

Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

October 12, 2018

Susana Lara-Mesa

K.P. Kauffman

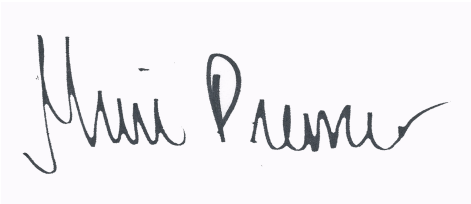
1675 Broadway

Denver, CO 80202

RE: McMallum

Enclosed are the results of analyses for samples received by Summit Scientific on 10/05/18 13:00. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink on a light blue background. The signature is written in a cursive style and reads "Muri Premier".

Muri Premier For Paul Shrewsbury

President



K.P. Kauffman
1675 Broadway
Denver CO, 80202

Project: McCallum

Project Number: [none]

Project Manager: Susana Lara-Mesa

Reported:
10/12/18 16:18

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
McCallum #100	1810096-01	Water	10/04/18 09:00	10/05/18 13:00
McCallum #85	1810096-02	Water	10/04/18 10:15	10/05/18 13:00
McCallum #81	1810096-03	Water	10/04/18 11:00	10/05/18 13:00
McCallum #120	1810096-04	Water	10/04/18 11:15	10/05/18 13:00
McCallum #65	1810096-05	Water	10/04/18 09:15	10/05/18 13:00
McCallum #63	1810096-06	Water	10/04/18 10:00	10/05/18 13:00
McCallum #94	1810096-07	Water	10/04/18 10:45	10/05/18 13:00
McCallum #119	1810096-08	Water	10/04/18 11:30	10/05/18 13:00
McCallum #178	1810096-09	Water	10/04/18 09:45	10/05/18 13:00
McCallum #45	1810096-10	Water	10/04/18 09:30	10/05/18 13:00
McCallum #43	1810096-11	Water	10/04/18 10:30	10/05/18 13:00
McCallum #118	1810096-12	Water	10/04/18 11:45	10/05/18 13:00

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Summit Scientific

1810096.1

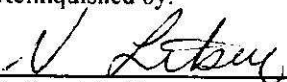
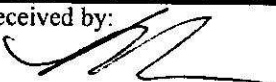
741 Corporate Circle Suite 1 ♦ Golden, Colorado 80401
303-277-9310 ♦ 303-374-5933 Fax

Page 1 of 2

Client: KP Kauffman
Address: 1675 Broadway
City/State/Zip: Denver, CO 80202
Phone: 303-825-4822 Fax: 303-825-4825
Sampler Name: Susana Lara-Mesa

Project Manager: Susana Lara-Mesa
E-Mail: slaramesa@kpk.com
Project Name: McCallum
Project Number:

Sample Description	Date Sampled	Time Sampled	Number of Containers	Preservative				Matrix			Analyze For:								Special Instructions		
				HCl	HNO ₃	None	Other (Specify)	Groundwater	Soil	Air - Canister Serial #	Other (Specify)	TDS	Major Anions	Major Cations	TPH-ORO						
McCallum #100	10/4/2018	9am	2		✓	✓		x				x	x	x							
McCallum #85	10/4/2018	10:15am	2		✓	✓		x				x	x	x							
McCallum #81	10/4/2018	11am	2		✓	✓		x				x	x	x							
McCallum #120	10/4/2018	11:15am	2		✓	✓		x				x	x	x							
McCallum #65	10/4/2018	9:15am	2		✓	✓		x				x	x	x							
McCallum #63	10/4/2018	10am	2		✓	✓		x				x	x	x							
McCallum #94	10/4/2018	10:45am	2		✓	✓		x				x	x	x							
McCallum #119	10/4/2018	11:30am	2		✓	✓		x				x	x	x							
McCallum #178	10/4/2018	9:45am	2		✓	✓		x				x	x	x							
McCallum #45	10/4/2018	9:30am	2		✓	✓		x				x	x	x							

Relinquished by: 	Date/Time: 10/5/18 17:00	Received by: 	Date/Time: 10-5-18 1300	Turn Around Time (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"/> Sample Integrity: Temperature Upon Receipt: 12.6 Intact: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Notes:
Relinquished by:	Date/Time:	Received by:	Date/Time:		
Relinquished by:	Date/Time:	Received in Lab by:	Date/Time:		

