

Report  
on the  
Reverse Circulation Drilling  
of the  
Moose Deposit  
of  
Fireside Minerals

BC Geological Survey  
Assessment Report  
34000

Covering portions of Lease 361111 and Claim 386812 (Lynx 1)

Situated at Kilometer 880 of the Alaska Highway

Liard Mining Division

N.T.S. 94M/14

Latitude 59° 45' 30" N Longitude 127° 14' 40" W

Report by

E.W.Craft P.Eng.

February 25, 2013

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## Introduction

In 2012 it was decided to use Reverse Circulation drilling as a preliminary exploration tool. The main goal of the program was to extend the Moose barite veins to the north. Most of the drilling was done on the Moose Production Lease (361111) with the last 2 holes drilled off of the lease on the Lynx 1 Claim (386812). This report covers the drilling on both tenures.

I was on site April 27<sup>th</sup> to May 1<sup>st</sup> to mark up the locations of the drilling and again on August 21<sup>st</sup> to August 26<sup>th</sup> to review the drilling and do the final pick-ups.

## Summary and Conclusions

A total of 18 Reverse Circulation Holes were drilled on the Moose Production Lease and the Lynx Claim for a total of 896.24 meters. Only two of the holes were drilled on the Lynx Claim. The reverse circulation drilling is a cheaper and faster method than diamond drilling for getting preliminary subsurface information but it has limited value in quantifying a resource. Reverse circulation drilling does give some stratigraphic information but no structural information. This drilling does position the resource geometrically and provide enough data to do a rough estimate on the resource potential.

The drilling program did extend the veins 220m to the north and the veins appear to be thick enough to mine by open pit methods. A diamond drill program in 2013 will evaluate the resource farther.

## Location and Access

The Moose Deposit is located on the Liard Plain approximately 6 km. north of the Alaska Highway near Kilometer 880. 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.

Access is by a good 6km gravel road off of the Alaska Highway at Km. 880.

## Claims

The Fireside Property is made up of the following claims as well as the Bear and the Moose Production leases. The Moose Deposit is located on the Moose Production Lease and the Lynx 1 Claim. The claims are shown on the Claim Map in Appendix 1.

Tenure Number	Type	Claim Name	Good Until	Area (ha)
386812	Mineral	LYNX 1	20140225	400
402287	Mineral	RAM 1	20131225	400
402290	Mineral	RAM 4	20131225	25

402291	Mineral	RAM 5	20131225	25
402292	Mineral	RAM 6	20131225	25
402293	Mineral	RAM 7	20131225	25
402294	Mineral	RAM 8	20131225	25
402295	Mineral	RAM 9	20131225	25
402296	Mineral	RAM 10	20131225	25
402297	Mineral	RAM 11	20131225	25
402298	Mineral	RAM 12	20131225	25
402299	Mineral	RAM 13	20131225	25
402300	Mineral	RAM 14	20131225	25
402301	Mineral	RAM 15	20131225	25
402302	Mineral	RAM 16	20131225	25
402303	Mineral	RAM 17	20131225	25
402304	Mineral	RAM 18	20131225	25
402305	Mineral	RAM 19	20131225	25
410485	Mineral	RAM 20	20131225	375
410486	Mineral	RAM 21	20130110	500
775122	Mineral	RAM 22	20131225	244.5551
896190	Mineral	RAM23	20130907	407.7414
896191	Mineral	RAM24	20130907	228.1973

#### General Setting

The Moose deposit lies on the Liard Plain of Northeastern B.C. at an elevation of approximately 750m. The ground surface is covered by second growth Lodgepole Pine and Tag Alder.

The bedrock geology is a thick sequence of Cambrian and Precambrian siltstones.

#### Geology and Mineralization

The Moose veins are contained within a north trending fault zone that dips steeply to the west. The Barite veins pinch and swell both along strike and dip. For this reason it is necessary to have fairly close spaced information in order to do a reliable job on a resource estimate.

The Moose veins have been mined to a shallow depth for approximately 450m on the southern end with the production of about 80,000 tonnes of Barite. The Barite is of good quality with a low base metal content.

The location of the historical work (1985 and earlier) is only approximate. The locations are referenced to an exploration grid that was established in 1966 and I have been unable to locate it on the ground. The historical is also incomplete.

## Program

The exploration program was all reverse circulation drilling which was carried out in 3 short campaigns between May 12<sup>th</sup> and July 30<sup>th</sup>. A total of 18 holes were drilled on 9 sections. The locations of the holes are shown on the Moose Plan contained in Appendix 1.

The drilling was done by Fireside Minerals personnel using a drill owned by the company. The drill produces a 63 mm diameter hole.

## Results

The drilling program was successful in extending the barite veins north to Latitude 6,626,402N. The veins have been located sufficiently so that a Diamond drill program can be located to obtain a maximum amount of worthwhile data. While the veins are identified with reverse circulation drilling their location is not precise as there is bound to be some wandering of the holes, which is indeterminate. The data obtained by this drilling does give some lithological information but no structural information. The thickness of the intersections is open to interpretation as I have tried to demonstrate on Section 6,626,247N. One interpretation is shown on the top side of the hole plot and another on the lower side.

The holes in the Moose Zone were designed to extend the zone to the north. All of the holes up to and including RC12-18 were drilled on the Moose Mining Lease (361111) while holes RC12-19, 20 were drilled on the Lynx 1 MC (386812).

Holes RC 12-01, 02 were drilled on Section 6,626,211N. The upper hole hit a commercial section of Barite the lower hole did not.

Holes RC 12-03, 04 were drilled on Section 6,626,196N. These holes were drilled below an exposed Barite outcrop. The upper hole hit a commercial intersection of Barite while the lower hole hit a narrower intersection.

Holes RC12-05, 06 were drilled on Section 6,626,180N. Both holes hit commercial intersections of Barite.

Hole RC12-07 was drilled on Section 6,625,708N. This hole was to determine the southern limit of the Moose Zone. This hole did not intersect any Barite.

Hole RC12-10 was drilled in the wrong direction and accomplished nothing.

Holes RC12-11, 12 were drilled on Section 6,626,247N. Both holes hit commercial intersections of Barite.

Holes RC12-13, 14 were drilled on Section 6,626,273N. Both holes hit commercial intersections of Barite.

Holes RC12-15, 16 were drilled on Section 6,626,303N. Both holes hit commercial intersections of Barite.

Holes RC12-17, 18 were drilled on Section 6,626,333N. These holes did not hit any significant Barite. It is quite probable that they hit a fault gap in the system.

