

Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403


303.277.9310

January 25, 2021

Brent Hedstrom
Crestone Peak Resources
2020 E. Grand Avenue, Suite 515
Laramie, WY 82070
RE: Bickler 4-6-34
Work Order #2101134

Enclosed are the results of analyses for samples received by Summit Scientific on 01/14/21 14:00. 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: Bickler 4-6-34

Project Number: [none]

Project Manager: Brent Hedstrom

Reported:
01/25/21 15:30

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
Surface Casing	2101134-01	Water	12/17/20 00:00	01/14/21 14:00

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

2101134



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
City/State/Zip: Firestone, CO 80504
Phone: 303-434-3007 Project Name: Bickler 4-6-34
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	#####		8					X					X	X	X	X	X	X	X	COGCC 293770
2		12-17-20																			LOE/AFE 16192852.1 9728
3																					
4																					
5																					
6																					
7																					
8																					
9																					
10																					
Relinquished by:		Date/Time:		Received by:		Date/Time:		Turn Around Time (Check)							Notes:						
<i>Bb</i>		1-14-21 / 1400		<i>MR</i>		1-14-21 14:00		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"/>													
Relinquished by:		Date/Time:		Received by:		Date/Time:		Sample Integrity:													
								Temperature Upon Receipt: <u>37</u>													
								Samples Intact: <input checked="" type="radio"/> Yes <input type="radio"/> No													

Sample Receipt Checklist

S2 Work Order 2101134

Client: Crestone Peak Resources Client Project ID: Bickler 4-6-34

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

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

Temp (°C)	3.7
-----------	-----

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 type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	HNO3
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):

Samples must be acid preserved by Summit at extraction

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

MP
Custodian Printed Name or Initials

Muri Premer
Signature of Custodian

1/14/21
Date/Time



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

Project: Bickler 4-6-34

Project Number: [none]
Project Manager: Brent Hedstrom

Reported:
01/25/21 15:30

Surface Casing
2101134-01 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

I-02

Date Sampled: **12/17/20 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	11	1.0	ug/l	1	BEA0155	01/15/21	01/15/21	EPA 8260B	
Toluene	4.9	1.0	"	"	"	"	"	"	
Ethylbenzene	2.3	1.0	"	"	"	"	"	"	
Xylenes (total)	12	2.0	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	690	500	"	"	"	"	"	"	

Date Sampled: **12/17/20 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		117 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		100 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		99.2 %	21-167		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **12/17/20 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	5.0	mg/L	1	BEA0178	01/18/21	01/19/21	EPA 8015M	

Date Sampled: **12/17/20 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		147 %	58.9-148		"	"	"	"	

Dissolved Gases by RSK-175

Date Sampled: **12/17/20 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Methane	3.4	1.0	mg/L	100	BEA0162	01/15/21	01/18/21	RSK-175 mod	I-03
Ethane	0.29	0.10	"	10	"	"	"	"	I-03
Propane	0.27	0.10	"	"	"	"	"	"	I-03

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: Bickler 4-6-34

Project Number: [none]
 Project Manager: Brent Hedstrom

Reported:
 01/25/21 15:30

**Surface Casing
 2101134-01 (Water)**

Summit Scientific

Dissolved Gases by RSK-175

Date Sampled: **12/17/20 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: Ethene		115 %	70-130		BEA0162	01/15/21	01/18/21	RSK-175 mod	I-03

Total Metals by EPA Method 200.8

Date Sampled: **12/17/20 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	7540	500	ug/l	10	BEA0186	01/19/21	01/19/21	EPA 200.8	
Magnesium	ND	50.0	"	1	"	"	"	"	
Potassium	5190	500	"	10	"	"	"	"	
Sodium	664000	500	"	"	"	"	"	"	

Anions by EPA Method 300.0

Date Sampled: **12/17/20 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chloride	227	6.00	mg/L	100	BEA0172	01/18/21	01/19/21	EPA 300.0	I-03
Sulfate	ND	0.300	"	1	"	"	"	"	I-03

Total Dissolved Solids by SM2540C

Date Sampled: **12/17/20 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Total Dissolved Solids	6100	10.0	mg/L	1	BEA0152	01/15/21	01/15/21	SM2540C	I-03

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: Bickler 4-6-34

Project Number: [none]
Project Manager: Brent Hedstrom

Reported:
01/25/21 15:30

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 BEA0155 - EPA 5030 Water MS

Blank (BEA0155-BLK1)

Prepared & Analyzed: 01/15/21

Benzene	ND	1.0	ug/l							
Toluene	ND	1.0	"							
Ethylbenzene	ND	1.0	"							
Xylenes (total)	ND	2.0	"							
Gasoline Range Hydrocarbons	ND	500	"							
<i>Surrogate: 1,2-Dichloroethane-d4</i>	13.9		"	13.3		104	23-173			
<i>Surrogate: Toluene-d8</i>	13.4		"	13.3		101	20-170			
<i>Surrogate: 4-Bromofluorobenzene</i>	13.2		"	13.3		98.9	21-167			

