

# Summit Scientific

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4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

March 31, 2025

Andy Sagen

Tasman Geosciences

6855 W. 119th Ave.

Broomfield, CO 80020

RE: PDC - Klausner 1

Work Order #2501321

Enclosed are the results of analyses for samples received by Summit Scientific on 01/22/25 17:57. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read "Natalie Tessier". The signature is fluid and cursive, with the first name being more prominent.

Natalie Tessier For Paul Shrewsbury  
President



Tasman Geosciences  
6855 W. 119th Ave.  
Broomfield CO, 80020

Project: PDC - Klausner 1  
Project Number: UWRWE-A4709-ABN  
Project Manager: Andy Sagen

**Reported:**  
03/31/25 09:28

### ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
FL01R-W@3'	2501321-01	Soil	01/22/25 09:02	01/22/25 17:57
FL01R-S@4'	2501321-02	Soil	01/22/25 09:15	01/22/25 17:57
BKG01@1'	2501321-03	Soil	01/22/25 10:15	01/22/25 17:57
BKG01@2'	2501321-04	Soil	01/22/25 10:20	01/22/25 17:57
BKG01@3'	2501321-05	Soil	01/22/25 10:25	01/22/25 17:57
BKG01@4'	2501321-06	Soil	01/22/25 10:30	01/22/25 17:57
BKG02@1'	2501321-07	Soil	01/22/25 10:35	01/22/25 17:57
BKG02@2'	2501321-08	Soil	01/22/25 10:40	01/22/25 17:57
BKG02@3'	2501321-09	Soil	01/22/25 10:45	01/22/25 17:57
BKG02@4'	2501321-10	Soil	01/22/25 10:50	01/22/25 17:57

Summit Scientific

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4653 Table Mountain Drive  
Golden, CO 80403  
303-277-9310

Lab ID

Page 1 of 1

2501321

					Send Data To:					Send Invoice To:											
Client: <del>Noble</del> Tasman					Project Manager: Andy Sagen					Company: PDC											
Address: 6855 W. 119th Ave.					E-Mail: tas-chevron-1@tasman-geo.com					Project Name/Location: <u>KLAUSNER 1</u>											
City/State/Zip: Broomfield/CO/ 80020					RBUEUF27@Chevron.com					AFE#: <u>UWRWE-A4709-ABN</u>											
Phone: <u>970-424-9162</u>					Project Name: <u>KLAUSNER 1</u>					PO/Billing Codes:											
Sampler Name: David Erwin					Project Number:					Contact: Karen Olson											
					Preservative			Matrix			Analysis Requested					Special Instructions					
ID	Sample Description	Date Sampled	Time Sampled	# of containers	HCl	HNO3	None	Other	Water	Soil	Air-Canister #	Other	Metals - 915	VOC - 915	TPH - 915	PAH - 915	SAR, EC pH	Boron - HWS		SAR, EC, pH by saturated paste	
1	FLOIR-W@3'	1/22/25	9:02	2						X											
2	FLOIR-S@4'	1/22/25	9:15	2																	
3	BuG01@1'		10:15	1																	
4	BuG01@2'		10:20	1																	
5	BuG01@3'		10:25	1																	
6	BuG01@4'		10:30	1																	
7	BuG02@1'		10:35	1																	
8	BuG02@2'		10:40	1																	
9	BuG02@3'		10:45	1																	
10	BuG02@4'		10:50	1																	
11																					
12																					
13																					
14																					
15																					

Relinquished by: <u>Jess O'Neal</u>	Date/Time: <u>1-22-24 1:47 pm</u>	Received by: <u>Mead Satilite / Tasman Lock Box</u>	Date/Time: <u>1-22-24 1/47pm</u>	TAT Business Days	Field DO	Notes:
				Same Day	Field EC	
Relinquished by: <u>Tasman/OLWSX</u>	Date/Time: <u>1/22/25 1757</u>	Received by: <u>[Signature]</u>	Date/Time: <u>1/22/25 1757</u>	1 Day	Field ORP	
				2 Days	Field pH	
				3 Days	Field Temp.	
Relinquished by:	Date/Time:	Received by:	Date/Time:	Standard	X Field Turb.	
Temperature Upon Receipt: <u>2.9</u>	Corrected Temperature: <u>0</u>	IR gun #: <u>1</u>	HNO3 lot #:			

S<sub>2</sub>S2 Work Order# 2501321

## Sample Receipt Checklist

Client: POF Tasman Client Project ID: Klausner 1Received Via: H.D./P.U./FedEx/UPS/USPS/Other ☐ Airbill #: ☐Matrix (Circle all that apply) Air/Soil/Water/Other ☐ Temp (°C) 2.9 Thermometer # 1Bottle ware (Circle all that apply) Glass/Jar/Voa/Amber/Poly/Other ☐

	Yes	No	N/A	Comments (if any)
If samples require cooling, is the temperature < 6°C? <sup>(1)</sup> <b>NOTE:</b> 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"/>	<u>on ice</u>
If custody seals are present, are they intact? <sup>(1)</sup>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Are samples due within 48 hours?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Are water samples with short hold times present? Note the short hold analysis in the comments column - pH, Nitrate/Nitrite, Ferrous Iron (Fe <sup>2+</sup> ), Hexavalent Chromium (Cr <sup>6+</sup> , Cr VI), COD, Total Residual Chlorine (TRC)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Is a chain-of-custody (COC) form present and filled out completely? <sup>(1)</sup>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Is the COC properly relinquished by the client w/ date and time recorded? <sup>(1)</sup>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Were all samples received intact? <sup>(1)</sup>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Was adequate sample volume provided? <sup>(1)</sup>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Were samples provided in appropriate bottle ware?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Does the COC agree with the number and type of sample bottles received? <sup>(1)</sup>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Do the sample IDs on the bottle labels match the COC? <sup>(1)</sup>	<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 type="checkbox"/>	<input checked="" type="checkbox"/>	
Are any samples/bottles preserved (excluding cooling)? <sup>(1)</sup> Note the type of preservative in the comments column – HCl, H <sub>2</sub> SO <sub>4</sub> , NaOH, HNO <sub>3</sub> , etc.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
If samples are acid preserved for metals, is the pH ≤ 2? <sup>(1)</sup> 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"/>	
Are there requested analysis that cannot be performed by S2? Note analysis in the comments column	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Additional Comments (if any):				
<sup>(1)</sup> If NO, then contact the client before proceeding with analysis and note in case narrative.				

