

# Summit Scientific

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4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

February 15, 2021

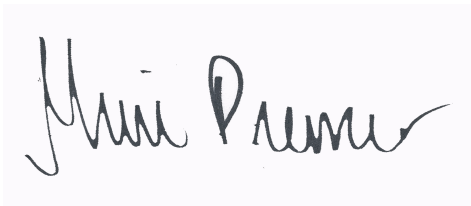
Brent Hedstrom  
Crestone Peak Resources  
2020 E. Grand Avenue, Suite 515  
Laramie, WY 82070

RE: Kugel 21-18

Work Order #2102076

Enclosed are the results of analyses for samples received by Summit Scientific on 02/04/21 09:50. 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: Kugel 21-18  
Project Number: COGCC 260647  
Project Manager: Brent Hedstrom

**Reported:**  
02/15/21 11:58

**ANALYTICAL REPORT FOR SAMPLES**

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
Surface Casing	2102076-01	Water	01/19/21 00:00	02/04/21 09:50

Summit Scientific

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# Summit Scientific

S<sub>2</sub>

2102076

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

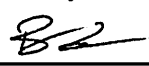
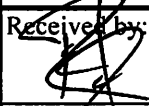
Project Name: Kugel 21-18

COGCC 260647

Sampler Name:

Project Number:

					Preservative				Matrix				Analysis Requested								Special Instructions
ID	Sample Description	Date Sampled	Time Sampled	# of containers	HCl	HNO3	None	Other	Water	Soil	Air-Canister #	Other	Anion	Cations	TDS	BTEX 8020	DRO	GRO	RSK-175		
1	Surface Casing	1/19/2021		8									X	X	X	X	X	X	X		LOE C762089 Code 8503
2																					
3																					
4																					
5																					
6																					
7																					
8																					
9																					
10																					

Relinquished by: 	Date/Time: 2-4-21 950 AM	Received by: 	Date/Time: 02/04/2021 950 AM	<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: <input type="checkbox"/> Samples Intact: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<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 2102076

Client: CRESTONE PEAK Client Project ID: KUGEL 21-18

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
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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 <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"/>	
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 checked="" type="checkbox"/>	<input 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, <b>contact client and note in narrative.</b>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input 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 checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	HNO3
If samples are acid preserved for metals, is the pH ≤ 2 <sup>(1)</sup> ? 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):   				
<sup>(1)</sup> If NO, then contact the client before proceeding with analysis and note in case narrative.				

RZ  
Custodian Printed Name or Initials

  
Signature of Custodian

2/4/21  
Date/Time



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

Project: Kugel 21-18  
Project Number: COGCC 260647  
Project Manager: Brent Hedstrom

**Reported:**  
02/15/21 11:58

**Surface Casing**  
**2102076-01 (Water)**

**Summit Scientific**

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

Date Sampled: **01/19/21 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	19	1.0	ug/l	1	BEB0117	02/08/21	02/08/21	EPA 8260B	
Toluene	36	1.0	"	"	"	"	"	"	
Ethylbenzene	11	1.0	"	"	"	"	"	"	
Xylenes (total)	160	2.0	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	32000	5000	"	10	"	"	"	"	

Date Sampled: **01/19/21 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	105 %	23-173	"	"	"	"	"	"	
Surrogate: Toluene-d8	108 %	20-170	"	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene	333 %	21-167	"	"	"	"	"	"	S-02

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **01/19/21 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	240	5.0	mg/L	1	BEB0118	02/08/21	02/09/21	EPA 8015M	

Date Sampled: **01/19/21 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	130 %	58.9-148	"	"	"	"	"	"	

**Dissolved Gases by RSK-175**

**R-03**

Date Sampled: **01/19/21 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Methane	0.34	0.10	mg/L	10	BEB0099	02/05/21	02/09/21	RSK-175 mod	
Ethane	1.3	0.10	"	"	"	"	"	"	
Propane	2.0	0.10	"	"	"	"	"	"	

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02/15/21 11:58

**Surface Casing**  
**2102076-01 (Water)**

**Summit Scientific**

**Dissolved Gases by RSK-175**

**R-03**

Date Sampled: **01/19/21 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: Ethene		121 %	70-130		BEB0099	02/05/21	02/09/21	RSK-175 mod	

**Total Metals by EPA Method 200.8**

Date Sampled: **01/19/21 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	14000	500	ug/l	10	BEB0130	02/09/21	02/10/21	EPA 200.8	
Magnesium	4750	500	"	"	"	"	"	"	
Potassium	389000	500	"	"	"	"	"	"	
Sodium	1090000	500	"	"	"	"	"	"	

