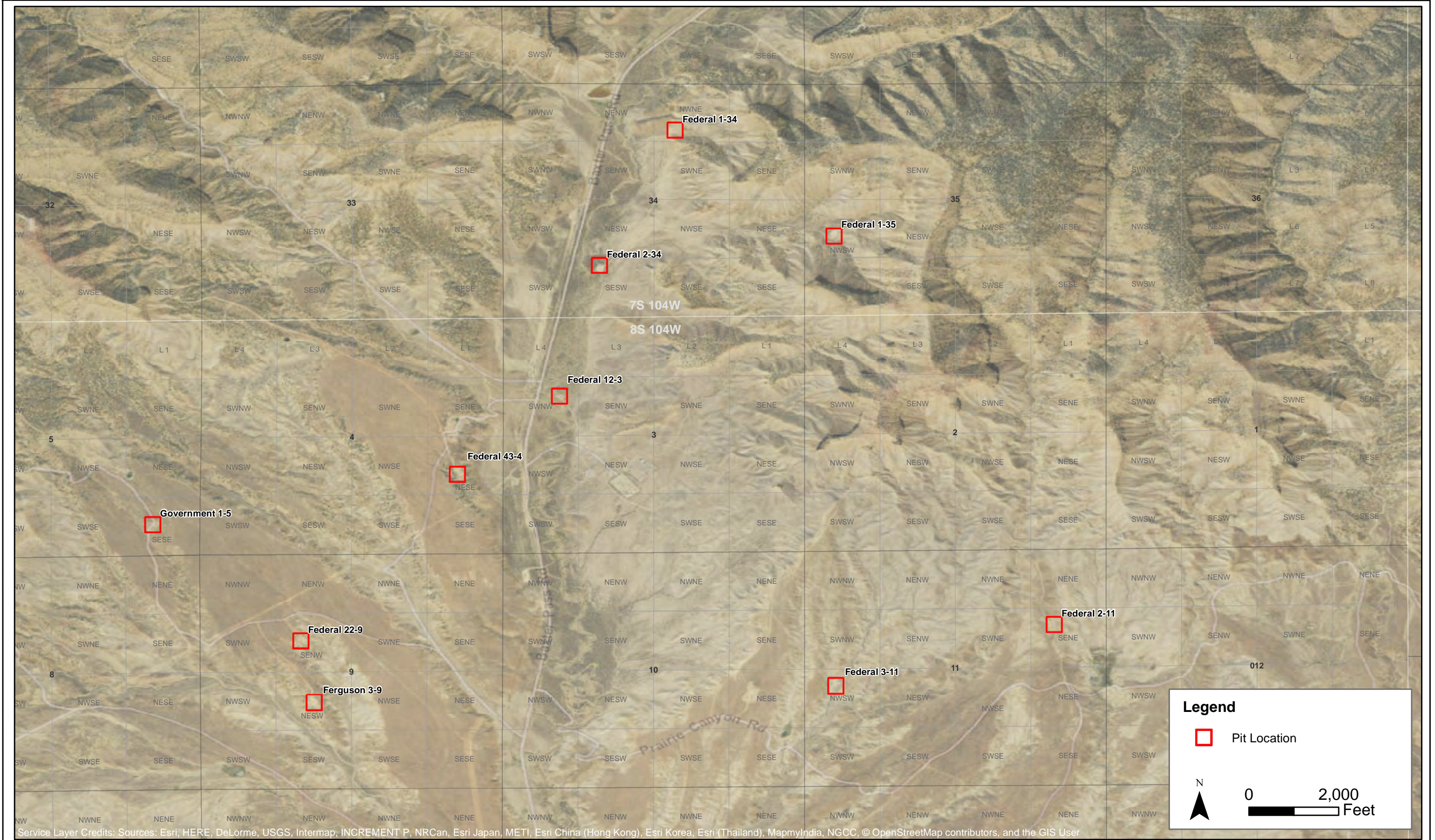


## FIGURES



Service Layer Credits: Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NGCC, © OpenStreetMap contributors, and the GIS User

DATE:	September 2016
DESIGNED BY:	R. Cornez
DRAWN BY:	D. Arnold



Tasman Geosciences, Inc.  
6899 Pecos Street - Unit C  
Denver, CO 80221

Foundation Energy Management, LLC  
Western Slope Pit Assessment  
Garfield County, Colorado

Site Locations Overview  
Map

Figure  
1



DATE:	September 22, 2017
DESIGNED BY:	R. Cornez
DRAWN BY:	K. Chritz



Foundation Energy Management, LLC  
Ferguson 3-9  
NESW, Section 9, Township 8 South, Range 104 West  
Garfield County, Colorado

Excavation and Soil Sample Location  
Map

FIGURE  
2

## **ANALYTICAL TABLE**

TABLE 1

Former National Fuel Corporation Ferguson 3-9 Pit  
Soil Sample Analytical Results  
Foundation Energy Management

Sample ID	Date Sampled	BTEX				TPH		pH	EC (mmhos/cm)	SAR
		Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Xylenes (mg/kg)	GRO (mg/kg)	DRO (mg/kg)			
Table 910-1 Allowable Concentrations		0.17	85	100	175	500		6 - 9	< 4	< 12
Ferg 3-9:C@8'	12/03/2016	< 0.0020	24	10	570	1,700	1,800	7.87	4.35	0.120
Ferg 3-9:N@8'	12/03/2016	< 0.0020	< 0.0050	< 0.0050	< 0.0050	0.69	< 50	8.07	7.08	-
Ferg 3-9:E@10'	12/03/2016	< 0.0020	< 0.0050	< 0.0050	< 0.0050	< 0.50	< 50	8.15	6.70	-
Ferg 3-9:S@10'	12/03/2016	< 0.0020	< 0.0050	< 0.0050	< 0.0050	< 0.50	< 50	8.19	2.20	-
Ferg 3-9:W@10'	12/03/2016	< 0.0020	< 0.0050	< 0.0050	< 0.0050	< 0.50	< 50	8.00	5.93	-
Base01@15'	07/20/2017	< 0.10	< 10	< 10	< 10	< 50	< 50	8.04	1.53	-
RE01@14'	07/20/2017	< 0.10	< 10	< 10	< 10	< 50	< 50	8.63	0.794	-
RW01@14'	07/20/2017	< 0.10	< 10	< 10	< 10	< 50	< 50	7.95	1.87	-
RS01@14'	07/20/2017	< 0.10	< 10	< 10	< 10	< 50	< 50	7.95	1.41	-
RN01@14'	07/20/2017	< 0.10	< 10	< 10	< 10	< 50	< 50	8.13	0.934	-
CS01	07/21/2017	< 0.10	< 10	< 10	< 10	< 50	< 50	7.74	5.04	-
CS02	07/21/2017	< 0.10	< 10	< 10	< 10	< 50	< 50	7.81	4.08	-

**Red Text** = Constituent concentration exceeds COGCC Table 910-1 standard  
**Bold Text** = Constituent concentration exceeds COGCC Table 910-1 inorganic standard; material backfilled below the designated root zone  
< = Constituent concentration less than the listed laboratory reporting limit  
- = Constituent not analyzed  
mg/kg = Milligram per Kilogram  
TPH = Total Petroleum Hydrocarbons  
GRO = Gasoline Range Organics  
DRO = Diesel Range Organics  
EC = Electrical Conductivity  
mmhos/cm = millimhos per centimeter  
SAR = Sodium Adsorption Ratio

**ATTACHMENT A  
LABORATORY  
ANALYTICAL REPORTS**

# Summit Scientific

---

741 Corporate Circle – Suite I ♦ Golden, Colorado 80401

303.277.9310 - laboratory ♦ 303.277.9531 - fax

December 13, 2016

Bob Cornez  
Tasman Geosciences  
6899 Pecos Street  
Denver, CO 80221  
RE: Western Slope Pit Assessment

Enclosed are the results of analyses for samples received by Summit Scientific on 12/05/16 12:35. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read 'P. Shrewsbury', with a stylized, cursive script.

Paul Shrewsbury  
President



Tasman Geosciences  
6899 Pecos Street  
Denver CO, 80221

Project: Western Slope Pit Assessment

Project Number: [none]  
Project Manager: Bob Cornez

**Reported:**  
12/13/16 14:29

### ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
Ferg 3-9: C @ 8'	1612034-01	Soil	12/03/16 07:46	12/05/16 12:35
Ferg 3-9: N @ 8'	1612034-02	Soil	12/03/16 08:04	12/05/16 12:35
Ferg 3-9: E @ 10'	1612034-03	Soil	12/03/16 08:38	12/05/16 12:35
Ferg 3-9: S @ 10'	1612034-04	Soil	12/03/16 08:59	12/05/16 12:35
Ferg 3-9: W @ 10'	1612034-05	Soil	12/03/16 09:17	12/05/16 12:35

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.*



Tasman Geosciences  
6899 Pecos Street  
Denver CO, 80221

Project: Western Slope Pit Assessment

Project Number: [none]  
Project Manager: Bob Cornez

Reported:  
12/13/16 14:29

# Summit Scientific

S<sub>2</sub>

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

1212034.1

1 of 2

Page 4 of 6

Client: Foundation Energy / Tasman Project Manager: RUC  
Address: \_\_\_\_\_ E-Mail: \_\_\_\_\_  
City/State/Zip: \_\_\_\_\_  
Phone: \_\_\_\_\_ Fax: \_\_\_\_\_ Project Name: Western Slope Pit Assessment  
Sampler Name: \_\_\_\_\_ Project Number: \_\_\_\_\_

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix			Analysis Requested					Special Instructions	
					HCl	HNO <sub>3</sub>	None	Other (Specify)	Groundwater	Soil	Air-Canister #	Other (Specify)	Fall Table #10-1	GBTEX	TPH-DRO	EC		PH
1	Fed 3-11: E @ 6'	02-Dec	1343	1						X			X	X	X	X		
2	Fed 2-11: E @ 2'		1468	2									X					
3	Southeast Camp		1530	1														
4	Fed 3-11: W @ 6'		1527	1									X	X	X	X		
5	Fed 3-11: S @ 2'		1537	1									X	X	X	X		
6	Fed 2-11: N @ 8'		1638	1									X	X	X	X		
7	Fed 2-11: E @ 2'		1657	1									X	X	X	X		
8	Fed 3-9: C @ 8'	03-Dec	0746	2									X	X	X	X		01
9	Fed 3-9: N @ 8'		0804	1									X	X	X	X		02
10	Fed 3-9: E @ 10'		0838	1									X	X	X	X		03

Relinquished by: <u>[Signature]</u>	Date/Time: <u>12/5/16 10:00</u>	Received by: <u>[Signature]</u>	Date/Time: <u>12-5-16 16:00</u>	Turn Around Time (Check) Same Day _____ 72 hours 24 hours _____ Standard <u>X</u> 48 hours _____	Notes:  <u>1.6%</u>
Relinquished by: _____	Date/Time: _____	Received by: _____	Date/Time: _____	Sample Integrity: _____	
Relinquished by: _____	Date/Time: _____	Received by: _____	Date/Time: _____	Temperature Upon Receipt: _____ Intact: <u>Yes</u> No	

www.s2scientific.com

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.

