

Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

April 11, 2025

Andy Sagen

Tasman Geosciences

4725 Independence St.

Wheat Ridge, CO 80033

RE: Noble - Arens G26-19 Flowline

Work Order #2502151

Enclosed are the results of analyses for samples received by Summit Scientific on 02/07/25 18:00. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read "Natalie Tessier". The signature is written in a cursive, flowing style.

Natalie Tessier For Paul Shrewsbury

President



Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: Noble - Arens G26-19 Flowline
Project Number: UWRWE-A3241-ABN
Project Manager: Andy Sagen

Reported:
04/11/25 07:42

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
BKG02@1-2'	2502151-01	Soil	02/07/25 11:21	02/07/25 18:00
BKG02@3-4'	2502151-02	Soil	02/07/25 11:23	02/07/25 18:00
BKG02@4-5'	2502151-03	Soil	02/07/25 11:25	02/07/25 18:00
BKG03@1-2'	2502151-04	Soil	02/07/25 11:30	02/07/25 18:00
BKG03@3-4'	2502151-05	Soil	02/07/25 11:32	02/07/25 18:00
BKG03@4-5'	2502151-06	Soil	02/07/25 11:34	02/07/25 18:00
BKG04@1-2'	2502151-07	Soil	02/07/25 11:36	02/07/25 18:00
BKG04@3-4'	2502151-08	Soil	02/07/25 11:38	02/07/25 18:00
BKG04@4-5'	2502151-09	Soil	02/07/25 11:40	02/07/25 18:00



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

Lab ID	Page 1 of 1
2502151	

	Send Data To:	Send Invoice To:
Client: Noble	Project Manager: Andy Sagen	Company: Noble
Address: 6855 W. 119th Ave.	E-Mail: tas-chevron-1@tasman-geo.com	Project Name/Location:
City/State/Zip: Broomfield/CO/ 80020	RBUEUF27@chevron.com	AFE#:
Phone: 303-668-5268	Project Name: <i>Arens @ 26-19 Flowline</i>	PO/Billing Codes:
Sampler Name: Natalie Crozier	Project Number:	Contact: Dan Peterson

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix		Air-Canister #	Other	Analysis Requested							Special Instructions		
					HCl	HNO3	None	Other	Water	Soil			Metals - 915	VOC - 915	TPH - 915	PAH - 915	SAR, EC, pH	Boron - HWS	HOLD			
1	BKG02@1-2'	2/7/25	1121	1			X					X					X	X			SAR, EC, pH by saturated paste	
2	BKG02@3-4'		1123																			
3	BKG02@4-5'		1125																			
4	BKG03@1-2'		1130																			
5	BKG03@3-4'		1132																			
6	BKG03@4-5'		1134																			
7	BKG04@1-2'		1136																			
8	BKG04@3-4'		1138																			
9	BKG04@4-5'		1140																			
10																						
11																						
12																						
13																						
14																						
15																						

Relinquished by: <i>Natalie Crozier</i>	Date/Time: 2/7/25 1348	Received by: Tasman Lock Box	Date/Time: 2/7/25 1348	TAT Business Days	Field DO	Notes:
				Same Day	Field EC	
Relinquished by: <i>Tasman Lock Box</i>	Date/Time: 2/7/25 1800	Received by: <i>[Signature]</i>	Date/Time: 2/7/25 1800	1 Day	Field ORP	
				2 Days	Field pH	
Relinquished by: _____	Date/Time: _____	Received by: _____	Date/Time: _____	3 Days	Field Temp.	
Temperature Upon Receipt: 2.1	Corrected Temperature: 0	IR gum #: 1	HNO3 lot #: _____	Standard	<input checked="" type="checkbox"/> Field Turb.	