**Anions by EPA Method 300.0**

Date Sampled: **01/19/21 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chloride	835	30.0	mg/L	500	BEB0127	02/09/21	02/09/21	EPA 300.0	
Sulfate	5440	150	"	"	"	"	"	"	

**Total Dissolved Solids by SM2540C**

Date Sampled: **01/19/21 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Total Dissolved Solids	2020	10.0	mg/L	1	BEB0145	02/10/21	02/10/21	SM2540C	I-03

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Project Number: COGCC 260647  
Project Manager: Brent Hedstrom

**Reported:**  
02/15/21 11:58

## 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 BEB0117 - EPA 5030 Water MS

##### Blank (BEB0117-BLK1)

Prepared: 02/08/21 Analyzed: 02/09/21

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	18.7		"	13.3		141	23-173			
Surrogate: Toluene-d8	11.7		"	13.3		87.7	20-170			
Surrogate: 4-Bromofluorobenzene	13.4		"	13.3		100	21-167			

##### LCS (BEB0117-BS1)

Prepared: 02/08/21 Analyzed: 02/09/21

Benzene	38.4	1.0	ug/l	33.3		115	70-130			
Toluene	34.2	1.0	"	33.3		103	70-130			
Ethylbenzene	40.2	1.0	"	33.3		120	70-130			
m,p-Xylene	66.0	2.0	"	66.7		99.0	70-130			
o-Xylene	38.2	1.0	"	33.3		114	70-130			
Surrogate: 1,2-Dichloroethane-d4	18.2		"	13.3		136	23-173			
Surrogate: Toluene-d8	11.8		"	13.3		88.1	20-170			
Surrogate: 4-Bromofluorobenzene	13.6		"	13.3		102	21-167			

##### Matrix Spike (BEB0117-MS1)

Source: 2102107-02

Prepared: 02/08/21 Analyzed: 02/09/21

Benzene	38.6	1.0	ug/l	33.3	ND	116	70-130			
Toluene	35.1	1.0	"	33.3	ND	105	70-130			
Ethylbenzene	41.3	1.0	"	33.3	ND	124	70-130			
m,p-Xylene	66.7	2.0	"	66.7	ND	100	70-130			
o-Xylene	39.0	1.0	"	33.3	ND	117	70-130			
Surrogate: 1,2-Dichloroethane-d4	18.5		"	13.3		139	23-173			
Surrogate: Toluene-d8	11.9		"	13.3		89.5	20-170			
Surrogate: 4-Bromofluorobenzene	13.8		"	13.3		103	21-167			

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02/15/21 11:58

**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 BEB0117 - EPA 5030 Water MS**

Matrix Spike Dup (BEB0117-MSD1)	Source: 2102107-02			Prepared: 02/08/21 Analyzed: 02/09/21						
Benzene	38.6	1.0	ug/l	33.3	ND	116	70-130	0.104	30	
Toluene	35.2	1.0	"	33.3	ND	106	70-130	0.540	30	
Ethylbenzene	40.4	1.0	"	33.3	ND	121	70-130	2.06	30	
m,p-Xylene	65.5	2.0	"	66.7	ND	98.2	70-130	1.88	30	
o-Xylene	38.1	1.0	"	33.3	ND	114	70-130	2.26	30	
Surrogate: 1,2-Dichloroethane-d4	19.2		"	13.3		144	23-173			
Surrogate: Toluene-d8	12.1		"	13.3		91.0	20-170			
Surrogate: 4-Bromofluorobenzene	13.8		"	13.3		104	21-167			

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02/15/21 11:58

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

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

**Batch BEB0118 - EPA 3520B**

**Blank (BEB0118-BLK1)**

Prepared: 02/08/21 Analyzed: 02/09/21

C10-C28 (DRO) ND 5.0 mg/L

**LCS (BEB0118-BS1)**

Prepared: 02/08/21 Analyzed: 02/09/21

C10-C28 (DRO) 46.1 5.0 mg/L 50.0 92.3 70-130

**LCS Dup (BEB0118-BS1)**

Prepared: 02/08/21 Analyzed: 02/09/21

C10-C28 (DRO) 41.9 5.0 mg/L 50.0 83.7 70-130 9.69 20

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02/15/21 11:58

**Dissolved Gases by RSK-175 - Quality Control**  
**Summit Scientific**

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

**Batch BEB0099 - GC**

**Blank (BEB0099-BLK1)**

Prepared: 02/05/21 Analyzed: 02/08/21

Methane	ND	0.010	mg/L							
Ethane	ND	0.010	"							
Propane	ND	0.010	"							
Surrogate: Ethene	0.0383		"	0.0364		105	70-130			