1810096.2

Page 2 of 2

Project Manager:	Susana Lara-Mesa
E-Mail:	slaramesa@kpk.com
Project Name:	McCallum
Project Number:	

www.s2scientific.com

Sample Receipt Checklist

S2 Work Order 1810096

Client: KP Kauffman Client Project ID: McCallum

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

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

Temp (°C)	<u>12.6</u>
-----------	-------------

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.	/			
Were all samples received intact ⁽¹⁾ ?	/			
Was adequate sample volume provided ⁽¹⁾ ?	/			
If custody seals are present, are they intact ⁽¹⁾ ?			/	
Are samples with holding times due within 48 hours sample due within 48 hours present?			/	
Is a chain-of-custody (COC) form present and filled out completely ⁽¹⁾ ?	/			
Does the COC agree with the number and type of sample bottles received ⁽¹⁾ ?	/			
Do the sample IDs on the bottle labels match the COC ⁽¹⁾ ?	/			
Is the COC properly relinquished by the client w/ date and time recorded ⁽¹⁾ ?	/			
For volatiles in water – is there headspace present? If yes, contact client and note in narrative.			/	
Are samples preserved that require preservation (excluding cooling) ⁽¹⁾ ? Note the type of preservative in the Comments column – HCl, H2SO4, NaOH, HNO3, ect	/	/		HNO3 – not enough
If samples are acid preserved for metals, is the pH ≤ 2 ⁽¹⁾ ? Record the pH in Comments.		/		
If dissolved metals are requested, were samples field filtered?			/	
Additional Comments (if any): 				
⁽¹⁾ If NO, then contact the client before proceeding with analysis and note in case narrative.				

KP
Custodian Printed Name or Initials

[Signature]
Signature of Custodian

10.5.18 1840
Date/Time



K.P. Kauffman
1675 Broadway
Denver CO, 80202

Project: McCallum

Project Number: [none]
Project Manager: Susana Lara-Mesa

Reported:
10/12/18 16:18

McCallum #100
1810096-01 (Water)

Summit Scientific

Total Metals by EPA Method 200.8

Date Sampled: **10/04/18 09:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Calcium	20.9	0.0500	mg/L	1	1810157	10/11/18	10/12/18	EPA 200.8	
Magnesium	16.1	0.0500	"	"	"	"	"	"	
Potassium	17.3	0.0500	"	"	"	"	"	"	
Sodium	3160	0.0500	"	"	"	"	"	"	

Anions by EPA Method 300.0

Date Sampled: **10/04/18 09:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Bromide	ND	1.00	mg/L	100	1810106	10/08/18	10/08/18	EPA 300.0	R-01
Chloride	1360	100	"	"	"	"	"	"	
Fluoride	ND	9.00	"	"	"	"	"	"	R-01
Nitrate as N	ND	4.00	"	"	"	"	"	"	I-02, R-01
Nitrite as N	ND	2.00	"	"	"	"	"	"	I-02, R-01
Orthophosphate as P	ND	5.00	"	"	"	"	"	"	R-01
Sulfate	ND	100	"	"	"	"	"	"	R-01

Total Dissolved Solids by SM2540C

Date Sampled: **10/04/18 09:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Total Dissolved Solids	6800	10.0	mg/L	1	1810129	10/09/18	10/11/18	SM2540C	

Summit Scientific

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K.P. Kauffman
1675 Broadway
Denver CO, 80202

Project: McCallum

Project Number: [none]
Project Manager: Susana Lara-Mesa

Reported:
10/12/18 16:18

McCallum #85
1810096-02 (Water)

Summit Scientific

Total Metals by EPA Method 200.8

Date Sampled: **10/04/18 10:15**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Calcium	20.1	0.0500	mg/L	1	1810157	10/11/18	10/12/18	EPA 200.8	
Magnesium	14.8	0.0500	"	"	"	"	"	"	
Potassium	15.8	0.0500	"	"	"	"	"	"	
Sodium	2880	0.0500	"	"	"	"	"	"	

