

Summit Scientific

741 Corporate Circle – Suite I ♦ Golden, Colorado 80401

303.277.9310 - laboratory ♦ 303.277.9531 - fax

January 22, 2016

Ryan Bruner
Extraction Oil & Gas
570 17th St. Suite 550
Denver, CO 80202
RE: FCR MD 1-9

Enclosed are the results of analyses for samples received by Summit Scientific on 01/21/16 16:00. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Paul Shrewsbury
President



Extraction Oil & Gas
570 17th St. Suite 550
Denver CO, 80202

Project: FCR MD 1-9

Project Number: [none]
Project Manager: Ryan Bruner

Reported:
01/22/16 15:03

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
W01@6	1601176-01	Soil	01/21/16 09:35	01/21/16 16:00
B01@6	1601176-02	Soil	01/21/16 09:37	01/21/16 16:00
S02@6	1601176-03	Soil	01/21/16 11:22	01/21/16 16:00
E01@6	1601176-04	Soil	01/21/16 11:52	01/21/16 16:00
S03@6	1601176-05	Soil	01/21/16 13:45	01/21/16 16:00
W02@6	1601176-06	Soil	01/21/16 15:00	01/21/16 16:00

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Extraction Oil & Gas
570 17th St. Suite 550
Denver CO, 80202

Project: FCR MD 1-9

Project Number: [none]
Project Manager: Ryan Bruner

Reported:
01/22/16 15:03

Summit Scientific

S₂

1601176

741 Corporate Circle, Suite J ♦ Golden, Colorado 80401
303-277-9310 ♦ 303-374-5933

Page 1 of 1

Client: EXTRACTION TASHAN Project Manager: RYAN BRUNER
Address: _____ E-Mail: _____
City/State/Zip: _____
Phone: _____ Fax: _____ Project Name: FCR MD 1-9
Sampler Name: RYAN BRUNER Project Number: _____

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix			Analysis Requested				Special Instructions	
					HCl	HNO3	None	Other (Specify)	Groundwater	Soil	Air-Canister #	Other (Specify)	TPH-D10	GBTEX			
1	W0106	1/21	9:38	1													
2	B0106		9:57						X								
3	S0206		11:22														
4	E0106		11:52														
5	S0306		1:45														
6	W0206		3:00														
7																	
8																	
9																	
10																	

Relinquished by: <u>RBR</u>	Date/Time: <u>1/21 4:00</u>	Received by: <u>Mitchell</u>	Date/Time: <u>1/21/16 4:00</u>	Turn Around Time (Check)	Notes:
Relinquished by:	Date/Time:	Received by:	Date/Time:	Same Day <input checked="" type="checkbox"/> 72 hours	
Relinquished by:	Date/Time:	Received by:	Date/Time:	24 hours <input type="checkbox"/> Standard	
Relinquished by:	Date/Time:	Received by:	Date/Time:	48 hours <input type="checkbox"/>	
				Sample Integrity:	
				Temperature Upon Receipt: <u>3.6</u>	
				Intact: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	

www.s2scientific.com



Extraction Oil & Gas
570 17th St. Suite 550
Denver CO, 80202

Project: FCR MD 1-9

Project Number: [none]
Project Manager: Ryan Bruner

Reported:
01/22/16 15:03

W01@6
1601176-01 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **01/21/16 09:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1601215	01/21/16	01/22/16	8015M	

Date Sampled: **01/21/16 09:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: <i>o</i> -Terphenyl		89.9 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **01/21/16 09:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	0.27	0.0020	mg/kg	1	1601214	01/21/16	01/21/16	EPA 8260B	
Toluene	0.043	0.0050	"	"	"	"	"	"	
Ethylbenzene	0.10	0.0050	"	"	"	"	"	"	
Xylenes (total)	0.88	0.0050	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	39	0.50	"	"	"	"	"	"	

Date Sampled: **01/21/16 09:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		111 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		79.4 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		140 %	21-167		"	"	"	"	

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Extraction Oil & Gas
570 17th St. Suite 550
Denver CO, 80202

Project: FCR MD 1-9

Project Number: [none]
Project Manager: Ryan Bruner

Reported:
01/22/16 15:03

B01@6
1601176-02 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **01/21/16 09:37**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1601215	01/21/16	01/22/16	8015M	

Date Sampled: **01/21/16 09:37**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: <i>o</i> -Terphenyl		90.6 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **01/21/16 09:37**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	0.060	0.0020	mg/kg	1	1601214	01/21/16	01/21/16	EPA 8260B	
Toluene	0.50	0.0050	"	"	"	"	"	"	
Ethylbenzene	0.22	0.0050	"	"	"	"	"	"	
Xylenes (total)	2.4	0.0050	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	84	0.50	"	"	"	"	"	"	

Date Sampled: **01/21/16 09:37**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		102 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		91.4 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		113 %	21-167		"	"	"	"	

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Extraction Oil & Gas
570 17th St. Suite 550
Denver CO, 80202