Control Form #: SRC-001

SN  
Custodian Printed Name

1/22/25  
Date/Time



Tasman Geosciences  
6855 W. 119th Ave.  
Broomfield CO, 80020

Project: PDC - Klausner 1  
Project Number: UWRWE-A4709-ABN  
Project Manager: Andy Sagen

**Reported:**  
03/31/25 09:28

**FL01R-W@3'**  
**2501321-01 (Soil)**

**Summit Scientific**

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

Date Sampled: **01/22/25 09:02**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BIA1244	01/28/25	02/03/25	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **01/22/25 09:02**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0428	107 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0393	98.3 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0415	104 %	50-150		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **01/22/25 09:02**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	<b>830</b>	50	mg/kg	1	BIA1250	01/28/25	01/29/25	EPA 8015M	
C28-C36 (ORO)	<b>1100</b>	50	"	"	"	"	"	"	

Date Sampled: **01/22/25 09:02**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	12.5	99.9 %	30-150		"	"	"	"	

**PAH by EPA Method 8270D SIM**

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6855 W. 119th Ave.  
Broomfield CO, 80020

Project: PDC - Klausner 1  
Project Number: UWRWE-A4709-ABN  
Project Manager: Andy Sagen

**Reported:**  
03/31/25 09:28

**FL01R-W@3'**  
**2501321-01 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **01/22/25 09:02**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Acenaphthene	ND	0.00500	mg/kg	1	BIA1430	01/30/25	02/08/25	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
<b>Fluoranthene</b>	<b>0.00810</b>	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **01/22/25 09:02**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 2-Methylnaphthalene-d10	0.0221	66.3 %	40-140		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0273	81.8 %	40-140		"	"	"	"	

**Total Metals by EPA 6020B Hot Water Soluble Extraction**

Date Sampled: **01/22/25 09:02**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Boron	ND	2.00	mg/L	1	BIB1380	02/25/25	03/08/25	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **01/22/25 09:02**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							

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Project Manager: Andy Sagen

**Reported:**  
03/31/25 09:28

**FL01R-W@3'**  
**2501321-01 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B**

Arsenic	1.36	0.200	mg/kg dry	1	BIC0337	03/06/25	03/25/25	EPA 6020B
Barium	152	0.400	"	"	"	"	"	"
Cadmium	0.438	0.200	"	"	"	"	"	"
Copper	7.03	0.400	"	"	"	"	"	"
Lead	107	0.200	"	"	"	"	"	"
Nickel	3.34	0.400	"	"	"	"	"	"
Silver	0.0770	0.0200	"	"	"	"	"	"
Zinc	20.3	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

**Hexavalent Chromium by EPA Method 7196**

Date Sampled: **01/22/25 09:02**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BIB0404	02/08/25	02/08/25	EPA 7196A	

**Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction**

Date Sampled: **01/22/25 09:02**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	41.4	0.0500	mg/L dry	1	BIB0748	02/13/25	02/26/25	EPA 6020B	
Magnesium	6.71	0.0500	"	"	"	"	"	"	
Sodium	12.7	0.0500	"	"	"	"	"	"	

**Calculated Analysis**

Date Sampled: **01/22/25 09:02**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.483	0.00100	units	1	BIB1537	02/26/25	02/26/25	Calculation	

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **01/22/25 09:02**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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**Reported:**  
03/31/25 09:28

**FL01R-W@3'**  
**2501321-01 (Soil)**

**Summit Scientific**

**Physical Parameters by APHA/ASTM/EPA Methods**

% Solids	83.3	%	1	BIB0346	02/07/25	02/07/25	Calculation
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**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Date Sampled: **01/22/25 09:02**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.314	0.0100	mmhos/cm	1	BIB0749	02/13/25	02/19/25	EPA 120.1	

**Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction**

Date Sampled: **01/22/25 09:02**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.96		pH Units	1	BIB0750	02/13/25	02/19/25	EPA 9045D	

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Project: PDC - Klausner 1  
Project Number: UWRWE-A4709-ABN  
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**Reported:**  
03/31/25 09:28

**FL01R-S@4'**  
**2501321-02 (Soil)**

**Summit Scientific**

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

Date Sampled: **01/22/25 09:15**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BIA1244	01/28/25	02/03/25	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **01/22/25 09:15**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0426	106 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0398	99.5 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0403	101 %	50-150		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **01/22/25 09:15**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BIA1250	01/28/25	02/05/25	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **01/22/25 09:15**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	8.47	67.8 %	30-150		"	"	"	"	

**PAH by EPA Method 8270D SIM**

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Project Manager: Andy Sagen

**Reported:**  
03/31/25 09:28

**FL01R-S@4'**  
**2501321-02 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **01/22/25 09:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BIA1430	01/30/25	02/05/25	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **01/22/25 09:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0147	44.1 %	40-140		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0151	45.3 %	40-140		"	"	"	"	

**Total Metals by EPA 6020B Hot Water Soluble Extraction**

Date Sampled: **01/22/25 09:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BIB1380	02/25/25	03/08/25	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **01/22/25 09:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Project: PDC - Klausner 1  
Project Number: UWRWE-A4709-ABN  
Project Manager: Andy Sagen

**Reported:**  
03/31/25 09:28

**FL01R-S@4'**  
**2501321-02 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B**

Arsenic	1.31	0.200	mg/kg dry	1	BIC0337	03/06/25	03/25/25	EPA 6020B
Barium	239	0.400	"	"	"	"	"	"
Cadmium	0.448	0.200	"	"	"	"	"	"
Copper	2.76	0.400	"	"	"	"	"	"
Lead	10.7	0.200	"	"	"	"	"	"
Nickel	3.09	0.400	"	"	"	"	"	"
Silver	0.0639	0.0200	"	"	"	"	"	"
Zinc	10.2	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

**Hexavalent Chromium by EPA Method 7196**

Date Sampled: **01/22/25 09:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BIB0404	02/08/25	02/08/25	EPA 7196A	

**Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction**

Date Sampled: **01/22/25 09:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	1840	0.0500	mg/L dry	1	BIB0748	02/13/25	02/26/25	EPA 6020B	
Magnesium	100	0.0500	"	"	"	"	"	"	
Sodium	61.2	0.0500	"	"	"	"	"	"	

**Calculated Analysis**

Date Sampled: **01/22/25 09:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.376	0.00100	units	1	BIB1537	02/26/25	02/26/25	Calculation	

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **01/22/25 09:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Tasman Geosciences  
6855 W. 119th Ave.  
Broomfield CO, 80020

Project: PDC - Klausner 1  
Project Number: UWRWE-A4709-ABN  
Project Manager: Andy Sagen

**Reported:**  
03/31/25 09:28

**FL01R-S@4'**  
**2501321-02 (Soil)**

**Summit Scientific**

**Physical Parameters by APHA/ASTM/EPA Methods**

% Solids	84.6	%	1	BIB0346	02/07/25	02/07/25	Calculation
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**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Date Sampled: **01/22/25 09:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.206	0.0100	mmhos/cm	1	BIB0749	02/13/25	02/19/25	EPA 120.1	

**Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction**

Date Sampled: **01/22/25 09:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	9.17		pH Units	1	BIB0750	02/13/25	02/19/25	EPA 9045D	

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Tasman Geosciences  
6855 W. 119th Ave.  
Broomfield CO, 80020

Project: PDC - Klausner 1  
Project Number: UWRWE-A4709-ABN  
Project Manager: Andy Sagen

**Reported:**  
03/31/25 09:28

**BKG01@1'**  
**2501321-03 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B Hot Water Soluble Extraction**

Date Sampled: **01/22/25 10:15**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Boron	ND	2.00	mg/L	1	BIB1380	02/25/25	03/08/25	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **01/22/25 10:15**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Arsenic	1.49	0.200	mg/kg dry	1	BIC0337	03/06/25	03/25/25	EPA 6020B	
Barium	232	0.400	"	"	"	"	"	"	
Cadmium	0.288	0.200	"	"	"	"	"	"	
Copper	2.80	0.400	"	"	"	"	"	"	
Lead	10.9	0.200	"	"	"	"	"	"	
Nickel	3.22	0.400	"	"	"	"	"	"	
Silver	0.0904	0.0200	"	"	"	"	"	"	
Zinc	11.9	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

