

Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

May 28, 2019

Heather Shideman

Extraction Oil&Gas

370 17th Street Suite 5300

Denver, CO 80202

RE: Trip_Blank/GWA_Ferguson_43_35

Work Order # 1905199

Enclosed are the results of analyses for samples received by Summit Scientific on 05/16/19 17:07. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Paul Shrewsbury For Ben Shrewsbury

Laboratory Manager



Extraction Oil&Gas
370 17th Street Suite 5300
Denver CO, 80202

Project: Trip_Blank/GWA_Ferguson_43_35

Project Number: AFE# 16227 Fac ID: 754337

Project Manager: Heather Shideman

Reported:
05/28/19 07:00

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
BW_FergusonFarms47109_Trip_Blank	1905199-01	Water	05/16/19 11:10	05/16/19 17:07

Summit Scientific

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Summit Scientific

S₂

1905199

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

Client: Extraction Oil and Gas (XOG)	Report to: Apex Companies, LLC	Project Manager: Heather Shideman
Address: 2234 117th Ave, Ste 106	E-Mail: Rochelle.Carlisle@apexcos.com, Heather.Shideman@apexcos.com	
City/State/Zip: Greeley, CO 80634	cc: bford@extractionog.com	
Phone: (970) 576-3446	Project Name: Trip_Blank/GWA_Ferguson_43_35	
Sampler Name: <i>Josue Sanchez</i>	Project No.: AFE # 16227	Facility ID 754337

ID	Field ID / Point of Collection	Date Sampled	Time Sampled	# of containers	Preservative				Matrix				Analysis Requested				Special Instructions	
					HCl	HNO3	None	Other (Specify)	Groundwater	Soil	Air-Canister #	Other (Specify)	BTEX					
1	BW_FergusonFarms47109_Trip_Blank	5/16/19	1110	1					X					X				Sample Frequency: A

Relinquished by: <i>[Signature]</i>	Date/Time: 5/16/19 5:07pm	Received by: <i>[Signature]</i>	Date/Time: 5-16-19 7:07	Turn Around Time (Check) Same Day _____ 72 hours 24 hours <u>X</u> Standard 48 hours _____ Sample Integrity: Temperature Upon Receipt: 10.8° Intact: <u>Yes</u> No	Notes:
Relinquished by:	Date/Time:	Received by:	Date/Time:		
Relinquished by:	Date/Time:	Received by:	Date/Time:		

1905199

Sample Receipt Checklist

S2 Work Order _____

Client: Apex / X06 Client Project ID: Trip-Blank/GWA-Ferguson-43-35

Shipped Via: H.D./P.U./FedEx/UPS/USPS/Other Airbill #: _____

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

Temp (°C)	10.8°
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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.	✓			on ice
Were all samples received intact ⁽¹⁾ ?	✓			
Was adequate sample volume provided ⁽¹⁾ ?	✓			
If custody seals are present, are they intact ⁽¹⁾ ?			✓	
Are samples with holding times due within 48 hours sample 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?			✓	
<u>Additional Comments (if any):</u>				

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

AT
Custodian Printed Name or Initials


Signature of Custodian

5-16-19 17:07
Date/Time



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Reported:
05/28/19 07:00

BW_FergusonFarms47109_Trip_Blank
1905199-01 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **05/16/19 11:10**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	1.0		ug/l	1	1905297	05/22/19	05/25/19	EPA 8260B	
Toluene	ND	1.0		"	"	"	"	"	"	
Ethylbenzene	ND	1.0		"	"	"	"	"	"	
m,p-Xylene	ND	2.0		"	"	"	"	"	"	
o-Xylene	ND	1.0		"	"	"	"	"	"	
Xylenes (total)	ND	2.0		"	"	"	"	"	"	

Date Sampled: **05/16/19 11:10**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4		93.8 %		23-173		"	"	"	"	
Surrogate: Toluene-d8		98.0 %		20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		99.6 %		21-167		"	"	"	"	

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Project: Trip_Blank/GWA_Ferguson_43_35

Project Number: AFE# 16227 Fac ID: 754337
Project Manager: Heather Shideman

Reported:
05/28/19 07:00

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Summit Scientific

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

Batch 1905297 - EPA 5030 Water MS

Blank (1905297-BLK1)

Prepared: 05/22/19 Analyzed: 05/25/19

Benzene	ND	1.0	ug/l							
Toluene	ND	1.0	"							
Ethylbenzene	ND	1.0	"							
m,p-Xylene	ND	2.0	"							
o-Xylene	ND	1.0	"							
Xylenes (total)	ND	2.0	"							
Surrogate: 1,2-Dichloroethane-d4	12.0		"	13.3		90.2		23-173		
Surrogate: Toluene-d8	13.2		"	13.3		98.9		20-170		
Surrogate: 4-Bromofluorobenzene	13.6		"	13.3		102		21-167		

LCS (1905297-BS1)

Prepared: 05/22/19 Analyzed: 05/25/19

Benzene	33.4	1.0	ug/l	33.3		100		51-132		
Toluene	34.7	1.0	"	33.3		104		51-138		
Ethylbenzene	38.0	1.0	"	33.3		114		58-146		
m,p-Xylene	72.5	2.0	"	66.7		109		57-144		
o-Xylene	34.3	1.0	"	33.3		103		53-146		
Surrogate: 1,2-Dichloroethane-d4	12.7		"	13.3		95.0		23-173		
Surrogate: Toluene-d8	13.3		"	13.3		99.6		20-170		
Surrogate: 4-Bromofluorobenzene	14.0		"	13.3		105		21-167		

Matrix Spike (1905297-MS1)

Source: 1905196-01

Prepared: 05/22/19 Analyzed: 05/25/19

Benzene	33.9	1.0	ug/l	33.3	ND	102		34-141		
Toluene	35.0	1.0	"	33.3	ND	105		27-151		
Ethylbenzene	37.8	1.0	"	33.3	ND	113		29-160		
m,p-Xylene	72.4	2.0	"	66.7	ND	109		20-166		
o-Xylene	34.6	1.0	"	33.3	ND	104		33-159		
Surrogate: 1,2-Dichloroethane-d4	12.9		"	13.3		96.7		23-173		
Surrogate: Toluene-d8	13.4		"	13.3		100		20-170		
Surrogate: 4-Bromofluorobenzene	13.3		"	13.3		100		21-167		

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Volatile Organic Compounds by EPA Method 8260B - Quality Control

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

Batch 1905297 - EPA 5030 Water MS

Matrix Spike Dup (1905297-MSD1)

Source: 1905196-01

Prepared: 05/22/19 Analyzed: 05/25/19

Benzene	34.1	1.0	ug/l	33.3	ND	102	34-141	0.530	32	
Toluene	35.7	1.0	"	33.3	ND	107	27-151	1.90	25	
Ethylbenzene	38.8	1.0	"	33.3	ND	117	29-160	2.85	50	
m,p-Xylene	74.5	2.0	"	66.7	ND	112	20-166	2.83	36	
o-Xylene	35.3	1.0	"	33.3	ND	106	33-159	2.15	26	
Surrogate: 1,2-Dichloroethane-d4	13.9		"	13.3		104	23-173			
Surrogate: Toluene-d8	13.5		"	13.3		101	20-170			
Surrogate: 4-Bromofluorobenzene	14.0		"	13.3		105	21-167			

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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