

Summit Scientific

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September 06, 2017

Alyssa Beard
Foundation Energy, LLC
15 E 15th St
Tulsa, OK 74103
RE: Kaufman 2,4

Enclosed are the results of analyses for samples received by Summit Scientific on 08/31/17 11:00. 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: Kaufman 2,4

Project Number: [none]
Project Manager: Alyssa Beard

Reported:
09/06/17 14:10

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
West2@5'	1708298-01	Soil	08/31/17 08:00	08/31/17 11:00

Summit Scientific

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1708298

Sample Receipt Checklist

S2 Work Order: _____

Client: Foundation Energy Client Project ID: Kaufman 2,4

Shipped Via: P/U Airbill #: _____
(UPS, FedEx, Hand Delivered, Pick-up, etc.)

Matrix (check all that apply): Air Soil/Solid Water Other: _____
(Describe)

Cooler ID					
Temp (°C)	9.3				

Thermometer ID: 61857155-K

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

⁽¹⁾ If NO, then contact the client before proceeding with analysis and note in case narrative.

Nakita
 Custodian Printed Name

[Signature]
 Signature or Initials of Custodian

8/31/17 #1200
 Date/Time



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West2@5'
1708298-01 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **08/31/17 08:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1709008	09/01/17	09/02/17	8015M	

Date Sampled: **08/31/17 08:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: <i>o</i> -Terphenyl		106 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **08/31/17 08:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	1709007	09/01/17	09/02/17	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.0050	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **08/31/17 08:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		110 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		101 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		102 %	21-167		"	"	"	"	

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Reported:
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Extractable Petroleum Hydrocarbons by 8015 - Quality Control
Summit Scientific

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

Batch 1709008 - EPA 3550A

Blank (1709008-BLK1)				Prepared & Analyzed: 09/01/17							
C10-C28 (DRO)	ND	50	mg/kg								
<i>Surrogate: o-Terphenyl</i>	13.2		"	12.5		106	30-150				
LCS (1709008-BS1)				Prepared: 09/01/17 Analyzed: 09/02/17							
C10-C28 (DRO)	436	50	mg/kg	499		87.4	73-134				
<i>Surrogate: o-Terphenyl</i>	13.2		"	12.5		106	30-150				
Matrix Spike (1709008-MS1)				Source: 1708287-01		Prepared: 09/01/17 Analyzed: 09/02/17					
C10-C28 (DRO)	437	50	mg/kg	499	15.2	84.6	50-148				
<i>Surrogate: o-Terphenyl</i>	13.2		"	12.5		105	30-150				
Matrix Spike Dup (1709008-MSD1)				Source: 1708287-01		Prepared: 09/01/17 Analyzed: 09/02/17					
C10-C28 (DRO)	423	50	mg/kg	499	15.2	81.7	50-148	3.33		20	
<i>Surrogate: o-Terphenyl</i>	12.2		"	12.5		97.9	30-150				

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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 1709007 - EPA 5030 Soil MS

Blank (1709007-BLK1)

Prepared & Analyzed: 09/01/17

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>0.0400</i>		<i>"</i>	<i>0.0400</i>		<i>100</i>	<i>23-173</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0394</i>		<i>"</i>	<i>0.0400</i>		<i>98.6</i>	<i>20-170</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0368</i>		<i>"</i>	<i>0.0400</i>		<i>92.0</i>	<i>21-167</i>			

LCS (1709007-BS1)

Prepared & Analyzed: 09/01/17

Benzene	0.0824	0.0020	mg/kg	0.100		82.4	58-130			
Toluene	0.0976	0.0050	"	0.100		97.6	61-134			
Ethylbenzene	0.111	0.0050	"	0.0992		112	74-139			
m,p-Xylene	0.219	0.010	"	0.200		109	73-137			
o-Xylene	0.105	0.0050	"	0.0980		108	73-141			
Xylenes (total)	0.324	0.0050	"				30-150			
Gasoline Range Hydrocarbons	5.32	0.50	"				30-150			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0417</i>		<i>"</i>	<i>0.0400</i>		<i>104</i>	<i>23-173</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0391</i>		<i>"</i>	<i>0.0400</i>		<i>97.8</i>	<i>20-170</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0392</i>		<i>"</i>	<i>0.0400</i>		<i>97.9</i>	<i>21-167</i>			

Matrix Spike (1709007-MS1)

Source: 1708276-01

Prepared & Analyzed: 09/01/17

Benzene	0.0819	0.0020	mg/kg	0.100	ND	81.9	30-131			
Toluene	0.0958	0.0050	"	0.100	ND	95.8	30-134			
Ethylbenzene	0.110	0.0050	"	0.0992	ND	111	22-153			
m,p-Xylene	0.218	0.010	"	0.200	ND	109	10-159			
o-Xylene	0.108	0.0050	"	0.0980	ND	110	31-151			
Xylenes (total)	0.326	0.0050	"		ND		30-150			
Gasoline Range Hydrocarbons	33.3	0.50	"		30.3		30-150			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0421</i>		<i>"</i>	<i>0.0400</i>		<i>105</i>	<i>23-173</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0384</i>		<i>"</i>	<i>0.0400</i>		<i>96.0</i>	<i>20-170</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0397</i>		<i>"</i>	<i>0.0400</i>		<i>99.2</i>	<i>21-167</i>			

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Volatile Organic Compounds by EPA Method 8260B - Quality Control
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Analyte	Reporting			Spike	Source	%REC			RPD	Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch 1709007 - EPA 5030 Soil MS

Matrix Spike Dup (1709007-MSD1)	Source: 1708276-01			Prepared & Analyzed: 09/01/17						
Benzene	0.0814	0.0020	mg/kg	0.100	ND	81.4	30-131	0.624	34	
Toluene	0.0924	0.0050	"	0.100	ND	92.4	30-134	3.67	30	
Ethylbenzene	0.111	0.0050	"	0.0992	ND	112	22-153	0.788	24	
m,p-Xylene	0.212	0.010	"	0.200	ND	106	10-159	2.71	68	
o-Xylene	0.103	0.0050	"	0.0980	ND	105	31-151	4.35	38	
Xylenes (total)	0.315	0.0050	"		ND		30-150	3.25	20	
Gasoline Range Hydrocarbons	33.7	0.50	"		30.3		30-150	1.45	20	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0410</i>		<i>"</i>	<i>0.0400</i>		<i>103</i>	<i>23-173</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0396</i>		<i>"</i>	<i>0.0400</i>		<i>99.1</i>	<i>20-170</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0383</i>		<i>"</i>	<i>0.0400</i>		<i>95.8</i>	<i>21-167</i>			

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09/06/17 14:10

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