

Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

June 17, 2021

Brent Hedstrom
Crestone Peak Resources
2020 E. Grand Avenue, Suite 515
Laramie, WY 82070

RE: Edith Ann Duckworth 4H-21H

Work Order #2105463

Enclosed are the results of analyses for samples received by Summit Scientific on 05/27/21 17:15. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads "Muri Premer". The signature is written in a cursive style with a large initial "M" and a long, sweeping underline.

Muri Premer For Paul Shrewsbury
President



Crestone Peak Resources
2020 E. Grand Avenue, Suite 515
Laramie WY, 82070

Project: Edith Ann Duckworth 4H-21H

Project Number: [none]
Project Manager: Brent Hedstrom

Reported:
06/17/21 13:47

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
Surface Casing	2105463-01	Water	05/18/21 00:00	05/27/21 17:15

Summit Scientific

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Summit Scientific 2105463

S₂

4653 Table Mountain Drive ♦ Golden, Colorado 80403
303-277-9310

Client: Crestone Peak Resources	Project Manager: Brent Hedstrom
Address: 10188 East I-25 Frontage road	E-Mail: brent.hedstrom@crestonepr.com
City/State/Zip: Firestone, CO 80504	LOE W75095 8503
Phone: 303-434-3007	Project Name: Edith Ann Duckworth 4H-21H
Sampler Name:	Project Number:

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix				Analysis Requested							Special Instructions	
					HCl	HNO3	None	Other	Water	Soil	Air-Canister #	Other	Anion	Cations	TDS	BTEX 8020	DRO	GRO	RSK-175		
1	Surface Casing	5/18/2021		2									X	X	X	X	X	X	X	X	COGCC 434305
2																					
3																					
4																					
5																					
6																					
7																					
8																					
9																					
10																					

Relinquished by: <i>BH</i>	Date/Time: 5/17/21 9AM	Received by: <i>Juhon</i>	Date/Time: 5/27/21 1715	Turn Around Time (Check)	Notes:
				Same Day <input type="checkbox"/>	72 hours <input type="checkbox"/>
				24 hours <input type="checkbox"/>	Standard <input checked="" type="checkbox"/>
				48 hours <input type="checkbox"/>	
				Sample Integrity:	
				Temperature Upon Receipt: <u>25</u>	
				Samples Intact: <input checked="" type="radio"/> Yes <input type="radio"/> No	

2105463

Sample Receipt Checklist

S2 Work Order _____

Client: Crestone Client Project ID: Edith Ann Duckworth 4H-214

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

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

Temp (°C)	25
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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 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 type="checkbox"/>	<input checked="" 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.

JB
Custodian Printed Name or Initials

[Signature]
Signature of Custodian

5/27/21
Date/Time



Crestone Peak Resources
2020 E. Grand Avenue, Suite 515
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Project: Edith Ann Duckworth 4H-21H

Project Number: [none]
Project Manager: Brent Hedstrom

Reported:
06/17/21 13:47

Surface Casing
2105463-01 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **05/18/21 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	1.6	1.0	ug/l	1	BEE0554	05/29/21	05/31/21	EPA 8260B	
Toluene	3.6	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	8.2	2.0	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	500	"	"	"	"	"	"	

Date Sampled: **05/18/21 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	124 %	23-173	"	"	"	"	"	"	
Surrogate: Toluene-d8	123 %	20-170	"	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene	106 %	21-167	"	"	"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **05/18/21 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	5.0	mg/L	1	BEF0182	06/08/21	06/09/21	EPA 8015M	

Date Sampled: **05/18/21 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	111 %	58.9-148	"	"	"	"	"	"	

Total Metals by EPA Method 200.8

Date Sampled: **05/18/21 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	3980	50.0	ug/l	1	BEF0033	06/02/21	06/03/21	EPA 200.8	
Magnesium	135	50.0	"	"	"	"	"	"	
Potassium	4920	50.0	"	"	"	"	"	"	

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Surface Casing
2105463-01 (Water)

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Total Metals by EPA Method 200.8

Sodium	226000	50.0	ug/l	1	BEF0033	06/02/21	06/03/21	EPA 200.8
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Anions by EPA Method 300.0

Date Sampled: **05/18/21 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chloride	162	6.00	mg/L	100	BEF0083	06/03/21	06/03/21	EPA 300.0	
Sulfate	15.5	0.300	"	1	"	"	"	"	