**Hexavalent Chromium by EPA Method 7196**

Date Sampled: **01/22/25 10:15**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BIB0404	02/08/25	02/08/25	EPA 7196A	

**Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction**

Date Sampled: **01/22/25 10:15**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Calcium	63.4	0.0500	mg/L dry	1	BIB0748	02/13/25	02/26/25	EPA 6020B	
Magnesium	8.86	0.0500	"	"	"	"	"	"	
Sodium	9.66	0.0500	"	"	"	"	"	"	

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Tasman Geosciences  
6855 W. 119th Ave.  
Broomfield CO, 80020

Project: PDC - Klausner 1  
Project Number: UWRWE-A4709-ABN  
Project Manager: Andy Sagen

**Reported:**  
03/31/25 09:28

**BKG01@1'**  
**2501321-03 (Soil)**

**Summit Scientific**

**Calculated Analysis**

Date Sampled: **01/22/25 10:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	<b>0.301</b>	0.00100	units	1	BIB1537	02/26/25	02/26/25	Calculation	

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **01/22/25 10:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	<b>85.4</b>		%	1	BIB0346	02/07/25	02/07/25	Calculation	

**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Date Sampled: **01/22/25 10:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	<b>0.239</b>	0.0100	mmhos/cm	1	BIB0749	02/13/25	02/19/25	EPA 120.1	

**Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction**

Date Sampled: **01/22/25 10:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	<b>8.27</b>		pH Units	1	BIB0750	02/13/25	02/19/25	EPA 9045D	

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Tasman Geosciences  
6855 W. 119th Ave.  
Broomfield CO, 80020

Project: PDC - Klausner 1  
Project Number: UWRWE-A4709-ABN  
Project Manager: Andy Sagen

**Reported:**  
03/31/25 09:28

**BKG01@2'**  
**2501321-04 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B Hot Water Soluble Extraction**

Date Sampled: **01/22/25 10:20**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Boron	ND	2.00	mg/L	1	BIB1380	02/25/25	03/08/25	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **01/22/25 10:20**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Arsenic	1.37	0.200	mg/kg dry	1	BIC0337	03/06/25	03/25/25	EPA 6020B	
Barium	210	0.400	"	"	"	"	"	"	
Cadmium	0.300	0.200	"	"	"	"	"	"	
Copper	2.58	0.400	"	"	"	"	"	"	
Lead	9.93	0.200	"	"	"	"	"	"	
Nickel	3.05	0.400	"	"	"	"	"	"	
Silver	0.0728	0.0200	"	"	"	"	"	"	
Zinc	9.25	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

**Hexavalent Chromium by EPA Method 7196**

Date Sampled: **01/22/25 10:20**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BIB0404	02/08/25	02/08/25	EPA 7196A	

**Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction**

Date Sampled: **01/22/25 10:20**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Calcium	95.1	0.0500	mg/L dry	1	BIB0748	02/13/25	02/26/25	EPA 6020B	
Magnesium	7.59	0.0500	"	"	"	"	"	"	
Sodium	12.6	0.0500	"	"	"	"	"	"	

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6855 W. 119th Ave.  
Broomfield CO, 80020

Project: PDC - Klausner 1  
Project Number: UWRWE-A4709-ABN  
Project Manager: Andy Sagen

**Reported:**  
03/31/25 09:28

**BKG01@2'**  
**2501321-04 (Soil)**

**Summit Scientific**

**Calculated Analysis**

Date Sampled: **01/22/25 10:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	<b>0.334</b>	0.00100	units	1	BIB1537	02/26/25	02/26/25	Calculation	

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **01/22/25 10:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	<b>91.0</b>		%	1	BIB0346	02/07/25	02/07/25	Calculation	

**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Date Sampled: **01/22/25 10:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	<b>0.135</b>	0.0100	mmhos/cm	1	BIB0749	02/13/25	02/19/25	EPA 120.1	

**Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction**

Date Sampled: **01/22/25 10:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	<b>8.58</b>		pH Units	1	BIB0750	02/13/25	02/19/25	EPA 9045D	

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Broomfield CO, 80020

Project: PDC - Klausner 1  
Project Number: UWRWE-A4709-ABN  
Project Manager: Andy Sagen

**Reported:**  
03/31/25 09:28

**BKG01@3'**  
**2501321-05 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B Hot Water Soluble Extraction**

Date Sampled: **01/22/25 10:25**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Boron	ND	2.00	mg/L	1	BIB1380	02/25/25	03/08/25	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **01/22/25 10:25**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Arsenic	1.39	0.200	mg/kg dry	1	BIC0337	03/06/25	03/25/25	EPA 6020B	
Barium	260	0.400	"	"	"	"	"	"	
Cadmium	0.322	0.200	"	"	"	"	"	"	
Copper	2.83	0.400	"	"	"	"	"	"	
Lead	11.4	0.200	"	"	"	"	"	"	
Nickel	3.27	0.400	"	"	"	"	"	"	
Silver	0.0866	0.0200	"	"	"	"	"	"	
Zinc	12.4	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

**Hexavalent Chromium by EPA Method 7196**

Date Sampled: **01/22/25 10:25**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BIB0404	02/08/25	02/08/25	EPA 7196A	

**Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction**

Date Sampled: **01/22/25 10:25**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Calcium	51.2	0.0500	mg/L dry	1	BIB0748	02/13/25	02/26/25	EPA 6020B	
Magnesium	7.90	0.0500	"	"	"	"	"	"	
Sodium	11.2	0.0500	"	"	"	"	"	"	

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Tasman Geosciences  
6855 W. 119th Ave.  
Broomfield CO, 80020

Project: PDC - Klausner 1  
Project Number: UWRWE-A4709-ABN  
Project Manager: Andy Sagen

**Reported:**  
03/31/25 09:28

**BKG01@3'**  
**2501321-05 (Soil)**

**Summit Scientific**

**Calculated Analysis**

Date Sampled: **01/22/25 10:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.385	0.00100	units	1	BIB1537	02/26/25	02/26/25	Calculation	

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **01/22/25 10:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	85.9		%	1	BIB0346	02/07/25	02/07/25	Calculation	

**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Date Sampled: **01/22/25 10:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.248	0.0100	mmhos/cm	1	BIB0749	02/13/25	02/19/25	EPA 120.1	

**Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction**

Date Sampled: **01/22/25 10:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.11		pH Units	1	BIB0750	02/13/25	02/19/25	EPA 9045D	

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Tasman Geosciences  
6855 W. 119th Ave.  
Broomfield CO, 80020

Project: PDC - Klausner 1  
Project Number: UWRWE-A4709-ABN  
Project Manager: Andy Sagen