Tasman Geosciences  
6899 Pecos Street  
Denver CO, 80221

Project: Western Slope Pit Assessment

Project Number: [none]  
Project Manager: Bob Cornez

**Reported:**  
12/13/16 14:29

Summit Scientific

 $S_2$ 

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

1612034.2

2 of 2

Page 5 of 6

Client: Foundation Energy / Tasman

Project Manager: EMC

**Address:**

E-Mail:

City/State/Zip:

Phone: \_\_\_\_\_

**Fax:**

Project Name: Western Slope Lit Assessment

**Sampler Name:**

Project Number:

Sample Name:		Project Number:		Preservative		Matrix		Analysis Requested						Special Instructions						
ID	Sample Description	Date Sampled	Time Sampled	# of containers	HCl	HNO3	None	Other (Specify)	Groundwater	Soil	Air-Canister #	Other (Specify)	Full Table	GC-MS	TPH-DGC	EC	pH	As-Only		
1	Ferc 3-9:5@10'	07-10-16	0859	1						X				X	X	X	X			04
2	Ferc 3-9:W@10'		0917	1										X	X	X	X			05
3	Fed 22-9:C@4'		1020	2									X							
4	Fed 22-9:SO@4'		1052											X	X	X	X			
5	Fed 22-9:SO@4'		1208											X	X	X	X			
6	Fed 22-9:W@8'		1226	1										X	X	X	X			
7	Fed 22-9:W@4'		1209	1										X	X	X	X			
8	Fed 22-9:SO@8'		1211	1										X	X	X	X			
9	SW 15:1C@3'		1143																	
10	Southwest Comp		1442																	
Relinquished by:		Date/Time:		Received by:		Date/Time:		Turn Around Time		(Check)		Notes:								
		12/5/16 1010				12-5-16 1020		Same Day		72 hours										
Relinquished by:		Date/Time:		Received by:		Date/Time:		24 hours		Standard		X								
								48 hours												
								Sample Integrity:												
Relinquished by:		Date/Time:		Received by:		Date/Time:		Temperature Upon Receipt:												
								Intact: Yes		No										

[www.s2scientific.com](http://www.s2scientific.com)

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.*





Tasman Geosciences  
6899 Pecos Street  
Denver CO, 80221

Project: Western Slope Pit Assessment

Project Number: [none]  
Project Manager: Bob Cornez

Reported:  
12/13/16 14:29

### Sample Receipt Checklist

S2 Work Order: 1612034

Client: Foundation/Tasman

Client Project ID:

Western Slope Pit Assessment  
(Frog 3-9)

Shipped Via:

Hand

(UPS, FedEx, Hand Delivered, Pick-up, etc.)

Airbill #:

Matrix (check all that apply):

☐ Air

☒ Soil/Solid

☐ Water

☐ Other:

(Describe)

Cooler ID					
Temp (°C)	<u>1.6</u>				

Thermometer ID: 61857155-K

	Yes	No	N/A	Comments (if any)
If samples require cooling, was the temperature just above 0°C to ≤ 6°C <sup>(1)</sup> ?	<input checked="" type="checkbox"/>			
NOTE: If samples are delivered the same day of sampling, this requirement is waived provided that there is evidence that cooling has begun.				
Were all samples received intact <sup>(1)</sup> ?	<input checked="" type="checkbox"/>			
Was adequate sample volume provided <sup>(1)</sup> ?	<input checked="" type="checkbox"/>			
If custody seals are present, are they intact <sup>(1)</sup> ?			<input checked="" type="checkbox"/>	
Are short holding time analytes or samples with HTs due within 48 hours present?			<input checked="" type="checkbox"/>	
Is a chain-of-custody (COC) form present and filled out completely <sup>(1)</sup> ?	<input checked="" type="checkbox"/>			
Does the COC agree with the number and type of sample bottles received <sup>(1)</sup> ?	<input checked="" type="checkbox"/>			
Do the sample IDs on the bottle labels match the COC <sup>(1)</sup> ?	<input checked="" type="checkbox"/>			
Is the COC properly relinquished by the client w/ date and time recorded <sup>(1)</sup> ?	<input checked="" type="checkbox"/>			
For Volatiles in water – is there headspace present? If yes, contact client and note in narrative.			<input checked="" type="checkbox"/>	
Are samples preserved that require preservation (excluding cooling) <sup>(1)</sup> ?			<input checked="" type="checkbox"/>	
Note the type of preservative in the Comments column – HCl, H2SO4, NaOH, HNO3, ect			<input checked="" type="checkbox"/>	
If samples are acid preserved for metals, is the pH ≤ 2 <sup>(1)</sup> ?			<input checked="" type="checkbox"/>	
Record the pH in Comments.			<input checked="" type="checkbox"/>	
If dissolved metals are requested, were samples field filtered?			<input checked="" type="checkbox"/>	
Additional Comments (if any):				
<sup>(1)</sup> If NO, then contact the client before proceeding with analysis and note in case narrative.				

Nakita  
Custodian Printed Name

MA  
Signature or Initials of Custodian

12/13/16 1235  
Date/Time



Tasman Geosciences  
6899 Pecos Street  
Denver CO, 80221

Project: Western Slope Pit Assessment  
Project Number: [none]  
Project Manager: Bob Cornez

**Reported:**  
12/13/16 14:29

**Ferg 3-9: C @ 8'**  
**1612034-01 (Soil)**

**Summit Scientific**

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **12/03/16 07:46**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>C10-C28 (DRO)</b>	<b>1800</b>	50	mg/kg	1	1612117	12/12/16	12/13/16	8015M	

Date Sampled: **12/03/16 07:46**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<i>Surrogate: o-Terphenyl</i>		103 %	30-150		"	"	"	"	

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **12/03/16 07:46**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	1612089	12/08/16	12/09/16	EPA 8260B	
<b>Toluene</b>	<b>24</b>	0.50	"	100	"	"	"	"	
<b>Ethylbenzene</b>	<b>10</b>	0.50	"	"	"	"	"	"	
<b>Xylenes (total)</b>	<b>570</b>	5.0	"	1000	"	"	"	"	
<b>Gasoline Range Hydrocarbons</b>	<b>1700</b>	50	"	100	"	"	"	"	

Date Sampled: **12/03/16 07:46**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<i>Surrogate: 1,2-Dichloroethane-d4</i>		128 %	23-173		"	"	"	"	
<i>Surrogate: Toluene-d8</i>		100 %	20-170		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		205 %	21-167		"	"	"	"	S-02

**Semivolatile Organic Compounds by EPA Method 8270D SIM**

Date Sampled: **12/03/16 07:46**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	1612049	12/06/16	12/08/16	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	

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.*



Tasman Geosciences  
6899 Pecos Street  
Denver CO, 80221

Project: Western Slope Pit Assessment

Project Number: [none]  
Project Manager: Bob Cornez

Reported:  
12/13/16 14:29

**Ferg 3-9: C @ 8'**  
**1612034-01 (Soil)**

### Summit Scientific

#### Semivolatile Organic Compounds by EPA Method 8270D SIM

Benzo (a) anthracene	ND	0.00500	mg/kg	1	1612049	12/06/16	12/08/16	EPA 8270D SIM
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"
Chrysene	ND	0.00500	"	"	"	"	"	"
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"
Fluoranthene	ND	0.00500	"	"	"	"	"	"
<b>Fluorene</b>	<b>0.00719</b>	0.00500	"	"	"	"	"	"
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"
<b>Naphthalene</b>	<b>1.19</b>	0.0500	"	10	"	"	"	"
Pyrene	ND	0.00500	"	1	"	"	"	"

Date Sampled: **12/03/16 07:46**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		14.4 %	30-150		"	"	"	"	S-02
Surrogate: Fluoranthene-d10		94.2 %	30-150		"	"	"	"	

#### Total Metals by EPA Method 6020 - Dry Weight Basis

Date Sampled: **12/03/16 07:46**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	5.71	0.231	mg/kg dry	1	1612062	12/07/16	12/07/16	EPA 6020A	
Barium	137	0.461	"	"	"	"	"	"	
Arsenic	5.71	0.231	"	"	"	"	"	"	
Boron	3.51	1.15	"	"	"	"	"	"	
Barium	137	0.461	"	"	"	"	"	"	
Cadmium	0.140	0.115	"	"	"	"	"	"	
Chromium	6.08	0.577	"	"	"	"	"	"	
Cadmium	0.140	0.115	"	"	"	"	"	"	
Copper	8.72	0.577	"	"	"	"	"	"	
Lead	9.57	0.231	"	"	"	"	"	"	
Chromium	6.08	0.577	"	"	"	"	"	"	
Nickel	9.84	0.115	"	"	"	"	"	"	
Selenium	0.591	0.461	"	"	"	"	"	"	
Copper	8.72	0.577	"	"	"	"	"	"	

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.



Tasman Geosciences  
6899 Pecos Street  
Denver CO, 80221

Project: Western Slope Pit Assessment  
Project Number: [none]  
Project Manager: Bob Cornez

**Reported:**  
12/13/16 14:29

**Ferg 3-9: C @ 8'**  
**1612034-01 (Soil)**

**Summit Scientific**

**Total Metals by EPA Method 6020 - Dry Weight Basis**

Silver	ND	0.115	mg/kg dry	1	1612062	12/07/16	12/07/16	EPA 6020A
<b>Zinc</b>	<b>36.8</b>	11.5	"	"	"	"	"	"
<b>Lead</b>	<b>9.57</b>	0.231	"	"	"	"	"	"
<b>Nickel</b>	<b>9.84</b>	0.115	"	"	"	"	"	"
<b>Selenium</b>	<b>0.591</b>	0.461	"	"	"	"	"	"
Silver	ND	0.115	"	"	"	"	"	"
<b>Zinc</b>	<b>36.8</b>	11.5	"	"	"	"	"	"

**Total Mercury by EPA Method 7471**

Date Sampled: **12/03/16 07:46**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Mercury	ND	0.0489	mg/kg dry	1	1612034	12/05/16	12/06/16	EPA 7471	

**Hexavalent Chromium by EPA 7196**

Date Sampled: **12/03/16 07:46**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Trivalent Chromium</b>	<b>6.08</b>	0.923	mg/kg dry	1	[CALC]	12/07/16	12/08/16	EPA 7196/3060A	
Chromium, Hexavalent	ND	0.300	"	"	1612064	"	"	EPA 7196	

**Soluble Nutrients by EPA 6020/Mod. USDA60 6(2, 3A) - Dry Weight Basis**

Date Sampled: **12/03/16 07:46**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Calcium</b>	<b>7710</b>	11.5	mg/kg dry	1	1612063	12/07/16	12/07/16	EPA 6020/Mod. USDA60 6(2, 3A)	
<b>Magnesium</b>	<b>309</b>	5.77	"	"	"	"	"	"	
<b>Sodium</b>	<b>39.6</b>	5.77	"	"	"	"	"	"	
<b>Sodium Adsorption Ratio</b>	<b>0.120</b>		units	"	1612082	12/08/16	12/08/16	"	

**Physical Parameters by APHA/ASTM/EPA Methods**

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.*



Tasman Geosciences  
6899 Pecos Street  
Denver CO, 80221

Project: Western Slope Pit Assessment  
Project Number: [none]  
Project Manager: Bob Cornez

**Reported:**  
12/13/16 14:29

**Ferg 3-9: C @ 8'**  
**1612034-01 (Soil)**

**Summit Scientific**

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **12/03/16 07:46**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	<b>4.35</b>	0.0100	mmhos/cm	1	1612098	12/09/16	12/09/16	SM 2510B	
pH	<b>7.87</b>	0.100	pH Units	"	1612096	12/09/16	12/09/16	EPA 9045	
% Solids	<b>86.7</b>		%	"	1612069	12/07/16	12/07/16	% calculation	

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.*



Tasman Geosciences  
6899 Pecos Street  
Denver CO, 80221

Project: Western Slope Pit Assessment  
Project Number: [none]  
Project Manager: Bob Cornez

**Reported:**  
12/13/16 14:29

**Ferg 3-9: N @ 8'**  
**1612034-02 (Soil)**

**Summit Scientific**

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **12/03/16 08:04**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1612117	12/12/16	12/13/16	8015M	

Date Sampled: **12/03/16 08:04**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		101 %	30-150		"	"	"	"	

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **12/03/16 08:04**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	1612089	12/08/16	12/09/16	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.0050	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	0.69	0.50	"	"	"	"	"	"	

Date Sampled: **12/03/16 08:04**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		127 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		104 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		99.3 %	21-167		"	"	"	"	

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **12/03/16 08:04**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.07	0.100	pH Units	1	1612096	12/09/16	12/09/16	EPA 9045	
Specific Conductance (EC)	7.08	0.0100	mmhos/cm	"	1612098	12/09/16	12/09/16	SM 2510B	

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.



