

Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

August 26, 2020

Brent Hedstrom
Crestone Peak Resources
2020 E. Grand Avenue, Suite 515
Laramie, WY 82070
RE: Geist 2-4-32
Work Order #2008184

Enclosed are the results of analyses for samples received by Summit Scientific on 08/19/20 14:40. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Paul Shrewsbury
President



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

Project: Geist 2-4-32
Project Number: COGCC 276694 LOE W17664
Project Manager: Brent Hedstrom

Reported:
08/26/20 10:59

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
Surface Casing	2008184-01	Water	08/07/20 15:06	08/19/20 14:40

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S₂

2008184

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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

LOE W17664

Phone: 303-434-3007

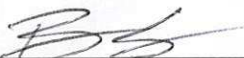

Project Name: Geist 2-4-32

COGCC 276694

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	8/7/2020	15:06	9														X	X	X	X	X	X	X		
2																										
3																										
4																										
5																										
6																										
7																										
8																										
9																										
10																										

Relinquished by:  Date/Time: 8/19/20 1440	Received by:  Date/Time: 08-19-20 14:40	Turn Around Time (Check) Same Day ___ 72 hours ___ 24 hours ___ Standard <input checked="" type="checkbox"/> 48 hours ___ Sample Integrity: Temperature Upon Receipt: 10.2 Samples Intact: <input checked="" type="checkbox"/> Yes No	Notes: ON ICE
Relinquished by: Date/Time:	Received by: Date/Time:		
Relinquished by: Date/Time:	Received by: Date/Time:		

Sample Receipt Checklist

S2 Work Order 2008184

Client: Crestone Peak Resources Client Project ID: Geist 2-4-32

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


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

Temp (°C)	10.2
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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 ⁽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"/>	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"/>	
<u>Additional Comments (if any):</u> samples may need further preservation				
⁽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

8/19/20
Date/Time



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Surface Casing
2008184-01 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **08/07/20 15:06**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	1800	25	ug/l	1	2008225	08/20/20	08/20/20	EPA 8260B	
Toluene	2000	25	"	"	"	"	"	"	
Ethylbenzene	150	25	"	"	"	"	"	"	
Xylenes (total)	930	51	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	30000	13000	"	"	"	"	"	"	

Date Sampled: **08/07/20 15:06**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		111 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		96.0 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		106 %	21-167		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **08/07/20 15:06**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	69	5.0	mg/L	1	2008224	08/20/20	08/21/20	EPA 8015M	

Date Sampled: **08/07/20 15:06**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		131 %	58.9-148		"	"	"	"	

Dissolved Gases by RSK-175

Date Sampled: **08/07/20 15:06**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Methane	2.4	1.0	mg/L	100	2008223	08/20/20	08/25/20	RSK-175 mod	
Ethane	2.9	0.10	"	10	"	"	"	"	
Propane	3.0	0.10	"	"	"	"	"	"	

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2008184-01 (Water)

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Dissolved Gases by RSK-175

Date Sampled: **08/07/20 15:06**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: Ethene		87.9 %	70-130		2008223	08/20/20	08/25/20	RSK-175 mod	

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Reported:
08/26/20 10:59

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 2008225 - EPA 5030 Water MS

Blank (2008225-BLK1)

Prepared: 08/20/20 Analyzed: 08/21/20

Benzene	ND	1.0	ug/l								
Toluene	ND	1.0	"								
Ethylbenzene	ND	1.0	"								
Xylenes (total)	ND	2.0	"								
Gasoline Range Hydrocarbons	ND	500	"								
<i>Surrogate: 1,2-Dichloroethane-d4</i>	13.4		"	13.3		101	23-173				
<i>Surrogate: Toluene-d8</i>	12.8		"	13.3		96.4	20-170				
<i>Surrogate: 4-Bromofluorobenzene</i>	12.0		"	13.3		90.0	21-167				

LCS (2008225-BS1)

Prepared: 08/20/20 Analyzed: 08/21/20

Benzene	33.3	1.0	ug/l	33.3		99.8	70-130				
Toluene	34.7	1.0	"	33.3		104	70-130				
Ethylbenzene	36.2	1.0	"	33.3		109	70-130				
m,p-Xylene	72.6	2.0	"	66.7		109	70-130				
o-Xylene	34.9	1.0	"	33.3		105	70-130				
<i>Surrogate: 1,2-Dichloroethane-d4</i>	14.1		"	13.3		106	23-173				
<i>Surrogate: Toluene-d8</i>	13.0		"	13.3		97.4	20-170				
<i>Surrogate: 4-Bromofluorobenzene</i>	11.9		"	13.3		89.3	21-167				

