

Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

August 03, 2021

Max Knop

K.P. Kauffman

1675 Broadway

Denver, CO 80202

RE: Stieber

Work Order # 2107295

Enclosed are the results of analyses for samples received by Summit Scientific on 07/20/21 12:00. 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



K.P. Kauffman
1675 Broadway
Denver CO, 80202

Project: Stieber

Project Number: [none]
Project Manager: Max Knop

Reported:
08/03/21 07:31

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
318858-GW	2107295-01	Water	07/20/21 11:50	07/20/21 12:00
Trip Blank	2107295-02	Water	07/20/21 00:00	07/20/21 12:00

Summit Scientific

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Summit Scientific



4653 Table Mountain Drive ♦ Golden, Colorado 80403

303-277-9310 ♦ 303-374-5933 (f)

2107295

Page 1 of 1

Client: K.P. Kauffman Company, Inc.

Project Manager: Max Knop

Address: 1675 Broadway, Suite 2800

E-Mail: MKnop@kpk.com

City/State/Zip: Denver, CO 80202-4628

Phone: 303-825-4822

Project Name: Stieber

Sampler Name: Mike Hattel (mhattel@msn.com)

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	Full	LEL5	BTEX							
1	B318858-6w	7/20/21	1150	11	X				X					X								
2	Trip Blank	7/20/21	—	2	No				X						X							
3																						
4																						
5																						
6																						
7																						
8																						
9																						
10																						

Relinquished by: <u>Mike Hattel</u>	Date/Time: <u>7/20/21 1200</u>	Received by: <u>[Signature]</u>	Date/Time: <u>7-20-21 12:00</u>	Turn Around Time (Check) Same Day <input type="checkbox"/> 72 hours <input type="checkbox"/> 24 hours <input type="checkbox"/> Standard <input type="checkbox"/> 48 hours <input type="checkbox"/> Sample Integrity: Temperature Upon Receipt: <u>3.6</u> Samples Intact: <u>Yes</u> No	Notes: <u>copy to:</u> <u>mhattel@msn.com</u>
Relinquished by:	Date/Time:	Received by:	Date/Time:		
Relinquished by:	Date/Time:	Received by:	Date/Time:		

Sample Receipt Checklist

S2 Work Order

2107295

Client: KP KAUFFMAN

Client Project ID: STIEBER

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

Airbill #:

☒ ☐ ☐ ☐ ☐

Matrix (check all that apply):

☐ Air

☐ Soil/Solid

☐ Water

☐ Other:

(Describe)

Temp (°C)

3.6

Thermometer ID: 61857155-K

	Yes	No	N/A	Comments (if any)
If samples require cooling, was the temperature at 4°C +/- 2°C ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
NOTE: If samples are delivered the same day of sampling, this requirement is met provided that there is evidence that cooling has begun.				
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 checked="" type="checkbox"/>	Trip Blank Seals intact
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, pH
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⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	HNO ₃
Note the type of preservative in the Comments column – HCl, H ₂ SO ₄ , NaOH, HNO ₃ , ect				
If samples are acid preserved for metals, is the pH ≤ 2 ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Record the pH in Comments.				
If dissolved metals are requested, were samples field filtered?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input 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

Muri P.

Signature of Custodian

[Signature]

Date/Time

7-10-21



K.P. Kauffman
1675 Broadway
Denver CO, 80202

Project: Stieber
Project Number: [none]
Project Manager: Max Knop

Reported:
08/03/21 07:31

318858-GW

2107295-01 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 07/20/21 11:50

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	1.0	ug/l	1	BEG0373	07/21/21	07/22/21	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
m,p-Xylene	ND	2.0	"	"	"	"	"	"	
o-Xylene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	2.0	"	"	"	"	"	"	
Naphthalene	ND	1.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	500	"	"	"	"	"	"	

Date Sampled: 07/20/21 11:50

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		88.4 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		97.1 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		99.7 %	21-167		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: 07/20/21 11:50

