

Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

December 15, 2021

James Miller

Civatas Resources

650 Southgate Drive

Windsor, CO 80550

RE: Livingston 519-25-11C

Work Order #2112077

Enclosed are the results of analyses for samples received by Summit Scientific on 12/03/21 13:00. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read 'P. Shrewsbury', with a stylized, cursive script.

Paul Shrewsbury

President



Civatas Resources
650 Southgate Drive
Windsor CO, 80550

Project: Livingston 519-25-11C

Project Number: 8520.142
Project Manager: James Miller

Reported:
12/15/21 10:39

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
Livingston 519-25-11C	2112077-01	Water	11/24/21 00:00	12/03/21 13:00

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S₂

2112077

4653 Table Mountain Drive ♦ Golden, Colorado 80403
303-277-9310

Page _____ of _____

Client: Civitas Resources

Project Manager: James Miller

Address: 650 Southgate Drive

E-Mail: Jmiller@civresources

City/State/Zip: Windsor, CO 80550

AFF: CDX 3067

Phone: 720-984-7460

Project Name: Livingston 519-25-11C

Sampler Name: _____

Project Number: 8520.142

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix				Analysis Requested								Special Instructions
					HCl	HNO ₃	None	Other	Water	Soil	Air-Canister #	Other	Anion	Cation	TD ₆	BTEX	DR ₀	GR ₀	PSK-175		
1	Livingston 519-25-11C	11/24		8		1	7							X	X	X	X	X	X	X	
2																					
3																					
4																					
5																					
6																					
7																					
8																					
9																					
10																					

Relinquished by: <u>[Signature]</u>	Date/Time: <u>12/3 1:00</u>	Received by: <u>[Signature]</u>	Date/Time: <u>12 3 21 1300</u>	Turn Around Time (Check)	Notes:
Relinquished by: _____	Date/Time: _____	Received by: _____	Date/Time: _____	Same Day _____ 72 hours _____	
				24 hours _____ Standard <u>X</u>	
				48 hours _____	
Temperature Upon Receipt: <u>10.0</u>	Corrected Temperature: <u>10.0</u>	HNO ₃ lot # _____		Sample Integrity:	
IR gun correction: <u>0.0</u>	IR gun #: <u>#1</u>			Samples Intact: <u>Yes</u> No	

S₂

Sample Receipt Checklist

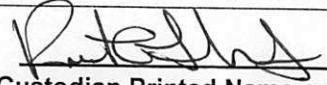
S2 Work Order# 2112077

Client: Civitas Resources Client Project ID: Livingston SA-25-11CShipped Via: ☐ H.D./P.U./FedEx/UPS/USPS/Other ☒ Airbill #: _____Matrix (check all that apply): ☐ Air ☐ Soil/Solid ☒ Water ☐ Other: _____
(Describe)Temp (°C) 10.0

Thermometer ID: G86A9201901378

	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 if 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 checked="" type="checkbox"/>	<input type="checkbox"/>	<input 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 ⁽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, H ₂ SO ₄ , NaOH, HNO ₃ , etc.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	HNO ₃
If samples are acid preserved for metals, is the pH ≤ 2 ⁽¹⁾ ? Record the pH in Comments.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" 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):				

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


 Custodian Printed Name or Initials

12312
 Date/Time



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Project: Livingston 519-25-11C
Project Number: 8520.142
Project Manager: James Miller

Reported:
12/15/21 10:39

Livingston 519-25-11C
2112077-01 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 11/24/21 00:00									
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	13000	10000	ug/l	10000	BEL0195	12/09/21	12/12/21	EPA 8260B	
Toluene	84000	10000	"	"	"	"	"	"	
Ethylbenzene	27000	10000	"	"	"	"	"	"	
Xylenes (total)	260000	20000	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	190000000	5000000	"	"	"	"	"	"	

Date Sampled: 11/24/21 00:00									
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		103 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		105 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		103 %	21-167		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: 11/24/21 00:00									
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	2200	5.0	mg/L	1	BEL0166	12/08/21	12/09/21	EPA 8015M	

Date Sampled: 11/24/21 00:00									
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		3040 %	58.9-148		"	"	"	"	S-02

Dissolved Gases by RSK-175

Date Sampled: 11/24/21 00:00									
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Methane	12	1.0	mg/L	100	BEL0197	12/05/21	12/10/21	RSK-175 mod	
Ethane	4.3	1.0	"	"	"	"	"	"	
Propane	1.4	1.0	"	"	"	"	"	"	

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Livingston 519-25-11C
2112077-01 (Water)

