.10	4.19		
			44.04-45.11 m	S5	51.71	51.82	0.10	4.26		
			47.02-47.63 m	S6	54.86	55.02	0.15	4.26		
			61.72-63.86 m	S7	58.93	59.13	0.20	4.31		
			Quartz vein	S8	62.18	62.41	0.23	4.20		
			47.02-47.63 m	AS1	36.42	64.25	27.83	4.39	782	300
64.25	65.68		Vuggy Quartz barite siderite breccia							

65.68	69.49		Disseminated Siderite + silica Fracturing black banded siltstone							
69.49	72.54		Black banded siltstone ,Pervasively fractured by hairline Siderite veinlets							
			EOH							

## Diamond Drill Log

Dip Test		
Angle		
Footage	Reading	Corrected

Hole No. DDH14-33	Sheet No. 1	Total Depth: 78.41 m
Section: 1642893N	Latitude: 1642893.03	Logged by: Scott Allan
Date Started: Sept 13 <sup>th</sup>	Departure: 929888.297	Dip: -60 <sup>o</sup>
Date Finished: Sept 13 <sup>th</sup>	Elevation: 737.281	Core Size: NQ
Date Logged: September 13 <sup>th</sup>	Azimuth: 60 <sup>o</sup>	

Depth M		Rec	Description	Sample No.	From m	To m	Sample Width	Assay		
From	To							S/G	Pb (ppm)	Zn (ppm)
0.00	3.05		Casing							
3.05	8.84		Porphyritic diorite Variable bleaching							
8.84	32.92		Banded Siltstone Fine sand laminations Fault gouge 20.42-23.16 m 26.82-30.48 m							
32.92	45.11		Fault gouge							
45.11	49.01		Disseminated quartz Brecciating bleached siltstone Fault gouge 46.86-47.24 m							
49.01	63.19		Barite Fractured if not faulted at times	S1 S2 S3 AS1	49.54 51.51 58.67 49.01	49.68 51.72 58.77 63.19	0.14 0.21 0.09 14.18	4.29 4.30 4.44 4.46	23	61
63.19	63.40		Fault gouge							
63.40	64.92		Quartz breccia Clast supported							
64.92	70.56		Barite	S4 S5	67.00 68.48	67.06 68.58	0.06 0.10	4.07 4.28		
70.56	71.98		Disseminated barite Fracturing bleached siltstone							

71.98	78.41		Fault gouge Bleached to 73.30 m							
78.41	78.64		Porphyritic Diorite							
			EOH							

## Diamond Drill Log

Dip Test		
Angle		
Footage	Reading	Corrected

Hole No. DDH14-34	Sheet No. 1	Total Depth: 51.05 m
Section: 1642893N	Latitude: 1,642,893.43	Logged by: Scott Allan
Date Started: Sept 13 <sup>th</sup>	Departure: 929888.47	Dip: -45 <sup>0</sup>
Date Finished: Sept 14 <sup>th</sup>	Elevation: 737.29	Core Size: NQ
Date Logged: September 14 <sup>th</sup>	Azimuth: 120 <sup>0</sup>	

Depth M		Rec	Description	Sample No.	From m	To m	Sample Width	Assay		
From	To							S/G		
0.00	3.05		Casing							
3.05	5.03		Porphyritic Diorite							
5.03	7.34		Bleached Porphyritic Diorite Fractured							
7.34	9.94		Porphyritic Diorite							
9.94	10.39		Barite							
10.39	18.29		Black Banded Siltstone							
18.29	26.72		Bleached Fault gouge							
26.72	27.37		Bleached Banded Siltstone							
27.37	28.50		Barite	S5	27.53	27.78	0.25	4.33		
28.50	29.72		Disseminated Barite Brecciating bleached siltstone							
29.72	32.00		Bleached Siltstone							
32.00	39.32		Barite	S1	32.00	32.08	0.08	4.15		
			Low grade	S2	34.59	34.75	0.16	4.35		
			36.6 - 36.8 m	S3	36.02	36.17	0.15	4.32		
				S4	39.01	39.17	0.16	4.09		
39.32	41.76	20%	Dropped core Rubbly barite + black siltstone Barite likely goes to 41.5 m based off return.							
41.76	51.05		Disseminated quartz + barite in siltstone Trace Sphalerite Brecciated 45.34 - 47.85 m							
			EOH							

## Diamond Drill Log

Dip Test		
Angle		
Footage	Reading	Corrected

Hole No. DDH14-35	Sheet No. 1	Total Depth: 60.35 m
Section: 1642893N	Latitude: 1,642,893.43	Logged by: Scott Allan
Date Started: Sept 14 <sup>th</sup>	Departure: 929888.47	Dip: -60 <sup>0</sup>
Date Finished: Sept 14 <sup>th</sup>	Elevation: 737.29	Core Size: NQ
Date Logged: September 14 <sup>th</sup>	Azimuth: 120 <sup>0</sup>	