LCS (BEA0155-BS1)

Prepared & Analyzed: 01/15/21

Benzene	26.6	1.0	ug/l	33.3		79.8	70-130			
Toluene	32.4	1.0	"	33.3		97.4	70-130			
Ethylbenzene	35.5	1.0	"	33.3		107	70-130			
m,p-Xylene	70.8	2.0	"	66.7		106	70-130			
o-Xylene	35.7	1.0	"	33.3		107	70-130			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	13.6		"	13.3		102	23-173			
<i>Surrogate: Toluene-d8</i>	13.8		"	13.3		103	20-170			
<i>Surrogate: 4-Bromofluorobenzene</i>	13.4		"	13.3		100	21-167			

Matrix Spike (BEA0155-MS1)

Source: 2101123-01

Prepared & Analyzed: 01/15/21

Benzene	26.9	1.0	ug/l	33.3	ND	80.6	70-130			
Toluene	32.1	1.0	"	33.3	ND	96.4	70-130			
Ethylbenzene	35.0	1.0	"	33.3	ND	105	70-130			
m,p-Xylene	69.8	2.0	"	66.7	ND	105	70-130			
o-Xylene	35.0	1.0	"	33.3	ND	105	70-130			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	13.6		"	13.3		102	23-173			
<i>Surrogate: Toluene-d8</i>	13.6		"	13.3		102	20-170			
<i>Surrogate: 4-Bromofluorobenzene</i>	13.1		"	13.3		98.4	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: Bickler 4-6-34

Project Number: [none]
 Project Manager: Brent Hedstrom

Reported:
 01/25/21 15:30

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 BEA0155 - EPA 5030 Water MS

Matrix Spike Dup (BEA0155-MSD1)	Source: 2101123-01			Prepared & Analyzed: 01/15/21						
Benzene	27.1	1.0	ug/l	33.3	ND	81.3	70-130	0.889	30	
Toluene	32.3	1.0	"	33.3	ND	97.0	70-130	0.651	30	
Ethylbenzene	35.6	1.0	"	33.3	ND	107	70-130	1.67	30	
m,p-Xylene	70.9	2.0	"	66.7	ND	106	70-130	1.65	30	
o-Xylene	36.1	1.0	"	33.3	ND	108	70-130	2.90	30	
Surrogate: 1,2-Dichloroethane-d4	13.9		"	13.3		104	23-173			
Surrogate: Toluene-d8	13.6		"	13.3		102	20-170			
Surrogate: 4-Bromofluorobenzene	13.3		"	13.3		100	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: Bickler 4-6-34

Project Number: [none]
 Project Manager: Brent Hedstrom

Reported:
 01/25/21 15:30

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 BEA0178 - EPA 3520B

Blank (BEA0178-BLK1)

Prepared: 01/18/21 Analyzed: 01/19/21

C10-C28 (DRO) ND 5.0 mg/L

LCS (BEA0178-BS1)

Prepared: 01/18/21 Analyzed: 01/19/21

C10-C28 (DRO) 64.5 5.0 mg/L 50.0 129 70-130

Matrix Spike (BEA0178-MS1)

Source: 2101133-01

Prepared: 01/18/21 Analyzed: 01/19/21

C10-C28 (DRO) 50.8 5.0 mg/L 50.0 8.36 85.0 70-130

Matrix Spike Dup (BEA0178-MSD1)

Source: 2101133-01

Prepared: 01/18/21 Analyzed: 01/19/21

C10-C28 (DRO) 51.9 5.0 mg/L 50.0 8.36 87.0 70-130 2.02 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: Bickler 4-6-34

Project Number: [none]
Project Manager: Brent Hedstrom

Reported:
01/25/21 15:30

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 BEA0162 - GC

Blank (BEA0162-BLK1)

Prepared: 01/15/21 Analyzed: 01/18/21

Methane	ND	0.010	mg/L								
Ethane	ND	0.010	"								
Propane	ND	0.010	"								
<i>Surrogate: Ethene</i>	<i>0.0336</i>		<i>"</i>	<i>0.0364</i>		<i>92.3</i>	<i>70-130</i>				

LCS (BEA0162-BS1)

Prepared: 01/15/21 Analyzed: 01/18/21

Methane	0.035	0.010	mg/L	0.0428		82.5	70-130				
Ethane	0.069	0.010	"	0.0798		86.7	70-130				
Propane	0.10	0.010	"	0.139		75.3	70-130				
<i>Surrogate: Ethene</i>	<i>0.0637</i>		<i>"</i>	<i>0.0728</i>		<i>87.5</i>	<i>70-130</i>				

LCS Dup (BEA0162-BSD1)