**Reported:**  
03/31/25 09:28

**BKG01@4'**  
**2501321-06 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B Hot Water Soluble Extraction**

Date Sampled: **01/22/25 10:30**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Boron	ND	2.00	mg/L	1	BIB1380	02/25/25	03/08/25	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **01/22/25 10:30**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Arsenic	1.22	0.200	mg/kg dry	1	BIC0337	03/06/25	03/25/25	EPA 6020B	
Barium	637	0.400	"	"	"	"	"	"	
Cadmium	0.302	0.200	"	"	"	"	"	"	
Copper	2.48	0.400	"	"	"	"	"	"	
Lead	10.1	0.200	"	"	"	"	"	"	
Nickel	2.88	0.400	"	"	"	"	"	"	
Silver	0.0607	0.0200	"	"	"	"	"	"	
Zinc	9.65	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

**Hexavalent Chromium by EPA Method 7196**

Date Sampled: **01/22/25 10:30**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BIB0404	02/08/25	02/08/25	EPA 7196A	

**Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction**

Date Sampled: **01/22/25 10:30**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Calcium	56.7	0.0500	mg/L dry	1	BIB0748	02/13/25	02/26/25	EPA 6020B	
Magnesium	7.30	0.0500	"	"	"	"	"	"	
Sodium	51.8	0.0500	"	"	"	"	"	"	

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Tasman Geosciences  
6855 W. 119th Ave.  
Broomfield CO, 80020

Project: PDC - Klausner 1  
Project Number: UWRWE-A4709-ABN  
Project Manager: Andy Sagen

**Reported:**  
03/31/25 09:28

**BKG01@4'**  
**2501321-06 (Soil)**

**Summit Scientific**

**Calculated Analysis**

Date Sampled: **01/22/25 10:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	1.72	0.00100	units	1	BIB1537	02/26/25	02/26/25	Calculation	

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **01/22/25 10:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	90.9		%	1	BIB0346	02/07/25	02/07/25	Calculation	

**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Date Sampled: **01/22/25 10:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.353	0.0100	mmhos/cm	1	BIB0749	02/13/25	02/19/25	EPA 120.1	

**Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction**

Date Sampled: **01/22/25 10:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.46		pH Units	1	BIB0750	02/13/25	02/19/25	EPA 9045D	

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Tasman Geosciences  
6855 W. 119th Ave.  
Broomfield CO, 80020

Project: PDC - Klausner 1  
Project Number: UWRWE-A4709-ABN  
Project Manager: Andy Sagen

**Reported:**  
03/31/25 09:28

**BKG02@1'**  
**2501321-07 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B Hot Water Soluble Extraction**

Date Sampled: **01/22/25 10:35**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Boron	ND	2.00	mg/L	1	BIB1380	02/25/25	03/08/25	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **01/22/25 10:35**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Arsenic	1.28	0.200	mg/kg dry	1	BIC0337	03/06/25	03/25/25	EPA 6020B	
Barium	226	0.400	"	"	"	"	"	"	
Cadmium	0.310	0.200	"	"	"	"	"	"	
Copper	2.60	0.400	"	"	"	"	"	"	
Lead	10.6	0.200	"	"	"	"	"	"	
Nickel	3.08	0.400	"	"	"	"	"	"	
Silver	0.0786	0.0200	"	"	"	"	"	"	
Zinc	9.73	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

**Hexavalent Chromium by EPA Method 7196**

Date Sampled: **01/22/25 10:35**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BIB0404	02/08/25	02/08/25	EPA 7196A	

**Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction**

Date Sampled: **01/22/25 10:35**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Calcium	46.5	0.0500	mg/L dry	1	BIB0748	02/13/25	02/26/25	EPA 6020B	
Magnesium	5.86	0.0500	"	"	"	"	"	"	
Sodium	4.84	0.0500	"	"	"	"	"	"	

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Tasman Geosciences  
6855 W. 119th Ave.  
Broomfield CO, 80020

Project: PDC - Klausner 1  
Project Number: UWRWE-A4709-ABN  
Project Manager: Andy Sagen

**Reported:**  
03/31/25 09:28

**BKG02@1'**  
**2501321-07 (Soil)**

**Summit Scientific**

**Calculated Analysis**

Date Sampled: **01/22/25 10:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	<b>0.178</b>	0.00100	units	1	BIB1537	02/26/25	02/26/25	Calculation	

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **01/22/25 10:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	<b>86.6</b>		%	1	BIB0346	02/07/25	02/07/25	Calculation	

**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Date Sampled: **01/22/25 10:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	<b>0.124</b>	0.0100	mmhos/cm	1	BIB0749	02/13/25	02/19/25	EPA 120.1	

**Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction**

Date Sampled: **01/22/25 10:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	<b>8.63</b>		pH Units	1	BIB0750	02/13/25	02/19/25	EPA 9045D	

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6855 W. 119th Ave.  
Broomfield CO, 80020

Project: PDC - Klausner 1  
Project Number: UWRWE-A4709-ABN  
Project Manager: Andy Sagen

**Reported:**  
03/31/25 09:28

**BKG02@2'**  
**2501321-08 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B Hot Water Soluble Extraction**

Date Sampled: **01/22/25 10:40**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Boron	ND	2.00	mg/L	1	BIB1380	02/25/25	03/08/25	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **01/22/25 10:40**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Arsenic	1.38	0.200	mg/kg dry	1	BIC0337	03/06/25	03/25/25	EPA 6020B	
Barium	197	0.400	"	"	"	"	"	"	
Cadmium	0.300	0.200	"	"	"	"	"	"	
Copper	2.64	0.400	"	"	"	"	"	"	
Lead	10.2	0.200	"	"	"	"	"	"	
Nickel	3.05	0.400	"	"	"	"	"	"	
Silver	0.109	0.0200	"	"	"	"	"	"	
Zinc	12.4	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

**Hexavalent Chromium by EPA Method 7196**

Date Sampled: **01/22/25 10:40**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BIB0404	02/08/25	02/08/25	EPA 7196A	

**Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction**

Date Sampled: **01/22/25 10:40**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Calcium	155	0.0500	mg/L dry	1	BIB0748	02/13/25	02/26/25	EPA 6020B	
Magnesium	9.05	0.0500	"	"	"	"	"	"	
Sodium	33.9	0.0500	"	"	"	"	"	"	

Summit Scientific

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Tasman Geosciences  
6855 W. 119th Ave.  
Broomfield CO, 80020

Project: PDC - Klausner 1  
Project Number: UWRWE-A4709-ABN  
Project Manager: Andy Sagen

**Reported:**  
03/31/25 09:28

**BKG02@2'**  
**2501321-08 (Soil)**

**Summit Scientific**

**Calculated Analysis**

Date Sampled: **01/22/25 10:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.716	0.00100	units	1	BIB1537	02/26/25	02/26/25	Calculation	

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **01/22/25 10:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	91.9		%	1	BIB0346	02/07/25	02/07/25	Calculation	

**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Date Sampled: **01/22/25 10:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.172	0.0100	mmhos/cm	1	BIB0749	02/13/25	02/19/25	EPA 120.1	

**Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction**

Date Sampled: **01/22/25 10:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.84		pH Units	1	BIB0750	02/13/25	02/19/25	EPA 9045D	

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Broomfield CO, 80020

Project: PDC - Klausner 1  
Project Number: UWRWE-A4709-ABN  
Project Manager: Andy Sagen

