

SITE ASSESSMENT REPORT
CARPIO A26-05
ECMC REMEDIATION # 20992

Prepared for:



2115 117th Avenue
Greeley, CO 80631

Prepared by:



6855 W. 119th Ave
Broomfield, CO 80020

TABLES

TABLE 1
SOIL ANALYTICAL DATA
NOBLE ENERGY, INC. - CARPIO A26-05

Soil Sample ID	Date	¹ Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Total Xylenes (mg/kg)	1,2,4 - TMB (mg/kg)	1,3,5 - TMB (mg/kg)	Naphthalene (mg/kg)	TPH-GRO (mg/kg)	TPH-DRO (mg/kg)	TPH-ORO (mg/kg)	Acenaphthene (mg/kg)	Anthracene (mg/kg)	Benz(a) (mg/kg)	Benzo(a) (mg/kg)	Benzo(b) (mg/kg)	Benzo(k) (mg/kg)	Chrysene (mg/kg)	A,H (mg/kg)	Fluoranthene (mg/kg)	Fluorene (mg/kg)	1,2,3-CD (mg/kg)	Pyrene (mg/kg)	1-M (mg/kg)	2-M (mg/kg)
Residential SSL ²		1.2	490	5.8	58	30	27	2	500			360	1,800	1.1	0.11	1.1	11	110	0.11	240	240	1.1	180	18	24
Protection of Groundwater SSL ^{2,3}		0.0026	0.69	0.78	9.9	0.0081	0.0087	0.0038	500			0.55	6	0.011	0.24	0.3	2.9	9	0.096	8.9	0.54	0.98	1.3	0.006	0.019
FS01@5'	03/01/22	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<0.50	<50	<50	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
FL01-A@4'	03/01/22	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<0.50	<50	<50	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
FL01-F@3'	03/15/22	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<0.50	<50	<50	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500

Soil Sample ID	Date	pH	SAR	EC (mmhos/cm)	Boron (mg/L)
Residential SSL ²		6 - 8.3	<6	<4mmhos/cm	2
FS01@5'	03/01/22	8.19	1.47	0.596	<0.0100
FL01-A@4'	03/01/22	8.09	0.84	0.341	<0.0100
FL01-F@3'	03/15/22	8.10	4.16	6.26	0.407
BG01@4'	12/08/22	NA	NA	1.65	NA
BG01@10'	12/08/22	NA	NA	0.511	NA
BG02@4'	12/08/22	NA	NA	1.79	NA
BG02@10'	12/08/22	NA	NA	0.680	NA
BG03@4'	12/08/22	NA	NA	1.42	NA
BG03@10'	12/08/22	NA	NA	0.723	NA
BG04@4'	12/08/22	NA	NA	1.48	NA
BG04@10'	12/08/22	NA	NA	0.470	NA
BG05@4'	12/08/22	NA	NA	1.88	NA
BG05@10'	12/08/22	NA	NA	0.837	NA
BH01@3'	05/17/23	NA	NA	2.52	NA
BH01@6'	05/17/23	NA	NA	1.27	NA
BH02@3'	05/17/23	NA	NA	3.64	NA
BH02@6'	05/17/23	NA	NA	3.36	NA
BH03@3'	05/17/23	NA	NA	3.84	NA
BH03@6'	05/17/23	NA	NA	1.56	NA
BH04@3'	05/17/23	NA	NA	2.85	NA
BH04@6'	05/17/23	NA	NA	0.961	NA
BH05@3'	05/17/23	NA	NA	0.826	NA
BH05@6'	05/17/23	NA	NA	1.21	NA

Notes:

- Compounds referenced from 2 CCR 404-1, Table 915-1, effective January 15, 2021.
- Soil Screening Levels (SSL) referenced from EPA Regional Screening Levels (EPA RSLs) for Chemical Contaminants at Superfund Sites, effective November 2020.
- SSLs are applicable if a pathway for communication with groundwater is present.

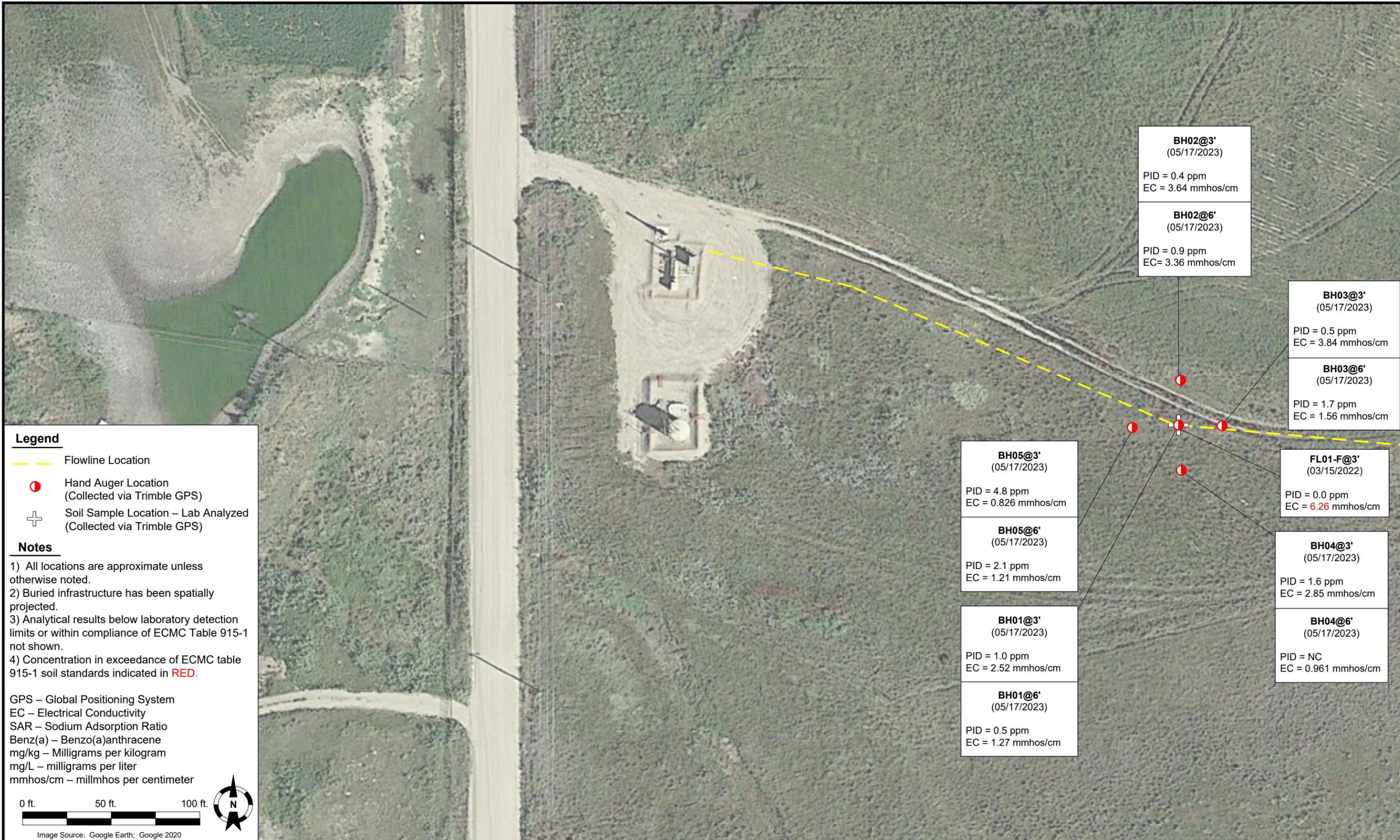
Definitions:

ECMC = Energy and Carbon Management Commission
 TPH-GRO = Total petroleum hydrocarbons - gasoline range organics
 TPH-DRO = Total petroleum hydrocarbons - diesel range organics
 TPH-ORO = Total petroleum hydrocarbons - oil range organics
 mg/kg = Milligrams per kilogram
 SAR = Sodium Adsorption Ratio
 EC = Electrical Conductivity
 mmhos/cm = Millimhos per centimeter
 mg/L = Milligrams per liter
 < = Analytical result is less than the indicated laboratory reporting limit
 NA = Not Analyzed

1,2,4 - TMB = 1,2,4 Trimethylbenzene
 1,3,5 - TMB = 1,3,5 Trimethylbenzene
 Benz(a) = Benzo(a)anthracene
 Benzo(b) = Benzo(b)fluoranthene
 Benzo(k) = Benzo(k)fluoranthene
 Benzo(a) = Benzo(a)pyrene
 A,H = Dibenzo(a,h)anthracene
 1,2,3-CD = Indeno(1,2,3-cd)pyrene
 1-M = 1-methylnaphthalene
 2-M = 2-methylnaphthalene

Highlighted results are equal to or exceed the ECMC Table 915-1 standard

FIGURES



DATE:	01/16/2023
DESIGNED BY:	JW
DRAWN BY:	SB



Tasman Geosciences, Inc.
 6855 W 119th Avenue
 Broomfield, CO 80020

Noble Energy, Inc. – DJ Basin
Carpio A26-05
 SWNW, Section 26, Township 6 North, Range 64 West
 Weld County, Colorado

Hand Auger Soil
 Analytical Results Map
 (3/15/2022 & 05/17/2023)

FIGURE
1



Legend

-  Soil Sample Location – Lab Analyzed (Collected via Trimble GPS)
-  Flowline Location (Collected via Trimble GPS)

Notes

- 1) All locations are approximate unless otherwise noted.
- 2) Site Infrastructure has been removed; shown for illustrative purposes only.
- 3) Analytical results below laboratory detection limits or within compliance of ECMC Table 915-1 not shown.
- 4) Concentration in exceedance of ECMC table 915-1 standards indicated in **RED**.

EC – Electrical Conductivity
 GPS – Global Positioning System
 mg/kg – Milligrams per kilogram
 mmhos/cm – Millimhos per centimeter
 PID – Photoionization detector
 PPM – Parts per million

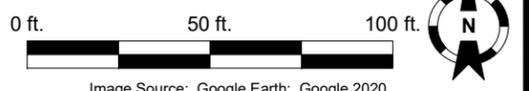


Image Source: Google Earth; Google 2020

DATE:	01/16/2024
DESIGNED BY:	JW
DRAWN BY:	SB



TASMAN Tasman, Inc.
 6855 W 119th Avenue
 Broomfield, CO 80020

Noble Energy, Inc. – DJ Basin
Carpio A26-05
 SWNW, Section 26, Township 6 North, Range 64 West
 Weld County, Colorado

Background Soil Analytical
 Results Map
 (12/08/2022)

FIGURE
 2

ATTACHMENT A
LABORATORY SOIL ANALYTICAL DATA REPORTS

Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

March 14, 2022

Jacob Whritenour

Tasman Geosciences

6855 W. 119th Ave.

Broomfield, CO 80020

RE: Noble - Carpio A26-05

Work Order #2203009

Enclosed are the results of analyses for samples received by Summit Scientific on 03/01/22 16:20. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Paul Shrewsbury

President



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

Project: Noble - Carpio A26-05
Project Number: UWRWE-A1698-ABN
Project Manager: Jacob Whritenour

Reported:
03/14/22 10:56

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
FS01@5'	2203009-02	Soil	03/01/22 13:33	03/01/22 16:20
FL01-A@4'	2203009-03	Soil	03/01/22 13:35	03/01/22 16:20

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.

