

Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

August 11, 2020

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

RE: FILE 3E-32H

Work Order #2007301

Enclosed are the results of analyses for samples received by Summit Scientific on 07/30/20 12:00. 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: FILE 3E-32H

Project Number: [none]

Project Manager: Brent Hedstrom

Reported:
08/11/20 16:29

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
FILE 3E-32H	2007301-01	Water	07/21/20 00:00	07/30/20 12:00

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Summit Scientific

2007301

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 C82214
Phone: 303-434-3007	Project Name: FILE 3E-32H
Sampler Name:	COGCC 434247
	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	FILE 3E-32H	7/21/2020		11					X					X	X	X	X	X	X	X			
2																							
3																							
4																							
5																							
6																							
7																							
8																							
9																							
10																							

Relinquished by:	Date/Time: 7/30/20	Received by:	Date/Time: 07-30-20 12:00	Turn Around Time (Check)	Notes:
Relinquished by:	Date/Time:	Received by:	Date/Time:	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: 11.6	ON ICE
				Samples Intact: <input checked="" type="radio"/> Yes <input type="radio"/> No	

2007301

Sample Receipt Checklist

S2 Work Order _____

Client: Crestone Peak Resources Client Project ID: File 3E-32H

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

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

Temp (°C)	11.6
-----------	------

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 checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	anions
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 checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
If samples are acid preserved for metals, is the pH ≤ 2 ⁽¹⁾ ? Record the pH in Comments.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input 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):

HNO3 preserved bottle not at less than 2

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

MP
Custodian Printed Name or Initials


Signature of Custodian

7/30/20
Date/Time



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

Project: FILE 3E-32H

Project Number: [none]
Project Manager: Brent Hedstrom

Reported:
08/11/20 16:29

FILE 3E-32H
2007301-01 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **07/21/20 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	31000	1000	ug/l	1000	2008002	08/03/20	08/04/20	EPA 8260B	
Toluene	160000	1000	"	"	"	"	"	"	
Ethylbenzene	33000	1000	"	"	"	"	"	"	
Xylenes (total)	350000	2000	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	20000000	500000	"	"	"	"	"	"	

Date Sampled: **07/21/20 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	158 %	23-173	"	"	"	"	"	"	
Surrogate: Toluene-d8	90.1 %	20-170	"	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene	215 %	21-167	"	"	"	"	"	"	S-02

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **07/21/20 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	1000000	500	mg/L	100	2008003	08/03/20	08/04/20	EPA 8015M	

Date Sampled: **07/21/20 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	22700 %	58.9-148	"	"	"	"	"	"	S-02

Dissolved Gases by RSK-175

Date Sampled: **07/21/20 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Methane	3.0	1.0	mg/L	100	2008073	08/03/20	08/10/20	RSK-175 mod	
Ethane	1.5	0.10	"	10	"	"	"	"	
Propane	0.74	0.10	"	"	"	"	"	"	

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



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

Project: FILE 3E-32H

Project Number: [none]
 Project Manager: Brent Hedstrom

Reported:
 08/11/20 16:29

FILE 3E-32H
2007301-01 (Water)

Summit Scientific

Dissolved Gases by RSK-175

Date Sampled: **07/21/20 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: Ethene		11.0 %	70-130		2008073	08/03/20	08/10/20	RSK-175 mod	S-06

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



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

Project: FILE 3E-32H

Project Number: [none]
Project Manager: Brent Hedstrom

Reported:
08/11/20 16:29

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Summit Scientific

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

Batch 2008002 - EPA 5030 Water MS

Blank (2008002-BLK1)

Prepared: 08/03/20 Analyzed: 08/05/20

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	13.9		"	13.3		104	23-173				
Surrogate: Toluene-d8	12.7		"	13.3		95.6	20-170				
Surrogate: 4-Bromofluorobenzene	11.9		"	13.3		89.0	21-167				

LCS (2008002-BS1)

Prepared: 08/03/20 Analyzed: 08/05/20

Benzene	36.9	1.0	ug/l	33.3		111	70-130				
Toluene	37.3	1.0	"	33.3		112	70-130				
Ethylbenzene	41.1	1.0	"	33.3		123	70-130				
m,p-Xylene	83.4	2.0	"	66.7		125	70-130				
o-Xylene	40.0	1.0	"	33.3		120	70-130				
Surrogate: 1,2-Dichloroethane-d4	14.1		"	13.3		106	23-173				
Surrogate: Toluene-d8	13.0		"	13.3		97.4	20-170				
Surrogate: 4-Bromofluorobenzene	12.5		"	13.3		94.1	21-167				

Matrix Spike (2008002-MS1)