Anions by EPA Method 300.0

Date Sampled: **10/04/18 10:15**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Bromide	ND	1.00	mg/L	100	1810106	10/08/18	10/08/18	EPA 300.0	R-01
Chloride	1460	200	"	200	"	"	"	"	
Fluoride	ND	9.00	"	100	"	"	"	"	R-01
Nitrate as N	ND	4.00	"	"	"	"	"	"	I-02, R-01
Nitrite as N	ND	2.00	"	"	"	"	"	"	I-02, R-01
Orthophosphate as P	ND	5.00	"	"	"	"	"	"	R-01
Sulfate	ND	100	"	"	"	"	"	"	R-01

Total Dissolved Solids by SM2540C

Date Sampled: **10/04/18 10:15**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Total Dissolved Solids	6790	10.0	mg/L	1	1810129	10/09/18	10/11/18	SM2540C	

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K.P. Kauffman
1675 Broadway
Denver CO, 80202

Project: McCallum

Project Number: [none]
Project Manager: Susana Lara-Mesa

Reported:
10/12/18 16:18

McCallum #81
1810096-03 (Water)

Summit Scientific

Total Metals by EPA Method 200.8

Date Sampled: **10/04/18 11:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Calcium	19.5	0.0500	mg/L	1	1810157	10/11/18	10/12/18	EPA 200.8	
Magnesium	13.9	0.0500	"	"	"	"	"	"	
Potassium	14.8	0.0500	"	"	"	"	"	"	
Sodium	2720	0.0500	"	"	"	"	"	"	

Anions by EPA Method 300.0

Date Sampled: **10/04/18 11:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Bromide	ND	1.00	mg/L	100	1810106	10/08/18	10/08/18	EPA 300.0	R-01
Chloride	1510	200	"	200	"	"	"	"	R-01
Fluoride	ND	9.00	"	100	"	"	"	"	R-01
Nitrate as N	ND	4.00	"	"	"	"	"	"	I-02, R-01
Nitrite as N	ND	2.00	"	"	"	"	"	"	I-02, R-01
Orthophosphate as P	ND	5.00	"	"	"	"	"	"	R-01
Sulfate	ND	100	"	"	"	"	"	"	R-01

Total Dissolved Solids by SM2540C

Date Sampled: **10/04/18 11:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Total Dissolved Solids	6770	10.0	mg/L	1	1810129	10/09/18	10/11/18	SM2540C	

Summit Scientific

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K.P. Kauffman
1675 Broadway
Denver CO, 80202

Project: McCallum
Project Number: [none]
Project Manager: Susana Lara-Mesa

Reported:
10/12/18 16:18

McCallum #120
1810096-04 (Water)

Summit Scientific

Total Metals by EPA Method 200.8

Date Sampled: **10/04/18 11:15**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Calcium	20.1	0.0500		mg/L	1	1810157	10/11/18	10/12/18	EPA 200.8	
Magnesium	14.1	0.0500		"	"	"	"	"	"	
Potassium	15.1	0.0500		"	"	"	"	"	"	
Sodium	2750	0.0500		"	"	"	"	"	"	

Anions by EPA Method 300.0

Date Sampled: **10/04/18 11:15**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Bromide	9.50	1.00		mg/L	100	1810106	10/08/18	10/08/18	EPA 300.0	R-01
Chloride	1360	200		"	200	"	"	"	"	
Fluoride	ND	9.00		"	100	"	"	"	"	R-01
Nitrate as N	ND	4.00		"	"	"	"	"	"	I-02, R-01
Nitrite as N	ND	2.00		"	"	"	"	"	"	I-02, R-01
Orthophosphate as P	ND	5.00		"	"	"	"	"	"	R-01
Sulfate	ND	100		"	"	"	"	"	"	R-01

Total Dissolved Solids by SM2540C

Date Sampled: **10/04/18 11:15**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Total Dissolved Solids	6780	10.0		mg/L	1	1810129	10/09/18	10/11/18	SM2540C	

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K.P. Kauffman
1675 Broadway
Denver CO, 80202

Project: McCallum
Project Number: [none]
Project Manager: Susana Lara-Mesa

Reported:
10/12/18 16:18

McCallum #65
1810096-05 (Water)

Summit Scientific

Total Metals by EPA Method 200.8

Date Sampled: **10/04/18 09:15**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Calcium	22.6	0.0500		mg/L	1	1810157	10/11/18	10/12/18	EPA 200.8	
Magnesium	15.4	0.0500		"	"	"	"	"	"	
Potassium	16.4	0.0500		"	"	"	"	"	"	
Sodium	2990	0.0500		"	"	"	"	"	"	