Summit Scientific

Dissolved Gases by RSK-175

Date Sampled: **11/24/21 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: Ethene		110 %	70-130		BEL0197	12/05/21	12/10/21	RSK-175 mod	R-01

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Volatile Organic Compounds by EPA Method 8260B - Quality Control

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

Batch BEL0195 - EPA 5030 Water MS

Blank (BEL0195-BLK1)

Prepared: 12/09/21 Analyzed: 12/12/21

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	12.4		"	13.3		92.8	23-173			
Surrogate: Toluene-d8	13.5		"	13.3		101	20-170			
Surrogate: 4-Bromofluorobenzene	13.3		"	13.3		100	21-167			

LCS (BEL0195-BS1)

Prepared: 12/09/21 Analyzed: 12/12/21

Benzene	38.5	1.0	ug/l	33.3		116	70-130			
Toluene	34.7	1.0	"	33.3		104	70-130			
Ethylbenzene	30.6	1.0	"	33.3		91.7	70-130			
m,p-Xylene	58.5	2.0	"	66.7		87.8	70-130			
o-Xylene	30.2	1.0	"	33.3		90.7	70-130			
Surrogate: 1,2-Dichloroethane-d4	12.4		"	13.3		93.3	23-173			
Surrogate: Toluene-d8	13.7		"	13.3		103	20-170			
Surrogate: 4-Bromofluorobenzene	13.2		"	13.3		99.2	21-167			

LCS Dup (BEL0195-BSD1)

Prepared: 12/09/21 Analyzed: 12/12/21

Benzene	39.0	1.0	ug/l	33.3		117	70-130	1.31	20	
Toluene	34.8	1.0	"	33.3		104	70-130	0.259	20	
Ethylbenzene	31.2	1.0	"	33.3		93.7	70-130	2.14	20	
m,p-Xylene	59.1	2.0	"	66.7		88.6	70-130	0.952	20	
o-Xylene	30.1	1.0	"	33.3		90.4	70-130	0.398	20	
Surrogate: 1,2-Dichloroethane-d4	13.2		"	13.3		98.6	23-173			
Surrogate: Toluene-d8	13.9		"	13.3		105	20-170			
Surrogate: 4-Bromofluorobenzene	13.2		"	13.3		99.2	21-167			

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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 BEL0166 - EPA 3520B

Blank (BEL0166-BLK1)

Prepared: 12/08/21 Analyzed: 12/09/21

C10-C28 (DRO) ND 5.0 mg/L

LCS (BEL0166-BS1)

Prepared: 12/08/21 Analyzed: 12/09/21

C10-C28 (DRO) 49.6 5.0 mg/L 50.0 99.2 70-130

LCS Dup (BEL0166-BSD1)

Prepared: 12/08/21 Analyzed: 12/09/21

C10-C28 (DRO) 47.3 5.0 mg/L 50.0 94.6 70-130 4.78 20

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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 BEL0197 - GC

Blank (BEL0197-BLK1)

Prepared: 12/09/21 Analyzed: 12/10/21

Methane	ND	0.010	mg/L							
Ethane	ND	0.010	"							
Propane	ND	0.010	"							
Surrogate: Ethene	0.0455		"	0.0364		125	70-130			

LCS (BEL0197-BS1)

Prepared: 12/09/21 Analyzed: 12/10/21

Methane	0.038	0.010	mg/L	0.0428		89.6	70-130			
Ethane	0.088	0.010	"	0.0798		110	70-130			
Propane	0.16	0.010	"	0.139		118	70-130			
Surrogate: Ethene	0.0849		"	0.0728		117	70-130			

LCS Dup (BEL0197-BSD1)

Prepared: 12/09/21 Analyzed: 12/10/21

Methane	0.038	0.010	mg/L	0.0428		89.3	70-130	0.261	200	
Ethane	0.081	0.010	"	0.0798		101	70-130	7.97	200	
Propane	0.16	0.010	"	0.139		116	70-130	1.54	200	
Surrogate: Ethene	0.0821		"	0.0728		113	70-130			

Duplicate (BEL0197-DUP1)

Source: 2112071-01

Prepared: 12/09/21 Analyzed: 12/10/21

Methane	6.3	1.0	mg/L		6.1			2.25	30	
Ethane	1.9	1.0	"		2.0			4.08	30	
Propane	1.5	1.0	"		1.8			22.5	30	
Surrogate: Ethene	0.0700		"	0.0364		192	70-130			S-06

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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.
R-01	The Reporting Limit for this analyte has been raised to account for matrix interference.
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