

Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

August 21, 2019

Heather Shideman

Axis Exploration LLC

2234 117th Ave Ste. 106

Greeley, CO 80634

RE: Trip_Blank/GWA_Houlihan_4_64_22A

Work Order # 1908121

Enclosed are the results of analyses for samples received by Summit Scientific on 08/12/19 15:35. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, reading "Muri Premier", on a light blue background.

Muri Premier For Ben Shrewsbury

Laboratory Manager



Axis Exploration LLC
2234 117th Ave Ste. 106
Greeley CO, 80634

Project: Trip_Blank/GWA_Houlihan_4_64_22A

Project Number: AFE #221706 Code 961.15

Project Manager: Heather Shideman

Reported:
08/21/19 10:39

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
BW_Heurich_173456_Trip_Blank	1908121-01	Water	08/12/19 10:05	08/12/19 15:35

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Summit Scientific

S₂

1908121

4653 Table Mountain Drive ♦ Golden, Colorado 80403

303-277-9310 ♦ 303-374-5933

Page 1 of 1

Client: Axis Exploration, LLC (AXIS)	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_Houlihan_4_64_22A	
Sampler Name: Foster Search	Project No.: AFE # 221706; Code: 961.15	Facility ID: 756996

ID	Field ID / Point of Collection	Date Sampled	Time Sampled	# of containers	Preservative				Matrix				Analysis Requested				Special Instructions		
					HCl	HNO ₃	None	Other (Specify)	Groundwater	Soil	Air-Canister Serial #	Other (Specify)	BTEX						
1	BW_Heurich_173456_Trip_Blank	8/12/19	1005	2					X					X					Sample Frequency: ISUB
Relinquished by: <i>Josue</i>		Date/Time: 8/12/19 1535		Received by: <i>[Signature]</i>		Date/Time: 8-12-19 1535		Turn Around Time (Check)				Notes:							
Relinquished by:		Date/Time:		Received by:		Date/Time:		Same Day <input type="checkbox"/>				72 hours <input type="checkbox"/>							
Relinquished by:		Date/Time:		Received by:		Date/Time:		24 hours <input type="checkbox"/>				Standard <input checked="" type="checkbox"/>							
Relinquished by:		Date/Time:		Received by:		Date/Time:		48 hours <input type="checkbox"/>				Sample Integrity:							
Relinquished by:		Date/Time:		Received by:		Date/Time:		Temperature Upon Receipt: 6.1°C				Intact: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>							
Relinquished by:		Date/Time:		Received by:		Date/Time:		On ice											

Sample Receipt Checklist

1908121

S2 Work Order _____

Client: Axis Exploration

Client Project ID: Trip-Blank/GWA Houlahan-4-6-24

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

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

Temp (°C)	<u>6.1°C</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⁾ ?				
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?			✓	
Additional Comments (if any):				

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

Eric H
Custodian Printed Name or Initials

E. Houlahan
Signature of Custodian

8-12-19 15:35
Date/Time



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BW_Heurich_173456_Trip_Blank

1908121-01 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 08/12/19 10:05

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Benzene	ND	1.0	ug/l	1	1908167	08/14/19	08/15/19	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: 08/12/19 10:05

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: 1,2-Dichloroethane-d4		103 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		94.7 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		104 %	21-167		"	"	"	"	

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Reported:
08/21/19 10:39

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 1908167 - EPA 5030 Water MS

Blank (1908167-BLK1)

Prepared: 08/14/19 Analyzed: 08/15/19

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	13.6		"	13.3		102	23-173			
Surrogate: Toluene-d8	12.6		"	13.3		94.8	20-170			
Surrogate: 4-Bromofluorobenzene	13.8		"	13.3		104	21-167			

LCS (1908167-BS1)

Prepared: 08/14/19 Analyzed: 08/15/19

Benzene	30.5	1.0	ug/l	33.3		91.4	51-132			
Toluene	30.9	1.0	"	33.3		92.8	51-138			
Ethylbenzene	31.5	1.0	"	33.3		94.5	58-146			
m,p-Xylene	63.3	2.0	"	66.7		94.9	57-144			
o-Xylene	30.8	1.0	"	33.3		92.5	53-146			
Surrogate: 1,2-Dichloroethane-d4	14.2		"	13.3		106	23-173			
Surrogate: Toluene-d8	12.9		"	13.3		97.1	20-170			
Surrogate: 4-Bromofluorobenzene	14.2		"	13.3		106	21-167			

Matrix Spike (1908167-MS1)

Source: 1908121-01

Prepared: 08/14/19 Analyzed: 08/15/19

Benzene	30.2	1.0	ug/l	33.3	ND	90.7	34-141			
Toluene	30.7	1.0	"	33.3	ND	92.0	27-151			
Ethylbenzene	31.4	1.0	"	33.3	ND	94.3	29-160			
m,p-Xylene	63.1	2.0	"	66.7	ND	94.7	20-166			
o-Xylene	30.5	1.0	"	33.3	ND	91.4	33-159			
Surrogate: 1,2-Dichloroethane-d4	14.2		"	13.3		107	23-173			
Surrogate: Toluene-d8	12.8		"	13.3		95.9	20-170			
Surrogate: 4-Bromofluorobenzene	14.0		"	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 1908167 - EPA 5030 Water MS

Matrix Spike Dup (1908167-MSD1)	Source: 1908121-01			Prepared: 08/14/19 Analyzed: 08/15/19						
Benzene	30.2	1.0	ug/l	33.3	ND	90.7	34-141	0.0662	32	
Toluene	30.9	1.0	"	33.3	ND	92.7	27-151	0.812	25	
Ethylbenzene	31.4	1.0	"	33.3	ND	94.2	29-160	0.0955	50	
m,p-Xylene	63.1	2.0	"	66.7	ND	94.6	20-166	0.0634	36	
o-Xylene	30.5	1.0	"	33.3	ND	91.4	33-159	0.0656	26	
Surrogate: 1,2-Dichloroethane-d4	14.7		"	13.3		110	23-173			
Surrogate: Toluene-d8	12.9		"	13.3		97.1	20-170			
Surrogate: 4-Bromofluorobenzene	14.1		"	13.3		106	21-167			

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08/21/19 10:39

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