Tasman Geosciences  
6899 Pecos Street  
Denver CO, 80221

Project: Western Slope Pit Assessment  
Project Number: [none]  
Project Manager: Bob Cornez

**Reported:**  
12/13/16 14:29

**Ferg 3-9: E @ 10'**  
**1612034-03 (Soil)**

**Summit Scientific**

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **12/03/16 08:38**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1612117	12/12/16	12/13/16	8015M	

Date Sampled: **12/03/16 08:38**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		98.1 %	30-150		"	"	"	"	

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **12/03/16 08:38**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	1612089	12/08/16	12/09/16	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.0050	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **12/03/16 08:38**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		126 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		105 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		105 %	21-167		"	"	"	"	

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **12/03/16 08:38**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	<b>6.70</b>	0.0100	mmhos/cm	1	1612098	12/09/16	12/09/16	SM 2510B	
pH	<b>8.15</b>	0.100	pH Units	"	1612096	12/09/16	12/09/16	EPA 9045	

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.



Tasman Geosciences  
6899 Pecos Street  
Denver CO, 80221

Project: Western Slope Pit Assessment  
Project Number: [none]  
Project Manager: Bob Cornez

**Reported:**  
12/13/16 14:29

**Ferg 3-9: S @ 10'**  
**1612034-04 (Soil)**

**Summit Scientific**

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **12/03/16 08:59**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1612117	12/12/16	12/13/16	8015M	

Date Sampled: **12/03/16 08:59**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		98.1 %	30-150		"	"	"	"	

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **12/03/16 08:59**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	1612089	12/08/16	12/09/16	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.0050	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **12/03/16 08:59**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		133 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		103 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		100 %	21-167		"	"	"	"	

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **12/03/16 08:59**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	<b>8.19</b>	0.100	pH Units	1	1612096	12/09/16	12/09/16	EPA 9045	
Specific Conductance (EC)	<b>2.20</b>	0.0100	mmhos/cm	"	1612098	12/09/16	12/09/16	SM 2510B	

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.



Tasman Geosciences  
6899 Pecos Street  
Denver CO, 80221

Project: Western Slope Pit Assessment  
Project Number: [none]  
Project Manager: Bob Cornez

**Reported:**  
12/13/16 14:29

**Ferg 3-9: W @ 10'**  
**1612034-05 (Soil)**

**Summit Scientific**

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **12/03/16 09:17**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1612117	12/12/16	12/13/16	8015M	

Date Sampled: **12/03/16 09:17**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		97.3 %	30-150		"	"	"	"	

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **12/03/16 09:17**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	1612089	12/08/16	12/09/16	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.0050	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **12/03/16 09:17**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		124 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		104 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		102 %	21-167		"	"	"	"	

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **12/03/16 09:17**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	<b>5.93</b>	0.0100	mmhos/cm	1	1612098	12/09/16	12/09/16	SM 2510B	
pH	<b>8.00</b>	0.100	pH Units	"	1612096	12/09/16	12/09/16	EPA 9045	

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.



Tasman Geosciences  
6899 Pecos Street  
Denver CO, 80221

Project: Western Slope Pit Assessment

Project Number: [none]  
Project Manager: Bob Cornez

**Reported:**  
12/13/16 14:29

**Extractable Petroleum Hydrocarbons by 8015 - Quality Control**  
**Summit Scientific**

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

**Batch 1612117 - EPA 3550A**

**Blank (1612117-BLK1)**

Prepared & Analyzed: 12/12/16

C10-C28 (DRO) ND 50 mg/kg

Surrogate: o-Terphenyl 12.9 " 12.5 103 30-150

**LCS (1612117-BS1)**

Prepared & Analyzed: 12/12/16

C10-C28 (DRO) 429 50 mg/kg 499 86.0 73-134

Surrogate: o-Terphenyl 13.0 " 12.5 104 30-150

**Matrix Spike (1612117-MS1)**

Source: 1612072-01

Prepared: 12/12/16 Analyzed: 12/13/16

C10-C28 (DRO) 460 50 mg/kg 499 53.6 81.5 50-148

Surrogate: o-Terphenyl 13.0 " 12.5 104 30-150

**Matrix Spike Dup (1612117-MSD1)**

Source: 1612072-01

Prepared: 12/12/16 Analyzed: 12/13/16

C10-C28 (DRO) 464 50 mg/kg 499 53.6 82.3 50-148 0.890 20

Surrogate: o-Terphenyl 13.1 " 12.5 105 30-150

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.



Tasman Geosciences  
6899 Pecos Street  
Denver CO, 80221

Project: Western Slope Pit Assessment  
Project Number: [none]  
Project Manager: Bob Cornez

Reported:  
12/13/16 14:29

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

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

**Batch 1612089 - EPA 5030 Soil MS**

**Blank (1612089-BLK1)**

Prepared & Analyzed: 12/08/16

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	"							
Surrogate: 1,2-Dichloroethane-d4	0.0481		"	0.0400		120	23-173			
Surrogate: Toluene-d8	0.0414		"	0.0400		104	20-170			
Surrogate: 4-Bromofluorobenzene	0.0413		"	0.0400		103	21-167			

**LCS (1612089-BS1)**

Prepared & Analyzed: 12/08/16

Benzene	0.0861	0.0020	mg/kg	0.100		86.1	58-130			
Toluene	0.0954	0.0050	"	0.100		95.4	61-134			
Ethylbenzene	0.120	0.0050	"	0.0992		121	74-139			
m,p-Xylene	0.217	0.010	"	0.200		109	73-137			
o-Xylene	0.112	0.0050	"	0.0980		115	73-141			
Xylenes (total)	0.330	0.0050	"				30-150			
Gasoline Range Hydrocarbons	3.07	0.50	"				30-150			
Surrogate: 1,2-Dichloroethane-d4	0.0499		"	0.0400		125	23-173			
Surrogate: Toluene-d8	0.0408		"	0.0400		102	20-170			
Surrogate: 4-Bromofluorobenzene	0.0415		"	0.0400		104	21-167			

**Matrix Spike (1612089-MS1)**

Source: 1612033-01

Prepared: 12/08/16 Analyzed: 12/09/16

Benzene	0.0834	0.0020	mg/kg	0.100	ND	83.4	30-131			
Toluene	0.0954	0.0050	"	0.100	ND	95.4	30-134			
Ethylbenzene	0.119	0.0050	"	0.0992	ND	120	22-153			
m,p-Xylene	0.218	0.010	"	0.200	ND	109	10-159			
o-Xylene	0.112	0.0050	"	0.0980	ND	114	31-151			
Xylenes (total)	0.330	0.0050	"		ND		30-150			
Gasoline Range Hydrocarbons	3.10	0.50	"		ND		30-150			
Surrogate: 1,2-Dichloroethane-d4	0.0507		"	0.0400		127	23-173			
Surrogate: Toluene-d8	0.0402		"	0.0400		100	20-170			
Surrogate: 4-Bromofluorobenzene	0.0392		"	0.0400		98.0	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.



Tasman Geosciences  
6899 Pecos Street  
Denver CO, 80221

Project: Western Slope Pit Assessment

Project Number: [none]  
Project Manager: Bob Cornez

**Reported:**  
12/13/16 14:29

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

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

**Batch 1612089 - EPA 5030 Soil MS**

Matrix Spike Dup (1612089-MSD1)		Source: 1612033-01			Prepared: 12/08/16		Analyzed: 12/09/16			
Benzene	0.0839	0.0020	mg/kg	0.100	ND	83.9	30-131	0.609	34	
Toluene	0.0951	0.0050	"	0.100	ND	95.1	30-134	0.346	30	
Ethylbenzene	0.120	0.0050	"	0.0992	ND	121	22-153	1.21	24	
m,p-Xylene	0.219	0.010	"	0.200	ND	110	10-159	0.741	68	
o-Xylene	0.112	0.0050	"	0.0980	ND	114	31-151	0.00	38	
Xylenes (total)	0.331	0.0050	"		ND		30-150	0.490	20	
Gasoline Range Hydrocarbons	3.12	0.50	"		ND		30-150	0.787	20	
Surrogate: 1,2-Dichloroethane-d4	0.0501		"	0.0400		125	23-173			
Surrogate: Toluene-d8	0.0405		"	0.0400		101	20-170			
Surrogate: 4-Bromofluorobenzene	0.0416		"	0.0400		104	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.