Holes RC12-19, 20 were drilled on Section 6,626,402N. The upper hole hit a significant Barite intersection but the lower hole did not. These holes were probably started too far to the west and as a result the lower hole was not drilled deep enough to get an intersection.

The drilling program was supervised by Scott Allan who also logged the cuttings. Scott Allan is currently completing his final year towards a B.Sc. Degree in Geology from the University of Calgary.

The Sections of the drilling are contained in Appendix 2 and the logs in Appendix 3.

#### Exploration and Development Work on Lynx 1(386812)

Costs for drilling and recording RC 12-19 & 20

Access and site preparation Dozer and Excavator 15 hrs. @ \$100/hr.		\$1500
Drilling	105.16m @\$50/m.	\$5558
Surveying and Logging	10hrs. @\$100/hr.	\$1000
Report preparation	15hrs @ \$100/hr.	<u>\$1500</u>
Total		<u>\$9558</u>

Certificate

- 1 I, E.W.Craft, certify that I am a practising Consulting Mining Engineer with offices at 1070 Bridgeview Crescent, Castlegar B.C. V1N 4L1
- 2 I am a 1963 graduate of UBC with a B.A.Sc. in Mining.
- 3 I have practiced my profession for 45 years.
- 4 I am a member in good standing of the Association of Professional Engineers and Geoscientists of British Columbia
- 5 I have no direct or indirect interest in the properties or securities of Fireside Minerals.