**Reported:**  
03/31/25 09:28

**BKG02@3'**  
**2501321-09 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B Hot Water Soluble Extraction**

Date Sampled: **01/22/25 10:45**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Boron	ND	2.00	mg/L	1	BIB1380	02/25/25	03/08/25	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **01/22/25 10:45**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Arsenic	1.51	0.200	mg/kg dry	1	BIC0337	03/06/25	03/25/25	EPA 6020B	
Barium	192	0.400	"	"	"	"	"	"	
Cadmium	0.406	0.200	"	"	"	"	"	"	
Copper	3.00	0.400	"	"	"	"	"	"	
Lead	11.3	0.200	"	"	"	"	"	"	
Nickel	3.61	0.400	"	"	"	"	"	"	
Silver	0.0814	0.0200	"	"	"	"	"	"	
Zinc	33.3	0.400	"	"	"	"	"	"	
Selenium	0.366	0.260	"	"	"	"	"	"	

**Hexavalent Chromium by EPA Method 7196**

Date Sampled: **01/22/25 10:45**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BIB0404	02/08/25	02/08/25	EPA 7196A	

**Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction**

Date Sampled: **01/22/25 10:45**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Calcium	69.2	0.0500	mg/L dry	1	BIB0748	02/13/25	02/26/25	EPA 6020B	
Magnesium	7.57	0.0500	"	"	"	"	"	"	
Sodium	60.4	0.0500	"	"	"	"	"	"	

**Calculated Analysis**

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6855 W. 119th Ave.  
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Project: PDC - Klausner 1  
Project Number: UWRWE-A4709-ABN  
Project Manager: Andy Sagen

**Reported:**  
03/31/25 09:28

**BKG02@3'**  
**2501321-09 (Soil)**

**Summit Scientific**

**Calculated Analysis**

Date Sampled: **01/22/25 10:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	1.84	0.00100	units	1	BIB1537	02/26/25	02/26/25	Calculation	

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **01/22/25 10:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	92.4		%	1	BIB0346	02/07/25	02/07/25	Calculation	

**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Date Sampled: **01/22/25 10:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.440	0.0100	mmhos/cm	1	BIB0749	02/13/25	02/19/25	EPA 120.1	

**Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction**

Date Sampled: **01/22/25 10:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.71		pH Units	1	BIB0750	02/13/25	02/19/25	EPA 9045D	

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Project: PDC - Klausner 1  
Project Number: UWRWE-A4709-ABN  
Project Manager: Andy Sagen

**Reported:**  
03/31/25 09:28

**BKG02@4'**  
**2501321-10 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B Hot Water Soluble Extraction**

Date Sampled: **01/22/25 10:50**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Boron	ND	2.00	mg/L	1	BIB1380	02/25/25	03/08/25	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **01/22/25 10:50**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Arsenic	1.16	0.200	mg/kg dry	1	BIC0337	03/06/25	03/25/25	EPA 6020B	
Barium	268	0.400	"	"	"	"	"	"	
Cadmium	0.250	0.200	"	"	"	"	"	"	
Copper	2.52	0.400	"	"	"	"	"	"	
Lead	9.20	0.200	"	"	"	"	"	"	
Nickel	2.88	0.400	"	"	"	"	"	"	
Silver	0.0738	0.0200	"	"	"	"	"	"	
Zinc	10.0	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

**Hexavalent Chromium by EPA Method 7196**

Date Sampled: **01/22/25 10:50**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BIB0404	02/08/25	02/08/25	EPA 7196A	

**Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction**

Date Sampled: **01/22/25 10:50**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Calcium	28.9	0.0500	mg/L dry	1	BIB0748	02/13/25	02/26/25	EPA 6020B	
Magnesium	10.9	0.0500	"	"	"	"	"	"	
Sodium	200	0.0500	"	"	"	"	"	"	

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6855 W. 119th Ave.  
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Project: PDC - Klausner 1  
Project Number: UWRWE-A4709-ABN  
Project Manager: Andy Sagen

**Reported:**  
03/31/25 09:28

**BKG02@4'**  
**2501321-10 (Soil)**

**Summit Scientific**

**Calculated Analysis**

Date Sampled: **01/22/25 10:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	8.04	0.00100	units	1	BIB1537	02/26/25	02/26/25	Calculation	

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **01/22/25 10:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	92.9		%	1	BIB0346	02/07/25	02/07/25	Calculation	

**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Date Sampled: **01/22/25 10:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	1.03	0.0100	mmhos/cm	1	BIB0749	02/13/25	02/19/25	EPA 120.1	

**Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction**

Date Sampled: **01/22/25 10:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.77		pH Units	1	BIB0750	02/13/25	02/19/25	EPA 9045D	

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Broomfield CO, 80020

Project: PDC - Klausner 1  
Project Number: UWRWE-A4709-ABN  
Project Manager: Andy Sagen

**Reported:**  
03/31/25 09:28

## 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 BIA1244 - EPA 5030 Soil MS

##### Blank (BIA1244-BLK1)

Prepared: 01/28/25 Analyzed: 02/03/25

Benzene	ND	0.0020	mg/kg							
Toluene	ND	0.0050	"							
Ethylbenzene	ND	0.0050	"							
Xylenes (total)	ND	0.010	"							
1,2,4-Trimethylbenzene	ND	0.0050	"							
1,3,5-Trimethylbenzene	ND	0.0050	"							
Naphthalene	ND	0.0038	"							
Gasoline Range Hydrocarbons	ND	0.50	"							
Surrogate: 1,2-Dichloroethane-d4	0.0425		"	0.0400		106	50-150			
Surrogate: Toluene-d8	0.0388		"	0.0400		97.1	50-150			
Surrogate: 4-Bromofluorobenzene	0.0399		"	0.0400		99.8	50-150			

##### LCS (BIA1244-BS1)

Prepared: 01/28/25 Analyzed: 02/03/25

Benzene	0.0960	0.0020	mg/kg	0.100		96.0	70-130			
Toluene	0.0939	0.0050	"	0.100		93.9	70-130			
Ethylbenzene	0.0954	0.0050	"	0.100		95.4	70-130			
m,p-Xylene	0.192	0.010	"	0.200		95.8	70-130			
o-Xylene	0.0984	0.0050	"	0.100		98.4	70-130			
1,2,4-Trimethylbenzene	0.0939	0.0050	"	0.100		93.9	70-130			
1,3,5-Trimethylbenzene	0.0918	0.0050	"	0.100		91.8	70-130			
Naphthalene	0.106	0.0038	"	0.100		106	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0411		"	0.0400		103	50-150			
Surrogate: Toluene-d8	0.0393		"	0.0400		98.3	50-150			
Surrogate: 4-Bromofluorobenzene	0.0402		"	0.0400		101	50-150			

##### Matrix Spike (BIA1244-MS1)

Source: 2501296-01

Prepared: 01/28/25 Analyzed: 02/03/25

Benzene	0.0758	0.0020	mg/kg	0.100	ND	75.8	70-130			
Toluene	0.0794	0.0050	"	0.100	ND	79.4	70-130			
Ethylbenzene	0.0907	0.0050	"	0.100	ND	90.7	70-130			
m,p-Xylene	0.173	0.010	"	0.200	ND	86.3	70-130			
o-Xylene	0.0874	0.0050	"	0.100	ND	87.4	70-130			
1,2,4-Trimethylbenzene	0.0841	0.0050	"	0.100	ND	84.1	70-130			
1,3,5-Trimethylbenzene	0.0899	0.0050	"	0.100	ND	89.9	70-130			
Naphthalene	0.0208	0.0038	"	0.100	ND	20.8	70-130			QM-05
Surrogate: 1,2-Dichloroethane-d4	0.0454		"	0.0400		114	50-150			
Surrogate: Toluene-d8	0.0403		"	0.0400		101	50-150			
Surrogate: 4-Bromofluorobenzene	0.0410		"	0.0400		103	50-150			