Tasman Geosciences  
6899 Pecos Street  
Denver CO, 80221

Project: Western Slope Pit Assessment  
Project Number: [none]  
Project Manager: Bob Cornez

Reported:  
12/13/16 14:29

**Semivolatile Organic Compounds by EPA Method 8270D SIM - Quality Control**  
**Summit Scientific**

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

**Batch 1612049 - EPA 5030 Soil MS**

**Blank (1612049-BLK1)**

Prepared: 12/06/16 Analyzed: 12/08/16

Acenaphthene	ND	0.00500	mg/kg
Anthracene	ND	0.00500	"
Benzo (a) anthracene	ND	0.00500	"
Benzo (b) fluoranthene	ND	0.00500	"
Benzo (k) fluoranthene	ND	0.00500	"
Benzo (a) pyrene	ND	0.00500	"
Chrysene	ND	0.00500	"
Dibenz (a,h) anthracene	ND	0.00500	"
Fluoranthene	ND	0.00500	"
Fluorene	ND	0.00500	"
Indeno (1,2,3-cd) pyrene	ND	0.00500	"
Naphthalene	ND	0.00500	"
Pyrene	ND	0.00500	"

Surrogate: 2-Methylnaphthalene-d10

0.0227

"

0.0333

68.0 30-150

Surrogate: Fluoranthene-d10

0.0341

"

0.0333

102 30-150

**LCS (1612049-BS1)**

Prepared: 12/06/16 Analyzed: 12/08/16

Acenaphthene	0.0338	0.00500	mg/kg	0.0333	101	48-131
Anthracene	0.0382	0.00500	"			48-135
Benzo (a) anthracene	0.0376	0.00500	"			37-142
Benzo (b) fluoranthene	0.0386	0.00500	"			35-139
Benzo (k) fluoranthene	0.0337	0.00500	"			30-139
Benzo (a) pyrene	0.0370	0.00500	"			41-132
Chrysene	0.0324	0.00500	"			30-136
Dibenz (a,h) anthracene	0.0345	0.00500	"			24-127
Fluoranthene	0.0346	0.00500	"			50-139
Fluorene	0.0358	0.00500	"			50-130
Indeno (1,2,3-cd) pyrene	0.0304	0.00500	"			26-139
Naphthalene	0.0321	0.00500	"			40-135
Pyrene	0.0342	0.00500	"	0.0333	103	39-141

Surrogate: 2-Methylnaphthalene-d10

0.0272

"

0.0333

81.6 50-150

Surrogate: Fluoranthene-d10

0.0396

"

0.0333

119 50-150

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.



Tasman Geosciences  
6899 Pecos Street  
Denver CO, 80221

Project: Western Slope Pit Assessment  
Project Number: [none]  
Project Manager: Bob Cornez

Reported:  
12/13/16 14:29

**Semivolatile Organic Compounds by EPA Method 8270D SIM - Quality Control**  
**Summit Scientific**

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

**Batch 1612049 - EPA 5030 Soil MS**

Matrix Spike (1612049-MS1)				Source: 1612026-04		Prepared: 12/06/16		Analyzed: 12/08/16		
Acenaphthene	0.0600	0.00500	mg/kg	0.0333	ND	180	27-140			QM-07
Anthracene	0.0389	0.00500	"		ND		23-144			
Benzo (a) anthracene	0.0364	0.00500	"		ND		12-168			
Benzo (b) fluoranthene	0.0438	0.00500	"		ND		10-170			
Benzo (k) fluoranthene	0.0355	0.00500	"		ND		11-150			
Benzo (a) pyrene	0.0379	0.00500	"		ND		11-162			
Chrysene	0.0393	0.00500	"		0.00974		10-167			
Dibenz (a,h) anthracene	0.0291	0.00500	"		ND		10-128			
Fluoranthene	0.0391	0.00500	"		ND		18-157			
Fluorene	0.0692	0.00500	"		0.0432		37-133			
Indeno (1,2,3-cd) pyrene	0.0255	0.00500	"		ND		10-161			
Naphthalene	ND	0.00500	"		ND		10-157			
Pyrene	0.0366	0.00500	"	0.0333	0.00168	105	10-166			
Surrogate: 2-Methylnaphthalene-d10	0.0276		"	0.0333		82.9	50-150			
Surrogate: Fluoranthene-d10	0.0373		"	0.0333		112	50-150			

Matrix Spike Dup (1612049-MSD1)				Source: 1612026-04		Prepared: 12/06/16		Analyzed: 12/08/16		
Acenaphthene	0.0611	0.00500	mg/kg	0.0333	ND	183	27-140	1.76	15	QM-07
Anthracene	0.0396	0.00500	"		ND		23-144	1.68	29	
Benzo (a) anthracene	0.0384	0.00500	"		ND		12-168	5.33	65	
Benzo (b) fluoranthene	0.0462	0.00500	"		ND		10-170	5.25	18	
Benzo (k) fluoranthene	0.0370	0.00500	"		ND		11-150	4.33	32	
Benzo (a) pyrene	0.0400	0.00500	"		ND		11-162	5.49	27	
Chrysene	0.0389	0.00500	"		0.00974		10-167	1.08	88	
Dibenz (a,h) anthracene	0.0298	0.00500	"		ND		10-128	2.36	20	
Fluoranthene	0.0393	0.00500	"		ND		18-157	0.502	31	
Fluorene	0.0750	0.00500	"		0.0432		37-133	8.05	16	
Indeno (1,2,3-cd) pyrene	0.0274	0.00500	"		ND		10-161	6.97	22	
Naphthalene	ND	0.00500	"		ND		10-157		24	
Pyrene	0.0373	0.00500	"	0.0333	0.00168	107	10-166	1.84	57	
Surrogate: 2-Methylnaphthalene-d10	0.0322		"	0.0333		96.5	50-150			
Surrogate: Fluoranthene-d10	0.0365		"	0.0333		110	50-150			

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.



Tasman Geosciences  
6899 Pecos Street  
Denver CO, 80221

Project: Western Slope Pit Assessment  
Project Number: [none]  
Project Manager: Bob Cornez

Reported:  
12/13/16 14:29

**Total Metals by EPA Method 6020 - Dry Weight Basis - Quality Control**  
**Summit Scientific**

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

**Batch 1612062 - EPA 3050B**

**Blank (1612062-BLK1)**

Prepared & Analyzed: 12/07/16

Arsenic	ND	0.200	mg/kg wet
Barium	ND	0.400	"
Boron	ND	1.00	"
Arsenic	ND	0.200	"
Cadmium	ND	0.100	"
Barium	ND	0.400	"
Chromium	ND	0.500	"
Cadmium	ND	0.100	"
Copper	ND	0.500	"
Lead	ND	0.200	"
Chromium	ND	0.500	"
Nickel	ND	0.100	"
Selenium	ND	0.400	"
Copper	ND	0.500	"
Silver	ND	0.100	"
Zinc	ND	10.0	"
Lead	ND	0.200	"
Nickel	ND	0.100	"
Selenium	ND	0.400	"
Silver	ND	0.100	"
Zinc	ND	10.0	"

**LCS (1612062-BS1)**

Prepared & Analyzed: 12/07/16

Arsenic	127	0.500	mg/kg wet	132	96.5	82.6-117
Barium	183	1.00	"	228	80.3	72.8-127
Boron	94.4	2.50	"	120	78.7	77.1-123
Arsenic	127	0.500	"	132	96.5	82.6-117
Cadmium	118	0.250	"	122	96.7	80.3-120
Barium	183	1.00	"	228	80.3	72.8-127
Chromium	56.4	1.25	"	63.2	89.3	74.7-125
Cadmium	118	0.250	"	122	96.7	80.3-120
Copper	195	1.25	"	212	91.9	85.4-115
Lead	94.7	0.500	"	108	87.7	81.1-119
Chromium	56.4	1.25	"	63.2	89.3	74.7-125
Nickel	264	0.250	"	284	92.8	88-112
Selenium	72.0	1.00	"	80.5	89.4	73.7-127
Copper	195	1.25	"	212	91.9	85.4-115
Silver	55.6	0.250	"	73.5	75.6	69.8-130

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.*



Tasman Geosciences  
6899 Pecos Street  
Denver CO, 80221

Project: Western Slope Pit Assessment  
Project Number: [none]  
Project Manager: Bob Cornez

**Reported:**  
12/13/16 14:29

**Total Metals by EPA Method 6020 - Dry Weight Basis - Quality Control**  
**Summit Scientific**

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

**Batch 1612062 - EPA 3050B**

**LCS (1612062-BS1)**

Prepared & Analyzed: 12/07/16

Zinc	195	25.0	mg/kg wet	203	96.1	77.8-122
Lead	94.7	0.500	"	108	87.7	81.1-119
Nickel	264	0.250	"	284	92.8	88-112
Selenium	72.0	1.00	"	80.5	89.4	73.7-127
Silver	55.6	0.250	"	73.5	75.6	69.8-130
Zinc	195	25.0	"	203	96.1	77.8-122

**Duplicate (1612062-DUP1)**

Source: 1612006-04

Prepared & Analyzed: 12/07/16

Arsenic	1.02	0.207	mg/kg dry	0.898	12.6	20	
Barium	26.7	0.415	"	21.8	20.1	20	QR-03
Boron	1.00	1.04	"	1.15	13.9	20	
Arsenic	1.02	0.207	"	0.898	12.6	20	
Cadmium	0.131	0.104	"	0.0802	48.4	20	QR-03
Barium	26.7	0.415	"	21.8	20.1	20	QR-03
Chromium	2.31	0.518	"	1.76	26.8	20	QR-03
Cadmium	0.131	0.104	"	0.0802	48.4	20	QR-03
Copper	2.83	0.518	"	2.29	21.0	20	QR-03
Lead	12.0	0.207	"	9.99	18.5	20	
Nickel	2.48	0.104	"	2.01	21.1	20	QR-03
Chromium	2.31	0.518	"	1.76	26.8	20	QR-03
Selenium	0.313	0.415	"	0.302	3.61	20	
Silver	0.0280	0.104	"	0.0250	11.2	20	
Copper	2.83	0.518	"	2.29	21.0	20	QR-03
Zinc	15.1	10.4	"	9.58	44.9	20	QR-03
Lead	12.0	0.207	"	9.99	18.5	20	
Nickel	2.48	0.104	"	2.01	21.1	20	QR-03
Selenium	0.313	0.415	"	0.302	3.61	20	
Silver	0.0280	0.104	"	0.0250	11.2	20	
Zinc	15.1	10.4	"	9.58	44.9	20	QR-03

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.*



Tasman Geosciences  
6899 Pecos Street  
Denver CO, 80221

Project: Western Slope Pit Assessment  
Project Number: [none]  
Project Manager: Bob Cornez

Reported:  
12/13/16 14:29

**Total Metals by EPA Method 6020 - Dry Weight Basis - Quality Control**  
**Summit Scientific**

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

**Batch 1612062 - EPA 3050B**

Matrix Spike (1612062-MS1)		Source: 1612006-04			Prepared & Analyzed: 12/07/16					
Arsenic	39.2	0.207	mg/kg dry	39.0	0.898	98.3	75-125			
Barium	58.7	0.415	"	39.0	21.8	94.6	75-125			
Boron	33.7	1.04	"	39.0	1.15	83.6	75-125			
Arsenic	39.2	0.207	"	39.0	0.898	98.3	75-125			
Cadmium	2.17	0.104	"	1.95	0.0802	107	75-125			
Barium	58.7	0.415	"	39.0	21.8	94.6	75-125			
Chromium	38.5	0.518	"	39.0	1.76	94.4	75-125			
Copper	38.9	0.518	"	39.0	2.29	94.0	75-125			
Cadmium	2.17	0.104	"	1.95	0.0802	107	75-125			
Lead	31.8	0.207	"	19.5	9.99	112	75-125			
Nickel	37.7	0.104	"	39.0	2.01	91.6	75-125			
Chromium	38.5	0.518	"	39.0	1.76	94.4	75-125			
Selenium	3.95	0.415	"	3.90	0.302	93.5	75-125			
Silver	1.83	0.104	"	1.95	0.0250	92.5	75-125			
Copper	38.9	0.518	"	39.0	2.29	94.0	75-125			
Zinc	83.4	10.4	"	39.0	9.58	189	75-125			QM-07
Lead	31.8	0.207	"	19.5	9.99	112	75-125			
Nickel	37.7	0.104	"	39.0	2.01	91.6	75-125			
Selenium	3.95	0.415	"	3.90	0.302	93.5	75-125			
Silver	1.83	0.104	"	1.95	0.0250	92.5	75-125			
Zinc	83.4	10.4	"	39.0	9.58	189	75-125			QM-07