Anions by EPA Method 300.0

Date Sampled: **10/04/18 09:15**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Bromide	10.1	1.00		mg/L	100	1810106	10/08/18	10/08/18	EPA 300.0	R-01
Chloride	1180	200		"	200	"	"	"	"	
Fluoride	ND	9.00		"	100	"	"	"	"	R-01
Nitrate as N	ND	4.00		"	"	"	"	"	"	I-02, R-01
Nitrite as N	ND	2.00		"	"	"	"	"	"	I-02, R-01
Orthophosphate as P	ND	5.00		"	"	"	"	"	"	R-01
Sulfate	773	100		"	"	"	"	"	"	

Total Dissolved Solids by SM2540C

Date Sampled: **10/04/18 09:15**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Total Dissolved Solids	6790	10.0		mg/L	1	1810129	10/09/18	10/11/18	SM2540C	

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K.P. Kauffman
1675 Broadway
Denver CO, 80202

Project: McCallum
Project Number: [none]
Project Manager: Susana Lara-Mesa

Reported:
10/12/18 16:18

McCallum #63
1810096-06 (Water)

Summit Scientific

Total Metals by EPA Method 200.8

Date Sampled: **10/04/18 10:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Calcium	19.9	0.0500		mg/L	1	1810157	10/11/18	10/12/18	EPA 200.8	
Magnesium	13.6	0.0500		"	"	"	"	"	"	
Potassium	14.5	0.0500		"	"	"	"	"	"	
Sodium	2640	0.0500		"	"	"	"	"	"	

Anions by EPA Method 300.0

Date Sampled: **10/04/18 10:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Bromide	9.30	1.00		mg/L	100	1810106	10/08/18	10/08/18	EPA 300.0	R-01
Chloride	1470	200		"	200	"	"	"	"	
Fluoride	ND	9.00		"	100	"	"	"	"	R-01
Nitrate as N	ND	4.00		"	"	"	"	"	"	I-02, R-01
Nitrite as N	ND	2.00		"	"	"	"	"	"	I-02, R-01
Orthophosphate as P	ND	5.00		"	"	"	"	"	"	R-01
Sulfate	ND	100		"	"	"	"	"	"	R-01

Total Dissolved Solids by SM2540C

Date Sampled: **10/04/18 10:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Total Dissolved Solids	6760	10.0		mg/L	1	1810129	10/09/18	10/11/18	SM2540C	

Summit Scientific

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K.P. Kauffman
1675 Broadway
Denver CO, 80202

Project: McCallum
Project Number: [none]
Project Manager: Susana Lara-Mesa

Reported:
10/12/18 16:18

McCallum #94
1810096-07 (Water)

Summit Scientific

Total Metals by EPA Method 200.8

Date Sampled: **10/04/18 10:45**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Calcium	20.6	0.0500	mg/L	1	1810157	10/11/18	10/12/18	EPA 200.8	
Magnesium	14.9	0.0500	"	"	"	"	"	"	
Potassium	16.1	0.0500	"	"	"	"	"	"	
Sodium	2890	0.0500	"	"	"	"	"	"	

Anions by EPA Method 300.0

Date Sampled: **10/04/18 10:45**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Bromide	ND	1.00	mg/L	100	1810106	10/08/18	10/08/18	EPA 300.0	R-01
Chloride	1430	200	"	200	"	"	"	"	
Fluoride	ND	9.00	"	100	"	"	"	"	R-01
Nitrate as N	ND	4.00	"	"	"	"	"	"	I-02, R-01
Nitrite as N	ND	2.00	"	"	"	"	"	"	I-02, R-01
Orthophosphate as P	ND	5.00	"	"	"	"	"	"	R-01
Sulfate	ND	100	"	"	"	"	"	"	R-01

Total Dissolved Solids by SM2540C

Date Sampled: **10/04/18 10:45**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Total Dissolved Solids	6800	10.0	mg/L	1	1810129	10/09/18	10/11/18	SM2540C	

Summit Scientific

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K.P. Kauffman
1675 Broadway
Denver CO, 80202

Project: McCallum
Project Number: [none]
Project Manager: Susana Lara-Mesa

Reported:
10/12/18 16:18

McCallum #119
1810096-08 (Water)