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6855 W. 119th Ave.  
Broomfield CO, 80020

Project: PDC - Klausner 1  
Project Number: UWRWE-A4709-ABN  
Project Manager: Andy Sagen

**Reported:**  
03/31/25 09:28

**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 BIA1244 - EPA 5030 Soil MS**

Matrix Spike Dup (BIA1244-MSD1)		Source: 2501296-01			Prepared: 01/28/25 Analyzed: 02/03/25					
Benzene	0.0768	0.0020	mg/kg	0.100	ND	76.8	70-130	1.22	30	
Toluene	0.0793	0.0050	"	0.100	ND	79.3	70-130	0.113	30	
Ethylbenzene	0.0892	0.0050	"	0.100	ND	89.2	70-130	1.60	30	
m,p-Xylene	0.170	0.010	"	0.200	ND	85.2	70-130	1.31	30	
o-Xylene	0.0870	0.0050	"	0.100	ND	87.0	70-130	0.447	30	
1,2,4-Trimethylbenzene	0.0830	0.0050	"	0.100	ND	83.0	70-130	1.26	30	
1,3,5-Trimethylbenzene	0.0884	0.0050	"	0.100	ND	88.4	70-130	1.62	30	
Naphthalene	0.0183	0.0038	"	0.100	ND	18.3	70-130	12.9	30	QM-05
Surrogate: 1,2-Dichloroethane-d4		0.0429	"	0.0400		107	50-150			
Surrogate: Toluene-d8		0.0401	"	0.0400		100	50-150			
Surrogate: 4-Bromofluorobenzene		0.0406	"	0.0400		101	50-150			

Summit Scientific

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Broomfield CO, 80020

Project: PDC - Klausner 1  
Project Number: UWRWE-A4709-ABN  
Project Manager: Andy Sagen

**Reported:**  
03/31/25 09:28

**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 BIA1250 - EPA 3550A**

**Blank (BIA1250-BLK1)**

Prepared & Analyzed: 01/28/25

C10-C28 (DRO)	ND	50	mg/kg
C28-C36 (ORO)	ND	50	"

Surrogate: o-Terphenyl	16.6	"	12.5	133	30-150
------------------------	------	---	------	-----	--------

**LCS (BIA1250-BS1)**

Prepared & Analyzed: 01/28/25

C10-C28 (DRO)	440	50	mg/kg	500	88.1	70-130
Surrogate: o-Terphenyl	15.3	"	12.5	122	30-150	

**Matrix Spike (BIA1250-MS1)**

Source: 2501296-01

Prepared & Analyzed: 01/28/25

C10-C28 (DRO)	420	50	mg/kg	500	6.16	82.8	70-130
Surrogate: o-Terphenyl	13.0	"	12.5	104	30-150		

**Matrix Spike Dup (BIA1250-MSD1)**

Source: 2501296-01

Prepared & Analyzed: 01/28/25

C10-C28 (DRO)	435	50	mg/kg	500	6.16	85.8	70-130	3.56	20
Surrogate: o-Terphenyl	14.6	"	12.5	117	30-150				

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Project: PDC - Klausner 1  
Project Number: UWRWE-A4709-ABN  
Project Manager: Andy Sagen

**Reported:**  
03/31/25 09:28

## PAH by EPA Method 8270D SIM - Quality Control

### Summit Scientific

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

#### Batch BIA1430 - EPA 5030 Soil MS

##### Blank (BIA1430-BLK1)

Prepared: 01/30/25 Analyzed: 02/04/25

Acenaphthene	ND	0.00500	mg/kg							
Anthracene	ND	0.00500	"							
Benzo (a) anthracene	ND	0.00500	"							
Benzo (a) pyrene	ND	0.00500	"							
Benzo (b) fluoranthene	ND	0.00500	"							
Benzo (k) fluoranthene	ND	0.00500	"							
Chrysene	ND	0.00500	"							
Dibenz (a,h) anthracene	ND	0.00500	"							
Fluoranthene	ND	0.00500	"							
Fluorene	ND	0.00500	"							
Indeno (1,2,3-cd) pyrene	ND	0.00500	"							
Pyrene	ND	0.00500	"							
1-Methylnaphthalene	ND	0.00500	"							
2-Methylnaphthalene	ND	0.00500	"							
Surrogate: 2-Methylnaphthalene-d10	0.0140		"	0.0333		41.9	40-140			
Surrogate: Fluoranthene-d10	0.0159		"	0.0333		47.6	40-140			

##### LCS (BIA1430-BS1)

Prepared: 01/30/25 Analyzed: 02/08/25

Acenaphthene	0.0292	0.00500	mg/kg	0.0333		87.5	40-140			
Anthracene	0.0291	0.00500	"	0.0333		87.2	40-140			
Benzo (a) anthracene	0.0310	0.00500	"	0.0333		93.0	40-140			
Benzo (a) pyrene	0.0278	0.00500	"	0.0333		83.3	40-140			
Benzo (b) fluoranthene	0.0287	0.00500	"	0.0333		86.2	40-140			
Benzo (k) fluoranthene	0.0281	0.00500	"	0.0333		84.4	40-140			
Chrysene	0.0296	0.00500	"	0.0333		88.8	40-140			
Dibenz (a,h) anthracene	0.0260	0.00500	"	0.0333		78.0	40-140			
Fluoranthene	0.0313	0.00500	"	0.0333		93.9	40-140			
Fluorene	0.0292	0.00500	"	0.0333		87.6	40-140			
Indeno (1,2,3-cd) pyrene	0.0162	0.00500	"	0.0333		48.6	40-140			
Pyrene	0.0280	0.00500	"	0.0333		84.0	40-140			
1-Methylnaphthalene	0.0272	0.00500	"	0.0333		81.5	40-140			
2-Methylnaphthalene	0.0254	0.00500	"	0.0333		76.3	40-140			
Surrogate: 2-Methylnaphthalene-d10	0.0255		"	0.0333		76.5	40-140			
Surrogate: Fluoranthene-d10	0.0315		"	0.0333		94.4	40-140			

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Broomfield CO, 80020

Project: PDC - Klausner 1  
Project Number: UWRWE-A4709-ABN  
Project Manager: Andy Sagen