Matrix Spike Dup (1612062-MSD1)		Source: 1612006-04			Prepared & Analyzed: 12/07/16					
Arsenic	42.6	0.207	mg/kg dry	40.5	0.898	103	75-125	8.37	25	
Barium	64.2	0.415	"	40.5	21.8	105	75-125	8.98	25	
Boron	35.8	1.04	"	40.5	1.15	85.6	75-125	6.00	25	
Arsenic	42.6	0.207	"	40.5	0.898	103	75-125	8.37	25	
Cadmium	2.21	0.104	"	2.02	0.0802	105	75-125	1.66	25	
Barium	64.2	0.415	"	40.5	21.8	105	75-125	8.98	25	
Chromium	42.3	0.518	"	40.5	1.76	100	75-125	9.44	25	
Copper	41.5	0.518	"	40.5	2.29	96.8	75-125	6.39	25	
Cadmium	2.21	0.104	"	2.02	0.0802	105	75-125	1.66	25	
Lead	33.4	0.207	"	20.2	9.99	116	75-125	4.91	25	
Nickel	41.4	0.104	"	40.5	2.01	97.3	75-125	9.36	25	
Chromium	42.3	0.518	"	40.5	1.76	100	75-125	9.44	25	
Selenium	4.29	0.415	"	4.05	0.302	98.6	75-125	8.46	25	
Silver	1.97	0.104	"	2.02	0.0250	96.2	75-125	7.66	25	
Copper	41.5	0.518	"	40.5	2.29	96.8	75-125	6.39	25	

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.



Tasman Geosciences  
6899 Pecos Street  
Denver CO, 80221

Project: Western Slope Pit Assessment

Project Number: [none]  
Project Manager: Bob Cornez

**Reported:**  
12/13/16 14:29

**Total Metals by EPA Method 6020 - Dry Weight Basis - Quality Control**  
**Summit Scientific**

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

**Batch 1612062 - EPA 3050B**

Matrix Spike Dup (1612062-MSD1)		Source: 1612006-04			Prepared & Analyzed: 12/07/16					
Zinc	59.7	10.4	mg/kg dry	40.5	9.58	124	75-125	33.0	25	QM-07
Lead	33.4	0.207	"	20.2	9.99	116	75-125	4.91	25	
Nickel	41.4	0.104	"	40.5	2.01	97.3	75-125	9.36	25	
Selenium	4.29	0.415	"	4.05	0.302	98.6	75-125	8.46	25	
Silver	1.97	0.104	"	2.02	0.0250	96.2	75-125	7.66	25	
Zinc	59.7	10.4	"	40.5	9.58	124	75-125	33.0	25	QM-07

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.*



Tasman Geosciences  
6899 Pecos Street  
Denver CO, 80221

Project: Western Slope Pit Assessment

Project Number: [none]  
Project Manager: Bob Cornez

**Reported:**  
12/13/16 14:29

**Total Mercury by EPA Method 7471 - Quality Control**  
**Summit Scientific**

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

**Batch 1612034 - EPA 7471A**

**Blank (1612034-BLK1)**

Prepared: 12/05/16 Analyzed: 12/06/16

Mercury ND 0.0500 mg/kg wet

**LCS (1612034-BS1)**

Prepared: 12/05/16 Analyzed: 12/06/16

Mercury 0.525 0.0500 mg/kg wet 0.500 105 80-120

**Duplicate (1612034-DUP1)**

**Source: 1612006-01**

Prepared: 12/05/16 Analyzed: 12/06/16

Mercury 0.00401 0.0460 mg/kg dry 0.00399 0.564 20

**Matrix Spike (1612034-MS1)**

**Source: 1612006-01**

Prepared: 12/05/16 Analyzed: 12/06/16

Mercury 0.474 0.0460 mg/kg dry 0.460 0.00399 102 80-120

**Matrix Spike Dup (1612034-MSD1)**

**Source: 1612006-01**

Prepared: 12/05/16 Analyzed: 12/06/16

Mercury 0.455 0.0444 mg/kg dry 0.444 0.00399 102 80-120 4.00 20

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.*



Tasman Geosciences  
6899 Pecos Street  
Denver CO, 80221

Project: Western Slope Pit Assessment

Project Number: [none]  
Project Manager: Bob Cornez

**Reported:**  
12/13/16 14:29

### Hexavalent Chromium by EPA 7196 - Quality Control Summit Scientific

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

#### Batch 1612064 - 3060A\_Mod

##### Blank (1612064-BLK1)

Prepared: 12/07/16 Analyzed: 12/08/16

Chromium, Hexavalent ND 0.300 mg/kg wet

##### LCS (1612064-BS1)

Prepared: 12/07/16 Analyzed: 12/08/16

Chromium, Hexavalent 18.7 0.300 mg/kg wet 19.9 93.7 85-115

##### Duplicate (1612064-DUP1)

Source: 1612026-04

Prepared: 12/07/16 Analyzed: 12/08/16

Chromium, Hexavalent ND 0.300 mg/kg dry ND 20

##### Matrix Spike (1612064-MS1)

Source: 1612026-04

Prepared: 12/07/16 Analyzed: 12/08/16

Chromium, Hexavalent ND 0.300 mg/kg dry 23.9 ND 85-115

##### Matrix Spike (1612064-MS2)

Source: 1612036-01

Prepared: 12/07/16 Analyzed: 12/08/16

Chromium, Hexavalent 3.25 0.300 mg/kg dry 22.5 ND 14.4 85-115

##### Post Spike (1612064-PS1)

Source: 1612026-04

Prepared: 12/07/16 Analyzed: 12/08/16

Chromium, Hexavalent 0.00400 mg/kg 0.498 0.00 0.802 85-115

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.*



Tasman Geosciences  
6899 Pecos Street  
Denver CO, 80221

Project: Western Slope Pit Assessment  
Project Number: [none]  
Project Manager: Bob Cornez

Reported:  
12/13/16 14:29

**Soluble Nutrients by EPA 6020/Mod. USDA60 6(2, 3A) - Dry Weight Basis - Quality Control**  
**Summit Scientific**

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

**Batch 1612063 - General Preparation**

**Blank (1612063-BLK1)**

Prepared & Analyzed: 12/07/16

Calcium	ND	10.0	mg/kg wet
Magnesium	ND	5.00	"
Sodium	ND	5.00	"

**LCS (1612063-BS1)**

Prepared & Analyzed: 12/07/16

Calcium	590	10.0	mg/kg wet	500	118	82.9-118
Magnesium	610	5.00	"	500	122	77.1-123
Sodium	588	5.00	"	500	118	71-129

**Duplicate (1612063-DUP1)**

Source: 1612026-04

Prepared & Analyzed: 12/07/16

Calcium	1440	12.0	mg/kg dry	1370	4.57	200
Magnesium	192	6.00	"	190	0.644	200
Sodium	59.9	6.00	"	47.8	22.5	200

**Matrix Spike (1612063-MS1)**

Source: 1612026-04

Prepared & Analyzed: 12/07/16

Calcium	2060	12.0	mg/kg dry	600	1370	115	75-125
Magnesium	902	6.00	"	600	190	119	75-125
Sodium	688	6.00	"	600	47.8	107	75-125

**Matrix Spike Dup (1612063-MSD1)**

Source: 1612026-04

Prepared & Analyzed: 12/07/16

Calcium	2040	12.0	mg/kg dry	600	1370	112	75-125	0.803	25
Magnesium	921	6.00	"	600	190	122	75-125	2.12	25
Sodium	705	6.00	"	600	47.8	110	75-125	2.31	25

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.*



Tasman Geosciences  
6899 Pecos Street  
Denver CO, 80221

Project: Western Slope Pit Assessment

Project Number: [none]  
Project Manager: Bob Cornez

**Reported:**  
12/13/16 14:29

**Physical Parameters by APHA/ASTM/EPA Methods - Quality Control**  
**Summit Scientific**

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

**Batch 1612069 - General Preparation**

<b>Duplicate (1612069-DUP1)</b>	<b>Source: 1612014-01</b>			Prepared & Analyzed: 12/07/16						
% Solids	92.3		%		93.0			0.756	20	

**Batch 1612096 - General Preparation**

<b>LCS (1612096-BS1)</b>				Prepared & Analyzed: 12/09/16						
pH	8.02	0.100	pH Units	8.00	100	95-105				
<b>Duplicate (1612096-DUP1)</b>	<b>Source: 1612034-01</b>			Prepared & Analyzed: 12/09/16						
pH	7.82	0.100	pH Units		7.87			0.637	20	

**Batch 1612098 - General Preparation**

<b>Blank (1612098-BLK1)</b>				Prepared & Analyzed: 12/09/16						
Specific Conductance (EC)	ND	0.0100	mmhos/cm							
<b>LCS (1612098-BS1)</b>				Prepared & Analyzed: 12/09/16						
Specific Conductance (EC)	0.744	0.0100	mmhos/cm	0.750	99.2	90-110				
<b>Duplicate (1612098-DUP1)</b>	<b>Source: 1612034-01</b>			Prepared & Analyzed: 12/09/16						
Specific Conductance (EC)	4.04	0.0100	mmhos/cm		4.35			7.40	20	

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.*



Tasman Geosciences  
6899 Pecos Street  
Denver CO, 80221

Project: Western Slope Pit Assessment

Project Number: [none]  
Project Manager: Bob Cornez

**Reported:**  
12/13/16 14:29

### Notes and Definitions

S-02	The surrogate recovery for this sample cannot be accurately quantified due to interference from coeluting organic compounds present in the sample extract.
QR-03	The RPD value for the sample duplicate or MS/MSD was outside of QC acceptance limits due to matrix interference. QC batch accepted based on LCS and/or LCSD recovery and/or RPD values.
QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS/LCSD recovery.
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

# Summit Scientific

---

741 Corporate Circle – Suite I ♦ Golden, Colorado 80401

303.277.9310 - laboratory ♦ 303.374.5933 - fax

July 21, 2017

Bob Cornez  
Foundation Energy, LLC  
15 E 15th St  
Tulsa, OK 74103  
RE: Ferguson 3-9

Enclosed are the results of analyses for samples received by Summit Scientific on 07/20/17 16:30. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read 'P. Shrewsbury', with a stylized, cursive script.