## **Appendix 1**

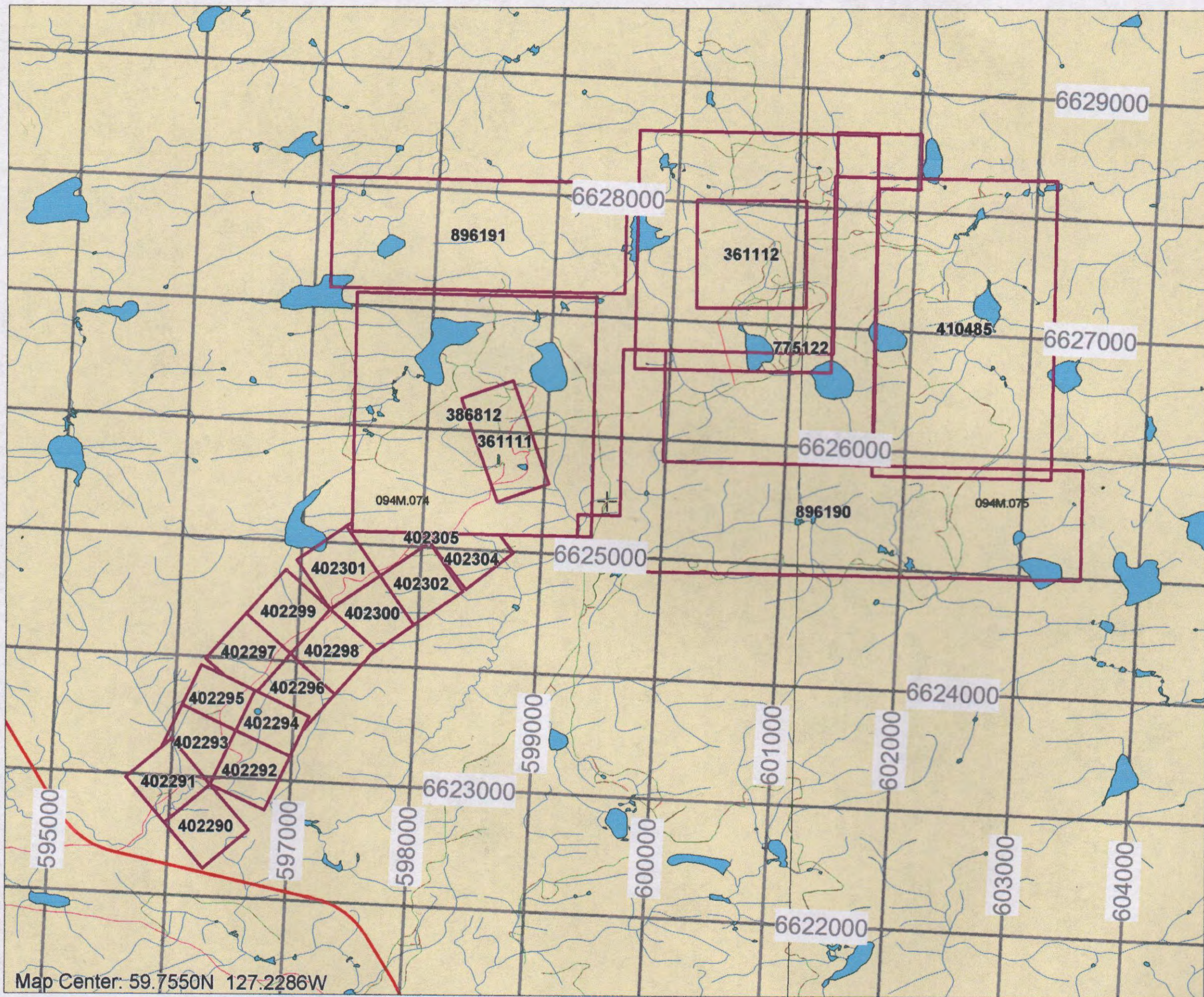
### **Maps**



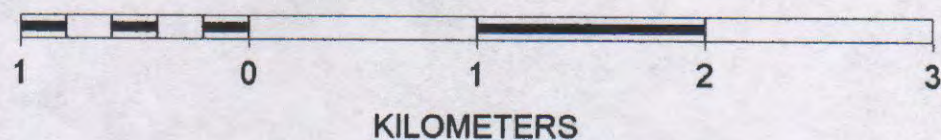
# Fireside Minerals Location Map



# Fireside Minerals Claim Map



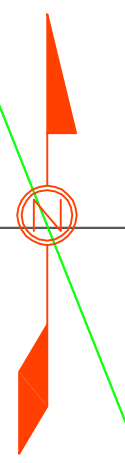
SCALE 1 : 50,000



Lynx 1  
386,812

Moose 13 & 14 MC  
D. L. 7214  
Lease 36111

Proposed Diamond Drill Sites 2013 & 2014  
Details shown on sections

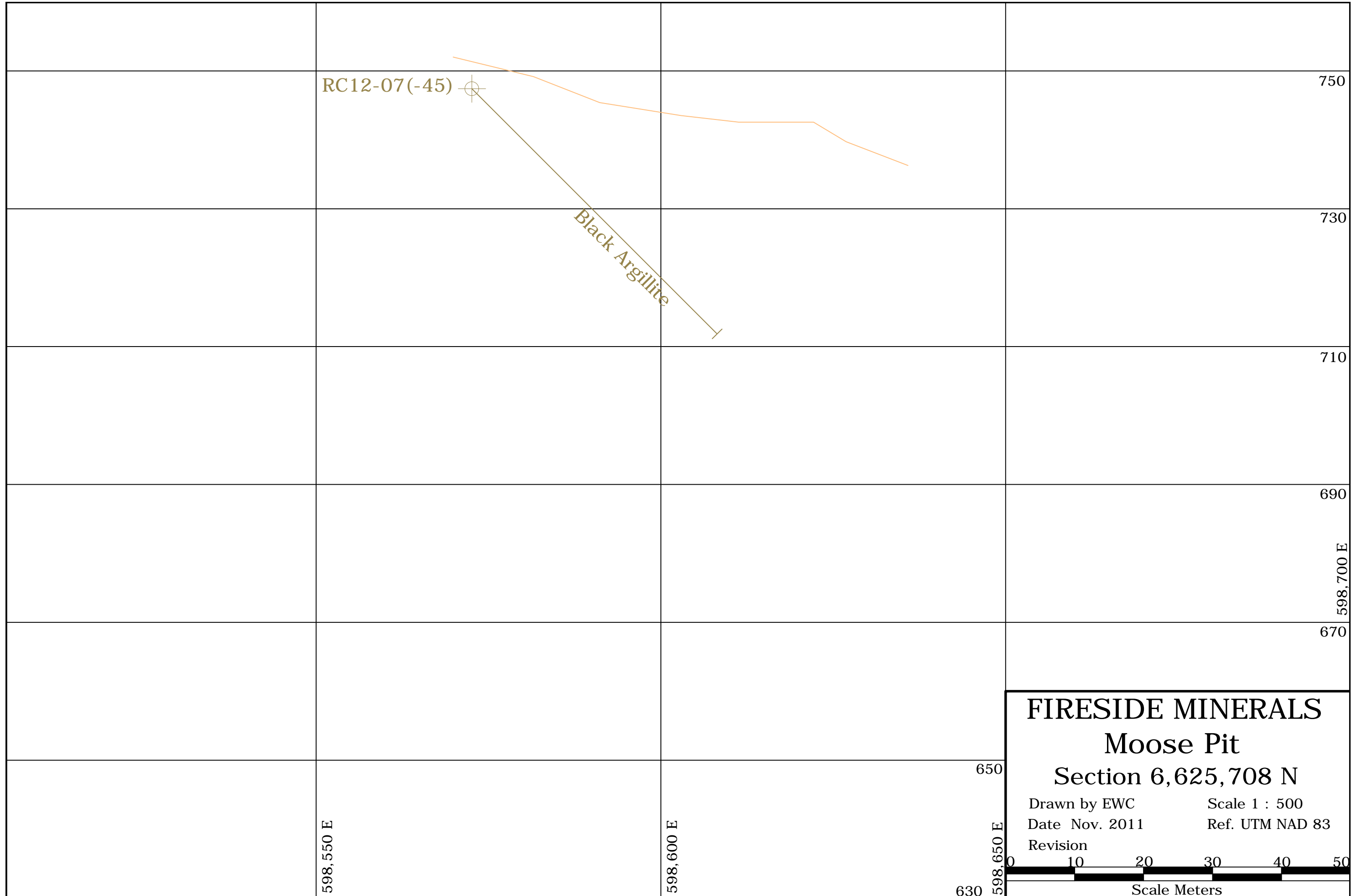


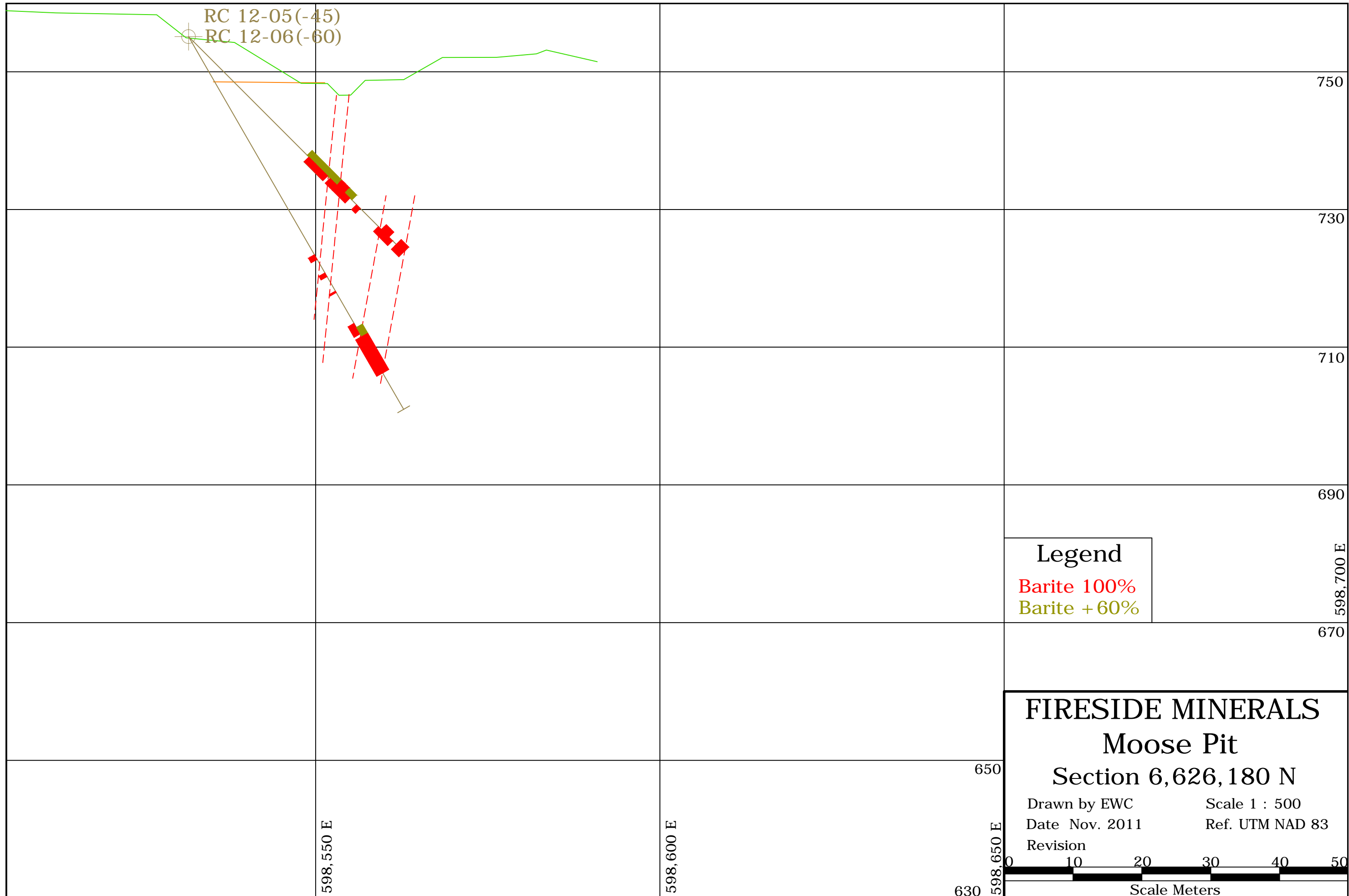
6,626,400N  
6,626,350N  
6,626,300N  
6,626,250N  
6,626,200N  
6,626,150N  
6,626,100N  
6,626,050N  
6,626,000N  
6,625,950N  
6,625,900N  
6,625,850N  
6,625,800N  
6,625,750N  
6,625,700N  
6,625,650N  
6,625,600N  
6,625,550N