S₂

S2 Work Order# 2502151

Sample Receipt Checklist

Client: NOVA Client Project ID: Arens G 20-19 Flowline

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

Matrix (Circle all that apply) Air/Soil/Water/Other Temp (°C) 2.1 Thermometer # 1

Bottle 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? ⁽¹⁾ NOTE: If samples are delivered the same day of sampling, this requirement is met if there is evidence that cooling has begun.	-			on ice
If custody seals are present, are they intact? ⁽¹⁾	-			
Are samples due within 48 hours?		-		
Are water samples with short hold times present? Note the short hold analysis in the comments column - pH, Nitrate/Nitrite, Ferrous Iron (Fe ²⁺), Hexavalent Chromium (Cr ⁶⁺ , Cr VI), COD, Total Residual Chlorine (TRC)		-		
Is a chain-of-custody (COC) form present and filled out Completely? ⁽¹⁾	-			
Is the COC properly relinquished by the client w/ date and time recorded? ⁽¹⁾	-			
Were all samples received intact? ⁽¹⁾	✓			
Was adequate sample volume provided? ⁽¹⁾	✓			
Were samples provided in appropriate bottle ware?	✓			
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⁾	✓			
For volatiles in water – is there headspace present? If yes, contact client and note in narrative.			✓	
Are any samples/bottles preserved (excluding cooling)? ⁽¹⁾ Note the type of preservative in the comments column – HCl, H ₂ SO ₄ , NaOH, HNO ₃ , etc.			-	
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?			✓	
Are there requested analysis that cannot be performed by S2? Note analysis in the comments column		✓		
Additional Comments (if any):				

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

Control Form #: SRC-001

AS
Custodian Printed Name

2/7/25
Date/Time



Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: Noble - Arens G26-19 Flowline
Project Number: UWRWE-A3241-ABN
Project Manager: Andy Sagen

Reported:
04/11/25 07:42

BKG02@1-2'
2502151-01 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **02/07/25 11:21**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Boron	ND	2.00	mg/L	1	BIC0333	03/06/25	03/18/25	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **02/07/25 11:21**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	0.458	0.200	mg/kg dry	1	BIC1135	03/19/25	04/04/25	EPA 6020B	
Barium	26.3	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
Copper	1.34	0.400	"	"	"	"	"	"	
Lead	3.28	0.200	"	"	"	"	"	"	
Nickel	1.10	0.400	"	"	"	"	"	"	
Silver	ND	0.0200	"	"	"	"	"	"	
Zinc	5.22	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **02/07/25 11:21**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BIB1037	02/19/25	02/19/25	EPA 7196A	

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

Date Sampled: **02/07/25 11:21**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Calcium	51.6	0.0500	mg/L dry	1	BIC0166	03/04/25	03/15/25	EPA 6020B	
Magnesium	27.3	0.0500	"	"	"	"	"	"	
Sodium	164	0.0500	"	"	"	"	"	"	

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.



Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: Noble - Arens G26-19 Flowline
Project Number: UWRWE-A3241-ABN
Project Manager: Andy Sagen

Reported:
04/11/25 07:42

BKG02@1-2'
2502151-01 (Soil)

Summit Scientific

Calculated Analysis

Date Sampled: **02/07/25 11:21**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	4.59	0.00100	units	1	BIC0954	03/17/25	03/17/25	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **02/07/25 11:21**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	86.6		%	1	BIB1056	02/19/25	02/20/25	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **02/07/25 11:21**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	1.18	0.0100	mmhos/cm	1	BIC0168	03/04/25	03/07/25	EPA 120.1	

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

Date Sampled: **02/07/25 11:21**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.03		pH Units	1	BIC0167	03/04/25	03/07/25	EPA 9045D	

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.



Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: Noble - Arens G26-19 Flowline
Project Number: UWRWE-A3241-ABN
Project Manager: Andy Sagen

Reported:
04/11/25 07:42

BKG02@3-4'
2502151-02 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **02/07/25 11:23**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Boron	ND	2.00	mg/L	1	BIC0333	03/06/25	03/18/25	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **02/07/25 11:23**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	0.499	0.200	mg/kg dry	1	BIC1135	03/19/25	04/04/25	EPA 6020B	
Barium	41.0	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
Copper	1.23	0.400	"	"	"	"	"	"	
Lead	3.49	0.200	"	"	"	"	"	"	
Nickel	1.25	0.400	"	"	"	"	"	"	
Silver	0.0231	0.0200	"	"	"	"	"	"	
Zinc	5.54	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **02/07/25 11:23**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BIB1037	02/19/25	02/19/25	EPA 7196A	

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

Date Sampled: **02/07/25 11:23**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Calcium	44.0	0.0500	mg/L dry	1	BIC0166	03/04/25	03/15/25	EPA 6020B	
Magnesium	22.8	0.0500	"	"	"	"	"	"	
Sodium	101	0.0500	"	"	"	"	"	"	

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.



Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: Noble - Arens G26-19 Flowline
Project Number: UWRWE-A3241-ABN
Project Manager: Andy Sagen

Reported:
04/11/25 07:42

BKG02@3-4'
2502151-02 (Soil)

Summit Scientific

Calculated Analysis

Date Sampled: **02/07/25 11:23**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	3.08	0.00100	units	1	BIC0954	03/17/25	03/17/25	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **02/07/25 11:23**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	82.4		%	1	BIB1056	02/19/25	02/20/25	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **02/07/25 11:23**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.727	0.0100	mmhos/cm	1	BIC0168	03/04/25	03/07/25	EPA 120.1	

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

Date Sampled: **02/07/25 11:23**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.85		pH Units	1	BIC0167	03/04/25	03/07/25	EPA 9045D	

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.



Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: Noble - Arens G26-19 Flowline
Project Number: UWRWE-A3241-ABN
Project Manager: Andy Sagen

Reported:
04/11/25 07:42

BKG02@4-5'
2502151-03 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **02/07/25 11:25**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Boron	ND	2.00	mg/L	1	BIC0333	03/06/25	03/18/25	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **02/07/25 11:25**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	0.411	0.200	mg/kg dry	1	BIC1135	03/19/25	04/04/25	EPA 6020B	
Barium	49.6	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
Copper	1.31	0.400	"	"	"	"	"	"	
Lead	3.69	0.200	"	"	"	"	"	"	
Nickel	1.22	0.400	"	"	"	"	"	"	
Silver	0.0256	0.0200	"	"	"	"	"	"	
Zinc	6.12	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **02/07/25 11:25**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BIB1037	02/19/25	02/19/25	EPA 7196A	

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

Date Sampled: **02/07/25 11:25**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Calcium	24.4	0.0500	mg/L dry	1	BIC0166	03/04/25	03/15/25	EPA 6020B	
Magnesium	12.1	0.0500	"	"	"	"	"	"	
Sodium	93.9	0.0500	"	"	"	"	"	"	

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.



Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: Noble - Arens G26-19 Flowline
Project Number: UWRWE-A3241-ABN
Project Manager: Andy Sagen

Reported:
04/11/25 07:42

BKG02@4-5'
2502151-03 (Soil)

Summit Scientific

Calculated Analysis

Date Sampled: **02/07/25 11:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	3.88	0.00100	units	1	BIC0954	03/17/25	03/17/25	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **02/07/25 11:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	82.3		%	1	BIB1056	02/19/25	02/20/25	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **02/07/25 11:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.610	0.0100	mmhos/cm	1	BIC0168	03/04/25	03/07/25	EPA 120.1	

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

Date Sampled: **02/07/25 11:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.88		pH Units	1	BIC0167	03/04/25	03/07/25	EPA 9045D	

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.



Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: Noble - Arens G26-19 Flowline

Project Number: UWRWE-A3241-ABN
Project Manager: Andy Sagen

Reported:
04/11/25 07:42

BKG03@1-2'
2502151-04 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **02/07/25 11:30**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Boron	ND	2.00	mg/L	1	BIC0333	03/06/25	03/18/25	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **02/07/25 11:30**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	0.973	0.200	mg/kg dry	1	BIC1135	03/19/25	04/04/25	EPA 6020B	
Barium	40.0	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
Copper	1.27	0.400	"	"	"	"	"	"	
Lead	5.24	0.200	"	"	"	"	"	"	
Nickel	0.986	0.400	"	"	"	"	"	"	
Silver	ND	0.0200	"	"	"	"	"	"	
Zinc	5.07	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **02/07/25 11:30**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BIB1037	02/19/25	02/19/25	EPA 7196A	

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

Date Sampled: **02/07/25 11:30**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Calcium	41.8	0.0500	mg/L dry	1	BIC0166	03/04/25	03/15/25	EPA 6020B	
Magnesium	25.8	0.0500	"	"	"	"	"	"	
Sodium	315	0.0500	"	"	"	"	"	"	

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.



Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: Noble - Arens G26-19 Flowline
Project Number: UWRWE-A3241-ABN
Project Manager: Andy Sagen

Reported:
04/11/25 07:42

BKG03@1-2'
2502151-04 (Soil)

Summit Scientific

Calculated Analysis

Date Sampled: **02/07/25 11:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	9.45	0.00100	units	1	BIC0954	03/17/25	03/17/25	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **02/07/25 11:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	86.7		%	1	BIB1056	02/19/25	02/20/25	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **02/07/25 11:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	2.12	0.0100	mmhos/cm	1	BIC0168	03/04/25	03/07/25	EPA 120.1	

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

Date Sampled: **02/07/25 11:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.41		pH Units	1	BIC0167	03/04/25	03/07/25	EPA 9045D	

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.



Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: Noble - Arens G26-19 Flowline
Project Number: UWRWE-A3241-ABN
Project Manager: Andy Sagen

Reported:
04/11/25 07:42

BKG03@3-4'
2502151-05 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **02/07/25 11:32**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Boron	ND	2.00	mg/L	1	BIC0333	03/06/25	03/18/25	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **02/07/25 11:32**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	0.450	0.200	mg/kg dry	1	BIC1135	03/19/25	04/04/25	EPA 6020B	
Barium	45.9	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
Copper	1.37	0.400	"	"	"	"	"	"	
Lead	3.63	0.200	"	"	"	"	"	"	
Nickel	1.10	0.400	"	"	"	"	"	"	
Silver	ND	0.0200	"	"	"	"	"	"	
Zinc	5.01	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **02/07/25 11:32**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BIB1037	02/19/25	02/19/25	EPA 7196A	

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

Date Sampled: **02/07/25 11:32**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Calcium	39.9	0.0500	mg/L dry	1	BIC0166	03/04/25	03/15/25	EPA 6020B	
Magnesium	17.1	0.0500	"	"	"	"	"	"	
Sodium	170	0.0500	"	"	"	"	"	"	

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.



Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: Noble - Arens G26-19 Flowline
Project Number: UWRWE-A3241-ABN
Project Manager: Andy Sagen

Reported:
04/11/25 07:42

BKG03@3-4'
2502151-05 (Soil)

Summit Scientific

Calculated Analysis

Date Sampled: **02/07/25 11:32**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	5.67	0.00100	units	1	BIC0954	03/17/25	03/17/25	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **02/07/25 11:32**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	87.4		%	1	BIB1056	02/19/25	02/20/25	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **02/07/25 11:32**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	1.09	0.0100	mmhos/cm	1	BIC0168	03/04/25	03/07/25	EPA 120.1	

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

Date Sampled: **02/07/25 11:32**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.94		pH Units	1	BIC0167	03/04/25	03/07/25	EPA 9045D	

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.



Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: Noble - Arens G26-19 Flowline
Project Number: UWRWE-A3241-ABN
Project Manager: Andy Sagen

Reported:
04/11/25 07:42

BKG03@4-5'
2502151-06 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **02/07/25 11:34**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Boron	ND	2.00	mg/L	1	BIC0333	03/06/25	03/18/25	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **02/07/25 11:34**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	0.601	0.200	mg/kg dry	1	BIC1135	03/19/25	04/04/25	EPA 6020B	
Barium	79.7	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
Copper	2.09	0.400	"	"	"	"	"	"	
Lead	7.19	0.200	"	"	"	"	"	"	
Nickel	2.15	0.400	"	"	"	"	"	"	
Silver	0.0383	0.0200	"	"	"	"	"	"	
Zinc	9.13	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **02/07/25 11:34**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BIB1037	02/19/25	02/19/25	EPA 7196A	

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

Date Sampled: **02/07/25 11:34**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Calcium	38.4	0.0500	mg/L dry	1	BIC0166	03/04/25	03/15/25	EPA 6020B	
Magnesium	15.0	0.0500	"	"	"	"	"	"	
Sodium	112	0.0500	"	"	"	"	"	"	

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.



Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: Noble - Arens G26-19 Flowline
Project Number: UWRWE-A3241-ABN
Project Manager: Andy Sagen

Reported:
04/11/25 07:42

BKG03@4-5'
2502151-06 (Soil)

Summit Scientific

Calculated Analysis

Date Sampled: **02/07/25 11:34**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	3.88	0.00100	units	1	BIC0954	03/17/25	03/17/25	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **02/07/25 11:34**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	78.3		%	1	BIB1056	02/19/25	02/20/25	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **02/07/25 11:34**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.698	0.0100	mmhos/cm	1	BIC0168	03/04/25	03/07/25	EPA 120.1	

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

Date Sampled: **02/07/25 11:34**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.72		pH Units	1	BIC0167	03/04/25	03/07/25	EPA 9045D	

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.



Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: Noble - Arens G26-19 Flowline

Project Number: UWRWE-A3241-ABN
Project Manager: Andy Sagen

Reported:
04/11/25 07:42

BKG04@1-2'
2502151-07 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **02/07/25 11:36**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Boron	ND	2.00	mg/L	1	BIC0333	03/06/25	03/18/25	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **02/07/25 11:36**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	0.599	0.200	mg/kg dry	1	BIC1135	03/19/25	04/04/25	EPA 6020B	
Barium	48.1	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
Copper	1.77	0.400	"	"	"	"	"	"	
Lead	5.24	0.200	"	"	"	"	"	"	
Nickel	1.65	0.400	"	"	"	"	"	"	
Silver	0.0228	0.0200	"	"	"	"	"	"	
Zinc	7.90	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **02/07/25 11:36**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BIB1037	02/19/25	02/19/25	EPA 7196A	

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

Date Sampled: **02/07/25 11:36**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Calcium	421	0.0500	mg/L dry	1	BIC0166	03/04/25	03/15/25	EPA 6020B	
Magnesium	168	0.0500	"	"	"	"	"	"	
Sodium	1130	0.0500	"	"	"	"	"	"	

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.



Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: Noble - Arens G26-19 Flowline
Project Number: UWRWE-A3241-ABN
Project Manager: Andy Sagen

Reported:
04/11/25 07:42

BKG04@1-2'
2502151-07 (Soil)

Summit Scientific

Calculated Analysis

Date Sampled: **02/07/25 11:36**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	11.8	0.00100	units	1	BIC0954	03/17/25	03/17/25	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **02/07/25 11:36**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	84.4		%	1	BIB1056	02/19/25	02/20/25	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **02/07/25 11:36**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	7.64	0.0100	mmhos/cm	1	BIC0168	03/04/25	03/07/25	EPA 120.1	

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

Date Sampled: **02/07/25 11:36**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.83		pH Units	1	BIC0167	03/04/25	03/07/25	EPA 9045D	

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.



Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: Noble - Arens G26-19 Flowline
Project Number: UWRWE-A3241-ABN
Project Manager: Andy Sagen

Reported:
04/11/25 07:42

BKG04@3-4'
2502151-08 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **02/07/25 11:38**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Boron	ND	2.00		mg/L	1	BIC0333	03/06/25	03/18/25	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **02/07/25 11:38**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Arsenic	0.693	0.200		mg/kg dry	1	BIC1135	03/19/25	04/04/25	EPA 6020B	
Barium	66.2	0.400		"	"	"	"	"	"	
Cadmium	ND	0.200		"	"	"	"	"	"	
Copper	1.60	0.400		"	"	"	"	"	"	
Lead	4.77	0.200		"	"	"	"	"	"	
Nickel	1.78	0.400		"	"	"	"	"	"	
Silver	0.0339	0.0200		"	"	"	"	"	"	
Zinc	7.06	0.400		"	"	"	"	"	"	
Selenium	ND	0.260		"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **02/07/25 11:38**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Chromium, Hexavalent	ND	0.30		mg/kg dry	1	BIB1037	02/19/25	02/19/25	EPA 7196A	

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

Date Sampled: **02/07/25 11:38**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Calcium	102	0.0500		mg/L dry	1	BIC0166	03/04/25	03/15/25	EPA 6020B	
Magnesium	63.0	0.0500		"	"	"	"	"	"	
Sodium	597	0.0500		"	"	"	"	"	"	

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.



Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: Noble - Arens G26-19 Flowline
Project Number: UWRWE-A3241-ABN
Project Manager: Andy Sagen

Reported:
04/11/25 07:42

BKG04@3-4'
2502151-08 (Soil)

Summit Scientific

Calculated Analysis

Date Sampled: **02/07/25 11:38**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	11.5	0.00100	units	1	BIC0954	03/17/25	03/17/25	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **02/07/25 11:38**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	86.3		%	1	BIB1056	02/19/25	02/20/25	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **02/07/25 11:38**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	3.58	0.0100	mmhos/cm	1	BIC0168	03/04/25	03/07/25	EPA 120.1	

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

Date Sampled: **02/07/25 11:38**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.00		pH Units	1	BIC0167	03/04/25	03/07/25	EPA 9045D	

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.



Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: Noble - Arens G26-19 Flowline

Project Number: UWRWE-A3241-ABN
Project Manager: Andy Sagen

Reported:
04/11/25 07:42

BKG04@4-5'
2502151-09 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **02/07/25 11:40**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Boron	ND	2.00	mg/L	1	BIC0333	03/06/25	03/18/25	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **02/07/25 11:40**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	0.633	0.200	mg/kg dry	1	BIC1135	03/19/25	04/04/25	EPA 6020B	
Barium	44.5	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
Copper	1.06	0.400	"	"	"	"	"	"	
Lead	3.34	0.200	"	"	"	"	"	"	
Nickel	1.34	0.400	"	"	"	"	"	"	
Silver	0.0220	0.0200	"	"	"	"	"	"	
Zinc	5.14	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **02/07/25 11:40**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BIB1037	02/19/25	02/19/25	EPA 7196A	

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

Date Sampled: **02/07/25 11:40**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Calcium	65.1	0.0500	mg/L dry	1	BIC0166	03/04/25	03/15/25	EPA 6020B	
Magnesium	29.8	0.0500	"	"	"	"	"	"	
Sodium	186	0.0500	"	"	"	"	"	"	

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.



Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: Noble - Arens G26-19 Flowline
Project Number: UWRWE-A3241-ABN
Project Manager: Andy Sagen

Reported:
04/11/25 07:42

BKG04@4-5'
2502151-09 (Soil)

Summit Scientific

Calculated Analysis

Date Sampled: **02/07/25 11:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	4.79	0.00100	units	1	BIC0954	03/17/25	03/17/25	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **02/07/25 11:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	86.3		%	1	BIB1056	02/19/25	02/20/25	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **02/07/25 11:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	1.41	0.0100	mmhos/cm	1	BIC0168	03/04/25	03/07/25	EPA 120.1	

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

Date Sampled: **02/07/25 11:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.78		pH Units	1	BIC0167	03/04/25	03/07/25	EPA 9045D	

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.



Tasman Geosciences
 4725 Independence St.
 Wheat Ridge CO, 80033

Project: Noble - Arens G26-19 Flowline

Project Number: UWRWE-A3241-ABN
 Project Manager: Andy Sagen

Reported:
 04/11/25 07:42

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

Summit Scientific

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

Batch BIC0333 - EPA 3050B

Blank (BIC0333-BLK1)

Prepared: 03/06/25 Analyzed: 03/18/25

Boron ND 2.00 mg/L

LCS (BIC0333-BS1)

Prepared: 03/06/25 Analyzed: 03/18/25

Boron 4.90 2.00 mg/L 5.00 97.9 80-120

Duplicate (BIC0333-DUP1)

Source: 2502148-41

Prepared: 03/06/25 Analyzed: 03/18/25

Boron 0.207 2.00 mg/L 0.207 0.197 20

Matrix Spike (BIC0333-MS1)

Source: 2502148-41

Prepared: 03/06/25 Analyzed: 03/18/25

Boron 5.14 2.00 mg/L 5.00 0.207 98.6 75-125

Matrix Spike Dup (BIC0333-MSD1)

Source: 2502148-41

Prepared: 03/06/25 Analyzed: 03/18/25

Boron 5.18 2.00 mg/L 5.00 0.207 99.4 75-125 0.748 25

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.



Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: Noble - Arens G26-19 Flowline
Project Number: UWRWE-A3241-ABN
Project Manager: Andy Sagen

Reported:
04/11/25 07:42

Total Metals by EPA 6020B - Quality Control
Summit Scientific

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

Batch BIC1135 - EPA 3050B

Blank (BIC1135-BLK1)

Prepared: 03/19/25 Analyzed: 04/08/25

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 (BIC1135-BS1)

Prepared: 03/19/25 Analyzed: 04/08/25

Arsenic	44.2	0.200	mg/kg wet	39.1	113	80-120
Barium	44.5	0.400	"	39.1	114	80-120
Cadmium	2.31	0.200	"	1.95	118	80-120
Copper	44.6	0.400	"	39.1	114	80-120
Lead	23.1	0.200	"	19.5	118	80-120
Nickel	44.3	0.400	"	39.1	113	80-120
Silver	2.23	0.0200	"	1.95	114	80-120
Zinc	44.5	0.400	"	39.1	114	80-120
Selenium	4.69	0.260	"	3.91	120	80-120

Duplicate (BIC1135-DUP1)

Source: 2502148-49

Prepared: 03/19/25 Analyzed: 04/04/25

Arsenic	ND	0.200	mg/kg dry	ND		20
Barium	12.8	0.400	"	14.3	10.7	20
Cadmium	0.0259	0.200	"	0.0293	12.4	20
Copper	0.239	0.400	"	0.254	5.99	20
Lead	1.84	0.200	"	2.40	26.3	20
Nickel	0.281	0.400	"	0.306	8.41	20
Silver	0.0107	0.0200	"	0.0115	7.05	20
Zinc	2.02	0.400	"	2.09	3.42	20
Selenium	ND	0.260	"	ND		20

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.



Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: Noble - Arens G26-19 Flowline

Project Number: UWRWE-A3241-ABN
Project Manager: Andy Sagen

Reported:
04/11/25 07:42

Total Metals by EPA 6020B - Quality Control

Summit Scientific

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

Batch BIC1135 - EPA 3050B

Matrix Spike (BIC1135-MS1)	Source: 2502148-49			Prepared: 03/19/25 Analyzed: 04/08/25								
Arsenic	9.86	0.200	mg/kg dry	41.1	ND	24.0	75-125					QM-05
Barium	147	0.400	"	41.1	14.3	322	75-125					QM-05
Cadmium	2.35	0.200	"	2.06	0.0293	113	75-125					
Copper	10.7	0.400	"	41.1	0.254	25.4	75-125					QM-05
Lead	26.3	0.200	"	20.6	2.40	116	75-125					
Nickel	11.1	0.400	"	41.1	0.306	26.2	75-125					QM-05
Silver	2.16	0.0200	"	2.06	0.0115	104	75-125					
Zinc	16.8	0.400	"	41.1	2.09	35.7	75-125					QM-05
Selenium	4.32	0.260	"	4.11	ND	105	75-125					

Matrix Spike Dup (BIC1135-MSD1)	Source: 2502148-49			Prepared: 03/19/25 Analyzed: 04/08/25								
Arsenic	10.6	0.200	mg/kg dry	40.2	ND	26.5	75-125	7.53	25			QM-05
Barium	148	0.400	"	40.2	14.3	334	75-125	1.14	25			QM-05
Cadmium	2.27	0.200	"	2.01	0.0293	111	75-125	3.57	25			
Copper	11.0	0.400	"	40.2	0.254	26.7	75-125	2.59	25			QM-05
Lead	24.7	0.200	"	20.1	2.40	111	75-125	6.18	25			
Nickel	11.6	0.400	"	40.2	0.306	28.1	75-125	4.42	25			QM-05
Silver	2.07	0.0200	"	2.01	0.0115	102	75-125	4.10	25			
Zinc	16.1	0.400	"	40.2	2.09	34.9	75-125	4.00	25			QM-05
Selenium	4.39	0.260	"	4.02	ND	109	75-125	1.61	25			

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.



Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: Noble - Arens G26-19 Flowline
Project Number: UWRWE-A3241-ABN
Project Manager: Andy Sagen

Reported:
04/11/25 07:42

Hexavalent Chromium by EPA Method 7196 - Quality Control
Summit Scientific

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

Batch BIB1037 - 3060A Mod

Blank (BIB1037-BLK1)

Prepared & Analyzed: 02/19/25

Chromium, Hexavalent ND 0.30 mg/kg wet

LCS (BIB1037-BS1)

Prepared & Analyzed: 02/19/25

Chromium, Hexavalent 26.2 0.30 mg/kg wet 25.5 103 80-120

Duplicate (BIB1037-DUP1)

Source: 2502146-01

Prepared & Analyzed: 02/19/25

Chromium, Hexavalent ND 0.30 mg/kg dry ND 20

Matrix Spike (BIB1037-MS1)

Source: 2502146-01

Prepared & Analyzed: 02/19/25

Chromium, Hexavalent 29.8 0.30 mg/kg dry 28.6 ND 104 75-125

Matrix Spike Dup (BIB1037-MSD1)

Source: 2502146-01

Prepared & Analyzed: 02/19/25

Chromium, Hexavalent 31.6 0.30 mg/kg dry 29.7 ND 106 75-125 5.86 20

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.



Tasman Geosciences
 4725 Independence St.
 Wheat Ridge CO, 80033

Project: Noble - Arens G26-19 Flowline
 Project Number: UWRWE-A3241-ABN
 Project Manager: Andy Sagen

Reported:
 04/11/25 07:42

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

Summit Scientific

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

Batch BIC0166 - General Preparation

Blank (BIC0166-BLK1)

Prepared: 03/04/25 Analyzed: 03/15/25

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

LCS (BIC0166-BS1)

Prepared: 03/04/25 Analyzed: 03/15/25

Calcium	6.00	0.0500	mg/L wet	5.00	120	70-130				
Magnesium	4.62	0.0500	"	5.00	92.4	70-130				
Sodium	4.85	0.0500	"	5.00	97.0	70-130				

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.



Tasman Geosciences
 4725 Independence St.
 Wheat Ridge CO, 80033

Project: Noble - Arens G26-19 Flowline

Project Number: UWRWE-A3241-ABN
 Project Manager: Andy Sagen

Reported:
 04/11/25 07:42

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

Summit Scientific

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

Batch BIB1056 - General Preparation

Duplicate (BIB1056-DUP1)	Source: 2502151-01		Prepared: 02/19/25 Analyzed: 02/20/25			
% Solids	85.6	%		86.6	1.06	20

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.



Tasman Geosciences
 4725 Independence St.
 Wheat Ridge CO, 80033

Project: Noble - Arens G26-19 Flowline
 Project Number: UWRWE-A3241-ABN
 Project Manager: Andy Sagen

Reported:
 04/11/25 07:42

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

Summit Scientific

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

Batch BIC0168 - General Preparation

Blank (BIC0168-BLK1)

Prepared: 03/04/25 Analyzed: 03/07/25

Specific Conductance (EC) ND 0.0100 mmhos/cm

LCS (BIC0168-BS1)

Prepared: 03/04/25 Analyzed: 03/07/25

Specific Conductance (EC) 1.48 0.0100 mmhos/cm 1.41 105 95-105

Duplicate (BIC0168-DUP1)

Source: 2502091-01

Prepared: 03/04/25 Analyzed: 03/07/25

Specific Conductance (EC) 0.731 0.0100 mmhos/cm 0.735 0.433 20

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.



Tasman Geosciences
 4725 Independence St.
 Wheat Ridge CO, 80033

Project: Noble - Arens G26-19 Flowline

Project Number: UWRWE-A3241-ABN
 Project Manager: Andy Sagen

Reported:
 04/11/25 07:42

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

Summit Scientific

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

Batch BIC0167 - General Preparation

LCS (BIC0167-BS1)

Prepared: 03/04/25 Analyzed: 03/07/25

pH	9.18		pH Units	9.18		100	95-105			
----	------	--	----------	------	--	-----	--------	--	--	--

Duplicate (BIC0167-DUP1)

Source: 2502091-01

Prepared: 03/04/25 Analyzed: 03/07/25

pH	9.26		pH Units	9.25		0.0421	20			
----	------	--	----------	------	--	--------	----	--	--	--

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.



Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: Noble - Arens G26-19 Flowline

Project Number: UWRWE-A3241-ABN
Project Manager: Andy Sagen

Reported:
04/11/25 07:42

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