Summit Scientific

S₂

2203009

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

Page 1 of 1

Client: Noble / Tasman Geosciences Project Manager: Jake Whritenour, Invoice: Jeff White

Address: 6855 W. 119th Ave. E-Mail: jwhritenour@tasman-geo.com

City/State/Zip: Broomfield / CO / 80020

Phone: 3038290530 / 7206168383 Project Name: Carpio A26-05

Sampler Name: Halina North & Stanley Gilbert Project Number: UWRWE-A1698-ABN

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix			Analysis Requested						Special Instructions	
					HCl	HNO3	None	Other	Water	Soil	Air-Canister #	Other	VOC - 915	TPH - 915	PAH - 915	SAR, EC, pH	Boron - HWS		HOLD
1	SS04@2.5'	3/1/22	13:31	2			X			X			X	X	X	X	X	X	HOLD
2	FS01@5'	3/1/22	13:33	2			X			X			X	X	X	X	X		
3	FL01-A@4'	3/1/22	13:35	2			X			X			X	X	X	X	X		
4																			
5																			
6																			
7																			
8																			
9																			
10																			

Relinquished by: <u>Halina North</u> Date/Time: <u>3/1/22 16:20</u>	Received by: <u>Tasman's Lock Box</u> Date/Time: <u>3/1/22 16:20</u>	Turn Around Time (Check) <input type="checkbox"/> Same Day <input type="checkbox"/> 72 hours <input type="checkbox"/> 24 hours <input checked="" type="checkbox"/> Standard <input type="checkbox"/> 48 hours <input type="checkbox"/> Sample Integrity: Temperature Upon Receipt: <u>4.4</u> Samples Intact: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Notes:
Relinquished by: <u>Tasman's Lock Box</u> Date/Time: <u>3/1/22 16:20</u>	Received by: <u>[Signature]</u> Date/Time: <u>3/1/22 16:20</u>		
Relinquished by: _____ Date/Time: _____	Received by: _____ Date/Time: _____		

S₂

Sample Receipt Checklist

S2 Work Order# 2203009

Client: Noble-Tasman Client Project ID: Carpic A2C6-05

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

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

Temp (°C) 44

Thermometer ID: G86A9201901378

	Yes	No	N/A	Comments (if any)
If samples require cooling, was the temperature at 4°C +/- 2°C ⁽¹⁾ ? NOTE: If samples are delivered the same day of sampling, this requirement is met if there is evidence that cooling has begun.	-			ON ICE
Were all samples received intact ⁽¹⁾ ?	-			
Was adequate sample volume provided ⁽¹⁾ ?	-			
If custody seals are present, are they intact ⁽¹⁾ ?	-			
Are samples with holding times due within 48 hours sample due within 48 hours present?		-		
Is a chain-of-custody (COC) form present and filled out completely ⁽¹⁾ ?	-			
Does the COC agree with the number and type of sample bottles received ⁽¹⁾ ?	-			
Do the sample IDs on the bottle labels match the COC ⁽¹⁾ ?	-			
Is the COC properly relinquished by the client w/ date and time recorded ⁽¹⁾ ?	-			
For volatiles in water – is there headspace present? If yes, contact client and note in narrative.			-	
Are samples preserved that require preservation (excluding cooling) ⁽¹⁾ ? Note the type of preservative in the Comments column – HCl, H2SO4, NaOH, HNO3, 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?			-	

Additional Comments (if any):

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

[Signature]
Custodian Printed Name or Initials

3-1-22
Date/Time



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

Project: Noble - Carpio A26-05
Project Number: UWRWE-A1698-ABN
Project Manager: Jacob Whritenour

Reported:
03/14/22 10:56

FS01@5'
2203009-02 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **03/01/22 13:33**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	0.0020		mg/kg	1	BFC0046	03/03/22	03/04/22	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: **03/01/22 13:33**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4		104 %		70-130		"	"	"	"	
Surrogate: Toluene-d8		96.8 %		70-130		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		91.0 %		70-130		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **03/01/22 13:33**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
C10-C28 (DRO)	ND	50		mg/kg	1	BFC0049	03/03/22	03/04/22	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **03/01/22 13:33**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: o-Terphenyl		113 %		30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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

Project: Noble - Carpio A26-05
Project Number: UWRWE-A1698-ABN
Project Manager: Jacob Whritenour

Reported:
03/14/22 10:56

FS01@5'
2203009-02 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **03/01/22 13:33**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BFC0059	03/03/22	03/05/22	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: **03/01/22 13:33**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		57.4 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		53.1 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **03/01/22 13:33**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	0.0100	mg/L	1	BFC0079	03/04/22	03/10/22	EPA 6020B	

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

Date Sampled: **03/01/22 13:33**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Summit Scientific

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

Project: Noble - Carpio A26-05
Project Number: UWRWE-A1698-ABN
Project Manager: Jacob Whritenour

Reported:
03/14/22 10:56

FS01@5'
2203009-02 (Soil)

Summit Scientific

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	131	0.0593	mg/L dry	1	BFC0060	03/03/22	03/10/22	EPA 6020B	
Magnesium	67.8	0.0593	"	"	"	"	"	"	
Sodium	83.3	0.0593	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **03/01/22 13:33**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	1.47	0.00100	units	1	BFC0213	03/11/22	03/11/22	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **03/01/22 13:33**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	84.3		%	1	BFC0115	03/07/22	03/07/22	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **03/01/22 13:33**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.596	0.0100	mmhos/cm	1	BFC0035	03/02/22	03/02/22	EPA 120.1	

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

Date Sampled: **03/01/22 13:33**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.19		pH Units	1	BFC0034	03/02/22	03/02/22	EPA 9045D	

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Broomfield CO, 80020

Project: Noble - Carpio A26-05
Project Number: UWRWE-A1698-ABN
Project Manager: Jacob Whritenour

Reported:
03/14/22 10:56

FL01-A@4'
2203009-03 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **03/01/22 13:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BFC0046	03/03/22	03/04/22	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: **03/01/22 13:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		97.4 %	70-130		"	"	"	"	
Surrogate: Toluene-d8		97.0 %	70-130		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		89.1 %	70-130		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **03/01/22 13:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BFC0049	03/03/22	03/04/22	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **03/01/22 13:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		109 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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

Project: Noble - Carpio A26-05
Project Number: UWRWE-A1698-ABN
Project Manager: Jacob Whritenour

Reported:
03/14/22 10:56

FL01-A@4'
2203009-03 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **03/01/22 13:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BFC0059	03/03/22	03/05/22	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: **03/01/22 13:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		49.7 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		48.9 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **03/01/22 13:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	0.0100	mg/L	1	BFC0079	03/04/22	03/10/22	EPA 6020B	

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

Date Sampled: **03/01/22 13:35**

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: Noble - Carpio A26-05
Project Number: UWRWE-A1698-ABN
Project Manager: Jacob Whritenour

Reported:
03/14/22 10:56

FL01-A@4'
2203009-03 (Soil)

Summit Scientific

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	34.6	0.0618	mg/L dry	1	BFC0060	03/03/22	03/10/22	EPA 6020B	
Magnesium	17.2	0.0618	"	"	"	"	"	"	
Sodium	24.1	0.0618	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **03/01/22 13:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.836	0.00100	units	1	BFC0213	03/11/22	03/11/22	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **03/01/22 13:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	80.9		%	1	BFC0115	03/07/22	03/07/22	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **03/01/22 13:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.341	0.0100	mmhos/cm	1	BFC0035	03/02/22	03/02/22	EPA 120.1	

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

Date Sampled: **03/01/22 13:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.09		pH Units	1	BFC0034	03/02/22	03/02/22	EPA 9045D	

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

Project: Noble - Carpio A26-05
Project Number: UWRWE-A1698-ABN
Project Manager: Jacob Whritenour

Reported:
03/14/22 10:56

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Summit Scientific

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

Batch BFC0046 - EPA 5030 Soil MS

Blank (BFC0046-BLK1)

Prepared: 03/03/22 Analyzed: 03/04/22

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	"							
<i>Surrogate: 1,2-Dichloroethane-d4</i>	0.0386		"	0.0400		96.5	70-130			
<i>Surrogate: Toluene-d8</i>	0.0386		"	0.0400		96.6	70-130			
<i>Surrogate: 4-Bromofluorobenzene</i>	0.0362		"	0.0400		90.6	70-130			

LCS (BFC0046-BS1)

Prepared: 03/03/22 Analyzed: 03/04/22

Benzene	0.0610	0.0020	mg/kg	0.0750		81.3	70-130			
Toluene	0.0673	0.0050	"	0.0750		89.7	70-130			
Ethylbenzene	0.0674	0.0050	"	0.0750		89.9	70-130			
m,p-Xylene	0.140	0.010	"	0.150		93.5	70-130			
o-Xylene	0.0735	0.0050	"	0.0750		98.0	70-130			
1,2,4-Trimethylbenzene	0.0762	0.0050	"	0.0750		102	70-130			
1,3,5-Trimethylbenzene	0.0749	0.0050	"	0.0750		99.9	70-130			
Naphthalene	0.0693	0.0038	"	0.0750		92.4	70-130			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	0.0395		"	0.0400		98.7	70-130			
<i>Surrogate: Toluene-d8</i>	0.0390		"	0.0400		97.6	70-130			
<i>Surrogate: 4-Bromofluorobenzene</i>	0.0383		"	0.0400		95.8	70-130			

Matrix Spike (BFC0046-MS1)

Source: 2203005-01

Prepared: 03/03/22 Analyzed: 03/04/22

Benzene	0.0623	0.0020	mg/kg	0.0750	ND	83.1	70-130			
Toluene	0.0681	0.0050	"	0.0750	ND	90.8	70-130			
Ethylbenzene	0.0672	0.0050	"	0.0750	ND	89.6	70-130			
m,p-Xylene	0.140	0.010	"	0.150	ND	93.5	70-130			
o-Xylene	0.0731	0.0050	"	0.0750	ND	97.5	70-130			
1,2,4-Trimethylbenzene	0.0765	0.0050	"	0.0750	ND	102	70-130			
1,3,5-Trimethylbenzene	0.0748	0.0050	"	0.0750	ND	99.7	70-130			
Naphthalene	0.0798	0.0038	"	0.0750	ND	106	70-130			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	0.0387		"	0.0400		96.7	70-130			
<i>Surrogate: Toluene-d8</i>	0.0394		"	0.0400		98.4	70-130			
<i>Surrogate: 4-Bromofluorobenzene</i>	0.0383		"	0.0400		95.8	70-130			

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

Project: Noble - Carpio A26-05
Project Number: UWRWE-A1698-ABN
Project Manager: Jacob Whritenour

Reported:
03/14/22 10:56

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Summit Scientific

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

Batch BFC0046 - EPA 5030 Soil MS

Matrix Spike Dup (BFC0046-MSD1)	Source: 2203005-01			Prepared: 03/03/22 Analyzed: 03/04/22						
Benzene	0.0611	0.0020	mg/kg	0.0750	ND	81.5	70-130	1.90	30	
Toluene	0.0673	0.0050	"	0.0750	ND	89.7	70-130	1.29	30	
Ethylbenzene	0.0670	0.0050	"	0.0750	ND	89.3	70-130	0.268	30	
m,p-Xylene	0.141	0.010	"	0.150	ND	94.2	70-130	0.810	30	
o-Xylene	0.0738	0.0050	"	0.0750	ND	98.4	70-130	0.899	30	
1,2,4-Trimethylbenzene	0.0785	0.0050	"	0.0750	ND	105	70-130	2.59	30	
1,3,5-Trimethylbenzene	0.0761	0.0050	"	0.0750	ND	101	70-130	1.79	30	
Naphthalene	0.0782	0.0038	"	0.0750	ND	104	70-130	2.01	30	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0388</i>		<i>"</i>	<i>0.0400</i>		<i>97.1</i>	<i>70-130</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0394</i>		<i>"</i>	<i>0.0400</i>		<i>98.6</i>	<i>70-130</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0381</i>		<i>"</i>	<i>0.0400</i>		<i>95.3</i>	<i>70-130</i>			

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Project: Noble - Carpio A26-05
Project Number: UWRWE-A1698-ABN
Project Manager: Jacob Whritenour

Reported:
03/14/22 10:56

Extractable Petroleum Hydrocarbons by 8015 - Quality Control
Summit Scientific

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

Batch BFC0049 - EPA 3550A

Blank (BFC0049-BLK1)

Prepared: 03/03/22 Analyzed: 03/04/22

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

LCS (BFC0049-BS1)