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	0.100	mg/L	1	BEG0411	07/23/21	07/24/21	EPA 8015M	
C28-C36 (ORO)	ND	0.100	"	"	"	"	"	"	

Date Sampled: 07/20/21 11:50

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl		97.8 %	44.8-129		"	"	"	"	

Dissolved Gases by RSK-175

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318858-GW

2107295-01 (Water)

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Dissolved Gases by RSK-175

Date Sampled: **07/20/21 11:50**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Methane	ND	0.010	mg/L	1	BEG0403	07/22/21	07/23/21	RSK-175 mod	
Ethane	ND	0.010	"	"	"	"	"	"	
Propane	ND	0.010	"	"	"	"	"	"	

Date Sampled: **07/20/21 11:50**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: Ethene		110 %	70-130		"	"	"	"	

Dissolved Metals by EPA Method 200.8

Date Sampled: **07/20/21 11:50**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Calcium	113000	50.0	ug/l	1	BEG0372	07/22/21	07/23/21	EPA 200.8	
Iron	ND	10.0	"	"	"	"	"	"	
Magnesium	44500	50.0	"	"	"	"	"	"	
Manganese	ND	1.00	"	"	"	"	"	"	
Potassium	2580	50.0	"	"	"	"	"	"	
Sodium	135000	50.0	"	"	"	"	"	"	
Barium	38.9	1.00	"	"	"	"	"	"	
Boron	227	10.0	"	"	"	"	"	"	
Selenium	3.16	1.00	"	"	"	"	"	"	
Strontium	1590	10.0	"	"	"	"	"	"	

Anions by EPA Method 300.0

Date Sampled: **07/20/21 11:50**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Bromide	ND	0.200	mg/L	1	BEG0359	07/21/21	07/22/21	EPA 300.0	
Chloride	135	10.0	"	100	"	"	"	"	
Fluoride	0.886	0.200	"	1	"	"	"	"	

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2107295-01 (Water)

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Anions by EPA Method 300.0

Sulfate	252	30.0	mg/L	100	BEG0359	07/21/21	07/22/21	EPA 300.0
Nitrate as N	ND	0.100	"	1	"	"	"	"
Nitrite as N	ND	0.100	"	"	"	"	"	"
Nitrate/Nitrite as N	ND	0.200	"	"	"	"	"	"

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **07/20/21 11:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Total Alkalinity	380	10.0	mg/L as CaCO ₃	1	BEG0358	07/21/21	07/22/21	SM2320-B	
Carbonate	ND	10.0	"	"	"	"	"	"	
Bicarbonate	380	10.0	"	"	"	"	"	"	

Conventional Chemistry Parameters by APHA/EPA Methods

Date Sampled: **07/20/21 11:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Phosphorus - Total	0.0516	0.0500	mg/L	1	BEG0437	07/26/21	07/28/21	SM4500-P-E	

Specific Conductance by SM2510B

Date Sampled: **07/20/21 11:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	1690	1.00	umhos/cm	1	BEG0354	07/21/21	07/21/21	SM2510B	

Total Dissolved Solids by SM2540C

Date Sampled: **07/20/21 11:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Total Dissolved Solids	836	10.0	mg/L	1	BEG0409	07/23/21	07/23/21	SM2540C	

pH by SM4500

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318858-GW

2107295-01 (Water)

Summit Scientific

pH by SM4500

Date Sampled: **07/20/21 11:50**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
pH	7.29	1.00		pH Units	1	BEG0414	07/20/21	07/23/21	SM4500-H+ B	

Biological Activity Reaction Test

Date Sampled: **07/20/21 11:50**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Iron Related Bacteria	500	25.0		CFU/ml	1	BEG0419	07/23/21	08/02/21	BART	
Sulfate Reducing Bacteria	1400	200		"	"	"	"	"	"	
Slime Forming Bacteria	ND	500		"	"	"	"	"	"	