Summit Scientific

Total Metals by EPA Method 200.8

Date Sampled: **10/04/18 11:30**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Calcium	18.6	0.0500		mg/L	1	1810157	10/11/18	10/12/18	EPA 200.8	
Magnesium	13.3	0.0500		"	"	"	"	"	"	
Potassium	14.3	0.0500		"	"	"	"	"	"	
Sodium	2570	0.0500		"	"	"	"	"	"	

Anions by EPA Method 300.0

Date Sampled: **10/04/18 11:30**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Bromide	7.90	1.00		mg/L	100	1810106	10/08/18	10/08/18	EPA 300.0	
Chloride	631	200		"	200	"	"	"	"	
Fluoride	ND	9.00		"	100	"	"	"	"	R-01
Nitrate as N	ND	4.00		"	"	"	"	"	"	I-02, R-01
Nitrite as N	ND	2.00		"	"	"	"	"	"	I-02, R-01
Orthophosphate as P	ND	5.00		"	"	"	"	"	"	R-01
Sulfate	2800	200		"	200	"	"	"	"	

Total Dissolved Solids by SM2540C

Date Sampled: **10/04/18 11:30**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Total Dissolved Solids	6790	10.0		mg/L	1	1810129	10/09/18	10/11/18	SM2540C	

Summit Scientific

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K.P. Kauffman
1675 Broadway
Denver CO, 80202

Project: McCallum

Project Number: [none]
Project Manager: Susana Lara-Mesa

Reported:
10/12/18 16:18

McCallum #178
1810096-09 (Water)

Summit Scientific

Total Metals by EPA Method 200.8

Date Sampled: **10/04/18 09:45**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Calcium	20.0	0.0500	mg/L	1	1810157	10/11/18	10/12/18	EPA 200.8	
Magnesium	13.7	0.0500	"	"	"	"	"	"	
Potassium	14.7	0.0500	"	"	"	"	"	"	
Sodium	2660	0.0500	"	"	"	"	"	"	

Anions by EPA Method 300.0

Date Sampled: **10/04/18 09:45**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Bromide	ND	1.00	mg/L	100	1810106	10/08/18	10/08/18	EPA 300.0	R-01
Chloride	730	100	"	"	"	"	"	"	
Fluoride	ND	9.00	"	"	"	"	"	"	R-01
Nitrate as N	ND	4.00	"	"	"	"	"	"	I-02, R-01
Nitrite as N	ND	2.00	"	"	"	"	"	"	I-02, R-01
Orthophosphate as P	ND	5.00	"	"	"	"	"	"	R-01
Sulfate	ND	100	"	"	"	"	"	"	R-01

Total Dissolved Solids by SM2540C

Date Sampled: **10/04/18 09:45**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Total Dissolved Solids	6770	10.0	mg/L	1	1810129	10/09/18	10/11/18	SM2540C	

Summit Scientific

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K.P. Kauffman
1675 Broadway
Denver CO, 80202

Project: McCallum
Project Number: [none]
Project Manager: Susana Lara-Mesa

Reported:
10/12/18 16:18

McCallum #45
1810096-10 (Water)

Summit Scientific

Total Metals by EPA Method 200.8

Date Sampled: **10/04/18 09:30**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Calcium	21.2	0.0500	mg/L	1	1810157	10/11/18	10/12/18	EPA 200.8	
Magnesium	14.5	0.0500	"	"	"	"	"	"	
Potassium	15.5	0.0500	"	"	"	"	"	"	
Sodium	2810	0.0500	"	"	"	"	"	"	

Anions by EPA Method 300.0

Date Sampled: **10/04/18 09:30**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Bromide	11.3	1.00	mg/L	100	1810106	10/08/18	10/08/18	EPA 300.0	
Chloride	1160	200	"	200	"	"	"	"	
Fluoride	ND	9.00	"	100	"	"	"	"	R-01
Nitrate as N	ND	4.00	"	"	"	"	"	"	I-02, R-01
Nitrite as N	ND	2.00	"	"	"	"	"	"	I-02, R-01
Orthophosphate as P	ND	5.00	"	"	"	"	"	"	R-01
Sulfate	ND	100	"	"	"	"	"	"	R-01

Total Dissolved Solids by SM2540C

Date Sampled: **10/04/18 09:30**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Total Dissolved Solids	6740	10.0	mg/L	1	1810129	10/09/18	10/11/18	SM2540C	

