

Summit Scientific

741 Corporate Circle – Suite I ♦ Golden, Colorado 80401

303.277.9310 - laboratory ♦ 303.277.9531 - fax

August 15, 2018

Blake Ford

Extraction Oil&Gas

370 17th Street Suite 5300

Denver, CO 80202

RE: Trip_Blank/GWA_Coyote_Trails

Enclosed are the results of analyses for samples received by Summit Scientific on 08/08/18 16:25. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to be 'P. Shrewsbury', written in a cursive style.

Paul Shrewsbury For Ben Shrewsbury

Laboratory Manager



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

Project: Trip_Blank/GWA_Coyote_Trails

Project Number: AFE#17031 Code 961.15

Project Manager: Blake Ford

Reported:
08/15/18 09:55

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
BW_Front_Range_Landfill_Surface_Water_SW_Trip_Blan	1808100-01	Water	08/08/18 10:57	08/08/18 16:25

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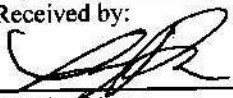
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106

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

Page 1 of 1

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 Coyote Trails
Sampler Name: Katerina Donald **Project No.:** AFE # 17031; Code 961.15 **Facility ID**

				Preservative				Matrix			Analysis Requested				Special Instructions				
ID	Field ID / Point of Collection	Date Sampled	Time Sampled	# of containers	HCl	HNO3	None	Other (Specify)	Surface Water	Soil	Air-Canister #	Other (Specify)	BTEX						
1	BW_Front_Range_Landfill_Surface_Water_SW_Trip_Blank	8/8/18	1057	1					X				X						Sample Frequency: Q2 Q3 ps
Relinquished by: 		Date/Time: 8/8/18 1625		Received by: 		Date/Time: 8-8-18 1625		Turn Around Time (Check)				Notes:							
Relinquished by:		Date/Time:		Received by:		Date/Time:		Same Day _____				72 hours _____							
								24 hours _____				Standard <input checked="" type="checkbox"/>							
								48 hours _____											
Relinquished by:		Date/Time:		Received by:		Date/Time:		Sample Integrity:				Temperature Upon Receipt: 18.9							
								Intact: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No											

Sample Receipt Checklist

S2 Work Order 1808100

Client: XOG Client Project ID: Trip-Blank/GWA-Coyote Trails

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

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

Temp (°C)	<u>15.9</u>
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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⁾ ?	<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 ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Was adequate sample volume provided ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
If custody seals are present, are they intact ⁽¹⁾ ?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Are samples with holding times due within 48 hours sample due within 48 hours present?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Is a chain-of-custody (COC) form present and filled out completely ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Does the COC agree with the number and type of sample bottles received ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Do the sample IDs on the bottle labels match the COC ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Is the COC properly relinquished by the client w/ date and time recorded ⁽¹⁾ ?	<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 checked="" type="checkbox"/>	<input type="checkbox"/>	
Are samples preserved that require preservation (excluding cooling) ⁽¹⁾ ?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
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⁾ ?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Record the pH in Comments.				
If dissolved metals are requested, were samples field filtered?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

Additional Comments (if any):

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

LP
Custodian Printed Name or Initials

[Signature]
Signature of Custodian

8-2-18 1612
Date/Time



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Reported:
08/15/18 09:55

BW_Front_Range_Landfill_Surface_Water_SW_Trip_Blank
1808100-01 (Water)

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Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **08/08/18 10:57**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Benzene	ND	1.0	ug/l	1	1808182	08/14/18	08/14/18	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: **08/08/18 10:57**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: 1,2-Dichloroethane-d4		114 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		98.1 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		107 %	21-167		"	"	"	"	

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Reported:
08/15/18 09:55

Volatile Organic Compounds by EPA Method 8260B - Quality Control

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

Batch 1808182 - EPA 5030 Water MS

Blank (1808182-BLK1)

Prepared & Analyzed: 08/14/18

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	15.1		"	13.2		115	23-173			
Surrogate: Toluene-d8	13.0		"	13.3		97.3	20-170			
Surrogate: 4-Bromofluorobenzene	14.3		"	13.3		108	21-167			

LCS (1808182-BS1)

Prepared & Analyzed: 08/14/18

Benzene	28.7	1.0	ug/l	33.3		86.0	51-132			
Toluene	28.7	1.0	"	33.3		86.2	51-138			
Ethylbenzene	31.5	1.0	"	33.3		94.5	58-146			
m,p-Xylene	56.3	2.0	"	66.7		84.4	57-144			
o-Xylene	29.9	1.0	"	33.3		89.6	53-146			
Surrogate: 1,2-Dichloroethane-d4	15.4		"	13.2		117	23-173			
Surrogate: Toluene-d8	13.6		"	13.3		102	20-170			
Surrogate: 4-Bromofluorobenzene	14.6		"	13.3		109	21-167			

Matrix Spike (1808182-MS1)

Source: 1808184-02

Prepared & Analyzed: 08/14/18

Benzene	26.8	1.0	ug/l	33.3	ND	80.4	34-141			
Toluene	26.9	1.0	"	33.3	ND	80.6	27-151			
Ethylbenzene	29.2	1.0	"	33.3	ND	87.6	29-160			
m,p-Xylene	52.4	2.0	"	66.7	ND	78.6	20-166			
o-Xylene	28.4	1.0	"	33.3	ND	85.1	33-159			
Surrogate: 1,2-Dichloroethane-d4	16.0		"	13.2		121	23-173			
Surrogate: Toluene-d8	13.6		"	13.3		102	20-170			
Surrogate: 4-Bromofluorobenzene	14.1		"	13.3		105	21-167			

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Volatile Organic Compounds by EPA Method 8260B - Quality Control

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

Batch 1808182 - EPA 5030 Water MS

Matrix Spike Dup (1808182-MSD1)	Source: 1808184-02			Prepared & Analyzed: 08/14/18						
Benzene	29.3	1.0	ug/l	33.3	ND	88.0	34-141	9.05	32	
Toluene	29.3	1.0	"	33.3	ND	87.9	27-151	8.62	25	
Ethylbenzene	32.6	1.0	"	33.3	ND	97.8	29-160	11.0	50	
m,p-Xylene	57.4	2.0	"	66.7	ND	86.0	20-166	9.08	36	
o-Xylene	31.2	1.0	"	33.3	ND	93.6	33-159	9.50	26	
Surrogate: 1,2-Dichloroethane-d4	15.5		"	13.2		117	23-173			
Surrogate: Toluene-d8	13.4		"	13.3		100	20-170			
Surrogate: 4-Bromofluorobenzene	14.1		"	13.3		106	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