Project: FCR MD 1-9

Project Number: [none]
Project Manager: Ryan Bruner

Reported:
01/22/16 15:03

S02@6
1601176-03 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **01/21/16 11:22**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1601215	01/21/16	01/22/16	8015M	

Date Sampled: **01/21/16 11:22**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: <i>o</i> -Terphenyl		90.1 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **01/21/16 11:22**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	0.020	0.0020	mg/kg	1	1601214	01/21/16	01/22/16	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	0.012	0.0050	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	2.0	0.50	"	"	"	"	"	"	

Date Sampled: **01/21/16 11:22**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		107 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		96.7 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		105 %	21-167		"	"	"	"	

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Extraction Oil & Gas
570 17th St. Suite 550
Denver CO, 80202

Project: FCR MD 1-9

Project Number: [none]
Project Manager: Ryan Bruner

Reported:
01/22/16 15:03

E01@6
1601176-04 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **01/21/16 11:52**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1601215	01/21/16	01/22/16	8015M	

Date Sampled: **01/21/16 11:52**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: <i>o</i> -Terphenyl		90.9 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **01/21/16 11:52**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	1601214	01/21/16	01/22/16	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	0.015	0.0050	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	2.0	0.50	"	"	"	"	"	"	

Date Sampled: **01/21/16 11:52**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		113 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		95.0 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		108 %	21-167		"	"	"	"	

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Extraction Oil & Gas
570 17th St. Suite 550
Denver CO, 80202

Project: FCR MD 1-9

Project Number: [none]
Project Manager: Ryan Bruner

Reported:
01/22/16 15:03

S03@6
1601176-05 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **01/21/16 13:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1601215	01/21/16	01/22/16	8015M	

Date Sampled: **01/21/16 13:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: <i>o</i> -Terphenyl		90.3 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **01/21/16 13:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	0.044	0.0020	mg/kg	1	1601214	01/21/16	01/22/16	EPA 8260B	
Toluene	0.020	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	0.032	0.0050	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	1.3	0.50	"	"	"	"	"	"	

Date Sampled: **01/21/16 13:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		117 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		96.4 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		105 %	21-167		"	"	"	"	

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Extraction Oil & Gas
570 17th St. Suite 550
Denver CO, 80202

Project: FCR MD 1-9

Project Number: [none]
Project Manager: Ryan Bruner

Reported:
01/22/16 15:03

W02@6
1601176-06 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **01/21/16 15:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1601215	01/21/16	01/22/16	8015M	

Date Sampled: **01/21/16 15:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: <i>o</i> -Terphenyl		94.2 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **01/21/16 15:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	0.059	0.0020	mg/kg	1	1601214	01/21/16	01/22/16	EPA 8260B	
Toluene	0.0079	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.0050	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	0.94	0.50	"	"	"	"	"	"	

Date Sampled: **01/21/16 15:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		119 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		94.5 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		107 %	21-167		"	"	"	"	

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Extraction Oil & Gas
570 17th St. Suite 550
Denver CO, 80202

Project: FCR MD 1-9

Project Number: [none]
Project Manager: Ryan Bruner

Reported:
01/22/16 15:03

Extractable Petroleum Hydrocarbons by 8015 - Quality Control
Summit Scientific

Analyte	Result	Reporting		Spike Level	Source		%REC		RPD		Notes
		Limit	Units		Result	%REC	Limits	RPD	Limit		

Batch 1601215 - EPA 3550A

Blank (1601215-BLK1)

Prepared: 01/21/16 Analyzed: 01/22/16

C10-C28 (DRO)	ND	50	mg/kg								
<i>Surrogate: o-Terphenyl</i>	<i>11.0</i>		"	<i>12.5</i>		<i>88.3</i>	<i>30-150</i>				

LCS (1601215-BS1)

Prepared: 01/21/16 Analyzed: 01/22/16

C10-C28 (DRO)	447	50	mg/kg	499	18.1	89.5	73-134				
<i>Surrogate: o-Terphenyl</i>	<i>11.4</i>		"	<i>12.5</i>		<i>91.4</i>	<i>30-150</i>				

Matrix Spike (1601215-MS1)

Source: 1601175-01

Prepared: 01/21/16 Analyzed: 01/22/16

C10-C28 (DRO)	430	50	mg/kg	474	18.1	86.8	50-148				
<i>Surrogate: o-Terphenyl</i>	<i>11.3</i>		"	<i>11.9</i>		<i>95.2</i>	<i>30-150</i>				

Matrix Spike Dup (1601215-MSD1)

Source: 1601175-01

Prepared: 01/21/16 Analyzed: 01/22/16

C10-C28 (DRO)	468	50	mg/kg	496	18.1	90.7	50-148	8.52		13	
<i>Surrogate: o-Terphenyl</i>	<i>12.3</i>		"	<i>12.4</i>		<i>99.3</i>	<i>30-150</i>				

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Extraction Oil & Gas
570 17th St. Suite 550
Denver CO, 80202