Prepared: 03/03/22 Analyzed: 03/04/22

C10-C28 (DRO)	523	50	mg/kg	500	105	70-130				
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Matrix Spike (BFC0049-MS1)

Source: 2203005-03

Prepared: 03/03/22 Analyzed: 03/04/22

C10-C28 (DRO)	608	50	mg/kg	500	21.1	117	70-130			
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Matrix Spike Dup (BFC0049-MSD1)

Source: 2203005-03

Prepared: 03/03/22 Analyzed: 03/04/22

C10-C28 (DRO)	604	50	mg/kg	500	21.1	117	70-130	0.564	20	
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Project: Noble - Carpio A26-05
Project Number: UWRWE-A1698-ABN
Project Manager: Jacob Whritenour

Reported:
03/14/22 10:56

PAH by EPA Method 8270D SIM - Quality Control

Summit Scientific

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

Batch BFC0059 - EPA 5030 Soil MS

Blank (BFC0059-BLK1)

Prepared: 03/03/22 Analyzed: 03/04/22

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	0.0213		"	0.0333		64.0	40-150			
Surrogate: Fluoranthene-d10	0.0190		"	0.0333		57.0	40-150			

LCS (BFC0059-BS1)

Prepared: 03/03/22 Analyzed: 03/04/22

Acenaphthene	0.0190	0.00500	mg/kg	0.0333		57.0	31-137			
Anthracene	0.0189	0.00500	"	0.0333		56.7	30-120			
Benzo (a) anthracene	0.0209	0.00500	"	0.0333		62.6	30-120			
Benzo (a) pyrene	0.0157	0.00500	"	0.0333		47.0	30-120			
Benzo (b) fluoranthene	0.0161	0.00500	"	0.0333		48.2	30-120			
Benzo (k) fluoranthene	0.0176	0.00500	"	0.0333		52.8	30-120			
Chrysene	0.0217	0.00500	"	0.0333		65.0	30-120			
Dibenz (a,h) anthracene	0.0135	0.00500	"	0.0333		40.4	30-120			
Fluoranthene	0.0192	0.00500	"	0.0333		57.5	30-120			
Fluorene	0.0198	0.00500	"	0.0333		59.5	30-120			
Indeno (1,2,3-cd) pyrene	0.0154	0.00500	"	0.0333		46.1	30-120			
Pyrene	0.0214	0.00500	"	0.0333		64.1	35-142			
1-Methylnaphthalene	0.0198	0.00500	"	0.0333		59.3	35-142			
2-Methylnaphthalene	0.0208	0.00500	"	0.0333		62.4	35-142			
Surrogate: 2-Methylnaphthalene-d10	0.0207		"	0.0333		62.1	40-150			
Surrogate: Fluoranthene-d10	0.0206		"	0.0333		61.8	40-150			

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Broomfield CO, 80020

Project: Noble - Carpio A26-05
Project Number: UWRWE-A1698-ABN
Project Manager: Jacob Whritenour

Reported:
03/14/22 10:56

PAH by EPA Method 8270D SIM - Quality Control

Summit Scientific

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

Batch BFC0059 - EPA 5030 Soil MS

Matrix Spike (BFC0059-MS1)	Source: 2202234-02			Prepared: 03/03/22 Analyzed: 03/04/22						
Acenaphthene	0.0144	0.00500	mg/kg	0.0333	ND	43.2	31-137			
Anthracene	0.0144	0.00500	"	0.0333	ND	43.3	30-120			
Benzo (a) anthracene	0.0171	0.00500	"	0.0333	0.00259	43.6	30-120			
Benzo (a) pyrene	0.0127	0.00500	"	0.0333	ND	38.0	30-120			
Benzo (b) fluoranthene	0.0164	0.00500	"	0.0333	0.00600	31.2	30-120			
Benzo (k) fluoranthene	0.0139	0.00500	"	0.0333	ND	41.7	30-120			
Chrysene	0.0171	0.00500	"	0.0333	0.00362	40.5	30-120			
Dibenz (a,h) anthracene	0.0192	0.00500	"	0.0333	ND	57.7	30-120			
Fluoranthene	0.0154	0.00500	"	0.0333	0.00223	39.5	30-120			
Fluorene	0.0157	0.00500	"	0.0333	ND	47.1	30-120			
Indeno (1,2,3-cd) pyrene	0.0177	0.00500	"	0.0333	ND	53.0	30-120			
Pyrene	0.0186	0.00500	"	0.0333	0.00559	39.0	35-142			
1-Methylnaphthalene	0.0183	0.00500	"	0.0333	ND	54.8	15-130			
2-Methylnaphthalene	0.0182	0.00500	"	0.0333	ND	54.6	15-130			
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0190</i>	<i>"</i>	<i>"</i>	<i>0.0333</i>	<i>"</i>	<i>56.9</i>	<i>40-150</i>			
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0168</i>	<i>"</i>	<i>"</i>	<i>0.0333</i>	<i>"</i>	<i>50.5</i>	<i>40-150</i>			

Matrix Spike Dup (BFC0059-MSD1)	Source: 2202234-02			Prepared: 03/03/22 Analyzed: 03/04/22						
Acenaphthene	0.0149	0.00500	mg/kg	0.0333	ND	44.6	31-137	3.09	30	
Anthracene	0.0152	0.00500	"	0.0333	ND	45.6	30-120	5.01	30	
Benzo (a) anthracene	0.0173	0.00500	"	0.0333	0.00259	44.1	30-120	1.01	30	
Benzo (a) pyrene	0.0126	0.00500	"	0.0333	ND	37.8	30-120	0.548	30	
Benzo (b) fluoranthene	0.0173	0.00500	"	0.0333	0.00600	34.0	30-120	5.48	30	
Benzo (k) fluoranthene	0.0141	0.00500	"	0.0333	ND	42.4	30-120	1.64	30	
Chrysene	0.0172	0.00500	"	0.0333	0.00362	40.8	30-120	0.610	30	
Dibenz (a,h) anthracene	0.0171	0.00500	"	0.0333	ND	51.4	30-120	11.5	30	
Fluoranthene	0.0153	0.00500	"	0.0333	0.00223	39.1	30-120	0.950	30	
Fluorene	0.0165	0.00500	"	0.0333	ND	49.5	30-120	5.01	30	
Indeno (1,2,3-cd) pyrene	0.0149	0.00500	"	0.0333	ND	44.8	30-120	16.9	30	
Pyrene	0.0189	0.00500	"	0.0333	0.00559	39.8	35-142	1.35	30	
1-Methylnaphthalene	0.0160	0.00500	"	0.0333	ND	48.0	15-130	13.3	50	
2-Methylnaphthalene	0.0164	0.00500	"	0.0333	ND	49.2	15-130	10.3	50	
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0175</i>	<i>"</i>	<i>"</i>	<i>0.0333</i>	<i>"</i>	<i>52.5</i>	<i>40-150</i>			
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0167</i>	<i>"</i>	<i>"</i>	<i>0.0333</i>	<i>"</i>	<i>50.2</i>	<i>40-150</i>			

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6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - Carpio A26-05
Project Number: UWRWE-A1698-ABN
Project Manager: Jacob Whritenour

Reported:
03/14/22 10:56

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

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

Batch BFC0079 - EPA 3050B

Blank (BFC0079-BLK1)

Prepared: 03/04/22 Analyzed: 03/10/22

Boron ND 0.0100 mg/L

LCS (BFC0079-BS1)

Prepared: 03/04/22 Analyzed: 03/10/22

Boron 4.10 0.0100 mg/L 5.00 82.1 80-120

Duplicate (BFC0079-DUP1)

Source: 2203006-01

Prepared: 03/04/22 Analyzed: 03/10/22

Boron ND 0.0100 mg/L ND 20

Matrix Spike (BFC0079-MS1)

Source: 2203006-01

Prepared: 03/04/22 Analyzed: 03/10/22

Boron 3.92 0.0100 mg/L 5.00 ND 78.4 75-125

Matrix Spike Dup (BFC0079-MSD1)

Source: 2203006-01

Prepared: 03/04/22 Analyzed: 03/10/22

Boron 3.96 0.0100 mg/L 5.00 ND 79.1 75-125 0.998 25

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Broomfield CO, 80020

Project: Noble - Carpio A26-05
Project Number: UWRWE-A1698-ABN
Project Manager: Jacob Whritenour

Reported:
03/14/22 10:56

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 BFC0060 - General Preparation

Blank (BFC0060-BLK1)

Prepared: 03/03/22 Analyzed: 03/10/22

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

LCS (BFC0060-BS1)

Prepared: 03/03/22 Analyzed: 03/10/22

Calcium	5.40	0.0500	mg/L wet	5.00	108	70-130
Magnesium	5.14	0.0500	"	5.00	103	70-130
Sodium	4.78	0.0500	"	5.00	95.7	70-130

Summit Scientific

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6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - Carpio A26-05

Project Number: UWRWE-A1698-ABN

Project Manager: Jacob Whritenour

Reported:
03/14/22 10:56

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 BFC0115 - General Preparation

Duplicate (BFC0115-DUP1)

Source: 2203001-09

Prepared & Analyzed: 03/07/22

% Solids	98.3		%		98.2			0.0887	20	
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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - Carpio A26-05
Project Number: UWRWE-A1698-ABN
Project Manager: Jacob Whritenour

Reported:
03/14/22 10:56

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 BFC0035 - General Preparation

Blank (BFC0035-BLK1)

Prepared & Analyzed: 03/02/22

Specific Conductance (EC) ND 0.0100 mmhos/cm

LCS (BFC0035-BS1)

Prepared & Analyzed: 03/02/22

Specific Conductance (EC) 0.150 0.0100 mmhos/cm 0.150 99.8 95-105

Duplicate (BFC0035-DUP1)

Source: 2203005-04

Prepared & Analyzed: 03/02/22

Specific Conductance (EC) 0.409 0.0100 mmhos/cm 0.409 0.0733 20

Summit Scientific

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

Project: Noble - Carpio A26-05
Project Number: UWRWE-A1698-ABN
Project Manager: Jacob Whritenour

Reported:
03/14/22 10:56

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 BFC0034 - General Preparation

LCS (BFC0034-BS1)

Prepared & Analyzed: 03/02/22

pH	9.15	pH Units	9.18	99.7	95-105
----	------	----------	------	------	--------

Duplicate (BFC0034-DUP1)

Source: 2203005-04

Prepared & Analyzed: 03/02/22

pH	8.16	pH Units	8.15	0.123	20
----	------	----------	------	-------	----

Summit Scientific

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

Project: Noble - Carpio A26-05
Project Number: UWRWE-A1698-ABN
Project Manager: Jacob Whritenour

Reported:
03/14/22 10:56

Notes and Definitions

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

Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

April 01, 2022

Jacob Whritenour

Tasman Geosciences

6855 W. 119th Ave.

Broomfield, CO 80020

RE: Noble - Carpio A26-05

Work Order #2203257

Enclosed are the results of analyses for samples received by Summit Scientific on 03/15/22 15:05. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Paul Shrewsbury

President



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

Project: Noble - Carpio A26-05

Project Number: UWRWE-A1698-ABN

Project Manager: Jacob Whritenour

Reported:
04/01/22 10:47

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
FL01-F@3'	2203257-01	Soil	03/15/22 12:36	03/15/22 15:05
GW01@3'	2203257-02	Water	03/15/22 12:05	03/15/22 15:05
GW02@3'	2203257-03	Water	03/15/22 12:20	03/15/22 15:05
GW03@3'	2203257-04	Water	03/15/22 12:30	03/15/22 15:05

Summit Scientific

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Summit Scientific

S₂

2203257

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

Client: Noble / Tasman Project Manager: Jake Whritenour, Invoice: Jeff White
Address: 6855 W. 119th Ave E-Mail: jwhritenour@tasman-geo.com
City/State/Zip: Broomfield/ CO/ 80020
Phone: 303261-6246 Project Name: CARPIO A26-05
Sampler Name: Stanley Gilbert Project Number: UWRWE-A2698-ABN