Summit Scientific

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K.P. Kauffman
1675 Broadway
Denver CO, 80202

Project: McCallum
Project Number: [none]
Project Manager: Susana Lara-Mesa

Reported:
10/12/18 16:18

McCallum #43
1810096-11 (Water)

Summit Scientific

Total Metals by EPA Method 200.8

Date Sampled: **10/04/18 10:30**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Calcium	19.5	0.0500	mg/L	1	1810157	10/11/18	10/12/18	EPA 200.8	
Magnesium	14.0	0.0500	"	"	"	"	"	"	
Potassium	15.2	0.0500	"	"	"	"	"	"	
Sodium	2700	0.0500	"	"	"	"	"	"	

Anions by EPA Method 300.0

Date Sampled: **10/04/18 10:30**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Bromide	ND	1.00	mg/L	100	1810106	10/08/18	10/08/18	EPA 300.0	R-01
Chloride	1310	100	"	"	"	"	"	"	
Fluoride	ND	9.00	"	"	"	"	"	"	R-01
Nitrate as N	ND	4.00	"	"	"	"	"	"	I-02, R-01
Nitrite as N	ND	2.00	"	"	"	"	"	"	I-02, R-01
Orthophosphate as P	ND	5.00	"	"	"	"	"	"	R-01
Sulfate	ND	100	"	"	"	"	"	"	R-01

Total Dissolved Solids by SM2540C

Date Sampled: **10/04/18 10:30**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Total Dissolved Solids	6800	10.0	mg/L	1	1810129	10/09/18	10/11/18	SM2540C	

Summit Scientific

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K.P. Kauffman
1675 Broadway
Denver CO, 80202

Project: McCallum
Project Number: [none]
Project Manager: Susana Lara-Mesa

Reported:
10/12/18 16:18

McCallum #118
1810096-12 (Water)

Summit Scientific

Total Metals by EPA Method 200.8

Date Sampled: **10/04/18 11:45**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Calcium	23.4	0.0500	mg/L	1	1810157	10/11/18	10/12/18	EPA 200.8	
Magnesium	16.0	0.0500	"	"	"	"	"	"	
Potassium	17.3	0.0500	"	"	"	"	"	"	
Sodium	3090	0.0500	"	"	"	"	"	"	

Anions by EPA Method 300.0

Date Sampled: **10/04/18 11:45**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Bromide	10.3	1.00	mg/L	100	1810106	10/08/18	10/08/18	EPA 300.0	
Chloride	1420	100	"	"	"	"	"	"	
Fluoride	ND	9.00	"	"	"	"	"	"	R-01
Nitrate as N	ND	4.00	"	"	"	"	"	"	I-02, R-01
Nitrite as N	ND	2.00	"	"	"	"	"	"	I-02, R-01
Orthophosphate as P	ND	5.00	"	"	"	"	"	"	R-01
Sulfate	ND	100	"	"	"	"	"	"	R-01

Total Dissolved Solids by SM2540C

Date Sampled: **10/04/18 11:45**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Total Dissolved Solids	6770	10.0	mg/L	1	1810129	10/09/18	10/11/18	SM2540C	

Summit Scientific

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K.P. Kauffman
1675 Broadway
Denver CO, 80202

Project: McMallum
Project Number: [none]
Project Manager: Susana Lara-Mesa

Reported:
10/12/18 16:18

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 1810157 - EPA 200.8

Blank (1810157-BLK1)

Prepared & Analyzed: 10/11/18

Calcium	ND	0.0500	mg/L
Magnesium	ND	0.0500	"
Potassium	ND	0.0500	"
Sodium	ND	0.0500	"

LCS (1810157-BS1)

Prepared & Analyzed: 10/11/18

Calcium	5.07	0.0500	mg/L	5.00	101	80-120
Magnesium	5.40	0.0500	"	5.00	108	80-120
Potassium	5.36	0.0500	"	5.00	107	80-120
Sodium	5.17	0.0500	"	5.00	103	80-120

Duplicate (1810157-DUP1)

Source: 1810116-01

Prepared & Analyzed: 10/11/18

Calcium	108	0.0500	mg/L	110	2.12	20
Magnesium	23.6	0.0500	"	20.6	13.8	20
Potassium	36.1	0.0500	"	32.5	10.5	20
Sodium	110	0.0500	"	96.9	13.1	20