Project: FCR MD 1-9

Project Number: [none]
Project Manager: Ryan Bruner

Reported:
01/22/16 15:03

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source	%REC		RPD	Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	

Batch 1601214 - EPA 5030 Soil MS

Blank (1601214-BLK1)

Prepared & Analyzed: 01/21/16

Benzene	ND	0.0020	mg/kg						
Toluene	ND	0.0050	"						
Ethylbenzene	ND	0.0050	"						
Xylenes (total)	ND	0.0050	"						
Gasoline Range Hydrocarbons	ND	0.50	"						
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0444</i>		<i>"</i>	<i>0.0400</i>		<i>111</i>	<i>23-173</i>		
<i>Surrogate: Toluene-d8</i>	<i>0.0388</i>		<i>"</i>	<i>0.0400</i>		<i>97.0</i>	<i>20-170</i>		
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0409</i>		<i>"</i>	<i>0.0400</i>		<i>102</i>	<i>21-167</i>		

LCS (1601214-BS1)

Prepared & Analyzed: 01/21/16

Benzene	0.149	0.0020	mg/kg	0.150		99.5	58-130		
Toluene	0.145	0.0050	"	0.150		96.9	61-134		
Ethylbenzene	0.153	0.0050	"	0.150		102	74-139		
m,p-Xylene	0.299	0.010	"	0.300		99.8	73-137		
o-Xylene	0.151	0.0050	"	0.150		101	73-141		
Xylenes (total)	0.450	0.0050	"				30-150		
Gasoline Range Hydrocarbons	8.44	0.50	"				30-150		
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0425</i>		<i>"</i>	<i>0.0400</i>		<i>106</i>	<i>23-173</i>		
<i>Surrogate: Toluene-d8</i>	<i>0.0398</i>		<i>"</i>	<i>0.0400</i>		<i>99.4</i>	<i>20-170</i>		
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0406</i>		<i>"</i>	<i>0.0400</i>		<i>101</i>	<i>21-167</i>		

Matrix Spike (1601214-MS1)

Source: 1601175-01

Prepared & Analyzed: 01/21/16

Benzene	0.126	0.0020	mg/kg	0.146	ND	86.7	30-131		
Toluene	0.120	0.0050	"	0.146	ND	82.1	30-134		
Ethylbenzene	0.119	0.0050	"	0.146	ND	82.0	22-153		
m,p-Xylene	0.231	0.010	"	0.291	ND	79.2	10-159		
o-Xylene	0.116	0.0050	"	0.146	ND	79.9	31-151		
Xylenes (total)	0.347	0.0050	"		ND		30-150		
Gasoline Range Hydrocarbons	6.12	0.50	"		ND		30-150		
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0424</i>		<i>"</i>	<i>0.0388</i>		<i>109</i>	<i>23-173</i>		
<i>Surrogate: Toluene-d8</i>	<i>0.0394</i>		<i>"</i>	<i>0.0388</i>		<i>102</i>	<i>20-170</i>		
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0386</i>		<i>"</i>	<i>0.0388</i>		<i>99.3</i>	<i>21-167</i>		

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Extraction Oil & Gas
570 17th St. Suite 550
Denver CO, 80202

Project: FCR MD 1-9

Project Number: [none]
Project Manager: Ryan Bruner

Reported:
01/22/16 15:03

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source	%REC			RPD	Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch 1601214 - EPA 5030 Soil MS

Matrix Spike Dup (1601214-MSD1)	Source: 1601175-01			Prepared & Analyzed: 01/21/16						
Benzene	0.117	0.0020	mg/kg	0.140	ND	83.5	30-131	7.61	34	
Toluene	0.109	0.0050	"	0.140	ND	77.7	30-134	9.31	30	
Ethylbenzene	0.107	0.0050	"	0.140	ND	76.2	22-153	11.1	24	
m,p-Xylene	0.208	0.010	"	0.280	ND	74.3	10-159	10.2	68	
o-Xylene	0.105	0.0050	"	0.140	ND	75.1	31-151	10.1	38	
Xylenes (total)	0.314	0.0050	"		ND		30-150	10.1	20	
Gasoline Range Hydrocarbons	5.46	0.50	"		ND		30-150	11.3	20	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0401</i>		<i>"</i>	<i>0.0374</i>		<i>107</i>	<i>23-173</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0379</i>		<i>"</i>	<i>0.0374</i>		<i>101</i>	<i>20-170</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0385</i>		<i>"</i>	<i>0.0374</i>		<i>103</i>	<i>21-167</i>			

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Extraction Oil & Gas
570 17th St. Suite 550
Denver CO, 80202

Project: FCR MD 1-9

Project Number: [none]
Project Manager: Ryan Bruner

Reported:
01/22/16 15:03

Notes and Definitions

DET Analyte DETECTED
ND Analyte NOT DETECTED at or above the reporting limit
NR Not Reported
dry Sample results reported on a dry weight basis
RPD Relative Percent Difference