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix				Analysis Requested							Special Instructions	
					HCl	HNO3	None	Other	Water	Soil	Air-Canister #	Other	VOC - 915	TPH - 915	PAH - 915	pH, EC, SAR	Boron - HWS	HOLD	TEX, NAP		TMB
1	FLO1-F @ 3'	3/15/22	12:36	2			X			X				X	X	X	X	X			SAR, EC, PH By Saturated paste
2	GW01 @ 3'	↓	12:05	3					X										X		
3	GW02 @ 3'	↓	12:20	3					X										X		
4	GW03 @ 3'	↓	12:30	3					X										X		
5																					
6																					
7																					
8																					
9																					
10																					

Relinquished by: 	Date/Time: 3/15/22 15:05	Received by: Tasman's Lock Box	Date/Time: 3/15/22 15:05	Turn Around Time (Check) Same Day _____ 72 hours _____ 24 hours _____ Standard <input checked="" type="checkbox"/> 48 hours _____ Sample Integrity: Temperature Upon Receipt: <u>4.9</u> Samples Intact: <input checked="" type="radio"/> Yes <input type="radio"/> No	Notes:
Relinquished by: Tasman's Lock Box	Date/Time:	Received by: 	Date/Time: 3/15/22 15:05		
Relinquished by:	Date/Time:	Received by:	Date/Time:		

S₂

Sample Receipt Checklist

S2 Work Order# 2203257

Client: Noble-Tasman Client Project ID: Carpio AZG-05

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

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

Temp (°C) 4.9

Thermometer ID: G86A9201901378

	Yes	No	N/A	Comments (if any)
If samples require cooling, was the temperature at 4°C +/- 2°C ⁽¹⁾ ? NOTE: If samples are delivered the same day of sampling, this requirement is met if there is evidence that cooling has begun.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	on ICE
Were all samples received intact ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Was adequate sample volume provided ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
If custody seals are present, are they intact ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Are samples with holding times due within 48 hours sample due within 48 hours present?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Is a chain-of-custody (COC) form present and filled out completely ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Does the COC agree with the number and type of sample bottles received ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Do the sample IDs on the bottle labels match the COC ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Is the COC properly relinquished by the client w/ date and time recorded ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
For volatiles in water – is there headspace present? If yes, contact client and note in narrative.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Are samples preserved that require preservation (excluding cooling) ⁽¹⁾ ? Note the type of preservative in the Comments column – HCl, H2SO4, NaOH, HNO3, etc.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
If samples are acid preserved for metals, is the pH ≤ 2 ⁽¹⁾ ? Record the pH in Comments.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
If dissolved metals are requested, were samples field filtered?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

Additional Comments (if any):

PH

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

[Signature]
Custodian Printed Name or Initials

3.15.22
Date/Time



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

Project: Noble - Carpio A26-05
Project Number: UWRWE-A1698-ABN
Project Manager: Jacob Whritenour

Reported:
04/01/22 10:47

FL01-F@3'
2203257-01 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **03/15/22 12:36**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	0.0020		mg/kg	1	BFC0327	03/16/22	03/17/22	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: **03/15/22 12:36**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4		99.8 %		50-150		"	"	"	"	
Surrogate: Toluene-d8		100 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		96.1 %		50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **03/15/22 12:36**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
C10-C28 (DRO)	ND	50		mg/kg	1	BFC0328	03/16/22	03/17/22	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **03/15/22 12:36**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: o-Terphenyl		94.8 %		30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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

Project: Noble - Carpio A26-05
Project Number: UWRWE-A1698-ABN
Project Manager: Jacob Whritenour

Reported:
04/01/22 10:47

FL01-F@3'
2203257-01 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **03/15/22 12:36**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BFC0315	03/16/22	03/17/22	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: **03/15/22 12:36**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		55.8 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		43.5 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **03/15/22 12:36**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.407	0.0100	mg/L	1	BFC0372	03/25/22	03/30/22	EPA 6020B	

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

Date Sampled: **03/15/22 12:36**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Summit Scientific

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

Project: Noble - Carpio A26-05
Project Number: UWRWE-A1698-ABN
Project Manager: Jacob Whritenour

Reported:
04/01/22 10:47

FL01-F@3'
2203257-01 (Soil)

Summit Scientific

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	419	0.0585	mg/L dry	1	BFC0357	03/17/22	03/22/22	EPA 6020B	
Magnesium	403	0.0585	"	"	"	"	"	"	
Sodium	497	0.0585	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **03/15/22 12:36**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	4.16	0.00100	units	1	BFC0512	03/23/22	03/23/22	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **03/15/22 12:36**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	85.5		%	1	BFC0445	03/21/22	03/21/22	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **03/15/22 12:36**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	6.26	0.0100	mmhos/cm	1	BFC0390	03/18/22	03/18/22	EPA 120.1	

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

Date Sampled: **03/15/22 12:36**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.10		pH Units	1	BFC0389	03/18/22	03/18/22	EPA 9045D	

Summit Scientific

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

Project: Noble - Carpio A26-05
Project Number: UWRWE-A1698-ABN
Project Manager: Jacob Whritenour

Reported:
04/01/22 10:47

GW01@3'
2203257-02 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **03/15/22 12:05**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Benzene	ND	1.0	ug/l	1	BFC0358	03/17/22	03/18/22	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	2.0	"	"	"	"	"	"	
Naphthalene	66	1.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	

Date Sampled: **03/15/22 12:05**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: 1,2-Dichloroethane-d4		138 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		104 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		103 %	21-167		"	"	"	"	

Summit Scientific

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

Project: Noble - Carpio A26-05
Project Number: UWRWE-A1698-ABN
Project Manager: Jacob Whritenour

Reported:
04/01/22 10:47

GW02@3'
2203257-03 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **03/15/22 12:20**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	1.0		ug/l	1	BFC0358	03/17/22	03/18/22	EPA 8260B	
Toluene	ND	1.0		"	"	"	"	"	"	
Ethylbenzene	ND	1.0		"	"	"	"	"	"	
Xylenes (total)	12	2.0		"	"	"	"	"	"	
Naphthalene	32	1.0		"	"	"	"	"	"	
1,2,4-Trimethylbenzene	1.3	1.0		"	"	"	"	"	"	
1,3,5-Trimethylbenzene	1.2	1.0		"	"	"	"	"	"	

Date Sampled: **03/15/22 12:20**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4		110 %		23-173		"	"	"	"	
Surrogate: Toluene-d8		131 %		20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		102 %		21-167		"	"	"	"	

Summit Scientific

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

Project: Noble - Carpio A26-05
Project Number: UWRWE-A1698-ABN
Project Manager: Jacob Whritenour

Reported:
04/01/22 10:47

GW03@3'
2203257-04 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **03/15/22 12:30**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Benzene	ND	1.0	ug/l	1	BFC0358	03/17/22	03/18/22	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	2.0	"	"	"	"	"	"	
Naphthalene	ND	1.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	

Date Sampled: **03/15/22 12:30**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: 1,2-Dichloroethane-d4		112 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		104 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		99.2 %	21-167		"	"	"	"	

Summit Scientific

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

Project: Noble - Carpio A26-05
Project Number: UWRWE-A1698-ABN
Project Manager: Jacob Whritenour

Reported:
04/01/22 10:47

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Summit Scientific

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

Batch BFC0327 - EPA 5030 Soil MS

Blank (BFC0327-BLK1)

Prepared & Analyzed: 03/16/22

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	"							
<i>Surrogate: 1,2-Dichloroethane-d4</i>	0.0391		"	0.0400		97.6	50-150			
<i>Surrogate: Toluene-d8</i>	0.0413		"	0.0400		103	50-150			
<i>Surrogate: 4-Bromofluorobenzene</i>	0.0378		"	0.0400		94.6	50-150			

LCS (BFC0327-BS1)

Prepared & Analyzed: 03/16/22

Benzene	0.0599	0.0020	mg/kg	0.0750		79.9	70-130			
Toluene	0.0638	0.0050	"	0.0750		85.1	70-130			
Ethylbenzene	0.0660	0.0050	"	0.0750		88.0	70-130			
m,p-Xylene	0.140	0.010	"	0.150		93.4	70-130			
o-Xylene	0.0674	0.0050	"	0.0750		89.9	70-130			
1,2,4-Trimethylbenzene	0.0704	0.0050	"	0.0750		93.8	70-130			
1,3,5-Trimethylbenzene	0.0695	0.0050	"	0.0750		92.7	70-130			
Naphthalene	0.0632	0.0038	"	0.0750		84.2	70-130			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	0.0381		"	0.0400		95.2	50-150			
<i>Surrogate: Toluene-d8</i>	0.0403		"	0.0400		101	50-150			
<i>Surrogate: 4-Bromofluorobenzene</i>	0.0398		"	0.0400		99.5	50-150			

Matrix Spike (BFC0327-MS1)

Source: 2203066-03

Prepared & Analyzed: 03/16/22

Benzene	0.0617	0.0020	mg/kg	0.0750	ND	82.3	70-130			
Toluene	0.0654	0.0050	"	0.0750	ND	87.2	70-130			
Ethylbenzene	0.0658	0.0050	"	0.0750	ND	87.7	70-130			
m,p-Xylene	0.141	0.010	"	0.150	ND	93.9	70-130			
o-Xylene	0.0687	0.0050	"	0.0750	ND	91.6	70-130			
1,2,4-Trimethylbenzene	0.0734	0.0050	"	0.0750	ND	97.9	70-130			
1,3,5-Trimethylbenzene	0.0715	0.0050	"	0.0750	ND	95.3	70-130			
Naphthalene	0.0716	0.0038	"	0.0750	0.00939	82.9	70-130			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	0.0384		"	0.0400		96.1	50-150			
<i>Surrogate: Toluene-d8</i>	0.0407		"	0.0400		102	50-150			
<i>Surrogate: 4-Bromofluorobenzene</i>	0.0409		"	0.0400		102	50-150			

Summit Scientific

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

Project: Noble - Carpio A26-05
Project Number: UWRWE-A1698-ABN
Project Manager: Jacob Whritenour

Reported:
04/01/22 10:47

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

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

Batch BFC0327 - EPA 5030 Soil MS

Matrix Spike Dup (BFC0327-MSD1)	Source: 2203066-03			Prepared & Analyzed: 03/16/22						
Benzene	0.0601	0.0020	mg/kg	0.0750	ND	80.2	70-130	2.61	30	
Toluene	0.0648	0.0050	"	0.0750	ND	86.4	70-130	0.968	30	
Ethylbenzene	0.0677	0.0050	"	0.0750	ND	90.3	70-130	2.97	30	
m,p-Xylene	0.144	0.010	"	0.150	ND	95.8	70-130	2.00	30	
o-Xylene	0.0690	0.0050	"	0.0750	ND	92.0	70-130	0.436	30	
1,2,4-Trimethylbenzene	0.0742	0.0050	"	0.0750	ND	99.0	70-130	1.06	30	
1,3,5-Trimethylbenzene	0.0731	0.0050	"	0.0750	ND	97.5	70-130	2.28	30	
Naphthalene	0.0635	0.0038	"	0.0750	0.00939	72.2	70-130	11.9	30	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0361</i>		<i>"</i>	<i>0.0400</i>		<i>90.2</i>	<i>50-150</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0402</i>		<i>"</i>	<i>0.0400</i>		<i>101</i>	<i>50-150</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0390</i>		<i>"</i>	<i>0.0400</i>		<i>97.4</i>	<i>50-150</i>			

Batch BFC0358 - EPA 5030 Water MS

Blank (BFC0358-BLK1)	Prepared: 03/17/22 Analyzed: 03/18/22									
Benzene	ND	1.0	ug/l							
Toluene	ND	1.0	"							
Ethylbenzene	ND	1.0	"							
Xylenes (total)	ND	2.0	"							
Naphthalene	ND	1.0	"							
1,2,4-Trimethylbenzene	ND	1.0	"							
1,3,5-Trimethylbenzene	ND	1.0	"							
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>13.7</i>		<i>"</i>	<i>13.3</i>		<i>103</i>	<i>23-173</i>			
<i>Surrogate: Toluene-d8</i>	<i>13.4</i>		<i>"</i>	<i>13.3</i>		<i>101</i>	<i>20-170</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>13.6</i>		<i>"</i>	<i>13.3</i>		<i>102</i>	<i>21-167</i>			

