

# Summit Scientific

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4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

September 22, 2020

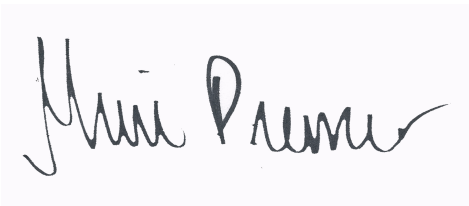
Brent Hedstrom  
Crestone Peak Resources  
2020 E. Grand Avenue, Suite 515  
Laramie, WY 82070

RE: Ione 34-2

Work Order #2009147

Enclosed are the results of analyses for samples received by Summit Scientific on 09/14/20 10:30. 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: Ione 34-2  
Project Number: LOE W762437 COGCC 262332  
Project Manager: Brent Hedstrom

**Reported:**  
09/22/20 15:57

#### ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
Surface Casing	2009147-01	Water	09/08/20 08:25	09/14/20 10:30

Summit Scientific

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2009147

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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

Phone: 303-434-3007

Project Name: Ione 34-2

LOE W762437

Sampler Name:

Project Number:

COGCC 262332

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	9/8/2020	8:25	9		X	X		X				X	X	X	X	X	X			
2																					
3																					
4																					
5																					
6																					
7																					
8																					
9																					
10																					

Relinquished by:	Date/Time:	Received by:	Date/Time:	Turn Around Time (Check)	Notes:
BH 09-14-20 10:30			09/14/2020 10:30	Same Day <input type="checkbox"/> 72 hours <input type="checkbox"/>	
Relinquished by:	Date/Time:	Received by:	Date/Time:	24 hours <input type="checkbox"/> Standard <input type="checkbox"/>	
				48 hours <input type="checkbox"/>	
Relinquished by:	Date/Time:	Received by:	Date/Time:	Sample Integrity:	3.7
				Temperature Upon Receipt: <input type="checkbox"/>	
				Samples Intact: <input checked="" type="radio"/> Yes <input type="radio"/> No	

# Sample Receipt Checklist

S2 Work Order 2009147

Client: Crestone Peak Client Project ID: Zone 34-2

Shipped Via H.D.V.P.U./FedEx/UPS/USPS/Other Airbill #: \_\_\_\_\_

Matrix (check all that apply):    Air    Soil/Solid X 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 <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.	X			
Were all samples received intact <sup>(1)</sup> ?	X			
Was adequate sample volume provided <sup>(1)</sup> ?	X			
If custody seals are present, are they intact <sup>(1)</sup> ?			X	
Are samples with holding times due within 48 hours sample due within 48 hours present?		X		
Is a chain-of-custody (COC) form present and filled out completely <sup>(1)</sup> ?	X			
Does the COC agree with the number and type of sample bottles received <sup>(1)</sup> ?	X			
Do the sample IDs on the bottle labels match the COC <sup>(1)</sup> ?	X			
Is the COC properly relinquished by the client w/ date and time recorded <sup>(1)</sup> ?	X			
For volatiles in water – is there headspace present? If yes, contact client and note in narrative.			X	
Are samples preserved that require preservation (excluding cooling) <sup>(1)</sup> ?				4HNO <sub>3</sub>
Note the type of preservative in the Comments column – HCl, H <sub>2</sub> SO <sub>4</sub> , NaOH, HNO <sub>3</sub> , ect	X			
If samples are acid preserved for metals, is the pH ≤ 2 <sup>(1)</sup> ?	X			pH 1
Record the pH in Comments.				
If dissolved metals are requested, were samples field filtered?			X	
Additional Comments (if any):				

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

Custodian Printed Name or Initials

Signature of Custodian

Date/Time

09/14/2020



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

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Project Manager: Brent Hedstrom

**Reported:**  
09/22/20 15:57

**Surface Casing**  
**2009147-01 (Water)**

**Summit Scientific**

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

Date Sampled: **09/08/20 08:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	400000	10000	ug/l	10000	2009165	09/15/20	09/16/20	EPA 8260B	
Toluene	730000	10000	"	"	"	"	"	"	
Ethylbenzene	240000	10000	"	"	"	"	"	"	
Xylenes (total)	1400000	20000	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	210000000	5000000	"	"	"	"	"	"	

Date Sampled: **09/08/20 08:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	981 %	23-173	"	"	"	"	"	"	S-02
Surrogate: Toluene-d8	4820 %	20-170	"	"	"	"	"	"	S-02
Surrogate: 4-Bromofluorobenzene	1070 %	21-167	"	"	"	"	"	"	S-02

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **09/08/20 08:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	400000	50	mg/L	10	2009159	09/15/20	09/16/20	EPA 8015M	

Date Sampled: **09/08/20 08:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	1240 %	58.9-148	"	"	"	"	"	"	S-02

**Dissolved Gases by RSK-175**

Date Sampled: **09/08/20 08:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Methane	11	1.0	mg/L	100	2009209	09/17/20	09/21/20	RSK-175 mod	
Ethane	14	1.0	"	"	"	"	"	"	
Propane	17	1.0	"	"	"	"	"	"	

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**Surface Casing**  
**2009147-01 (Water)**

**Summit Scientific**

**Dissolved Gases by RSK-175**

Date Sampled: **09/08/20 08:25**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: Ethene		13.7 %	70-130		2009209	09/17/20	09/21/20	RSK-175 mod	S-04

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**Reported:**  
09/22/20 15:57

## 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 2009165 - EPA 5030 Water MS

##### Blank (2009165-BLK1)

Prepared: 09/15/20 Analyzed: 09/16/20

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	12.9		"	13.3		97.1	23-173			
Surrogate: Toluene-d8	13.7		"	13.3		103	20-170			
Surrogate: 4-Bromofluorobenzene	12.2		"	13.3		91.3	21-167			