Jig Recyc

## **Appendix 2**

### **Drill Hole Sections**





RC 12-05(-45)  
RC 12-06(-60)

750

730

710

690

670

650

630

598,550 E

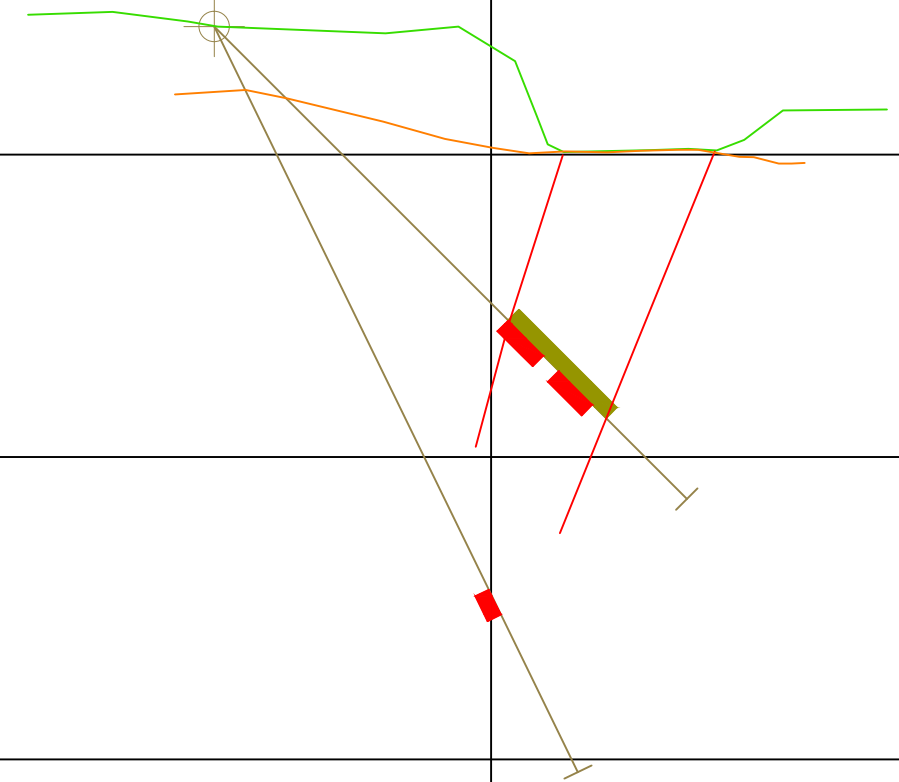
598,600 E

598,650 E

**Legend**  
Barite 100%  
Barite + 60%

**FIRESIDE MINERALS**  
**Moose Pit**  
**Section 6,626,180 N**  
Drawn by EWC      Scale 1 : 500  
Date Nov. 2011      Ref. UTM NAD 83  
Revision  
0      10      20      30      40      50  
Scale Meters

RC 12-03(-45)  
RC 12-04(-64)



**Legend**  
Barite 100%  
Barite + 60%

598,650 E

598,700 E

**FIRESIDE MINERALS**  
**Moose Pit**  
**Section 6,626,196 N**

Drawn by EWC                      Scale 1 : 500  
Date Nov. 2011                    Ref. UTM NAD 83  
Revision