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Reported:
08/03/21 07:31

Trip Blank

2107295-02 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 07/20/21 00:00

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	1.0	ug/l	1	BEG0373	07/21/21	07/22/21	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
m,p-Xylene	ND	2.0	"	"	"	"	"	"	
o-Xylene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	2.0	"	"	"	"	"	"	

Date Sampled: 07/20/21 00:00

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		82.0 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		95.9 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		95.8 %	21-167		"	"	"	"	

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Project: Stieber

Project Number: [none]
Project Manager: Max Knop

Reported:
08/03/21 07:31

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 BEG0373 - EPA 5030 Water MS

Blank (BEG0373-BLK1)

Prepared & Analyzed: 07/21/21

Benzene	ND	1.0	ug/l							
Benzene	ND	1.0	"							
Toluene	ND	1.0	"							
Toluene	ND	1.0	"							
Ethylbenzene	ND	1.0	"							
Ethylbenzene	ND	1.0	"							
m,p-Xylene	ND	2.0	"							
m,p-Xylene	ND	2.0	"							
o-Xylene	ND	1.0	"							
o-Xylene	ND	1.0	"							
Xylenes (total)	ND	2.0	"							
Xylenes (total)	ND	2.0	"							
Naphthalene	ND	1.0	"							
1,2,4-Trimethylbenzene	ND	1.0	"							
1,3,5-Trimethylbenzene	ND	1.0	"							
Gasoline Range Hydrocarbons	ND	500	"							
Surrogate: 1,2-Dichloroethane-d4	11.3		"	13.3		84.7	23-173			
Surrogate: Toluene-d8	13.1		"	13.3		98.5	20-170			
Surrogate: 4-Bromofluorobenzene	12.9		"	13.3		96.9	21-167			
Surrogate: 1,2-Dichloroethane-d4	11.3		"	13.3		84.7	23-173			
Surrogate: Toluene-d8	13.1		"	13.3		98.5	20-170			
Surrogate: 4-Bromofluorobenzene	12.9		"	13.3		96.9	21-167			

LCS (BEG0373-BS1)

Prepared & Analyzed: 07/21/21

Benzene	39.2	1.0	ug/l	41.7		94.0	51-132			
Benzene	39.2	1.0	"	41.7		94.0	51-132			
Toluene	41.7	1.0	"	41.7		100	51-138			
Toluene	41.7	1.0	"	41.7		100	51-138			
Ethylbenzene	40.6	1.0	"	41.7		97.3	58-146			
Ethylbenzene	40.6	1.0	"	41.7		97.3	58-146			
m,p-Xylene	81.6	2.0	"	83.3		98.0	57-144			
m,p-Xylene	81.6	2.0	"	83.3		98.0	57-144			
o-Xylene	40.4	1.0	"	41.7		96.9	53-146			
o-Xylene	40.4	1.0	"	41.7		96.9	53-146			
Naphthalene	37.4	1.0	"	41.7		89.8	70-130			
1,2,4-Trimethylbenzene	34.8	1.0	"	41.7		83.4	70-130			
1,3,5-Trimethylbenzene	42.7	1.0	"	41.7		102	70-130			
Surrogate: 1,2-Dichloroethane-d4	11.4		"	13.3		85.5	23-173			

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Project: Stieber
Project Number: [none]
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08/03/21 07:31

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 BEG0373 - EPA 5030 Water MS

LCS (BEG0373-BS1)

Prepared & Analyzed: 07/21/21

Surrogate: Toluene-d8	13.4		ug/l	13.3		100	20-170
Surrogate: 4-Bromofluorobenzene	12.8		"	13.3		95.9	21-167
Surrogate: 1,2-Dichloroethane-d4	11.4		"	13.3		85.5	23-173
Surrogate: Toluene-d8	13.4		"	13.3		100	20-170
Surrogate: 4-Bromofluorobenzene	12.8		"	13.3		95.9	21-167