Matrix Spike (2008225-MS1)

Source: 2008175-02

Prepared: 08/20/20 Analyzed: 08/21/20

Benzene	34.0	1.0	ug/l	33.3	ND	102	70-130				
Toluene	35.4	1.0	"	33.3	ND	106	70-130				
Ethylbenzene	37.2	1.0	"	33.3	ND	112	70-130				
m,p-Xylene	74.4	2.0	"	66.7	ND	112	70-130				
o-Xylene	35.8	1.0	"	33.3	ND	107	70-130				
<i>Surrogate: 1,2-Dichloroethane-d4</i>	13.9		"	13.3		105	23-173				
<i>Surrogate: Toluene-d8</i>	13.1		"	13.3		98.5	20-170				
<i>Surrogate: 4-Bromofluorobenzene</i>	11.7		"	13.3		87.8	21-167				

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Volatile Organic Compounds by EPA Method 8260B - Quality Control
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Analyte	Result	Reporting		Spike	Source	%REC		RPD		Notes
		Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch 2008225 - EPA 5030 Water MS

Matrix Spike Dup (2008225-MSD1)

Source: 2008175-02

Prepared: 08/20/20 Analyzed: 08/21/20

Benzene	33.4	1.0	ug/l	33.3	ND	100	70-130	1.81	30	
Toluene	35.3	1.0	"	33.3	ND	106	70-130	0.198	30	
Ethylbenzene	37.2	1.0	"	33.3	ND	112	70-130	0.108	30	
m,p-Xylene	74.0	2.0	"	66.7	ND	111	70-130	0.445	30	
o-Xylene	35.2	1.0	"	33.3	ND	106	70-130	1.58	30	
Surrogate: 1,2-Dichloroethane-d4	14.7		"	13.3		110	23-173			
Surrogate: Toluene-d8	13.1		"	13.3		98.5	20-170			
Surrogate: 4-Bromofluorobenzene	11.8		"	13.3		88.4	21-167			

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Extractable Petroleum Hydrocarbons by 8015 - Quality Control
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Analyte	Result	Reporting		Spike Level	Source Result	%REC		RPD		Notes
		Limit	Units			%REC	Limits	RPD	Limit	

Batch 2008224 - EPA 3520B

Blank (2008224-BLK1)

Prepared & Analyzed: 08/20/20

C10-C28 (DRO) ND 5.0 mg/L

LCS (2008224-BS1)

Prepared: 08/20/20 Analyzed: 08/21/20

C10-C28 (DRO) 54.2 5.0 mg/L 50.0 108 70-130

LCS Dup (2008224-BSD1)

Prepared: 08/20/20 Analyzed: 08/21/20

C10-C28 (DRO) 53.1 5.0 mg/L 50.0 106 70-130 2.02 20

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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 2008223 - GC

Blank (2008223-BLK1)

Prepared: 08/20/20 Analyzed: 08/21/20

Methane	ND	0.010	mg/L								
Ethane	ND	0.010	"								
Propane	ND	0.010	"								
Surrogate: Ethene	0.0471		"	0.0364		129	70-130				

LCS (2008223-BS1)

Prepared: 08/20/20 Analyzed: 08/21/20

Methane	0.034	0.010	mg/L	0.0428		79.0	70-130				
Ethane	0.098	0.010	"	0.0798		122	70-130				
Propane	0.14	0.010	"	0.139		104	70-130				
Surrogate: Ethene	0.0911		"	0.0728		125	70-130				

Duplicate (2008223-DUP1)

Source: 2008153-01

Prepared: 08/20/20 Analyzed: 08/21/20

Methane	1.2	0.10	mg/L		1.3			14.0	30		
Ethane	0.31	0.010	"		0.39			21.9	30		
Propane	0.056	0.010	"		0.067			17.2	30		
Surrogate: Ethene	0.0429		"	0.0364		118	70-130				

Matrix Spike (2008223-MS1)

Source: 2008153-01

Prepared: 08/20/20 Analyzed: 08/21/20

Methane	1.2	0.10	mg/L	0.0428	1.3	NR	70-130				QM-05
Ethane	0.39	0.010	"	0.0798	0.39	1.88	70-130				QM-05
Propane	0.19	0.010	"	0.139	0.067	90.8	70-130				
Surrogate: Ethene	0.0895		"	0.0728		123	70-130				

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Notes and Definitions

- 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