Prepared: 01/15/21 Analyzed: 01/18/21

Methane	0.039	0.010	mg/L	0.0428		91.0	70-130	9.70	200		
Ethane	0.081	0.010	"	0.0798		102	70-130	15.8	200		
Propane	0.12	0.010	"	0.139		87.1	70-130	14.5	200		
<i>Surrogate: Ethene</i>	<i>0.0762</i>		<i>"</i>	<i>0.0728</i>		<i>105</i>	<i>70-130</i>				

Duplicate (BEA0162-DUP1)

Source: 2101094-01

Prepared: 01/15/21 Analyzed: 01/18/21

Methane	3.1	1.0	mg/L		3.1			0.325	30		
Ethane	ND	0.010	"		ND				30		
Propane	ND	0.010	"		ND				30		
<i>Surrogate: Ethene</i>	<i>0.0410</i>		<i>"</i>	<i>0.0364</i>		<i>113</i>	<i>70-130</i>				

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: Bickler 4-6-34

Project Number: [none]
Project Manager: Brent Hedstrom

Reported:
01/25/21 15:30

Total Metals by EPA Method 200.8 - Quality Control
Summit Scientific

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

Batch BEA0186 - EPA 200.8

Blank (BEA0186-BLK1)

Prepared & Analyzed: 01/19/21

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

LCS (BEA0186-BS1)

Prepared & Analyzed: 01/19/21

Calcium	4650	50.0	ug/l	5000		92.9	85-115		
Magnesium	5030	50.0	"	5000		101	85-115		
Potassium	4780	50.0	"	5000		95.6	85-115		
Sodium	4820	50.0	"	5000		96.4	85-115		

Duplicate (BEA0186-DUP1)

Source: 2101167-01

Prepared & Analyzed: 01/19/21

Calcium	264000	50.0	ug/l		287000			8.28	20
Magnesium	61400	50.0	"		60500			1.53	20
Potassium	33300	50.0	"		32700			1.85	20
Sodium	391000	50.0	"		382000			2.34	20

Matrix Spike (BEA0186-MS1)

Source: 2101167-01

Prepared & Analyzed: 01/19/21

Calcium	292000	50.0	ug/l	5000	287000	89.6	70-130		
Magnesium	66300	50.0	"	5000	60500	117	70-130		
Potassium	39200	50.0	"	5000	32700	129	70-130		
Sodium	388000	50.0	"	5000	382000	107	70-130		

Matrix Spike Dup (BEA0186-MSD1)

Source: 2101167-01

Prepared & Analyzed: 01/19/21

Calcium	292000	50.0	ug/l	5000	287000	99.6	70-130	0.170	25
Magnesium	65600	50.0	"	5000	60500	104	70-130	0.965	25
Potassium	37300	50.0	"	5000	32700	91.4	70-130	4.96	25
Sodium	388000	50.0	"	5000	382000	117	70-130	0.134	25

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: Bickler 4-6-34

Project Number: [none]
 Project Manager: Brent Hedstrom

Reported:
 01/25/21 15:30

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 BEA0172 - General Preparation

Blank (BEA0172-BLK1)

Prepared & Analyzed: 01/18/21

Sulfate	ND	0.300	mg/L							
Chloride	ND	0.0600	"							

LCS (BEA0172-BS1)

Prepared & Analyzed: 01/18/21

Chloride	2.97	0.0600	mg/L	3.00	99.1	90-110				
Sulfate	15.7	0.300	"	15.0	105	90-110				

Duplicate (BEA0172-DUP1)

Source: 2101131-01

Prepared & Analyzed: 01/18/21

Sulfate	94.3	30.0	mg/L		188		66.4	20		
Chloride	2290	6.00	"		1390		49.0	20		QM-02

Matrix Spike (BEA0172-MS1)

Source: 2101131-01

Prepared & Analyzed: 01/18/21

Sulfate	1600	30.0	mg/L	1500	188	94.2	80-120			
Chloride	3590	6.00	"	300	1390	735	80-120			QM-02

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: Bickler 4-6-34

Project Number: [none]
 Project Manager: Brent Hedstrom

Reported:
 01/25/21 15:30

Total Dissolved Solids by SM2540C - Quality Control
Summit Scientific

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

Batch BEA0152 - General Preparation

Blank (BEA0152-BLK1)

Prepared & Analyzed: 01/15/21

Total Dissolved Solids ND 10.0 mg/L

Duplicate (BEA0152-DUP1)

Source: 2101131-01

Prepared & Analyzed: 01/15/21

Total Dissolved Solids 2890 10.0 mg/L 2900 0.656 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: Bickler 4-6-34

Project Number: [none]
Project Manager: Brent Hedstrom

Reported:
01/25/21 15:30

Notes and Definitions

- QM-02 The RPD and/or percent recovery for this QC spike sample cannot be accurately calculated due to the high concentration of analyte inherent in the sample.
- I-03 This sample was recieved and analyzed outside of the recommended holding time.
- I-02 This sample was 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