Matrix Spike (BEG0373-MS1)

Source: 2107285-01

Prepared & Analyzed: 07/21/21

Benzene	39.5	1.0	ug/l	41.7	ND	94.9	34-141
Benzene	39.5	1.0	"	41.7	ND	94.9	34-141
Toluene	41.1	1.0	"	41.7	ND	98.6	27-151
Toluene	41.1	1.0	"	41.7	ND	98.6	27-151
Ethylbenzene	40.8	1.0	"	41.7	ND	97.9	29-160
Ethylbenzene	40.8	1.0	"	41.7	ND	97.9	29-160
m,p-Xylene	82.5	2.0	"	83.3	ND	99.0	20-166
m,p-Xylene	82.5	2.0	"	83.3	ND	99.0	20-166
o-Xylene	40.9	1.0	"	41.7	ND	98.2	33-159
o-Xylene	40.9	1.0	"	41.7	ND	98.2	33-159
Naphthalene	47.1	1.0	"	41.7	7.10	96.0	70-130
1,2,4-Trimethylbenzene	35.5	1.0	"	41.7	ND	85.2	70-130
1,3,5-Trimethylbenzene	43.3	1.0	"	41.7	ND	104	70-130
Surrogate: 1,2-Dichloroethane-d4	11.3		"	13.3		84.7	23-173
Surrogate: Toluene-d8	13.0		"	13.3		97.5	20-170
Surrogate: 4-Bromofluorobenzene	13.0		"	13.3		97.5	21-167
Surrogate: 1,2-Dichloroethane-d4	11.3		"	13.3		84.7	23-173
Surrogate: Toluene-d8	13.0		"	13.3		97.5	20-170
Surrogate: 4-Bromofluorobenzene	13.0		"	13.3		97.5	21-167

Matrix Spike Dup (BEG0373-MSD1)

Source: 2107285-01

Prepared & Analyzed: 07/21/21

Benzene	39.1	1.0	ug/l	41.7	ND	93.8	34-141	1.12	32
Benzene	39.1	1.0	"	41.7	ND	93.8	34-141	1.12	30
Toluene	38.9	1.0	"	41.7	ND	93.4	27-151	5.35	25
Toluene	38.9	1.0	"	41.7	ND	93.4	27-151	5.35	30
Ethylbenzene	40.6	1.0	"	41.7	ND	97.4	29-160	0.541	50
Ethylbenzene	40.6	1.0	"	41.7	ND	97.4	29-160	0.541	30
m,p-Xylene	81.9	2.0	"	83.3	ND	98.3	20-166	0.693	36
m,p-Xylene	81.9	2.0	"	83.3	ND	98.3	20-166	0.693	30
o-Xylene	40.6	1.0	"	41.7	ND	97.5	33-159	0.687	26
o-Xylene	40.6	1.0	"	41.7	ND	97.5	33-159	0.687	30

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1675 Broadway
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Project: Stieber

Project Number: [none]
Project Manager: Max Knop

Reported:
08/03/21 07:31

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 BEG0373 - EPA 5030 Water MS

Matrix Spike Dup (BEG0373-MSD1)

Source: 2107285-01

Prepared & Analyzed: 07/21/21

Naphthalene	47.2	1.0	ug/l	41.7	7.10	96.2	70-130	0.170	30	
1,2,4-Trimethylbenzene	35.3	1.0	"	41.7	ND	84.7	70-130	0.593	30	
1,3,5-Trimethylbenzene	43.0	1.0	"	41.7	ND	103	70-130	0.719	30	
Surrogate: 1,2-Dichloroethane-d4	11.4		"	13.3		85.6	23-173			
Surrogate: Toluene-d8	12.6		"	13.3		94.7	20-170			
Surrogate: 4-Bromofluorobenzene	12.9		"	13.3		97.0	21-167			
Surrogate: 1,2-Dichloroethane-d4	11.4		"	13.3		85.6	23-173			
Surrogate: Toluene-d8	12.6		"	13.3		94.7	20-170			
Surrogate: 4-Bromofluorobenzene	12.9		"	13.3		97.0	21-167			