LCS (BFC0358-BS1)	Prepared: 03/17/22 Analyzed: 03/18/22									
Benzene	41.4	1.0	ug/l	50.0		82.8	51-132			
Toluene	40.6	1.0	"	50.0		81.1	51-138			
Ethylbenzene	45.7	1.0	"	50.0		91.4	58-146			
m,p-Xylene	91.2	2.0	"	100		91.2	57-144			
o-Xylene	45.6	1.0	"	50.0		91.1	53-146			
Naphthalene	49.4	1.0	"	50.0		98.9	70-130			
1,2,4-Trimethylbenzene	47.5	1.0	"	50.0		95.0	70-130			
1,3,5-Trimethylbenzene	46.6	1.0	"	50.0		93.2	70-130			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>11.7</i>		<i>"</i>	<i>13.3</i>		<i>87.8</i>	<i>23-173</i>			
<i>Surrogate: Toluene-d8</i>	<i>13.5</i>		<i>"</i>	<i>13.3</i>		<i>101</i>	<i>20-170</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>13.5</i>		<i>"</i>	<i>13.3</i>		<i>101</i>	<i>21-167</i>			

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

Project: Noble - Carpio A26-05
Project Number: UWRWE-A1698-ABN
Project Manager: Jacob Whritenour

Reported:
04/01/22 10:47

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

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

Batch BFC0358 - EPA 5030 Water MS

Matrix Spike (BFC0358-MS1)

Source: 2203264-01

Prepared: 03/17/22 Analyzed: 03/18/22

Benzene	51.9	1.0	ug/l	50.0	ND	104	34-141			
Toluene	51.8	1.0	"	50.0	ND	104	27-151			
Ethylbenzene	48.9	1.0	"	50.0	ND	97.8	29-160			
m,p-Xylene	96.9	2.0	"	100	ND	96.9	20-166			
o-Xylene	48.1	1.0	"	50.0	ND	96.2	33-159			
Naphthalene	51.2	1.0	"	50.0	ND	102	70-130			
1,2,4-Trimethylbenzene	50.2	1.0	"	50.0	ND	100	70-130			
1,3,5-Trimethylbenzene	49.6	1.0	"	50.0	ND	99.3	70-130			
Surrogate: 1,2-Dichloroethane-d4	12.1		"	13.3		90.9	23-173			
Surrogate: Toluene-d8	13.6		"	13.3		102	20-170			
Surrogate: 4-Bromofluorobenzene	13.6		"	13.3		102	21-167			

Matrix Spike Dup (BFC0358-MSD1)

Source: 2203264-01

Prepared: 03/17/22 Analyzed: 03/18/22

Benzene	53.9	1.0	ug/l	50.0	ND	108	34-141	3.82	30	
Toluene	53.1	1.0	"	50.0	ND	106	27-151	2.52	30	
Ethylbenzene	50.0	1.0	"	50.0	ND	100	29-160	2.24	30	
m,p-Xylene	99.2	2.0	"	100	ND	99.2	20-166	2.30	30	
o-Xylene	49.4	1.0	"	50.0	ND	98.7	33-159	2.61	30	
Naphthalene	53.0	1.0	"	50.0	ND	106	70-130	3.40	30	
1,2,4-Trimethylbenzene	52.5	1.0	"	50.0	ND	105	70-130	4.44	30	
1,3,5-Trimethylbenzene	52.8	1.0	"	50.0	ND	106	70-130	6.19	30	
Surrogate: 1,2-Dichloroethane-d4	12.3		"	13.3		92.3	23-173			
Surrogate: Toluene-d8	13.4		"	13.3		100	20-170			
Surrogate: 4-Bromofluorobenzene	13.3		"	13.3		99.5	21-167			

Summit Scientific

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

Project: Noble - Carpio A26-05
Project Number: UWRWE-A1698-ABN
Project Manager: Jacob Whritenour

Reported:
04/01/22 10:47

Extractable Petroleum Hydrocarbons by 8015 - Quality Control
Summit Scientific

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

Batch BFC0328 - EPA 3550A

Blank (BFC0328-BLK1)

Prepared: 03/16/22 Analyzed: 03/17/22

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

LCS (BFC0328-BS1)

Prepared: 03/16/22 Analyzed: 03/17/22

C10-C28 (DRO)	443	50	mg/kg	500	88.6	70-130				
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Matrix Spike (BFC0328-MS1)

Source: 2203066-03

Prepared: 03/16/22 Analyzed: 03/17/22

C10-C28 (DRO)	429	50	mg/kg	500	27.7	80.2	70-130			
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Matrix Spike Dup (BFC0328-MSD1)

Source: 2203066-03

Prepared: 03/16/22 Analyzed: 03/17/22

C10-C28 (DRO)	470	50	mg/kg	500	27.7	88.5	70-130	9.22	20	
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Summit Scientific

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

Project: Noble - Carpio A26-05
Project Number: UWRWE-A1698-ABN
Project Manager: Jacob Whritenour

Reported:
04/01/22 10:47

PAH by EPA Method 8270D SIM - Quality Control

Summit Scientific

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

Batch BFC0315 - EPA 5030 Soil MS

Blank (BFC0315-BLK1)

Prepared: 03/16/22 Analyzed: 03/17/22

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	"							
<i>Surrogate: 2-Methylnaphthalene-d10</i>	0.0279		"	0.0333		83.6	40-150			
<i>Surrogate: Fluoranthene-d10</i>	0.0222		"	0.0333		66.6	40-150			

LCS (BFC0315-BS1)

Prepared: 03/16/22 Analyzed: 03/19/22

Acenaphthene	0.0266	0.00500	mg/kg	0.0333		79.9	31-137			
Anthracene	0.0270	0.00500	"	0.0333		81.1	30-120			
Benzo (a) anthracene	0.0275	0.00500	"	0.0333		82.5	30-120			
Benzo (a) pyrene	0.0346	0.00500	"	0.0333		104	30-120			
Benzo (b) fluoranthene	0.0308	0.00500	"	0.0333		92.5	30-120			
Benzo (k) fluoranthene	0.0361	0.00500	"	0.0333		108	30-120			
Chrysene	0.0318	0.00500	"	0.0333		95.5	30-120			
Dibenz (a,h) anthracene	0.0342	0.00500	"	0.0333		103	30-120			
Fluoranthene	0.0297	0.00500	"	0.0333		89.2	30-120			
Fluorene	0.0287	0.00500	"	0.0333		86.0	30-120			
Indeno (1,2,3-cd) pyrene	0.0250	0.00500	"	0.0333		75.0	30-120			
Pyrene	0.0313	0.00500	"	0.0333		94.0	35-142			
1-Methylnaphthalene	0.0237	0.00500	"	0.0333		71.0	35-142			
2-Methylnaphthalene	0.0221	0.00500	"	0.0333		66.4	35-142			
<i>Surrogate: 2-Methylnaphthalene-d10</i>	0.0232		"	0.0333		69.7	40-150			
<i>Surrogate: Fluoranthene-d10</i>	0.0281		"	0.0333		84.4	40-150			

Summit Scientific

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

Project: Noble - Carpio A26-05
Project Number: UWRWE-A1698-ABN
Project Manager: Jacob Whritenour

Reported:
04/01/22 10:47

PAH by EPA Method 8270D SIM - Quality Control

Summit Scientific

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

Batch BFC0315 - EPA 5030 Soil MS

Matrix Spike (BFC0315-MS1)	Source: 2203232-01			Prepared: 03/16/22 Analyzed: 03/19/22						
Acenaphthene	0.0170	0.00500	mg/kg	0.0333	ND	51.0	31-137			
Anthracene	0.0184	0.00500	"	0.0333	ND	55.1	30-120			
Benzo (a) anthracene	0.0185	0.00500	"	0.0333	ND	55.6	30-120			
Benzo (a) pyrene	0.0213	0.00500	"	0.0333	ND	63.8	30-120			
Benzo (b) fluoranthene	0.0174	0.00500	"	0.0333	ND	52.3	30-120			
Benzo (k) fluoranthene	0.0195	0.00500	"	0.0333	ND	58.4	30-120			
Chrysene	0.0209	0.00500	"	0.0333	ND	62.8	30-120			
Dibenz (a,h) anthracene	0.0258	0.00500	"	0.0333	ND	77.3	30-120			
Fluoranthene	0.0202	0.00500	"	0.0333	ND	60.6	30-120			
Fluorene	0.0172	0.00500	"	0.0333	ND	51.7	30-120			
Indeno (1,2,3-cd) pyrene	0.0245	0.00500	"	0.0333	ND	73.5	30-120			
Pyrene	0.0203	0.00500	"	0.0333	0.00266	52.9	35-142			
1-Methylnaphthalene	0.0188	0.00500	"	0.0333	ND	56.5	15-130			
2-Methylnaphthalene	0.0229	0.00500	"	0.0333	0.00524	52.9	15-130			
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0179</i>		<i>"</i>	<i>0.0333</i>		<i>53.8</i>	<i>40-150</i>			
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0206</i>		<i>"</i>	<i>0.0333</i>		<i>61.8</i>	<i>40-150</i>			

Matrix Spike Dup (BFC0315-MSD1)	Source: 2203232-01			Prepared: 03/16/22 Analyzed: 03/19/22						
Acenaphthene	0.0135	0.00500	mg/kg	0.0333	ND	40.4	31-137	23.1	30	
Anthracene	0.0137	0.00500	"	0.0333	ND	41.1	30-120	29.1	30	
Benzo (a) anthracene	0.0160	0.00500	"	0.0333	ND	48.1	30-120	14.5	30	
Benzo (a) pyrene	0.0181	0.00500	"	0.0333	ND	54.3	30-120	16.0	30	
Benzo (b) fluoranthene	0.0148	0.00500	"	0.0333	ND	44.5	30-120	16.1	30	
Benzo (k) fluoranthene	0.0161	0.00500	"	0.0333	ND	48.4	30-120	18.7	30	
Chrysene	0.0176	0.00500	"	0.0333	ND	52.7	30-120	17.3	30	
Dibenz (a,h) anthracene	0.0220	0.00500	"	0.0333	ND	66.1	30-120	15.6	30	
Fluoranthene	0.0213	0.00500	"	0.0333	ND	63.8	30-120	5.18	30	
Fluorene	0.0129	0.00500	"	0.0333	ND	38.7	30-120	28.7	30	
Indeno (1,2,3-cd) pyrene	0.0397	0.00500	"	0.0333	ND	119	30-120	47.4	30	
Pyrene	0.0176	0.00500	"	0.0333	0.00266	44.8	35-142	14.3	30	
1-Methylnaphthalene	0.0140	0.00500	"	0.0333	ND	41.9	15-130	29.7	50	
2-Methylnaphthalene	0.0164	0.00500	"	0.0333	0.00524	33.4	15-130	33.0	50	
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0146</i>		<i>"</i>	<i>0.0333</i>		<i>43.9</i>	<i>40-150</i>			
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0164</i>		<i>"</i>	<i>0.0333</i>		<i>49.1</i>	<i>40-150</i>			

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

Project: Noble - Carpio A26-05
Project Number: UWRWE-A1698-ABN
Project Manager: Jacob Whritenour

Reported:
04/01/22 10:47

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

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

Batch BFC0372 - EPA 3050B

Blank (BFC0372-BLK1)

Prepared: 03/25/22 Analyzed: 03/30/22

Boron ND 0.0100 mg/L

LCS (BFC0372-BS1)

Prepared: 03/25/22 Analyzed: 03/30/22

Boron 5.20 0.0100 mg/L 5.00 104 80-120

Duplicate (BFC0372-DUP1)

