

# Summit Scientific

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4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

June 23, 2020

Heather Shideman

Extraction Oil&Gas

370 17th Street Suite 5300

Denver, CO 80202

RE: Trip\_Blank/GWA\_Vetting\_15\_H

Work Order #2006136

Enclosed are the results of analyses for samples received by Summit Scientific on 06/11/20 12:20. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read "Muri Premier", is displayed on a light purple rectangular background.

Muri Premier For Paul Shrewsbury  
President



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

Project: Trip\_Blank/GWA\_Vetting\_15\_H  
Project Number: AFE#17148 Fac ID 758582  
Project Manager: Heather Shideman

**Reported:**  
06/23/20 11:53

**ANALYTICAL REPORT FOR SAMPLES**

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
BW_Herman_224760_A_Trip_Blank	2006136-01	Water	06/11/20 11:16	06/11/20 12:20

Summit Scientific

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## 2006136

Page 1 of 1

ID				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_Herman_224760_A_Trip_Blank	22/06/11	1116	2			+		X				X							Sample Frequency: 1SUB
Relinquished by:		Date/Time:		Received by:		Date/Time:		Turn Around Time (Check)								Notes:				
		22/06/11/1220				06-11-20 12:20		Same Day ___ 72 hours ___												
Relinquished by:		Date/Time:		Received by:		Date/Time:		24 hours ___ Standard <u>X</u>												
								48 hours ___												
Relinquished by:		Date/Time:		Received by:		Date/Time:		Sample Integrity:												
								Temperature Upon Receipt: <u>0.1</u>												
								Intact: <u>Yes</u> No												

2006136

## Sample Receipt Checklist

S2 Work Order \_\_\_\_\_

Client: Apex/XOGClient Project ID: Trip\_Blank/GWA\_Vetting\_15\_HShipped Via: H.D./P.U./FedEx/UPS/USPS/Other Airbill #: \_\_\_\_\_
☒ ☐ ☐ ☐ ☐
Matrix (check all that apply): ☐ Air ☐ Soil/Solid ☒ Water ☐ Other: \_\_\_\_\_  
(Describe)

Temp (°C)	0.1
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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 <sup>(1)</sup> ? 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 <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 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 <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 checked="" type="checkbox"/>	<input type="checkbox"/>	
Are samples preserved that require preservation (excluding cooling) <sup>(1)</sup> ? 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 <sup>(1)</sup> ? 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):   				
<sup>(1)</sup> If NO, then contact the client before proceeding with analysis and note in case narrative.				

MP

Custodian Printed Name or Initials

  
 Signature of Custodian

6/11/20

Date/Time



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**Reported:**  
06/23/20 11:53

**BW\_Herman\_224760\_A\_Trip\_Blank**  
**2006136-01 (Water)**

**Summit Scientific**

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

Date Sampled: **06/11/20 11:16**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Benzene	ND	1.0	ug/l	1	2006188	06/12/20	06/17/20	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: **06/11/20 11:16**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: 1,2-Dichloroethane-d4		114 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		99.7 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		87.7 %	21-167		"	"	"	"	

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**Reported:**  
06/23/20 11:53

## 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 2006188 - EPA 5030 Water MS

##### Blank (2006188-BLK1)

Prepared: 06/12/20 Analyzed: 06/16/20

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	14.4		"	13.3		108	23-173			
Surrogate: Toluene-d8	13.1		"	13.3		98.6	20-170			
Surrogate: 4-Bromofluorobenzene	11.6		"	13.3		86.7	21-167			

##### LCS (2006188-BS1)

Prepared: 06/12/20 Analyzed: 06/16/20

Benzene	19.7	1.0	ug/l	33.3		59.1	51-132			
Toluene	23.4	1.0	"	33.3		70.3	51-138			
Ethylbenzene	25.7	1.0	"	33.3		77.0	58-146			
m,p-Xylene	49.0	2.0	"	66.7		73.5	57-144			
o-Xylene	24.8	1.0	"	33.3		74.4	53-146			
Surrogate: 1,2-Dichloroethane-d4	14.6		"	13.3		109	23-173			
Surrogate: Toluene-d8	13.0		"	13.3		97.7	20-170			
Surrogate: 4-Bromofluorobenzene	11.3		"	13.3		84.5	21-167			

##### Matrix Spike (2006188-MS1)

Source: 2006108-02

Prepared: 06/12/20 Analyzed: 06/16/20

Benzene	21.3	1.0	ug/l	33.3	ND	63.9	34-141			
Toluene	24.7	1.0	"	33.3	ND	74.2	27-151			
Ethylbenzene	27.1	1.0	"	33.3	ND	81.4	29-160			
m,p-Xylene	51.2	2.0	"	66.7	ND	76.7	20-166			
o-Xylene	25.8	1.0	"	33.3	ND	77.4	33-159			
Surrogate: 1,2-Dichloroethane-d4	15.4		"	13.3		116	23-173			
Surrogate: Toluene-d8	13.0		"	13.3		97.7	20-170			
Surrogate: 4-Bromofluorobenzene	12.2		"	13.3		91.4	21-167			

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**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 2006188 - EPA 5030 Water MS**

Matrix Spike Dup (2006188-MSD1)	Source: 2006108-02			Prepared: 06/12/20 Analyzed: 06/16/20						
Benzene	21.2	1.0	ug/l	33.3	ND	63.7	34-141	0.376	32	
Toluene	24.4	1.0	"	33.3	ND	73.4	27-151	1.14	25	
Ethylbenzene	27.1	1.0	"	33.3	ND	81.4	29-160	0.0369	50	
m,p-Xylene	49.6	2.0	"	66.7	ND	74.4	20-166	3.14	36	
o-Xylene	25.2	1.0	"	33.3	ND	75.7	33-159	2.16	26	
Surrogate: 1,2-Dichloroethane-d4	15.6		"	13.3		117	23-173			
Surrogate: Toluene-d8	13.2		"	13.3		98.9	20-170			
Surrogate: 4-Bromofluorobenzene	11.0		"	13.3		82.8	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