Paul Shrewsbury  
President



Foundation Energy, LLC  
15 E 15th St  
Tulsa OK, 74103

Project: Ferguson 3-9

Project Number: [none]  
Project Manager: Bob Cornez

**Reported:**  
07/21/17 06:41

### ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
Base01@15'	1707149-01	Soil	07/20/17 09:00	07/20/17 16:30
RE01@14'	1707149-02	Soil	07/20/17 09:15	07/20/17 16:30
RW01@14'	1707149-03	Soil	07/20/17 10:00	07/20/17 16:30
RS01@14'	1707149-04	Soil	07/20/17 10:15	07/20/17 16:30
RN01@14'	1707149-05	Soil	07/20/17 10:30	07/20/17 16:30

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.*



Foundation Energy, LLC  
15 E 15th St  
Tulsa OK, 74103

Project: Ferguson 3-9

Project Number: [none]  
Project Manager: Bob Cornez

Reported:  
07/21/17 06:41

# Summit Scientific 1707149

S<sub>2</sub>

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

Page 1 of 1

Client: Foundation Energy Project Manager: Bob Cornez  
Address: \_\_\_\_\_ E-Mail: rcornez@tashua-geo.com  
City/State/Zip: \_\_\_\_\_  
Phone: \_\_\_\_\_ Fax: \_\_\_\_\_ Project Name: Ferguson 3-9  
Sampler Name: Paul Downey Project Number: \_\_\_\_\_

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix			Analysis Requested						Special Instructions
					HCl	HNO <sub>3</sub>	None	Other (Specify)	Groundwater	Soil	Air-Canister #	Other (Specify)	BIGX	TPH-DEO	TPH-GRO	EC	PH	
1	Base 01 @ 15'	7-20-17	09:00				X			X			X	X	X	X	X	
2	RE 01 @ 14'	7-20-17	09:15				X			X			X	X	X	X	X	
3	RW 01 @ 14'	7-20-17	10:00				X			X			X	X	X	X	X	
4	RS 01 @ 14'	7-20-17	10:15				X			X			X	X	X	X	X	
5	RW 01 @ 14'	7-20-17	10:30				X			X			X	X	X	X	X	
6																		
7																		
8																		
9																		
10																		

Relinquished by: <u>Paul Downey</u>	Date/Time: <u>7/20/17 16:30</u>	Received by: _____	Date/Time: _____	Turn Around Time (Check)	Notes:
Relinquished by: _____	Date/Time: _____	Received by: _____	Date/Time: _____	Same Day <input checked="" type="checkbox"/> 72 hours <input type="checkbox"/>	on 14
Relinquished by: _____	Date/Time: _____	Received by: _____	Date/Time: _____	24 hours <input type="checkbox"/> Standard <input type="checkbox"/>	
Relinquished by: _____	Date/Time: _____	Received by: _____	Date/Time: _____	48 hours <input type="checkbox"/>	
Relinquished by: _____	Date/Time: _____	Received by: _____	Date/Time: _____	Sample Integrity:	
Relinquished by: _____	Date/Time: _____	Received by: _____	Date/Time: _____	Temperature Upon Receipt: <u>16.0</u>	
Relinquished by: _____	Date/Time: _____	Received by: _____	Date/Time: _____	Intact: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	

www.s2scientific.com

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.



Foundation Energy, LLC  
15 E 15th St  
Tulsa OK, 74103

Project: Ferguson 3-9

Project Number: [none]  
Project Manager: Bob Cornez

Reported:  
07/21/17 06:41

### Sample Receipt Checklist

S2 Work Order: 1707149  
Client: Foundation Client Project ID: Ferguson 3-9  
Shipped Via: \_\_\_\_\_ Airbill #: \_\_\_\_\_  
(UPS, FedEx, Hand Delivered, Pick-up, etc.)  
Matrix (check all that apply): ☐ Air ☒ Soil/Solid ☐ Water ☐ Other: \_\_\_\_\_  
(Describe)

Cooler ID					
Temp (°C)	<u>16.0</u>				

Thermometer ID: 61857155-K

	Yes	No	N/A	Comments (if any)
If samples require cooling, was the temperature at 4°C +/- 2°C <sup>(1)</sup> ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>see</u>
NOTE: If samples are delivered the same day of sampling, this requirement is met provided that there is evidence that cooling has begun.				
Were all samples received intact <sup>(1)</sup> ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Was adequate sample volume provided <sup>(1)</sup> ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
If custody seals are present, are they intact <sup>(1)</sup> ?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Are short holding time analytes or samples with HTs due within 48 hours present?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Is a chain-of-custody (COC) form present and filled out completely <sup>(1)</sup> ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Does the COC agree with the number and type of sample bottles received <sup>(1)</sup> ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Do the sample IDs on the bottle labels match the COC <sup>(1)</sup> ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Is the COC properly relinquished by the client w/ date and time recorded <sup>(1)</sup> ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
For volatiles in water – is there headspace present? <b>if yes, contact client and note in narrative.</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Are samples preserved that require preservation (excluding cooling) <sup>(1)</sup> ?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Note the type of preservative in the Comments column – HCl, H2SO4, NaOH, HNO3, ect			<input checked="" type="checkbox"/>	
If samples are acid preserved for metals, is the pH ≤ 2 <sup>(1)</sup> ?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Record the pH in Comments.			<input checked="" type="checkbox"/>	
If dissolved metals are requested, were samples field filtered?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Additional Comments (if any):				
<sup>(1)</sup> If NO, then contact the client before proceeding with analysis and note in case narrative.				

Logan S.  
Custodian Printed Name

RS  
Signature or Initials of Custodian

7-20-17 16:30  
Date/Time



Foundation Energy, LLC  
15 E 15th St  
Tulsa OK, 74103

Project: Ferguson 3-9  
Project Number: [none]  
Project Manager: Bob Cornez

Reported:  
07/21/17 06:41

**Base01@15'**  
**1707149-01 (Soil)**

**Summit Scientific**

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: 07/20/17 09:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1707185	07/20/17	07/20/17	8015M	

Date Sampled: 07/20/17 09:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		111 %	30-150		"	"	"	"	

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: 07/20/17 09:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.10	mg/kg	1	1707182	07/20/17	07/20/17	EPA 8260B	
Toluene	ND	10	"	"	"	"	"	"	
Ethylbenzene	ND	10	"	"	"	"	"	"	
Xylenes (total)	ND	10	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	50	"	"	"	"	"	"	

Date Sampled: 07/20/17 09:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		97.8 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		98.2 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		96.2 %	21-167		"	"	"	"	

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: 07/20/17 09:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	1.53	0.0100	mmhos/cm	1	1707189	07/20/17	07/20/17	SM 2510B	

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.



Foundation Energy, LLC  
15 E 15th St  
Tulsa OK, 74103

Project: Ferguson 3-9

Project Number: [none]  
Project Manager: Bob Cornez

**Reported:**  
07/21/17 06:41

**Base01@15'**  
**1707149-01 (Soil)**

**Summit Scientific**

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **07/20/17 09:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
pH	<b>8.04</b>	0.100	pH Units	1	1707187	07/20/17	07/20/17	EPA 9045	

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.*



Foundation Energy, LLC  
15 E 15th St  
Tulsa OK, 74103

Project: Ferguson 3-9  
Project Number: [none]  
Project Manager: Bob Cornez

Reported:  
07/21/17 06:41

**RE01@14'**  
**1707149-02 (Soil)**

**Summit Scientific**

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **07/20/17 09:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1707185	07/20/17	07/20/17	8015M	

Date Sampled: **07/20/17 09:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		109 %	30-150		"	"	"	"	

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **07/20/17 09:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.10	mg/kg	1	1707182	07/20/17	07/20/17	EPA 8260B	
Toluene	ND	10	"	"	"	"	"	"	
Ethylbenzene	ND	10	"	"	"	"	"	"	
Xylenes (total)	ND	10	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	50	"	"	"	"	"	"	

Date Sampled: **07/20/17 09:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		103 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		100 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		99.5 %	21-167		"	"	"	"	

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **07/20/17 09:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	<b>0.794</b>	0.0100	mmhos/cm	1	1707189	07/20/17	07/20/17	SM 2510B	

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.



Foundation Energy, LLC  
15 E 15th St  
Tulsa OK, 74103

Project: Ferguson 3-9

Project Number: [none]  
Project Manager: Bob Cornez

**Reported:**  
07/21/17 06:41

**RE01@14'**  
**1707149-02 (Soil)**

**Summit Scientific**

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **07/20/17 09:15**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
pH	8.63	0.100	pH Units	1	1707187	07/20/17	07/20/17	EPA 9045	

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.*



Foundation Energy, LLC  
15 E 15th St  
Tulsa OK, 74103

Project: Ferguson 3-9  
Project Number: [none]  
Project Manager: Bob Cornez

Reported:  
07/21/17 06:41

**RW01@14'**  
**1707149-03 (Soil)**

**Summit Scientific**

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **07/20/17 10:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1707185	07/20/17	07/20/17	8015M	

Date Sampled: **07/20/17 10:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: <i>o</i> -Terphenyl		117 %	30-150		"	"	"	"	

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **07/20/17 10:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.10	mg/kg	1	1707182	07/20/17	07/20/17	EPA 8260B	
Toluene	ND	10	"	"	"	"	"	"	
Ethylbenzene	ND	10	"	"	"	"	"	"	
Xylenes (total)	ND	10	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	50	"	"	"	"	"	"	

Date Sampled: **07/20/17 10:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		101 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		101 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		98.9 %	21-167		"	"	"	"	

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **07/20/17 10:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	1.87	0.0100	mmhos/cm	1	1707189	07/20/17	07/20/17	SM 2510B	

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.



Foundation Energy, LLC  
15 E 15th St  
Tulsa OK, 74103

Project: Ferguson 3-9

Project Number: [none]  
Project Manager: Bob Cornez

**Reported:**  
07/21/17 06:41

**RW01@14'**  
**1707149-03 (Soil)**

**Summit Scientific**

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **07/20/17 10:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
pH	7.95	0.100	pH Units	1	1707187	07/20/17	07/20/17	EPA 9045	

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.*



Foundation Energy, LLC  
15 E 15th St  
Tulsa OK, 74103

Project: Ferguson 3-9  
Project Number: [none]  
Project Manager: Bob Cornez

Reported:  
07/21/17 06:41

**RS01@14'**  
**1707149-04 (Soil)**

**Summit Scientific**

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **07/20/17 10:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1707185	07/20/17	07/20/17	8015M	

Date Sampled: **07/20/17 10:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: <i>o</i> -Terphenyl		111 %	30-150		"	"	"	"	

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **07/20/17 10:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.10	mg/kg	1	1707182	07/20/17	07/20/17	EPA 8260B	
Toluene	ND	10	"	"	"	"	"	"	
Ethylbenzene	ND	10	"	"	"	"	"	"	
Xylenes (total)	ND	10	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	50	"	"	"	"	"	"	

Date Sampled: **07/20/17 10:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		101 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		102 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		97.3 %	21-167		"	"	"	"	

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **07/20/17 10:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	1.41	0.0100	mmhos/cm	1	1707189	07/20/17	07/20/17	SM 2510B	

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.