Scale Meters

598,550 E

598,600 E

650

670

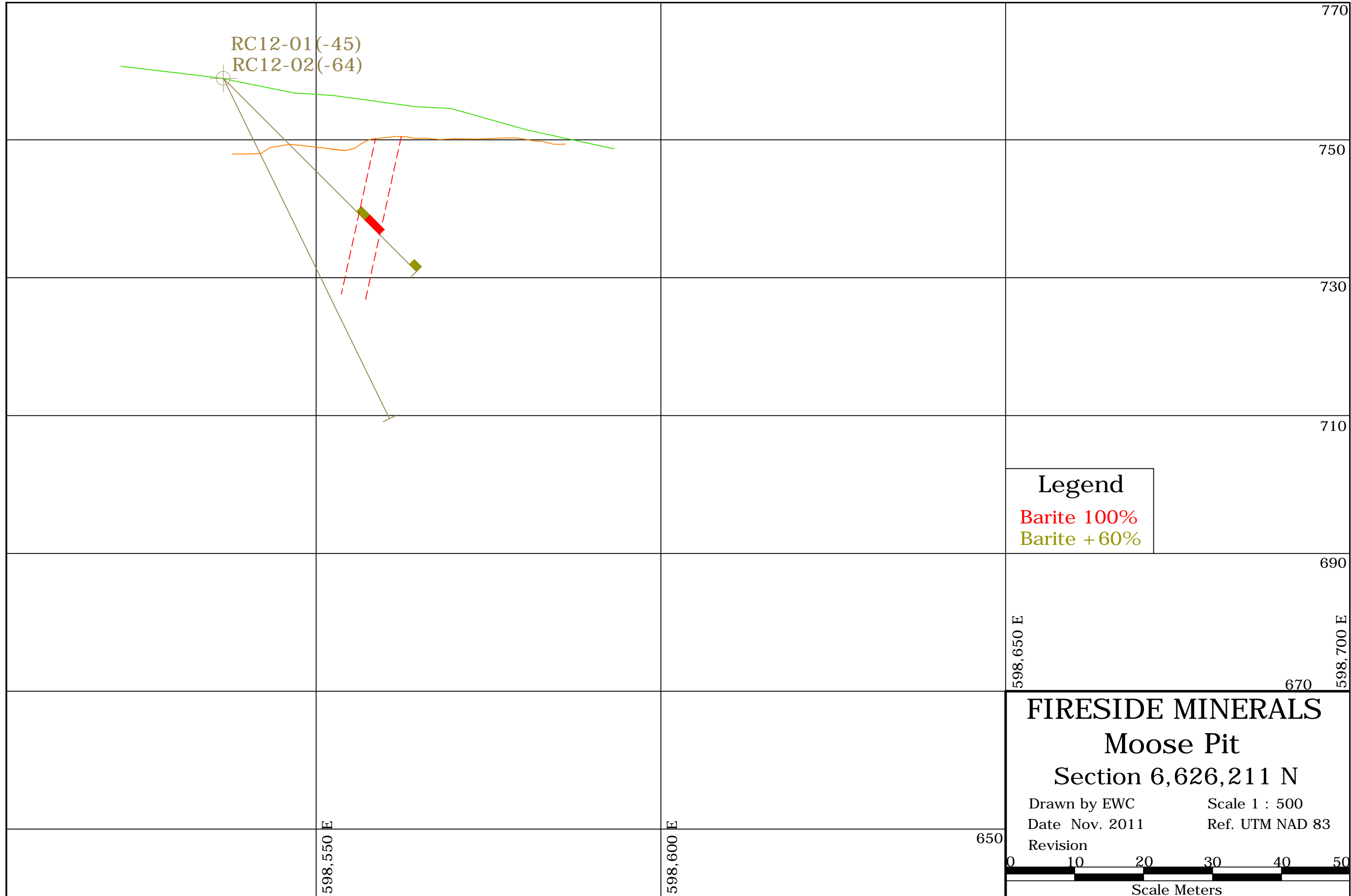
770

750

730

710

690



RC12-01 (-45)  
RC12-02 (-64)

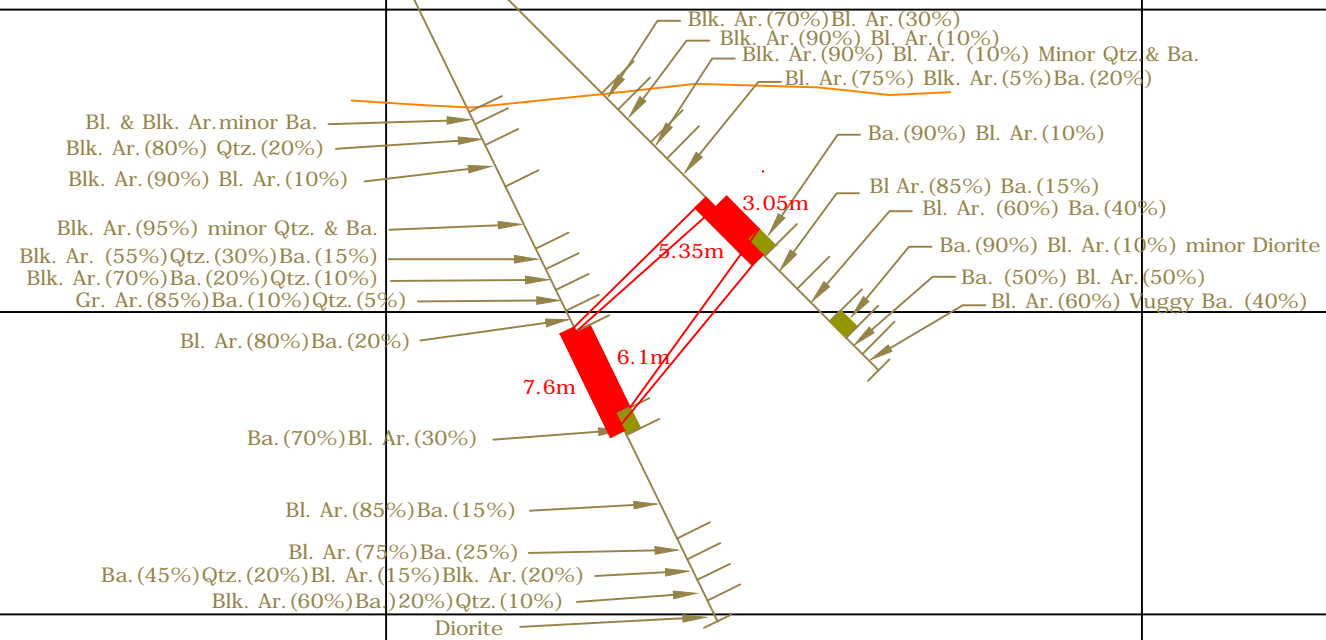
**Legend**  
 Barite 100%  
 Barite + 60%

**FIRESIDE MINERALS**  
**Moose Pit**  
**Section 6,626,211 N**  
 Drawn by EWC                      Scale 1 : 500  
 Date Nov. 2011                      Ref. UTM NAD 83  
 Revision

0    10    20    30    40    50  
 Scale Meters



RC 12-12(-64) RC 12-11(-45)



**Legend**  
 Barite 100%  
 Barite + 60%

598,650 E  
 670  
 598,700 E

**FIRESIDE MINERALS**  
**Moose Pit**  
 Section 6,626,247 N

Drawn by EWC      Scale 1 : 500  
 Date Nov. 2011      Ref. UTM NAD 83  
 Revision