Source: 2203211-01

Prepared: 03/25/22 Analyzed: 03/30/22

Boron 0.0667 0.0100 mg/L 0.0790 16.9 20

Matrix Spike (BFC0372-MS1)

Source: 2203211-01

Prepared: 03/25/22 Analyzed: 03/30/22

Boron 5.42 0.0100 mg/L 5.00 0.0790 107 75-125

Matrix Spike Dup (BFC0372-MSD1)

Source: 2203211-01

Prepared: 03/25/22 Analyzed: 03/30/22

Boron 4.98 0.0100 mg/L 5.00 0.0790 98.0 75-125 8.53 25

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

Project: Noble - Carpio A26-05
Project Number: UWRWE-A1698-ABN
Project Manager: Jacob Whritenour

Reported:
04/01/22 10:47

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

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

Batch BFC0357 - General Preparation

Blank (BFC0357-BLK1)

Prepared: 03/17/22 Analyzed: 03/22/22

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

LCS (BFC0357-BS1)

Prepared: 03/17/22 Analyzed: 03/22/22

Calcium	6.01	0.0500	mg/L wet	5.00	120	70-130
Magnesium	5.56	0.0500	"	5.00	111	70-130
Sodium	5.56	0.0500	"	5.00	111	70-130

Summit Scientific

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

Project: Noble - Carpio A26-05

Project Number: UWRWE-A1698-ABN

Project Manager: Jacob Whritenour

Reported:
04/01/22 10:47

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 BFC0445 - General Preparation

Duplicate (BFC0445-DUP1)

Source: 2203256-01

Prepared & Analyzed: 03/21/22

% Solids	96.2		%		97.1			0.921	20	
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Summit Scientific

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

Project: Noble - Carpio A26-05
Project Number: UWRWE-A1698-ABN
Project Manager: Jacob Whritenour

Reported:
04/01/22 10:47

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 BFC0390 - General Preparation

Blank (BFC0390-BLK1)

Prepared & Analyzed: 03/18/22

Specific Conductance (EC) ND 0.0100 mmhos/cm

LCS (BFC0390-BS1)

Prepared & Analyzed: 03/18/22

Specific Conductance (EC) 0.150 0.0100 mmhos/cm 0.150 100 95-105

Duplicate (BFC0390-DUP1)

Source: 2203066-03

Prepared & Analyzed: 03/18/22

Specific Conductance (EC) 0.316 0.0100 mmhos/cm 0.323 2.35 20

Summit Scientific

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

Project: Noble - Carpio A26-05

Project Number: UWRWE-A1698-ABN
 Project Manager: Jacob Whritenour

Reported:
 04/01/22 10:47

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 BFC0389 - General Preparation

LCS (BFC0389-BS1)

Prepared & Analyzed: 03/18/22

pH 9.14 pH Units 9.18 99.6 95-105

Duplicate (BFC0389-DUP1)

Source: 2203066-03

Prepared & Analyzed: 03/18/22

pH 8.18 pH Units 7.99 2.35 20

Summit Scientific

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

Project: Noble - Carpio A26-05
Project Number: UWRWE-A1698-ABN
Project Manager: Jacob Whritenour

Reported:
04/01/22 10:47

Notes and Definitions

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

Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80401

303.277.9310

December 16, 2022

Jacob Whritenour

Tasman Geosciences

6855 W. 119th Ave.

Broomfield, CO 80020

RE: Noble - Carpio A26-05 FAC

Work Order # 2212191

Enclosed are the results of analyses for samples received by Summit Scientific on 12/08/22 17:22. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Mikayla Axtell For Paul Shrewsbury

President



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

Project: Noble - Carpio A26-05 FAC

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
12/16/22 10:07

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
BH11@4'	2212191-01	Soil	12/08/22 10:10	12/08/22 17:22
BH11@10'	2212191-02	Soil	12/08/22 10:40	12/08/22 17:22
BH12@4'	2212191-03	Soil	12/08/22 11:05	12/08/22 17:22
BH12@10'	2212191-04	Soil	12/08/22 11:30	12/08/22 17:22
BG01@4'	2212191-05	Soil	12/08/22 12:40	12/08/22 17:22
BG01@10'	2212191-06	Soil	12/08/22 13:00	12/08/22 17:22
BG02@4'	2212191-07	Soil	12/08/22 13:05	12/08/22 17:22
BG02@10'	2212191-08	Soil	12/08/22 13:15	12/08/22 17:22
BG03@4'	2212191-09	Soil	12/08/22 13:25	12/08/22 17:22
BG03@10'	2212191-10	Soil	12/08/22 13:40	12/08/22 17:22
BG04@4'	2212191-11	Soil	12/08/22 13:50	12/08/22 17:22
BG04@10'	2212191-12	Soil	12/08/22 14:10	12/08/22 17:22
BG05@4'	2212191-13	Soil	12/08/22 14:15	12/08/22 17:22
BG05@10'	2212191-14	Soil	12/08/22 14:25	12/08/22 17:22

Summit Scientific

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

Summit Scientific

S₂

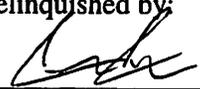
2212191.2

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

Page 2 of 2

Client: Noble / Tasman Project Manager: Jake Whritenour Invoice: Dan Peterson
Address: 6855 W. 119th Ave E-Mail: jwhritenour@tasman-geo.com
City/State/Zip: Broomfield, CO 80020
Phone: 970-691-7338 Project Name:
Sampler Name: Chris Chapman Project Number: Carpio A26-05 FAC

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix				Analysis Requested							Special Instructions
					HCl	HNO3	None	Other	Water	Soil	Air-Canister #	Other	VOC - 915	TPH - 915	PAH - 915	EC, EC ₂	Boron - HWS	HOLD	Arsenic & Cadmium	
1	B604@4'	12-8-22	1350	1						X							X	X	pH, EC, SAR by saturated paste	
2	B604@10'	↓	1410	↓													X	X		
3	B605@4'	↓	1415	↓													X	X		
4	B605@10'	↓	1425	↓													X	X		
5																				
6																				
7																				
8																				
9																				
10																				

Relinquished by: 	Date/Time: 12-8-22/1630	Received by: Tasman's Lock Box	Date/Time: 12-8-22/1630	Turn Around Time (Check) Same Day <input type="checkbox"/> 72 hours 24 hours <input type="checkbox"/> Standard <input checked="" type="checkbox"/> 48 hours <input type="checkbox"/> Sample Integrity: Temperature Upon Receipt: <u>7.9</u> Samples Intact: <input checked="" type="radio"/> Yes <input type="radio"/> No	Notes:
Relinquished by: Tasman's Lock Box	Date/Time: 12-8-22 1722	Received by: 	Date/Time: 12-8-22 1722		
Relinquished by:	Date/Time:	Received by:	Date/Time:		

S₂

2/2
Sample Receipt Checklist

S2 Work Order# 2212191

Client: Noble/Tasman Client Project ID: Carpio AZC-05 FAC

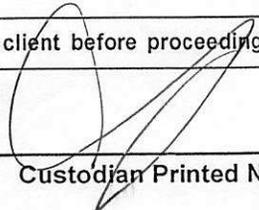
Shipped Via: H.D./P.U./FedEx/UPS/USPS/Other Airbill #: _____

Matrix (Check all that apply) Air Soil/Solid Water Other

Temp (°C) Thermometer #

	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.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	on ice
If custody seals are present, are they intact? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Are samples due within 48 hours present?	<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 ²⁺), Hexavalent Chromium (Cr ⁶⁺ , Cr VI), COD/BOD, Total Coliform, E. Coli, Total Residual Chlorine (TRC), Dissolved Oxygen	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Is a chain-of-custody (COC) form present and filled out Completely? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Is the COC properly relinquished by the client w/ date and time recorded? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Were all samples received intact? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Was adequate sample volume provided? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Does the COC agree with the number and type of sample bottles received? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Do the sample IDs on the bottle labels match the COC? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
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 samples preserved that require preservation (excluding cooling)? ⁽¹⁾ Note the type of preservative in the comments column – HCl, H ₂ SO ₄ , NaOH, HNO ₃ , etc.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
If samples are acid preserved for metals, is the pH ≤ 2? ⁽¹⁾ Record the pH in Comments.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
If dissolved metals are requested, were samples field filtered?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Additional Comments (if any):				

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


Custodian Printed Name

12-8-22
Date/Time



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

Project: Noble - Carpio A26-05 FAC

Project Number: [none]
 Project Manager: Jacob Whritenour

Reported:
 12/16/22 10:07

BH11@4'
2212191-01 (Soil)

Summit Scientific

Saturation Paste by the Western Region Soil, Plant and Water Reference Methods 2013

Date Sampled: **12/08/22 10:10**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Specific Conductance (EC)	1.71	0.0100		mmhos/cm	1	BFL0394	12/11/22	12/11/22	EPA 120.1	

Summit Scientific

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

Project: Noble - Carpio A26-05 FAC

Project Number: [none]
 Project Manager: Jacob Whritenour

Reported:
 12/16/22 10:07

BH11@10'
2212191-02 (Soil)

Summit Scientific

Saturation Paste by the Western Region Soil, Plant and Water Reference Methods 2013

Date Sampled: **12/08/22 10:40**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Specific Conductance (EC)	0.722	0.0100		mmhos/cm	1	BFL0394	12/11/22	12/11/22	EPA 120.1	

Summit Scientific

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

Project: Noble - Carpio A26-05 FAC

Project Number: [none]
 Project Manager: Jacob Whritenour

Reported:
 12/16/22 10:07

BH12@4'
2212191-03 (Soil)

Summit Scientific

Saturation Paste by the Western Region Soil, Plant and Water Reference Methods 2013

Date Sampled: **12/08/22 11:05**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Specific Conductance (EC)	0.842	0.0100		mmhos/cm	1	BFL0394	12/11/22	12/11/22	EPA 120.1	

Summit Scientific

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

Project: Noble - Carpio A26-05 FAC

Project Number: [none]
 Project Manager: Jacob Whritenour

Reported:
 12/16/22 10:07

BH12@10'
2212191-04 (Soil)

Summit Scientific

Saturation Paste by the Western Region Soil, Plant and Water Reference Methods 2013

Date Sampled: **12/08/22 11:30**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Specific Conductance (EC)	0.612	0.0100		mmhos/cm	1	BFL0394	12/11/22	12/11/22	EPA 120.1	

Summit Scientific

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

Project: Noble - Carpio A26-05 FAC

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
12/16/22 10:07

BG01@4'
2212191-05 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Date Sampled: **12/08/22 12:40**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Arsenic	3.88	0.200		mg/kg dry	1	BFL0298	12/12/22	12/13/22	EPA 6020B	
Barium	52.0	0.400		"	"	"	"	"	"	
Lead	5.61	0.200		"	"	"	"	"	"	
Selenium	0.469	0.260	0.175	"	"	"	"	"	"	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **12/08/22 12:40**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
% Solids	87.2			%	1	BFL0340	12/13/22	12/14/22	Calculation	

Saturation Paste by the Western Region Soil, Plant and Water Reference Methods 2013

Date Sampled: **12/08/22 12:40**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Specific Conductance (EC)	1.65	0.0100		mmhos/cm	1	BFL0394	12/11/22	12/11/22	EPA 120.1	

Summit Scientific

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

Project: Noble - Carpio A26-05 FAC

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
12/16/22 10:07

BG01@10'
2212191-06 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Date Sampled: **12/08/22 13:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Arsenic	6.55	0.200		mg/kg dry	1	BFL0298	12/12/22	12/13/22	EPA 6020B	
Barium	31.7	0.400		"	"	"	"	"	"	
Lead	4.85	0.200		"	"	"	"	"	"	
Selenium	0.508	0.260	0.175	"	"	"	"	"	"	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **12/08/22 13:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
% Solids	77.5			%	1	BFL0340	12/13/22	12/14/22	Calculation	

Saturation Paste by the Western Region Soil, Plant and Water Reference Methods 2013