**Reported:**  
03/31/25 09:28

## PAH by EPA Method 8270D SIM - Quality Control

### Summit Scientific

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

#### Batch BIA1430 - EPA 5030 Soil MS

##### Matrix Spike (BIA1430-MS1)

Source: 2501314-01

Prepared: 01/30/25 Analyzed: 02/08/25

Acenaphthene	0.0285	0.00500	mg/kg	0.0333	ND	85.5	40-140		
Anthracene	0.0286	0.00500	"	0.0333	ND	85.9	40-140		
Benzo (a) anthracene	0.0300	0.00500	"	0.0333	ND	90.0	40-140		
Benzo (a) pyrene	0.0271	0.00500	"	0.0333	ND	81.2	40-140		
Benzo (b) fluoranthene	0.0276	0.00500	"	0.0333	ND	82.9	40-140		
Benzo (k) fluoranthene	0.0272	0.00500	"	0.0333	ND	81.5	40-140		
Chrysene	0.0288	0.00500	"	0.0333	ND	86.5	40-140		
Dibenz (a,h) anthracene	0.0256	0.00500	"	0.0333	ND	76.7	40-140		
Fluoranthene	0.0321	0.00500	"	0.0333	ND	96.2	40-140		
Fluorene	0.0286	0.00500	"	0.0333	ND	85.9	40-140		
Indeno (1,2,3-cd) pyrene	0.0150	0.00500	"	0.0333	ND	44.9	40-140		
Pyrene	0.0273	0.00500	"	0.0333	ND	82.0	40-140		
1-Methylnaphthalene	0.0301	0.00500	"	0.0333	ND	90.3	40-140		
2-Methylnaphthalene	0.0297	0.00500	"	0.0333	ND	89.2	40-140		
Surrogate: 2-Methylnaphthalene-d10	0.0294		"	0.0333		88.2	40-140		
Surrogate: Fluoranthene-d10	0.0324		"	0.0333		97.3	40-140		

##### Matrix Spike Dup (BIA1430-MSD1)

Source: 2501314-01

Prepared: 01/30/25 Analyzed: 02/08/25

Acenaphthene	0.0285	0.00500	mg/kg	0.0333	ND	85.6	40-140	0.0432	30
Anthracene	0.0286	0.00500	"	0.0333	ND	85.7	40-140	0.254	30
Benzo (a) anthracene	0.0295	0.00500	"	0.0333	ND	88.5	40-140	1.70	30
Benzo (a) pyrene	0.0260	0.00500	"	0.0333	ND	78.0	40-140	3.99	30
Benzo (b) fluoranthene	0.0271	0.00500	"	0.0333	ND	81.2	40-140	2.00	30
Benzo (k) fluoranthene	0.0258	0.00500	"	0.0333	ND	77.5	40-140	5.10	30
Chrysene	0.0282	0.00500	"	0.0333	ND	84.7	40-140	2.20	30
Dibenz (a,h) anthracene	0.0234	0.00500	"	0.0333	ND	70.2	40-140	8.85	30
Fluoranthene	0.0324	0.00500	"	0.0333	ND	97.3	40-140	1.10	30
Fluorene	0.0284	0.00500	"	0.0333	ND	85.1	40-140	0.887	30
Indeno (1,2,3-cd) pyrene	0.0149	0.00500	"	0.0333	ND	44.6	40-140	0.596	30
Pyrene	0.0262	0.00500	"	0.0333	ND	78.6	40-140	4.32	30
1-Methylnaphthalene	0.0278	0.00500	"	0.0333	ND	83.5	40-140	7.85	30
2-Methylnaphthalene	0.0264	0.00500	"	0.0333	ND	79.1	40-140	12.0	30
Surrogate: 2-Methylnaphthalene-d10	0.0278		"	0.0333		83.5	40-140		
Surrogate: Fluoranthene-d10	0.0327		"	0.0333		98.0	40-140		

Summit Scientific

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Tasman Geosciences  
6855 W. 119th Ave.  
Broomfield CO, 80020

Project: PDC - Klausner 1  
Project Number: UWRWE-A4709-ABN  
Project Manager: Andy Sagen

**Reported:**  
03/31/25 09:28

**Total Metals by EPA 6020B Hot Water Soluble Extraction - Quality Control**  
**Summit Scientific**

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

**Batch BIB1380 - EPA 3050B**

**Blank (BIB1380-BLK1)**

Prepared: 02/25/25 Analyzed: 03/08/25

Boron ND 2.00 mg/L

**LCS (BIB1380-BS1)**

Prepared: 02/25/25 Analyzed: 03/08/25

Boron 5.93 2.00 mg/L 5.00 119 80-120

**Duplicate (BIB1380-DUP1)**

**Source: 2501314-01**

Prepared: 02/25/25 Analyzed: 03/08/25

Boron 1.28 2.00 mg/L 1.28 0.392 20

**Matrix Spike (BIB1380-MS1)**

**Source: 2501314-01**

Prepared: 02/25/25 Analyzed: 03/08/25

Boron 6.70 2.00 mg/L 4.99 1.28 109 75-125

**Matrix Spike Dup (BIB1380-MSD1)**

**Source: 2501314-01**

Prepared: 02/25/25 Analyzed: 03/08/25

Boron 7.11 2.00 mg/L 4.99 1.28 117 75-125 5.87 25

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Tasman Geosciences  
6855 W. 119th Ave.  
Broomfield CO, 80020

Project: PDC - Klausner 1  
Project Number: UWRWE-A4709-ABN  
Project Manager: Andy Sagen

**Reported:**  
03/31/25 09:28

**Total Metals by EPA 6020B - Quality Control**  
**Summit Scientific**

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

**Batch BIC0337 - EPA 3050B**

**Blank (BIC0337-BLK1)**

Prepared: 03/06/25 Analyzed: 03/25/25

Arsenic	ND	0.200	mg/kg wet
Barium	ND	0.400	"
Cadmium	ND	0.200	"
Copper	ND	0.400	"
Lead	ND	0.200	"
Nickel	ND	0.400	"
Silver	ND	0.0200	"
Zinc	ND	0.400	"
Selenium	ND	0.260	"

**LCS (BIC0337-BS1)**

Prepared: 03/06/25 Analyzed: 03/24/25

Arsenic	41.0	0.200	mg/kg wet	41.0	100	80-120
Barium	40.3	0.400	"	41.0	98.4	80-120
Cadmium	2.03	0.200	"	2.05	99.3	80-120
Copper	40.1	0.400	"	41.0	97.9	80-120
Lead	18.7	0.200	"	20.5	91.2	80-120
Nickel	40.3	0.400	"	41.0	98.2	80-120
Silver	2.00	0.0200	"	2.05	97.5	80-120
Zinc	37.0	0.400	"	41.0	90.4	80-120
Selenium	4.03	0.260	"	4.10	98.4	80-120

**Duplicate (BIC0337-DUP1)**

Source: 2501239-01

Prepared: 03/06/25 Analyzed: 03/24/25

Arsenic	1.00	0.200	mg/kg dry	0.912	9.71	20
Barium	53.0	0.400	"	53.3	0.511	20
Cadmium	0.0789	0.200	"	0.0885	11.5	20
Copper	1.27	0.400	"	1.26	0.993	20
Lead	4.25	0.200	"	6.54	42.4	20
Nickel	1.30	0.400	"	1.21	7.08	20
Silver	0.0134	0.0200	"	0.0142	5.64	20
Zinc	5.84	0.400	"	5.52	5.56	20
Selenium	ND	0.260	"	ND		20

QR-04

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Tasman Geosciences  
6855 W. 119th Ave.  
Broomfield CO, 80020

Project: PDC - Klausner 1  
Project Number: UWRWE-A4709-ABN  
Project Manager: Andy Sagen