Source: 2007320-01

Prepared: 08/03/20 Analyzed: 08/05/20

Benzene	37.4	1.0	ug/l	33.3	ND	112	70-130				
Toluene	38.1	1.0	"	33.3	ND	114	70-130				
Ethylbenzene	40.6	1.0	"	33.3	ND	122	70-130				
m,p-Xylene	82.0	2.0	"	66.7	ND	123	70-130				
o-Xylene	38.7	1.0	"	33.3	ND	116	70-130				
Surrogate: 1,2-Dichloroethane-d4	14.5		"	13.3		108	23-173				
Surrogate: Toluene-d8	13.1		"	13.3		98.3	20-170				
Surrogate: 4-Bromofluorobenzene	12.4		"	13.3		93.2	21-167				

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



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

Project: FILE 3E-32H

Project Number: [none]
 Project Manager: Brent Hedstrom

Reported:
 08/11/20 16:29

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Summit Scientific

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

Batch 2008002 - EPA 5030 Water MS

Matrix Spike Dup (2008002-MSD1)

Source: 2007320-01

Prepared: 08/03/20 Analyzed: 08/05/20

Benzene	37.7	1.0	ug/l	33.3	ND	113	70-130	0.692	30	
Toluene	38.9	1.0	"	33.3	ND	117	70-130	2.18	30	
Ethylbenzene	40.8	1.0	"	33.3	ND	122	70-130	0.442	30	
m,p-Xylene	81.4	2.0	"	66.7	ND	122	70-130	0.710	30	
o-Xylene	39.4	1.0	"	33.3	ND	118	70-130	1.95	30	
Surrogate: 1,2-Dichloroethane-d4	15.6		"	13.3		117	23-173			
Surrogate: Toluene-d8	13.1		"	13.3		98.0	20-170			
Surrogate: 4-Bromofluorobenzene	12.9		"	13.3		96.6	21-167			

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



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

Project: FILE 3E-32H

Project Number: [none]
 Project Manager: Brent Hedstrom

Reported:
 08/11/20 16:29

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 2008003 - EPA 3520B

Blank (2008003-BLK1)

Prepared: 08/03/20 Analyzed: 08/04/20

C10-C28 (DRO) ND 5.0 mg/L

LCS (2008003-BS1)

Prepared: 08/03/20 Analyzed: 08/04/20

C10-C28 (DRO) 49.8 5.0 mg/L 50.0 99.6 70-130

Matrix Spike (2008003-MS1)

Source: 2007321-03

Prepared: 08/03/20 Analyzed: 08/04/20

C10-C28 (DRO) 45.0 5.0 mg/L 50.0 ND 90.0 70-130

Matrix Spike Dup (2008003-MSD1)

Source: 2007321-03

Prepared: 08/03/20 Analyzed: 08/04/20

C10-C28 (DRO) 39.1 5.0 mg/L 50.0 ND 78.3 70-130 13.9 20

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



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

Project: FILE 3E-32H

Project Number: [none]
 Project Manager: Brent Hedstrom

Reported:
 08/11/20 16:29

Dissolved Gases by RSK-175 - Quality Control
Summit Scientific

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

Batch 2008073 - GC

Blank (2008073-BLK1)

Prepared: 08/07/20 Analyzed: 08/10/20

Methane	ND	0.010	mg/L							
Ethane	ND	0.010	"							
Propane	ND	0.010	"							
Surrogate: Ethene	0.0279		"	0.0364		76.6	70-130			

LCS (2008073-BS1)

Prepared: 08/07/20 Analyzed: 08/10/20

Methane	0.033	0.010	mg/L	0.0428		76.9	70-130			
Ethane	0.083	0.010	"	0.0798		104	70-130			
Propane	0.12	0.010	"	0.139		88.4	70-130			
Surrogate: Ethene	0.0716		"	0.0728		98.3	70-130			

LCS Dup (2008073-BSD1)

Prepared: 08/07/20 Analyzed: 08/10/20

Methane	0.032	0.010	mg/L	0.0428		75.1	70-130	2.46	200	
Ethane	0.086	0.010	"	0.0798		108	70-130	3.54	200	
Propane	0.13	0.010	"	0.139		92.4	70-130	4.46	200	
Surrogate: Ethene	0.0664		"	0.0728		91.2	70-130			

Duplicate (2008073-DUP1)

Source: 2007305-01

Prepared: 08/07/20 Analyzed: 08/10/20

Methane	0.63	0.10	mg/L		0.66			5.41	30	
Ethane	0.34	0.10	"		0.36			3.14	30	
Propane	0.13	0.10	"		0.13			2.28	30	
Surrogate: Ethene	0.0340		"	0.0364		93.4	70-130			

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



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

Project: FILE 3E-32H

Project Number: [none]
Project Manager: Brent Hedstrom

Reported:
08/11/20 16:29

Notes and Definitions

- S-06 The recovery of this surrogate is outside control limits due to sample dilution required from high analyte concentration and/or matrix interferences.
- S-02 The surrogate recovery for this sample cannot be accurately quantified due to interference from coeluting organic compounds present in the sample extract.
- 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