0 10 20 30 40 50  
 Scale Meters

598,550 E

598,600 E

650

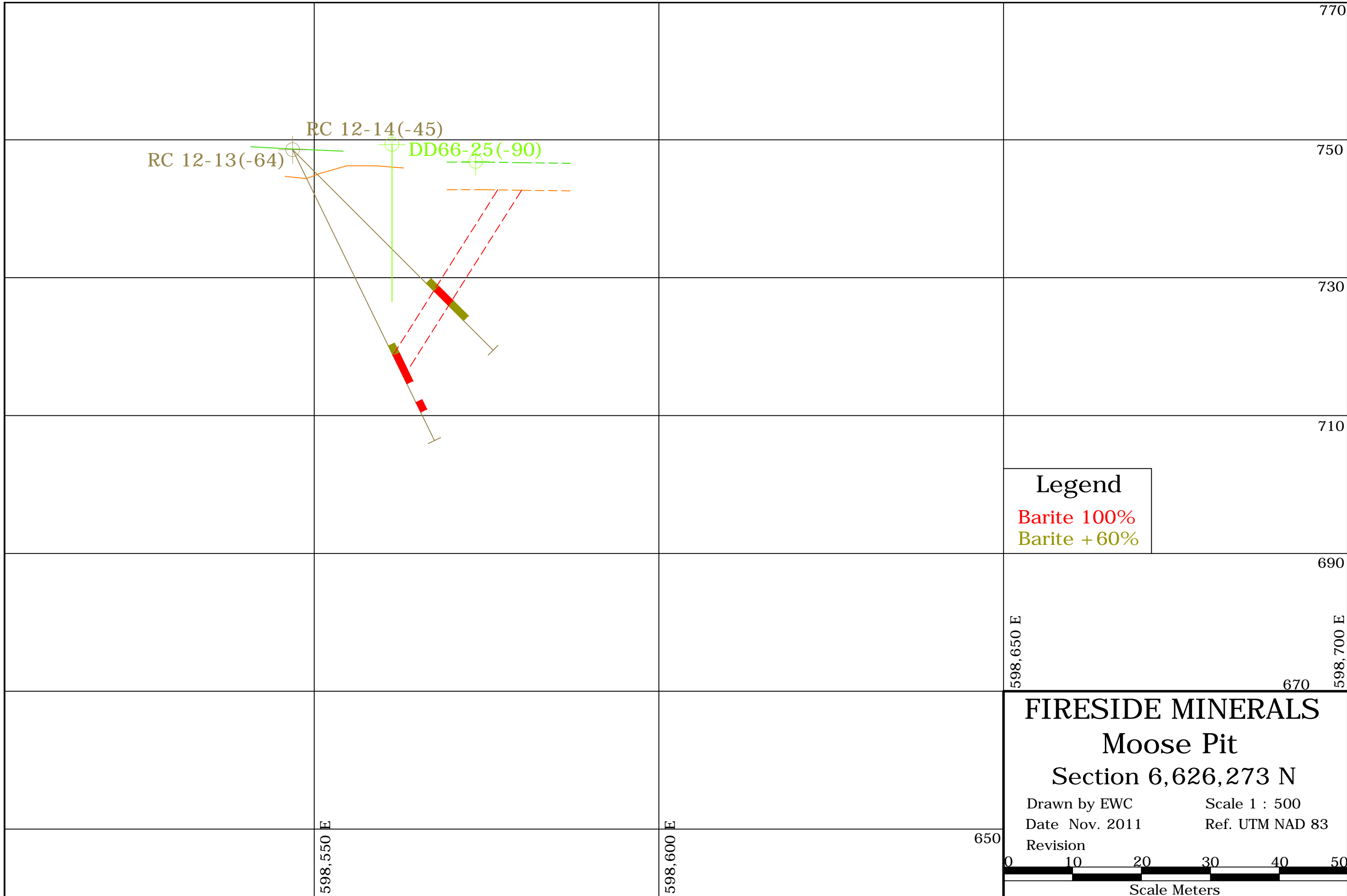
770

750

730

710

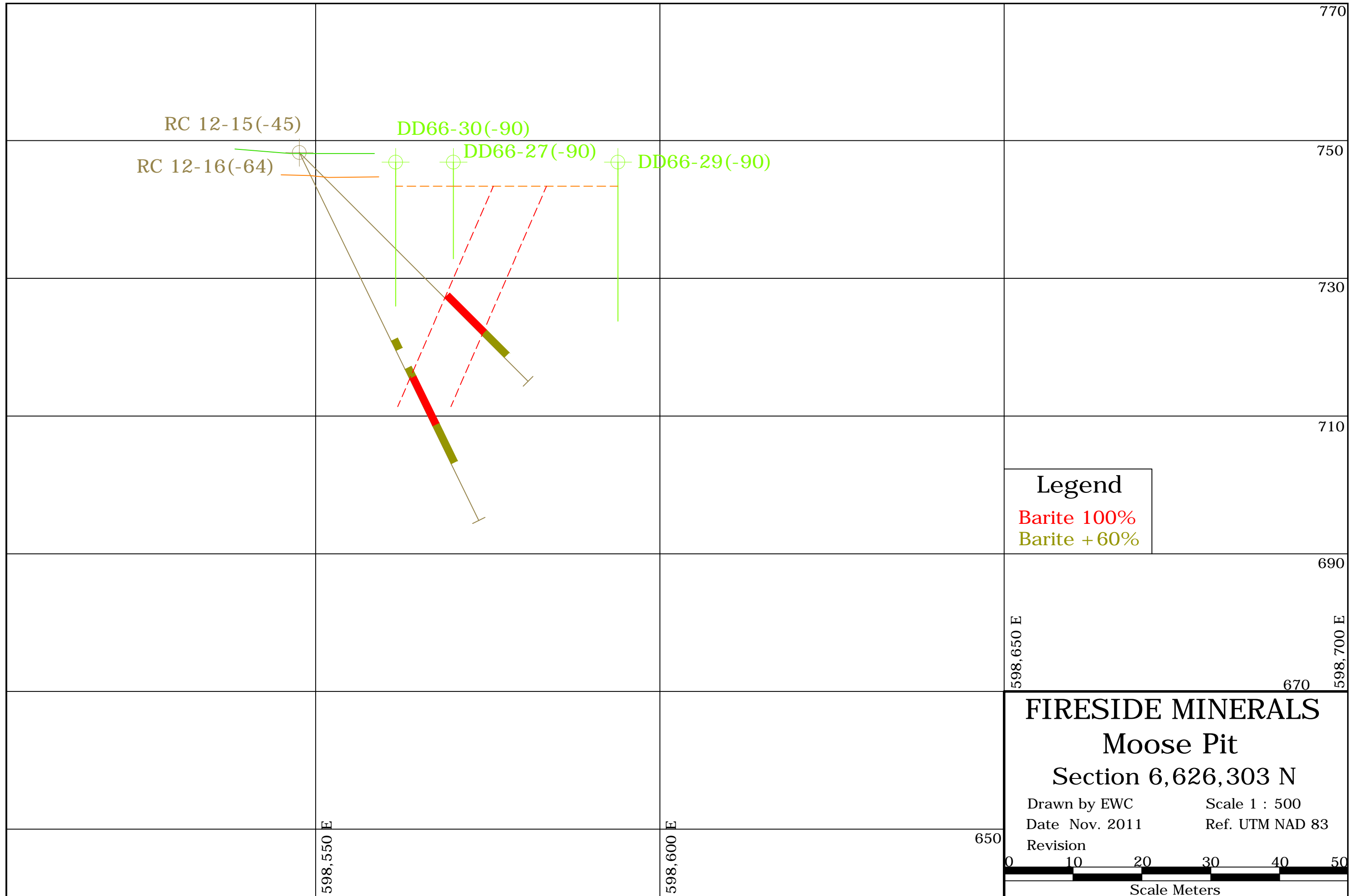