Depth M		Rec	Description	Sample No.	From m	To m	Sample Width	Assay		
From	To							S/G		
0.00	3.05		Casing							
3.05	8.03		Porphyritic diorite Variable bleaching							
8.03	25.37		Black banded siltstone Common sand laminations, Disseminated silica + siderite 8.03 - 12m Fractured broken ground							
25.37	28.96		Fault gouge							
28.96	30.40		Fractured black banded siltstone							
30.40	34.90		Fault gouge Bleached after 31.63 m							
34.90	37.41		Barite Low grade after 36.6 m	S1 S2	34.95 35.97	35.05 36.20	0.10 0.23	4.26 4.17		
37.41	45.19		Bleached siltstone							
45.19	52.83		Barite Trace Sulphides	S3 S4 S5	45.95 48.62 51.41	46.18 49.00 51.97	0.23 0.23 0.38	4.15 4.38 4.36		
52.83	54.44		Bleached Siltstone Fractured by disseminated barite							
54.44	55.85		Barite Major Silica							
55.85	60.35		Porphyritic Diorite Cut by sparse barite and silica veins							

			EOH							
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## Loring Laboratories ( Alberta ) Ltd.

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

FILE: 5 7 7 4 5

DATE: October 16, 2014

Sample: Pulp

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

Attn: Scott Allan

### 30 ELEMENT ICP ANALYSIS

Sample No.	Ag ppm	Al %	As ppm	B 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	Sr ppm	Th ppm	Ti %	U ppm	V ppm	W ppm	Zn ppm	Zr ppm
DDH-14-30-AS1	<0.5	0.06	1	386	>10000	<1	0.03	3	<1	40	25	0.09	<0.01	<1	0.01	89	4	0.01	8	<0.01	10	<1	321	<1	<0.01	<1	1	1	737	2
DDH-14-32-AS1	<0.5	0.04	1	254	>10000	1	0.02	1	<1	25	26	0.17	<0.01	1	0.01	34	<1	0.01	10	<0.01	782	1	518	1	<0.01	<1	1	2	300	1
DDH-14-33-AS1	<0.5	0.08	<1	234	>10000	<1	0.03	<1	<1	14	12	0.06	0.02	1	0.01	16	<1	0.01	11	<0.01	23	1	694	<1	<0.01	<1	1	1	61	1
Blank	<0.5	<0.01	<1	<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	<0.01	<1	<1	<1	<1	<1

\* 0.500 Gram sample is total digested with multi acid and ICP finish.

\* Sample received on Sept. 22, 2014

Certified by: 





ISO9001:2008 Certified

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

Attn: Scott Allan

## Loring Laboratories(Alberta) Ltd.

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

FILE: 5 7 7 4 5

DATE: October 16, 2014

Sample: Pulp

### WHOLEROCK ICP ANALYSIS

Sample I.D.	Al <sub>2</sub> O <sub>3</sub> %	BaSO <sub>4</sub> %	CaO %	Cr ppm	Fe <sub>2</sub> O <sub>3</sub> %	K <sub>2</sub> O %	MgO %	MnO %	Na <sub>2</sub> O %	Ni ppm	P <sub>2</sub> O <sub>5</sub> %	SO <sub>3</sub> %	SiO <sub>2</sub> %	Sr ppm	TiO <sub>2</sub> %	V ppm	LOI@1000 %	SUM %
DDH-14-30-AS1	0.12	91.90	0.04	40	0.14	0.01	0.02	0.01	0.01	8	<0.01	0.20	7.38	321	<0.01	1	0.31	100.14
DDH-14-32-AS1	0.08	94.32	0.03	25	0.24	0.01	0.01	<0.01	0.01	10	<0.01	0.39	4.33	518	<0.01	1	0.30	99.73
DDH-14-33-AS1	0.15	96.38	0.04	14	0.08	0.02	0.02	<0.01	0.02	11	<0.01	0.42	2.06	694	<0.01	1	0.34	99.54

Sample received on Sept. 22, 2014

0.5 gm sample digested with multi acids and finished by ICP

BaSO<sub>4</sub> value by wet chemistry gravimetric assay method.

Certified by: 



# LORING LABORATORIES (ALBERTA) LTD.

629 Beaverdam Road N.E. Calgary, Alberta T2K 4W7

Tel : (403) 274-2777 Fax : (403) 275-0541

Email: loringlabs@telus.net www.loringlabs.net

ISO 9001:2008 Certified

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

File No : 5 7 7 4 5  
Date : October 16, 2014  
Samples : Pulp

Attn: Scott Allan

## Certificate of Assay

Sample No.	% BaSO4	S.G.
<u>"Assay Analysis"</u>		
DDH-14-30-AS1	91.90	4.28
DDH-14-32-AS1	94.32	4.39
DDH-14-33-AS1	96.38	4.46
<p>Methodology: Specific Gravity by le Chatelier SG bottle. BaSO4 by wet chemistry gravimetric method.</p> <p>Sample received on Sept. 22, 2014</p>		

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

Assayer

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

FORM ASYC-015

# APPENDIX 3