Date Sampled: **12/08/22 13:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Specific Conductance (EC)	0.511	0.0100		mmhos/cm	1	BFL0394	12/11/22	12/11/22	EPA 120.1	

Summit Scientific

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

Project: Noble - Carpio A26-05 FAC

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
12/16/22 10:07

BG02@4'
2212191-07 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Date Sampled: **12/08/22 13:05**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Arsenic	3.36	0.200		mg/kg dry	1	BFL0298	12/12/22	12/13/22	EPA 6020B	
Barium	69.7	0.400		"	"	"	"	"	"	
Lead	5.90	0.200		"	"	"	"	"	"	
Selenium	0.557	0.260	0.175	"	"	"	"	"	"	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **12/08/22 13:05**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
% Solids	83.8			%	1	BFL0340	12/13/22	12/14/22	Calculation	

Saturation Paste by the Western Region Soil, Plant and Water Reference Methods 2013

Date Sampled: **12/08/22 13:05**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Specific Conductance (EC)	1.79	0.0100		mmhos/cm	1	BFL0394	12/11/22	12/11/22	EPA 120.1	

Summit Scientific

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

Project: Noble - Carpio A26-05 FAC

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
12/16/22 10:07

BG02@10'
2212191-08 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Date Sampled: **12/08/22 13:15**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Arsenic	4.23	0.200		mg/kg dry	1	BFL0298	12/12/22	12/13/22	EPA 6020B	
Barium	319	0.400		"	"	"	"	"	"	
Lead	7.04	0.200		"	"	"	"	"	"	
Selenium	0.968	0.260	0.175	"	"	"	"	"	"	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **12/08/22 13:15**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
% Solids	77.5			%	1	BFL0340	12/13/22	12/14/22	Calculation	

Saturation Paste by the Western Region Soil, Plant and Water Reference Methods 2013

Date Sampled: **12/08/22 13:15**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Specific Conductance (EC)	0.680	0.0100		mmhos/cm	1	BFL0394	12/11/22	12/11/22	EPA 120.1	

Summit Scientific

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

Project: Noble - Carpio A26-05 FAC

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
12/16/22 10:07

BG03@4'
2212191-09 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Date Sampled: **12/08/22 13:25**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Arsenic	4.42	0.200		mg/kg dry	1	BFL0298	12/12/22	12/13/22	EPA 6020B	
Barium	105	0.400		"	"	"	"	"	"	
Lead	6.60	0.200		"	"	"	"	"	"	
Selenium	0.643	0.260	0.175	"	"	"	"	"	"	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **12/08/22 13:25**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
% Solids	81.1			%	1	BFL0340	12/13/22	12/14/22	Calculation	

Saturation Paste by the Western Region Soil, Plant and Water Reference Methods 2013

Date Sampled: **12/08/22 13:25**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Specific Conductance (EC)	1.42	0.0100		mmhos/cm	1	BFL0394	12/11/22	12/11/22	EPA 120.1	

Summit Scientific

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

Project: Noble - Carpio A26-05 FAC

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
12/16/22 10:07

BG03@10'
2212191-10 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Date Sampled: **12/08/22 13:40**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Arsenic	3.34	0.200		mg/kg dry	1	BFL0298	12/12/22	12/13/22	EPA 6020B	
Barium	38.1	0.400		"	"	"	"	"	"	
Lead	6.20	0.200		"	"	"	"	"	"	
Selenium	0.696	0.260	0.175	"	"	"	"	"	"	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **12/08/22 13:40**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
% Solids	76.4			%	1	BFL0340	12/13/22	12/14/22	Calculation	

Saturation Paste by the Western Region Soil, Plant and Water Reference Methods 2013

Date Sampled: **12/08/22 13:40**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Specific Conductance (EC)	0.723	0.0100		mmhos/cm	1	BFL0394	12/11/22	12/11/22	EPA 120.1	

Summit Scientific

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

Project: Noble - Carpio A26-05 FAC

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
12/16/22 10:07

BG04@4'
2212191-11 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Date Sampled: **12/08/22 13:50**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Arsenic	3.90	0.200		mg/kg dry	1	BFL0298	12/12/22	12/13/22	EPA 6020B	
Barium	146	0.400		"	"	"	"	"	"	
Lead	5.37	0.200		"	"	"	"	"	"	
Selenium	0.764	0.260	0.175	"	"	"	"	"	"	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **12/08/22 13:50**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
% Solids	85.1			%	1	BFL0340	12/13/22	12/14/22	Calculation	

Saturation Paste by the Western Region Soil, Plant and Water Reference Methods 2013

Date Sampled: **12/08/22 13:50**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Specific Conductance (EC)	1.48	0.0100		mmhos/cm	1	BFL0394	12/11/22	12/11/22	EPA 120.1	

Summit Scientific

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

Project: Noble - Carpio A26-05 FAC

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
12/16/22 10:07

BG04@10'
2212191-12 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Date Sampled: **12/08/22 14:10**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Arsenic	3.96	0.200		mg/kg dry	1	BFL0298	12/12/22	12/13/22	EPA 6020B	
Barium	38.3	0.400		"	"	"	"	"	"	
Lead	5.30	0.200		"	"	"	"	"	"	
Selenium	0.626	0.260	0.175	"	"	"	"	"	"	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **12/08/22 14:10**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
% Solids	73.9			%	1	BFL0340	12/13/22	12/14/22	Calculation	

Saturation Paste by the Western Region Soil, Plant and Water Reference Methods 2013

Date Sampled: **12/08/22 14:10**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Specific Conductance (EC)	0.470	0.0100		mmhos/cm	1	BFL0394	12/11/22	12/11/22	EPA 120.1	

Summit Scientific

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

Project: Noble - Carpio A26-05 FAC

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
12/16/22 10:07

BG05@4'
2212191-13 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Date Sampled: **12/08/22 14:15**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Arsenic	3.50	0.200		mg/kg dry	1	BFL0298	12/12/22	12/13/22	EPA 6020B	
Barium	46.4	0.400		"	"	"	"	"	"	
Lead	5.24	0.200		"	"	"	"	"	"	
Selenium	0.485	0.260	0.175	"	"	"	"	"	"	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **12/08/22 14:15**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
% Solids	90.7			%	1	BFL0340	12/13/22	12/14/22	Calculation	

Saturation Paste by the Western Region Soil, Plant and Water Reference Methods 2013

Date Sampled: **12/08/22 14:15**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Specific Conductance (EC)	1.88	0.0100		mmhos/cm	1	BFL0394	12/11/22	12/11/22	EPA 120.1	

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
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - Carpio A26-05 FAC

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
12/16/22 10:07

BG05@10'
2212191-14 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Date Sampled: **12/08/22 14:25**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Arsenic	2.74	0.200		mg/kg dry	1	BFL0298	12/12/22	12/13/22	EPA 6020B	
Barium	39.0	0.400		"	"	"	"	"	"	
Lead	3.97	0.200		"	"	"	"	"	"	
Selenium	0.480	0.260	0.175	"	"	"	"	"	"	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **12/08/22 14:25**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
% Solids	73.8			%	1	BFL0340	12/13/22	12/14/22	Calculation	

Saturation Paste by the Western Region Soil, Plant and Water Reference Methods 2013

Date Sampled: **12/08/22 14:25**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Specific Conductance (EC)	0.837	0.0100		mmhos/cm	1	BFL0394	12/11/22	12/11/22	EPA 120.1	

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
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - Carpio A26-05 FAC

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
12/16/22 10:07

Total Metals by EPA 6020B - Quality Control

Summit Scientific

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

Batch BFL0298 - EPA 3050B

Blank (BFL0298-BLK1)

Prepared: 12/12/22 Analyzed: 12/13/22

Arsenic	ND	0.200	mg/kg wet							
Barium	ND	0.400	"							
Lead	ND	0.200	"							
Selenium	ND	0.260	"							

LCS (BFL0298-BS1)

Prepared: 12/12/22 Analyzed: 12/13/22

Arsenic	46.6	0.200	mg/kg wet	40.0		116	80-120			
Barium	45.1	0.400	"	40.0		113	80-120			
Lead	22.8	0.200	"	20.0		114	80-120			
Selenium	4.56	0.260	"	4.00		114	80-120			

Duplicate (BFL0298-DUP1)

Source: 2212191-05

Prepared: 12/12/22 Analyzed: 12/13/22

Arsenic	4.33	0.200	mg/kg dry		3.88			11.0	20	
Barium	45.7	0.400	"		52.0			12.9	20	
Lead	5.97	0.200	"		5.61			6.21	20	
Selenium	0.546	0.260	"		0.469			15.2	20	

Matrix Spike (BFL0298-MS1)

Source: 2212191-05

Prepared: 12/12/22 Analyzed: 12/13/22

Arsenic	52.1	0.200	mg/kg dry	45.9	3.88	105	75-125			
Barium	106	0.400	"	45.9	52.0	117	75-125			
Lead	25.0	0.200	"	22.9	5.61	84.3	75-125			
Selenium	4.67	0.260	"	4.59	0.469	91.5	75-125			

Matrix Spike Dup (BFL0298-MSD1)

Source: 2212191-05

Prepared: 12/12/22 Analyzed: 12/13/22

Arsenic	51.4	0.200	mg/kg dry	45.9	3.88	104	75-125	1.25	25	
Barium	109	0.400	"	45.9	52.0	124	75-125	2.64	25	
Lead	26.8	0.200	"	22.9	5.61	92.2	75-125	7.00	25	
Selenium	5.00	0.260	"	4.59	0.469	98.8	75-125	6.90	25	

Summit Scientific

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

Project: Noble - Carpio A26-05 FAC

Project Number: [none]
 Project Manager: Jacob Whritenour

Reported:
 12/16/22 10:07

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 BFL0340 - General Preparation

Duplicate (BFL0340-DUP1)	Source: 2212179-01		Prepared: 12/13/22 Analyzed: 12/14/22	
% Solids	96.7	%	96.8	0.0607 20

Summit Scientific

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

Project: Noble - Carpio A26-05 FAC

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
12/16/22 10:07

Saturation Paste by the Western Region Soil, Plant and Water Reference Methods 2013 - Quality Control
Summit Scientific

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

Batch BFL0394 - General Preparation

Blank (BFL0394-BLK1)

Prepared & Analyzed: 12/11/22

Specific Conductance (EC) ND 0.0100 mmhos/cm

LCS (BFL0394-BS1)

Prepared & Analyzed: 12/11/22

Specific Conductance (EC) 0.147 0.0100 mmhos/cm 0.150 97.7 95-105

Duplicate (BFL0394-DUP1)

Source: 2212086-01

Prepared & Analyzed: 12/11/22

Specific Conductance (EC) 2.97 0.0100 mmhos/cm 2.93 1.42 20

Summit Scientific

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

Project: Noble - Carpio A26-05 FAC

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
12/16/22 10:07

Notes and Definitions

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

Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

May 24, 2023

Jacob Whritenour

Tasman Geosciences

6855 W. 119th Ave.

Broomfield, CO 80020

RE: Noble - Carpio A26-05WH

Work Order #2305421

Enclosed are the results of analyses for samples received by Summit Scientific on 05/17/23 17:45. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Scott Sheely For Paul Shrewsbury

President



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

Project: Noble - Carpio A26-05WH
Project Number: UWRWE-A1698-ABN
Project Manager: Jacob Whritenour

Reported:
05/24/23 11:14

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
BH01@3'	2305421-01	Soil	05/17/23 09:37	05/17/23 17:45
BH01@6'	2305421-02	Soil	05/17/23 09:40	05/17/23 17:45
BH02@3'	2305421-03	Soil	05/17/23 09:25	05/17/23 17:45
BH02@6'	2305421-04	Soil	05/17/23 09:26	05/17/23 17:45
BH03@3'	2305421-05	Soil	05/17/23 09:15	05/17/23 17:45
BH03@6'	2305421-06	Soil	05/17/23 09:20	05/17/23 17:45
BH04@3'	2305421-07	Soil	05/17/23 09:30	05/17/23 17:45
BH04@6'	2305421-08	Soil	05/17/23 09:35	05/17/23 17:45
BH05@3'	2305421-09	Soil	05/17/23 09:45	05/17/23 17:45
BH05@6'	2305421-10	Soil	05/17/23 09:50	05/17/23 17:45

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.