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Project: Stieber

Project Number: [none]
Project Manager: Max Knop

Reported:
08/03/21 07:31

Extractable Petroleum Hydrocarbons by 8015 - Quality Control
Summit Scientific

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

Batch BEG0411 - EPA 3520B

Blank (BEG0411-BLK1)

Prepared: 07/23/21 Analyzed: 07/24/21

C10-C28 (DRO)	ND	0.100	mg/L							
C28-C36 (ORO)	ND	0.100	"							
Surrogate: o-Terphenyl	0.0229		"	0.0250		91.5	44.8-129			

LCS (BEG0411-BS1)

Prepared: 07/23/21 Analyzed: 07/24/21

C10-C28 (DRO)	0.875	0.100	mg/L	1.00		87.5	70-130			
Surrogate: o-Terphenyl	0.0220		"	0.0250		87.9	44.8-129			

LCS Dup (BEG0411-BSD1)

Prepared: 07/23/21 Analyzed: 07/24/21

C10-C28 (DRO)	0.938	0.100	mg/L	1.00		93.8	70-130	7.00	200	
Surrogate: o-Terphenyl	0.0232		"	0.0250		92.6	44.8-129			

Summit Scientific

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K.P. Kauffman
1675 Broadway
Denver CO, 80202

Project: Stieber
Project Number: [none]
Project Manager: Max Knop

Reported:
08/03/21 07:31

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 BEG0403 - GC

Blank (BEG0403-BLK1)

Prepared: 07/22/21 Analyzed: 07/23/21

Methane	ND	0.010	mg/L							
Ethane	ND	0.010	"							
Propane	ND	0.010	"							
Surrogate: Ethene	0.0448		"	0.0364		123	70-130			

LCS (BEG0403-BS1)

Prepared: 07/22/21 Analyzed: 07/23/21

Methane	0.038	0.010	mg/L	0.0428		87.7	70-130			
Ethane	0.10	0.010	"	0.0798		129	70-130			
Propane	0.15	0.010	"	0.139		111	70-130			
Surrogate: Ethene	0.0931		"	0.0728		128	70-130			

Duplicate (BEG0403-DUP1)

Source: 2107295-01

Prepared: 07/22/21 Analyzed: 07/23/21

Methane	ND	0.010	mg/L		ND				30	
Ethane	ND	0.010	"		ND				30	
Propane	ND	0.010	"		ND				30	
Surrogate: Ethene	0.0403		"	0.0364		111	70-130			

Matrix Spike (BEG0403-MS1)

Source: 2107295-01

Prepared: 07/22/21 Analyzed: 07/23/21

Methane	0.033	0.010	mg/L	0.0428	ND	76.2	70-130			
Ethane	0.096	0.010	"	0.0798	ND	120	70-130			
Propane	0.14	0.010	"	0.139	ND	101	70-130			
Surrogate: Ethene	0.0944		"	0.0728		130	70-130			

Summit Scientific

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K.P. Kauffman
1675 Broadway
Denver CO, 80202

Project: Stieber
Project Number: [none]
Project Manager: Max Knop

Reported:
08/03/21 07:31

Dissolved 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 BEG0372 - EPA 200.8

Blank (BEG0372-BLK1)

Prepared: 07/22/21 Analyzed: 07/23/21

Calcium	ND	50.0	ug/l
Iron	ND	10.0	"
Magnesium	ND	50.0	"
Manganese	ND	1.00	"
Potassium	ND	50.0	"
Sodium	ND	50.0	"
Barium	ND	1.00	"
Boron	ND	10.0	"
Selenium	ND	1.00	"
Strontium	ND	10.0	"

LCS (BEG0372-BS1)

