

# Summit Scientific

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4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

July 26, 2021

Brent Hedstrom

Crestone Peak Resources

2020 E. Grand Avenue, Suite 515

Laramie, WY 82070

RE: FILE 3D-32H

Work Order #2107143

Enclosed are the results of analyses for samples received by Summit Scientific on 07/12/21 17:00. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

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

Muri Premier For Paul Shrewsbury  
President



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

Project: FILE 3D-32H  
Project Number: [none]  
Project Manager: Brent Hedstrom

**Reported:**  
07/26/21 10:32

#### ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
Surface Casing	2107143-01	Water	07/07/21 11:10	07/12/21 17:00

Summit Scientific

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2107143

## Summit Scientific

S<sub>2</sub>

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

Page 1 of 1

Client: Crestone Peak Resources

Project Manager: Brent Hedstrom

Address: 10188 East I-25 Frontage road

E-Mail: [brent.hedstrom@crestonepr.com](mailto:brent.hedstrom@crestonepr.com)

City/State/Zip: Firestone, CO 80504

COGCC 434243 LOE C82213 8503

Phone: 303-434-3007

Project Name: File 3D-32H

Sampler Name:

Project Number:

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix				Analysis Requested								Special Instructions	
					HCl	HNO <sub>3</sub>	None	Other	Water	Soil	Air-Canister #	Other	Anion	Cations	TDS	BTEX 8020	DRO	GRO	RSK-175			
1	Surface Casing	7/7/2021	11:10	2										X	X	X	X	X	X	X		
2																						
3																						
4																						
5																						
6																						
7																						
8																						
9																						
10																						

Relinquished by: <i>BB</i>	Date/Time: 7-12-21 930	Received by: <i>John Br</i>	Date/Time: 7/12/21 1700	<b>Turn Around Time</b> (Check) 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"/> <b>Sample Integrity:</b> Temperature Upon Receipt: <u>12</u> Samples Intact: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<b>Notes:</b>
Relinquished by:	Date/Time:	Received by:	Date/Time:		
Relinquished by:	Date/Time:	Received by:	Date/Time:		

# Sample Receipt Checklist

S2 Work Order

2107143

Client: Crestone

Client Project ID:

File 3D-32H

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)

12

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 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 <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 type="checkbox"/>	<input checked="" 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.

JB

Custodian Printed Name or Initials

*John Brown*

Signature of Custodian

7/12/21

Date/Time



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

Project: FILE 3D-32H

Project Number: [none]  
Project Manager: Brent Hedstrom

**Reported:**  
07/26/21 10:32

**Surface Casing**  
**2107143-01 (Water)**

**Summit Scientific**

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

Date Sampled: **07/07/21 11:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Benzene</b>	<b>82</b>	10	ug/l	10	BEG0266	07/15/21	07/19/21	EPA 8260B	
<b>Toluene</b>	<b>730</b>	10	"	"	"	"	"	"	
<b>Ethylbenzene</b>	<b>290</b>	10	"	"	"	"	"	"	
<b>Xylenes (total)</b>	<b>2100</b>	20	"	"	"	"	"	"	
<b>Gasoline Range Hydrocarbons</b>	<b>140000</b>	5000	"	"	"	"	"	"	

Date Sampled: **07/07/21 11:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<i>Surrogate: 1,2-Dichloroethane-d4</i>		69.0 %	23-173		"	"	"	"	
<i>Surrogate: Toluene-d8</i>		125 %	20-170		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		178 %	21-167		"	"	"	"	S-02

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **07/07/21 11:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>C10-C28 (DRO)</b>	<b>980000</b>	50	mg/L	10	BEG0222	07/13/21	07/16/21	EPA 8015M	

Date Sampled: **07/07/21 11:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<i>Surrogate: o-Terphenyl</i>		4340 %	58.9-148		"	"	"	"	S-02