S₂

Sample Receipt Checklist

S2 Work Order# 2305421

Client: Noble/Tosman Client Project ID: Corpio AZ6-05 w/H

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

Matrix (Check all that apply) Air Soil/Solid Water Other

Temp (°C) Thermometer #

	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.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	or 70E
If custody seals are present, are they intact? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Are samples due within 48 hours present?	<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 ²⁺), Hexavalent Chromium (Cr ⁶⁺ , Cr VI), COD/BOD, Total Coliform, E. Coli, Total Residual Chlorine (TRC), Dissolved Oxygen	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Is a chain-of-custody (COC) form present and filled out Completely? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Is the COC properly relinquished by the client w/ date and time recorded? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Were all samples received intact? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Was adequate sample volume provided? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Does the COC agree with the number and type of sample bottles received? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Do the sample IDs on the bottle labels match the COC? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
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 samples preserved that require preservation (excluding cooling)? ⁽¹⁾ Note the type of preservative in the comments column – HCl, H ₂ SO ₄ , NaOH, HNO ₃ , etc.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
If samples are acid preserved for metals, is the pH ≤ 2? ⁽¹⁾ Record the pH in Comments.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
If dissolved metals are requested, were samples field filtered?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Additional Comments (if any):				

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

AS
Custodian Printed Name

5/17/23
Date/Time



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

Project: Noble - Carpio A26-05WH

Project Number: UWRWE-A1698-ABN
 Project Manager: Jacob Whritenour

Reported:
 05/24/23 11:14

BH01@3'
2305421-01 (Soil)

Summit Scientific

Saturation Paste by the Western Region Soil, Plant and Water Reference Methods 2013

Date Sampled: **05/17/23 09:37**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Specific Conductance (EC)	2.52	0.0100	mmhos/cm	1	BGE0741	05/22/23	05/22/23	EPA 120.1	

Summit Scientific

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

Project: Noble - Carpio A26-05WH

Project Number: UWRWE-A1698-ABN
 Project Manager: Jacob Whritenour

Reported:
 05/24/23 11:14

BH01@6'
2305421-02 (Soil)

Summit Scientific

Saturation Paste by the Western Region Soil, Plant and Water Reference Methods 2013

Date Sampled: **05/17/23 09:40**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Specific Conductance (EC)	1.27	0.0100	mmhos/cm	1	BGE0741	05/22/23	05/22/23	EPA 120.1	

Summit Scientific

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

Project: Noble - Carpio A26-05WH

Project Number: UWRWE-A1698-ABN
 Project Manager: Jacob Whritenour

Reported:
 05/24/23 11:14

BH02@3'
2305421-03 (Soil)

Summit Scientific

Saturation Paste by the Western Region Soil, Plant and Water Reference Methods 2013

Date Sampled: **05/17/23 09:25**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Specific Conductance (EC)	3.64	0.0100	mmhos/cm	1	BGE0741	05/22/23	05/22/23	EPA 120.1	

Summit Scientific

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

Project: Noble - Carpio A26-05WH

Project Number: UWRWE-A1698-ABN
 Project Manager: Jacob Whritenour

Reported:
 05/24/23 11:14

BH02@6'
2305421-04 (Soil)

Summit Scientific

Saturation Paste by the Western Region Soil, Plant and Water Reference Methods 2013

Date Sampled: **05/17/23 09:26**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Specific Conductance (EC)	3.36	0.0100	mmhos/cm	1	BGE0741	05/22/23	05/22/23	EPA 120.1	

Summit Scientific

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

Project: Noble - Carpio A26-05WH

Project Number: UWRWE-A1698-ABN
 Project Manager: Jacob Whritenour

Reported:
 05/24/23 11:14

BH03@3'
2305421-05 (Soil)

Summit Scientific

Saturation Paste by the Western Region Soil, Plant and Water Reference Methods 2013

Date Sampled: **05/17/23 09:15**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Specific Conductance (EC)	3.84	0.0100	mmhos/cm	1	BGE0741	05/22/23	05/22/23	EPA 120.1	

Summit Scientific

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

Project: Noble - Carpio A26-05WH

Project Number: UWRWE-A1698-ABN
Project Manager: Jacob Whritenour

Reported:
05/24/23 11:14

BH03@6'
2305421-06 (Soil)

Summit Scientific

Saturation Paste by the Western Region Soil, Plant and Water Reference Methods 2013

Date Sampled: **05/17/23 09:20**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Specific Conductance (EC)	1.56	0.0100	mmhos/cm	1	BGE0741	05/22/23	05/22/23	EPA 120.1	

Summit Scientific

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

Project: Noble - Carpio A26-05WH

Project Number: UWRWE-A1698-ABN
 Project Manager: Jacob Whritenour

Reported:
 05/24/23 11:14

BH04@3'
2305421-07 (Soil)

Summit Scientific

Saturation Paste by the Western Region Soil, Plant and Water Reference Methods 2013

Date Sampled: **05/17/23 09:30**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Specific Conductance (EC)	2.85	0.0100	mmhos/cm	1	BGE0741	05/22/23	05/22/23	EPA 120.1	

Summit Scientific

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

Project: Noble - Carpio A26-05WH

Project Number: UWRWE-A1698-ABN
 Project Manager: Jacob Whritenour

Reported:
 05/24/23 11:14

BH04@6'
2305421-08 (Soil)

Summit Scientific

Saturation Paste by the Western Region Soil, Plant and Water Reference Methods 2013

Date Sampled: **05/17/23 09:35**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Specific Conductance (EC)	0.961	0.0100	mmhos/cm	1	BGE0741	05/22/23	05/22/23	EPA 120.1	

Summit Scientific

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

Project: Noble - Carpio A26-05WH

Project Number: UWRWE-A1698-ABN
 Project Manager: Jacob Whritenour

Reported:
 05/24/23 11:14

BH05@3'
2305421-09 (Soil)

Summit Scientific

Saturation Paste by the Western Region Soil, Plant and Water Reference Methods 2013

Date Sampled: **05/17/23 09:45**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Specific Conductance (EC)	0.826	0.0100	mmhos/cm	1	BGE0741	05/22/23	05/22/23	EPA 120.1	

Summit Scientific

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

Project: Noble - Carpio A26-05WH
 Project Number: UWRWE-A1698-ABN
 Project Manager: Jacob Whritenour

Reported:
 05/24/23 11:14

BH05@6'
2305421-10 (Soil)

Summit Scientific

Saturation Paste by the Western Region Soil, Plant and Water Reference Methods 2013

Date Sampled: **05/17/23 09:50**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Specific Conductance (EC)	1.21	0.0100	mmhos/cm	1	BGE0741	05/22/23	05/22/23	EPA 120.1	

Summit Scientific

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

Project: Noble - Carpio A26-05WH
Project Number: UWRWE-A1698-ABN
Project Manager: Jacob Whritenour

Reported:
05/24/23 11:14

Saturation Paste by the Western Region Soil, Plant and Water Reference Methods 2013 - Quality Control

Summit Scientific

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

Batch BGE0741 - General Preparation

Blank (BGE0741-BLK1)

Prepared & Analyzed: 05/22/23

Specific Conductance (EC) ND 0.0100 mmhos/cm

LCS (BGE0741-BS1)

Prepared & Analyzed: 05/22/23

Specific Conductance (EC) 0.152 0.0100 mmhos/cm 0.150 102 95-105

Duplicate (BGE0741-DUP1)

Source: 2305082-18

Prepared & Analyzed: 05/22/23

Specific Conductance (EC) 6.68 0.0100 mmhos/cm 6.64 0.571 20

Summit Scientific

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

Project: Noble - Carpio A26-05WH

Project Number: UWRWE-A1698-ABN

Project Manager: Jacob Whritenour

Reported:
05/24/23 11:14

Notes and Definitions

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

ATTACHMENT B
BORING LOGS

Boring/Well ID #: BH01	SITE NAME: Carpio A 26-05 wt	CLIENT NAME: Chevron
Date Started: 5-17-23	Location: Weld County	
Date Completed: 5-17-23	TOC Elevation:	DTW: 2'
Type of Drill: HA	Geologist: DG	
Bit Size: 2"	Project Manager: JW	

 Drilling Company: **Tasman**

Depth (feet)	Well Completion	Sample Type	% Recovery	PID (ppm)	Laboratory Sample	USCS	Description
1						SP	Fine grain sand, wet, light brown, loose, No stain No odor
2		HA	100%				
3				1.0	BH01 @ 3' 937		
4							
5		HA	100%				
6				0.5	BH01 @ 6' 940		
7							
8							
9							No well set
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							
23							
24							
25							



Borehole Logging Form

Boring/Well ID #: BH02	SITE NAME: Carrio A26-05 WH	CLIENT NAME: Chesapeake Chevron
Date Started: 5-17-23	Location: Ward County	
Date Completed: 5-17-23	TOC Elevation: -	DTW:
Type of Drill: HA	Geologist: DF	
Bit Size: 2"	Project Manager: SW	

Drilling Company: **Tasman**

Depth (feet)	Well Completion	Sample Type	% Recovery	PID (ppm)	Laboratory Sample	USCS	Description
1							
2		HA	100 ^{ob}	0.4		ML	Silt w/ fine grain sand, brown, moist, medium, NO ST/NO odor
3					BH02e 3' 925		
4							
5		HA	100	0.9		ML	As above
6					BH02e 6' 926		
7							
8							No well set
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							
23							
24							
25							



Borehole Logging Form

Boring/Well ID #: BH03	SITE NAME: Carpio A26-05 WH	CLIENT NAME: Chevron
Date Started: 5-17-23	Location: Weid country	
Date Completed: 5-17-23	TOC Elevation: -	DTW: 3'
Type of Drill: HA	Geologist: DG	
Bit Size: 2"	Project Manager: JW	

Drilling Company: **Tasman**

Depth (feet)	Well Completion	Sample Type	% Recovery	PID (ppm)	Laboratory Sample	USCS	Description
1							
2		HA	100%			SP	
3				0.5	BH03 @ 3' 915		Fine grain sand, light brn, loose, wet, NO stain NO odor
4							
5		HA	100%	1.7	BH03 @ 6' 920	ML	Silt w/ fg sand, brown, moist, medium, NO st/NO odor
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							
23							
24							
25							



Borehole Logging Form

Boring/Well ID #: BH04	SITE NAME: Carpio A26-05 WH	CLIENT NAME: Chevron
Date Started: 5-17-23	Location: Weld County	
Date Completed: 5-17-23	TOC Elevation: -	DTW: 2.5
Type of Drill: HA	Geologist: DG	
Bit Size: 2"	Project Manager: JW	

Drilling Company: **Tasman**

Depth (feet)	Well Completion	Sample Type	% Recovery	PID (ppm)	Laboratory Sample	USCS	Description
1						SP	Fine grain sand, light brown, wet loose, NO Stain NO Ode
2		HA	100%	1.6			
3					BH04 e3' 930		
4							
5							
6					BH04 e6' 935		
7							
8							
9							NO well set
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							
23							
24							
25							



Borehole Logging Form

Boring/Well ID #: BH05	SITE NAME: Lurpio A26-05 WH	CLIENT NAME: Chevron
Date Started: 5-17-23	Location: Weld County	
Date Completed: 5-17-23	TOC Elevation: -	DTW: 2'
Type of Drill: HA	Geologist: DG	
Bit Size: 2"	Project Manager: SW	

Drilling Company: **Tasman**

Depth (feet)	Well Completion	Sample Type	% Recovery	PID (ppm)	Laboratory Sample	USCS	Description
1						SP	SP Fine grain sand, wet, loose, light brown, NO stain NO odor
2		HA	100	4.8	BH05 @ 3' 945		
3							
4							
5							
6				2.1	BH05 @ 6' 950		
7							No well set
8							
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