690

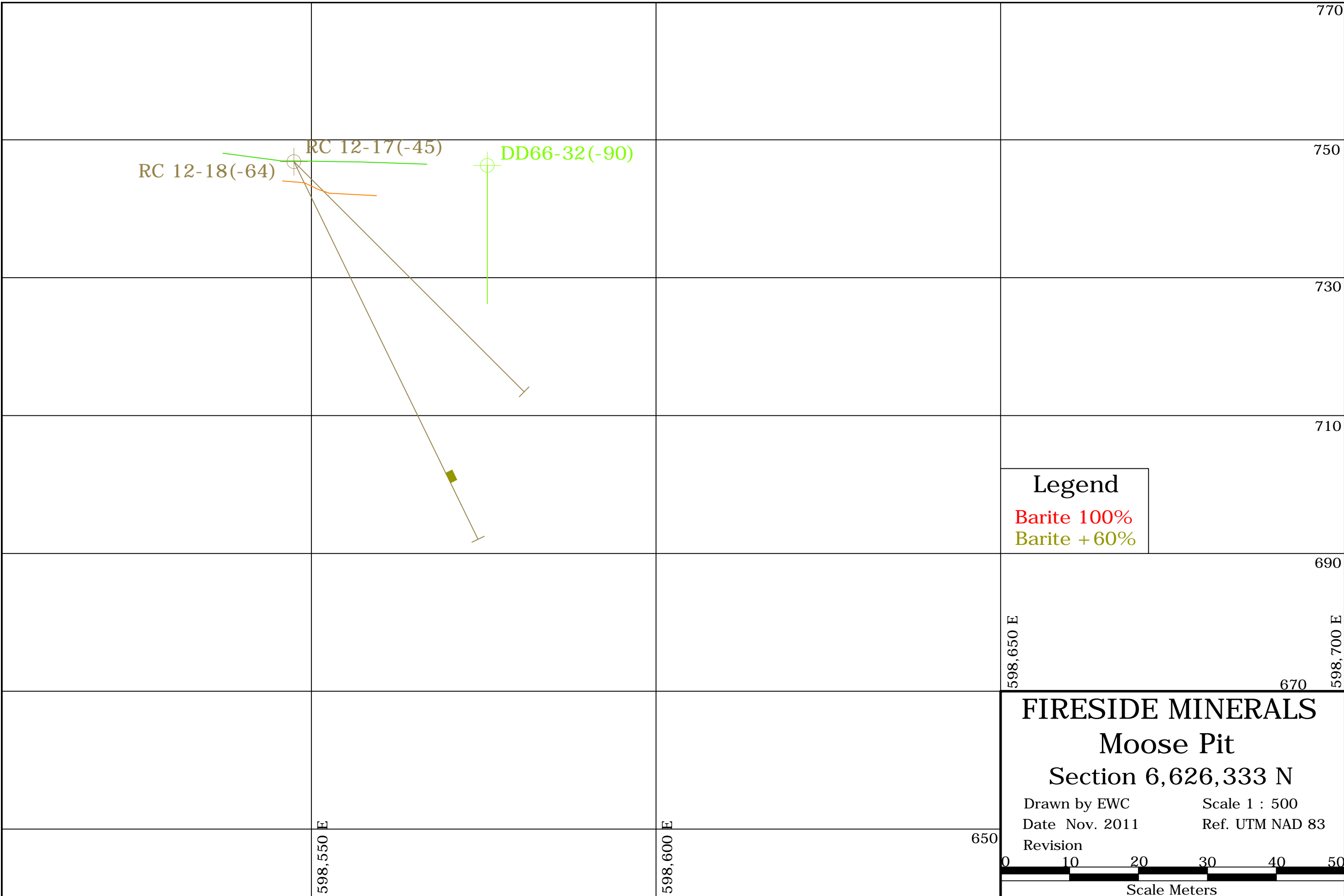


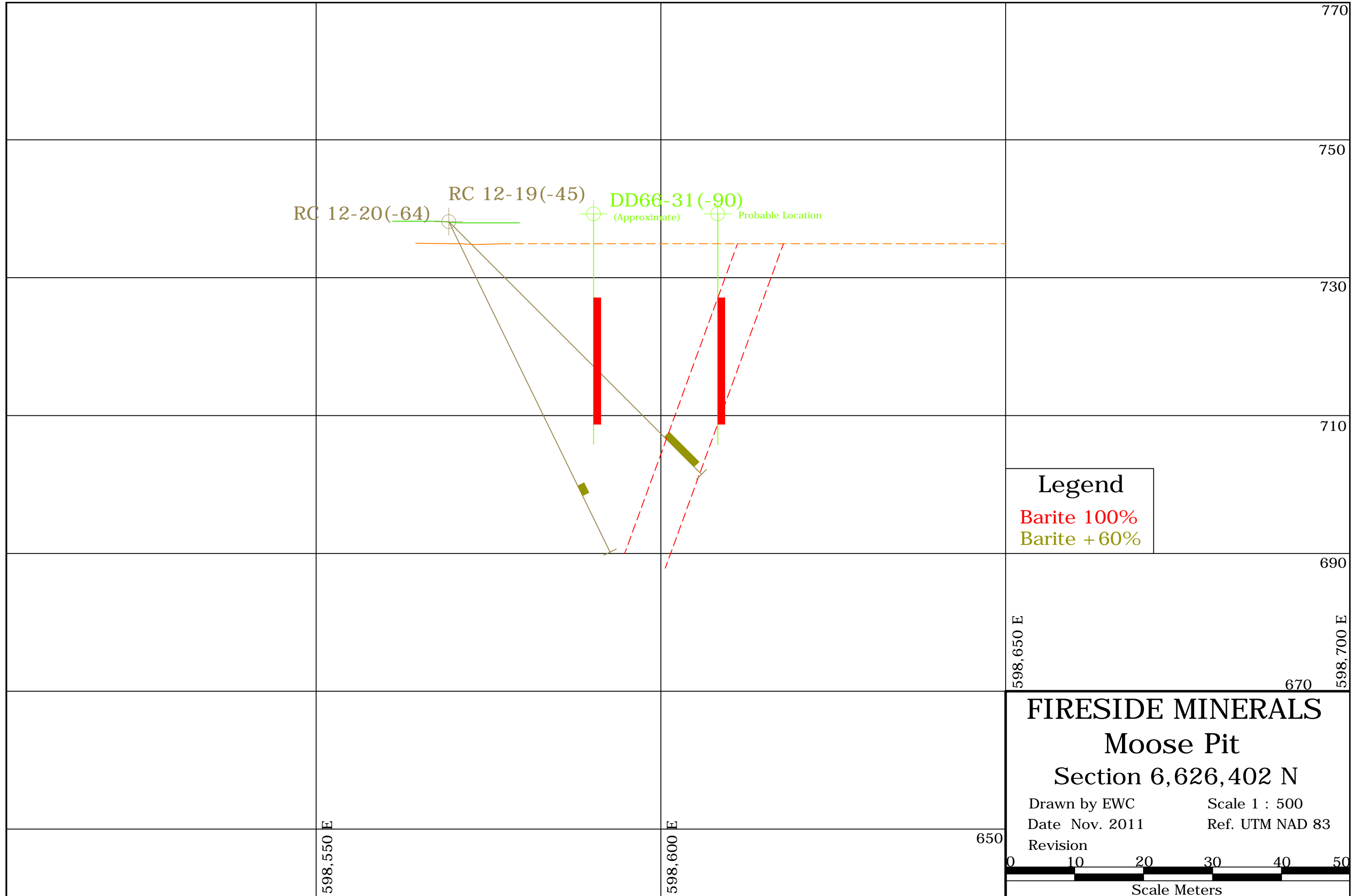
**Legend**  
 Barite 100%  
 Barite +60%