**Reported:**  
03/31/25 09:28

**Total Metals by EPA 6020B - Quality Control**  
**Summit Scientific**

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

**Batch BIC0337 - EPA 3050B**

Matrix Spike (BIC0337-MS1)		Source: 2501239-01			Prepared: 03/06/25 Analyzed: 03/25/25						
Arsenic	15.2	0.200	mg/kg dry	43.4	0.912	32.8	75-125				QM-05
Barium	93.7	0.400	"	43.4	53.3	93.2	75-125				
Cadmium	2.15	0.200	"	2.17	0.0885	95.2	75-125				
Copper	14.8	0.400	"	43.4	1.26	31.2	75-125				QM-05
Lead	21.8	0.200	"	21.7	6.54	70.4	75-125				QM-05
Nickel	15.0	0.400	"	43.4	1.21	31.7	75-125				QM-05
Silver	1.99	0.0200	"	2.17	0.0142	91.0	75-125				
Zinc	19.5	0.400	"	43.4	5.52	32.3	75-125				QM-05
Selenium	3.49	0.260	"	4.34	ND	80.5	75-125				

Matrix Spike Dup (BIC0337-MSD1)		Source: 2501239-01			Prepared: 03/06/25 Analyzed: 03/25/25						
Arsenic	16.4	0.200	mg/kg dry	43.8	0.912	35.3	75-125	7.65	25		QM-05
Barium	87.1	0.400	"	43.8	53.3	77.4	75-125	7.27	25		
Cadmium	2.26	0.200	"	2.19	0.0885	99.2	75-125	4.77	25		
Copper	15.6	0.400	"	43.8	1.26	32.8	75-125	5.39	25		QM-05
Lead	22.1	0.200	"	21.9	6.54	71.1	75-125	1.26	25		QM-05
Nickel	16.0	0.400	"	43.8	1.21	33.8	75-125	6.65	25		QM-05
Silver	2.03	0.0200	"	2.19	0.0142	92.2	75-125	2.12	25		
Zinc	20.1	0.400	"	43.8	5.52	33.3	75-125	2.81	25		QM-05
Selenium	3.70	0.260	"	4.38	ND	84.6	75-125	5.79	25		

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Tasman Geosciences  
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Broomfield CO, 80020

Project: PDC - Klausner 1  
Project Number: UWRWE-A4709-ABN  
Project Manager: Andy Sagen

**Reported:**  
03/31/25 09:28

**Hexavalent Chromium by EPA Method 7196 - Quality Control**  
**Summit Scientific**

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

**Batch BIB0404 - 3060A Mod**

**Blank (BIB0404-BLK1)**

Prepared & Analyzed: 02/08/25

Chromium, Hexavalent ND 0.30 mg/kg wet

**LCS (BIB0404-BS1)**

Prepared & Analyzed: 02/08/25

Chromium, Hexavalent 24.6 0.30 mg/kg wet 25.0 98.6 80-120

**Duplicate (BIB0404-DUP1)**

**Source: 2501265-01**

Prepared & Analyzed: 02/08/25

Chromium, Hexavalent ND 0.30 mg/kg dry ND 20

**Matrix Spike (BIB0404-MS1)**

**Source: 2501265-01**

Prepared & Analyzed: 02/08/25

Chromium, Hexavalent 27.7 0.30 mg/kg dry 28.5 ND 97.2 75-125

**Matrix Spike Dup (BIB0404-MSD1)**

**Source: 2501265-01**

Prepared & Analyzed: 02/08/25

Chromium, Hexavalent 28.0 0.30 mg/kg dry 28.5 ND 98.2 75-125 1.02 20

Summit Scientific

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Tasman Geosciences  
6855 W. 119th Ave.  
Broomfield CO, 80020

Project: PDC - Klausner 1  
Project Number: UWRWE-A4709-ABN  
Project Manager: Andy Sagen

**Reported:**  
03/31/25 09:28

**Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction - Quality Control**

**Summit Scientific**

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

**Batch BIB0748 - General Preparation**

**Blank (BIB0748-BLK1)**

Prepared: 02/13/25 Analyzed: 02/26/25

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

**LCS (BIB0748-BS1)**

Prepared: 02/13/25 Analyzed: 02/26/25

Calcium	5.29	0.0500	mg/L wet	5.00	106	70-130
Magnesium	5.00	0.0500	"	5.00	100	70-130
Sodium	4.71	0.0500	"	5.00	94.3	70-130

Summit Scientific

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Tasman Geosciences  
6855 W. 119th Ave.  
Broomfield CO, 80020

Project: PDC - Klausner 1

Project Number: UWRWE-A4709-ABN

Project Manager: Andy Sagen

**Reported:**  
03/31/25 09:28

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

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

**Batch BIB0346 - General Preparation**

Duplicate (BIB0346-DUP1)		Source: 2501295-01			Prepared & Analyzed: 02/07/25						
% Solids	97.5		%		97.3			0.181		20	

Summit Scientific

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Tasman Geosciences  
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Broomfield CO, 80020

Project: PDC - Klausner 1  
Project Number: UWRWE-A4709-ABN  
Project Manager: Andy Sagen

**Reported:**  
03/31/25 09:28

**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction - Quality Control**  
**Summit Scientific**

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

**Batch BIB0749 - General Preparation**

**Blank (BIB0749-BLK1)**

Prepared: 02/13/25 Analyzed: 02/19/25

Specific Conductance (EC) ND 0.0100 mmhos/cm

**LCS (BIB0749-BS1)**

Prepared: 02/13/25 Analyzed: 02/19/25

Specific Conductance (EC) 1.39 0.0100 mmhos/cm 1.41 98.7 95-105

**Duplicate (BIB0749-DUP1)**

**Source: 2501321-01**

Prepared: 02/13/25 Analyzed: 02/19/25

Specific Conductance (EC) 0.314 0.0100 mmhos/cm 0.314 0.00 20

Summit Scientific

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Tasman Geosciences  
6855 W. 119th Ave.  
Broomfield CO, 80020

Project: PDC - Klausner 1  
Project Number: UWRWE-A4709-ABN  
Project Manager: Andy Sagen

**Reported:**  
03/31/25 09:28

**Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction - Quality Control**  
**Summit Scientific**

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

**Batch BIB0750 - General Preparation**

**LCS (BIB0750-BS1)**

Prepared: 02/13/25 Analyzed: 02/19/25

pH	9.13	pH Units	9.18	99.4	95-105
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**Duplicate (BIB0750-DUP1)**

**Source: 2501321-01**

Prepared: 02/13/25 Analyzed: 02/19/25

pH	7.98	pH Units	7.96	0.332	20
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Summit Scientific

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Tasman Geosciences  
6855 W. 119th Ave.  
Broomfield CO, 80020

Project: PDC - Klausner 1  
Project Number: UWRWE-A4709-ABN  
Project Manager: Andy Sagen

**Reported:**  
03/31/25 09:28

### Notes and Definitions

QR-04	The RPD value for the sample duplicate or MS/MSD was outside of QC acceptance limits. Sample results were accepted based on LCS and/or LCSD recoveries and/or RPD values. Only applies to source/DUP and MS/MSD pairs.
QM-05	The spike recovery was outside acceptance limits for the MS and/or MSD due to matrix interference. Sample results were accepted based on LCS and/or LCSD recoveries and/or RPD values.
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