**Total Metals by EPA Method 200.8**

Date Sampled: **07/07/21 11:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Calcium</b>	<b>5820000</b>	5000	ug/l	100	BEG0292	07/16/21	07/19/21	EPA 200.8	
<b>Magnesium</b>	ND	5000	"	"	"	"	"	"	R-01
<b>Potassium</b>	<b>631000</b>	5000	"	"	"	"	"	"	

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Laramie WY, 82070

Project: FILE 3D-32H  
Project Number: [none]  
Project Manager: Brent Hedstrom

**Reported:**  
07/26/21 10:32

**Surface Casing**  
**2107143-01 (Water)**

**Summit Scientific**

**Total Metals by EPA Method 200.8**

Sodium	3780000	5000	ug/l	100	BEG0292	07/16/21	07/19/21	EPA 200.8
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**Anions by EPA Method 300.0**

Date Sampled: **07/07/21 11:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chloride	14300	240	mg/L	4000	BEG0294	07/16/21	07/16/21	EPA 300.0	
Sulfate	378	60.0	"	200	"	"	"	"	

**Total Dissolved Solids by SM2540C**

Date Sampled: **07/07/21 11:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Total Dissolved Solids	20300	10.0	mg/L	1	BEG0226	07/14/21	07/14/21	SM2540C	

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Project: FILE 3D-32H  
Project Number: [none]  
Project Manager: Brent Hedstrom

**Reported:**  
07/26/21 10:32

## 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 BEG0266 - EPA 5030 Water MS

##### Blank (BEG0266-BLK1)

Prepared & Analyzed: 07/15/21

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	9.63		"	13.3		72.2	23-173			
Surrogate: Toluene-d8	17.3		"	13.3		129	20-170			
Surrogate: 4-Bromofluorobenzene	13.6		"	13.3		102	21-167			

##### LCS (BEG0266-BS1)

Prepared: 07/15/21 Analyzed: 07/16/21

Benzene	26.2	1.0	ug/l	33.3		78.5	70-130			
Toluene	29.4	1.0	"	33.3		88.3	70-130			
Ethylbenzene	30.7	1.0	"	33.3		92.2	70-130			
m,p-Xylene	59.1	2.0	"	66.7		88.7	70-130			
o-Xylene	29.2	1.0	"	33.3		87.6	70-130			
Surrogate: 1,2-Dichloroethane-d4	6.27		"	13.3		47.0	23-173			
Surrogate: Toluene-d8	14.9		"	13.3		112	20-170			
Surrogate: 4-Bromofluorobenzene	12.4		"	13.3		93.3	21-167			

##### LCS Dup (BEG0266-BSD1)

Prepared: 07/15/21 Analyzed: 07/16/21

Benzene	26.1	1.0	ug/l	33.3		78.4	70-130	0.191	20	
Toluene	30.3	1.0	"	33.3		90.8	70-130	2.88	20	
Ethylbenzene	31.6	1.0	"	33.3		94.8	70-130	2.86	20	
m,p-Xylene	60.9	2.0	"	66.7		91.4	70-130	2.98	20	
o-Xylene	30.0	1.0	"	33.3		90.1	70-130	2.77	20	
Surrogate: 1,2-Dichloroethane-d4	7.20		"	13.3		54.0	23-173			
Surrogate: Toluene-d8	14.5		"	13.3		109	20-170			
Surrogate: 4-Bromofluorobenzene	12.6		"	13.3		94.4	21-167			

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**Reported:**  
07/26/21 10:32