**FIRESIDE MINERALS**  
**Moose Pit**  
**Section 6,626,273 N**  
 Drawn by EWC      Scale 1 : 500  
 Date Nov. 2011      Ref. UTM NAD 83  
 Revision

0 10 20 30 40 50  
 Scale Meters







**Legend**  
 Barite 100%  
 Barite + 60%

**FIRESIDE MINERALS**  
**Moose Pit**  
**Section 6,626,402 N**  
 Drawn by EWC      Scale 1 : 500  
 Date Nov. 2011      Ref. UTM NAD 83  
 Revision

0 10 20 30 40 50  
 Scale Meters

## **Appendix 3**

### **Drill Hole Logs**













## Fireside Minerals

**Property Moose Zone**

**Reverse Circulation Hole Log**

**Hole No. RC12-06**

Dip Test		
Angle		
Footage	Reading	Corrected

Hole No. RC 12-06	Sheet No. 1	Total Depth 62.50m
Section 6,626,180N	Latitude 6,626,180.00	Logged by Scott Allan
Date Started May 11 <sup>th</sup> , 12	Departure 598,531.53	Dip -60°
Date Finished May 11 <sup>th</sup> , 12	Elevation 755.16m	Core size RC
Date Logged May 30 <sup>th</sup> , 12	Azimuth 90°	

Depth m		Rec %	Description	Sample No.	From m	To m	Sample Width m	Assay			
From	To							S/G	Cu. ppm	Pb. ppm	Zn. ppm
0	8.23		Casing								
8.23	10.67		Calcareous Bleached Argillite and Black Argillite								
10.67	15.24		Slightly Calcareous Black Argillite								
15.24	16.76		Calcareous Black Argillite and Bleached Argillite								
16.76	18.29		Black Argillite								
18.29	27.43		Black Argillite with minor Quartz and Barite								
27.43	28.96		Black Argillite mixed with Banded Bleached Argillite (20%)								
28.96	30.48		Black Argillite mixed with minor Quartz and Barite								
30.48	32.00		Black Argillite mixed with Bleached Argillite and Barite (10%)								
32.00	33.53		Black Argillite mixed with Bleached Argillite with Minor Barite								
33.53	35.05		Black Argillite with Quartz (5%)								
35.05	36.58		Bleached Argillite								
36.58	38.1		Bleached Argillite mixed with Barite(50%)								
38.1	39.62		Bleached Argillite with minor Barite								
39.62	41.15		Barite (40%) mixed with Silica (30%) and Black Argillite (30%)								
41.15	42.67		Black Argillite mixed with Diorite (5%)								
42.67	44.20		Black Argillite mixed with Silica (15%) and Barite(15%)								
44.20	45.72		Black Argillite								























## Fireside Minerals

**Property Moose Zone**

**Reverse Circulation Hole Log**

**Hole No. RC12-18**

Dip Test		
Angle		
Footage	Reading	Corrected

Hole No. RC12-18	Sheet No. 1/2	Total Depth 60.96m
Section 6,626,333N	Latitude 6,626,333.26	Logged by Scott Allan
Date Started	Departure 598,547.45	Dip -64°
Date Finished	Elevation 746.84	Core size RC
Date Logged Aug 6 <sup>th</sup> , 12	Azimuth 98°	

Depth m		Rec %	Description	Sample No.	From m	To m	Sample Width m	Assay			
From	To							S/G	Cu. ppm	Pb. ppm	Zn. ppm
0	3.66		Casing								
3.66	6.10		Calcareous Black Argillite (60%) with Bleached Argillite (40%)								
6.10	7.62		Calcareous Bleached Argillite								
7.62	10.67		Calcareous Black Argillite (70%) with Bleached Argillite (30%)								
10.67	12.19		Bleached Argillite mixed with Black Argillite								
12.19	16.76		Calcareous Black Argillite with Quartz(<1%) and Bleached Argillite								
16.76	21.34		Slightly Calcareous Black Argillite								
21.34	24.38		Black Argillite with Quartz (5%)								
24.38	27.43		Slightly Calcareous Black Argillite								
27.43	28.96		Slightly Calcareous Black Argillite with Quartz (5%)								
28.96	30.48		Slightly Calcareous Black Argillite with Quartz(5%) and Barite (1%)								
30.48	32.00		Slightly Calcareous Black Argillite (85%) with Bleached Argillite (15%)								
32.00	33.53		Calcareous Bleached Argillite with minor Barite (1%)								
33.53	35.05		Slightly Calcareous Bleached Argillite with Black Argillite								
35.05	36.58		Black Argillite with Quartz(10%) and Barite (3%)								
36.58	41.15		Black Argillite mixed with Grey Argillite (10%) Quartz(5%) minor Barite								











