

Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

May 05, 2020

Heather Shideman

Extraction Oil&Gas

370 17th Street Suite 5300

Denver, CO 80202

RE: Trip_Blank/GWA_United_Pad

Work Order # 2004358

Enclosed are the results of analyses for samples received by Summit Scientific on 04/27/20 13:55. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink on a light blue background. The signature is written in a cursive style and appears to read "Muri Premier".

Muri Premier For Paul Shrewsbury

President



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

Project: Trip_Blank/GWA_United_Pad

Project Number: ALLOC-733,962,32

Project Manager: Heather Shideman

Reported:
05/05/20 11:21

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
BW_Joyner_92694_Trip_Blank	2004358-01	Water	04/27/20 12:19	04/27/20 13:55

Summit Scientific

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2004358

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S₂

4653 Table Mountain Drive ♦ Golden, Colorado 80403

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; kolbi.olson@apexcos.com
Phone: (970) 576-3446 **Project Name:** Trip_Blank/GWA_United_Pad
Sampler Name: Jeff Griggs **Project No.:** ALLOC-733, 962, 32 **Facility ID** 760092

					Preservative				Matrix				Analysis Requested								Special Instructions				
ID	Field ID / Point of Collection	Date Sampled	Time Sampled	# of containers	HCl	HNO3	None	Other (Specify)	Groundwater	Soil	Air-Canister Serial #	Other (Specify)	BTEX												
1	BW_Joyner_92694_Trip_Blank	04/27/2020	1219	2					X				X							Sample Frequency: IN					
Relinquished by: 					Date/Time: 04/27/2020 13:55					Received by: 					Date/Time: 04-27-2020 13:55					Turn Around Time (Check) Same Day ___ 72 hours ___ 24 hours ___ Standard <u>X</u> 48 hours ___					Notes: ON ICE
Relinquished by:					Date/Time:					Received by:					Date/Time:					Sample Integrity: Temperature Upon Receipt: 6.7 Intact: <u>Yes</u> No					
Relinquished by:					Date/Time:					Received by:					Date/Time:										

www.s2scientific.com

Sample Receipt Checklist

S2 Work Order 2004358

Client: Apex/XOG

Client Project ID: Trip-Blank/GWA-United-Pad

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

☒ ☐ ☐ ☐ ☐

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

Temp (°C)	6.7
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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.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	On Ice
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 checked="" type="checkbox"/>	<input type="checkbox"/>	<input 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⁾ ? Note the type of preservative in the Comments column – HCl, H2SO4, NaOH, HNO3, ect	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
If samples are acid preserved for metals, is the pH ≤ 2 ⁽¹⁾ ? Record the pH in Comments.	<input type="checkbox"/>	<input type="checkbox"/>	<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):

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

MP

Custodian Printed Name or Initials

Muri Premer

Signature of Custodian

4/27/20

Date/Time



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BW_Joyner_92694_Trip_Blank

2004358-01 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 04/27/20 12:19

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Benzene	ND	1.0	ug/l	1	2004338	04/28/20	04/29/20	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: 04/27/20 12:19

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: 1,2-Dichloroethane-d4		74.8 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		101 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		93.6 %	21-167		"	"	"	"	

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Reported:
05/05/20 11:21

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 2004338 - EPA 5030 Water MS

Blank (2004338-BLK1)

Prepared & Analyzed: 04/28/20

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	10.3		"	13.3		77.6	23-173			
Surrogate: Toluene-d8	13.8		"	13.3		103	20-170			
Surrogate: 4-Bromofluorobenzene	12.9		"	13.3		96.5	21-167			

LCS (2004338-BS1)

Prepared & Analyzed: 04/28/20

Benzene	24.6	1.0	ug/l	33.3		73.7	51-132			
Toluene	24.5	1.0	"	33.3		73.6	51-138			
Ethylbenzene	30.1	1.0	"	33.3		90.3	58-146			
m,p-Xylene	57.2	2.0	"	66.7		85.8	57-144			
o-Xylene	29.4	1.0	"	33.3		88.2	53-146			
Surrogate: 1,2-Dichloroethane-d4	9.64		"	13.3		72.3	23-173			
Surrogate: Toluene-d8	13.2		"	13.3		98.9	20-170			
Surrogate: 4-Bromofluorobenzene	12.7		"	13.3		95.3	21-167			

Matrix Spike (2004338-MS1)

Source: 2004354-01

Prepared & Analyzed: 04/28/20

Benzene	25.6	1.0	ug/l	33.3	1.30	72.9	34-141			
Toluene	24.4	1.0	"	33.3	ND	73.1	27-151			
Ethylbenzene	32.4	1.0	"	33.3	1.39	93.2	29-160			
m,p-Xylene	63.2	2.0	"	66.7	5.18	87.1	20-166			
o-Xylene	32.9	1.0	"	33.3	1.83	93.2	33-159			
Surrogate: 1,2-Dichloroethane-d4	8.99		"	13.3		67.4	23-173			
Surrogate: Toluene-d8	12.6		"	13.3		94.9	20-170			
Surrogate: 4-Bromofluorobenzene	12.6		"	13.3		94.4	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 2004338 - EPA 5030 Water MS

Matrix Spike Dup (2004338-MSD1)	Source: 2004354-01			Prepared & Analyzed: 04/28/20						
Benzene	25.0	1.0	ug/l	33.3	1.30	71.2	34-141	2.29	32	
Toluene	24.7	1.0	"	33.3	ND	74.1	27-151	1.39	25	
Ethylbenzene	29.1	1.0	"	33.3	1.39	83.0	29-160	11.0	50	
m,p-Xylene	55.6	2.0	"	66.7	5.18	75.6	20-166	12.9	36	
o-Xylene	29.6	1.0	"	33.3	1.83	83.3	33-159	10.5	26	
Surrogate: 1,2-Dichloroethane-d4	12.3		"	13.3		92.5	23-173			
Surrogate: Toluene-d8	13.0		"	13.3		97.8	20-170			
Surrogate: 4-Bromofluorobenzene	13.0		"	13.3		97.4	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