Prepared: 07/22/21 Analyzed: 07/23/21

Calcium	5220	50.0	ug/l	5000	104	85-115
Iron	5340	10.0	"	5000	107	85-115
Magnesium	5530	50.0	"	5000	111	85-115
Manganese	463	1.00	"	500	92.7	85-115
Potassium	5380	50.0	"	5000	108	85-115
Sodium	5600	50.0	"	5000	112	85-115
Barium	451	1.00	"	500	90.2	85-115
Boron	2470	10.0	"	2500	99.0	85-115
Selenium	43.9	1.00	"	50.0	87.9	85-115
Strontium	448	10.0	"	500	89.6	85-115

Duplicate (BEG0372-DUP1)

Source: 2107278-01

Prepared: 07/22/21 Analyzed: 07/23/21

Calcium	152000	50.0	ug/l	150000	1.22	20
Iron	43.9	10.0	"	49.9	12.7	20
Magnesium	30000	50.0	"	29900	0.280	20
Manganese	8.75	1.00	"	8.80	0.609	20
Potassium	5570	50.0	"	5500	1.39	20
Sodium	70700	50.0	"	69700	1.41	20
Barium	138	1.00	"	143	3.69	20
Boron	129	10.0	"	128	0.422	20
Selenium	28.3	1.00	"	28.0	0.957	20
Strontium	2080	10.0	"	1990	4.37	20

Summit Scientific

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K.P. Kauffman
1675 Broadway
Denver CO, 80202

Project: Stieber

Project Number: [none]
Project Manager: Max Knop

Reported:
08/03/21 07:31

Dissolved 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 BEG0372 - EPA 200.8

Matrix Spike (BEG0372-MS1)

Source: 2107278-01

Prepared: 07/22/21 Analyzed: 07/23/21

Calcium	156000	50.0	ug/l	5000	150000	116	70-130
Iron	5440	10.0	"	5000	49.9	108	70-130
Magnesium	34900	50.0	"	5000	29900	98.6	70-130
Manganese	508	1.00	"	500	8.80	99.8	70-130
Potassium	10600	50.0	"	5000	5500	103	70-130
Sodium	74500	50.0	"	5000	69700	95.9	70-130
Barium	632	1.00	"	500	143	97.8	70-130
Boron	2390	10.0	"	2500	128	90.5	70-130
Selenium	74.9	1.00	"	50.0	28.0	93.9	70-130
Strontium	2510	10.0	"	500	1990	104	70-130

Matrix Spike Dup (BEG0372-MSD1)

Source: 2107278-01

Prepared: 07/22/21 Analyzed: 07/23/21

Calcium	155000	50.0	ug/l	5000	150000	107	70-130	0.294	25
Iron	5770	10.0	"	5000	49.9	114	70-130	5.92	25
Magnesium	35700	50.0	"	5000	29900	116	70-130	2.48	25
Manganese	535	1.00	"	500	8.80	105	70-130	5.18	25
Potassium	11000	50.0	"	5000	5500	111	70-130	3.80	25
Sodium	75200	50.0	"	5000	69700	110	70-130	0.917	25
Barium	647	1.00	"	500	143	101	70-130	2.43	25
Boron	2560	10.0	"	2500	128	97.1	70-130	6.60	25
Selenium	78.9	1.00	"	50.0	28.0	102	70-130	5.11	25
Strontium	2530	10.0	"	500	1990	107	70-130	0.502	25

Summit Scientific

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K.P. Kauffman
1675 Broadway
Denver CO, 80202

Project: Stieber

Project Number: [none]
Project Manager: Max Knop

Reported:
08/03/21 07:31

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 BEG0359 - General Preparation

Blank (BEG0359-BLK1)

Prepared: 07/21/21 Analyzed: 07/22/21

Bromide	ND	0.200	mg/L
Chloride	ND	0.100	"
Fluoride	ND	0.200	"
Sulfate	ND	0.300	"
Nitrate as N	ND	0.100	"
Nitrite as N	ND	0.100	"
Nitrate/Nitrite as N	ND	0.200	"