##### LCS (2009165-BS1)

Prepared: 09/15/20 Analyzed: 09/16/20

Benzene	30.7	1.0	ug/l	33.3		92.2	70-130			
Toluene	37.8	1.0	"	33.3		113	70-130			
Ethylbenzene	38.6	1.0	"	33.3		116	70-130			
m,p-Xylene	79.0	2.0	"	66.7		118	70-130			
o-Xylene	37.6	1.0	"	33.3		113	70-130			
Surrogate: 1,2-Dichloroethane-d4	13.5		"	13.3		101	23-173			
Surrogate: Toluene-d8	14.3		"	13.3		107	20-170			
Surrogate: 4-Bromofluorobenzene	12.6		"	13.3		94.9	21-167			

##### Matrix Spike (2009165-MS1)

Source: 2009148-01

Prepared: 09/15/20 Analyzed: 09/16/20

Benzene	31.4	1.0	ug/l	33.3	ND	94.1	70-130			
Toluene	39.7	1.0	"	33.3	ND	119	70-130			
Ethylbenzene	38.2	1.0	"	33.3	ND	115	70-130			
m,p-Xylene	79.8	2.0	"	66.7	ND	120	70-130			
o-Xylene	37.9	1.0	"	33.3	ND	114	70-130			
Surrogate: 1,2-Dichloroethane-d4	13.8		"	13.3		104	23-173			
Surrogate: Toluene-d8	14.0		"	13.3		105	20-170			
Surrogate: 4-Bromofluorobenzene	12.9		"	13.3		96.9	21-167			

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**Reported:**  
09/22/20 15:57

**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 2009165 - EPA 5030 Water MS**

Matrix Spike Dup (2009165-MSD1)		Source: 2009148-01			Prepared: 09/15/20 Analyzed: 09/16/20					
Benzene	30.9	1.0	ug/l	33.3	ND	92.7	70-130	1.45	30	
Toluene	38.8	1.0	"	33.3	ND	116	70-130	2.17	30	
Ethylbenzene	38.6	1.0	"	33.3	ND	116	70-130	0.886	30	
m,p-Xylene	79.7	2.0	"	66.7	ND	120	70-130	0.0627	30	
o-Xylene	38.2	1.0	"	33.3	ND	115	70-130	0.841	30	
Surrogate: 1,2-Dichloroethane-d4	14.3		"	13.3		108	23-173			
Surrogate: Toluene-d8	14.4		"	13.3		108	20-170			
Surrogate: 4-Bromofluorobenzene	12.7		"	13.3		95.3	21-167			

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**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 2009159 - EPA 3520B**

**Blank (2009159-BLK1)**

Prepared & Analyzed: 09/15/20

C10-C28 (DRO) ND 5.0 mg/L

**LCS (2009159-BS1)**

Prepared & Analyzed: 09/15/20

C10-C28 (DRO) 58.6 5.0 mg/L 50.0 117 70-130

**Matrix Spike (2009159-MS1)**

**Source: 2009138-01**

Prepared & Analyzed: 09/15/20

C10-C28 (DRO) 56.8 5.0 mg/L 50.0 2.19 109 70-130

**Matrix Spike Dup (2009159-MSD1)**

**Source: 2009138-01**

Prepared & Analyzed: 09/15/20

C10-C28 (DRO) 54.5 5.0 mg/L 50.0 2.19 105 70-130 4.13 20

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**Reported:**  
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**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 2009209 - GC**

**Blank (2009209-BLK1)**

Prepared: 09/17/20 Analyzed: 09/18/20

Methane	ND	0.010	mg/L							
Ethane	ND	0.010	"							
Propane	ND	0.010	"							
Surrogate: Ethene	0.0428		"	0.0364		118	70-130			

**LCS (2009209-BS1)**

Prepared: 09/17/20 Analyzed: 09/18/20

Methane	0.034	0.010	mg/L	0.0428		78.3	70-130			
Ethane	0.097	0.010	"	0.0798		122	70-130			
Propane	0.14	0.010	"	0.139		103	70-130			
Surrogate: Ethene	0.0915		"	0.0728		126	70-130			

**Duplicate (2009209-DUP1)**

Source: 2009161-01

Prepared: 09/17/20 Analyzed: 09/18/20

Methane	1.2	0.10	mg/L		1.0			18.1	30	
Ethane	0.0033	0.010	"		0.0052			44.7	30	QR-03
Propane	0.00060	0.010	"		0.0041			149	30	QR-03
Surrogate: Ethene	0.0430		"	0.0364		118	70-130			

**Matrix Spike (2009209-MS1)**

Source: 2009161-01

Prepared: 09/17/20 Analyzed: 09/18/20

Methane	1.3	0.10	mg/L	0.0428	1.0	650	70-130			QM-05
Ethane	0.092	0.010	"	0.0798	0.0052	109	70-130			
Propane	0.13	0.010	"	0.139	0.0041	93.5	70-130			
Surrogate: Ethene	0.0827		"	0.0728		114	70-130			

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### Notes and Definitions

S-04	A sample matrix effect prevented complete surrogate recovery.
S-02	The surrogate recovery for this sample cannot be accurately quantified due to interference from coeluting organic compounds present in the sample extract.
QR-03	The RPD value for the sample duplicate or MS/MSD was outside of QC acceptance limits due to matrix interference. QC batch accepted based on LCS and/or LCSD recovery and/or RPD values.
QM-05	The spike recovery was outside acceptance limits for the MS and/or MSD due to matrix interference. The associated LCS and/or LCSD were within acceptance limits, therefore the data are considered valid.
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