Total Dissolved Solids by SM2540C

Date Sampled: **05/18/21 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Total Dissolved Solids	496	10.0	mg/L	1	BEE0534	05/28/21	05/28/21	SM2540C	I-03

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Project: Edith Ann Duckworth 4H-21H

Project Number: [none]
Project Manager: Brent Hedstrom

Reported:
06/17/21 13:47

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Summit Scientific

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

Batch BEE0554 - EPA 5030 Water MS

Blank (BEE0554-BLK1)

Prepared: 05/29/21 Analyzed: 05/30/21

Benzene	ND	1.0	ug/l							
Toluene	ND	1.0	"							
Ethylbenzene	ND	1.0	"							
Xylenes (total)	ND	2.0	"							
Gasoline Range Hydrocarbons	ND	500	"							
Surrogate: 1,2-Dichloroethane-d4	10.7		"	13.3		80.5	23-173			
Surrogate: Toluene-d8	13.0		"	13.3		97.6	20-170			
Surrogate: 4-Bromofluorobenzene	13.4		"	13.3		100	21-167			

LCS (BEE0554-BS1)

Prepared: 05/29/21 Analyzed: 05/30/21

Benzene	41.1	1.0	ug/l	33.3		123	70-130			
Toluene	40.3	1.0	"	33.3		121	70-130			
Ethylbenzene	32.9	1.0	"	33.3		98.6	70-130			
m,p-Xylene	64.9	2.0	"	66.7		97.3	70-130			
o-Xylene	34.0	1.0	"	33.3		102	70-130			
Surrogate: 1,2-Dichloroethane-d4	11.5		"	13.3		86.3	23-173			
Surrogate: Toluene-d8	14.5		"	13.3		109	20-170			
Surrogate: 4-Bromofluorobenzene	14.2		"	13.3		106	21-167			

Matrix Spike (BEE0554-MS1)

Source: 2105412-01

Prepared: 05/29/21 Analyzed: 05/31/21

Benzene	40.9	1.0	ug/l	33.3	ND	123	70-130			
Toluene	38.7	1.0	"	33.3	ND	116	70-130			
Ethylbenzene	34.1	1.0	"	33.3	ND	102	70-130			
m,p-Xylene	66.3	2.0	"	66.7	ND	99.5	70-130			
o-Xylene	34.9	1.0	"	33.3	ND	105	70-130			
Surrogate: 1,2-Dichloroethane-d4	11.5		"	13.3		86.1	23-173			
Surrogate: Toluene-d8	13.2		"	13.3		99.2	20-170			
Surrogate: 4-Bromofluorobenzene	14.1		"	13.3		106	21-167			

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Project: Edith Ann Duckworth 4H-21H

Project Number: [none]
 Project Manager: Brent Hedstrom

Reported:
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Volatile Organic Compounds by EPA Method 8260B - Quality Control

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

Batch BEE0554 - EPA 5030 Water MS

Matrix Spike Dup (BEE0554-MSD1)

Source: 2105412-01

Prepared: 05/29/21 Analyzed: 05/31/21

Benzene	40.5	1.0	ug/l	33.3	ND	122	70-130	0.983	30	
Toluene	38.6	1.0	"	33.3	ND	116	70-130	0.0776	30	
Ethylbenzene	33.4	1.0	"	33.3	ND	100	70-130	2.04	30	
m,p-Xylene	64.0	2.0	"	66.7	ND	96.0	70-130	3.61	30	
o-Xylene	33.8	1.0	"	33.3	ND	101	70-130	3.23	30	
Surrogate: 1,2-Dichloroethane-d4	11.9		"	13.3		89.5	23-173			
Surrogate: Toluene-d8	13.2		"	13.3		99.0	20-170			
Surrogate: 4-Bromofluorobenzene	14.4		"	13.3		108	21-167			

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Project Number: [none]
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Extractable Petroleum Hydrocarbons by 8015 - Quality Control
Summit Scientific

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

Batch BEF0182 - EPA 3520B

Blank (BEF0182-BLK1)

Prepared: 06/08/21 Analyzed: 06/09/21

C10-C28 (DRO) ND 5.0 mg/L

LCS (BEF0182-BS1)

Prepared: 06/08/21 Analyzed: 06/09/21

C10-C28 (DRO) 57.8 5.0 mg/L 50.0 116 70-130

Matrix Spike (BEF0182-MS1)