**Extractable Petroleum Hydrocarbons by 8015 - Quality Control**  
**Summit Scientific**

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

**Batch BEG0222 - EPA 3520B**

**Blank (BEG0222-BLK1)**

Prepared: 07/13/21 Analyzed: 07/15/21

C10-C28 (DRO) ND 5.0 mg/L

**LCS (BEG0222-BS1)**

Prepared: 07/13/21 Analyzed: 07/15/21

C10-C28 (DRO) 48.0 5.0 mg/L 50.0 95.9 70-130

**LCS Dup (BEG0222-BS1)**

Prepared: 07/13/21 Analyzed: 07/15/21

C10-C28 (DRO) 47.2 5.0 mg/L 50.0 94.3 70-130 1.67 20

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07/26/21 10:32

**Total Metals by EPA Method 200.8 - Quality Control**  
**Summit Scientific**

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

**Batch BEG0292 - EPA 200.8**

**Blank (BEG0292-BLK1)**

Prepared & Analyzed: 07/16/21

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

**LCS (BEG0292-BS1)**

Prepared & Analyzed: 07/16/21

Calcium	5630	50.0	ug/l	5000	113	85-115
Magnesium	5390	50.0	"	5000	108	85-115
Potassium	5740	50.0	"	5000	115	85-115
Sodium	5410	50.0	"	5000	108	85-115

**Duplicate (BEG0292-DUP1)**

Source: 2107160-01

Prepared: 07/16/21 Analyzed: 07/17/21

Calcium	139000	50.0	ug/l	139000	0.00669	20
Magnesium	30600	50.0	"	29800	2.67	20
Potassium	4030	50.0	"	3950	2.07	20
Sodium	201000	50.0	"	198000	1.50	20

**Matrix Spike (BEG0292-MS1)**

Source: 2107160-01

Prepared: 07/16/21 Analyzed: 07/17/21

Calcium	143000	50.0	ug/l	5000	139000	81.7	70-130
Magnesium	36200	50.0	"	5000	29800	128	70-130
Potassium	10300	50.0	"	5000	3950	127	70-130
Sodium	201000	50.0	"	5000	198000	70.4	70-130

**Matrix Spike Dup (BEG0292-MSD1)**

Source: 2107160-01

Prepared: 07/16/21 Analyzed: 07/17/21

Calcium	144000	50.0	ug/l	5000	139000	92.8	70-130	0.387	25
Magnesium	35400	50.0	"	5000	29800	112	70-130	2.26	25
Potassium	10100	50.0	"	5000	3950	124	70-130	1.60	25
Sodium	201000	50.0	"	5000	198000	70.5	70-130	0.00203	25

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07/26/21 10:32

**Anions by EPA Method 300.0 - Quality Control**  
**Summit Scientific**

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

**Batch BEG0294 - General Preparation**

**Blank (BEG0294-BLK1)**

Prepared & Analyzed: 07/16/21

Chloride	ND	0.0600	mg/L
Sulfate	ND	0.300	"

**LCS (BEG0294-BS1)**

Prepared & Analyzed: 07/16/21

Chloride	3.30	0.0600	mg/L	3.00	110	90-110
Sulfate	15.2	0.300	"	15.0	101	90-110

**Duplicate (BEG0294-DUP1)**

Source: 2107115-01

Prepared & Analyzed: 07/16/21

Chloride	245	12.0	mg/L	250	1.94	20
Sulfate	2730	60.0	"	2890	5.63	20

**Matrix Spike (BEG0294-MS1)**

Source: 2107115-01

Prepared & Analyzed: 07/16/21

Chloride	787	12.0	mg/L	600	250	89.5	80-120
Sulfate	5560	60.0	"	3000	2890	89.2	80-120

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Project: FILE 3D-32H  
Project Number: [none]  
Project Manager: Brent Hedstrom

**Reported:**  
07/26/21 10:32

**Total Dissolved Solids by SM2540C - Quality Control**  
**Summit Scientific**

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

**Batch BEG0226 - General Preparation**

**Blank (BEG0226-BLK1)**

Prepared & Analyzed: 07/14/21

Total Dissolved Solids ND 10.0 mg/L

**Duplicate (BEG0226-DUP1)**

**Source: 2107107-02**

Prepared & Analyzed: 07/14/21

Total Dissolved Solids 681 10.0 mg/L 680 0.0588 20

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Project: FILE 3D-32H  
Project Number: [none]  
Project Manager: Brent Hedstrom

**Reported:**  
07/26/21 10:32

### Notes and Definitions

S-02	The surrogate recovery for this sample cannot be accurately quantified due to interference from coeluting organic compounds present in the sample extract.
R-01	The Reporting Limit for this analyte has been raised to account for matrix interference.
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