Foundation Energy, LLC  
15 E 15th St  
Tulsa OK, 74103

Project: Ferguson 3-9

Project Number: [none]  
Project Manager: Bob Cornez

**Reported:**  
07/21/17 06:41

**RS01@14'**  
**1707149-04 (Soil)**

**Summit Scientific**

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **07/20/17 10:15**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
pH	7.95	0.100	pH Units	1	1707187	07/20/17	07/20/17	EPA 9045	

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.*



Foundation Energy, LLC  
15 E 15th St  
Tulsa OK, 74103

Project: Ferguson 3-9  
Project Number: [none]  
Project Manager: Bob Cornez

Reported:  
07/21/17 06:41

**RN01@14'**  
**1707149-05 (Soil)**

**Summit Scientific**

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **07/20/17 10:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1707185	07/20/17	07/20/17	8015M	

Date Sampled: **07/20/17 10:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: <i>o</i> -Terphenyl		108 %	30-150		"	"	"	"	

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **07/20/17 10:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.10	mg/kg	1	1707182	07/20/17	07/20/17	EPA 8260B	
Toluene	ND	10	"	"	"	"	"	"	
Ethylbenzene	ND	10	"	"	"	"	"	"	
Xylenes (total)	ND	10	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	50	"	"	"	"	"	"	

Date Sampled: **07/20/17 10:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		103 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		101 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		98.1 %	21-167		"	"	"	"	

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **07/20/17 10:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	<b>0.934</b>	0.0100	mmhos/cm	1	1707189	07/20/17	07/20/17	SM 2510B	

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.



Foundation Energy, LLC  
15 E 15th St  
Tulsa OK, 74103

Project: Ferguson 3-9

Project Number: [none]  
Project Manager: Bob Cornez

**Reported:**  
07/21/17 06:41

**RN01@14'**  
**1707149-05 (Soil)**

**Summit Scientific**

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **07/20/17 10:30**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
pH	8.13	0.100	pH Units	1	1707187	07/20/17	07/20/17	EPA 9045	

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.*



Foundation Energy, LLC  
15 E 15th St  
Tulsa OK, 74103

Project: Ferguson 3-9  
Project Number: [none]  
Project Manager: Bob Cornez

**Reported:**  
07/21/17 06:41

**Extractable Petroleum Hydrocarbons by 8015 - Quality Control**  
**Summit Scientific**

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

**Batch 1707185 - EPA 3550A**

**Blank (1707185-BLK1)**

Prepared & Analyzed: 07/20/17

C10-C28 (DRO) ND 50 mg/kg

Surrogate: o-Terphenyl 13.9 " 12.5 111 30-150

**LCS (1707185-BS1)**

Prepared & Analyzed: 07/20/17

C10-C28 (DRO) 627 50 mg/kg 499 126 73-134

Surrogate: o-Terphenyl 15.0 " 12.5 120 30-150

**Matrix Spike (1707185-MS1)**

Source: 1707153-01

Prepared & Analyzed: 07/20/17

C10-C28 (DRO) 530 50 mg/kg 499 36.9 98.9 50-148

Surrogate: o-Terphenyl 14.1 " 12.5 113 30-150

**Matrix Spike Dup (1707185-MSD1)**

Source: 1707153-01

Prepared & Analyzed: 07/20/17

C10-C28 (DRO) 522 50 mg/kg 499 36.9 97.2 50-148 1.60 20

Surrogate: o-Terphenyl 13.8 " 12.5 110 30-150

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.



Foundation Energy, LLC  
15 E 15th St  
Tulsa OK, 74103

Project: Ferguson 3-9  
Project Number: [none]  
Project Manager: Bob Cornez

Reported:  
07/21/17 06:41

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

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

**Batch 1707182 - EPA 5030 Soil MS**

**Blank (1707182-BLK1)**

Prepared & Analyzed: 07/20/17

Benzene	ND	0.10	mg/kg							
Toluene	ND	10	"							
Ethylbenzene	ND	10	"							
Xylenes (total)	ND	10	"							
Gasoline Range Hydrocarbons	ND	50	"							
Surrogate: 1,2-Dichloroethane-d4	0.0389		"	0.0400		97.3	23-173			
Surrogate: Toluene-d8	0.0401		"	0.0400		100	20-170			
Surrogate: 4-Bromofluorobenzene	0.0396		"	0.0400		99.1	21-167			

**LCS (1707182-BS1)**

Prepared & Analyzed: 07/20/17

Benzene	0.0857	0.10	mg/kg	0.100		85.7	58-130			
Toluene	0.0986	10	"	0.100		98.6	61-134			
Ethylbenzene	0.115	10	"	0.0992		116	74-139			
m,p-Xylene	0.219	10	"	0.200		110	73-137			
o-Xylene	0.108	10	"	0.0980		110	73-141			
Surrogate: 1,2-Dichloroethane-d4	0.0401		"	0.0400		100	23-173			
Surrogate: Toluene-d8	0.0386		"	0.0400		96.5	20-170			
Surrogate: 4-Bromofluorobenzene	0.0377		"	0.0400		94.2	21-167			

**Matrix Spike (1707182-MS1)**

Source: 1707153-01

Prepared & Analyzed: 07/20/17

Benzene	0.0862	0.10	mg/kg	0.100	ND	86.2	30-131			
Toluene	0.102	10	"	0.100	ND	102	30-134			
Ethylbenzene	0.111	10	"	0.0992	ND	112	22-153			
m,p-Xylene	0.214	10	"	0.200	ND	107	10-159			
o-Xylene	0.105	10	"	0.0980	ND	107	31-151			
Surrogate: 1,2-Dichloroethane-d4	0.0472		"	0.0400		118	23-173			
Surrogate: Toluene-d8	0.0391		"	0.0400		97.7	20-170			
Surrogate: 4-Bromofluorobenzene	0.0395		"	0.0400		98.8	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.



Foundation Energy, LLC  
15 E 15th St  
Tulsa OK, 74103

Project: Ferguson 3-9  
Project Number: [none]  
Project Manager: Bob Cornez

Reported:  
07/21/17 06:41

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

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

**Batch 1707182 - EPA 5030 Soil MS**

Matrix Spike Dup (1707182-MSD1)		Source: 1707153-01			Prepared & Analyzed: 07/20/17					
Benzene	0.0876	0.10	mg/kg	0.100	ND	87.6	30-131	1.66	34	
Toluene	0.103	10	"	0.100	ND	103	30-134	0.909	30	
Ethylbenzene	0.114	10	"	0.0992	ND	115	22-153	2.13	24	
m,p-Xylene	0.217	10	"	0.200	ND	109	10-159	1.42	68	
o-Xylene	0.107	10	"	0.0980	ND	109	31-151	1.78	38	
Surrogate: 1,2-Dichloroethane-d4	0.0495		"	0.0400		124	23-173			
Surrogate: Toluene-d8	0.0402		"	0.0400		100	20-170			
Surrogate: 4-Bromofluorobenzene	0.0395		"	0.0400		98.7	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.



Foundation Energy, LLC  
15 E 15th St  
Tulsa OK, 74103

Project: Ferguson 3-9  
Project Number: [none]  
Project Manager: Bob Cornez

Reported:  
07/21/17 06:41

Physical Parameters by APHA/ASTM/EPA Methods - Quality Control  
Summit Scientific

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

Batch 1707187 - General Preparation

LCS (1707187-BS1)

Prepared & Analyzed: 07/20/17

pH	6.15	0.100	pH Units	6.00	102	95-105
----	------	-------	----------	------	-----	--------

Duplicate (1707187-DUP1)

Source: 1707146-01

Prepared & Analyzed: 07/20/17

pH	8.57	0.100	pH Units	8.36	2.48	20
----	------	-------	----------	------	------	----

Batch 1707189 - General Preparation

Blank (1707189-BLK1)

Prepared & Analyzed: 07/20/17

Specific Conductance (EC)	ND	0.0100	mmhos/cm
---------------------------	----	--------	----------

LCS (1707189-BS1)

Prepared & Analyzed: 07/20/17

Specific Conductance (EC)	0.487	0.0100	mmhos/cm	0.500	97.4	90-110
---------------------------	-------	--------	----------	-------	------	--------

Duplicate (1707189-DUP1)

Source: 1707146-01

Prepared & Analyzed: 07/20/17

Specific Conductance (EC)	4.96	0.0100	mmhos/cm	4.84	2.43	20
---------------------------	------	--------	----------	------	------	----

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.



Foundation Energy, LLC  
15 E 15th St  
Tulsa OK, 74103

Project: Ferguson 3-9  
Project Number: [none]  
Project Manager: Bob Cornez

**Reported:**  
07/21/17 06:41

### 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

---

Summit Scientific

A handwritten signature in black ink, appearing to be 'MSM'.

*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.*

# Summit Scientific

---

741 Corporate Circle – Suite I ♦ Golden, Colorado 80401

303.277.9310 - laboratory ♦ 303.277.9531 - fax

July 25, 2017

Bob Cornez  
Foundation Energy, LLC  
15 E 15th St  
Tulsa, OK 74103  
RE: Ferguson 3-9

Enclosed are the results of analyses for samples received by Summit Scientific on 07/21/17 21:00. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read 'Ben Shrewsbury', with a long, sweeping horizontal line extending to the right.

Ben Shrewsbury  
Laboratory Manager



Foundation Energy, LLC  
15 E 15th St  
Tulsa OK, 74103

Project: Ferguson 3-9

Project Number: [none]  
Project Manager: Bob Cornez

**Reported:**  
07/25/17 17:00

### ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
CS01	1707165-01	Soil	07/21/17 09:00	07/21/17 21:00
CS02	1707165-02	Soil	07/21/17 09:05	07/21/17 21:00

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.*

A handwritten signature in black ink, appearing to be 'Bob Cornez', written over a horizontal line.



Foundation Energy, LLC  
15 E 15th St  
Tulsa OK, 74103

Project: Ferguson 3-9

Project Number: [none]  
Project Manager: Bob Cornez

Reported:  
07/25/17 17:00

# Summit Scientific 1707165

S<sub>2</sub>

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

Page 1 of 1

Client: Foundation Energy

Project Manager: Bob Cornez

Address:

E-Mail: rcornez@tasman-geo.com

City/State/Zip:

Phone:

Fax:

Project Name: Ferguson 3-9

Sampler Name: Pavi Downey

Project Number:

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix			Analysis Requested						Special Instructions	
					HCl	HNO <sub>3</sub>	None	Other (Specify)	Groundwater	Soil	Air-Canister #	Other (Specify)	BTEX	TPH-GRO	TPH-DRO	PH	EC		
1	CS01	6/21/17	9:00	1			X			X				X	X	X	X	X	
2	CS02	6/21/17	9:05	1			X			X				X	X	X	X	X	
3																			
4																			
5																			
6																			
7																			
8																			
9																			
10																			

Relinquished by: <u>Pavi Downey</u>	Date/Time: <u>7/21/17 21:00</u>	Received by: <u>Bob Cornez</u>	Date/Time: <u>7.21.17 21:00</u>	Turn Around Time (Check)	Notes:
Relinquished by:	Date/Time:	Received by:	Date/Time:	Same Day <input type="checkbox"/>	72 hours <input checked="" type="checkbox"/>
				24 hours <input type="checkbox"/>	Standard <input type="checkbox"/>
				48 hours <input type="checkbox"/>	
Relinquished by:	Date/Time:	Received by:	Date/Time:	Sample Integrity:	
				Temperature Upon Receipt: <u>1.1</u>	
				Intact: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	

www.s2scientific.com

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.



Foundation Energy, LLC  
15 E 15th St  
Tulsa OK, 74103

Project: Ferguson 3-9

Project Number: [none]  
Project Manager: Bob Cornez

Reported:  
07/25/17 17:00

### Sample Receipt Checklist

S2 Work Order: 1707165

Client: Foundation Client Project ID: Ferguson 3-9

Shipped Via: \_\_\_\_\_ Airbill #: \_\_\_\_\_  
(UPS, FedEx, Hand Delivered, Pick-up, etc.)