Matrix Spike (1810157-MS1)

Source: 1810116-01

Prepared & Analyzed: 10/11/18

Calcium	115	0.0500	mg/L	5.00	110	89.7	75-125
Magnesium	25.9	0.0500	"	5.00	20.6	107	75-125
Potassium	37.9	0.0500	"	5.00	32.5	109	75-125
Sodium	101	0.0500	"	5.00	96.9	90.2	75-125

Matrix Spike Dup (1810157-MSD1)

Source: 1810116-01

Prepared & Analyzed: 10/11/18

Calcium	115	0.0500	mg/L	5.00	110	95.4	75-125	0.248	25
Magnesium	25.8	0.0500	"	5.00	20.6	104	75-125	0.746	25
Potassium	37.8	0.0500	"	5.00	32.5	107	75-125	0.152	25
Sodium	102	0.0500	"	5.00	96.9	103	75-125	0.643	25

Summit Scientific

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K.P. Kauffman
1675 Broadway
Denver CO, 80202

Project: McMallum

Project Number: [none]
Project Manager: Susana Lara-Mesa

Reported:
10/12/18 16:18

Anions by EPA Method 300.0 - Quality Control
Summit Scientific

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

Batch 1810106 - General Preparation

Blank (1810106-BLK1)

Prepared & Analyzed: 10/08/18

Bromide	ND	0.0100	mg/L
Chloride	ND	1.00	"
Fluoride	ND	0.0900	"
Nitrate as N	ND	0.0400	"
Nitrite as N	ND	0.0200	"
Orthophosphate as P	ND	0.0500	"
Sulfate	ND	1.00	"

LCS (1810106-BS1)

Prepared & Analyzed: 10/08/18

Bromide	10.2	0.0100	mg/L	10.0	102	90-110
Chloride	3.19	1.00	"	3.00	106	90-110
Fluoride	2.14	0.0900	"	2.00	107	90-110
Nitrate as N	3.24	0.0400	"	3.00	108	90-110
Nitrite as N	3.09	0.0200	"	3.00	103	90-110
Orthophosphate as P	5.43	0.0500	"	5.00	109	90-110
Sulfate	15.1	1.00	"	15.0	101	90-110

Duplicate (1810106-DUP1)

Source: 1810096-01

Prepared & Analyzed: 10/08/18

Bromide	7.90	1.00	mg/L	ND		200
Chloride	1330	100	"	1360	2.10	200
Fluoride	ND	9.00	"	ND		200
Nitrate as N	ND	4.00	"	ND		200
Nitrite as N	ND	2.00	"	ND		200
Orthophosphate as P	ND	5.00	"	ND		200
Sulfate	ND	100	"	ND		200

Matrix Spike (1810106-MS1)

Source: 1810096-01

Prepared & Analyzed: 10/08/18

Bromide	828	1.00	mg/L	1000	ND	82.8	80-120
Chloride	1660	100	"	300	1360	99.5	80-120
Fluoride	189	9.00	"	200	ND	94.4	80-120
Nitrate as N	281	4.00	"	300	ND	93.8	80-120
Nitrite as N	283	2.00	"	300	ND	94.4	80-120
Orthophosphate as P	508	5.00	"	500	ND	102	80-120
Sulfate	1590	100	"	1500	ND	106	80-120

Summit Scientific

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K.P. Kauffman
1675 Broadway
Denver CO, 80202

Project: McMallum

Project Number: [none]
Project Manager: Susana Lara-Mesa

Reported:
10/12/18 16:18

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 1810129 - General Preparation

Blank (1810129-BLK1)

Prepared: 10/08/18 Analyzed: 10/09/18

Total Dissolved Solids ND 10.0 mg/L

Duplicate (1810129-DUP1)

Source: 1810068-01

Prepared: 10/08/18 Analyzed: 10/09/18

Total Dissolved Solids 20700 10.0 mg/L 20800 0.289 200

Summit Scientific

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K.P. Kauffman
1675 Broadway
Denver CO, 80202

Project: McMallum

Project Number: [none]
Project Manager: Susana Lara-Mesa

Reported:
10/12/18 16:18

Notes and Definitions

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

I-02 This sample was 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