Source: 2105467-01

Prepared: 06/08/21 Analyzed: 06/09/21

C10-C28 (DRO) 59.6 5.0 mg/L 50.0 ND 119 70-130

Matrix Spike Dup (BEF0182-MSD1)

Source: 2105467-01

Prepared: 06/08/21 Analyzed: 06/09/21

C10-C28 (DRO) 61.8 5.0 mg/L 50.0 ND 124 70-130 3.66 20

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Project Number: [none]
 Project Manager: Brent Hedstrom

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Total Metals by EPA Method 200.8 - Quality Control
Summit Scientific

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

Batch BEF0033 - EPA 200.8

Blank (BEF0033-BLK1)

Prepared: 06/02/21 Analyzed: 06/03/21

Calcium	ND	50.0	ug/l							
Magnesium	ND	50.0	"							
Potassium	ND	50.0	"							
Sodium	ND	50.0	"							

LCS (BEF0033-BS1)

Prepared: 06/02/21 Analyzed: 06/03/21

Calcium	4770	50.0	ug/l	5000	95.4	85-115				
Magnesium	5590	50.0	"	5000	112	85-115				
Potassium	5420	50.0	"	5000	108	85-115				
Sodium	5000	50.0	"	5000	99.9	85-115				

Duplicate (BEF0033-DUP1)

Source: 2105507-01

Prepared: 06/02/21 Analyzed: 06/03/21

Calcium	120000	50.0	ug/l	114000			5.68	20		
Magnesium	52000	50.0	"	48700			6.52	20		
Potassium	6420	50.0	"	6090			5.28	20		
Sodium	191000	50.0	"	177000			7.59	20		

Matrix Spike (BEF0033-MS1)

Source: 2105507-01

Prepared: 06/02/21 Analyzed: 06/03/21

Calcium	118000	50.0	ug/l	5000	114000	96.3	70-130			
Magnesium	53600	50.0	"	5000	48700	98.0	70-130			
Potassium	11500	50.0	"	5000	6090	109	70-130			
Sodium	184000	50.0	"	5000	177000	125	70-130			

Matrix Spike Dup (BEF0033-MSD1)

Source: 2105507-01

Prepared: 06/02/21 Analyzed: 06/03/21

Calcium	119000	50.0	ug/l	5000	114000	109	70-130	0.557	25	
Magnesium	54000	50.0	"	5000	48700	105	70-130	0.671	25	
Potassium	11600	50.0	"	5000	6090	111	70-130	0.848	25	
Sodium	182000	50.0	"	5000	177000	101	70-130	0.659	25	

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Project Number: [none]
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Anions by EPA Method 300.0 - Quality Control
Summit Scientific

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

Batch BEF0083 - General Preparation

Blank (BEF0083-BLK1)

Prepared & Analyzed: 06/03/21

Chloride	ND	0.0600	mg/L						
Sulfate	ND	0.300	"						

LCS (BEF0083-BS1)

Prepared & Analyzed: 06/03/21

Chloride	3.29	0.0600	mg/L	3.00	110	90-110
Sulfate	15.7	0.300	"	15.0	105	90-110

Duplicate (BEF0083-DUP1)

Source: 2106032-01

Prepared & Analyzed: 06/03/21

Chloride	15.1	0.0600	mg/L		14.7		2.74	20
Sulfate	12.8	0.300	"		12.0		6.45	20

Matrix Spike (BEF0083-MS1)

Source: 2106032-01

Prepared & Analyzed: 06/03/21

Chloride	17.5	0.0600	mg/L	3.00	14.7	94.0	80-120
Sulfate	27.3	0.300	"	15.0	12.0	102	80-120

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Project: Edith Ann Duckworth 4H-21H

Project Number: [none]
 Project Manager: Brent Hedstrom

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Total Dissolved Solids by SM2540C - Quality Control
Summit Scientific

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

Batch BEE0534 - General Preparation

Blank (BEE0534-BLK1)

Prepared & Analyzed: 05/28/21

Total Dissolved Solids ND 10.0 mg/L

Duplicate (BEE0534-DUP1)

Source: 2105409-01

Prepared & Analyzed: 05/28/21

Total Dissolved Solids 654 10.0 mg/L 654 0.0764 20

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Project: Edith Ann Duckworth 4H-21H

Project Number: [none]
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06/17/21 13:47

Notes and Definitions

I-03 This sample was recieved and analyzed outside of the recommended holding time.

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