Matrix (check all that apply): ☐ Air ☒ Soil/Solid ☐ Water ☐ Other: \_\_\_\_\_  
(Describe)

Cooler ID					
Temp (°C)	1.1				

Thermometer ID: 61857155-K

	Yes	No	N/A	Comments (if any)
If samples require cooling, was the temperature at 4°C +/- 2°C <sup>(1)</sup> ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
NOTE: If samples are delivered the same day of sampling, this requirement is met provided that there is evidence that cooling has begun.				
Were all samples received intact <sup>(1)</sup> ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Was adequate sample volume provided <sup>(1)</sup> ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
If custody seals are present, are they intact <sup>(1)</sup> ?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Are short holding time analytes or samples with HTs due within 48 hours present?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Is a chain-of-custody (COC) form present and filled out completely <sup>(1)</sup> ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Does the COC agree with the number and type of sample bottles received <sup>(1)</sup> ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Do the sample IDs on the bottle labels match the COC <sup>(1)</sup> ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Is the COC properly relinquished by the client w/ date and time recorded <sup>(1)</sup> ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
For volatiles in water – is there headspace present? If yes, contact client and note in narrative.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Are samples preserved that require preservation (excluding cooling) <sup>(1)</sup> ?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Note the type of preservative in the Comments column – HCl, H2SO4, NaOH, HNO3, ect			<input checked="" type="checkbox"/>	
If samples are acid preserved for metals, is the pH ≤ 2 <sup>(1)</sup> ?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Record the pH in Comments.			<input checked="" type="checkbox"/>	
If dissolved metals are requested, were samples field filtered?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Additional Comments (if any):				
<sup>(1)</sup> If NO, then contact the client before proceeding with analysis and note in case narrative.				

Logan S  
Custodian Printed Name

[Signature]  
Signature or Initials of Custodian

7-21-17 21:00  
Date/Time



Foundation Energy, LLC  
15 E 15th St  
Tulsa OK, 74103

Project: Ferguson 3-9  
Project Number: [none]  
Project Manager: Bob Cornez

Reported:  
07/25/17 17:00

**CS01**  
**1707165-01 (Soil)**

**Summit Scientific**

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **07/21/17 09:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1707207	07/21/17	07/22/17	8015M	

Date Sampled: **07/21/17 09:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		117 %	30-150		"	"	"	"	

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **07/21/17 09:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.10	mg/kg	1	1707206	07/21/17	07/22/17	EPA 8260B	
Toluene	ND	10	"	"	"	"	"	"	
Ethylbenzene	ND	10	"	"	"	"	"	"	
Xylenes (total)	ND	10	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	50	"	"	"	"	"	"	

Date Sampled: **07/21/17 09:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		112 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		102 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		110 %	21-167		"	"	"	"	

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **07/21/17 09:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.74	0.100	pH Units	1	1707217	07/25/17	07/25/17	EPA 9045	
Specific Conductance (EC)	5.04	0.0100	mmhos/cm	"	1707218	07/25/17	07/25/17	SM 2510B	

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.



Foundation Energy, LLC  
15 E 15th St  
Tulsa OK, 74103

Project: Ferguson 3-9  
Project Number: [none]  
Project Manager: Bob Cornez

**Reported:**  
07/25/17 17:00

**CS02**  
**1707165-02 (Soil)**

**Summit Scientific**

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **07/21/17 09:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1707207	07/21/17	07/22/17	8015M	

Date Sampled: **07/21/17 09:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		118 %	30-150		"	"	"	"	

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **07/21/17 09:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.10	mg/kg	1	1707206	07/21/17	07/22/17	EPA 8260B	
Toluene	ND	10	"	"	"	"	"	"	
Ethylbenzene	ND	10	"	"	"	"	"	"	
Xylenes (total)	ND	10	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	50	"	"	"	"	"	"	

Date Sampled: **07/21/17 09:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		108 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		98.4 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		105 %	21-167		"	"	"	"	

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **07/21/17 09:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	<b>7.81</b>	0.100	pH Units	1	1707217	07/25/17	07/25/17	EPA 9045	
Specific Conductance (EC)	<b>4.08</b>	0.0100	mmhos/cm	"	1707218	07/25/17	07/25/17	SM 2510B	

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.



Foundation Energy, LLC  
15 E 15th St  
Tulsa OK, 74103

Project: Ferguson 3-9  
Project Number: [none]  
Project Manager: Bob Cornez

**Reported:**  
07/25/17 17:00

**Extractable Petroleum Hydrocarbons by 8015 - Quality Control**  
**Summit Scientific**

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

**Batch 1707207 - EPA 3550A**

**Blank (1707207-BLK1)**

Prepared & Analyzed: 07/21/17

C10-C28 (DRO) ND 50 mg/kg

Surrogate: o-Terphenyl 14.6 " 12.5 117 30-150

**LCS (1707207-BS1)**

Prepared & Analyzed: 07/21/17

C10-C28 (DRO) 598 50 mg/kg 499 120 73-134

Surrogate: o-Terphenyl 15.7 " 12.5 126 30-150

**Matrix Spike (1707207-MS1)**

Source: 1707164-01

Prepared & Analyzed: 07/21/17

C10-C28 (DRO) 560 50 mg/kg 499 40.0 104 50-148

Surrogate: o-Terphenyl 14.2 " 12.5 113 30-150

**Matrix Spike Dup (1707207-MSD1)**

Source: 1707164-01

Prepared & Analyzed: 07/21/17

C10-C28 (DRO) 567 50 mg/kg 499 40.0 106 50-148 1.28 20

Surrogate: o-Terphenyl 14.2 " 12.5 114 30-150

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.*



Foundation Energy, LLC  
15 E 15th St  
Tulsa OK, 74103

Project: Ferguson 3-9  
Project Number: [none]  
Project Manager: Bob Cornez

Reported:  
07/25/17 17:00

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

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

**Batch 1707206 - EPA 5030 Soil MS**

**Blank (1707206-BLK1)**

Prepared: 07/21/17 Analyzed: 07/22/17

Benzene	ND	0.10	mg/kg							
Toluene	ND	10	"							
Ethylbenzene	ND	10	"							
Xylenes (total)	ND	10	"							
Gasoline Range Hydrocarbons	ND	50	"							
Surrogate: 1,2-Dichloroethane-d4	0.0421		"	0.0400		105	23-173			
Surrogate: Toluene-d8	0.0407		"	0.0400		102	20-170			
Surrogate: 4-Bromofluorobenzene	0.0382		"	0.0400		95.5	21-167			

**LCS (1707206-BS1)**

Prepared: 07/21/17 Analyzed: 07/22/17

Benzene	0.0842	0.10	mg/kg	0.100		84.2	58-130			
Toluene	0.0987	10	"	0.100		98.7	61-134			
Ethylbenzene	0.113	10	"	0.0992		114	74-139			
m,p-Xylene	0.219	10	"	0.200		110	73-137			
o-Xylene	0.106	10	"	0.0980		108	73-141			
Surrogate: 1,2-Dichloroethane-d4	0.0410		"	0.0400		102	23-173			
Surrogate: Toluene-d8	0.0389		"	0.0400		97.2	20-170			
Surrogate: 4-Bromofluorobenzene	0.0384		"	0.0400		95.9	21-167			

**Matrix Spike (1707206-MS1)**

Source: 1707164-01

Prepared: 07/21/17 Analyzed: 07/22/17

Benzene	0.0856	0.10	mg/kg	0.100	ND	85.6	30-131			
Toluene	0.0987	10	"	0.100	ND	98.7	30-134			
Ethylbenzene	0.132	10	"	0.0992	0.0217	112	22-153			
m,p-Xylene	0.356	10	"	0.200	0.206	74.7	10-159			
o-Xylene	0.121	10	"	0.0980	0.0217	102	31-151			
Surrogate: 1,2-Dichloroethane-d4	0.0416		"	0.0400		104	23-173			
Surrogate: Toluene-d8	0.0388		"	0.0400		96.9	20-170			
Surrogate: 4-Bromofluorobenzene	0.0429		"	0.0400		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.



Foundation Energy, LLC  
15 E 15th St  
Tulsa OK, 74103

Project: Ferguson 3-9  
Project Number: [none]  
Project Manager: Bob Cornez

**Reported:**  
07/25/17 17:00

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

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

**Batch 1707206 - EPA 5030 Soil MS**

Matrix Spike Dup (1707206-MSD1)		Source: 1707164-01			Prepared: 07/21/17		Analyzed: 07/22/17			
Benzene	0.0854	0.10	mg/kg	0.100	ND	85.4	30-131	0.316	34	
Toluene	0.0998	10	"	0.100	ND	99.8	30-134	1.09	30	
Ethylbenzene	0.136	10	"	0.0992	0.0217	115	22-153	2.66	24	
m,p-Xylene	0.407	10	"	0.200	0.206	100	10-159	13.4	68	
o-Xylene	0.126	10	"	0.0980	0.0217	106	31-151	3.52	38	
Surrogate: 1,2-Dichloroethane-d4	0.0418		"	0.0400		104	23-173			
Surrogate: Toluene-d8	0.0391		"	0.0400		97.8	20-170			
Surrogate: 4-Bromofluorobenzene	0.0424		"	0.0400		106	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.*



Foundation Energy, LLC  
15 E 15th St  
Tulsa OK, 74103

Project: Ferguson 3-9  
Project Number: [none]  
Project Manager: Bob Cornez

**Reported:**  
07/25/17 17:00

**Physical Parameters by APHA/ASTM/EPA Methods - Quality Control**  
**Summit Scientific**

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

**Batch 1707217 - General Preparation**

**LCS (1707217-BS1)**

Prepared & Analyzed: 07/25/17

pH	8.04	0.100	pH Units	8.00	100	95-105
----	------	-------	----------	------	-----	--------

**Duplicate (1707217-DUP1)**

**Source: 1707164-01**

Prepared & Analyzed: 07/25/17

pH	7.47	0.100	pH Units	7.40	0.941	20
----	------	-------	----------	------	-------	----

**Batch 1707218 - General Preparation**

**Blank (1707218-BLK1)**

Prepared & Analyzed: 07/25/17

Specific Conductance (EC)	ND	0.0100	mmhos/cm
---------------------------	----	--------	----------

**LCS (1707218-BS1)**

Prepared & Analyzed: 07/25/17

Specific Conductance (EC)	0.754	0.0100	mmhos/cm	0.750	100	90-110
---------------------------	-------	--------	----------	-------	-----	--------

**Duplicate (1707218-DUP1)**

**Source: 1707164-01**

Prepared & Analyzed: 07/25/17

Specific Conductance (EC)	10.5	0.0100	mmhos/cm	10.6	1.52	20
---------------------------	------	--------	----------	------	------	----

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.*



Foundation Energy, LLC  
15 E 15th St  
Tulsa OK, 74103

Project: Ferguson 3-9

Project Number: [none]  
Project Manager: Bob Cornez

**Reported:**  
07/25/17 17:00

### 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