LCS (BEG0359-BS1)

Prepared: 07/21/21 Analyzed: 07/22/21

Bromide	9.12	0.200	mg/L	10.0	91.2	90-110
Chloride	3.18	0.100	"	3.00	106	90-110
Fluoride	2.02	0.200	"	2.00	101	90-110
Sulfate	14.6	0.300	"	15.0	97.1	90-110
Nitrate as N	2.82	0.100	"	3.00	94.1	90-110
Nitrite as N	3.06	0.100	"	3.00	102	90-110

Duplicate (BEG0359-DUP1)

Source: 2107286-01

Prepared: 07/21/21 Analyzed: 07/22/21

Bromide	ND	40.0	mg/L	ND			20
Chloride	537	20.0	"	544		1.30	20
Fluoride	ND	40.0	"	ND			20
Sulfate	970	60.0	"	1010		3.76	20
Nitrate as N	ND	20.0	"	ND			20 R-03
Nitrite as N	ND	20.0	"	ND			20 R-03
Nitrate/Nitrite as N	ND	40.0	"	ND			20 R-03

Matrix Spike (BEG0359-MS1)

Source: 2107286-01

Prepared: 07/21/21 Analyzed: 07/22/21

Bromide	1910	40.0	mg/L	2000	ND	95.6	80-120
Chloride	1100	20.0	"	600	544	92.8	80-120
Fluoride	393	40.0	"	400	ND	98.2	80-120
Sulfate	4180	60.0	"	3000	1010	106	80-120
Nitrate as N	622	20.0	"	600	ND	104	80-120
Nitrite as N	514	20.0	"	600	ND	85.6	80-120

Summit Scientific

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K.P. Kauffman
1675 Broadway
Denver CO, 80202

Project: Stieber

Project Number: [none]
Project Manager: Max Knop

Reported:
08/03/21 07:31

Physical Parameters by APHA/ASTM/EPA Methods - Quality Control
Summit Scientific

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

Batch BEG0358 - General Preparation

Blank (BEG0358-BLK1)

Prepared: 07/21/21 Analyzed: 07/22/21

Total Alkalinity	ND	10.0	mg/L as CaCO3
Carbonate	ND	10.0	"
Bicarbonate	ND	10.0	"

LCS (BEG0358-BS1)

Prepared: 07/21/21 Analyzed: 07/22/21

Total Alkalinity	90.0	10.0	mg/L as CaCO3	100	90.0	80-120
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Duplicate (BEG0358-DUP1)

Source: 2107248-01

Prepared: 07/21/21 Analyzed: 07/22/21

Total Alkalinity	1320	10.0	mg/L as CaCO3	1320	0.00	20
Carbonate	460	10.0	"	460	0.00	20
Bicarbonate	860	10.0	"	860	0.00	20

Matrix Spike (BEG0358-MS1)

Source: 2107248-01

Prepared: 07/21/21 Analyzed: 07/22/21

Total Alkalinity	1410	10.0	mg/L as CaCO3	100	1320	90.0	70-130
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Matrix Spike Dup (BEG0358-MSD1)

Source: 2107248-01

Prepared: 07/21/21 Analyzed: 07/22/21

Total Alkalinity	1400	10.0	mg/L as CaCO3	100	1320	80.0	70-130	0.712	20
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Summit Scientific

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K.P. Kauffman
1675 Broadway
Denver CO, 80202

Project: Stieber

Project Number: [none]
Project Manager: Max Knop

Reported:
08/03/21 07:31

Conventional Chemistry Parameters by APHA/EPA Methods - Quality Control
Summit Scientific

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

Batch BEG0437 - General Preparation

Blank (BEG0437-BLK1)

Prepared: 07/26/21 Analyzed: 07/28/21

Phosphorus - Total ND 0.0500 mg/L

LCS (BEG0437-BS1)