**LCS (BEB0099-BS1)**

Prepared: 02/05/21 Analyzed: 02/08/21

Methane	0.030	0.010	mg/L	0.0428		71.3	70-130			
Ethane	0.10	0.010	"	0.0798		126	70-130			
Propane	0.17	0.010	"	0.139		120	70-130			
Surrogate: Ethene	0.0723		"	0.0728		99.3	70-130			

**Duplicate (BEB0099-DUP1)**

Source: 2102074-01

Prepared: 02/05/21 Analyzed: 02/09/21

Methane	1.3	1.0	mg/L		1.4			9.38	30	
Ethane	0.022	0.010	"		0.023			4.94	30	
Propane	0.054	0.010	"		0.056			3.99	30	
Surrogate: Ethene	0.0352		"	0.0364		96.7	70-130			

**Matrix Spike (BEB0099-MS1)**

Source: 2102074-01

Prepared: 02/05/21 Analyzed: 02/08/21

Methane	1.9	0.10	mg/L	0.0428	1.4	NR	70-130			QL-01
Ethane	0.11	0.010	"	0.0798	0.023	106	70-130			
Propane	0.24	0.010	"	0.139	0.056	130	70-130			
Surrogate: Ethene	0.0760		"	0.0728		104	70-130			

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02/15/21 11:58

**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 BEB0130 - EPA 200.8**

**Blank (BEB0130-BLK1)**

Prepared & Analyzed: 02/09/21

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

**LCS (BEB0130-BS1)**

Prepared & Analyzed: 02/09/21

Calcium	4750	50.0	ug/l	5000	94.9	85-115
Magnesium	4570	50.0	"	5000	91.5	85-115
Potassium	4270	50.0	"	5000	85.3	85-115
Sodium	4460	50.0	"	5000	89.1	85-115

**Duplicate (BEB0130-DUP1)**

Source: 2102118-01

Prepared & Analyzed: 02/09/21

Calcium	85800	50.0	ug/l	81000	5.71	20
Magnesium	36700	50.0	"	36400	0.983	20
Potassium	23800	50.0	"	23500	1.19	20
Sodium	23400	50.0	"	23700	1.56	20

**Matrix Spike (BEB0130-MS1)**

Source: 2102118-01

Prepared & Analyzed: 02/09/21

Calcium	80600	50.0	ug/l	5000	81000	NR	70-130	QM-01
Magnesium	37400	50.0	"	5000	36400	21.3	70-130	QM-01
Potassium	24300	50.0	"	5000	23500	16.2	70-130	QM-01
Sodium	24400	50.0	"	5000	23700	13.5	70-130	QM-01

**Matrix Spike Dup (BEB0130-MSD1)**

Source: 2102118-01

Prepared & Analyzed: 02/09/21

Calcium	81100	50.0	ug/l	5000	81000	1.48	70-130	0.646	25	QM-01
Magnesium	37600	50.0	"	5000	36400	25.2	70-130	0.526	25	QM-01
Potassium	24200	50.0	"	5000	23500	13.6	70-130	0.535	25	QM-01
Sodium	25200	50.0	"	5000	23700	28.3	70-130	3.00	25	QM-01

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**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 BEB0127 - General Preparation**

**Blank (BEB0127-BLK1)**

Prepared & Analyzed: 02/09/21

Chloride	ND	0.0600	mg/L
Sulfate	ND	0.300	"

**LCS (BEB0127-BS1)**

Prepared & Analyzed: 02/09/21

Sulfate	14.2	0.300	mg/L	15.0	94.4	90-110
Chloride	2.94	0.0600	"	3.00	98.0	90-110

**Duplicate (BEB0127-DUP1)**

Source: 2102032-05

Prepared & Analyzed: 02/09/21

Chloride	494	12.0	mg/L	545	9.86	20
Sulfate	1080	60.0	"	1190	9.82	20

**Matrix Spike (BEB0127-MS1)**

Source: 2102032-05

Prepared & Analyzed: 02/09/21

Chloride	1240	12.0	mg/L	600	545	116	80-120
Sulfate	4400	60.0	"	3000	1190	107	80-120

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**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 BEB0145 - General Preparation**

**Blank (BEB0145-BLK1)**

Prepared & Analyzed: 02/10/21

Total Dissolved Solids ND 10.0 mg/L

**Duplicate (BEB0145-DUP1)**

**Source: 2102074-01**

Prepared & Analyzed: 02/10/21

Total Dissolved Solids 1940 10.0 mg/L 1950 0.360 20

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### 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-03	The Reporting Limit for this analyte has been raised to account for interference from coeluting organic compounds present in the sample.
QM-01	The spike recovery for this QC sample is outside of established control limits due to sample matrix interference.
QL-01	Sample results for the QC batch were accepted based on LCS/LCSD percent recoveries and RPD values.
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