Prepared: 07/26/21 Analyzed: 07/28/21

Phosphorus - Total 0.968 0.0500 mg/L 1.00 96.8 80-120

Duplicate (BEG0437-DUP1)

Source: 2107295-01

Prepared: 07/26/21 Analyzed: 07/28/21

Phosphorus - Total 0.0502 0.0500 mg/L 0.0516 2.75 20

Matrix Spike (BEG0437-MS1)

Source: 2107295-01

Prepared: 07/26/21 Analyzed: 07/28/21

Phosphorus - Total 0.997 0.0500 mg/L 1.00 0.0516 94.5 70-130

Matrix Spike Dup (BEG0437-MSD1)

Source: 2107295-01

Prepared: 07/26/21 Analyzed: 07/28/21

Phosphorus - Total 1.04 0.0500 mg/L 1.00 0.0516 98.8 70-130 4.22 20

Summit Scientific

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K.P. Kauffman
1675 Broadway
Denver CO, 80202

Project: Stieber

Project Number: [none]
Project Manager: Max Knop

Reported:
08/03/21 07:31

Specific Conductance by SM2510B - Quality Control
Summit Scientific

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

Batch BEG0354 - General Preparation

Blank (BEG0354-BLK1)

Prepared & Analyzed: 07/21/21

Specific Conductance (EC) ND 1.00 umhos/cm

Duplicate (BEG0354-DUP1)

Source: 2107295-01

Prepared & Analyzed: 07/21/21

Specific Conductance (EC) 1700 1.00 umhos/cm 1690 0.236 20

Summit Scientific

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K.P. Kauffman
1675 Broadway
Denver CO, 80202

Project: Stieber

Project Number: [none]
Project Manager: Max Knop

Reported:
08/03/21 07:31

Total Dissolved Solids by SM2540C - Quality Control
Summit Scientific

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

Batch BEG0409 - General Preparation

Blank (BEG0409-BLK1)

Prepared & Analyzed: 07/23/21

Total Dissolved Solids ND 10.0 mg/L

Duplicate (BEG0409-DUP1)

Source: 2107237-01

Prepared & Analyzed: 07/23/21

Total Dissolved Solids 1060 10.0 mg/L 1060 0.0944 20

Summit Scientific

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K.P. Kauffman
1675 Broadway
Denver CO, 80202

Project: Stieber

Project Number: [none]
Project Manager: Max Knop

Reported:
08/03/21 07:31

pH by SM4500 - Quality Control
Summit Scientific

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

Batch BEG0414 - General Preparation

LCS (BEG0414-BS1)

Prepared: 07/20/21 Analyzed: 07/23/21

pH	9.27	1.00	pH Units	9.21	101	90-110
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Duplicate (BEG0414-DUP1)

Source: 2107279-01

Prepared: 07/20/21 Analyzed: 07/23/21

pH	6.79	1.00	pH Units	6.80	0.147	20
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Summit Scientific

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K.P. Kauffman
1675 Broadway
Denver CO, 80202

Project: Stieber

Project Number: [none]
Project Manager: Max Knop

Reported:
08/03/21 07:31

Biological Activity Reaction Test - Quality Control
Summit Scientific

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

Batch BEG0419 - General Preparation

Blank (BEG0419-BLK1)

Prepared: 07/23/21 Analyzed: 08/02/21

Iron Related Bacteria	ND	25.0	CFU/ml
Sulfate Reducing Bacteria	ND	200	"
Slime Forming Bacteria	ND	500	"

Summit Scientific

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K.P. Kauffman
1675 Broadway
Denver CO, 80202

Project: Stieber

Project Number: [none]
Project Manager: Max Knop

Reported:
08/03/21 07:31

Notes and Definitions

R-03	The Reporting Limit for this analyte has been raised to account for interference from coeluting organic compounds present in the sample.
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